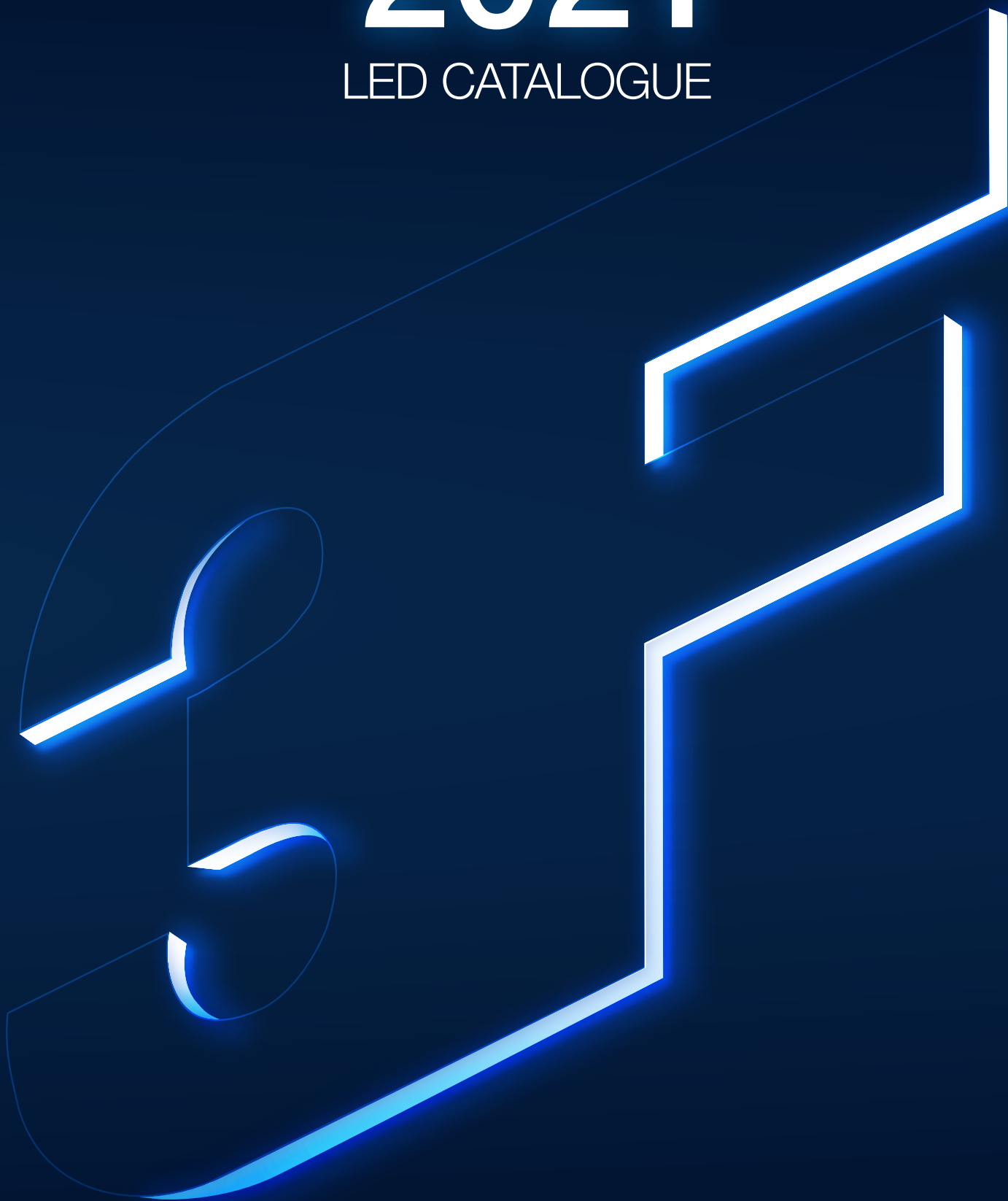


2021

LED CATALOGUE



3F Filippi

www.3F-Filippi.com

Instructions for use

How to use the 2021 General Catalogue

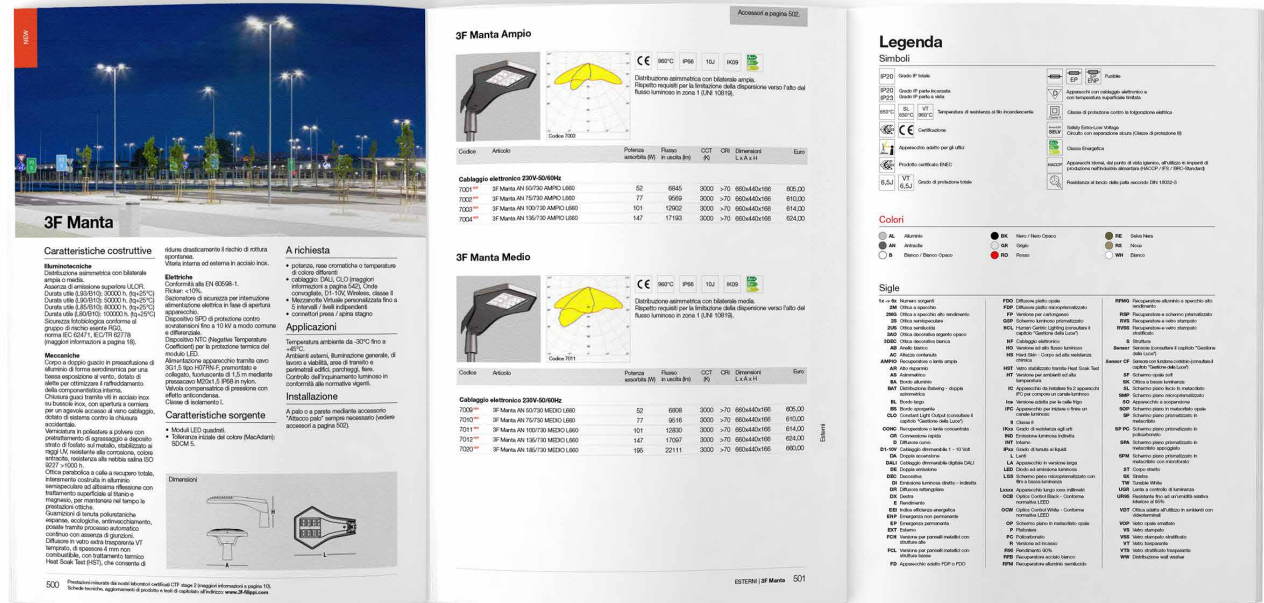
To facilitate using our catalogue, a new page layout is being introduced with this new version to help reading and simplify consultation.
We will see in detail how:

New for 2021

New product ranges are highlighted in red and have **NEW** beside them.

UPDATE

Product families that interested by important updates or new options compared to the 2020 version.



Series presentation page

In this section the product series are presented, with the characteristics and concepts common to the various versions specified.

Descriptions, articles, codes and prices

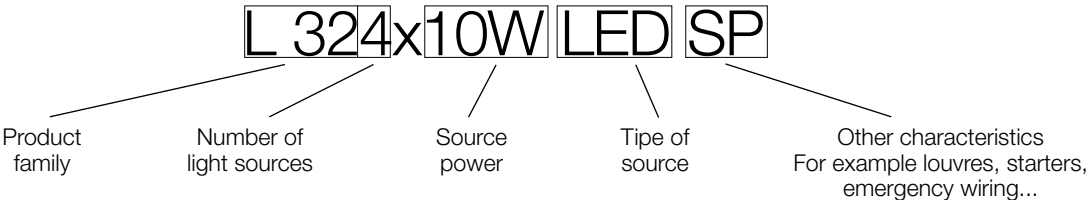
In these pages, all products are presented, divided by code, article and price.
The specific accessories for the version are also specified.
Accessories common to the whole series are grouped in a page at the end of the series.

Legend

This appendix helps understand the information given in the catalogue's pages.
It contains the key to the symbols and codes used and a summary.
It is part of the back cover and opens out.

How to interpret our product Articles

Consulting our product Articles could not be simpler – here's how:



Legend

Symbols

	Overall IP rating			Mechanical strength to impacts		Safety Extra-Low Voltage Separated power source (Class III)
	IP rating of recessed part IP rating of exposed part			Product compliant with IEC TR 61547-1 and IEC TR 63158 standards (see "Infopoint" chapter)		Energy class
			Glow wire resistance temperature			Resistance against ball impacts in accordance with DIN 18032-3
	Certification			Non-permanent emergency wiring		Product compliant with ATEX regulations (see "Infopoint" chapter)
	Luminaire suitable for offices			Luminaires with electronic wiring and limited surface temperature		Watertight product suitable for installation in cold rooms
	ENEC Certified product			Protection against electric shock - Appliance class		Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard)

Colors

	AL	Aluminium		BK	Black / Matt Black		WH	White / Matt White
	AN	Anthracite		GR	Grey			
	B	White		RD	Red			

Acronyms

1x -> 6x Number of sources	FDO Flat Diffuser Opal	RVS Flow recuperator and molded glass
2M specular louvre	FDP Flat Diffuser Microprismatic	RVSS Flux recuperator and laminated moulded glass
2MG specular louvre, high efficiency	FP Version for Plasterboard	S Structure
2S semi-specular louvre	FRONT Asymmetric distribution with deep bilateral	Sensor Sensor (refer to the "Management of light")
2US semi-glossy louvre	GSP Glare Screen Prismatic	Sensor Sensor with corridor function (refer to the "Management of light")
3AO Matt silver decorative louvre	HCL Human centric lighting (see the section "Management of light")	CF the "Management of light")
3DEC White decorative louvre	HF Electronic wiring	SF Soft opal screen
AB White trim	HO High Output	SL Flat smooth diffuser in methacrylate
AMPIO Wide distribution	HS Hard Skin - high chemical resistant body	SMP Flat cover microprismatic
AS Asymmetric	HST Glass stabilised via heat soak test	SOP Opal PMMA flat diffuser
BAT Batwing distribution - dual asymmetric	HT High temperature	SP Flat diffuser, prismatic in methacrylate
CLO Constant light output (see the section "Management of light")	Ice Version suitable for refrigeration cells	SP PC Flat PMMA prismatic cover
CONC Concentrated distribution	II Class ii	SPOT Concentrated distribution
CR Fast connection	IKxx Impact resistance	ST Narrow body
D Curved diffuser	IND Indirect light output	SX Left
D1-10V Dimmable 1 - 10 volt wiring	INT Internal	TK Product installable on Binario 3F
DA Twin-circuit	IPxx Liquid ingress protection	TW Tunable White
DALI Dali digital dimmable wiring	L Lenses	UGR Luminance control lens
DALI DALI dimmable cabling for Tunable	LA Wide version luminaire	UR95 Resistent to relative humidity up to 95%
DT8 White	LED Light emitting diode	VA Frosted glass
DE Dual emission	LGS Flat PMMA, with low luminance microprismatic cover	VOP Opal enamelled glass
DI Direct – indirect light output	Lxxx Appliance length xxx millimetres	VS Moulded glass
DR Rectangular diffuser	MEDIUM Asymmetric distribution	VSS Laminated moulded glass
DX Right	NL No power line	VT Transparent glass
E Efficiency	OCB Optics Control Black - LEED Compliant	WIDE Wide distribution
ELL Elliptical transparent methacrylate lenses	OCW Optics Control White - LEED Compliant	
ENP Non-permanent emergency lighting	OP Opal	
EP Permanent emergency lighting	P Surface luminaire	
EXT External	PC Polycarbonate	
FCH Version for metal panels with high structures	PCD Phase cut dimmable wiring	
FCL Version for metal panels with low structures	R Recessed version	
FD Fixture suitable FDP or FDO	RSP Flow recuperator with prismatic screen	

Product range

3F Architectural

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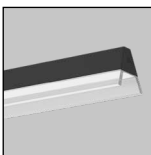
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3F HD R

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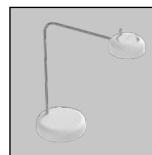
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3F Diagon P

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3F Petra

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P 200

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P 250

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Mira

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3F Emilio Wall

Recessed luminaires

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3F Six R

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3F LED Panel

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3F Diagon

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L 320

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L 340

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L 350

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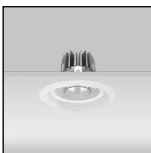
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3F Reno

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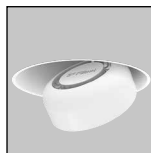
Galassia

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Lucequadro

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3F Emilio R

Systems and track-mounted products

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Zero 3F Track

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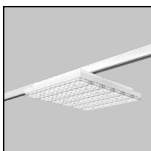
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Binario 3F

Waterproof and corrosion-proof

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3F Tank ATEX

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Beta 500

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3F Linda

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3F LEM

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Beta 235

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Beta i3F LED

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Retrofit Beta A3F - i3F

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Retrofit Beta 430

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3F Cub

Outdoor

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3F Manta

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3F 66

Light Management

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Analytical guide

This "LED catalogue 2021" is an informative product which is distributed free of charge.

While all efforts have been taken to ensure the accuracy of its contents, 3F Filippi shall not under any circumstances be held liable for errors, omissions, interruptions or delays concerning the information provided in the Catalogue, or for any resulting damage.

The data listed in this Catalogue may be approximate: please visit our website at www.3f-filippi.com or contact our Sales network to check for any updates.

As 3F Filippi S.p.A. are constantly striving to improve our products, we reserve the right to modify the contents of this publication and the technical specifications of products contained herein without prior notice.

2021 news



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Zero 3F

Page 136 / Surface luminaires and suspensions



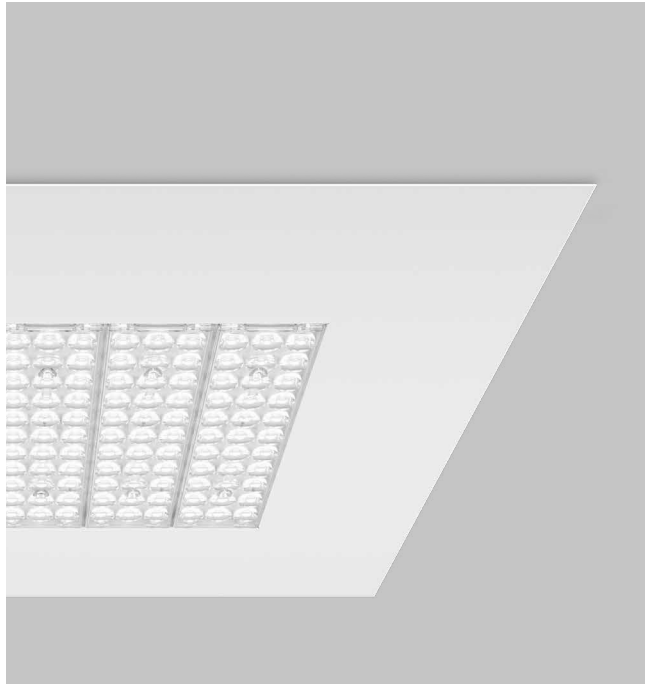
Zero 3F Track

Page 312 / Systems and track-mounted products



L 340

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3F Six R

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3F Tank ATEX

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Beta 500

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222	3F Diagon Lay-in installation		•	•	•	•	•
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230	3F Diagon Pull-up installation		•	•	•	•	•
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250	L 340 Lite		•	•	•	•	•
252	L 340 Tunable White		•	•	•	•	•
254	L 350 LED		•	•			
258	L 360		•	•	•	•	•



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264	L 560 LED			•			•	•	
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282	3F Reno White			•	•	•	•	•	
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298	Galassia 220			•	•	•	•	•	
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394	3F Tank ATEX	•	•	•	•	•	•	•	•
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418	3F Linda LED	•				•			•
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452	3F LEM High Output	•				•			
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478	Beta 235 LED Steel	•				•			•
486	Beta 235 LED Stainless Steel	•				•			•
492	Beta i3F LED	•							•
498	Retrofit Beta A3F - i3F	•							
502	Retrofit Beta 430	•							
506	3F Cub LED	•							•
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Industry



Offices



Architecture



Retail



Healthcare



Schools



Sport



Transport



Quality

Absolute transparency with the market is one of our most abiding values. Ever since it was founded, our company has always offered fixtures that offer guaranteed performance, establishing itself as a reliable partner for the creation of any lighting project.

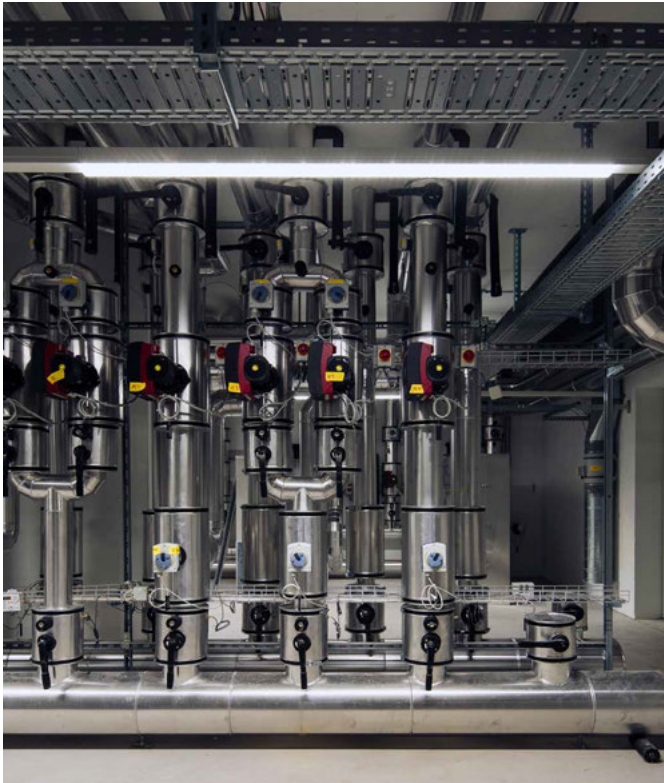
Our products are at the heart of everything. Each of them is created to have the best possible performance and durability, and are tested and verified in our laboratories. In fact, 3F Filippi uses cutting-edge systems like the Goniophotometer to perform photometric calculations with absolute precision and invests a significant portion of its resources in Research and Development to stay up-to-date on the latest technological innovations available on the market.

Our employees are highly motivated, knowledgeable, and passionate: this is the starting point for obtaining customer satisfaction.

Our sales force is always ready to support you so you can obtain the best results.

From the initial phases of your project, we provide information on our fixtures, processes, prices, and services. We are at your disposal to create custom solutions for your experience.

Our values



RELIABILITY AND TECHNIQUE COME FIRST

3F Filippi's commitment is to offer its customers the best technology available on the market so that every single Watt used is optimised to give the highest level of illumination. Whenever they pick one of our products, customers must be certain they are choosing **the best on the market** in terms of technical performance, reduced energy consumption, and reliability.

LISTENING TO THE CUSTOMER ALWAYS PROVES OUT.

Customers are the ideal partners when we talk about ideas, environmental topics, and increasingly green technical solutions. They help us analyse the present and imagine the future, considering several points of view.

Quick and easy installation have always been a benchmark for 3F Filippi, so we take the installers' feedback very seriously. In response to their observations we have developed, for example, the Fast Wiring for 3F Linus and 3F HD, as well as the Quick Connection for our industrial products.

All of these are optimisations that help those working in the construction site to save time, effort, and money.





WE BELIEVE IN THE RULES

The interpretation of the architectural spaces and the lighting effects within them must always follow the current standards.

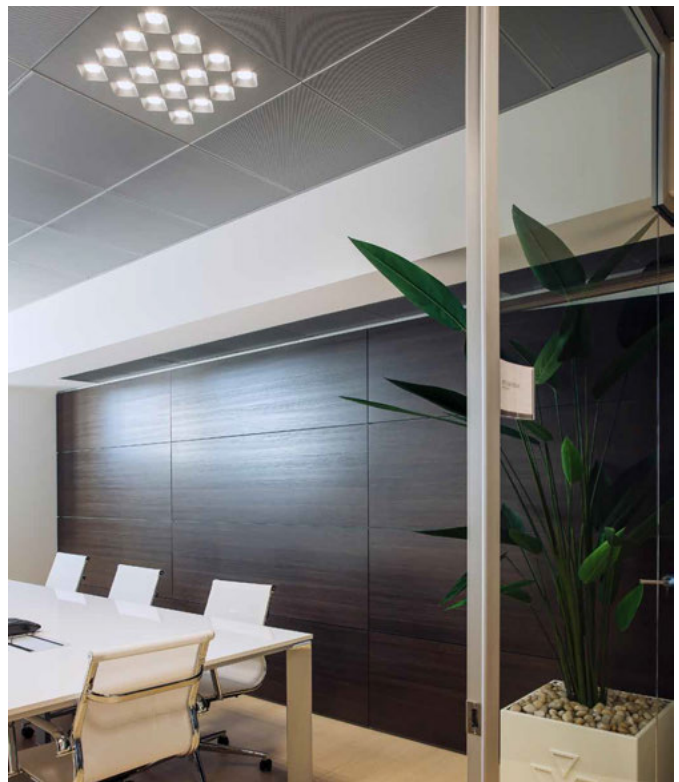
These rules derive from the experience of competent professionals, able to design a healthy and comfortable environment for those who experience it.

That is why, since 1952, 3F Filippi has been developing cutting-edge systems and instruments to **respond to the requirements** of the strictest standards, often before they become mandatory: We feel that we cannot show respect for the customer if we do not respect the rules.

IMPROVING PEOPLE'S LIVES

Light is a physical phenomenon that profoundly impacts every aspect of our lives. People spend most of their day indoors and 3F Filippi products are there to light up the hospitals where you were born, the schools you attended, the companies and offices where you work, and the shops you frequent.

Since this lighting accompanies every moment of your life, we feel it is our fundamental duty to **offer the best light for your wellbeing**. And nothing could make us happier.



Laboratory Tests

GONIOPHOTOMETER



Research and Development plays a fundamental role in 3F Filippi's growth strategy.

This is why the company dedicates a significant portion of its resources each year to always be up-to-date with the most recent innovations available, like **the rotating mirror Goniophotometer**, i.e., the most technologically advanced instruments in the industry to perform extremely precise checks.

All measurements are done inside a laboratory that occupies 210 m² of surface area, with a height of 8 m, and in which all the different parameters are continuously checked, including electrical stability, air speed, humidity, and temperature.

3F Filippi is one of the few European companies to possess this type of instrumentation and, therefore, can certify its products according to the recent standards, UNI EN 13032 and IES LM-79.

The use of this technology allows us to guarantee quality, reliability, and the authenticity of the data reported.

Tests that can be carried out:

- Photometric measurements (intensity, distribution, luminance, etc.)
- Colorimetric measurements (light spectrum, colour temperatures, colour yields, etc.).
- Precise thermal measurements on the internal components of the device

The photometric laboratory, which is CTF – Stage 2 certified by a Third Party (certification can be downloaded from www.3F-Filippi.com), is subject to IMQ monitoring and allows all photometric and colorimetric measurements of the products in the catalogue, according to the various international standards.

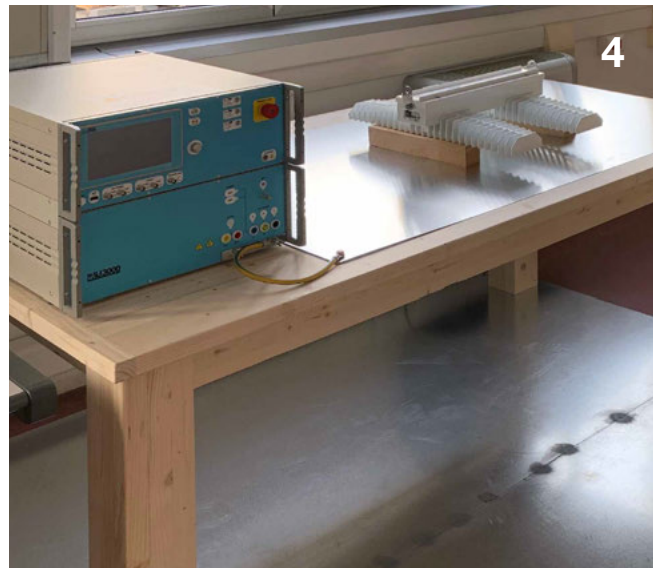
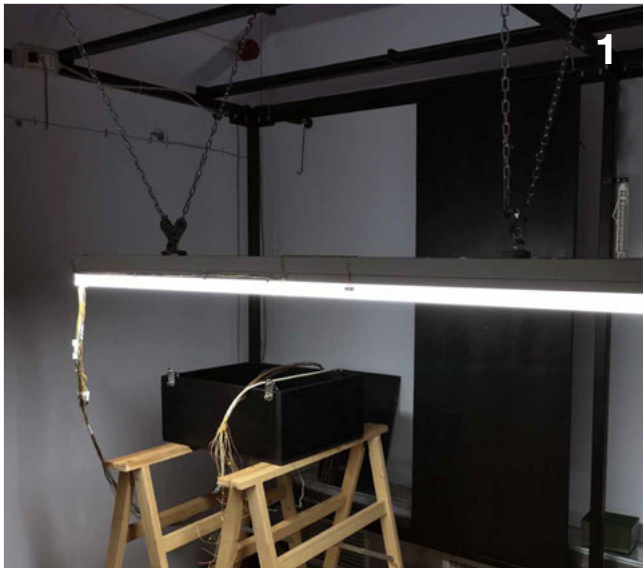
TESTS AND INSPECTIONS

3F Filippi devices are built and tested in compliance with current national standard CEI 34-21, European standard EN 60598-1, and international standard IEC 60598-1.

This allows us to independently perform the **valid tests for product Certification**: this significantly speeds up the development phases, to the customer's advantage, ensuring the safety, quality, and long life of the fixtures.

This is why the company constantly invests in updating its laboratories, which are IMQ certified (certifications can be downloaded from www.3F-Filippi.com), where the following tests are performed:

1. Temperature
2. Electromagnetic compatibility
3. UL Conformity: Rain and Sprinkler
4. EMC Compatibility: Burst and Surge
5. Liquid seal tests
6. Ball impact resistance (DIN 18032-3)
7. Dust seal
8. Resistance to salt spray
9. Impact Resistance



We work hard each day to give our best



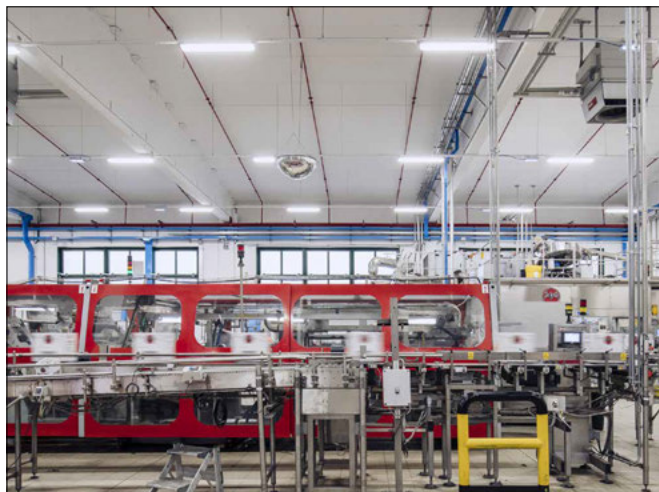
3F Filippi works alongside the best specialists, providing them with the most advanced instruments and the support of its lighting office (whose activity is ISO 9001 certified).

The company works through a close-knit network of regional and foreign offices in the European, Latin American, Asian, and Oceanian markets and impeccable logistics supported by a modern fleet of company vehicles allows 3F Filippi to optimise its delivery times and shipping of fixtures to its customers throughout the world.

Since 2018, 3F Filippi and Targetti, two companies that made the history of lighting in Italy, represent a cohesive unit

that acts as a unique partner to professionals and planners looking for quality solutions.

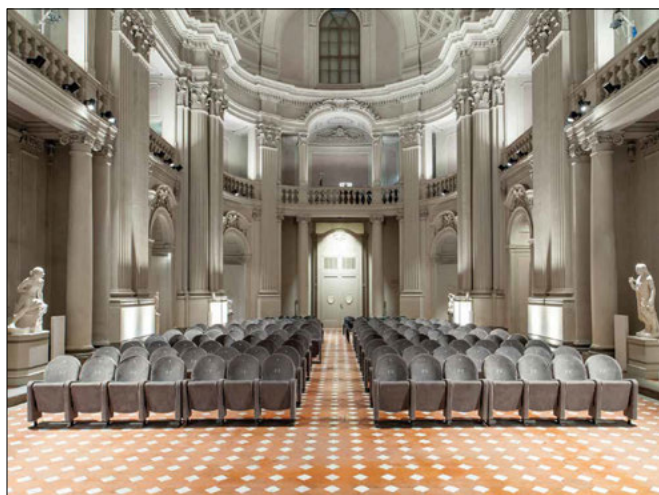
With decades of experience and the combination of skills in the technical and architectural lighting areas, the group responds and meets any type of need and design approach. Our partner can count on a vast selection, from the highly technical and functional products in the 3F Filippi catalogue to Targetti fixtures for indoor and outdoor architectural lighting, and up to the range of LED sources and fixtures offered by the Duralamp brand.



3F Filippi

Since 1952, 3F Filippi S.p.A has been a benchmark in the field of efficient technical lighting fixture design and manufacturing.

The products, which are designed and created exclusively in the Pian di Macina - Pianoro (Bologna) facilities, are an expression of the company's ability to combine the traditional and the modern, craftsmanship and technology, appearance and functionality, and efficiency and sustainability.



TARGETTI

Targetti has been designing and producing indoor and outdoor architectural lighting fixtures since 1928.

For over ninety years, its products have been illuminating prized artistic and architectural works throughout the world and are the expression of innovation, research, and attention to detail.

The company has always placed its experience and expertise at the disposal of architects, designers, and professionals in the lighting world.



DURA LAMP

With decades of experience and solid technical skill, Duralamp offers a wide range of high quality and efficient products.

Thanks to its expertise, it selects the latest generation components, engineering reliable products, with an offer that includes sources, LED strips, and lighting fixtures.

3F Filippi



Sustainability

3F Filippi wants to contribute to spreading and development a new consumption model that is not based on a “disposable” economy but on products that can be updated over time and on which maintenance can be performed, as needed.

Our products have always been built as platforms that can adapt to the customer’s needs and technological development, for solutions that are always more efficient.

To reach this goal, we focus on increasing the performance of the products and reducing the

environmental impact of the manufacturing processes. 3F Filippi actively collaborates with Lighting Europe to develop increasingly advanced systems, in line with European and International standards.

It is also a member of ASSIL (Italian Association of Lighting Manufacturers), a partner and institutional supporter of IES (Illuminating Engineering Society of North America), AIDI (Italian Lighting Association), and APIL (Association of Lighting Professionals) with whom it shares the values of the Carta della Luce (Light Charter).



Optimized manufacturing

At 3F Filippi, we work to produce **increasingly efficient products with less impact on the environment**, throughout all phases of the life cycle.
Here is what we are already doing today:

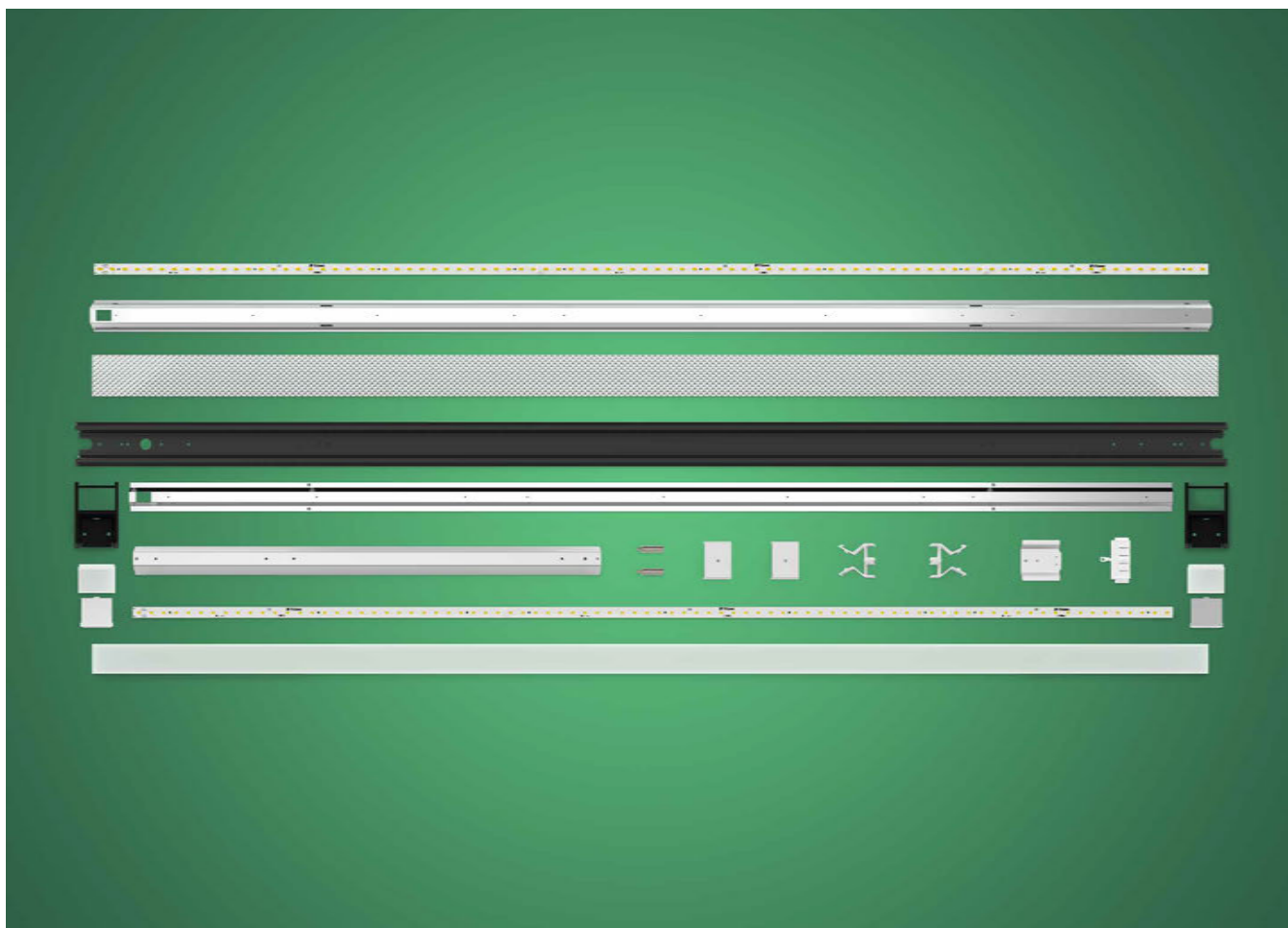
- We choose the **best** and most efficient components on the market
- We manufacture **exclusively** in two facilities located in the same district (Pian di Macina - Pianoro - Bologna).
- We use **photovoltaic panels** that cover 30% of the energy needs, with the remaining 70% from **certified renewable**

energy sources

- If quality is equal, we choose the closest supplier to our facility
- **ISO 14001** certified, we reorganise and rationalise the company's environmental management
- We apply the **Lean Production** system that aims to minimise waste, with the goal of removing it
- We use **green packaging** that is highly recyclable and in the most compact sizes possible. This has a significant positive impact on transport and stocking of our products



Ecodesign: a lifetime design



The Ecodesign Regulation governs the criteria that have as their purpose the creation and marketing of durable and innovative products that are conceived, designed and manufactured in such a way as to allow their reuse, refurbishment, improvement (upgrade) and recycling.



3F Filippi is a company sensitive to environmental issues: we have been applying the provisions of the Regulations for years now (remember the "EDG - Economia di Gestione" campaign launched at the end of the 1980s).

Our products are easily disassembled to facilitate the disposal of each single component, designed to achieve maximum recyclability.

In particular, the light sources and power supplies are:

- accessible and available so that checks can be easily carried out.
- removable to ensure the reparability of the lighting fixture.

- replaceable to allow for any updating of the lighting fixture, where more efficient or otherwise better components are available on the future market.

Remember that the components must be replaced and accessible only to qualified personnel, the manufacturer or his assistance service.

3F Filippi aims to reduce environmental impacts along all stages of the product life cycle, through the use of the Life Cycle Assessment and focusing in particular on:

- achievement of the maximum possible energy efficiency, considering the substantial contribution to achieve the objectives of reducing greenhouse gas emissions.
- maximization of product life span: we currently achieve service lives of 100,000 hours, a result we intend to surpass in the coming years.

LEDs: photobiological safety

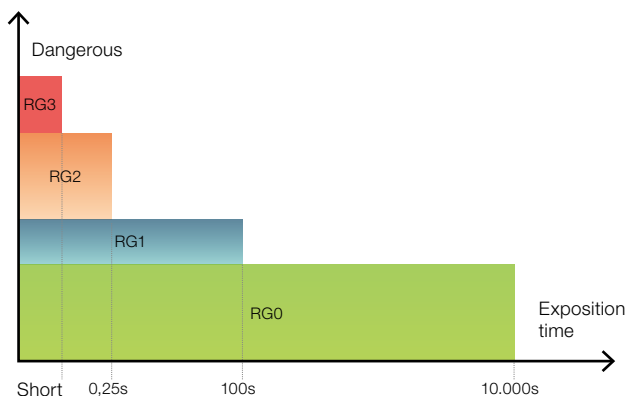
IS LED TECHNOLOGY SAFE FOR HEALTH?



Among 3F Filippi's top priorities is the well-being of those who are illuminated by our products. For this reason, we pay a great deal of attention to photo-biological safety, using the best sources with a low impact on human health.

Unfortunately, some less scrupulous manufacturers use low-quality sources during prolonged exposure, emit radiation which is damaging to organs of the human body, such as the eyes and skin.

A number of Photobiological Safety Risk Groups (IEC62471) have now been defined for the amount of radiation emitted from all sources in the range of wavelengths from 200 nm to 3000 nm, providing a clear indication of the limits of maximum exposure for each group.



Risk classes

In accordance with Paragraph 6.1 of EN 62471: 2010, the risk groups (for blue light) are defined as follows:

RG0 (Risk Exempt): The source does not cause any photo-biological risk. Requirement met by any lamp that does not cause a blue light (BL) retinal risk with an exposure time of up to 10,000 s (about 2.8 h).

RG1 (Low Risk): The source does not cause risk due to normal operating limitations on exposure. Requirement met by any source that exceeds the limits of the Exempt Group but does not cause a blue light (BL) retinal risk with an exposure time of up to 100 s.

RG2 (Moderate Risk): The source does not cause a risk due to an instinctive reaction when looking at very bright light sources (or due to a sensation of thermal discomfort.) Requirement met by any source that exceeds the limits of Risk 1 Group but does not cause a blue light (BL) retinal risk with an exposure time of up to 0.25 s (aversion response).

RG3 (High Risk): The source can constitute a risk even due to momentary or brief exposure.

Sources that exceed the limits of Risk Group 2 are included in Risk Group 3.

NOTES

The current standard EN 60598-1 concerning indoor luminaires indicates that RG0 or RG1 risk groups are acceptable for safety purposes. With the publication of standard EN 60598-1: 2015 (Luminaires - Part 1: General requirements and tests), the acceptable levels for safety purposes were definitively established.

In Paragraph 4.24.2 (Blue light retinal risk), the following is indicated:

“For luminaires that use light sources from risk group RG0 (unlimited) or RG1 (unlimited), in accordance with IEC/TR 62778, or which have been judged as being finished products ready for use, belonging to risk group RG0 (unlimited) or RG1 (unlimited), the requirements concerning blue light retinal risk do not apply.”

For luminaires that have an ETHR illuminance threshold, evaluated in accordance with IEC/TR 62778, additional requirements are applied for evaluating how far the product is from the threshold between RG2 and RG1. In such cases, although the luminaire cannot be considered to be dangerous, warnings and markings are used to alert the installer or user to the possible risks associated with direct and prolonged viewing of the source.

From a technical perspective, RG0 and RG1 groups cannot be said to be equivalent, or to be both considered as "exempt". The two photobiological risk groups are in fact distinguished as follows:

RG0 (Risk Absent): the source does not present any photobiological risk.

RG1 (Low risk): The source does not cause risk due to normal operating limitations on exposure.

Currently, therefore, there is no regulation that declares the various photo-biological risk groups to be equivalent, or indeed that united them, rendering both exempt. Exposure to RG1-group luminaires is not considered dangerous under ordinary conditions of use, due to the fact

that periods of exposure of over 100 seconds are considered to be "unlikely", although not impossible, as this cannot be predicted in the design phase.

Risk group RG0, on the other hand, has a period of exposure greater than 2.8h and as such, it can be stated with greater confidence that a luminaire would not be viewed directly for this long.

The demand for RG0 light sources could be considered redundant, but it is not stated anywhere that it is prohibited to request the use of RG0 luminaires, or that these can be considered equivalent to those belonging to the RG1 risk category.

As explained above, the RG0 risk group represents a cautionary, optimal class of light source.

A company that exhibits extra caution with regard to the safety of its operators, and decides to install equipment belonging to the risk-exempt RG0 category, could therefore be seen to be excessively conservative, but cannot certainly be criticised for having requested compliance with a parameter that provides greater safety for all involved.

European legislation states that companies, specifically the statutory employer, evaluate and manage risks to workers' health and safety. Among the risks that the employer must evaluate is any photobiological risk deriving from exposure to artificial optical radiation.

The reference standard is IEC/EN 62471:2010, which does not define a threshold marking safe from unsafe, but rather defines classification of sources into risk groups.

Limitations of use or warnings for the user are contained in the corresponding product standards, while a product marking guide is contained in IEC TR 62471-2:2009.

3F Filippi is committed to providing the most technologically advanced luminaires and always chooses the LED sources with the lowest photobiological risk group available on the market for its customers.

We also frequently find that some manufacturers declare data which is inconsistent with the components available on the market, and which must therefore be untrue.

If customers are offered product solutions similar to those which 3F Filippi declares for a certain class (for example RG1 - low) but other manufacturers state as being of a lower class (e.g. RG0 – risk absent), they can protect themselves by requesting that those manufacturers provide the certificates proving that the sources actually meet this photobiological risk class.



Instruments

The 3F Filippi catalogue is intended to be a valid “work instrument” that is continuously evolving, as is the lighting market, customer demand and lighting technology.

For 3F Filippi, operating in this industry means continuously being committed to increasing not only the performance of each product, but also the knowledge of artificial light and the infinite interactions that define the relationship between people and the environment.

This calls for continuous research and constructive networking with planners, in particular lighting designers, to the full extent of their individual skills and specialities.

We are convinced that a new lighting culture may arise only by working together to share the standards on mandatory lighting design, giving rise to all the necessary initiatives for the development of a new lighting culture.

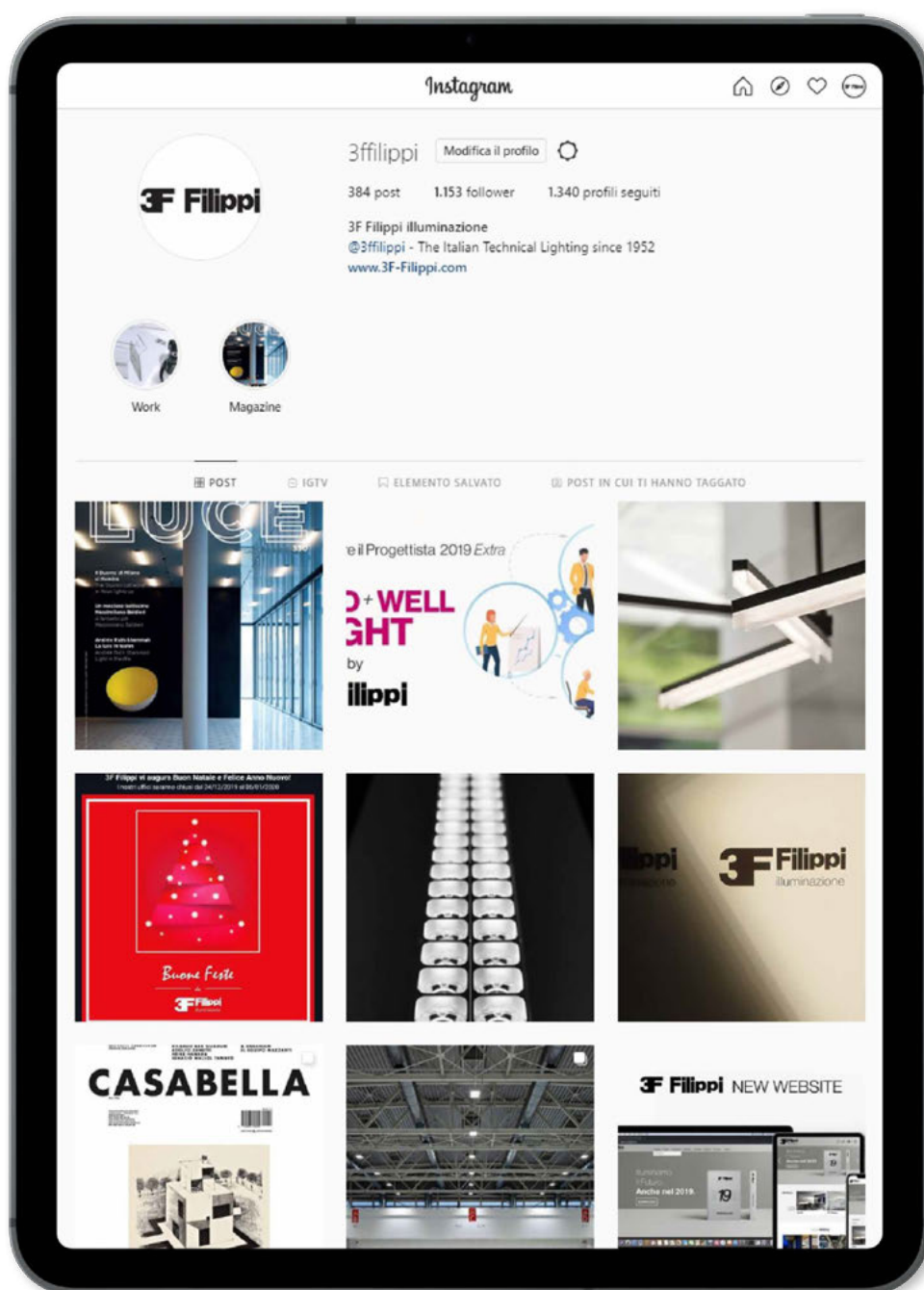
For this reason, we signed the APIL Lighting Charter (Associazione Professionisti dell'Illuminazione).

Sharing experiences

There is no treasure more valuable than experience in the field. That is why we publish **our monthly Newsletter, "lightUpdate"** with reports on what designers all over the world make with our products. In the Case History section of our website you can find a collection of these references.

We publish images every day on social networks (LinkedIn, Instagram, and Facebook) to show how light influences our environment and its perception.

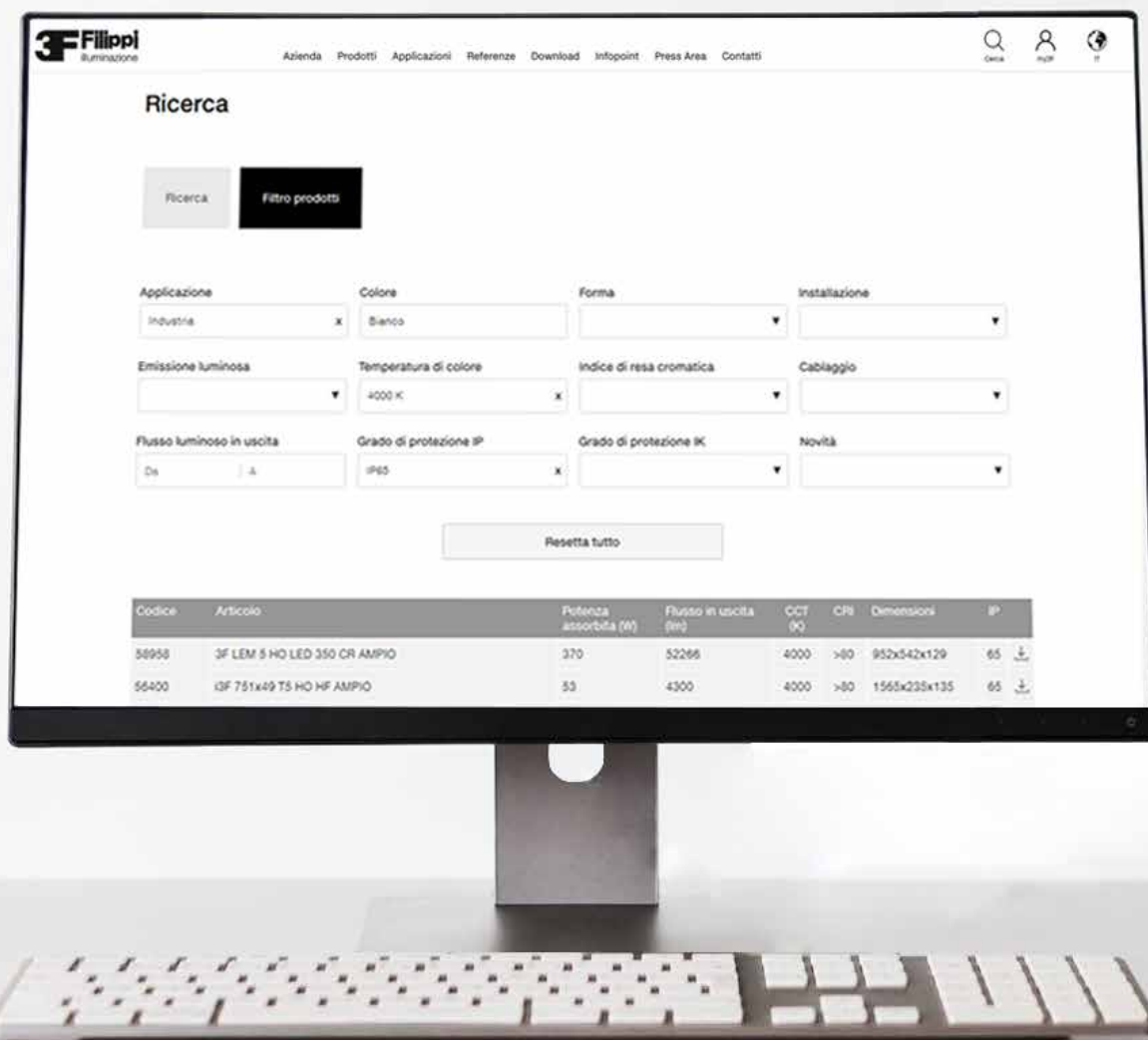
Would you like to share your project? Tag us in your posts using @3FFilippi #3FFilippi



lightUpdate newsletter



Are you looking for the right product?

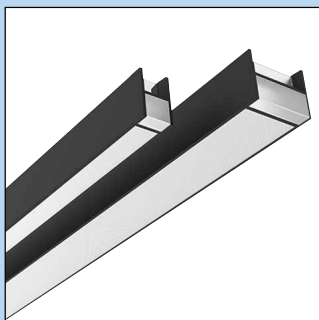


The website www.3F-Filippi.com was designed to make the research process more straightforward, in 6 different languages.

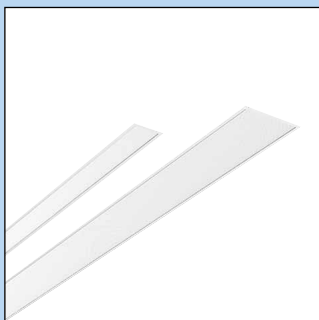
We decided to structure the information following the “**Research by code**” that lead directly to the item, the

“**Product Filter**” to choose the most suitable product from a dynamic screen and the “**Configurators**” that also help less practised users with **guided creation of modular products**.

3F HD



3F HD R



3F Mirella



3F Mirella Floor



3F Trittico



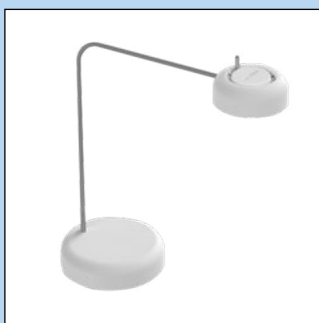
3F Solo



3F Filoluce



3F Emilio Table



3F Eldorado





Page	Product	Recessed	Ceiling	Suspended	Floor	Table
28	3F HD					
36	UPDATE 3F HD Direct - Single		•	•		
44	UPDATE 3F HD Direct - Channel		•	•		
48	UPDATE 3F HD Direct/Indirect - Single			•		
54	UPDATE 3F HD Direct/Indirect - Channel			•		
64	3F HD R					
66	UPDATE 3F HD R Recessed - Single	•				
72	UPDATE 3F HD R Recessed - Channel	•				
80	3F Mirella					
82	3F Mirella Direct			•		
86	3F Mirella Direct/Indirect			•		
92	3F Mirella Floor					
92	3F Mirella Floor				•	
96	3F Trittico					
100	UPDATE 3F Trittico			•		
104	3F Solo					
108	NEW 3F Solo Direct		•	•		
112	NEW 3F Solo Direct/Indirect			•		
118	3F Filoluce					
122	UPDATE 3F Filoluce				•	
126	3F Emilio Table					
128	3F Emilio Table					•
208	3F Eldorado					
208	NEW 3F Eldorado	•				





3F HD

> www.3F-Filippi.com/3F HD

Design by **Park Associati**

3F HD is available with different photometric distributions that are obtained with opal and prismatic screens.

The fixture is also available in a LEED compliant version equipped with an OCB optic, a unique solution with innovative technology to control luminance in the workplace in compliance with LEED specifications.

3F HD is composed of an H section aluminium linear profile. Available in various lengths it provides direct or direct/indirect light emission.

3F HD can be used easily in continuous lines with a significant reduction in installation time thanks to the presence of concealed joints and standard mounted plug-sockets.

The lighting head it is equipped with allows for a 360° perception of the fixture reaffirming its presence and uniqueness.

This product is also available in this version 3F HD R (page 64).

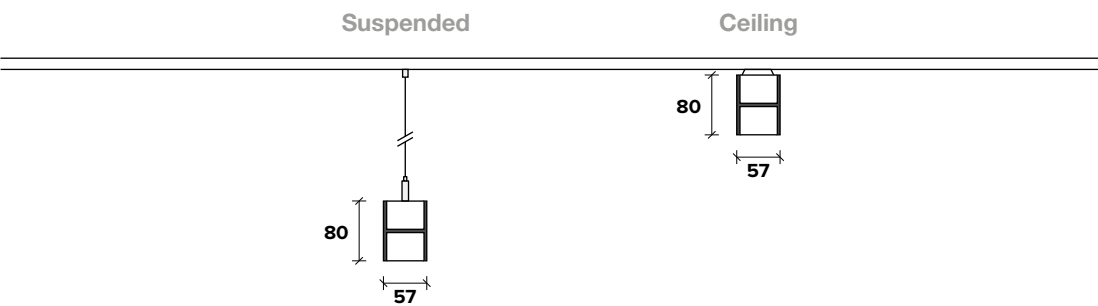
+ Overview

- Luminous efficacy up to 123 lumen/watt.
- Luminous fluxes from 1250 to 13135 lumens.
- Average luminance <200 cd/m² (OCB version).
- Extensive installation pitch.
- UGR <16 (OCB version).
- LEED Compliant.
- Available with OC lenticular optics or diffusers.
- Module lengths optimised to reduce installation time and required accessories by up to 20%.
- Quick and easy cleaning.
- Luminous end caps.
- Seamless screens (up to 15 metres in length).
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Thanks to the FastWiring system, the installation time is drastically reduced.

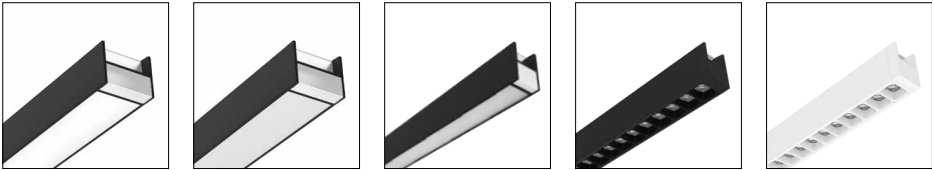
Page	Product	Ceiling	Suspended
36	UPDATE 3F HD Direct - Single	•	•
44	UPDATE 3F HD Direct - Channel	•	•
48	UPDATE 3F HD Direct/Indirect - Single		•
54	UPDATE 3F HD Direct/Indirect - Channel		•

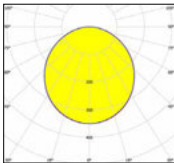
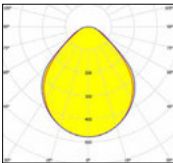
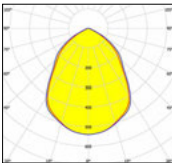
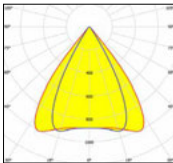
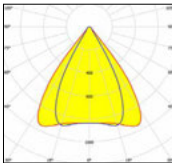
Product range

3F HD 50 Single/Channel



3F HD Direct Emission



	FDO	FDP	GSP	OCB	OCW	
Average luminance for angles> 65 (cd / m²)	>3000	<3000	<3000	<200	<1500	
UGR	<21	<19	<19	<16	<16	
Finishes	Silver White Black					
Photometric distribution						
Installation steps	Dt	1,29	1,16	1,14	1,34	1,32
	DI	1,24	1,18	1,18	1,00	1,00

NEW

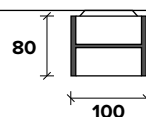
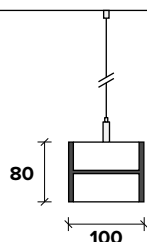
Arrange the version that best suits your needs quickly and easily
www.3f-illippi.com/en/3F-HD-configurator

3F HD 100

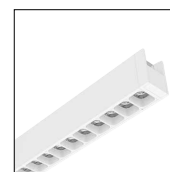
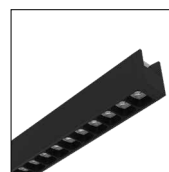
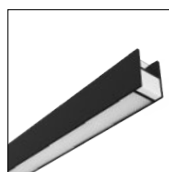
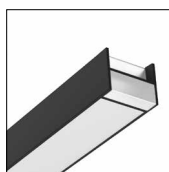
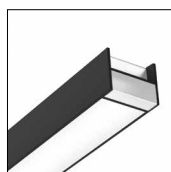
Single/Channel

Suspended

Ceiling



3F HD
Direct / Indirect
Emission



FDO

FDP

GSP

OCB

OCW

Average luminance
for angles > 65
(cd / m²)

>3000

<3000

<3000

<200

<1500

UGR

<21

<19

<19

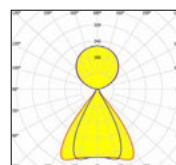
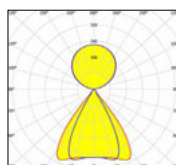
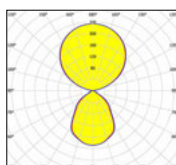
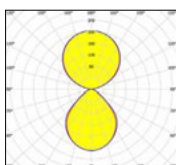
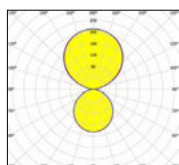
<16

<16

Finishes

Silver | White | Black

Photometric
distribution



Installation steps

Dt

1,40

1,50

1,45

1,50

1,50

DI

1,20

1,25

1,25

1,20

1,20

Screens and finishes

3F HD can satisfy all lighting needs. The system can be equipped with two different rollable flat PMMA filters, a prismatic screen designed especially for 3F Filippi and a series of OCB (Optics Control Black) optics, depending on the intended use of the environments.

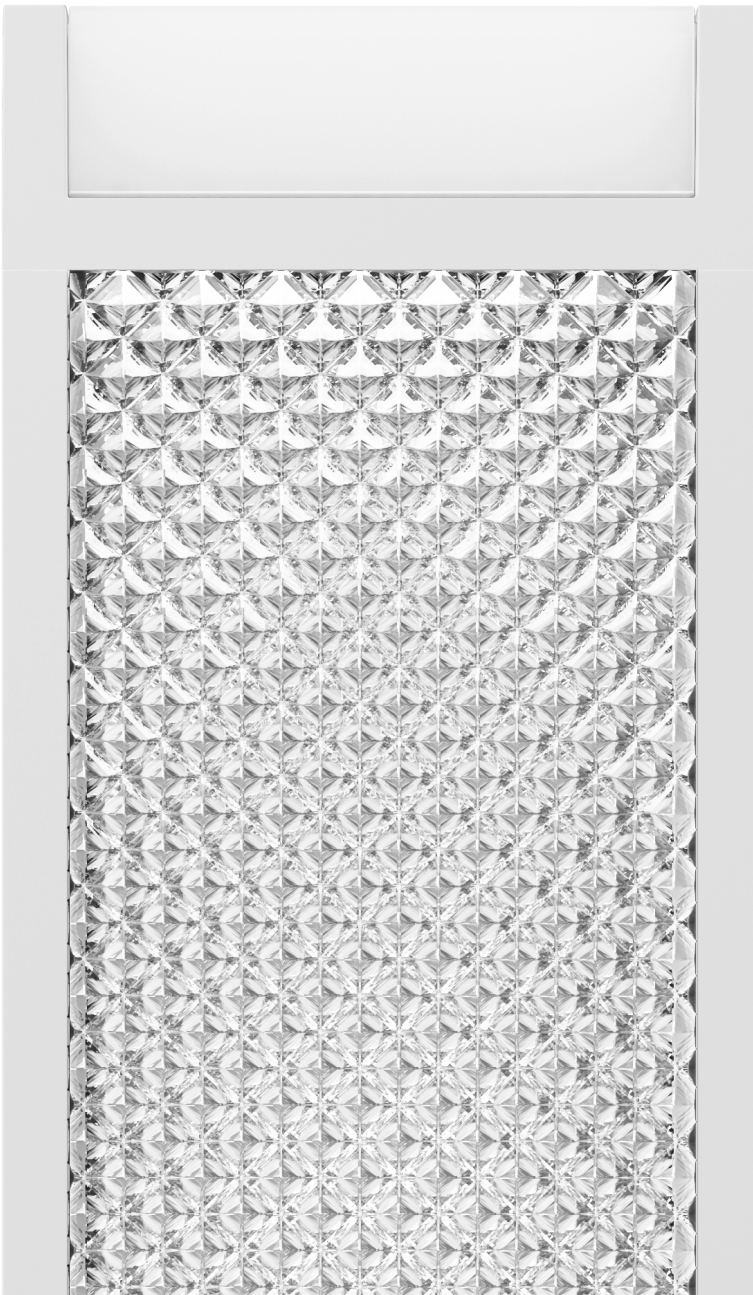
The FDO opal screen is suitable for areas that are not visually demanding such as waiting rooms and corridors, while the FDP (Flat Diffuser Micro prismatic) standard micro prismatic one ensures increased visual comfort for work stations.

Both filters do not require any visible joints for lengths of up to 15 metres thus ensuring the uniformity of the light diffusion.

The GSP (Glare Screen Prismatic) prismatic screen allows 3F HD to reduce progressive luminance, using the OCB optic on the other hand meets and widely exceeds luminance limits provided for in LEED certification for corners of more than 45° (<2500 cd/m²) and those of more than 65° (<200 cd/m²).

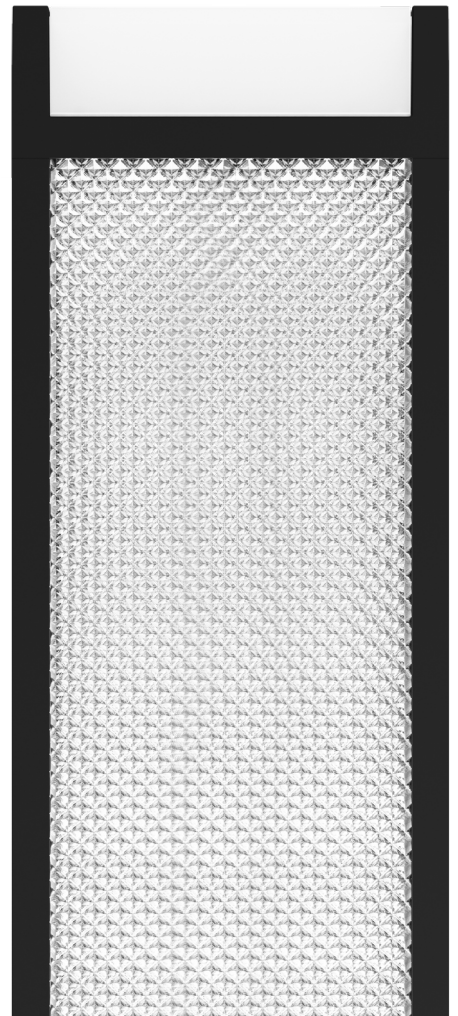
GSP

Prismatic screen

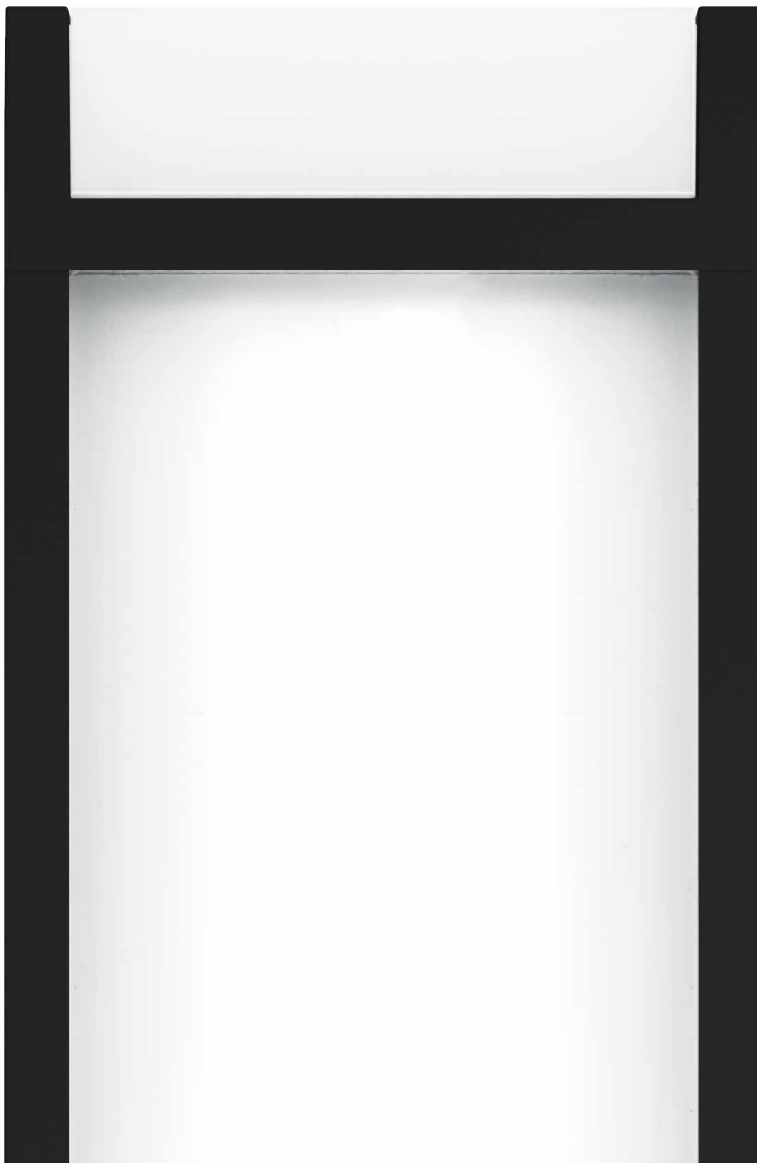


FDP

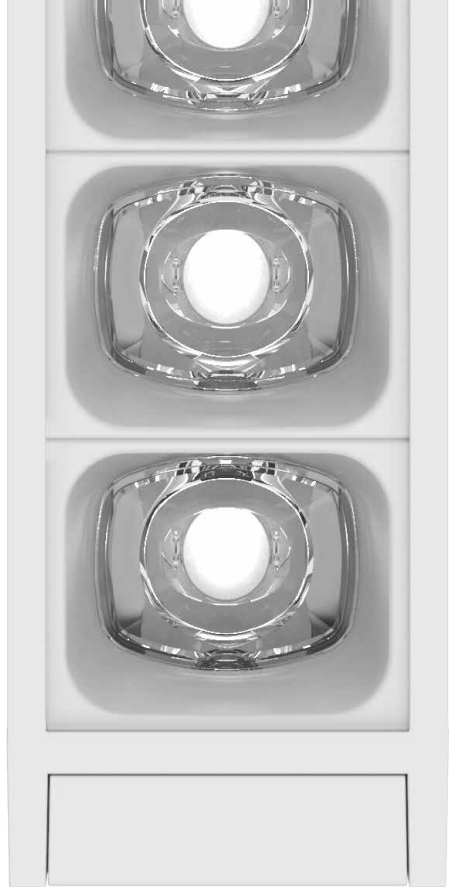
Flat micro prismatic diffuser



FDO
Flat opal diffuser



OCW
Optics Control White
Complies with LEED regulations



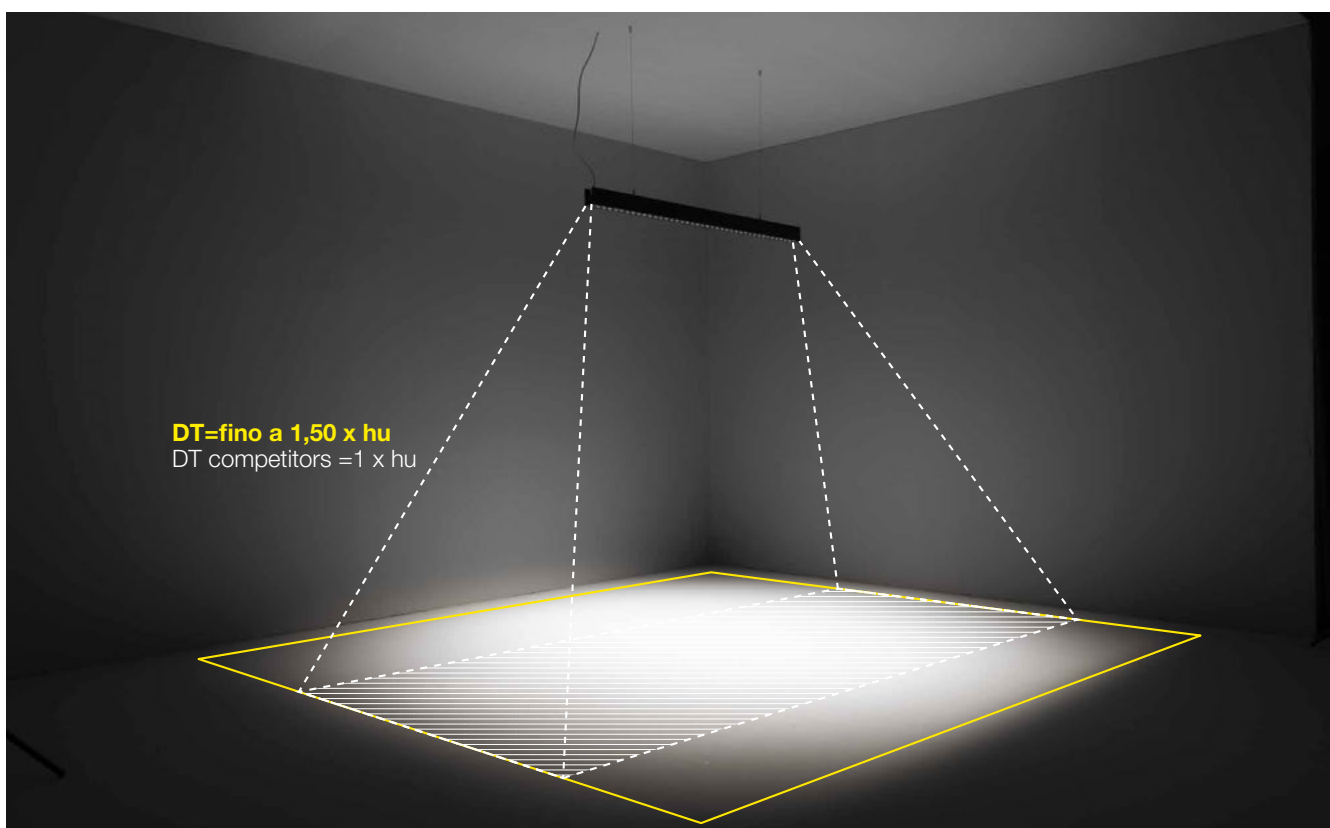
OCB
Optics Control Black
Complies with LEED regulations



Scale 1:1

Optimized distribution

The new optics from the OC (Optic Control) range were designed with the aim of obtaining the best lighting performance in terms of low luminance and uniformity of light distribution in the space: modern offices need spaces where the furniture can be arranged in a flexible way. For this reason the first step is to accept an ambitious challenge: to create an optic that can meet the stringent requirements of LEED certification with a product that can be installed at wide distances. With the solutions that were previously available on the market the distance was too contained and meant it was necessary to install a large number of fixtures to achieve the required performance in compliance with existing legislation.



Thanks to innovative Optic Control optics, the DT (transversal installation step, ie the installation distance between the luminaires) offered by 3F HD OCB is up to 50% more than the average of the homologous products proposed by the major brands on the market. The performance is obtained by maintaining 500 lux and ensuring, thanks to direct emission only, complete uniformity of the luminous flux on work stations (Direct/Indirect emission versions are also available).

3F HD

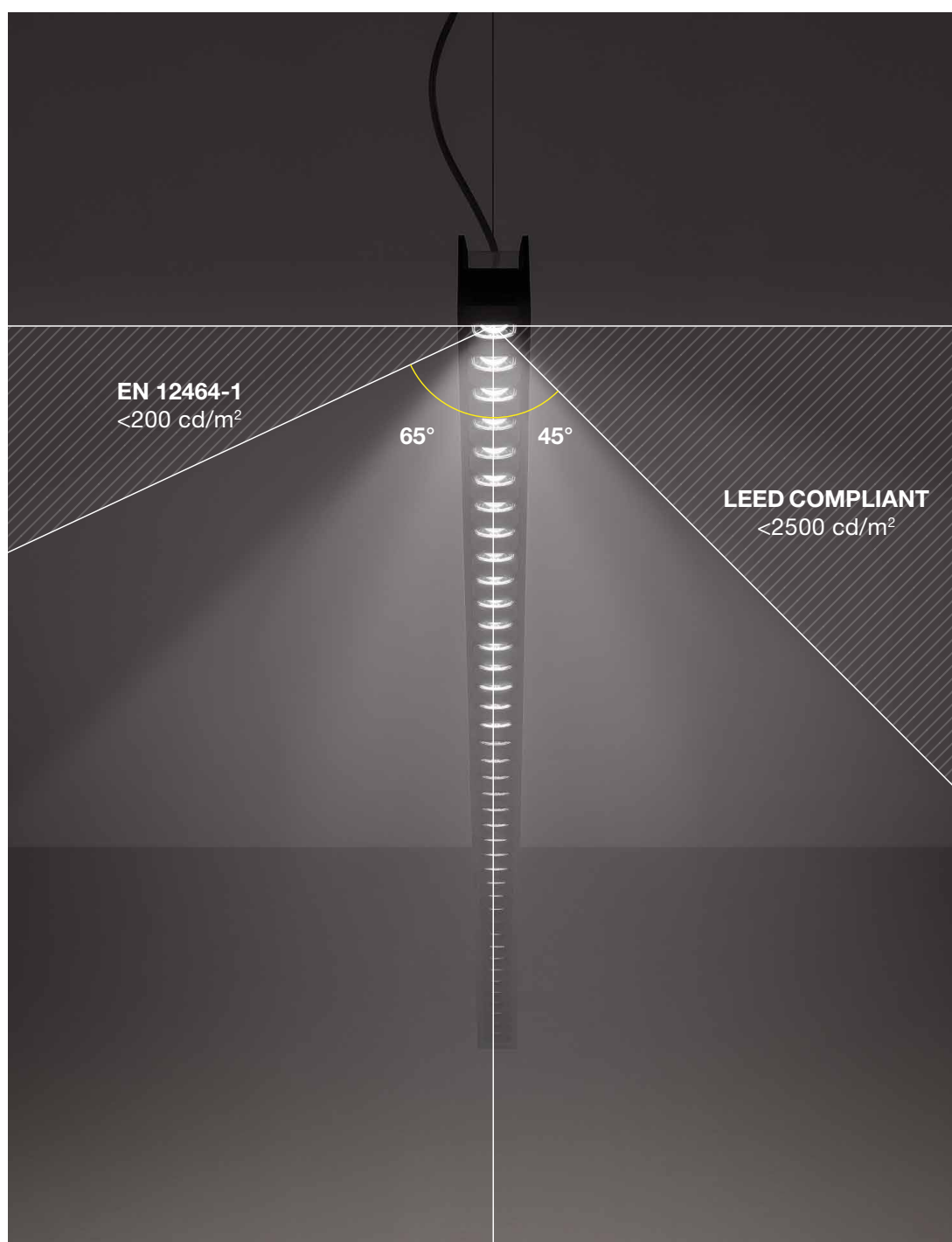


Competitors



LEED compliant

3F HD is the ideal technical solution to comply with indications from the most stringent environmental certifications and current legislation. The 3F Filippi system is **LEED compliant, with a luminance of less than 2500 cd/m²** for corners of more than 45°. The performance of 3F HD substantially meets the requirements of European standard EN 12464-1: if the maximum luminance required at 65° must be between 3000 cd/m² and 1500 cd/m², **the performance of the fixture at the same angle is lower than 200 cd/m² with UGR value <16.**



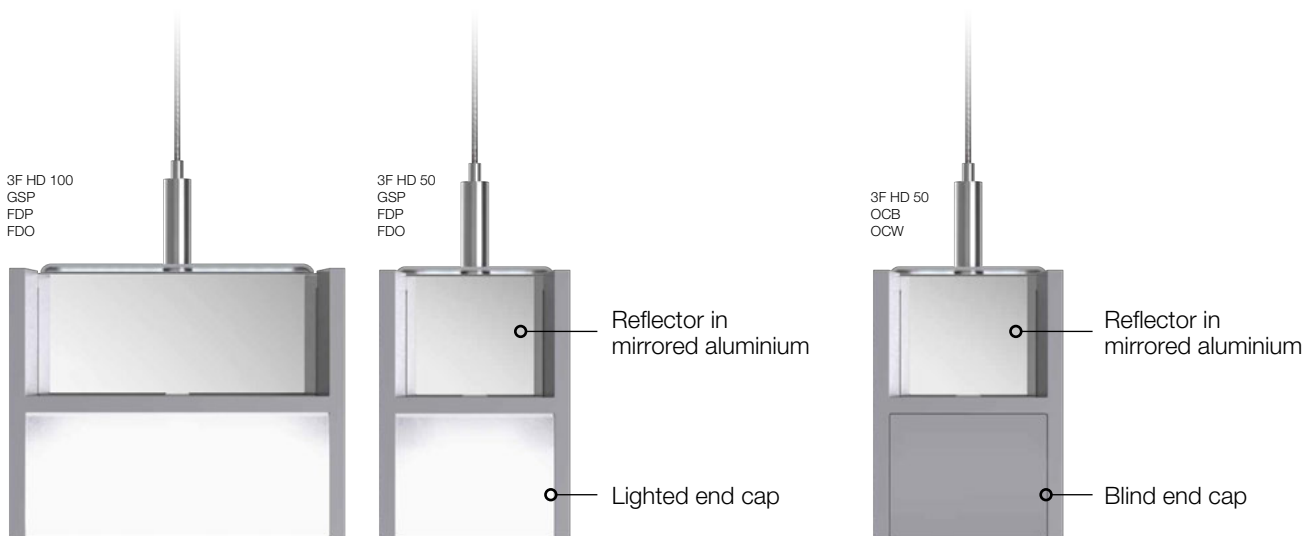
Product advantages

END CAPS

3F HD is a product created with two different types of end caps. While the OC (Optic Control - OCB and OCW) have blind caps, given that lighting and lighting distribution control are managed completely by the cells, those with screens use lighted end caps that perform the following functions:

- **Aesthetic:** the lower screen connected to the two end caps creates luminosity that eliminates the typical two-dimensional effect of similar products.
- **Functional:** when the product is installed near walls, the lighted caps mitigate the typical smudged light effect. On the other hand, when installed in open areas, its perception and light diffusion improve, even in the most open corners.
- **Lighting:** the luminous front component reduces the visual contrast, making the perceived light under the same product axis more comfortable.

All versions have a mirrored aluminium decoration that hides the access, giving the product visual depth.

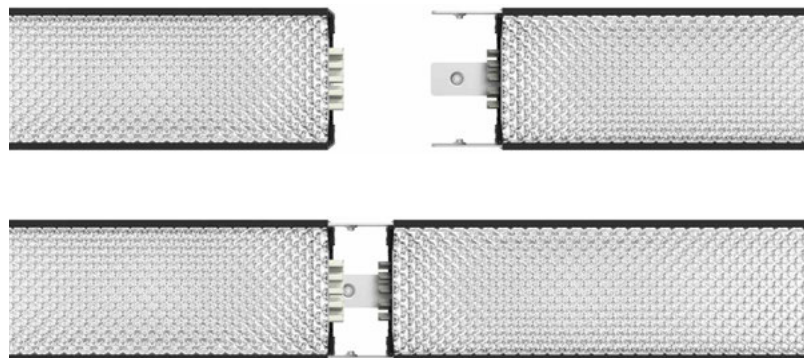


FASTWIRING SYSTEM

In the channel versions, the **FastWiring** system drastically reduces the installation time.

A plug and a socket are mounted at the beginning and end of each bar. Simply join them together and the connection is made automatically.

From the mechanical point of view, the connection is ensured by the (already mounted) joining elements inside the second body and fixing the safety hardware.







3F HD Direct - Single

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.

Removable gear-tray.

Lighting head caps with specular aluminium frieze.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Entrance to the upper power supply in proximity to a power head.

Branching via an irreversible quick coupling plug to connect the cable housing element to the socket.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- OC optic in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

FDO version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

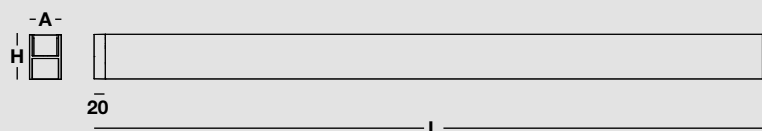
Installation

Ceiling mounted or suspension installation.

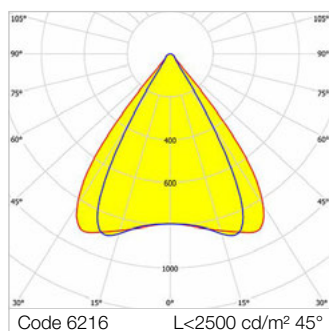
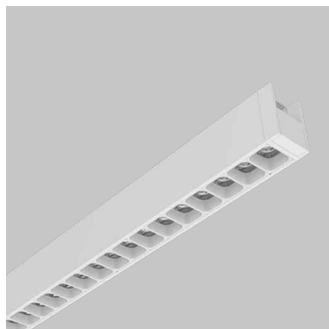
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F HD OCW Single



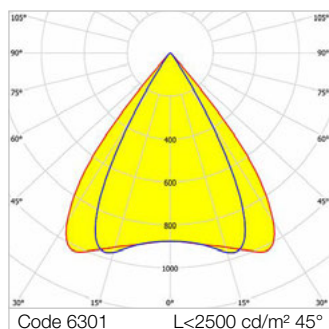
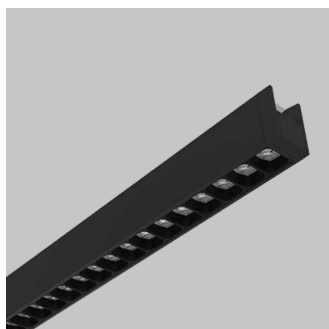
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <1500 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective white polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6215 <small>UPDATE</small>	3F HD50 WH 12/830 DALI OCW L1214	14.5	1696	3000	>80	1214x57x80
○ 6216 <small>UPDATE</small>	3F HD50 WH 15/830 DALI OCW L1508	18	2120	3000	>80	1508x57x80
○ 6217 <small>UPDATE</small>	3F HD50 WH 30/830 DALI OCW L2975	33	4240	3000	>80	2975x57x80

3F HD OCB Single



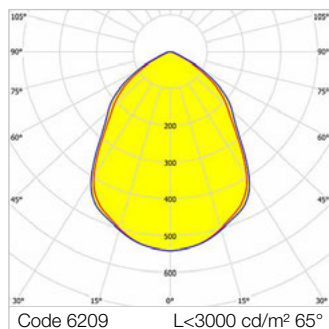
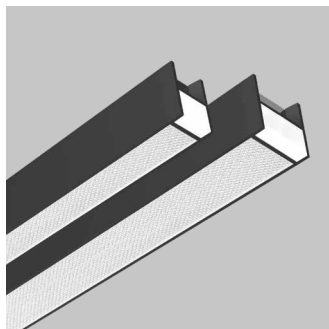
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <200 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective black polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

● 6300 <small>UPDATE</small>	3F HD50 BK 12/830 DALI OCB L1214	14.5	1570	3000	>80	1214x57x80
● 6301 <small>UPDATE</small>	3F HD50 BK 15/830 DALI OCB L1508	18	1963	3000	>80	1508x57x80
● 6302 <small>UPDATE</small>	3F HD50 BK 30/830 DALI OCB L2975	33	3926	3000	>80	2975x57x80
○ 6385 <small>UPDATE</small>	3F HD50 AL 12/830 DALI OCB L1214	14.5	1570	3000	>80	1214x57x80
○ 6386 <small>UPDATE</small>	3F HD50 AL 15/830 DALI OCB L1508	18	1963	3000	>80	1508x57x80
○ 6387 <small>UPDATE</small>	3F HD50 AL 30/830 DALI OCB L2975	33	3926	3000	>80	2975x57x80

3F HD GSP Single



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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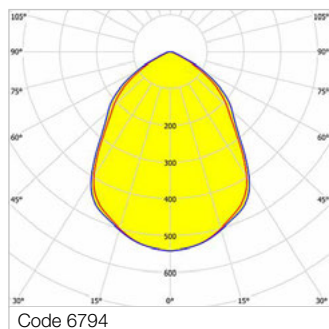
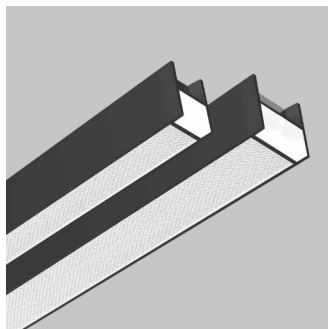
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6208	3F HD50 WH 13/840 DALI GSP L1214	14	1374	4000	>80	1214x57x80
○ 6209	3F HD50 WH 16/840 DALI GSP L1508	18	1718	4000	>80	1508x57x80
○ 6210	3F HD50 WH 32/840 DALI GSP L2975	35	3435	4000	>80	2975x57x80
● 6293	3F HD50 BK 13/840 DALI GSP L1214	14	1374	4000	>80	1214x57x80
● 6294	3F HD50 BK 16/840 DALI GSP L1508	18	1718	4000	>80	1508x57x80
● 6295	3F HD50 BK 32/840 DALI GSP L2975	35	3435	4000	>80	2975x57x80
○ 6378	3F HD50 AL 13/840 DALI GSP L1214	14	1374	4000	>80	1214x57x80
○ 6379	3F HD50 AL 16/840 DALI GSP L1508	18	1718	4000	>80	1508x57x80
○ 6380	3F HD50 AL 32/840 DALI GSP L2975	35	3435	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6227	3F HD100 WH 22/840 DALI GSP L1214	23	2617	4000	>80	1214x100x80
○ 6228	3F HD100 WH 26/840 DALI GSP L1508	29	3271	4000	>80	1508x100x80
○ 6229	3F HD100 WH 52/840 DALI GSP L2975	56	6428	4000	>80	2975x100x80
● 6312	3F HD100 BK 22/840 DALI GSP L1214	23	2617	4000	>80	1214x100x80
● 6313	3F HD100 BK 26/840 DALI GSP L1508	29	3271	4000	>80	1508x100x80
● 6314	3F HD100 BK 52/840 DALI GSP L2975	56	6428	4000	>80	2975x100x80
○ 6397	3F HD100 AL 22/840 DALI GSP L1214	23	2617	4000	>80	1214x100x80
○ 6398	3F HD100 AL 26/840 DALI GSP L1508	29	3271	4000	>80	1508x100x80
○ 6399	3F HD100 AL 52/840 DALI GSP L2975	56	6428	4000	>80	2975x100x80

3F HD HO GSP Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.
 Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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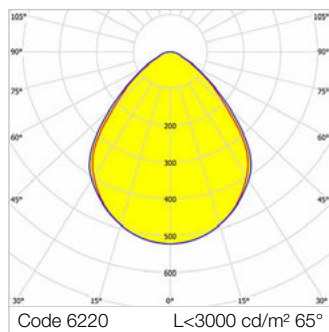
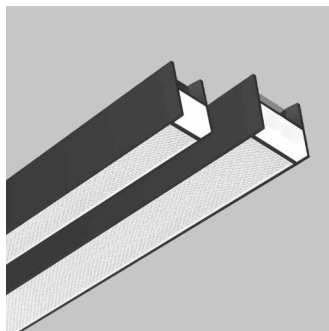
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6793	3F HD50 WH HO 22/840 DALI GSP L1214	24	2596	4000	>80	1214x57x80
○ 6794	3F HD50 WH HO 26/840 DALI GSP L1508	30	3246	4000	>80	1508x57x80
○ 6795	3F HD50 WH HO 52/840 DALI GSP L2975	58	6492	4000	>80	2975x57x80
● 6799	3F HD50 BK HO 22/840 DALI GSP L1214	24	2596	4000	>80	1214x57x80
● 6800	3F HD50 BK HO 26/840 DALI GSP L1508	30	3246	4000	>80	1508x57x80
● 6801	3F HD50 BK HO 52/840 DALI GSP L2975	58	6492	4000	>80	2975x57x80
○ 6805	3F HD50 AL HO 22/840 DALI GSP L1214	24	2596	4000	>80	1214x57x80
○ 6806	3F HD50 AL HO 26/840 DALI GSP L1508	30	3246	4000	>80	1508x57x80
○ 6807	3F HD50 AL HO 52/840 DALI GSP L2975	58	6492	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6796	3F HD100 WH HO 36/840 DALI GSP L1214	39	4434	4000	>80	1214x100x80
○ 6797	3F HD100 WH HO 44/840 DALI GSP L1508	49	5542	4000	>80	1508x100x80
○ 6798	3F HD100 WH HO 88/840 DALI GSP L2975	98	11085	4000	>80	2975x100x80
● 6802	3F HD100 BK HO 36/840 DALI GSP L1214	39	4434	4000	>80	1214x100x80
● 6803	3F HD100 BK HO 44/840 DALI GSP L1508	49	5542	4000	>80	1508x100x80
● 6804	3F HD100 BK HO 88/840 DALI GSP L2975	98	11085	4000	>80	2975x100x80
○ 6808	3F HD100 AL HO 36/840 DALI GSP L1214	39	4434	4000	>80	1214x100x80
○ 6809	3F HD100 AL HO 44/840 DALI GSP L1508	49	5542	4000	>80	1508x100x80
○ 6810	3F HD100 AL HO 88/840 DALI GSP L2975	98	11085	4000	>80	2975x100x80

3F HD FDP Single



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
Externally micro prismatic transparent flat anti-glare polycarbonate diffuser.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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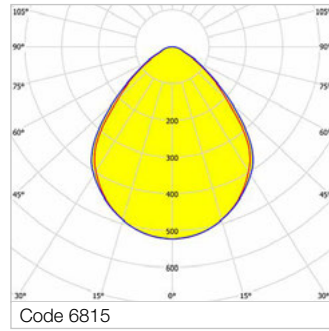
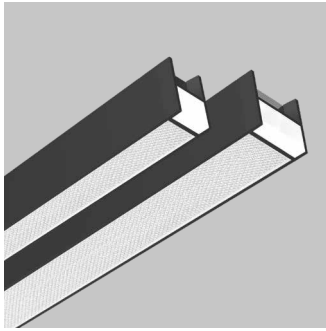
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6200	3F HD50 WH 13/840 DALI FDP L1214	14	1292	4000	>80	1214x57x80
○ 6201	3F HD50 WH 16/840 DALI FDP L1508	18	1615	4000	>80	1508x57x80
○ 6202	3F HD50 WH 32/840 DALI FDP L2975	35	3229	4000	>80	2975x57x80
● 6285	3F HD50 BK 13/840 DALI FDP L1214	14	1292	4000	>80	1214x57x80
● 6286	3F HD50 BK 16/840 DALI FDP L1508	18	1615	4000	>80	1508x57x80
● 6287	3F HD50 BK 32/840 DALI FDP L2975	35	3229	4000	>80	2975x57x80
○ 6370	3F HD50 AL 13/840 DALI FDP L1214	14	1292	4000	>80	1214x57x80
○ 6371	3F HD50 AL 16/840 DALI FDP L1508	18	1615	4000	>80	1508x57x80
○ 6372	3F HD50 AL 32/840 DALI FDP L2975	35	3229	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6219	3F HD100 WH 22/840 DALI FDP L1214	23	2468	4000	>80	1214x100x80
○ 6220	3F HD100 WH 26/840 DALI FDP L1508	29	3085	4000	>80	1508x100x80
○ 6221	3F HD100 WH 52/840 DALI FDP L2975	56	6062	4000	>80	2975x100x80
● 6304	3F HD100 BK 22/840 DALI FDP L1214	23	2468	4000	>80	1214x100x80
● 6305	3F HD100 BK 26/840 DALI FDP L1508	29	3085	4000	>80	1508x100x80
● 6306	3F HD100 BK 52/840 DALI FDP L2975	56	6062	4000	>80	2975x100x80
○ 6389	3F HD100 AL 22/840 DALI FDP L1214	23	2468	4000	>80	1214x100x80
○ 6390	3F HD100 AL 26/840 DALI FDP L1508	29	3085	4000	>80	1508x100x80
○ 6391	3F HD100 AL 52/840 DALI FDP L2975	56	6062	4000	>80	2975x100x80

3F HD HO FDP Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 Externally micro prismatic transparent flat anti-glare polycarbonate diffuser.
 Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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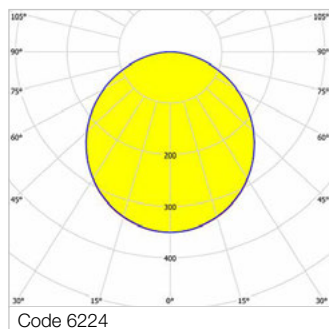
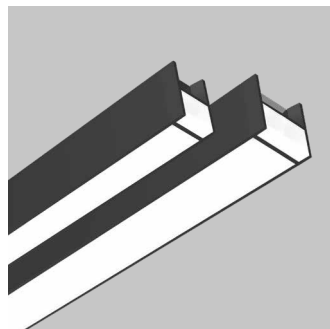
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6811	3F HD50 WH HO 22/840 DALI FDP L1214	24	2448	4000	>80	1214x57x80
○ 6812	3F HD50 WH HO 26/840 DALI FDP L1508	30	3061	4000	>80	1508x57x80
○ 6813	3F HD50 WH HO 52/840 DALI FDP L2975	58	6122	4000	>80	2975x57x80
● 6817	3F HD50 BK HO 22/840 DALI FDP L1214	24	2448	4000	>80	1214x57x80
● 6818	3F HD50 BK HO 26/840 DALI FDP L1508	30	3061	4000	>80	1508x57x80
● 6819	3F HD50 BK HO 52/840 DALI FDP L2975	58	6122	4000	>80	2975x57x80
○ 6823	3F HD50 AL HO 22/840 DALI FDP L1214	24	2448	4000	>80	1214x57x80
○ 6824	3F HD50 AL HO 26/840 DALI FDP L1508	30	3061	4000	>80	1508x57x80
○ 6825	3F HD50 AL HO 52/840 DALI FDP L2975	58	6122	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6814	3F HD100 WH HO 36/840 DALI FDP L1214	39	4182	4000	>80	1214x100x80
○ 6815	3F HD100 WH HO 44/840 DALI FDP L1508	49	5227	4000	>80	1508x100x80
○ 6816	3F HD100 WH HO 88/840 DALI FDP L2975	98	10454	4000	>80	2975x100x80
● 6820	3F HD100 BK HO 36/840 DALI FDP L1214	39	4182	4000	>80	1214x100x80
● 6821	3F HD100 BK HO 44/840 DALI FDP L1508	49	5227	4000	>80	1508x100x80
● 6822	3F HD100 BK HO 88/840 DALI FDP L2975	98	10454	4000	>80	2975x100x80
○ 6826	3F HD100 AL HO 36/840 DALI FDP L1214	39	4182	4000	>80	1214x100x80
○ 6827	3F HD100 AL HO 44/840 DALI FDP L1508	49	5227	4000	>80	1508x100x80
○ 6828	3F HD100 AL HO 88/840 DALI FDP L2975	98	10454	4000	>80	2975x100x80

3F HD FDO Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
Flat opal anti-glare polycarbonate diffuser.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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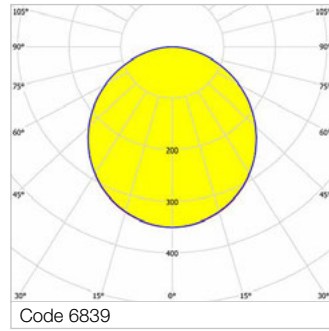
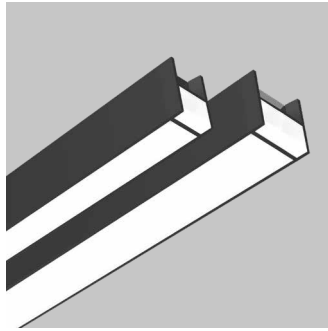
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6204	3F HD50 WH 13/840 DALI FDO L1214	14	1250	4000	>80	1214x57x80
○ 6205	3F HD50 WH 16/840 DALI FDO L1508	18	1563	4000	>80	1508x57x80
○ 6206	3F HD50 WH 32/840 DALI FDO L2975	35	3126	4000	>80	2975x57x80
● 6289	3F HD50 BK 13/840 DALI FDO L1214	14	1250	4000	>80	1214x57x80
● 6290	3F HD50 BK 16/840 DALI FDO L1508	18	1563	4000	>80	1508x57x80
● 6291	3F HD50 BK 32/840 DALI FDO L2975	35	3126	4000	>80	2975x57x80
○ 6374	3F HD50 AL 13/840 DALI FDO L1214	14	1250	4000	>80	1214x57x80
○ 6375	3F HD50 AL 16/840 DALI FDO L1508	18	1563	4000	>80	1508x57x80
○ 6376	3F HD50 AL 32/840 DALI FDO L2975	35	3126	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6223	3F HD100 WH 22/840 DALI FDO L1214	23	2304	4000	>80	1214x100x80
○ 6224	3F HD100 WH 26/840 DALI FDO L1508	29	2880	4000	>80	1508x100x80
○ 6225	3F HD100 WH 52/840 DALI FDO L2975	56	5660	4000	>80	2975x100x80
● 6308	3F HD100 BK 22/840 DALI FDO L1214	23	2304	4000	>80	1214x100x80
● 6309	3F HD100 BK 26/840 DALI FDO L1508	29	2880	4000	>80	1508x100x80
● 6310	3F HD100 BK 52/840 DALI FDO L2975	56	5660	4000	>80	2975x100x80
○ 6393	3F HD100 AL 22/840 DALI FDO L1214	23	2304	4000	>80	1214x100x80
○ 6394	3F HD100 AL 26/840 DALI FDO L1508	29	2880	4000	>80	1508x100x80
○ 6395	3F HD100 AL 52/840 DALI FDO L2975	56	5660	4000	>80	2975x100x80

3F HD HO FDO Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 Flat opal anti-glare polycarbonate diffuser.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6829	3F HD50 WH HO 22/840 DALI FDO L1214	24	2286	4000	>80	1214x57x80
○ 6830	3F HD50 WH HO 26/840 DALI FDO L1508	30	2858	4000	>80	1508x57x80
○ 6831	3F HD50 WH HO 52/840 DALI FDO L2975	58	5716	4000	>80	2975x57x80
● 6835	3F HD50 BK HO 22/840 DALI FDO L1214	24	2286	4000	>80	1214x57x80
● 6836	3F HD50 BK HO 26/840 DALI FDO L1508	30	2858	4000	>80	1508x57x80
● 6837	3F HD50 BK HO 52/840 DALI FDO L2975	58	5716	4000	>80	2975x57x80
○ 6841	3F HD50 AL HO 22/840 DALI FDO L1214	24	2286	4000	>80	1214x57x80
○ 6842	3F HD50 AL HO 26/840 DALI FDO L1508	30	2858	4000	>80	1508x57x80
○ 6843	3F HD50 AL HO 52/840 DALI FDO L2975	58	5716	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6832	3F HD100 WH HO 36/840 DALI FDO L1214	39	3904	4000	>80	1214x100x80
○ 6833	3F HD100 WH HO 44/840 DALI FDO L1508	49	4880	4000	>80	1508x100x80
○ 6834	3F HD100 WH HO 88/840 DALI FDO L2975	98	9760	4000	>80	2975x100x80
● 6838	3F HD100 BK HO 36/840 DALI FDO L1214	39	3904	4000	>80	1214x100x80
● 6839	3F HD100 BK HO 44/840 DALI FDO L1508	49	4880	4000	>80	1508x100x80
● 6840	3F HD100 BK HO 88/840 DALI FDO L2975	98	9760	4000	>80	2975x100x80
○ 6844	3F HD100 AL HO 36/840 DALI FDO L1214	39	3904	4000	>80	1214x100x80
○ 6845	3F HD100 AL HO 44/840 DALI FDO L1508	49	4880	4000	>80	1508x100x80
○ 6846	3F HD100 AL HO 88/840 DALI FDO L2975	98	9760	4000	>80	2975x100x80

3F HD Direct - Channel

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.

Removable gear-tray.

Hot-dip galvanised steel linear connecting element installed on the body for rapid mechanical connection.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Entrance to the upper power supply in proximity to a power head.

5 mm² section 2.5 pin through line with an irreversible quick coupling plug plug/socket fixed on the body for rapid electrical connection.

Branching via an irreversible quick coupling plug to connect the cable housing element to the socket.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- OC optic in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

FDO version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

Installation

Ceiling mounted or suspension installation.

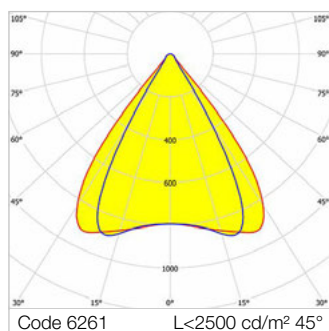
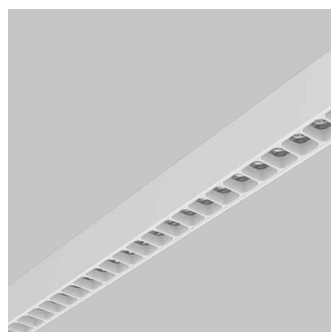
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F HD OCW Channel



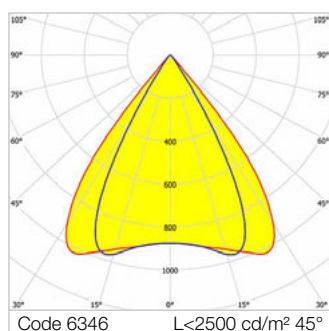
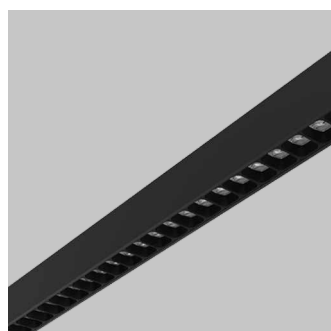
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <1500 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective white polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6260 <small>UPDATE</small>	3F HD50 WH 12/830 DALI 5P OCW L1174	14.5	1696	3000	>80	1174x57x80
○ 6261 <small>UPDATE</small>	3F HD50 WH 15/830 DALI 5P OCW L1468	18	2120	3000	>80	1468x57x80
○ 6262 <small>UPDATE</small>	3F HD50 WH 30/830 DALI 5P OCW L2935	33	4240	3000	>80	2935x57x80

3F HD OCB Channel



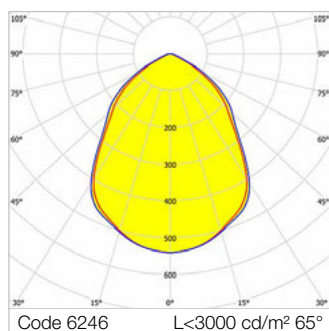
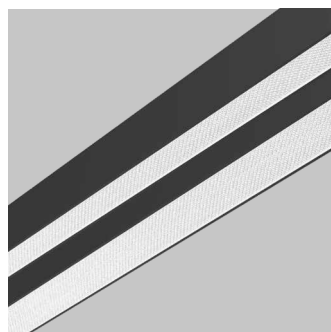
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <200 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective black polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

● 6345 <small>UPDATE</small>	3F HD50 BK 12/830 DALI 5P OCB L1174	14.5	1570	3000	>80	1174x57x80
● 6346 <small>UPDATE</small>	3F HD50 BK 15/830 DALI 5P OCB L1468	18	1963	3000	>80	1468x57x80
● 6347 <small>UPDATE</small>	3F HD50 BK 30/830 DALI 5P OCB L2935	33	3926	3000	>80	2935x57x80
○ 6430 <small>UPDATE</small>	3F HD50 AL 12/830 DALI 5P OCB L1174	14.5	1570	3000	>80	1174x57x80
○ 6431 <small>UPDATE</small>	3F HD50 AL 15/830 DALI 5P OCB L1468	18	1963	3000	>80	1468x57x80
○ 6432 <small>UPDATE</small>	3F HD50 AL 30/830 DALI 5P OCB L2935	33	3926	3000	>80	2935x57x80

3F HD GSP Channel



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
SP transparent methacrylate diffuser, prismatic outside, antiglare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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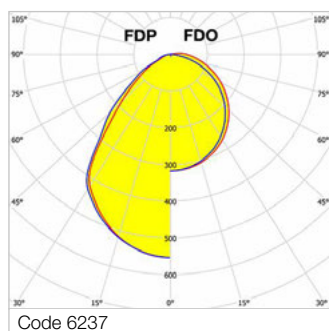
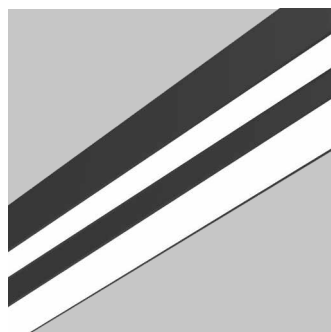
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6245	3F HD50 WH 13/840 DALI 5P GSP L1174	14	1374	4000	>80	1174x57x80
○ 6246	3F HD50 WH 16/840 DALI 5P GSP L1468	18	1718	4000	>80	1468x57x80
○ 6250	3F HD50 WH 32/840 DALI 5P GSP L2935	35	3435	4000	>80	2935x57x80
● 6330	3F HD50 BK 13/840 DALI 5P GSP L1174	14	1374	4000	>80	1174x57x80
● 6331	3F HD50 BK 16/840 DALI 5P GSP L1468	18	1718	4000	>80	1468x57x80
● 6335	3F HD50 BK 32/840 DALI 5P GSP L2935	35	3435	4000	>80	2935x57x80
○ 6415	3F HD50 AL 13/840 DALI 5P GSP L1174	14	1374	4000	>80	1174x57x80
○ 6416	3F HD50 AL 16/840 DALI 5P GSP L1468	18	1718	4000	>80	1468x57x80
○ 6420	3F HD50 AL 32/840 DALI 5P GSP L2935	35	3435	4000	>80	2935x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6275	3F HD100 WH 22/840 DALI 5P GSP L1174	23	2617	4000	>80	1174x100x80
○ 6276	3F HD100 WH 26/840 DALI 5P GSP L1468	29	3271	4000	>80	1468x100x80
○ 6280	3F HD100 WH 52/840 DALI 5P GSP L2935	56	6428	4000	>80	2935x100x80
● 6360	3F HD100 BK 22/840 DALI 5P GSP L1174	23	2617	4000	>80	1174x100x80
● 6361	3F HD100 BK 26/840 DALI 5P GSP L1468	29	3271	4000	>80	1468x100x80
● 6365	3F HD100 BK 52/840 DALI 5P GSP L2935	56	6428	4000	>80	2935x100x80
○ 6445	3F HD100 AL 22/840 DALI 5P GSP L1174	23	2617	4000	>80	1174x100x80
○ 6446	3F HD100 AL 26/840 DALI 5P GSP L1468	29	3271	4000	>80	1468x100x80
○ 6450	3F HD100 AL 52/840 DALI 5P GSP L2935	56	6428	4000	>80	2935x100x80

3F HD FD Channel



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65° (FDP).
 Non-iridescent high efficiency specular aluminium with a titanium
 and magnesium surface treatment flow recuperator.
 For diffusers see accessories on page 58.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6236	3F HD50 WH 13/840 DALI 5P FD L1174	14	1292 FDP 1250 FDO	4000	>80	1174x57x80
○ 6237	3F HD50 WH 16/840 DALI 5P FD L1468	18	1615 FDP 1563 FDO	4000	>80	1468x57x80
○ 6241	3F HD50 WH 32/840 DALI 5P FD L2935	35	3229 FDP 3126 FDO	4000	>80	2935x57x80
● 6321	3F HD50 BK 13/840 DALI 5P FD L1174	14	1292 FDP 1250 FDO	4000	>80	1174x57x80
● 6322	3F HD50 BK 16/840 DALI 5P FD L1468	18	1615 FDP 1563 FDO	4000	>80	1468x57x80
● 6326	3F HD50 BK 32/840 DALI 5P FD L2935	35	3229 FDP 3126 FDO	4000	>80	2935x57x80
○ 6406	3F HD50 AL 13/840 DALI 5P FD L1174	14	1292 FDP 1250 FDO	4000	>80	1174x57x80
○ 6407	3F HD50 AL 16/840 DALI 5P FD L1468	18	1615 FDP 1563 FDO	4000	>80	1468x57x80
○ 6411	3F HD50 AL 32/840 DALI 5P FD L2935	35	3229 FDP 3126 FDO	4000	>80	2935x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6266	3F HD100 WH 22/840 DALI 5P FD L1174	23	2468 FDP 2304 FDO	4000	>80	1174x100x80
○ 6267	3F HD100 WH 26/840 DALI 5P FD L1468	29	3085 FDP 2880 FDO	4000	>80	1468x100x80
○ 6271	3F HD100 WH 52/840 DALI 5P FD L2935	56	6062 FDP 5660 FDO	4000	>80	2935x100x80
● 6351	3F HD100 BK 22/840 DALI 5P FD L1174	23	2468 FDP 2304 FDO	4000	>80	1174x100x80
● 6352	3F HD100 BK 26/840 DALI 5P FD L1468	29	3085 FDP 2880 FDO	4000	>80	1468x100x80
● 6356	3F HD100 BK 52/840 DALI 5P FD L2935	56	6062 FDP 5660 FDO	4000	>80	2935x100x80
○ 6436	3F HD100 AL 22/840 DALI 5P FD L1174	23	2468 FDP 2304 FDO	4000	>80	1174x100x80
○ 6437	3F HD100 AL 26/840 DALI 5P FD L1468	29	3085 FDP 2880 FDO	4000	>80	1468x100x80
○ 6441	3F HD100 AL 52/840 DALI 5P FD L2935	56	6062 FDP 5660 FDO	4000	>80	2935x100x80



3F HD Direct/Indirect - Single

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.

Removable gear-tray.

Translucent polycarbonate upper diffuser.

Lighting head caps with specular

aluminium frieze.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

5-pole terminal block, single 230V circuit, 2 DALI addresses (depending on the type of lighting fixture).

Entrance to the upper power supply in proximity to a power head.

Branching via an irreversible quick coupling plug to connect the cable housing element to the socket.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- OC optic in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

FDO version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

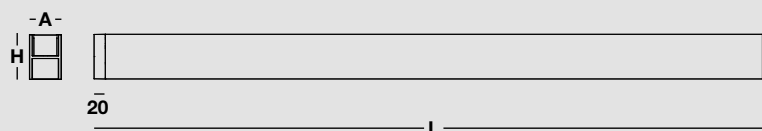
Installation

Suspension installation.

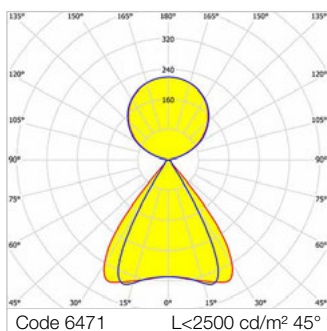
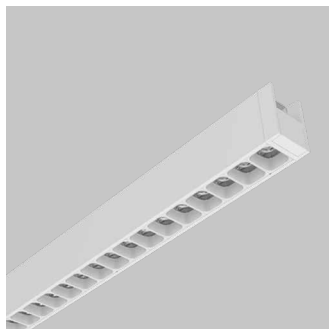
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F HD DI OCW Single



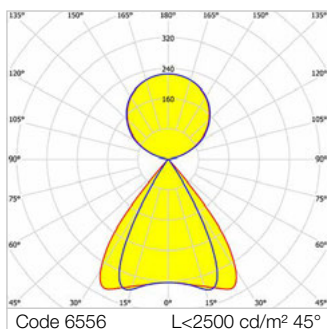
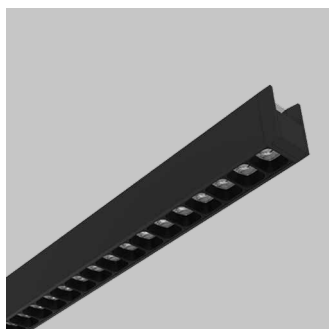
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <1500 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective white polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6470 <small>UPDATE</small>	3F HD50DI WH 12+20/830 DALI OCW L1214	37	4268	3000	>80	1214x57x80
○ 6471 <small>UPDATE</small>	3F HD50DI WH 15+26/830 DALI OCW L1508	48	5394	3000	>80	1508x57x80
○ 6472 <small>UPDATE</small>	3F HD50DI WH 30+52/830 DALI OCW L2975	90	10800	3000	>80	2975x57x80

3F HD DI OCB Single



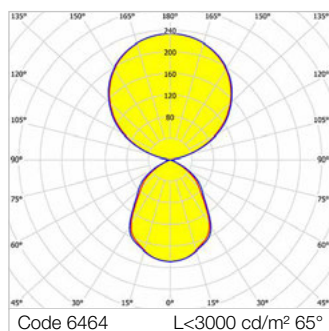
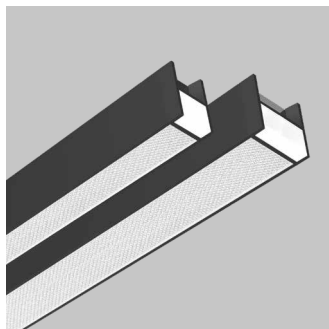
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <200 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective black polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

● 6555 <small>UPDATE</small>	3F HD50DI BK 12+20/830 DALI OCB L1214	37	4142	3000	>80	1214x57x80
● 6556 <small>UPDATE</small>	3F HD50DI BK 15+26/830 DALI OCB L1508	48	5237	3000	>80	1508x57x80
● 6557 <small>UPDATE</small>	3F HD50DI BK 30+52/830 DALI OCB L2975	90	10486	3000	>80	2975x57x80
○ 6640 <small>UPDATE</small>	3F HD50DI AL 12+20/830 DALI OCB L1214	37	4142	3000	>80	1214x57x80
○ 6641 <small>UPDATE</small>	3F HD50DI AL 15+26/830 DALI OCB L1508	48	5237	3000	>80	1508x57x80
○ 6642 <small>UPDATE</small>	3F HD50DI AL 30+52/830 DALI OCB L2975	90	10486	3000	>80	2975x57x80

3F HD DI GSP Single



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
SP transparent methacrylate diffuser, prismatic outside, antiglare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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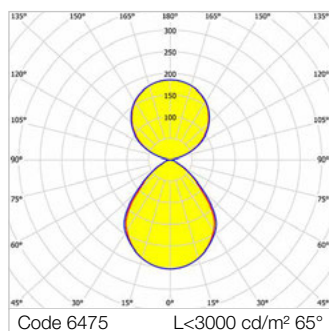
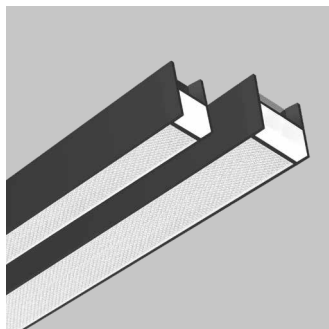
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6463	3F HD50DI WH 13+20/840 DALI GSP L1214	37	4081	4000	>80	1214x57x80
○ 6464	3F HD50DI WH 16+26/840 DALI GSP L1508	46	5164	4000	>80	1508x57x80
○ 6465	3F HD50DI WH 32+52/840 DALI GSP L2975	91	10340	4000	>80	2975x57x80
● 6548	3F HD50DI BK 13+20/840 DALI GSP L1214	37	4081	4000	>80	1214x57x80
● 6549	3F HD50DI BK 16+26/840 DALI GSP L1508	46	5164	4000	>80	1508x57x80
● 6550	3F HD50DI BK 32+52/840 DALI GSP L2975	91	10340	4000	>80	2975x57x80
○ 6633	3F HD50DI AL 13+20/840 DALI GSP L1214	37	4081	4000	>80	1214x57x80
○ 6634	3F HD50DI AL 16+26/840 DALI GSP L1508	46	5164	4000	>80	1508x57x80
○ 6635	3F HD50DI AL 32+52/840 DALI GSP L2975	91	10340	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6482	3F HD100DI WH 22+20/840 DALI GSP L1214	46	5394	4000	>80	1214x100x80
○ 6483	3F HD100DI WH 26+26/840 DALI GSP L1508	61	6805	4000	>80	1508x100x80
○ 6484	3F HD100DI WH 52+52/840 DALI GSP L2975	113	13510	4000	>80	2975x100x80
● 6567	3F HD100DI BK 22+20/840 DALI GSP L1214	46	5394	4000	>80	1214x100x80
● 6568	3F HD100DI BK 26+26/840 DALI GSP L1508	61	6805	4000	>80	1508x100x80
● 6569	3F HD100DI BK 52+52/840 DALI GSP L2975	113	13510	4000	>80	2975x100x80
○ 6652	3F HD100DI AL 22+20/840 DALI GSP L1214	46	5394	4000	>80	1214x100x80
○ 6653	3F HD100DI AL 26+26/840 DALI GSP L1508	61	6805	4000	>80	1508x100x80
○ 6654	3F HD100DI AL 52+52/840 DALI GSP L2975	113	13510	4000	>80	2975x100x80

3F HD DI FDP Single



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
 Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 Externally micro prismatic transparent flat anti-glare polycarbonate diffuser.
 Opal polycarbonate internal anti-glare filter for lighting uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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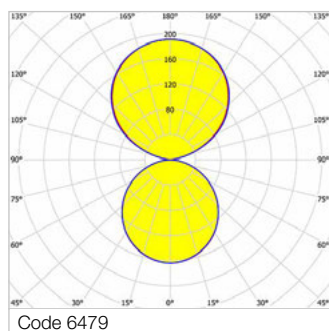
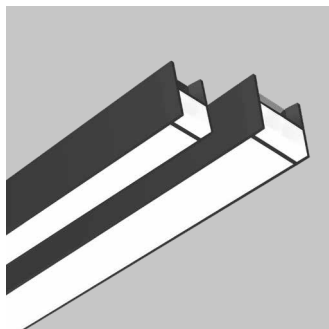
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6455	3F HD50DI WH 13+20/840 DALI FDP L1214	37	3999	4000	>80	1214x57x80
○ 6456	3F HD50DI WH 16+26/840 DALI FDP L1508	46	5061	4000	>80	1508x57x80
○ 6457	3F HD50DI WH 32+52/840 DALI FDP L2975	91	10134	4000	>80	2975x57x80
● 6540	3F HD50DI BK 13+20/840 DALI FDP L1214	37	3999	4000	>80	1214x57x80
● 6541	3F HD50DI BK 16+26/840 DALI FDP L1508	46	5061	4000	>80	1508x57x80
● 6542	3F HD50DI BK 32+52/840 DALI FDP L2975	91	10134	4000	>80	2975x57x80
○ 6625	3F HD50DI AL 13+20/840 DALI FDP L1214	37	3999	4000	>80	1214x57x80
○ 6626	3F HD50DI AL 16+26/840 DALI FDP L1508	46	5061	4000	>80	1508x57x80
○ 6627	3F HD50DI AL 32+52/840 DALI FDP L2975	91	10134	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6474	3F HD100DI WH 22+20/840 DALI FDP L1214	46	5245	4000	>80	1214x100x80
○ 6475	3F HD100DI WH 26+26/840 DALI FDP L1508	61	6619	4000	>80	1508x100x80
○ 6476	3F HD100DI WH 52+52/840 DALI FDP L2975	113	13144	4000	>80	2975x100x80
● 6559	3F HD100DI BK 22+20/840 DALI FDP L1214	46	5245	4000	>80	1214x100x80
● 6560	3F HD100DI BK 26+26/840 DALI FDP L1508	61	6619	4000	>80	1508x100x80
● 6561	3F HD100DI BK 52+52/840 DALI FDP L2975	113	13144	4000	>80	2975x100x80
○ 6644	3F HD100DI AL 22+20/840 DALI FDP L1214	46	5245	4000	>80	1214x100x80
○ 6645	3F HD100DI AL 26+26/840 DALI FDP L1508	61	6619	4000	>80	1508x100x80
○ 6646	3F HD100DI AL 52+52/840 DALI FDP L2975	113	13144	4000	>80	2975x100x80

3F HD DI FDO Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
Flat opal anti-glare polycarbonate diffuser.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6459	3F HD50DI WH 13+20/840 DALI FDO L1214	37	3957	4000	>80	1214x57x80
○ 6460	3F HD50DI WH 16+26/840 DALI FDO L1508	46	5009	4000	>80	1508x57x80
○ 6461	3F HD50DI WH 32+52/840 DALI FDO L2975	91	10031	4000	>80	2975x57x80
● 6544	3F HD50DI BK 13+20/840 DALI FDO L1214	37	3957	4000	>80	1214x57x80
● 6545	3F HD50DI BK 16+26/840 DALI FDO L1508	46	5009	4000	>80	1508x57x80
● 6546	3F HD50DI BK 32+52/840 DALI FDO L2975	91	10031	4000	>80	2975x57x80
○ 6629	3F HD50DI AL 13+20/840 DALI FDO L1214	37	3957	4000	>80	1214x57x80
○ 6630	3F HD50DI AL 16+26/840 DALI FDO L1508	46	5009	4000	>80	1508x57x80
○ 6631	3F HD50DI AL 32+52/840 DALI FDO L2975	91	10031	4000	>80	2975x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6478	3F HD100DI WH 22+20/840 DALI FDO L1214	46	5081	4000	>80	1214x100x80
○ 6479	3F HD100DI WH 26+26/840 DALI FDO L1508	61	6414	4000	>80	1508x100x80
○ 6480	3F HD100DI WH 52+52/840 DALI FDO L2975	113	12742	4000	>80	2975x100x80
● 6563	3F HD100DI BK 22+20/840 DALI FDO L1214	46	5081	4000	>80	1214x100x80
● 6564	3F HD100DI BK 26+26/840 DALI FDO L1508	61	6414	4000	>80	1508x100x80
● 6565	3F HD100DI BK 52+52/840 DALI FDO L2975	113	12742	4000	>80	2975x100x80
○ 6648	3F HD100DI AL 22+20/840 DALI FDO L1214	46	5081	4000	>80	1214x100x80
○ 6649	3F HD100DI AL 26+26/840 DALI FDO L1508	61	6414	4000	>80	1508x100x80
○ 6650	3F HD100DI AL 52+52/840 DALI FDO L2975	113	12742	4000	>80	2975x100x80





3F HD Direct/Indirect - Channel

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.

Removable gear-tray.

Hot-dip galvanised steel linear connecting element installed on the body for rapid mechanical connection.

Translucent polycarbonate upper diffuser.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

5-pole terminal block, single 230V circuit, 2 DALI addresses (depending on the type of lighting fixture).

Entrance to the upper power supply in proximity to a power head.

Branching via an irreversible quick coupling plug to connect the cable housing element to the socket.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- OC optic in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

FDO version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

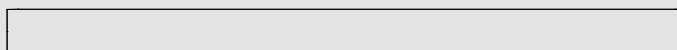
Installation

Suspension installation.

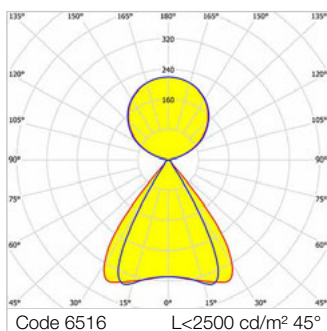
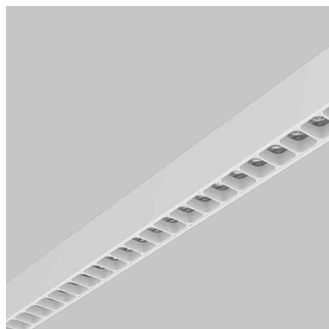
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F HD DI OCW Channel



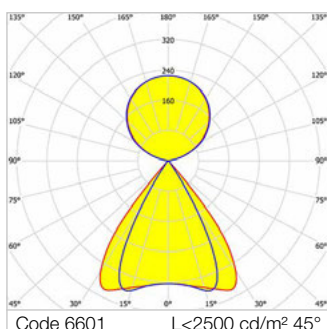
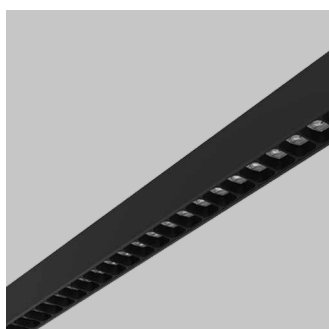
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <1500 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective white polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6515 <small>UPDATE</small>	3F HD50DI WH 12+20/830 DALI 5P OCW L1174	37	4268	3000	>80	1174x57x80
○ 6516 <small>UPDATE</small>	3F HD50DI WH 15+26/830 DALI 5P OCW L1468	48	5394	3000	>80	1468x57x80
○ 6517 <small>UPDATE</small>	3F HD50DI WH 30+52/830 DALI 5P OCW L2935	90	10800	3000	>80	2935x57x80

3F HD DI OCB Channel



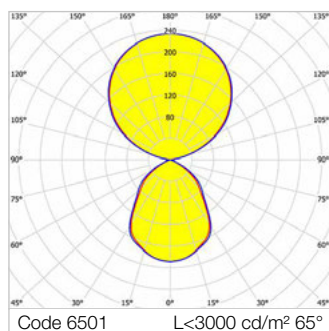
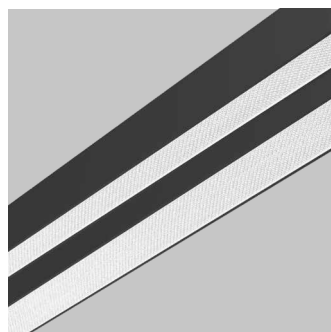
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <200 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective black polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

● 6600 <small>UPDATE</small>	3F HD50DI BK 12+20/830 DALI 5P OCB L1174	37	4142	3000	>80	1174x57x80
● 6601 <small>UPDATE</small>	3F HD50DI BK 15+26/830 DALI 5P OCB L1468	48	5237	3000	>80	1468x57x80
● 6602 <small>UPDATE</small>	3F HD50DI BK 30+52/830 DALI 5P OCB L2935	90	10486	3000	>80	2935x57x80
○ 6685 <small>UPDATE</small>	3F HD50DI AL 12+20/830 DALI 5P OCB L1174	37	4142	3000	>80	1174x57x80
○ 6686 <small>UPDATE</small>	3F HD50DI AL 15+26/830 DALI 5P OCB L1468	48	5237	3000	>80	1468x57x80
○ 6687 <small>UPDATE</small>	3F HD50DI AL 30+52/830 DALI 5P OCB L2935	90	10486	3000	>80	2935x57x80

3F HD DI GSP Channel



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
SP transparent methacrylate diffuser, prismatic outside, antiglare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

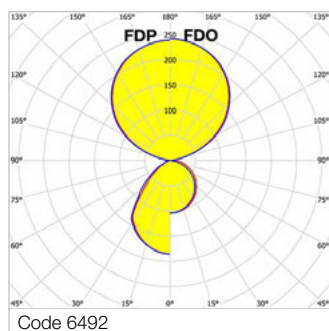
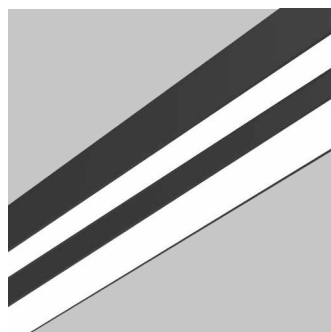
3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6500	3F HD50DI WH 13+20/840 DALI 5P GSP L1174	37	4081	4000	>80	1174x57x80
○ 6501	3F HD50DI WH 16+26/840 DALI 5P GSP L1468	46	5164	4000	>80	1468x57x80
○ 6505	3F HD50DI WH 32+52/840 DALI 5P GSP L2935	91	10340	4000	>80	2935x57x80
● 6585	3F HD50DI BK 13+20/840 DALI 5P GSP L1174	37	4081	4000	>80	1174x57x80
● 6586	3F HD50DI BK 16+26/840 DALI 5P GSP L1468	46	5164	4000	>80	1468x57x80
● 6590	3F HD50DI BK 32+52/840 DALI 5P GSP L2935	91	10340	4000	>80	2935x57x80
○ 6670	3F HD50DI AL 13+20/840 DALI 5P GSP L1174	37	4081	4000	>80	1174x57x80
○ 6671	3F HD50DI AL 16+26/840 DALI 5P GSP L1468	46	5164	4000	>80	1468x57x80
○ 6675	3F HD50DI AL 32+52/840 DALI 5P GSP L2935	91	10340	4000	>80	2935x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6530	3F HD100DI WH 22+20/840 DALI 5P GSP L1174	46	5394	4000	>80	1174x100x80
○ 6531	3F HD100DI WH 26+26/840 DALI 5P GSP L1468	61	6805	4000	>80	1468x100x80
○ 6535	3F HD100DI WH 52+52/840 DALI 5P GSP L2935	113	13510	4000	>80	2935x100x80
● 6615	3F HD100DI BK 22+20/840 DALI 5P GSP L1174	46	5394	4000	>80	1174x100x80
● 6616	3F HD100DI BK 26+26/840 DALI 5P GSP L1468	61	6805	4000	>80	1468x100x80
● 6620	3F HD100DI BK 52+52/840 DALI 5P GSP L2935	113	13510	4000	>80	2935x100x80
○ 6700	3F HD100DI AL 22+20/840 DALI 5P GSP L1174	46	5394	4000	>80	1174x100x80
○ 6701	3F HD100DI AL 26+26/840 DALI 5P GSP L1468	61	6805	4000	>80	1468x100x80
○ 6705	3F HD100DI AL 52+52/840 DALI 5P GSP L2935	113	13510	4000	>80	2935x100x80

3F HD DI FD Channel



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65° (FDP).
 Non-iridescent high efficiency specular aluminium with a titanium
 and magnesium surface treatment flow recuperator.
 For diffusers see accessories on page 58.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

○ 6491	3F HD50DI WH 13+20/840 DALI 5P FD L1174	37	3999 FDP 3957 FDO	4000	>80	1174x57x80
○ 6492	3F HD50DI WH 16+26/840 DALI 5P FD L1468	46	5061 FDP 5009 FDO	4000	>80	1468x57x80
○ 6496	3F HD50DI WH 32+52/840 DALI 5P FD L2935	91	10134 FDP 10031 FDO	4000	>80	2935x57x80
● 6576	3F HD50DI BK 13+20/840 DALI 5P FD L1174	37	3999 FDP 3957 FDO	4000	>80	1174x57x80
● 6577	3F HD50DI BK 16+26/840 DALI 5P FD L1468	46	5061 FDP 5009 FDO	4000	>80	1468x57x80
● 6581	3F HD50DI BK 32+52/840 DALI 5P FD L2935	91	10134 FDP 10031 FDO	4000	>80	2935x57x80
○ 6661	3F HD50DI AL 13+20/840 DALI 5P FD L1174	37	3999 FDP 3957 FDO	4000	>80	1174x57x80
○ 6662	3F HD50DI AL 16+26/840 DALI 5P FD L1468	46	5061 FDP 5009 FDO	4000	>80	1468x57x80
○ 6666	3F HD50DI AL 32+52/840 DALI 5P FD L2935	91	10134 FDP 10031 FDO	4000	>80	2935x57x80

3F HD 100 - DALI electronic wiring 230V-50/60Hz

○ 6521	3F HD100DI WH 22+20/840 DALI 5P FD L1174	46	5245 FDP 5081 FDO	4000	>80	1174x100x80
○ 6522	3F HD100DI WH 26+26/840 DALI 5P FD L1468	61	6619 FDP 6414 FDO	4000	>80	1468x100x80
○ 6526	3F HD100DI WH 52+52/840 DALI 5P FD L2935	113	13144 FDP 12742 FDO	4000	>80	2935x100x80
● 6606	3F HD100DI BK 22+20/840 DALI 5P FD L1174	46	5245 FDP 5081 FDO	4000	>80	1174x100x80
● 6607	3F HD100DI BK 26+26/840 DALI 5P FD L1468	61	6619 FDP 6414 FDO	4000	>80	1468x100x80
● 6611	3F HD100DI BK 52+52/840 DALI 5P FD L2935	113	13144 FDP 12742 FDO	4000	>80	2935x100x80
○ 6691	3F HD100DI AL 22+20/840 DALI 5P FD L1174	46	5245 FDP 5081 FDO	4000	>80	1174x100x80
○ 6692	3F HD100DI AL 26+26/840 DALI 5P FD L1468	61	6619 FDP 6414 FDO	4000	>80	1468x100x80
○ 6696	3F HD100DI AL 52+52/840 DALI 5P FD L2935	113	13144 FDP 12742 FDO	4000	>80	2935x100x80

3F HD | Accessories



850°C



FDP - Flat diffuser, externally microprismatic and made of transparent polycarbonate, with internal anti-glare opal polycarbonate filter for luminous uniformity. Supplied in roll.

Accessory compatible with 3F HD FD Channel and 3F HD DI FD Channel.

Code	Item
A01536	Channels diffusers 3F HD50 - FDP - 6m
A01537	Channels diffusers 3F HD50 - FDP - 9m
A01538	Channels diffusers 3F HD50 - FDP - 15m
A01544	Channels diffusers 3F HD100 - FDP - 6m
A01545	Channels diffusers 3F HD100 - FDP - 9m
A01546	Channels diffusers 3F HD100 - FDP - 15m

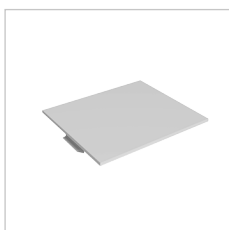


850°C

FDO - Flat diffuser, smooth outside and made of opal polycarbonate. Supplied in roll.

Accessory compatible with 3F HD FD Channel and 3F HD DI FD Channel.

Code	Item
A01540	Channels diffusers 3F HD50 - FDO - 6m
A01541	Channels diffusers 3F HD50 - FDO - 9m
A01542	Channels diffusers 3F HD50 - FDO - 15m
A01548	Channels diffusers 3F HD100 - FDO - 6m
A01549	Channels diffusers 3F HD100 - FDO - 9m
A01550	Channels diffusers 3F HD100 - FDO - 15m



Dilator coupling to connect flat diffusers FDP or FDO.

Accessory compatible with 3F HD FD Channel and 3F HD DI FD Channel.

Code	Item
A01563	Dilator joint FD channels>15m - HD50 WH
A01564	Dilator joint FD channels>15m - HD100 WH
A01568	Dilator joint FD channels>15m - HD50 BK
A01569	Dilator joint FD channels>15m - HD100 BK
A01570	Dilator joint FD channels>15m - HD50 AL
A01571	Pair of end caps 3F HD50R WH channel GSP

To be used for channels longer than 15 metres.



Pair of end caps for light channels equipped with OCB and OCW optics; made of plastic material reinforced with fibreglass and supplied with fixing screws. Thickness: 20 mm each cap.

Accessory compatible with 3F HD OCW Channel, 3F HD OCB Channel, 3F HD DI OCW Channel and 3F HD DI OCB Channel.

Code	Item
A01558	Pair end caps for 3F HD50 WH channel OC
A01559	Pair end caps for 3F HD50 BK channel OC
A01560	Pair end caps for 3F HD50 AL channel OC

These accessories are not suitable for single-unit installation.



Pair of end caps for light channels equipped with GSP screens; made of plastic material reinforced with fibreglass and supplied with fixing screws. Thickness: 20 mm each cap.

Accessory compatible with 3F HD GSP Channel and 3F HD DI GSP Channel.

Code	Item
A01578 ^{NEW}	Pair of end caps for 3F HD50 WH channel GSP
A01579 ^{NEW}	Pair of end caps for 3F HD50 BK channel GSP
A01580 ^{NEW}	Pair of end caps for 3F HD50 AL channel GSP
A01581 ^{NEW}	Pair of end caps for 3F HD100 WH channel GSP
A01582 ^{NEW}	Pair of end caps for 3F HD100 BK channel GSP
A01583 ^{NEW}	Pair of end caps for 3F HD100 AL channel GSP

These accessories are not suitable for single-unit installation.



Pair of end caps for light channels equipped with FDP and FDO screens; made of plastic material reinforced with fibreglass and supplied with fixing screws. Thickness: 20 mm each cap.

Accessory compatible with 3F HD FD Channel and 3F HD DI FD Channel.

Code	Item
A01552	Pair of end caps for 3F HD50 WH channel FD
A01553	Pair of end caps for 3F HD50 BK channel FD
A01554	Pair of end caps for 3F HD50 AL channel FD
A01555	Pair of end caps for 3F HD100 WH channel FD
A01556	Pair of end caps for 3F HD100 BK channel FD
A01557	Pair of end caps for 3F HD100 AL channel FD

These accessories are not suitable for single-unit installation.



Stainless steel sliding bracket that can be positioned freely. Accessory dedicated to ceiling installation.

Code	Item
A01530	Ceiling/recessed sliding brack. 3F HD50
A01531	Ceiling/recessed sliding brack. 3F HD100



Free-position sliding bracket with regulator in stainless steel. Accessory dedicated to suspended installation.

Code	Item
A01532	Slid.brack.w/reg.susp.instal. 3F HD50DI
A01528	Slid.brack.w/reg.susp.instal. 3F HD100DI

In the event of buying the sliding bracket with a regulator (code A01532 - A01528) on its own, the suspension cable must be made of galvanised steel with 49 elementary wires with a minimum diameter of 1,5 mm² (for a load of 15 kg).



Suspension without controller, galvanised steel cable 1.5 mm diameter, load 15 kg.

Accessory compatible with sliding bracket code A01532 and A01528.

Code	Item
A20485	Suspension without adjustment - 0.5 m
A20486	Suspension without adjustment - 1 m
A20487	Suspension without adjustment - 2 m
A20488	Suspension without adjustment - 3 m
A20489	Suspension without adjustment - 4 m
A20490	Suspension without adjustment - 5 m
A20491	Suspension without adjustment - 6 m

In the case of purchase of only one sliding bracket with controller (codes A01532 - A01528), the suspension cable must be made of galvanised steel with 49 elementary wires of minimum 1.5 mm diameter (for a weight of 15 kg).



Galvanised steel cable, diameter 1.5 mm, composed of 49 wires. 15 kg capacity (ratio 5:1).

Accessory compatible with one of the following codes: A01532 - A01528 - A0714.

Code	Item
A0716	Coil galv. cable diam. 1.5mm - 100m The pack contains 100 metres.
A0717	Coil galv. cable diam. 1.5mm - 500m The pack contains 500 metres.
A0718	Coil galv. cable diam. 1.5mm - 1000m The pack contains 1000 metres.



Clamp in nickel-plated brass suitable for fixing and adjustment of galvanised steel wire (diameter 1,25 mm - 1,5 mm - 2 mm), complete with locking screws. The 2 hole clamp allows to block and adjust the cable on a bearing element (part of the building) or on rounded eye bolt.

Accessory compatible with one of the following codes: A0716 - A0717 - A0718.

Code	Item
A0714	Clamp 2 holes susp.- 100 pcs The pack contains 100 pieces.



Terminal block (plug/socket) with irreversible snap-in double clamp, for power-supply connection at beginning and end of the channel, 5 poles.

Accessory compatible with 3F HD Direct - Channel, 3F HD Direct/Indirect - Channel.

Code	Item
A01567	3F HD - 5P socket/plug terminal block



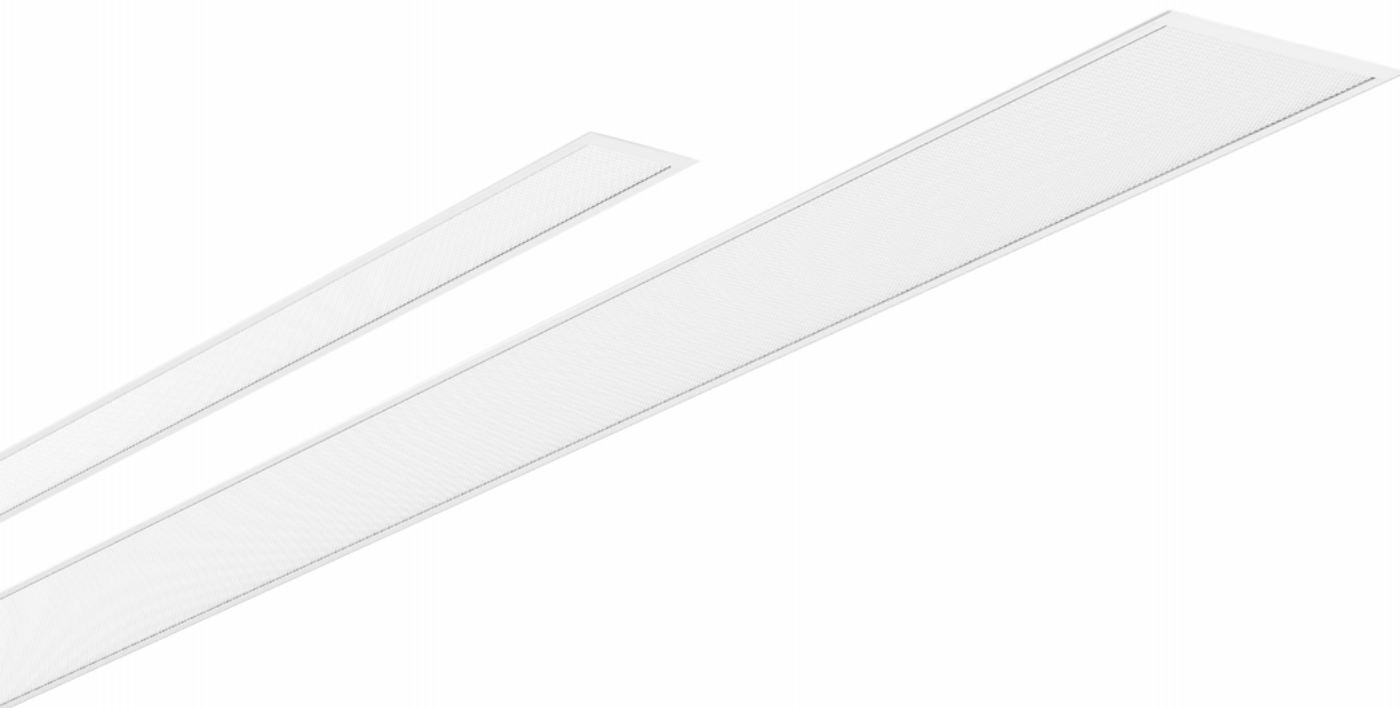
Electric supply with white polycarbonate case, internal bracket in galvanised steel.

Accessory compatible with 3F HD Direct - Single, 3F HD Direct/Indirect - Single, 3F HD Direct/Indirect - Channel.

Code	Item
A0679	5 pole rectangular rose (no cable) WH







3F HD R

> www.3F-Filippi.com/3F HD R

Design by **Park Associati**

3F HD R is available with different photometric distributions that are obtained with opal and prismatic screens.

The fixture is also available in a LEED compliant version equipped with an OCB optic, a unique solution with innovative technology to control luminance in the workplace in compliance with LEED specifications.

3F HD R is composed of an H section aluminium linear profile and it can be used easily in continuous lines with a significant reduction in installation time thanks to the presence of concealed joints and standard mounted plug-sockets.

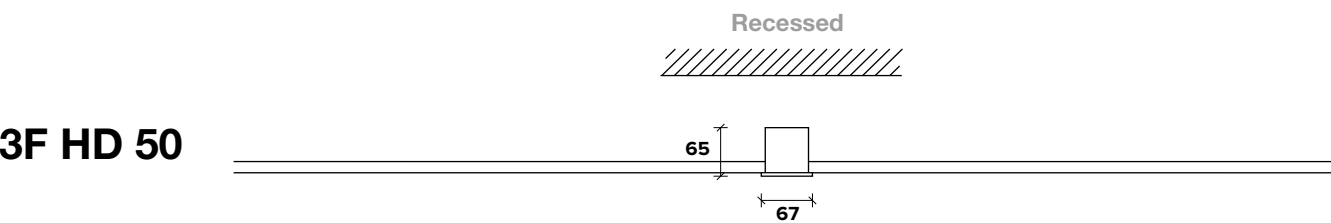
This product is also available in this version 3F HD (page 28).

+ Overview

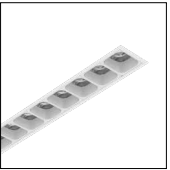
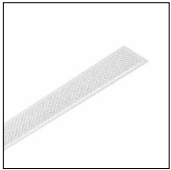
- Luminous efficacy up to 123 lumen/watt.
- Luminous fluxes from 1250 to 9997 lumens.
- Average luminance <200 cd/m² (OCB version).
- Extensive installation pitch.
- UGR <16 (OCW version).
- LEED Compliant.
- Available with OC lenticular optics or diffusers.
- Module lengths optimised to reduce installation time and required accessories by up to 20%.
- Quick and easy cleaning.
- Seamless screens (up to 15 metres in length).
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Mechanical and electrical assembly without tools.
- Thanks to the FastWiring system, the installation time is drastically reduced.

Page	Product	Recessed
66	UPDATE 3F HD R Recessed - Single	•
72	UPDATE 3F HD R Recessed - Channel	•

Product range



3F HD
Direct Emission

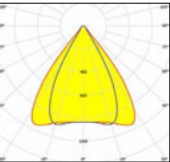
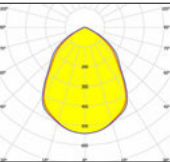
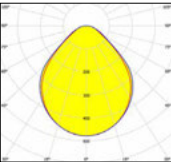
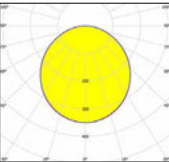


	FDO	FDP	GSP	OCW
Average luminance for angles> 65 (cd / m²)	>3000	<3000	<3000	<1500
UGR	<21	<19	<19	<16

Finishes

White

Photometric distribution

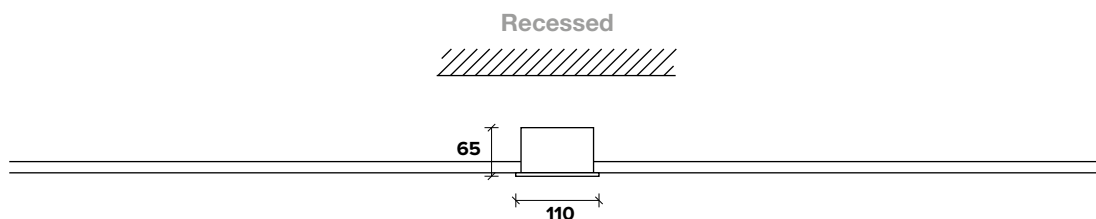


Installation steps	Dt	1,29	1,16	1,14	1,32
	DI	1,24	1,18	1,18	1,00

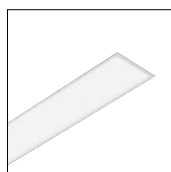
NEW

Arrange the version that best suits your needs quickly and easily
www.3f-illippi.com/en/3F-HD-configurator

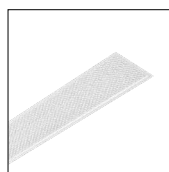
3F HD 100



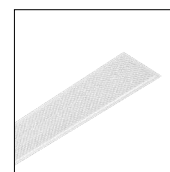
3F HD Direct / Indirect Emission



FDO



FDP



GSP

Average luminance for angles > 65 (cd / m²)

>3000

<3000

<3000

UGR

<21

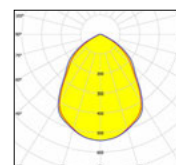
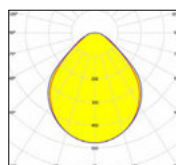
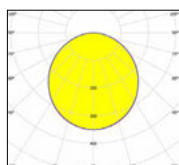
<19

<19

Finishes

White

Photometric distribution



Installation steps

Dt 1,40

1,50

1,45

DI 1,20

1,25

1,25



3F HD R Recessed - Single

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted extruded aluminium.

Removable gear-tray.

End caps in white steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Entrance to the upper power supply in proximity to a power head.

Branching via an irreversible quick coupling plug to connect the cable housing element to the socket.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- optic in different RAL colours
- wiring: CLO (more information on page 568)
- Optics Control Black
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

FDO version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

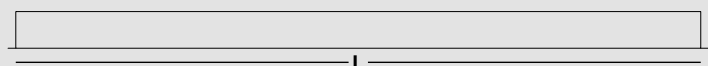
Installation

Recessed installation.

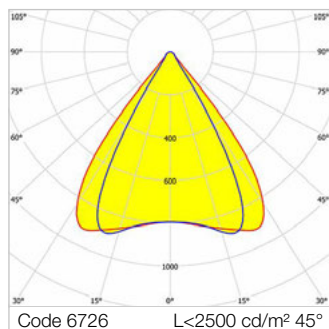
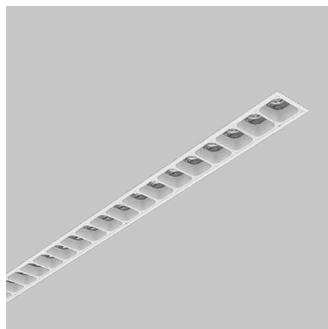
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F HD R OCW Single



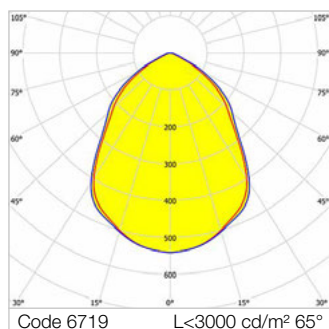
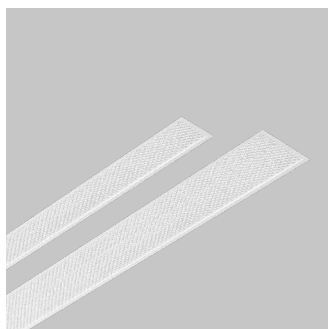
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <1500 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective white polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

6725 <small>UPDATE</small>	3F HD50R WH 12/830 DALI OCW L1188	14.5	1696	3000	>80	1188x67x65
6726 <small>UPDATE</small>	3F HD50R WH 15/830 DALI OCW L1482	18	2120	3000	>80	1482x67x65
6727 <small>UPDATE</small>	3F HD50R WH 30/830 DALI OCW L2949	33	4240	3000	>80	2949x67x65

3F HD R GSP Single



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
 Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.
 Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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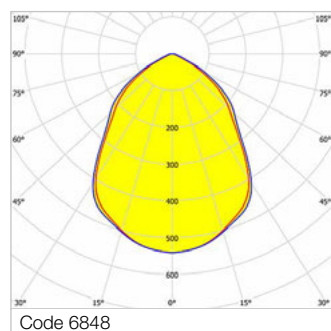
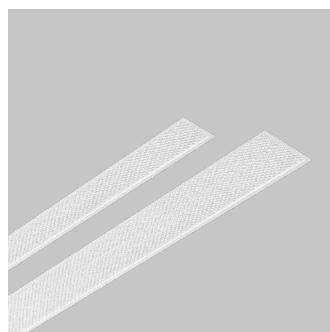
3F HD 50 - DALI electronic wiring 230V-50/60Hz

6718	3F HD50R WH 13/840 DALI GSP L1188	14	1374	4000	>80	1188x67x65
6719	3F HD50R WH 16/840 DALI GSP L1482	18	1718	4000	>80	1482x67x65
6720	3F HD50R WH 32/840 DALI GSP L2949	35	3435	4000	>80	2949x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6737	3F HD100R WH 22/840 DALI GSP L1188	23	2617	4000	>80	1188x110x65
6738	3F HD100R WH 26/840 DALI GSP L1482	29	3271	4000	>80	1482x110x65
6739	3F HD100R WH 52/840 DALI GSP L2949	56	6428	4000	>80	2949x110x65

3F HD R HO GSP Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

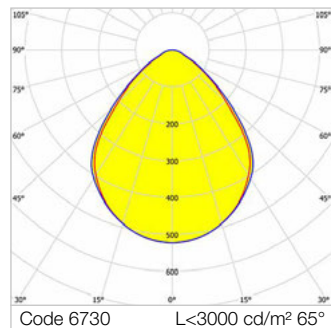
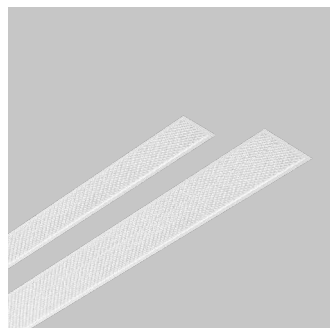
3F HD 50 - DALI electronic wiring 230V-50/60Hz

6847	3F HD50R WH HO 22/840 DALI GSP L1188	24	2596	4000	>80	1188x67x65
6848	3F HD50R WH HO 26/840 DALI GSP L1482	30	3246	4000	>80	1482x67x65
6849	3F HD50R WH HO 52/840 DALI GSP L2949	58	6492	4000	>80	2949x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6850	3F HD100R WH HO 36/840 DALI GSP L1188	39	4434	4000	>80	1188x110x65
6851	3F HD100R WH HO 44/840 DALI GSP L1482	49	5542	4000	>80	1482x110x65
6852	3F HD100R WH HO 88/840 DALI GSP L2949	98	11085	4000	>80	2949x110x65

3F HD R FDP Single



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
Externally micro prismatic transparent flat anti-glare polycarbonate diffuser.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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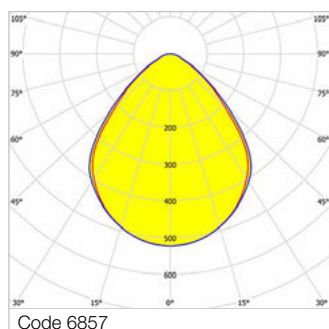
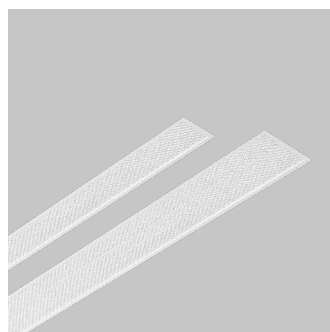
3F HD 50 - DALI electronic wiring 230V-50/60Hz

6710	3F HD50R WH 13/840 DALI FDP L1188	14	1292	4000	>80	1188x67x65
6711	3F HD50R WH 16/840 DALI FDP L1482	18	1615	4000	>80	1482x67x65
6712	3F HD50R WH 32/840 DALI FDP L2949	35	3229	4000	>80	2949x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6729	3F HD100R WH 22/840 DALI FDP L1188	23	2468	4000	>80	1188x110x65
6730	3F HD100R WH 26/840 DALI FDP L1482	29	3085	4000	>80	1482x110x65
6731	3F HD100R WH 52/840 DALI FDP L2949	56	6062	4000	>80	2949x110x65

3F HD R HO FDP Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 Externally micro prismatic transparent flat anti-glare polycarbonate diffuser.
 Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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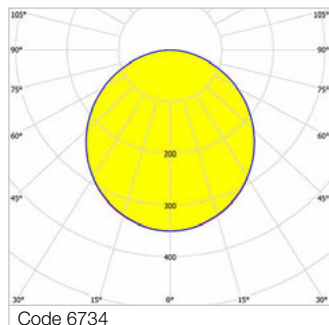
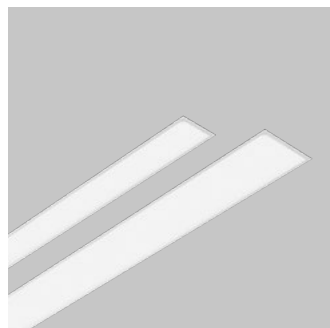
3F HD 50 - DALI electronic wiring 230V-50/60Hz

6853	3F HD50R WH HO 22/840 DALI FDP L1188	24	2448	4000	>80	1188x67x65
6854	3F HD50R WH HO 26/840 DALI FDP L1482	30	3061	4000	>80	1482x67x65
6855	3F HD50R WH HO 52/840 DALI FDP L2949	58	6122	4000	>80	2949x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6856	3F HD100R WH HO 36/840 DALI FDP L1188	39	4182	4000	>80	1188x110x65
6857	3F HD100R WH HO 44/840 DALI FDP L1482	49	5227	4000	>80	1482x110x65
6858	3F HD100R WH HO 88/840 DALI FDP L2949	98	10454	4000	>80	2949x110x65

3F HD R FDO Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 Flat opal anti-glare polycarbonate diffuser.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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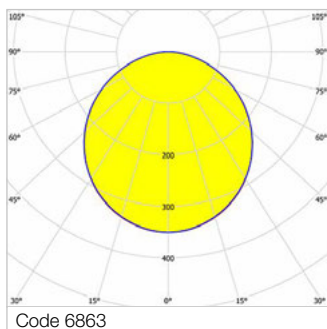
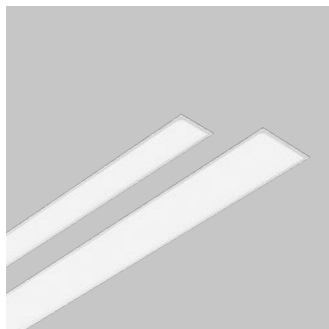
3F HD 50 - DALI electronic wiring 230V-50/60Hz

6714	3F HD50R WH 13/840 DALI FDO L1188	14	1250	4000	>80	1188x67x65
6715	3F HD50R WH 16/840 DALI FDO L1482	18	1563	4000	>80	1482x67x65
6716	3F HD50R WH 32/840 DALI FDO L2949	35	3126	4000	>80	2949x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6733	3F HD100R WH 22/840 DALI FDO L1188	23	2304	4000	>80	1188x110x65
6734	3F HD100R WH 26/840 DALI FDO L1482	29	2880	4000	>80	1482x110x65
6735	3F HD100R WH 52/840 DALI FDO L2949	56	5660	4000	>80	2949x110x65

3F HD R HO FDO Single



Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
Flat opal anti-glare polycarbonate diffuser.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

6859	3F HD50R WH HO 22/840 DALI FDO L1188	24	2286	4000	>80	1188x67x65
6860	3F HD50R WH HO 26/840 DALI FDO L1482	30	2858	4000	>80	1482x67x65
6861	3F HD50R WH HO 52/840 DALI FDO L2949	58	5716	4000	>80	2949x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6862	3F HD100R WH HO 36/840 DALI FDO L1188	39	3904	4000	>80	1188x110x65
6863	3F HD100R WH HO 44/840 DALI FDO L1482	49	4880	4000	>80	1482x110x65
6864	3F HD100R WH HO 88/840 DALI FDO L2949	98	9760	4000	>80	2949x110x65





3F HD R Recessed - Channel

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted extruded aluminium.

Removable gear-tray.

Hot-dip galvanised steel linear connecting element installed on the body for rapid mechanical connection.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Entrance to the upper power supply in proximity to a power head.

5 mm² section 2.5 pin through line with an irreversible quick coupling plug plug/socket fixed on the body for rapid electrical connection.

Branching via an irreversible quick coupling plug to connect the cable housing element to the socket.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- OC optic in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

FDO version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

Installation

Recessed installation.

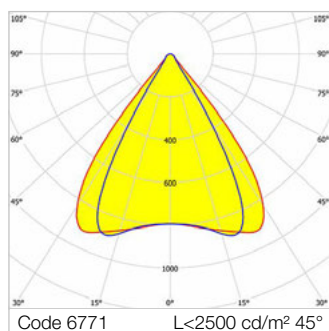
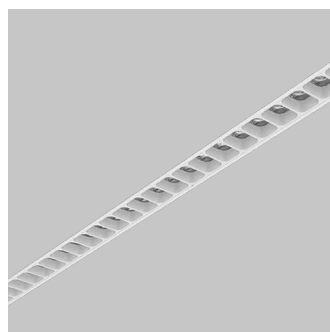
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F HD R OCW Channel



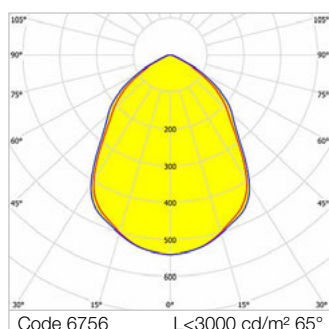
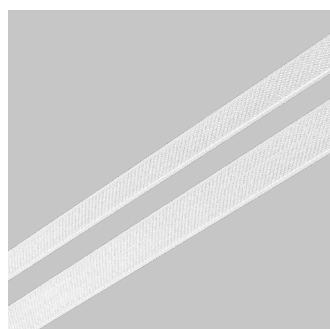
Average luminance <2500 cd/m² for angles >45°.
 Average luminance <1500 cd/m² for angles >65°.
 Environments with very exacting visual tasks and control of luminance at angles of >45° compared to the LEED certification. Offices with video terminals and administrative, information and school offices.
 Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.
 Anti-reflective white polycarbonate alveolar optic.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

6770 <small>UPDATE</small>	3F HD50R WH 12/830 DALI 5P OCW L1174	14.5	1696	3000	>80	1174x67x65
6771 <small>UPDATE</small>	3F HD50R WH 15/830 DALI 5P OCW L1468	18	2120	3000	>80	1468x67x65
6772 <small>UPDATE</small>	3F HD50R WH 30/830 DALI 5P OCW L2935	33	4240	3000	>80	2935x67x65

3F HD R GSP Channel



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65°.
 Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
 SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.
 Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

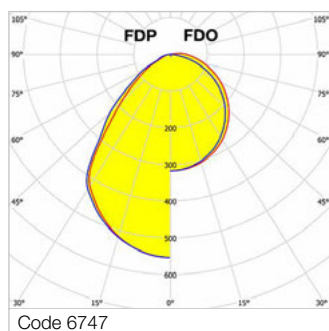
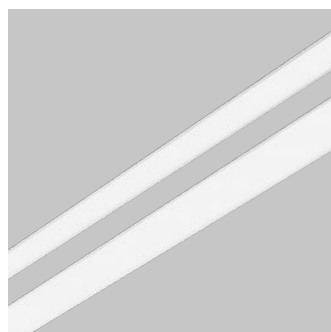
3F HD 50 - DALI electronic wiring 230V-50/60Hz

6755	3F HD50R WH 13/840 DALI 5P GSP L1174	14	1374	4000	>80	1174x67x65
6756	3F HD50R WH 16/840 DALI 5P GSP L1468	18	1718	4000	>80	1468x67x65
6760	3F HD50R WH 32/840 DALI 5P GSP L2935	35	3435	4000	>80	2935x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6785	3F HD100R WH 22/840 DALI 5P GSP L1174	23	2617	4000	>80	1174x110x65
6786	3F HD100R WH 26/840 DALI 5P GSP L1468	29	3271	4000	>80	1468x110x65
6790	3F HD100R WH 52/840 DALI 5P GSP L2935	56	6428	4000	>80	2935x110x65

3F HD R FD Channel



Driver/LED
SELV

Average luminance <3000 cd/m² for angles >65° (FDP).
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.
For diffusers see accessories on page 75.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F HD 50 - DALI electronic wiring 230V-50/60Hz

6746	3F HD50R WH 13/840 DALI 5P FD L1174	14	1292 FDP 1250 FDO	4000	>80	1174x67x65
6747	3F HD50R WH 16/840 DALI 5P FD L1468	18	1615 FDP 1563 FDO	4000	>80	1468x67x65
6751	3F HD50R WH 32/840 DALI 5P FD L2935	35	3229 FDP 3126 FDO	4000	>80	2935x67x65

3F HD 100 - DALI electronic wiring 230V-50/60Hz

6776	3F HD100R WH 22/840 DALI 5P FD L1174	23	2468 FDP 2304 FDO	4000	>80	1174x110x65
6777	3F HD100R WH 26/840 DALI 5P FD L1468	29	3085 FDP 2880 FDO	4000	>80	1468x110x65
6781	3F HD100R WH 52/840 DALI 5P FD L2935	56	6062 FDP 5660 FDO	4000	>80	2935x110x65

3F HD R | Accessories



850°C



FDP - Flat diffuser, externally microprismatic and made of transparent polycarbonate, with internal anti-glare opal polycarbonate filter for luminous uniformity. Supplied in roll.

Accessory compatible with 3F HD R FD Channel.

Code	Item
A01536	Channels diffusers 3F HD50 - FDP - 6m
A01537	Channels diffusers 3F HD50 - FDP - 9m
A01538	Channels diffusers 3F HD50 - FDP - 15m
A01544	Channels diffusers 3F HD100 - FDP - 6m
A01545	Channels diffusers 3F HD100 - FDP - 9m
A01546	Channels diffusers 3F HD100 - FDP - 15m



850°C

FDO - Flat diffuser, smooth outside and made of opal polycarbonate. Supplied in roll.

Accessory compatible with 3F HD R FD Channel.

Code	Item
A01540	Channels diffusers 3F HD50 - FDO - 6m
A01541	Channels diffusers 3F HD50 - FDO - 9m
A01542	Channels diffusers 3F HD50 - FDO - 15m
A01548	Channels diffusers 3F HD100 - FDO - 6m
A01549	Channels diffusers 3F HD100 - FDO - 9m
A01550	Channels diffusers 3F HD100 - FDO - 15m



Dilator coupling to connect flat diffusers FDP or FDO.

Accessory compatible with 3F HD R FD Channel.

Code	Item
A01563	Dilator joint FD channels>15m - HD50 WH
A01564	Dilator joint FD channels>15m - HD100 WH
A01568	Dilator joint FD channels>15m - HD50 BK
A01569	Dilator joint FD channels>15m - HD100 BK
A01570	Dilator joint FD channels>15m - HD50 AL
A01571	Pair of end caps 3F HD50R WH channel GSP

To be used for channels longer than 15 metres.



Pair of end caps for channels, in grey painted aluminium, with screws for fixing to housing, always required. Thickness: 10 mm each cap.

Accessory compatible with 3F HD R FD Channel.

Code	Item
A01561	Pair end caps 3F HD50R WH chan. FD
A01562	Pair end caps 3F HD100R WH chan. FD
A01572	Dilator joint FD channels>15m - HD100 AL
A01573	Pair of end caps 3F HD100R WH chann GSP
A01574	Pair of end caps 3F HD50R WH channel OCW

These accessories are not suitable for single-unit installation.



Set of galvanised steel brackets necessary to recess install the fixture in plasterboard.

Code	Item
A01565	Pair fixing brack. plasterboard 3F HD50R
A01566	Pair fixing brack.plasterboard 3F HD100R





Terminal block (plug/socket) with irreversible snap-in double clamp, for power-supply connection at beginning and end of the channel, 5 poles.

Accessory compatible with 3F HD R Recessed - Channel.

Code	Item
A01567	3F HD - 5P socket/plug terminal block







3F Mirella

> [www.3F-Filippi.com/3F Mirella](http://www.3F-Filippi.com/3F_Mirella)

Design by **Andrea Ciotti**

Essential yet at the same time refined the fixture is composed of an aluminium body that houses the LED technology and a shaped methacrylate part that accompanies the luminous flux. Available in various models and finishes the new system is designed to integrate discreetly in professional or residential contexts. The integration of the two elements makes the visual perception of the light source change inside the space during the day. Elaborate, essential and flexible 3F Mirella is a solution that is suitable for multiple configurations in modern architectural spaces. It can be equipped with diffusers of different types and colours, all interchangeable to give customers the possibility to select the best light quality and required visual comfort.

This product is also available in this version 3F Mirella Floor (page 92).

+ Overview

- Luminous efficacy up to 110 lumen/watt.
- Luminous fluxes from 4741 to 9051 lumens.
- Average luminance <3000 cd/m².
- Extensive installation pitch.
- UGR <19 (SP version).
- Driver integrated in the fixture.
- Quick and easy cleaning.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page	Product	Suspended
82	3F Mirella Direct	•
86	3F Mirella Direct/Indirect	•

Screens and finishes

3F Filippi takes their lighting competence to the architectural sector with products with advanced technology and excellent performance.

3F Mirella was developed with an optical system composed of three elements that make it possible to have extraordinary glare values and luminance without compromising on luminous flux output.

Finishes



White



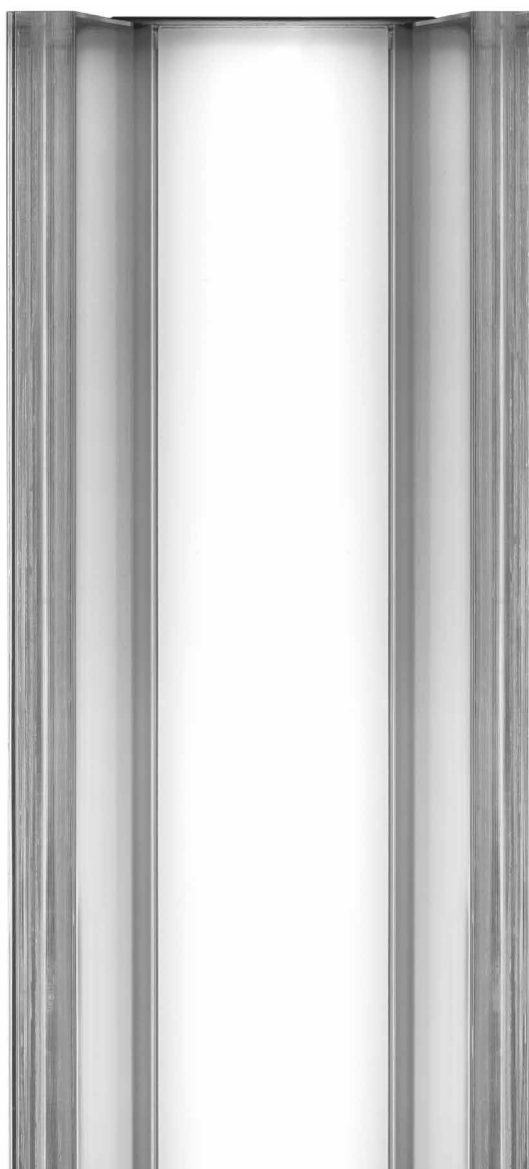
Black



Silver

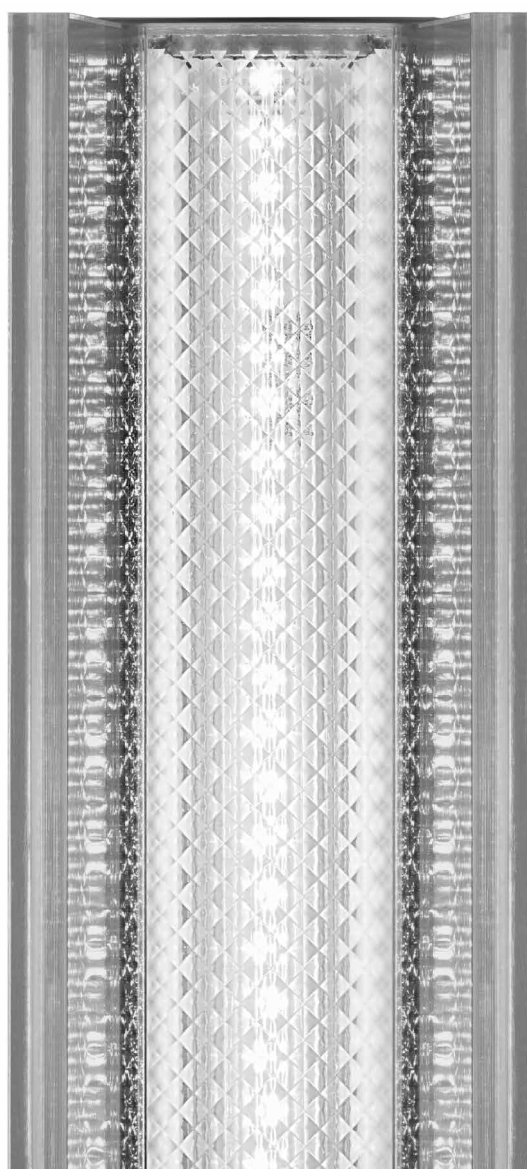
OP

Flat opal PMMA filter
Transparent lens



SP

Flat prismatic PMMA filter
Transparent lens







3F Mirella Direct

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium body, zamak heads.
 External lens of particular aesthetic value in transparent PMMA.
 Adjustable suspension fixtures with chrome studs and rapid adjusters, galvanised steel cable of 2 m long.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

ON/OFF versions

Transparent 3-pole power cable with white ceiling power supply case.

DALI versions

Transparent 5-pole power cable with white ceiling power supply case.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- power and suspension cables of >2 m long
- emergency versions

Applications

Environments involving accurate visual tasks where a diffused and soft light for an optimum visual comfort and the source total shielding are required.

In environments with VDTs, managerial offices and staterooms.

OP version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

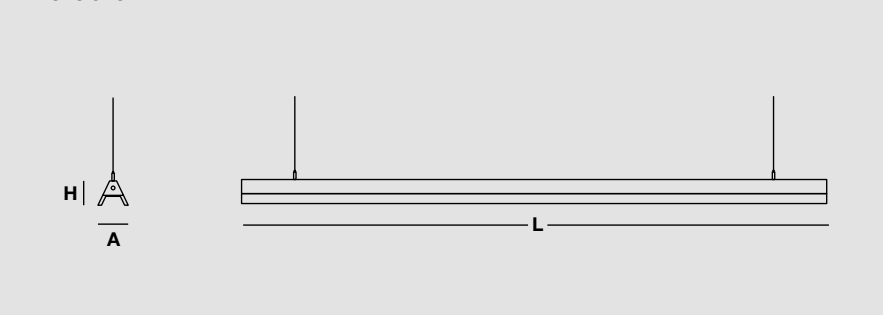
Installation

Suspension installation.

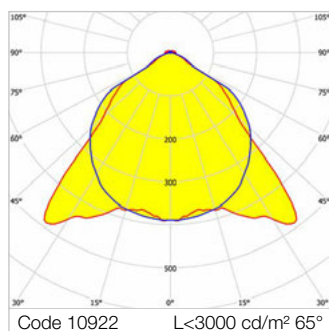
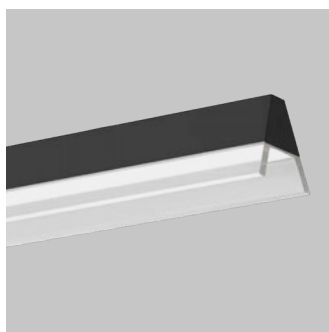
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Mirella SP



Driver/LED
SELV

Average luminance <3000 cd/m² for radial angles >65°.
PMMA primary lens for total source shielding.
Flat transparent prismatic PMMA methacrylate filter, multi-lenticular exterior, anti-glare.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

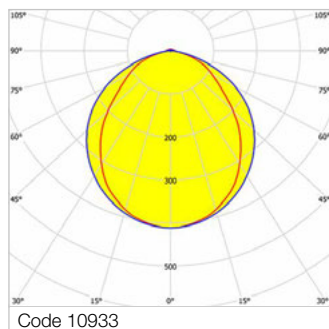
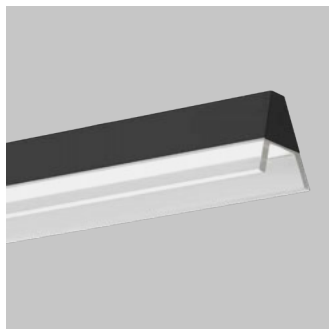
○ 10920	3F Mirella WH 40 SP L1480	46	4741	4000	>80	1480x112x91
○ 10921	3F Mirella WH 60 SP L2200	66	7112	4000	>80	2200x112x91
● 10898	3F Mirella BK 40 SP L1480	46	4741	4000	>80	1480x112x91
● 10899	3F Mirella BK 60 SP L2200	66	7112	4000	>80	2200x112x91
○ 10942	3F Mirella AL 40 SP L1480	46	4741	4000	>80	1480x112x91
○ 10943	3F Mirella AL 60 SP L2200	66	7112	4000	>80	2200x112x91

DALI electronic wiring 230V-50/60Hz

○ 10922	3F Mirella WH 40 DALI SP L1480	45	4741	4000	>80	1480x112x91
○ 10923	3F Mirella WH 60 DALI SP L2200	66	7112	4000	>80	2200x112x91
● 10900	3F Mirella BK 40 DALI SP L1480	45	4741	4000	>80	1480x112x91
● 10901	3F Mirella BK 60 DALI SP L2200	66	7112	4000	>80	2200x112x91
○ 10944	3F Mirella AL 40 DALI SP L1480	45	4741	4000	>80	1480x112x91
○ 10945	3F Mirella AL 60 DALI SP L2200	66	7112	4000	>80	2200x112x91



3F Mirella OP



Flat opal anti-glare PMMA filter.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 10931	3F Mirella WH 40 OP L1480	46	4845	4000	>80	1480x112x91
○ 10932	3F Mirella WH 60 OP L2200	66	7268	4000	>80	2200x112x91
● 10909	3F Mirella BK 40 OP L1480	46	4845	4000	>80	1480x112x91
● 10910	3F Mirella BK 60 OP L2200	66	7268	4000	>80	2200x112x91
○ 10953	3F Mirella AL 40 OP L1480	46	4845	4000	>80	1480x112x91
○ 10954	3F Mirella AL 60 OP L2200	66	7268	4000	>80	2200x112x91

DALI electronic wiring 230V-50/60Hz

○ 10933	3F Mirella WH 40 DALI OP L1480	45	4845	4000	>80	1480x112x91
○ 10934	3F Mirella WH 60 DALI OP L2200	66	7268	4000	>80	2200x112x91
● 10911	3F Mirella BK 40 DALI OP L1480	45	4845	4000	>80	1480x112x91
● 10912	3F Mirella BK 60 DALI OP L2200	66	7268	4000	>80	2200x112x91
○ 10955	3F Mirella AL 40 DALI OP L1480	45	4845	4000	>80	1480x112x91
○ 10956	3F Mirella AL 60 DALI OP L2200	66	7268	4000	>80	2200x112x91





3F Mirella Direct/Indirect

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium body, zamak heads.

External lens of particular aesthetic value in transparent PMMA.

Adjustable suspension fixtures with chrome studs and rapid adjusters, galvanised steel cable of 2 m long.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

ON/OFF versions

Transparent 3-pole power cable with white ceiling power supply case, single ignition.

DALI versions

5-pole transparent power cable with white power supply case for ceiling, single 230V circuit, 2 DALI addresses.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- power and suspension cables of >2 m long
- twin-circuit
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments involving accurate visual tasks where a diffused and soft light for an optimum visual comfort and the source total shielding are required.

In environments with VDTs, managerial offices and staterooms.

OP version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

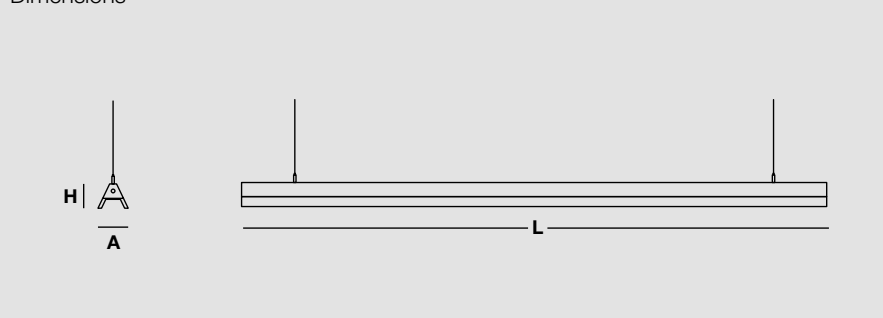
Installation

Suspension installation.

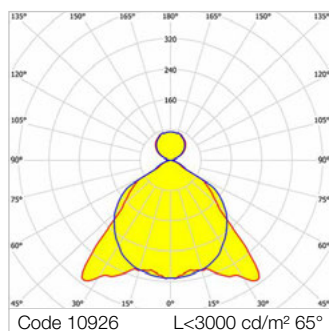
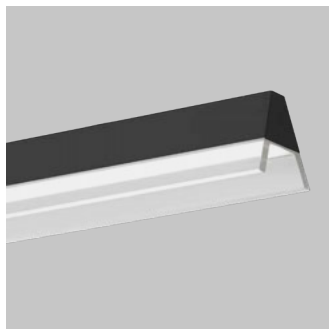
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Mirella DI SP



Driver/LED
SELV

PMMA primary lens for total source shielding.
Flat transparent prismatic PMMA methacrylate filter, multi-lenticular exterior, anti-glare.
Average luminance <3000 cd/m² for radial angles >65°.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

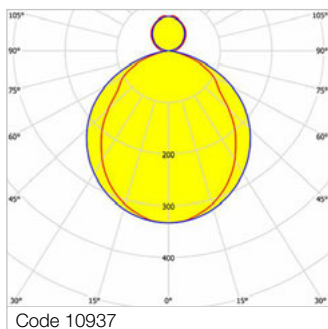
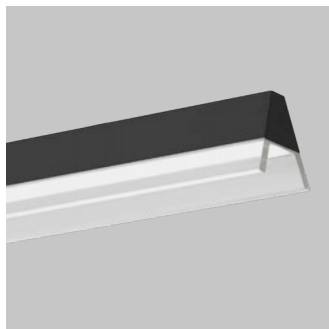
○ 10924	3F Mirella WH DI 40+8 SP L1480	58	5849	4000	>80	1480x112x91
○ 10925	3F Mirella WH DI 60+14 SP L2200	84	8907	4000	>80	2200x112x91
● 10902	3F Mirella BK DI 40+8 SP L1480	58	5849	4000	>80	1480x112x91
● 10903	3F Mirella BK DI 60+14 SP L2200	84	8907	4000	>80	2200x112x91
○ 10946	3F Mirella AL DI 40+8 SP L1480	58	5849	4000	>80	1480x112x91
○ 10947	3F Mirella AL DI 60+14 SP L2200	84	8907	4000	>80	2200x112x91

DALI electronic wiring 230V-50/60Hz

○ 10926	3F Mirella WH DI 40+8 DALI SP L1480	58	5849	4000	>80	1480x112x91
○ 10927	3F Mirella WH DI 60+14 DALI SP L2200	84	8907	4000	>80	2200x112x91
● 10904	3F Mirella BK DI 40+8 DALI SP L1480	58	5849	4000	>80	1480x112x91
● 10905	3F Mirella BK DI 60+14 DALI SP L2200	84	8907	4000	>80	2200x112x91
○ 10948	3F Mirella AL DI 40+8 DALI SP L1480	58	5849	4000	>80	1480x112x91
○ 10949	3F Mirella AL DI 60+14 DALI SP L2200	84	8907	4000	>80	2200x112x91



3F Mirella DI OP



Flat opal anti-glare PMMA filter.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

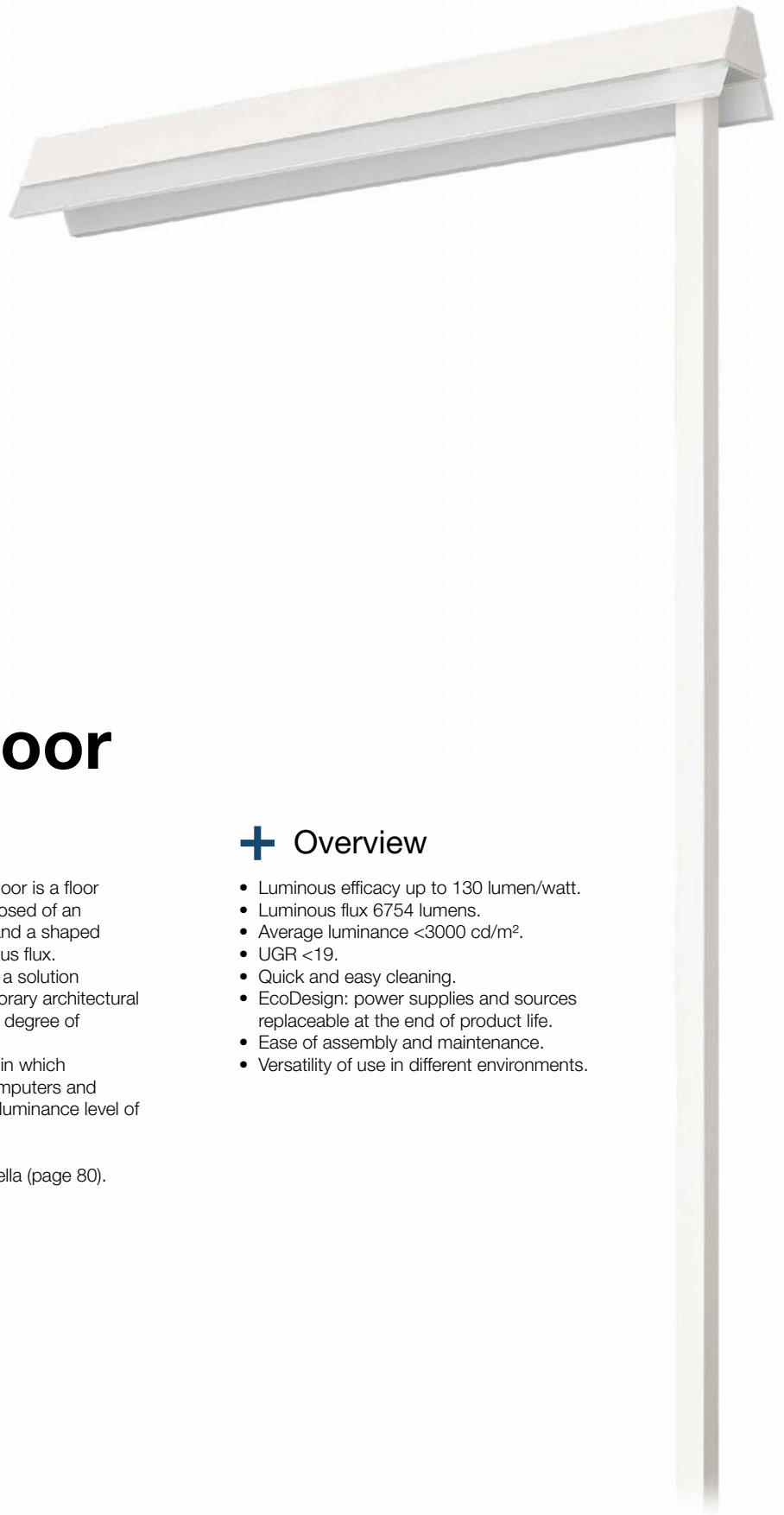
○ 10935	3F Mirella WH DI 40+8 OP L1480	58	5944	4000	>80	1480x112x91
○ 10936	3F Mirella WH DI 60+14 OP L2200	84	9051	4000	>80	2200x112x91
● 10913	3F Mirella BK DI 40+8 OP L1480	58	5944	4000	>80	1480x112x91
● 10914	3F Mirella BK DI 60+14 OP L2200	84	9051	4000	>80	2200x112x91
○ 10957	3F Mirella AL DI 40+8 OP L1480	58	5944	4000	>80	1480x112x91
○ 10958	3F Mirella AL DI 60+14 OP L2200	84	9051	4000	>80	2200x112x91

DALI electronic wiring 230V-50/60Hz

○ 10937	3F Mirella WH DI 40+8 DALI OP L1480	58	5944	4000	>80	1480x112x91
○ 10938	3F Mirella WH DI 60+14 DALI OP L2200	84	9051	4000	>80	2200x112x91
● 10915	3F Mirella BK DI 40+8 DALI OP L1480	58	5944	4000	>80	1480x112x91
● 10916	3F Mirella BK DI 60+14 DALI OP L2200	84	9051	4000	>80	2200x112x91
○ 10959	3F Mirella AL DI 40+8 DALI OP L1480	58	5944	4000	>80	1480x112x91
○ 10960	3F Mirella AL DI 60+14 DALI OP L2200	84	9051	4000	>80	2200x112x91







3F Mirella Floor

> [www.3F-Filippi.com/3F Mirella Floor](http://www.3F-Filippi.com/3F_Mirella_Floor)

Design by **Andrea Ciotti**

Essential yet at the same time refined, 3F Mirella Floor is a floor lamp that can be freely positioned in space, composed of an aluminium body that houses the LED technology and a shaped methacrylate volume that accompanies the luminous flux.

Elaborate, essential and flexible, 3F Mirella Floor is a solution suitable for the multiple configurations of contemporary architectural spaces - smart working above all - in which a high degree of flexibility of the individual workstations is required.

Its light (direct-indirect) is perfect for environments in which electronic equipment such as tablets, personal computers and smartphones are used daily, thanks to its average luminance level of less than 3000 cd/m² for radial angles >65°.

This product is also available in this version 3F Mirella (page 80).

+ Overview

- Luminous efficacy up to 130 lumen/watt.
- Luminous flux 6754 lumens.
- Average luminance <3000 cd/m².
- UGR <19.
- Quick and easy cleaning.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page	Product	Floor
92	3F Mirella Floor	•



3F Mirella Floor

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.

Average luminance <3000 cd/m² for radial angles >65°.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium body, zamak heads.

Transparent methacrylate PMMA micro prismatic primary anti-glare lens, multi lenticular on the outside.

Anti-glare opal polycarbonate filter for brightness uniformity.

External lens of particular aesthetic value in satin PMMA.

Painted stainless steel square section pole.

Base in painted steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Power supply with a 2.5 m long transparent cable, schuko plug.

ON/OFF versions

Foot switch, single switch-on.

DALI versions

Touch DALI touch control integrated in the stem, for switching on and off and independent adjustment of the two emissions.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- body, pole and base in different RAL colours
- wiring: CLO (more information on page 568)
- different power cables

Applications

Environments which cannot, for technical reasons, be equipped with points of light directed onto the ceiling.

Open-space offices and environments in which a high degree of workstation flexibility is required.

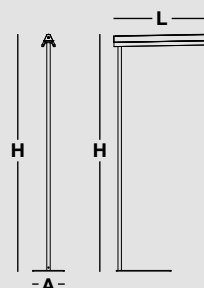
Environments: staterooms, with VDTs, offices.

Environments where soft diffuse light is required for optimal visual comfort.

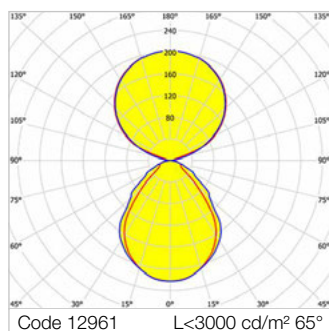
Installation

Floor installation.

Dimensions



3F Mirella Floor



Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 12961	3F Mirella Floor SF WH 23+23	52	7042	4000	>80	843x280x2060
● 12960	3F Mirella Floor SF BK 23+23	52	7042	4000	>80	843x280x2060

DALI electronic wiring 230V-50/60Hz

○ 12965	3F Mirella Floor SF WH 23+23 Touch DALI	52	7042	4000	>80	843x280x2060
● 12964	3F Mirella Floor SF BK 23+23 Touch DALI	52	7042	4000	>80	843x280x2060







3F Trittico

> [www.3F-Filippi.com/3F Trittico](http://www.3F-Filippi.com/3F_Trittico)

Design by **Atelier(s) Alfonso Femia**

Light fixture equipped with LED sources.

3F Trittico is composed of three arms of around 800 mm, two for direct lighting and one for indirect lighting.

Conceived mainly to light offices this fixture is ideal to adapt to changes in the layout of spaces.

The three arms on the fixture can rotate perpendicularly to the supporting rod to provide the best lighting depending on the activity carried out in the space and the arrangement of the furniture.

This product is also available in this version 3F Solo (page 104).

+ Overview

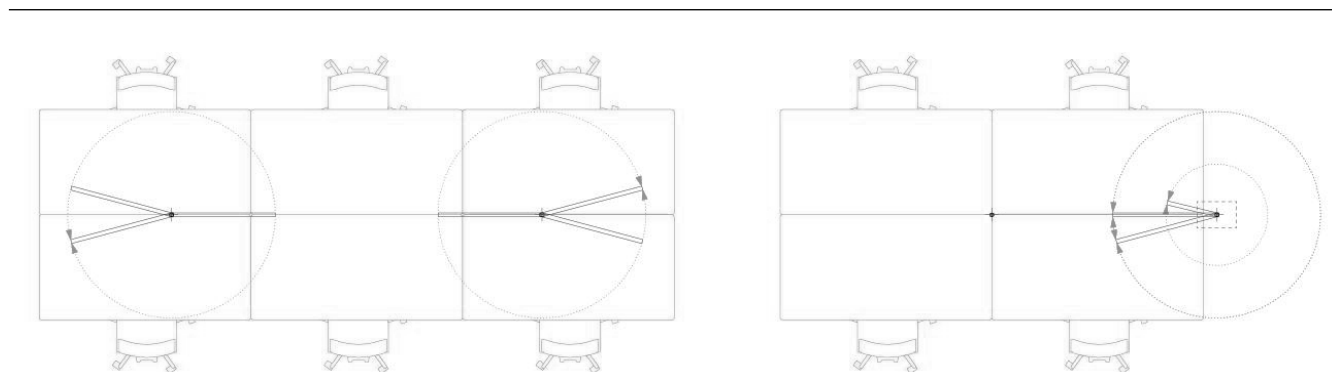
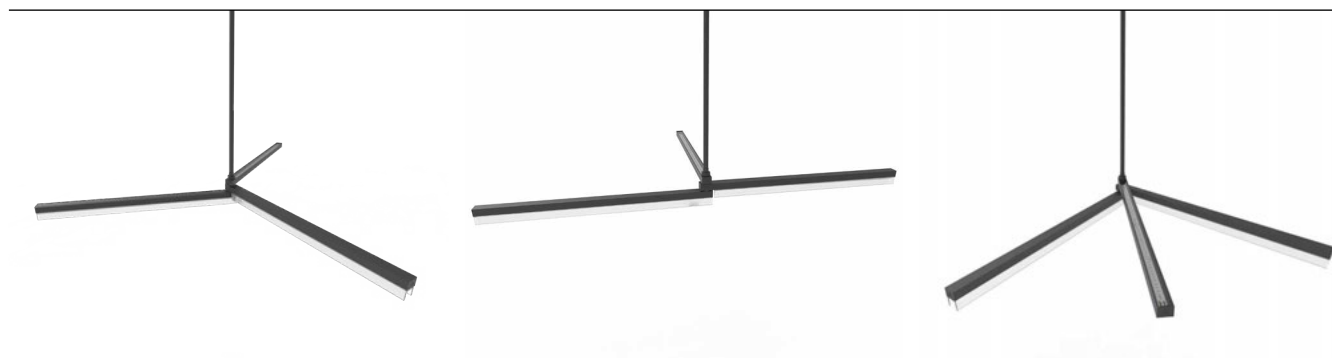
- Luminous efficacy up to 130 lumen/watt.
- Luminous flux 5841 lumens.
- Average luminance <3000 cd/m².
- Adjustable light source according to customer needs.
- UGR <19.
- Quick and easy cleaning.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page	Product	Suspended
100	UPDATE 3F Trittico	•



Versatility

Minimum angle between light elements of 52 degrees.
Maximum angle between light elements 308 degrees.



Screens and finishes

3F Trittico is available with an opaque black and white finish with aluminium arms and a steel supporting rod. Indirect lighting is filtered by a translucent PMMA screen, while the desktop version is diffused with a satin extruded PMMA lens with a design that minimises the level of glare.

INDIRECT LIGHT

Flat opal

PMMA filter

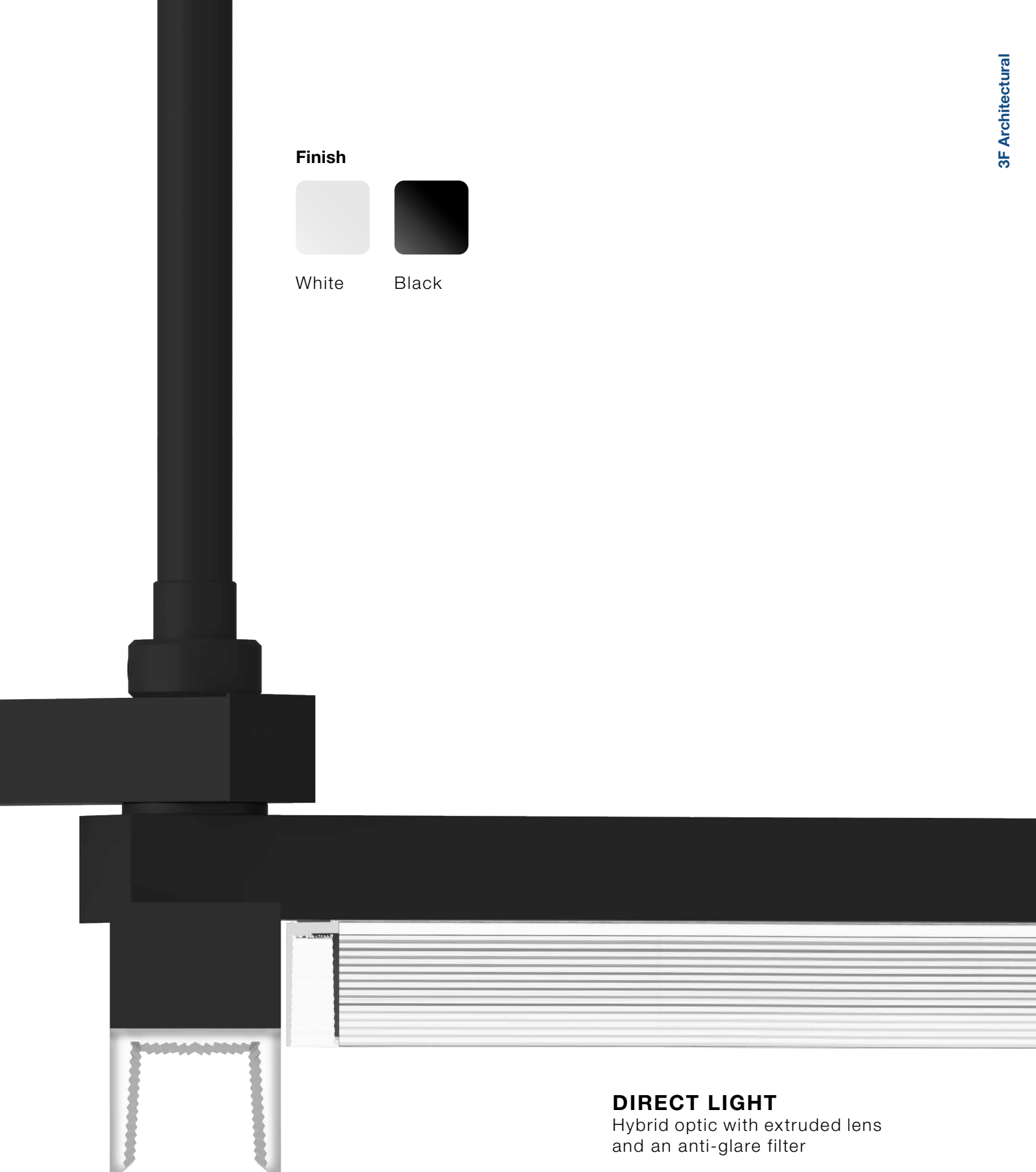
Finish



White



Black



DIRECT LIGHT

Hybrid optic with extruded lens
and an anti-glare filter



3F Trittico

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.

Lifetime (L92/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.

Fixture composed of three independent adjustable arms that can be moved separately.

Non-iridescent high efficiency aluminium with a titanium and magnesium surface treatment flow recuperator.

Transparent PMMA methacrylate anti-glare filter.

Arms for direct lighting with satin PMMA methacrylate lenses.

Arm for indirect lighting with a translucent polycarbonate screen.

Polycarbonate heads.

Steel suspension fixture with poles H 300-500-800 mm with a brass rotation mechanism.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Peripheral cabling unit to recess into the ceiling.

Class II.

4-pole terminal block, single 230V circuit, 2 DALI addresses.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- version for ceiling installation
- maximum pole height 1.3 m
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

Installation

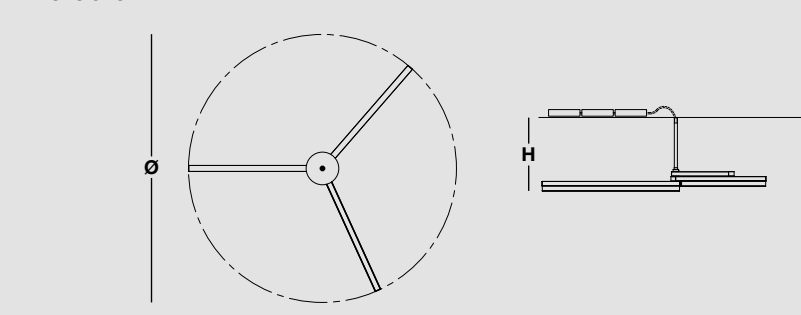
Installing mineral fibre or metal panels in plasterboard ceilings.

Warning: to install this fixture it is necessary to buy one of the following four accessories (A0828 / A0829 / A0830 / A0831) depending on the kind of ceiling to be used.

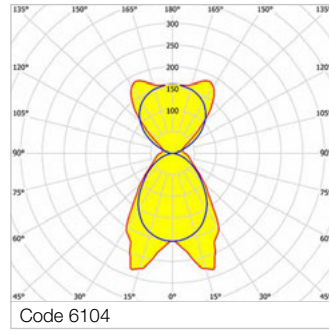
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Trittico



Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	--------------------	------------------	---------	-----	---------------------

DALI electronic wiring 230V-50/60Hz

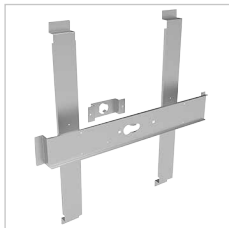
○ 6157 <small>UPDATE</small>	3F Trittico WH 12+12+15/830 DALI H300	45	5841	3000	>80	1560x300
○ 6160 <small>UPDATE</small>	3F Trittico WH 12+12+15/830 DALI H500	45	5841	3000	>80	1560x500
○ 6163 <small>UPDATE</small>	3F Trittico WH 12+12+15/830 DALI H800	45	5841	3000	>80	1560x800
● 6158 <small>UPDATE</small>	3F Trittico BK 12+12+15/830 DALI H300	45	5841	3000	>80	1560x300
● 6161 <small>UPDATE</small>	3F Trittico BK 12+12+15/830 DALI H500	45	5841	3000	>80	1560x500
● 6164 <small>UPDATE</small>	3F Trittico BK 12+12+15/830 DALI H800	45	5841	3000	>80	1560x800

3F Trittico | Accessories



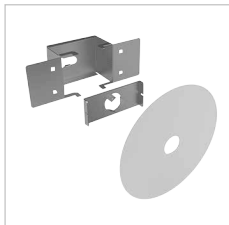
Hot-dip galvanised steel fixture installation bracket for metal panel false ceilings 600x600 with hidden structure with perpendicular adjustment rod screws.

Code	Item
A0828	Trittico fixing metal panels 60x60



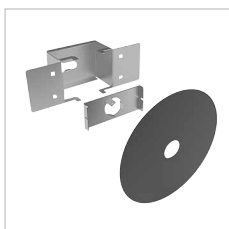
Hot-dip galvanised steel fixture installation bracket for mineral fibre panel false ceilings 600x600 with visible structure with perpendicular adjustment rod screws.

Code	Item
A0829	Trittico fixing mineral fiber pan. 60x60



Hot-dip galvanised steel fixture installation bracket for plasterboard false ceilings with perpendicular adjustment rod screws. White painted canopy with a Ø 120 mm hole.

Code	Item
A0830	Fixing Trittico plasterboard WH



Hot-dip galvanised steel fixture installation bracket for plasterboard false ceilings with perpendicular adjustment rod screws. Black painted canopy with a Ø 120 mm hole.

Code	Item
A0831	Fixing Trittico plasterboard BK





3F Solo

> [www.3F-Filippi.com/3F Solo](http://www.3F-Filippi.com/3F_Solo)

Design by **Atelier(s) Alfonso Femia**

The excellence of light combined with the elegance of the shape. 3F Solo is the result of the thinking behind the creation of the 3F Trittico: it is a simple, linear element that integrates discretely into environments.

An elegant, deliberately simple product enriched with technical details that become significant aesthetic characteristics.

The design of the fluted lens developed by the 3F Filippi optical laboratory, ensures that the light is diffused into the space softly and without glaring: the complex shape characterised by horizontal lines becomes a symmetry motif of the entire fixture in an interplay of surfaces that lighten the body when the fixture is lit.

In the version with the prismatic screen the contrast between the smooth surface of the body and the fluted diffuser creates a dualism that enhances its technical spirit.

The direct and indirect versions provide a feeling of greater space to the surrounding environment and make the product appear even more suspended in space.

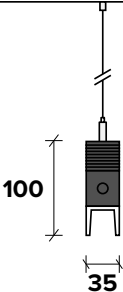
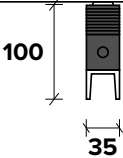



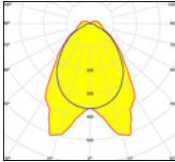
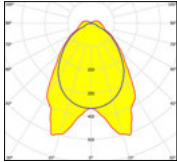
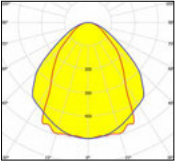
This product is also available in this version 3F Trittico (page 96).

+ Overview

- Luminous efficacy up to 130 lumen/watt.
- Luminous fluxes from 1826 to 15689 lumens.
- Average luminance <3000 cd/m² (L version).
- Extensive installation pitch.
- UGR <19.
- Driver integrated in the fixture.
- Quick and easy cleaning.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page		Product	Ceiling	Suspended
108	NEW	3F Solo Direct	•	•
112	NEW	3F Solo Direct/Indirect		•

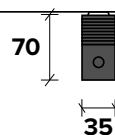
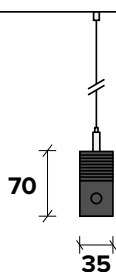
Product range

	Suspended	Ceiling	
3F Solo L			
3F Solo Direct Emission			
Model	L	L HO	HO SP
Average luminance for angles> 65 (cd / m²)	<3000	>3000	>3000
Percentage of emission D/DI (%)	Up Down	Up Down	Up Down
	0 100	0 100	0 100
Finishes	White Black		
Photometric distribution			
Installation steps	Dt DI	Dt DI	Dt DI
	1,35 1,13	1,35 1,13	1,06 1,25

3F Solo SP

Suspended

Ceiling



3F Solo Direct / Indirect Emission



Model

L

L HO

HO SP

Average luminance for angles > 65 (cd / m²)

<3000

>3000

>3000

Percentuale di emissione D/DI (%)

Up

76

61

60

Down

24

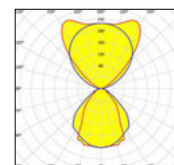
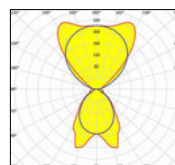
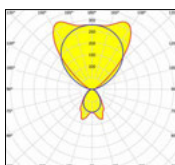
39

40

Finishes

White | Black

Photometric distribution



Installation steps

Dt

1,35

1,35

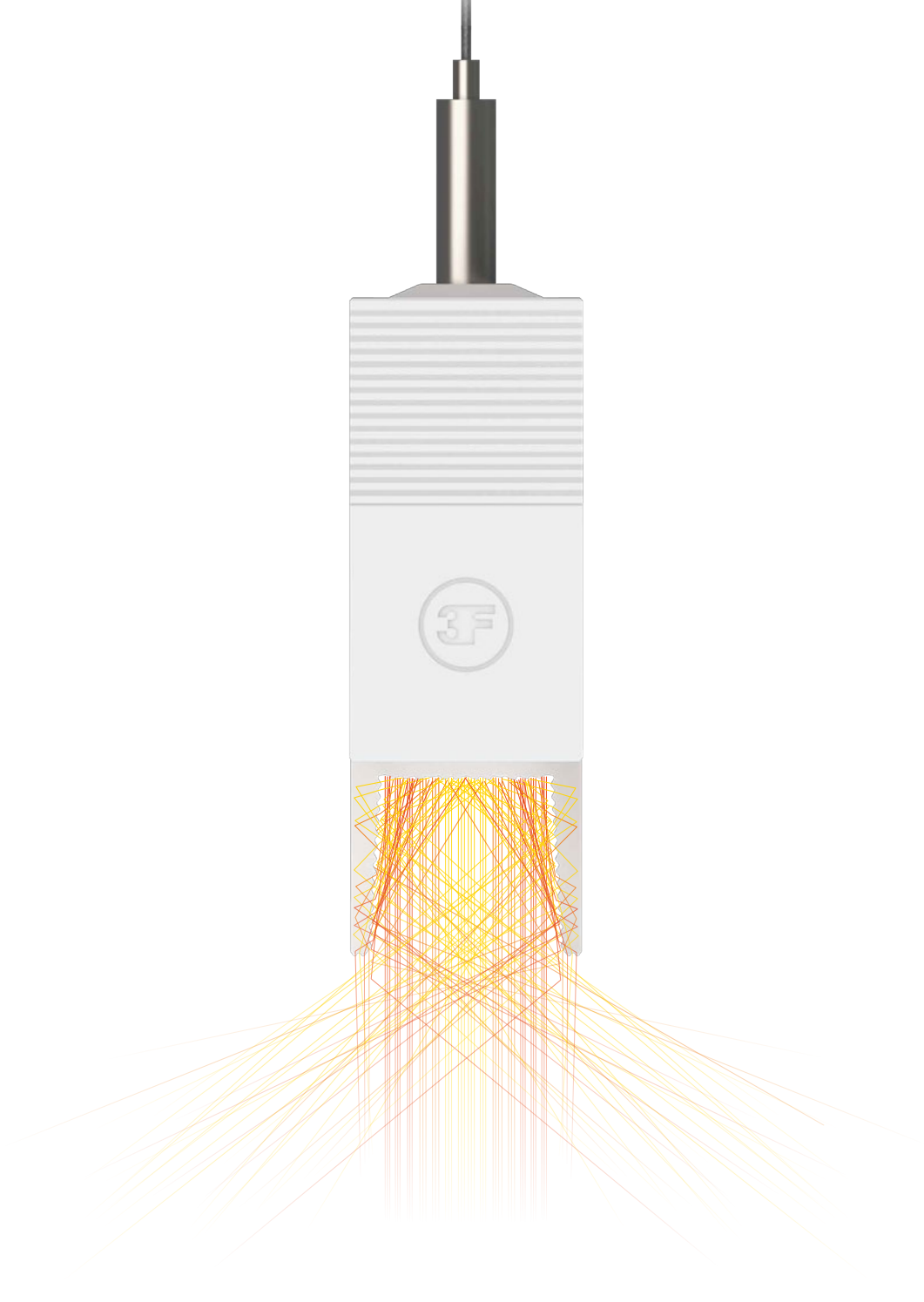
1,06

DI

1,13

1,13

1,25



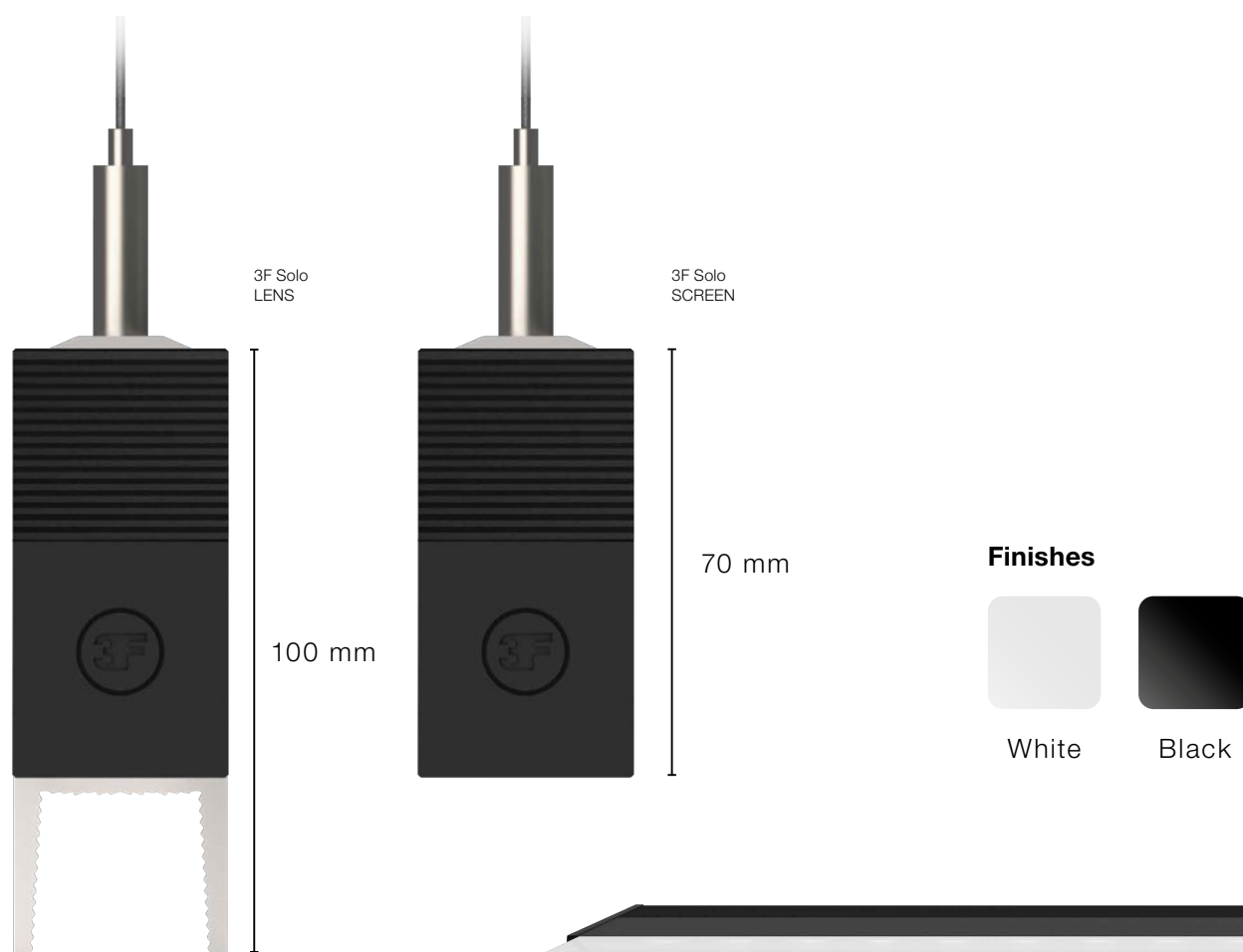
PRECISION LIGHTING

3F Solo distinguishes itself given the precision of the lighting provided and as a result complete visual comfort. In particular, the version equipped with a fluted U shaped opaque PMMA lens makes it possible to widen the distance between fixtures without increasing luminance and decreasing the number of products installed in the space. Luminous flux of the fixture from 1800 to 15000 lumen. Symmetrical direct (or direct and indirect) distribution. Installation distance $Dt = 1,35 \times hu$ - $DI = 1,13 \times hu$. Average luminance $<3000 \text{ cd/m}^2$ for $>65^\circ$ radial angles. UGR <19 (EN 12464-1). Product length from 1475 mm, 2205 mm and 2935 mm.

Screens and finishes

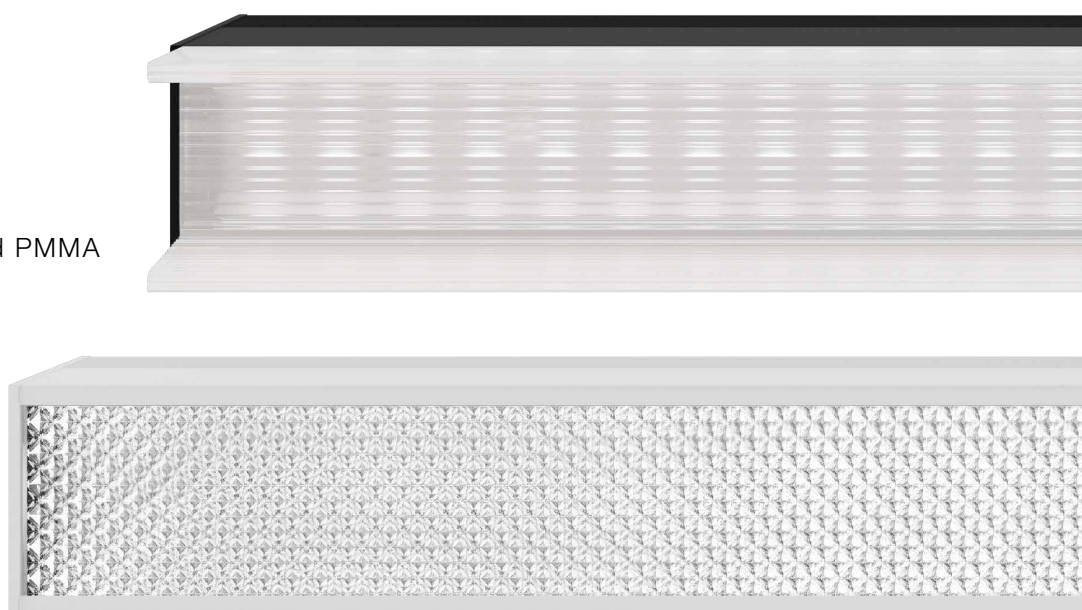
3F Solo is designed as a flexible element thanks to the various options provided by the designer. In addition to being able to choose the version with the prismatic screen or the one with the U-shaped fluted lens, lighting designers can choose from a black or white finish to facilitate the insertion of the fixture

into the architectural context of the workplace. Developed as a single element the light fixture comes in three different lengths (1500mm, 2200mm and 2900mm), to increase the options available to architects and lighting designers.



LENS
in frosted PMMA

SCREEN
Flat PMMA prismatic
diffuser



3F Solo Direct

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L92/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.

End caps in polycarbonate.

Upper film in translucent polycarbonate, self-extinguishing, UV stabilised.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

5-pole terminal block, single 230V circuit.

5-pole transparent power cable of 2 m long.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where soft diffuse light is required for optimal visual comfort.

Installation

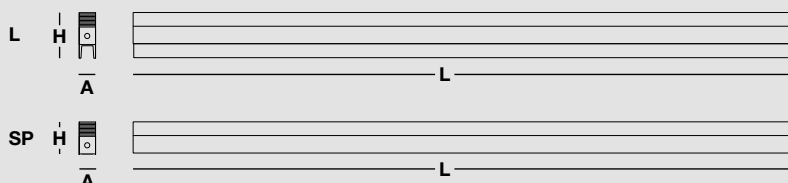
Ceiling mounted or suspension installation.

Warning: to install this fixture it is necessary to buy the accessory (A0820 - A0821), according to the type of installation.

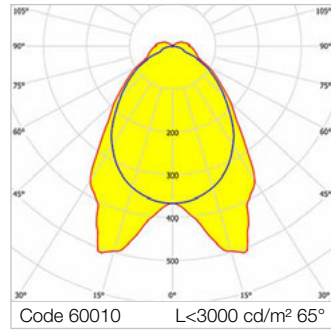
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



3F Solo L



650°C

IP40

0,2J

IK02

Driver/LED
SELV

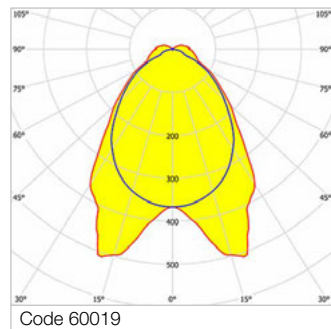
Average luminance <3000 cd/m² for radial angles >65°.
Transparent PMMA methacrylate anti-glare filter and striped-satin PMMA methacrylate lens.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 60010 ^{NEW}	3F Solo L WH 14/830 DALI L1475	17	1826	3000	>80	1475x35x100
● 60011 ^{NEW}	3F Solo L BK 14/830 DALI L1475	17	1826	3000	>80	1475x35x100
○ 60013 ^{NEW}	3F Solo L WH 21/830 DALI L2205	24	2739	3000	>80	2205x35x100
● 60014 ^{NEW}	3F Solo L BK 21/830 DALI L2205	24	2739	3000	>80	2205x35x100
○ 60016 ^{NEW}	3F Solo L WH 28/830 DALI L2935	32	3652	3000	>80	2935x35x100
● 60017 ^{NEW}	3F Solo L BK 28/830 DALI L2935	32	3652	3000	>80	2935x35x100

3F Solo L HO



650°C

IP40

0,2J

IK02



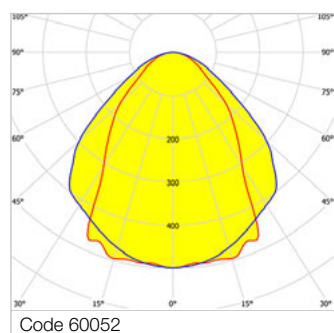
Transparent PMMA methacrylate anti-glare filter and striped-satin PMMA methacrylate lens.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 60019 ^{NEW}	3F Solo L WH HO 28/830 DALI L1475	33	3474	3000	>80	1475x35x100
● 60020 ^{NEW}	3F Solo L BK HO 28/830 DALI L1475	33	3474	3000	>80	1475x35x100
○ 60022 ^{NEW}	3F Solo L WH HO 41/830 DALI L2205	46	5210	3000	>80	2205x35x100
● 60023 ^{NEW}	3F Solo L BK HO 41/830 DALI L2205	46	5210	3000	>80	2205x35x100
○ 60025 ^{NEW}	3F Solo L WH HO 54/830 DALI L2935	58	6591	3000	>80	2935x35x100
● 60026 ^{NEW}	3F Solo L BK HO 54/830 DALI L2935	58	6591	3000	>80	2935x35x100

3F Solo HO SP



SP flat diffuser in transparent PMMA, outside prismatic, anti-glare. White aluminium non-iridescent high efficiency.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 60052 ^{NEW}	3F Solo WH HO 28/830 DALI SP L1475	33	3469	3000	>80	1475x35x70
● 60053 ^{NEW}	3F Solo BK HO 28/830 DALI SP L1475	33	3469	3000	>80	1475x35x70
○ 60055 ^{NEW}	3F Solo WH HO 41/830 DALI SP L2205	46	5203	3000	>80	2205x35x70
● 60056 ^{NEW}	3F Solo BK HO 41/830 DALI SP L2205	46	5203	3000	>80	2205x35x70
○ 60058 ^{NEW}	3F Solo WH HO 54/830 DALI SP L2935	58	6582	3000	>80	2935x35x70
● 60059 ^{NEW}	3F Solo BK HO 54/830 DALI SP L2935	58	6582	3000	>80	2935x35x70





3F Solo Direct/Indirect

Construction characteristics

Illuminotechnical characteristics

Symmetric direct-indirect distribution.
Lifetime (L92/B10): 30000 h. (tq+25°C)
Lifetime (L85/B10): 50000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium housing.
End caps in polycarbonate.
Upper film in translucent polycarbonate, self-extinguishing, UV stabilised.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
5-pole terminal block, single 230V circuit.
5-pole transparent power cable of 2 m long.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where soft diffuse light is required for optimal visual comfort.

Installation

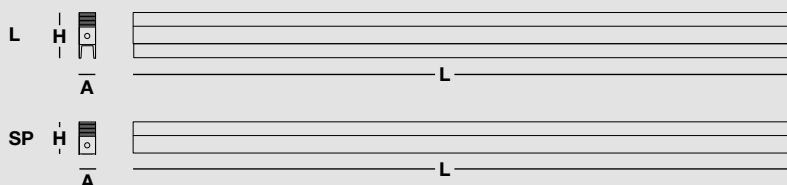
Suspension installation.

Warning: to install this fixture it is necessary to buy the accessory A0820.

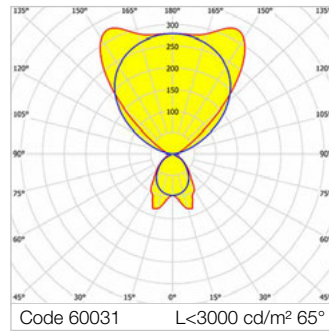
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



3F Solo L DI



Driver/LED
SELV

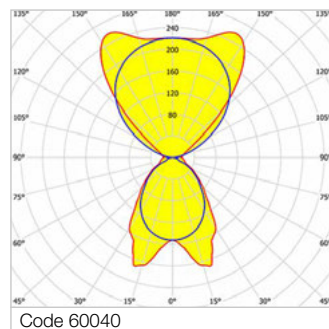
Average luminance <3000 cd/m² for radial angles >65°.
Transparent PMMA methacrylate anti-glare filter and striped-satin PMMA methacrylate lens.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 60031 ^{NEW}	3F Solo L WH DI 14+38/830 DALI L1475	57	6949	3000	>80	1475x35x100
● 60032 ^{NEW}	3F Solo L BK DI 14+38/830 DALI L1475	57	6949	3000	>80	1475x35x100
○ 60034 ^{NEW}	3F Solo L WH DI 21+58/830 DALI L2205	92	10786	3000	>80	2205x35x100
● 60035 ^{NEW}	3F Solo L BK DI 21+58/830 DALI L2205	92	10786	3000	>80	2205x35x100
○ 60037 ^{NEW}	3F Solo L WH DI 28+67/830 DALI L2935	99	12750	3000	>80	2935x35x100
● 60038 ^{NEW}	3F Solo L BK DI 28+67/830 DALI L2935	99	12750	3000	>80	2935x35x100

3F Solo L DI HO



Transparent PMMA methacrylate anti-glare filter and striped-satin PMMA methacrylate lens.
Non-iridescent high efficiency specular aluminium with a titanium and magnesium surface treatment flow recuperator.

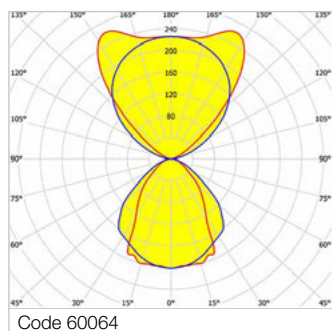
Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 60040 ^{NEW}	3F Solo L WH DI HO 28+38/830 DALI L1475	73	8597	3000	>80	1475x35x100
● 60041 ^{NEW}	3F Solo L BK DI HO 28+38/830 DALI L1475	73	8597	3000	>80	1475x35x100
○ 60043 ^{NEW}	3F Solo L WH DI HO 41+58/830 DALI L2205	115	13257	3000	>80	2205x35x100
● 60044 ^{NEW}	3F Solo L BK DI HO 41+58/830 DALI L2205	115	13257	3000	>80	2205x35x100
○ 60046 ^{NEW}	3F Solo L WH DI HO 54+67/830 DALI L2935	127	15689	3000	>80	2935x35x100
● 60047 ^{NEW}	3F Solo L BK DI HO 54+67/830 DALI L2935	127	15689	3000	>80	2935x35x100



3F Solo DI HO SP



SP flat diffuser in transparent PMMA, outside prismatic, anti-glare. White aluminium non-iridescent high efficiency.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 60064 ^{NEW}	3F Solo WH DI HO 28+38/830 DALI SP L1475	73	8592	3000	>80	1475x35x70
● 60065 ^{NEW}	3F Solo BK DI HO 28+38/830 DALI SP L1475	73	8592	3000	>80	1475x35x70
○ 60067 ^{NEW}	3F Solo WH DI HO 41+58/830 DALI SP L2205	115	13250	3000	>80	2205x35x70
● 60068 ^{NEW}	3F Solo BK DI HO 41+58/830 DALI SP L2205	115	13250	3000	>80	2205x35x70
○ 60070 ^{NEW}	3F Solo WH DI HO 54+67/830 DALI SP L2935	127	15680	3000	>80	2935x35x70
● 60071 ^{NEW}	3F Solo BK DI HO 54+67/830 DALI SP L2935	127	15680	3000	>80	2935x35x70

3F Solo | Accessories



Free-position sliding bracket with regulator in stainless steel. Accessory dedicated to suspended installation.

Code	Item
A0820 ^{NEW}	Pair of sliding brack. + reg. susp. 3F Solo

This accessory must ALWAYS be used with one of the following codes: A20485 - A20486 - A20487.



Stainless steel sliding bracket that can be positioned freely. Accessory dedicated to ceiling installation.

Code	Item
A0821 ^{NEW}	Pair of sliding brack. ceiling 3F Solo



Suspension without controller, galvanised steel cable 1.5 mm diameter, load 15 kg.

Code	Item
A20485	Suspension without adjustment - 0.5 m
A20486	Suspension without adjustment - 1 m
A20487	Suspension without adjustment - 2 m

Attention: each product requires two suspensions with regulator.



Electric supply with white polycarbonate case, internal bracket in galvanised steel.

Code	Item
A0679	5 pole rectangular rose (no cable) WH





3F Filoluce

> [www.3F-Filippi.com/3F Filoluce](http://www.3F-Filippi.com/3F_Filoluce)

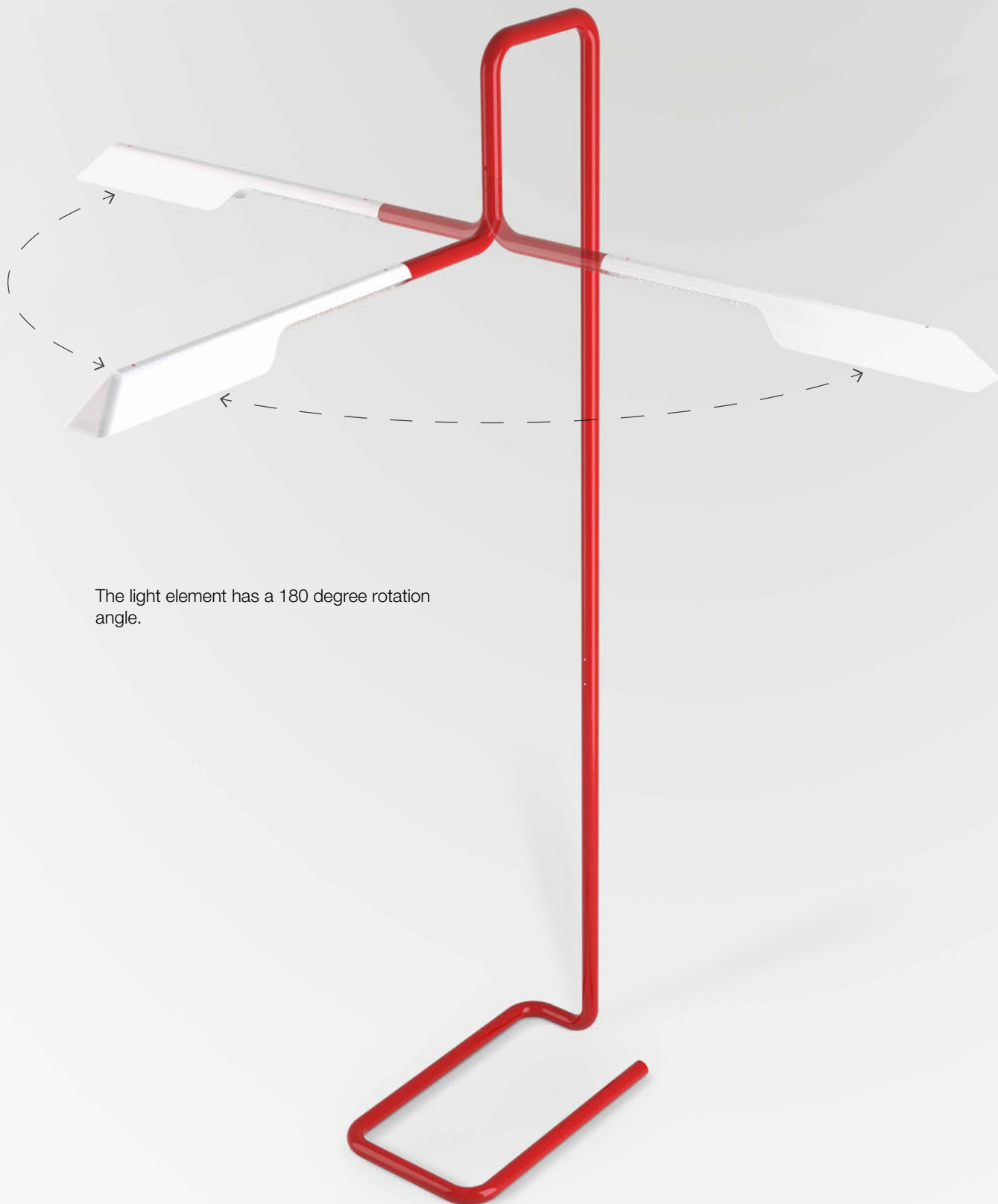
Design by **GEZA Architettura**

A free-standing steel luminaire fitted with a white opal methacrylate diffuser and a prismatic screen designed for the workplace. The lightness of the shape allows 3F Filoluce to fit easily into every context, establishing a relationship with the same through the various curves that form the sinuous vertical arm with a constant diameter of 38 mm, from the base right up to the diffuser. Fitted with a touch ignition system located in the vertical part the fixture provides comfortable lighting that is particularly suitable for office environments. With 3F Filoluce design and quality combine in a single element with a sleek, unusual shape designed to enhance the work environment from a technical and aesthetic point of view.

+ Overview

- Luminous efficacy up to 110 lumen/watt.
- Luminous fluxes from 4706 to 4953 lumens.
- Average luminance <3000 cd/m².
- Adjustable light source according to customer needs.
- UGR <19.
- Quick and easy cleaning.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page	Product	Floor
122	UPDATE 3F Filoluce	•



The light element has a 180 degree rotation angle.

Product advantages

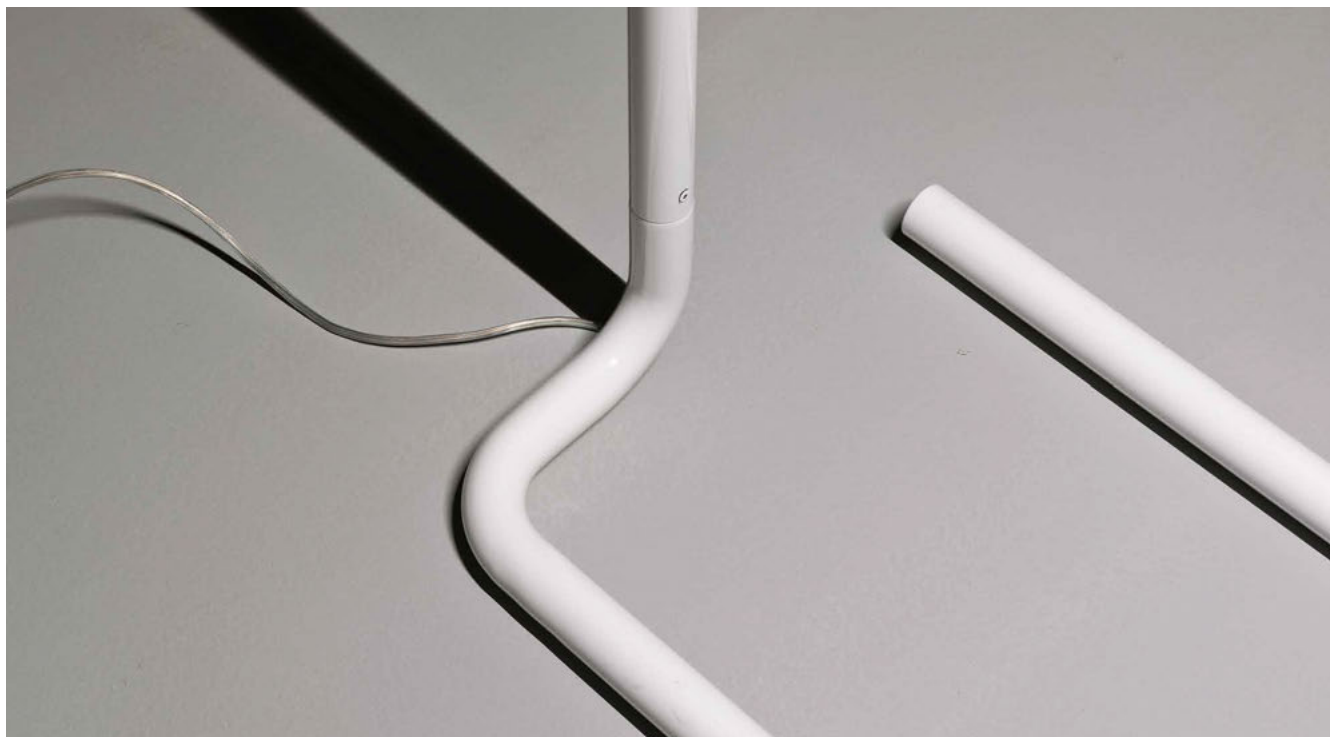
Particularly eye-catching opal and transparent prismatic PMMA diffuser to optimise light distribution.



Touch DALI touch control integrated in the stem, for switching on and off and independent adjustment of the two emissions.



Power supply with a 2.5 m long transparent cable, schuko plug.



Screens and finishes

3F Filoluce is available in black, white, red and anthracite versions. Its direct and indirect light is distributed downwards using a trapezoidal prismatic diffuser and upwards using an

opal element: a mix that makes the working environment relaxing while at the same time ensuring excellent visual comfort on work stations.

OP

Flat opal
PMMA filter

SP

Prismatic
PMMA filter



Finishes



White



Black



Red



Anthracite





3F Filoluce

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.
Average luminance <3000 cd/m² for radial angles >65° (direct emission).
Lifetime (L92/B10): 30000 h. (tq+25°C)
Lifetime (L85/B10): 50000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Painted steel filiform tubular body.
Aluminium LED housing compartment with a thermal heat sink function.
Particularly eye-catching opal and transparent prismatic PMMA diffuser to optimise light distribution.
The luminous part can be rotated 180° horizontally to optimise positioning in the workplace.

Electrical characteristics

In compliance with EN 60598-1.
Touch DALI touch control integrated in the stem, for switching on and off and independent adjustment of the two emissions.
Power supply with a 2.5 m long transparent cable, schuko plug.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- single-circuit wiring
- different power cables

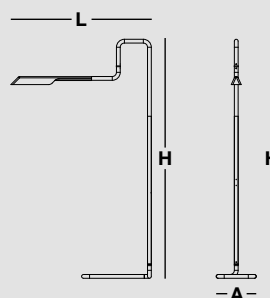
Applications

Environments which cannot, for technical reasons, be equipped with points of light directed onto the ceiling.
Open-space offices and environments in which a high degree of workstation flexibility is required.
Environments: staterooms, with VDTs, offices.
Environments where soft diffuse light is required for optimal visual comfort.

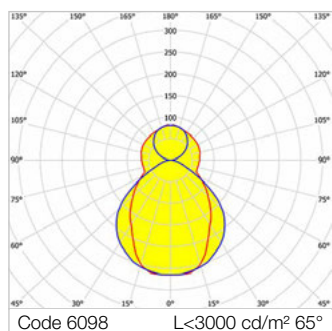
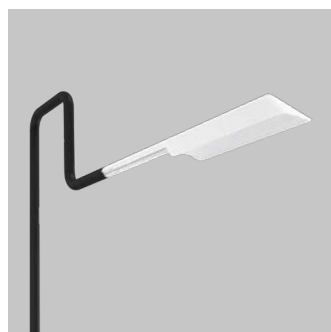
Installation

Floor installation.

Dimensions



3F Filoluce



Driver/LED
SELV

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

DALI electronic wiring 230V-50/60Hz

○ 6063 <small>UPDATE</small>	3F Filoluce WH 16+23W/830 Touch DALI	45	4706	3000	>80	1410x400x2400
○ 6098	3F Filoluce WH 16+23W/840 Touch DALI	45	4953	4000	>80	1410x400x2400
● 6064 <small>UPDATE</small>	3F Filoluce BK 16+23W/830 Touch DALI	45	4706	3000	>80	1410x400x2400
● 6099	3F Filoluce BK 16+23W/840 Touch DALI	45	4953	4000	>80	1410x400x2400
● 6065 <small>UPDATE</small>	3F Filoluce AN 16+23W/830 Touch DALI	45	4706	3000	>80	1410x400x2400
● 6100	3F Filoluce AN 16+23W/840 Touch DALI	45	4953	4000	>80	1410x400x2400
● 6066 <small>UPDATE</small>	3F Filoluce RD 16+23W/830 Touch DALI	45	4706	3000	>80	1410x400x2400
● 6101	3F Filoluce RD 16+23W/840 Touch DALI	45	4953	4000	>80	1410x400x2400





3F Emilio Table

> [www.3F-Filippi.com/3F Emilio Table](http://www.3F-Filippi.com/3F%20Emilio%20Table)

3F Emilio Table combines three different elements that together form a unique table lamp. The soft, sinuous lines of the base and the tube follow the geometry and fittings of the spotlight to create a compact and highly energy efficient lamp. In addition to being simple the 3F Emilio Table is also extremely functional. Colour fidelity and enhancement of textures combined with high-performance lighting make this product ideal for lighting workstations, reception areas and professional environments. The high level know-how and technology provided by 3F Filippi, make the 3F Emilio Table a table lamp with the technical characteristics of a professional spotlight.

This product is also available in this version 3F Emilio Wall (page 196), 3F Emilio R (page 308), 3F Emilio Track (page 368).

+ Overview

- Luminous flux 1148 lumens.
- Adjustable light source according to customer needs.
- Quick and easy cleaning.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page	Product	Table
128	3F Emilio Table	•

LEED and WELL compliant

3F Filippi has always favoured projects where the priority is lighting quality.

This is why they develop products in line with the criteria and principles of LEED as well as WELL certifications (a certification that assesses the well-being of the occupants in certain environments, especially offices).

To increasingly place people and their needs at the centre of projects the light emitted by fixtures must be monitored in a simple and precise way: with 3F Emilio Table this is possible

by increasing lighting levels (more than 500 lux on the work surface) and reducing energy consumption.

The Dimmer makes it possible to control the light according to the personal needs of all occupants even with different lighting levels. The CRI>90 source also makes it compliant with CAM - Criteri Ambientali Minimi (Minimum Environmental Criteria) for public buildings (D.M. 11 OCTOBER 2017).



LIGHT UNIFORMITY

A table lamp is a friend at work capable of warming cold days and highlighting work details: this is why it is equipped with a cosy warm light (3000K), with high colour rendering (CRI>90) and extremely low optical flicker values to avoid visual disturbances and headaches.

What's better than working at a well-lit and comfortable desk?

Adaptability in space

The simple and elegant design, together with its compact size are a great advantage that make 3F Emilio Table the ideal choice for those who need a flexible and effective light. Thanks to the diffuser adjustability of 90° along the horizontal axis and 80° on the stem axis three different lighting effects can be obtained:

- work light (intense and focused light to help visual performance).
- indirect light (the head rotates to create pleasant ambient lighting or increase the perception of space).
- indoor light (high quality lighting for decorative demonstration functions) if directed towards the wall.





3F Emilio Table

Construction characteristics

Illuminotechnical characteristics

Direct controlled symmetrical and indirect diffused comfort distribution (thanks to the reduction of the luminous contrast between the product and the surrounding environment).

Lifetime (L90/B20): 30000 h. (tq+25°C)

Lifetime (L80/B20): 50000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Diffuser in die-cast aluminium, opaque white, with upper rings with a luminous crown effect and an orientation arm.

Diffuser adjustability: 90° along the horizontal axis and 290° on the stem axis.

PMMA opal methacrylate lens.

Round stem in painted steel.

Round shaped base in aluminium and painted steel.

Electrical characteristics

In compliance with EN 60598-1.

Dimmer button installed on the 2 m long power cable with 2x10A plug.

Class II.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- LED module with different power levels, colour temperatures and colour rendering index
- housing in different RAL colours

Applications

Environments which cannot, for technical reasons, be equipped with points of light directed onto the ceiling.

Open-space offices and environments in which a high degree of workstation flexibility is required.

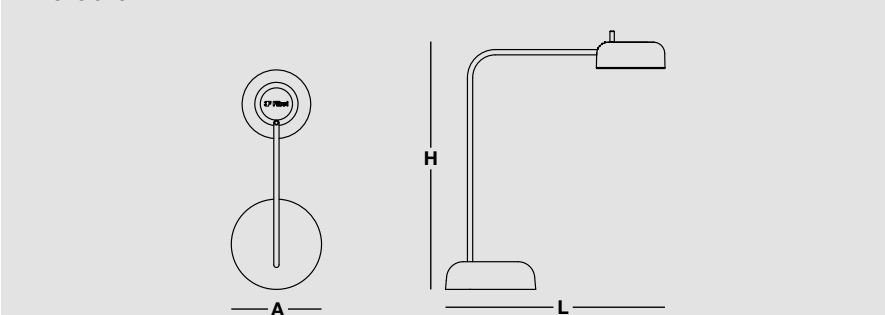
Environments: staterooms, with VDTs, offices.

Environments where soft diffuse light is required for optimal visual comfort.

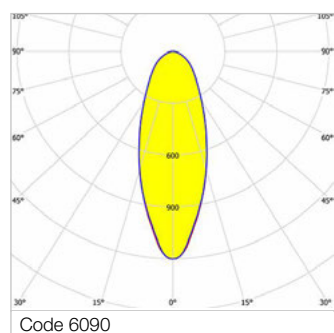
Installation

Table installation.

Dimensions



3F Emilio Table



Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	------------	--------------------	------------------	---------	-----	----------------------

PHASE CUT DIM electronic wiring 230V-50/60Hz

6090	3F Emilio Table WH 1000/930 PCD	80°	14	1148	3000	>90	415x170x490
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3F Eldorado

> [www.3F-Filippi.com/3F Eldorado](http://www.3F-Filippi.com/3F_Eldorado)

The world of work is constantly evolving, codes are renewing and behaviour and the way we experience environments are changing: smart working, flexible workstations and the use of smartphones and tablets.

As a result of increasingly careful investments by those building or renovating workplaces it is necessary to design products with a multifunctional approach: this is why we developed 3F Eldorado as an open platform capable of integrating products and extra functions simply to meet the needs of workers. All this by placing lighting quality at the centre of our research.

3F Eldorado is equipped with state-of-the-art sources and a prismatic diffuser that can light environments in an effective way and minimise the level of glare as required by the most stringent international regulations.

3F Eldorado is a unique, customisable product capable of integrating seamlessly into different areas and furnishings in the workplace, being able to act on various aspects such as:

- colour temperature variable over time
- integration of spot fixtures
- diffused lighting with custom graphics
- emergency lighting
- aesthetic and functional finishes that provide added value to the product and the lighting and architectural design
- audio or sound-absorption functions

For further information we invite you to consult our website www.3F-Filippi.com

Page	Product	Recessed
208	NEW 3F Eldorado	•

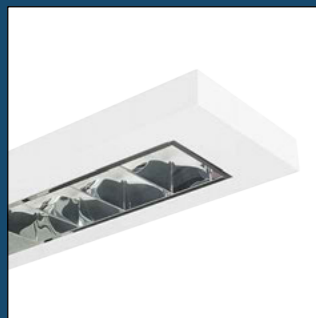
Zero 3F



3F C8



3F Travetta



3F Zeta



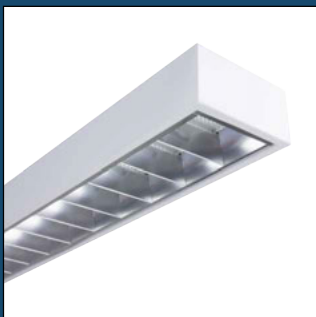
3F Diagon P



3F Petra



P 200



P 250



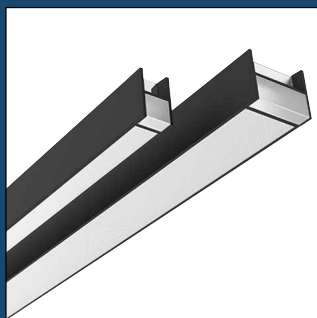
Mira



3F Emilio Wall



3F HD



3F Mirella



3F Trittico



3F Filoluce



Surface luminaires and suspensions

Page	Product	Ceiling	Suspended	Wall
136	Zero 3F			
140	NEW Zero 3F	•	•	•
144	3F C8			
144	3F C8 Direct		•	
146	3F C8 Direct/Indirect		•	
148	3F Travetta			
148	UPDATE 3F Travetta LED Direct	•	•	
152	UPDATE 3F Travetta LED Direct/Indirect		•	
156	3F Travetta LED Tunable White	•	•	
162	3F Zeta			
162	UPDATE 3F Zeta L	•	•	•
166	3F Zeta D	•	•	•
168	3F Zeta DR	•	•	•
174	3F Diagon P			
174	3F Diagon P	•		
176	3F Diagon P Tunable White	•		
178	3F Petra			
178	UPDATE 3F Petra LED	•		•
180	3F Petra LED Sensor	•		•
182	3F Petra LED Suspended		•	
184	P 200			
184	P 200 LED	•		
186	P 200 LED IP54	•		
188	P 250			
188	P 250 LED	•		
192	P 250 LED Diffused Light	•		
194	Mira			
194	Mira Wall LED			•
196	3F Emilio Wall			
196	3F Emilio Wall	•		•





Zero 3F

> www.3F-Filippi.com/Zero 3F

In modern study and work spaces, the homogeneity of light is a fundamental element to reduce shadow areas and improve volume perception.

Minimising the contrast between areas that are lit differently limits eye stress making the environment more comfortable.

The new Zero 3F was designed specifically to cope with visual tasks efficiently in task-areas, thanks to an increase in the surrounding and background areas.

Light is distributed widely even on the walls to limit the "cave effect" and to enhance the furnishings and information present on vertical surfaces.

This product is also available in this version Zero 3F Track (page 312).

+ Overview

- Luminous efficacy up to 140 lumen/watt.
- Luminous fluxes from 1897 to 6227 lumens.
- Average luminance <3000 cd/m².
- Extensive installation pitch.
- UGR <19.
- Uniformly illuminated screen.
- Asymmetrical version.
- Driver integrated in the fixture.
- Quick and easy cleaning.
- Luminous end caps.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Can be installed on the 3F Linux S electrified track.
- Versatility of use in different environments.

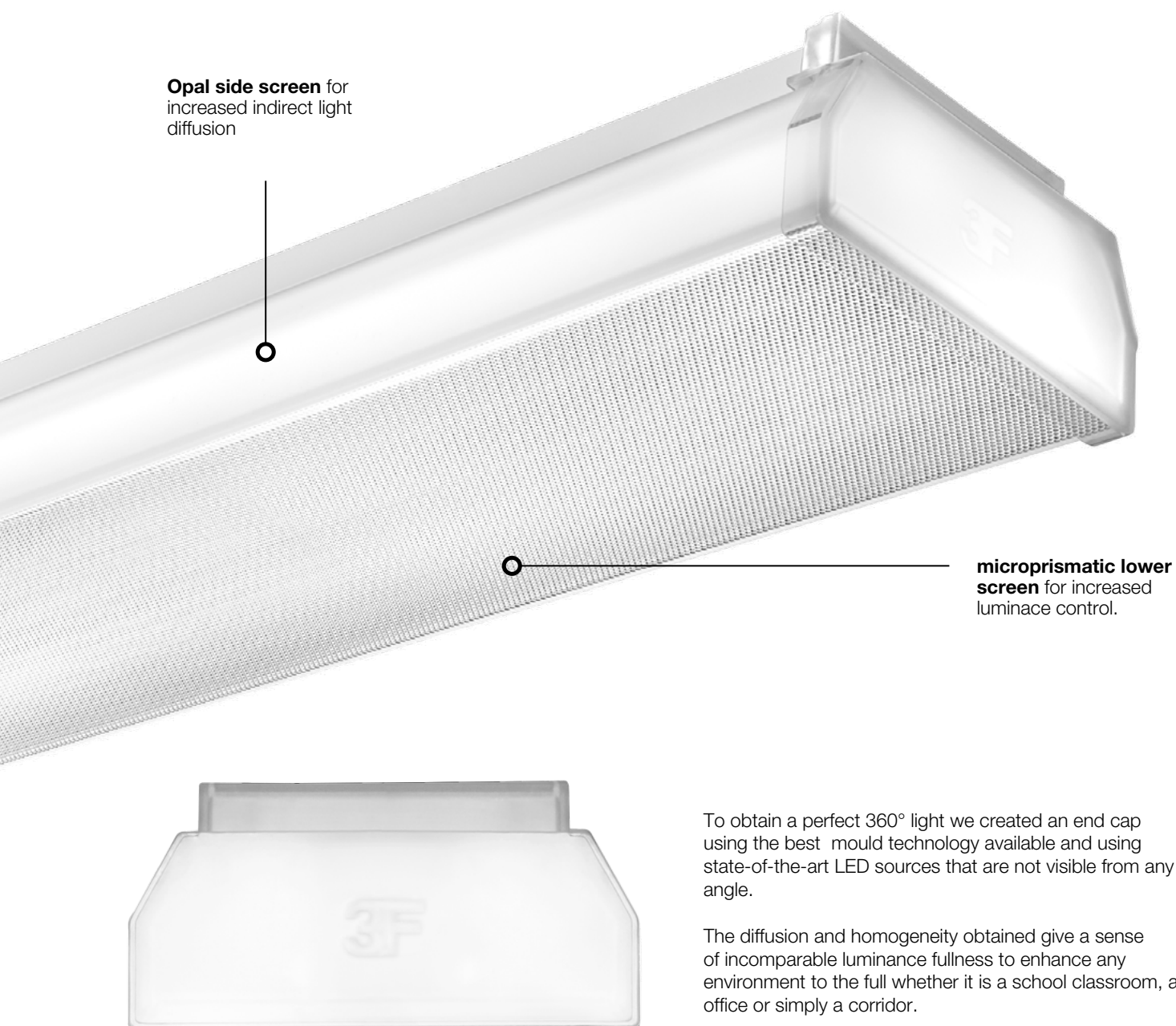
Page	Product	Ceiling	Suspended	Wall
140	NEW Zero 3F	•	•	•

Zero 3F

QUALITY OF LIGHT

Zero 3F is the result of more than a decade of experience of 3F Filippi in school and work environments, where visual comfort and light diffusion are the basis of a lighting project. To obtain low luminance values we maximised the area of the emitting surface to obtain the best luminous intensity possible.

The result is a fixture with a micro prismatic lower surface to obtain the shielding required by regulations and an opal side area to softly diffuse light into the space and give a sensation of suspension to the fixture. It is a simple, clean design that integrates discreetly in all types of environment.





THE BENEFITS OF HOMOGENEOUSLY DIFFUSED LIGHT

As you can see from the simulations below increasing the luminosity of vertical surfaces is a significant element that improves the visibility of information like that contained in bookshelves. The indirect light component reduces visual contrast and makes the product seem to be suspended even

if it is installed on the ceiling, and the mix between this and the direct light rays generate a uniform light right up to the joins between the walls and the ceiling.



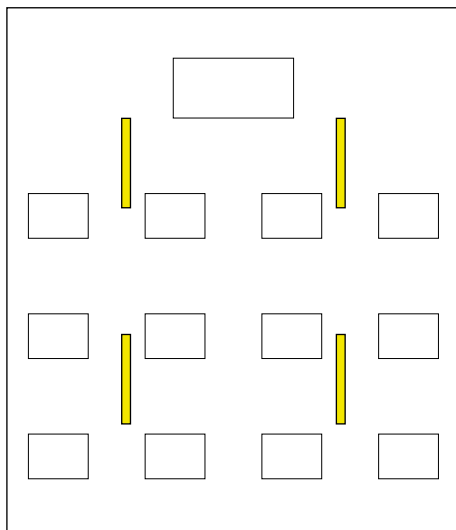
Standard fixture
Direct
photometric distribution



Zero 3F
Direct/indirect
photometric distribution

Project design example – School classroom

300 average lux on work surfaces

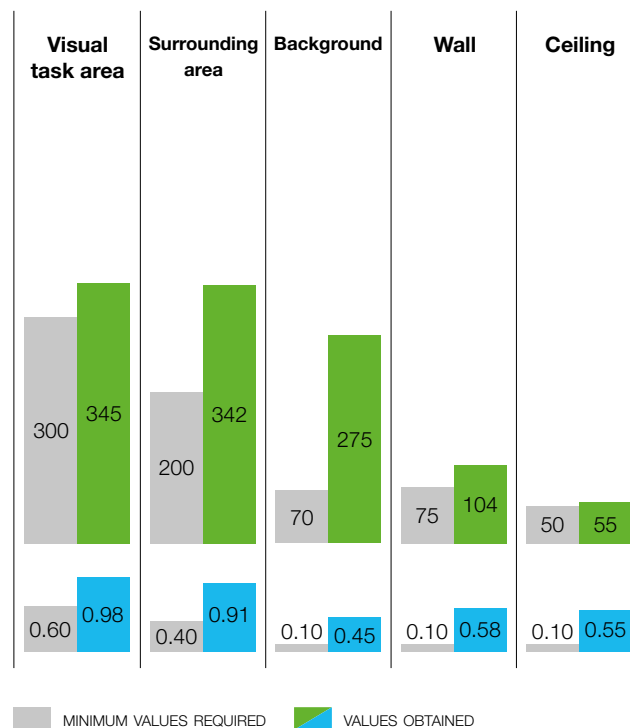


Fixture used:
03F 35W/940 L1204 - cod.1860

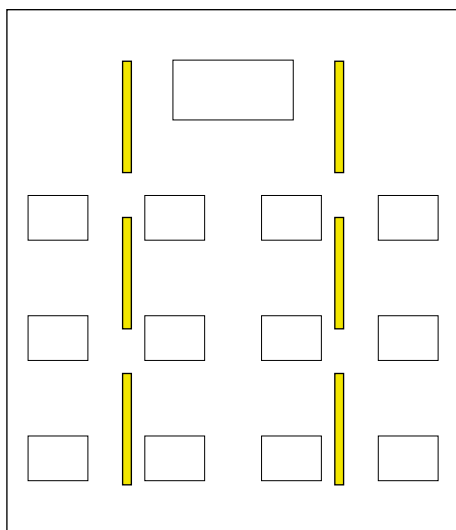
Size of the space 7 x 6 x h 3 meters
Installation height 3 meters

Average
luminance

Luminous
uniformity



500 average lux on work surfaces

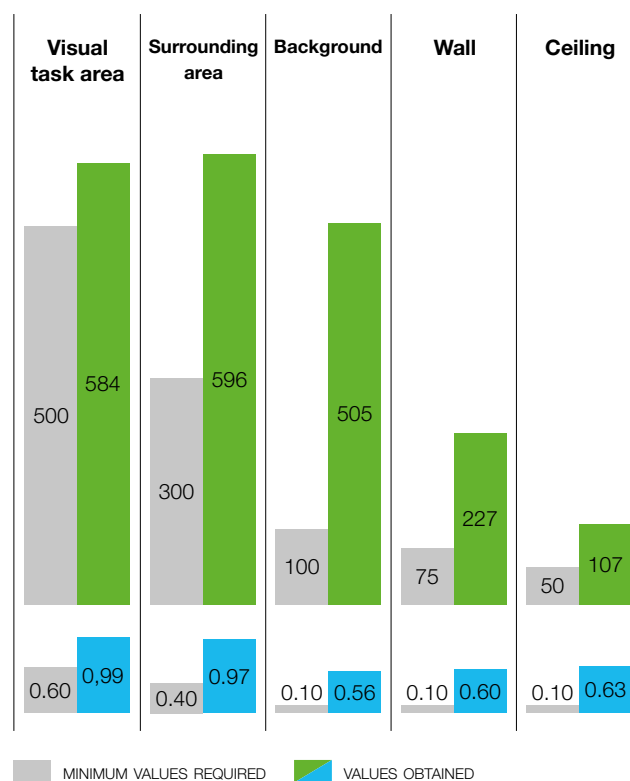


Fixture used:
03F 44W/940 L1506 - cod. 1861

Size of the space 7 x 6 x h 3 meters
Installation height 3 meters

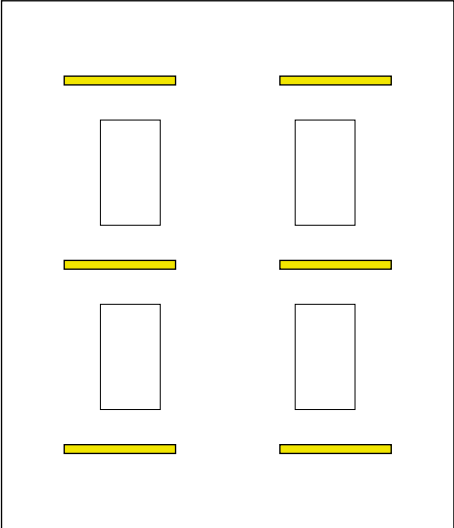
Average
luminance

Luminous
uniformity



Project design example - Office

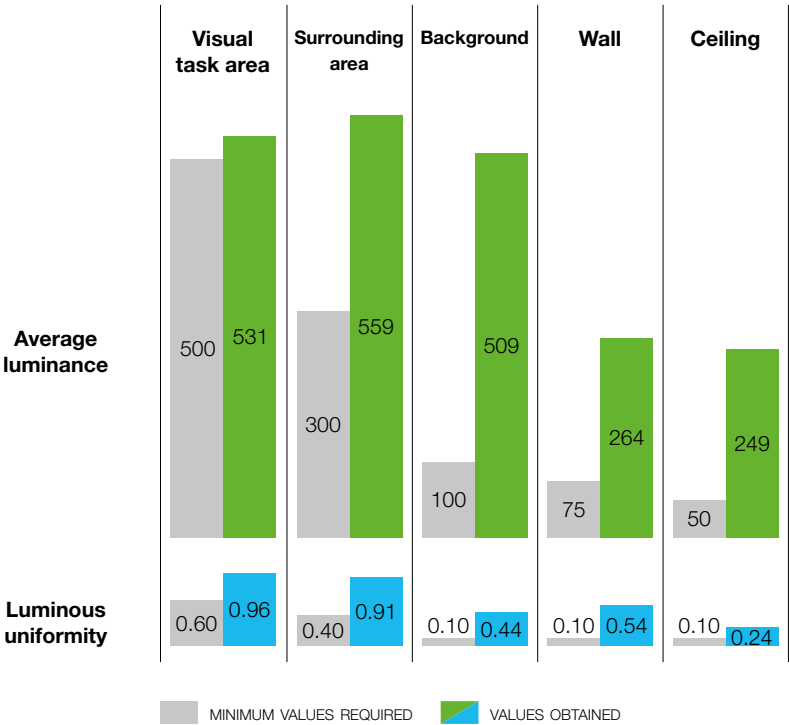
500 average lux on work surfaces



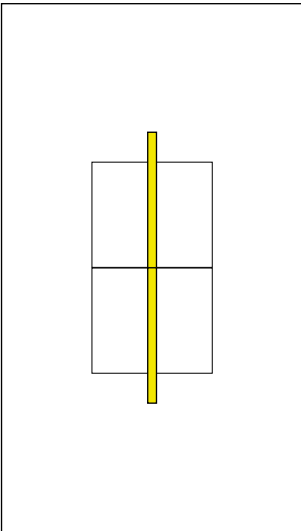
Individual workstations

Fixture used:
03F 35W/840 L1506 - cod.1857

Size of the space 7 x 6 x h 3 meters
Installation height 3 meters



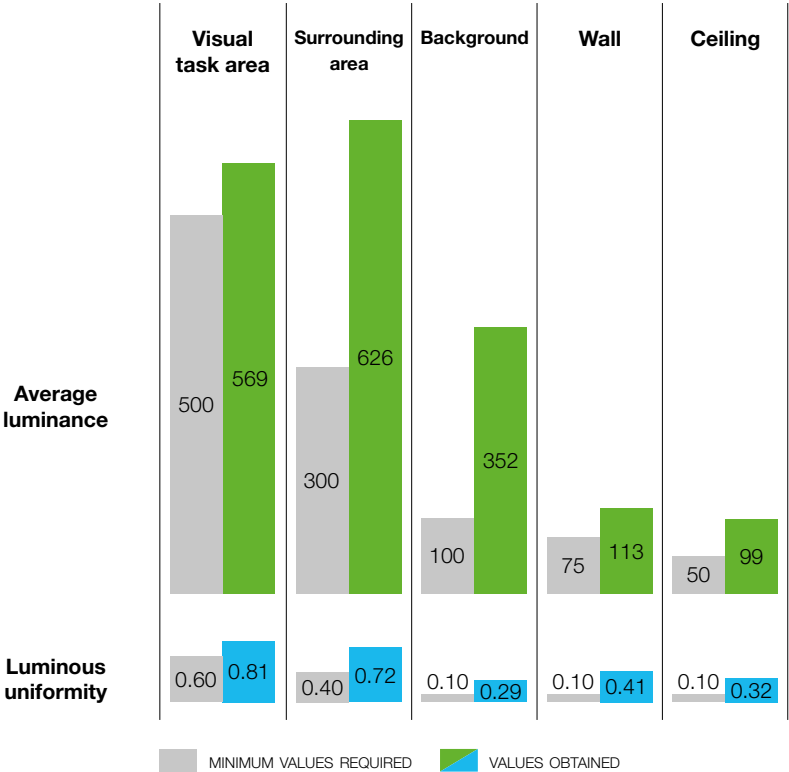
500 average lux on work surfaces



Island workstations

Fixture used:
03F 42W/840 L1787 - cod.1858

Size of the space 7 x 4 x h 3 meters
Installation height 2.6 meters



Outdoor

Zero 3F

Construction characteristics

Illuminotechnical characteristics

Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Body in white pre-painted steel.
 Diffuser with differentiated geometry, made of transparent methacrylate with microprismatic finish, anti-glare on the flat part and opal on the side.
 Anti-glare opal methacrylate filter for brightness uniformity.
 Lighting end caps in PMMA opal.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
 The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: recreational, transit areas, corridors, schools, stairwells.

Environments where soft diffuse light is required for optimal visual comfort.

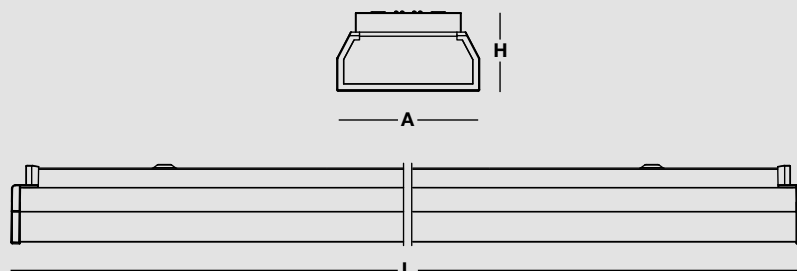
Installation

Ceiling, suspension or wall installation. Thanks to the full compatibility for dimensions and fixing distances, this product becomes the perfect solution for updating existing installations.

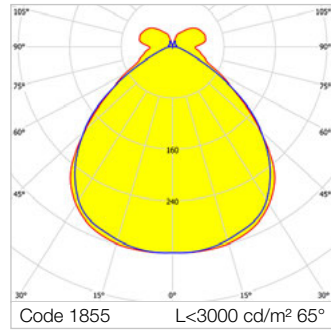
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



Zero 3F



Controlled symmetric distribution.
Average luminance <3000 cd/m² for radial angles >65°.

Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

1855 <small>NEW</small>	03F 14W/840 L620	16	2014	4000	>80	620x119x64
1856 <small>NEW</small>	03F 28W/840 L1204	31	4029	4000	>80	1204x119x64
1857 <small>NEW</small>	03F 35W/840 L1506	36	5036	4000	>80	1506x119x64
1858 <small>NEW</small>	03F 42W/840 L1787	44	6042	4000	>80	1787x119x64
1859 <small>NEW</small>	03F 18W/940 L620	20	1983	4000	>90	620x119x64
1860 <small>NEW</small>	03F 35W/940 L1204	42	4152	4000	>90	1204x119x64
1861 <small>NEW</small>	03F 44W/940 L1506	50	5190	4000	>90	1506x119x64
1862 <small>NEW</small>	03F 53W/940 L1787	58	6227	4000	>90	1787x119x64

DALI electronic wiring 230V-50/60Hz

1863 <small>NEW</small>	03F 14W/840 DALI L620	16	2014	4000	>80	620x119x64
1864 <small>NEW</small>	03F 28W/840 DALI L1204	31	4029	4000	>80	1204x119x64
1865 <small>NEW</small>	03F 35W/840 DALI L1506	36	5036	4000	>80	1506x119x64
1866 <small>NEW</small>	03F 42W/840 DALI L1787	44	6042	4000	>80	1787x119x64
1867 <small>NEW</small>	03F 18W/940 DALI L620	20	1983	4000	>90	620x119x64
1868 <small>NEW</small>	03F 35W/940 DALI L1204	40	4152	4000	>90	1204x119x64
1869 <small>NEW</small>	03F 44W/940 DALI L1506	49	5190	4000	>90	1506x119x64
1870 <small>NEW</small>	03F 53W/940 DALI L1787	57	6227	4000	>90	1787x119x64

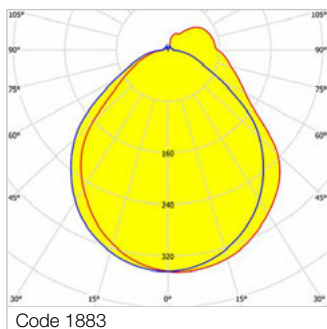
EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

1871 <small>NEW</small>	03F 28W/840 EP L1204	32	4029	4000	>80	1204x119x64
1872 <small>NEW</small>	03F 35W/840 EP L1506	37	5036	4000	>80	1506x119x64
1873 <small>NEW</small>	03F 42W/840 EP L1787	45	6042	4000	>80	1787x119x64
1874 <small>NEW</small>	03F 35W/940 EP L1204	43	4152	4000	>90	1204x119x64
1875 <small>NEW</small>	03F 44W/940 EP L1506	51	5190	4000	>90	1506x119x64
1876 <small>NEW</small>	03F 53W/940 EP L1787	59	6227	4000	>90	1787x119x64

DALI - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

1877 <small>NEW</small>	03F 28W/840 DALI EP L1204	32	4029	4000	>80	1204x119x64
1878 <small>NEW</small>	03F 35W/840 DALI EP L1506	37	5036	4000	>80	1506x119x64
1879 <small>NEW</small>	03F 42W/840 DALI EP L1787	45	6042	4000	>80	1787x119x64
1880 <small>NEW</small>	03F 35W/940 DALI EP L1204	41	4152	4000	>90	1204x119x64
1881 <small>NEW</small>	03F 44W/940 DALI EP L1506	50	5190	4000	>90	1506x119x64
1882 <small>NEW</small>	03F 53W/940 DALI EP L1787	58	6227	4000	>90	1787x119x64

Zero 3F AS



Asymmetric distribution.
Internal recuperator in white painted steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

1883 ^{NEW}	03F 14W/840 AS L620	16	1927	4000	>80	620x119x64
1884 ^{NEW}	03F 28W/840 AS L1204	31	3854	4000	>80	1204x119x64
1885 ^{NEW}	03F 35W/840 AS L1506	36	4818	4000	>80	1506x119x64
1886 ^{NEW}	03F 42W/840 AS L1787	44	5780	4000	>80	1787x119x64
1887 ^{NEW}	03F 18W/940 AS L620	20	1897	4000	>90	620x119x64
1888 ^{NEW}	03F 35W/940 AS L1204	42	3971	4000	>90	1204x119x64
1889 ^{NEW}	03F 44W/940 AS L1506	50	4965	4000	>90	1506x119x64
1890 ^{NEW}	03F 53W/940 AS L1787	58	5957	4000	>90	1787x119x64

Zero 3F | Accessories



Wall-mounting bracket, in white painted steel.

Code	Item
A0052 ^{NEW}	Wall-mounting brack



Suspension with regulator, galvanised steel cable 1.5 mm diameter, load 15 kg.

Code	Item
A0660	Suspension with adjustment - 1 m
A0661	Suspension with adjustment - 2 m
A0662	Suspension with adjustment - 3 m
A0663	Suspension with adjustment - 4 m
A0664	Suspension with adjustment - 5 m
A0665	Suspension with adjustment - 6 m

Attention: each product requires two suspensions with regulator.



Electric supply with white polycarbonate case, internal bracket in galvanised steel.

Code	Item
A0679	5 pole rectangular rose (no cable) WH



3F C8 Direct

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium body, zamak heads.

SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.

Anti-glare opal polycarbonate filter for brightness uniformity.

Adjustable suspension fixtures with chrome studs and rapid adjusters, galvanised steel cable of 2 m long.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Transparent 5-pole power cable with white ceiling power supply case.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- power and suspension cables of >2 m long
- different dimensions
- housing in different RAL colours
- emergency versions

Applications

Environments involving accurate visual tasks where a diffused and soft light for an optimum visual comfort and the source total shielding are required.

In environments with VDTs, managerial offices and staterooms.

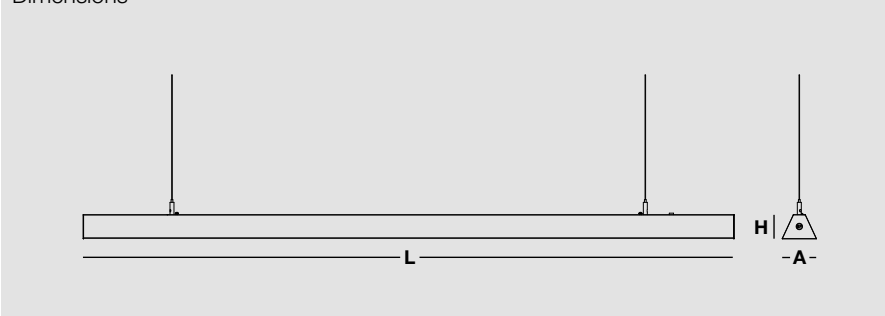
Installation

Suspension installation.

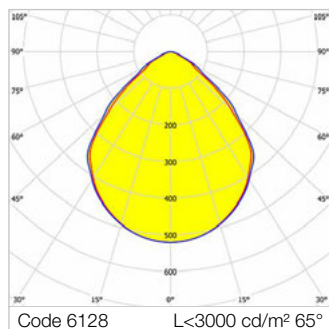
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F C8 GSP



Driver/LED
SELV

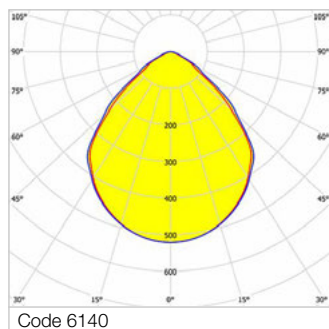
Average luminance <3000 cd/m² for angles >65°.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

DALI electronic wiring 230V-50/60Hz

○ 6128	3F C8 WH 30/840 DALI GSP L1480	35	2880	4000	>80	1480x77x54
● 6136	3F C8 BK 30/840 DALI GSP L1480	35	2880	4000	>80	1480x77x54

3F C8 HO GSP



Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

DALI electronic wiring 230V-50/60Hz

○ 6140	3F C8 WH HO 44/840 DALI GSP L1480	51	3912	4000	>80	1480x77x54
● 6148	3F C8 BK HO 44/840 DALI GSP L1480	51	3912	4000	>80	1480x77x54





3F C8 Direct/Indirect

Construction characteristics

Illuminotechnical characteristics

Symmetric direct-indirect distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Extruded aluminium body, zamak heads.
 SP flat diffuser in transparent PMMA, outside prismatic, anti-glare.
 Anti-glare opal polycarbonate filter for brightness uniformity.
 Adjustable suspension fixtures with chrome studs and rapid adjusters, galvanised steel cable of 2 m long.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
 5-pole transparent power cable with white power supply case for ceiling, single 230V circuit, 2 DALI addresses.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- power and suspension cables of >2 m long
- twin-circuit
- different dimensions
- housing in different RAL colours
- emergency versions

Applications

Environments involving accurate visual tasks where a diffused and soft light for an optimum visual comfort and the source total shielding are required.
 In environments with VDTs, managerial offices and staterooms.

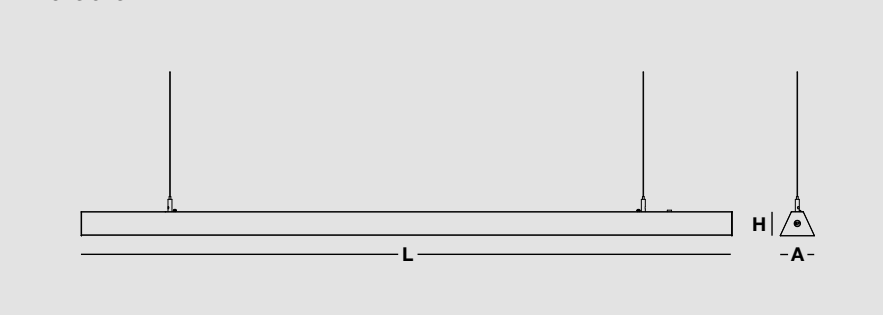
Installation

Suspension installation.

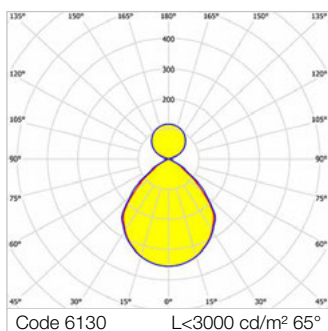
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F C8 DI GSP



Driver/LED
SELV

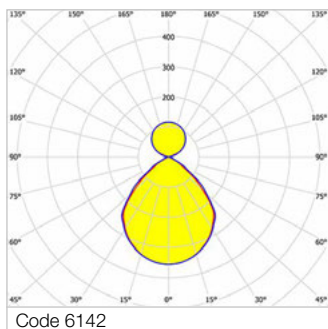
Average luminance <3000 cd/m² for angles >65°.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 6130	3F C8 WH DI 30+8/840 DALI GSP L1480	45	4147	4000	>80	1480x77x54
● 6138	3F C8 BK DI 30+8/840 DALI GSP L1480	45	4147	4000	>80	1480x77x54

3F C8 DI HO GSP



Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

○ 6142	3F C8 WH DI HO 44+8/840 DALI GSP L1480	62	5179	4000	>80	1480x77x54
● 6150	3F C8 BK DI HO 44+8/840 DALI GSP L1480	62	5179	4000	>80	1480x77x54

3F Travetta LED Direct

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing with squared shape in white painted steel, with nonreflecting surface.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Terminal block for cascade line connection with connection capacity 2x2.5 mm².

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 2.

On request

- different power levels, colour rendering indices and colour temperatures
- different dimensions
- housing and accessories in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: exhibition areas, staterooms, with VDTs, halls, shops, great halls, offices.

Environments where soft diffuse light is required for optimal visual comfort.

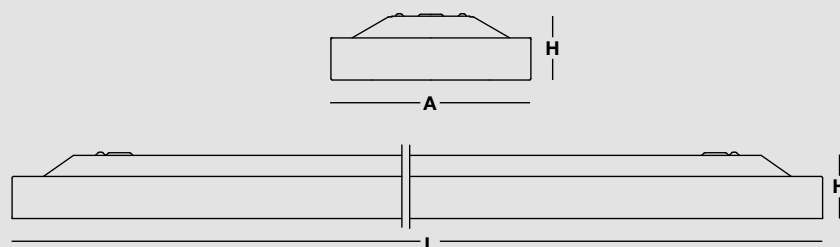
Installation

Ceiling mounted or suspension installation. Thanks to the full compatibility of dimensions, fixing spacing and accessories with the previous fluorescent version, this product becomes the perfect solution for updating existing installations.

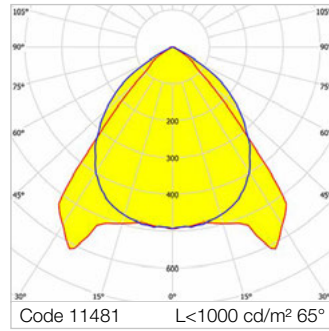
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Travetta LED 2MG



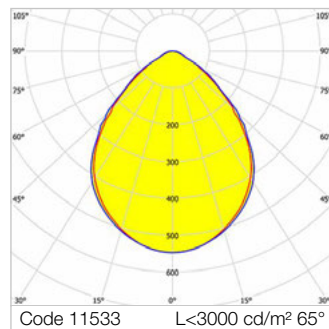
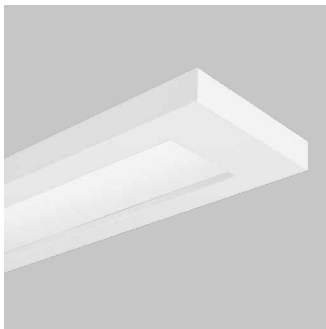
Average luminance <1000 cd/m² for radial angles >65°. 2MG parabolic louvre, high efficiency, in specular aluminium with superficial titanium-magnesium treatment, non-iridescent, with transverse blades closed at the top. Prismatic PMMA diffuser for total shielding of the louvre compartment. Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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DALI electronic wiring 230V-50/60Hz

11481	3F Travetta LED 1x22W DALI 2MG L1590	24,5	3168	4000	>80	1590x190x60
11484	3F Travetta LED 2x22W DALI 2MG L1590	49	6236	4000	>80	1590x190x60
11515 ^{NEW}	3F Travetta LED 1x30W/940 DALI 2MG L1590	35	3264	4000	>90	1590x190x60
11516 ^{NEW}	3F Travetta LED 2x22W/940 DALI 2MG L1590	49	5114	4000	>90	1590x190x60

3F Travetta LED LGS



Average luminance <3000 cd/m² for radial angles >65°. Flow recuperator in semi-specular aluminium, high efficiency. LGS micro-prismatic flat diffuser in transparent methacrylate, multi-lenticular exterior, anti-glare. Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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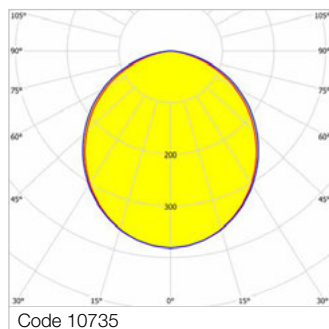
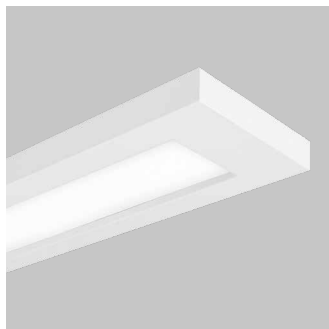
ON/OFF electronic wiring 230V-50/60Hz

11528	3F Travetta LED 1x24W LGS L1290	28	3022	4000	>80	1290x190x60
11530	3F Travetta LED 1x30W LGS L1590	34	3783	4000	>80	1590x190x60
11531	3F Travetta LED 2x18W LGS L1290	40	4690	4000	>80	1290x190x60
11533	3F Travetta LED 2x22W LGS L1590	49	5865	4000	>80	1590x190x60
11566 ^{NEW}	3F Travetta LED 1x24W/940 LGS L1290	28	2478	4000	>90	1290x190x60
11567 ^{NEW}	3F Travetta LED 1x30W/940 LGS L1590	35	3102	4000	>90	1590x190x60
11568 ^{NEW}	3F Travetta LED 2x18W/940 LGS L1290	40	3846	4000	>90	1290x190x60
11569 ^{NEW}	3F Travetta LED 2x22W/940 LGS L1590	49	4809	4000	>90	1590x190x60

DALI electronic wiring 230V-50/60Hz

11537	3F Travetta LED 1x24W DALI LGS L1290	28	3022	4000	>80	1290x190x60
11539	3F Travetta LED 1x30W DALI LGS L1590	35	3783	4000	>80	1590x190x60
11540	3F Travetta LED 2x18W DALI LGS L1290	40	4690	4000	>80	1290x190x60
11542	3F Travetta LED 2x22W DALI LGS L1590	49	5865	4000	>80	1590x190x60
11570 ^{NEW}	3F Travetta LED 1x24W/940 DALI LGS L1290	28	2478	4000	>90	1290x190x60
11571 ^{NEW}	3F Travetta LED 1x30W/940 DALI LGS L1590	35	3102	4000	>90	1590x190x60
11572 ^{NEW}	3F Travetta LED 2x18W/940 DALI LGS L1290	40	3846	4000	>90	1290x190x60
11573 ^{NEW}	3F Travetta LED 2x22W/940 DALI LGS L1590	49	4809	4000	>90	1590x190x60

3F Travetta LED OP



OP opal methacrylate flat diffuser, anti-glare.
Flow recuperator in semi-specular aluminium, high efficiency.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

10731	3F Travetta LED 1x18W OP L1290	20	2335	4000	>80	1290x190x60
10732	3F Travetta LED 1x22W OP L1590	24.5	2920	4000	>80	1590x190x60
10734	3F Travetta LED 2x18W OP L1290	40	4545	4000	>80	1290x190x60
10775	3F Travetta LED 1x40W OP L2200	45	4887	4000	>80	2200x190x60
10735	3F Travetta LED 2x22W OP L1590	49	5683	4000	>80	1590x190x60
10777	3F Travetta LED 2x40W OP L2200	90	9511	4000	>80	2200x190x60

DALI electronic wiring 230V-50/60Hz

11494	3F Travetta LED 1x18W DALI OP L1290	20	2335	4000	>80	1290x190x60
11495	3F Travetta LED 1x22W DALI OP L1590	24.5	2920	4000	>80	1590x190x60
11497	3F Travetta LED 2x18W DALI OP L1290	40	4545	4000	>80	1290x190x60
11511	3F Travetta LED 1x40W DALI OP L2200	45	4887	4000	>80	2200x190x60
11498	3F Travetta LED 2x22W DALI OP L1590	49	5683	4000	>80	1590x190x60
11513	3F Travetta LED 2x40W DALI OP L2200	90	9511	4000	>80	2200x190x60



3F Travetta LED Direct/Indirect

Construction characteristics

Illuminotechnical characteristics

Direct-indirect distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing with squared shape in white painted steel, with nonreflecting surface. Upper holes closing film made of opal polycarbonate.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Terminal block for cascade line connection with connection capacity 2x2.5 mm².

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 2.

On request

- different power levels, colour rendering indices and colour temperatures
- different dimensions
- housing and accessories in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: exhibition areas, staterooms, with VDTs, halls, shops, great halls, offices.

Environments where soft diffuse light is required for optimal visual comfort.

Installation

Suspension installation.

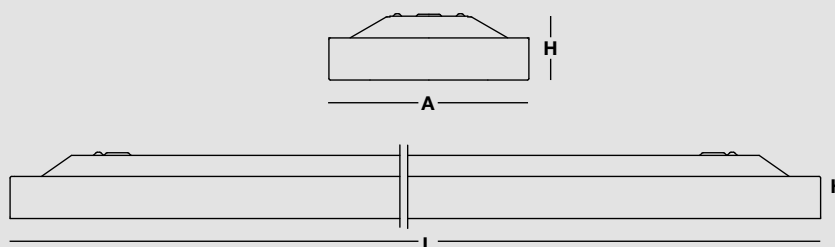
Thanks to the full compatibility of dimensions, fixing spacing and accessories with the previous fluorescent version, this product becomes the perfect solution for updating existing installations.

Light Management

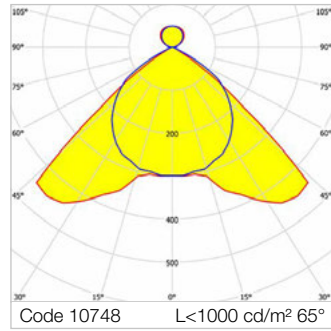
The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

The DALI SENSOR (LS) products from this product family are all fitted with DALI light and presence sensors integrated into the luminaire (see "Light Management" chapter).

Dimensions



3F Travetta LED DI 2MG



Average luminance <1000 cd/m² for radial angles >65°.

Light emission: direct 85%, indirect 15%.

2MG parabolic louvre, high efficiency, in specular aluminium with superficial titanium-magnesium treatment, non-iridescent, with transverse blades closed at the top.

Prismatic PMMA diffuser for total shielding of the louvre compartment.

Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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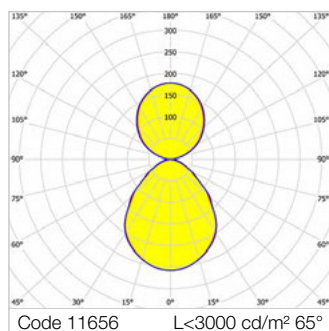
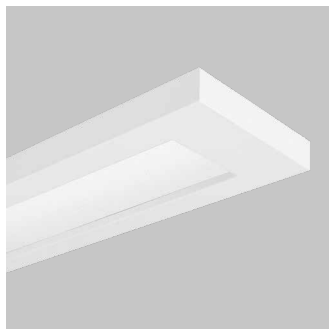
ON/OFF electronic wiring 230V-50/60Hz

10747	3F Travetta LED DI 2x15W 2MG L1590	33	3958	4000	>80	1590x190x60
10748	3F Travetta LED DI 2x22W 2MG L1590	49	5865	4000	>80	1590x190x60
10758 ^{NEW}	3F Travetta LED DI 2x15W/940 2MG L1590	33	3245	4000	>90	1590x190x60
10759 ^{NEW}	3F Travetta LED DI 2x22W/940 2MG L1590	49	4809	4000	>90	1590x190x60

DALI electronic wiring 230V-50/60Hz

11503	3F Travetta LED DI 2x15W DALI 2MG L1590	33	3958	4000	>80	1590x190x60
11504	3F Travetta LED DI 2x22W DALI 2MG L1590	49	5865	4000	>80	1590x190x60
11596 ^{NEW}	3F Trav. LED DI 2x15W/940 DALI 2MG L1590	33	3245	4000	>90	1590x190x60
11597 ^{NEW}	3F Trav. LED DI 2x22W/940 DALI 2MG L1590	49	4809	4000	>90	1590x190x60

3F Travetta LED DI LGS



Average luminance <3000 cd/m² for radial angles >65°.
 Light emission: direct 55%, indirect 45% .
 Flow recuperator in semi-glossy aluminium.
 LGS micro-prismatic flat diffuser in transparent methacrylate,
 multi-lenticular exterior, anti-glare.
 Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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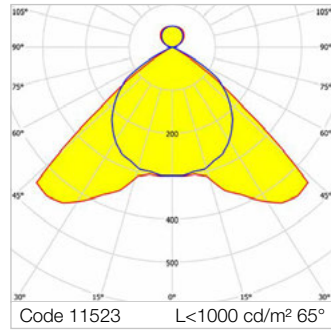
ON/OFF electronic wiring 230V-50/60Hz

11656 ^{NEW}	3F Travetta LED DI 2x18W LGS L1290	40	4809	4000	>80	1290x190x60
11657 ^{NEW}	3F Travetta LED DI 2x24W LGS L1290	56	6037	4000	>80	1290x190x60
11599 ^{NEW}	3F Travetta LED DI 2x22W LGS L1590	49	6013	4000	>80	1590x190x60
11600 ^{NEW}	3F Travetta LED DI 2x30W LGS L1590	70	7555	4000	>80	1590x190x60
11658 ^{NEW}	3F Travetta LED DI 2x18W/940 LGS L1290	40	3944	4000	>90	1290x190x60
11659 ^{NEW}	3F Travetta LED DI 2x24W/940 LGS L1290	56	4950	4000	>90	1290x190x60
11602 ^{NEW}	3F Travetta LED DI 2x22W/940 LGS L1590	49	4931	4000	>90	1590x190x60
11603 ^{NEW}	3F Travetta LED DI 2x30W/940 LGS L1590	70	6195	4000	>90	1590x190x60

DALI electronic wiring 230V-50/60Hz

11660 ^{NEW}	3F Travetta LED DI 2x18W DALI LGS L1290	40	4809	4000	>80	1290x190x60
11661 ^{NEW}	3F Travetta LED DI 2x24W DALI LGS L1290	56	6037	4000	>80	1290x190x60
11629 ^{NEW}	3F Travetta LED DI 2x22W DALI LGS L1590	49	6013	4000	>80	1590x190x60
11630 ^{NEW}	3F Travetta LED DI 2x30W DALI LGS L1590	70	7555	4000	>80	1590x190x60
11662 ^{NEW}	3F Trav. LED DI 2x18W/940 DALI LGS L1290	40	3944	4000	>90	1290x190x60
11663 ^{NEW}	3F Trav. LED DI 2x24W/940 DALI LGS L1290	56	4950	4000	>90	1290x190x60
11632 ^{NEW}	3F Trav. LED DI 2x22W/940 DALI LGS L1590	49	4931	4000	>90	1590x190x60
11633 ^{NEW}	3F Trav. LED DI 2x30W/940 DALI LGS L1590	70	6195	4000	>90	1590x190x60

3F Travetta LED DI DALI Sensor 2MG



Average luminance <1000 cd/m² for radial angles >65°.

Light emission: direct 15%, indirect 85% .

2MG parabolic louvre, high efficiency, in specular aluminium with superficial titanium-magnesium treatment, non-iridescent, with transverse blades closed at the top.

Prismatic PMMA diffuser for total shielding of the louvre compartment.

Film protective against dust and finger marks, adhesive, attached to louvre.

Integrated DALI light and presence sensor on the luminaire, to keep lighting levels constant in accordance with the amount of natural light and the presence of persons.

Turns on and off and is regulated according to the level of light and the presence of persons.

Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

11522	3F Trav. LED DI 2x15W DALI LS 2MG L1590	35	3958	4000	>80	1590x190x60
11523	3F Trav. LED DI 2x22W DALI LS 2MG L1590	49	5865	4000	>80	1590x190x60



3F Travetta LED Tunable White

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.
Average luminance $<1000 \text{ cd/m}^2$ for radial angles $>65^\circ$.

The colour temperature can be adjusted between 2700 K and 6500 K.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L75/B10): 80000 h. (tq+25°C)

Lifetime (L70/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing with squared shape in white painted steel, with nonreflecting surface. 2MG parabolic louvre, high efficiency, in specular aluminium with superficial titanium-magnesium treatment, non-iridescent, with transverse blades closed at the top.

Opal methacrylate diffuser for total shielding of the louvre compartment. Film protective against dust and finger marks, adhesive, attached to louvre.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Cable with a DALI DT8 driver.

5-pole terminal block (L-N-PE-DA/DA) for line connection with connection capacity $2 \times 2.5 \text{ mm}^2$.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different dimensions
- housing and accessories in different RAL colours
- emergency versions

Applications

Any environments requiring light which aims for the wellness of people. Environments with VDTs.

Environments where demanding visual tasks are performed and soft diffuse light is required for optimal visual comfort and total shielding of the light source.

Installation

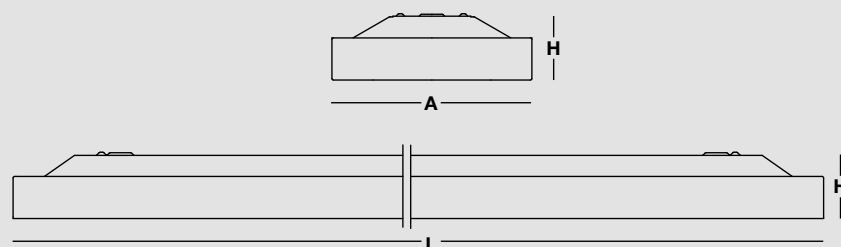
Ceiling mounted or suspension installation. Thanks to the full compatibility of dimensions, fixing spacing and accessories with the previous fluorescent version, this product becomes the perfect solution for updating existing installations.

Light Management

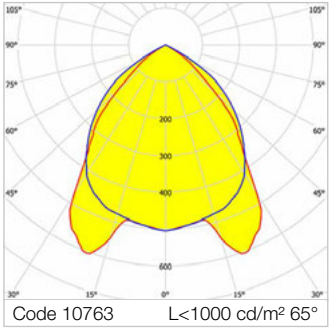
Thanks to the 3F HCL technology, our Tunable White products can be controlled by:

- Wired control systems (more information on page 562))
- 3F Bluetooth control systems (more information on page 564))

Dimensions



3F Travetta LED Tunable White 2MG



CE

SAFE
FLICKER

D

650°C

IP20

TW

Driver/LED
SELV

Variable light intensity and colour temperature.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
DALI DT8 electronic wiring 230V-50/60Hz						
10763	3F TRAV. LED 2X22W DALI DT8 TW 2MG L1590	50	5550 6236 6049	2700 4000 6500	>80	1590x190x60

Surface luminaires
and suspensions

3F Travetta | Accessories



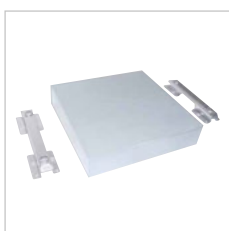
Wall-mounting bracket, in white painted steel.

Code	Item
A0052 ^{NEW}	Wall-mounting brack



Connecting bracket to form linear channels or branches of single luminaires, in galvanised steel with upper holes for adjustable suspensions.

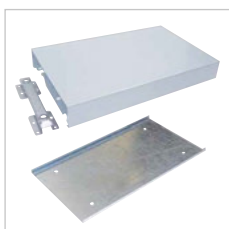
Code	Item
A0875	Connecting bracket Travetta



Linear connecting element and for branch, between luminaires or between luminaires and wall, to form channels, in steel with accessorizable cover, white colour. It allows the passage of the power-supply line. Concerning the use of connecting elements in false ceilings 600x600, see installation.

Code	Item
A0892	White connect.elem.190x190 3F Travetta
A0894	White connect.elem.190x210 3F Travetta
A0895	White connect.elem.190x510 3F Travetta
A0896	White connect.elem.190x810 3F Travetta
A0897	White connect.elem.190x1110 3F Travetta
A0941	White con.elem.lum/wall 810 3F Travetta
A0942	Wh.conn.elem.lum/wall 1110 3F Travetta

On request: elements of desired length. Connecting elements for false ceiling 625x625.



Branching in correspondence with the steel linear connecting elements with a white colour accessory cover.

Code	Item
A0951	White branch elem. 190x310 3F Travetta
A0952	White branches elem. 190x460 3F Travetta
A0877	Bracket for T-branch for 3F Travetta
A0878	Bracket for X-branch for 3F Travetta

It allows the passage of the power-supply line. The 190x190 linear connecting element can also be used for T junctions (request a bracket code A0875) and X junctions (request two brackets code A0875). To obtain an excellent T or X junction for connecting elements of a false ceiling with 600x600 visible profiles, the combination of a 1110 mm linear element with a 460 mm junction and the combination of a 810 mm linear element with a 310 mm junction are recommended.



Connecting element between luminaires or between luminaire and wall, white colour, composed of aluminium tube 1.5 m long Ø20 mm, which can be sectioned to any desired length, it allows the passage of the power-supply line.

Code	Item
A0870	White conn. elem. with boss for lum.
A0872	White conn.elem. to wall w/boss for lum.



Linear connecting element end cap to be used when there are connecting elements at the beginning or end of a channel.

Code	Item
A01368	Travetta B joint closing cap



Adjustable suspension with polycarbonate case in white colour, internal bracket in galvanised steel. Wired version with transparent power-supply cable 5x1.5 mm². Stainless steel cables Ø 1.25 mm, length 1 m, leaded at one end with adjusters for coupling on the luminaire.

Code	Item
A01318	White rectangular case adj. susp. 1 m
A01325	Wired adj. susp. 5P wh.rect.case 1 m

On request: for suspensions longer than 1 m, it is necessary order stainless steel cables Ø 1,25 mm in spool of 100 m and pack of n° 100 clamps.
Accessory always required for 2200 mm long products.



Fixed suspension with white polycarbonate case, internal bracket in galvanised steel. Wired version with transparent power-supply cable 5x1.5 mm². Ø 1.25 mm stainless steel cables leaded at the end for coupling on the luminaire.

Code	Item
A01314	White rectangular case fixed susp. 0,3m
A01315	White rectangular case fixed susp. 0,5m
A01317	White rectangular case fixed susp. 1m
A01321	Wired fixed susp. 5P wh.rect.case 0,3m
A01322	Wired fixed susp. 5P wh.rect.case 0,5m
A01324	Wired fixed susp. 5P wh.rect.case 1m



Coil of stainless steel cable Ø 1.25 mm, length 100 m.

Code	Item
A0620	Spool stain.ste.cab.diam. 1,25mm 100 m The pack contains 100 metres.



Clamps in nickel-plated brass suitable for fixing of steel wire (diameter 1.25 mm - 1.5 mm - 2 mm), complete with locking screws.

Code	Item
A0622	Clamp 1 hole suspension - 100 pcs The pack contains 100 pieces.



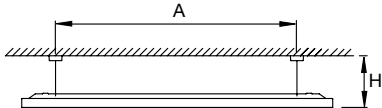
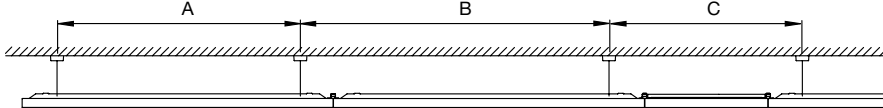
Electric supply with white polycarbonate case, internal bracket in galvanised steel.

Code	Item
A0679	5 pole rectangular rose (no cable) WH

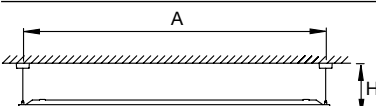
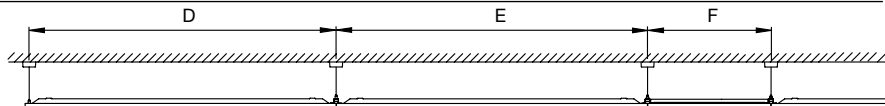
3F Travetta LED

Installations

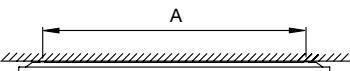
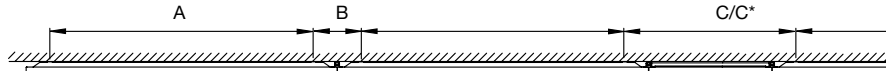
Mounting with fixed suspension H = 300-500-1000mm

					
Versions	A	Connecting bracket code	B	Connecting element code	C
3F Travetta 1290	1200	A0875	1290	A0892	280
				A0894	300
				A0895	600
				A0896	900
				A0897	1200
3F Travetta 1590	1200	A0875	1590	A0892	580
				A0894	600
				A0895	900
				A0896	1200
				A0897	1500
3F Travetta 2200	1800	A0875	2200	A0892	590
				A0894	610
				A0895	910
				A0896	1210
				A0897	1510

Mounting with adjustable suspension H max 1000mm

						
Versions	A	Connecting bracket code	D	E	Connecting element code	F
3F Travetta 1290	1250	A0875	1270	1290	A0892	190
					A0894	210
					A0895	510
					A0896	810
					A0897	1110
3F Travetta 1590	1550	A0875	1570	1590	A0892	190
					A0894	210
					A0895	510
					A0896	810
					A0897	1110
3F Travetta 2200	2160	A0875	2180	2200	A0892	190
					A0894	210
					A0895	510
					A0896	810
					A0897	1110

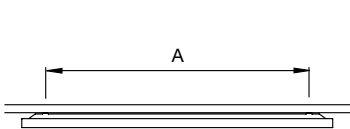
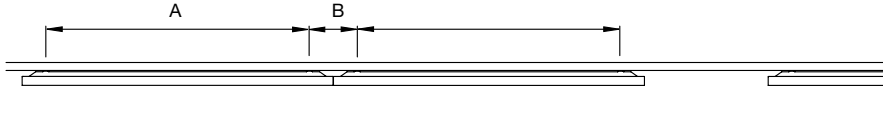
Ceiling mounting

Versions	A	Connecting bracket code	B	Connecting element code	C	C*
3F Travetta 1290 (C)	1075	A0875	215	A0892	405	
3F Travetta 1590 (C)	1375	A0875	215	A0892	405	690
3F Travetta 2200 (C*)	1700	A0875	500	A0894	425	710
				A0895	725	1010
				A0896	1025	1310
				A0897	1325	1610

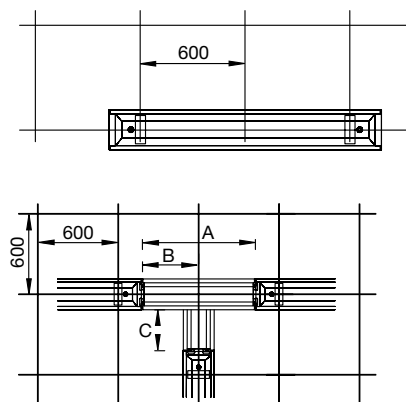
Installation on 3F Linux system

This type of installation avoids the use of connecting elements for 3F Travetta direct version.

			
Versions	A	B	
3F Travetta 1290	1075	215	
3F Travetta 1590	1375	215	
3F Travetta 2200	1700	500	

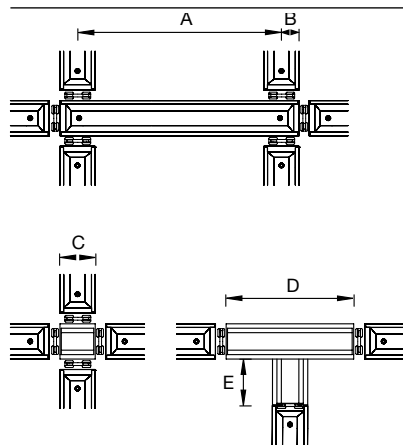
Installation to false ceiling with exposed structure 600x600 - 600x1200

For this type of installation only fixed suspensions are to be used.



	Linear connecting elements codes				Connecting elements for branches codes	
	A0894	A0895	A0896	A0897	A0951	A0952
Versions	A	A	A/B	A/B	C	C
3F Travetta 1290		510		1110/505		460
3F Travetta 1590	210		810/405		310	

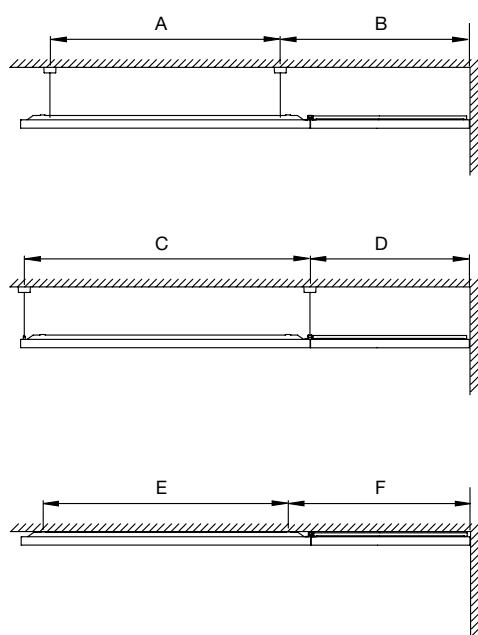
Formation of composition or branch



Versions	A	B
3F Travetta 1290	1100	95
3F Travetta 1590	1400	95

Linear connecting elements codes					Connecting elements for branches codes	
A0892	A0894	A0895	A0896	A0897	A0951	A0952
C	D	D	D	D	E	E
190	210	510	810	1110	310	460

Wall power-supply



Fixed suspension

Versions	A	Connecting bracket code	B
3F Travetta 1290	1200	A0941 A0942	855 1155
3F Travetta 1590	1200	A0941 A0942	1005 1305
3F Travetta 2200	1800	A0941 A0942	1010 1310

Adjustable suspension

Versions	C	Connecting bracket code	D
3F Travetta 1290	1270	A0941 A0942	810 1110
3F Travetta 1590	1570	A0941 A0942	810 1110
3F Travetta 2200	2180	A0941 A0942	810 1110

Ceiling mounting

Versions	E	Connecting bracket code	F
3F Travetta 1290	1075	A0941 A0942	918 1218
3F Travetta 1590	1375	A0941 A0942	918 1218
3F Travetta 2200	1700	A0941 A0942	1060 1360



3F Zeta L

Construction characteristics

Illuminotechnical characteristics

Wide, direct and asymmetric controlled distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

L UGR version

Average luminance <3000 cd/m² for radial angles >65°.

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester, obtained through rolling process.

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.

End caps in white polycarbonate.

Stainless steel mounting brackets with anti-slip screws.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Source characteristics

- LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- housing and accessories in different RAL colours
- wiring: CLO (more information on page 568)
- HACCP versions for use in the food industry
- IP54 version
- emergency versions

Applications

Environments: architectural, commercial, transit areas, cornices, boards.

L UGR version

Environments: exhibition areas, staterooms, with VDTs, halls, shops, great halls, offices.

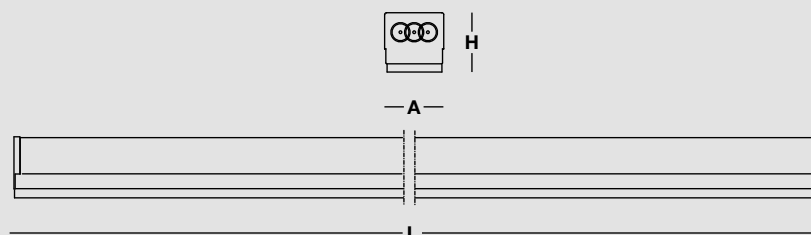
Installation

Ceiling, suspension or wall installation.

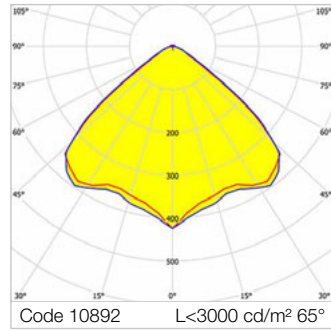
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Zeta L



Lenses for wide distribution, in transparent PMMA with external flat surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

10894	3F Zeta L 15 LED L605	16.5	2749	4000	>80	605x62x65
10893	3F Zeta L 30 LED L1194	33	5498	4000	>80	1194x62x65
10892	3F Zeta L 40 LED L1489	40	6872	4000	>80	1489x62x65

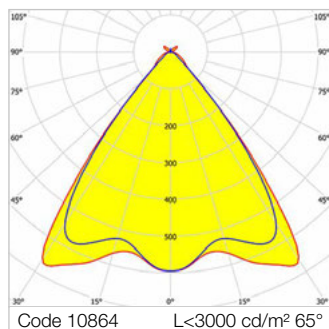
DALI electronic wiring 230V-50/60Hz

10977	3F Zeta L 30 LED DALI L1194	33	5498	4000	>80	1194x62x65
10976	3F Zeta L 40 LED DALI L1489	40	6872	4000	>80	1489x62x65

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

10988	3F Zeta L 40 LED EP L1489	41	6872	4000	>80	1489x62x65
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3F Zeta L UGR



Average luminance <3000 cd/m² for radial angles >65°.
Transparent methacrylate controlled distribution lenses with flat external surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

10863 ^{NEW}	3F Zeta L UGR 40 LED L1489	40	6858	4000	>80	1489x62x65
10864	3F Zeta L UGR 30 LED L1194	33	5487	4000	>80	1194x62x65
10839 ^{NEW}	3F Zeta L UGR 40/940 LED L1489	40	5624	4000	>90	1489x62x65
10840 ^{NEW}	3F Zeta L UGR 30/940 LED L1194	33	4499	4000	>90	1194x62x65

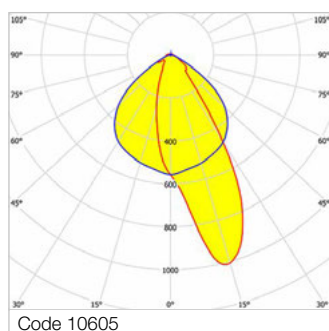
DALI electronic wiring 230V-50/60Hz

10866 ^{NEW}	3F Zeta L UGR 40 LED DALI L1489	40	6858	4000	>80	1489x62x65
10867	3F Zeta L UGR 30 LED DALI L1194	33	5487	4000	>80	1194x62x65
10841 ^{NEW}	3F Zeta L UGR 40/940 LED DALI L1489	40	5624	4000	>90	1489x62x65
10842 ^{NEW}	3F Zeta L UGR 30/940 LED DALI L1194	33	4499	4000	>90	1194x62x65

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

10843 ^{NEW}	3F Zeta L UGR 40 LED EP L1489	41	6858	4000	>80	1489x62x65
10844 ^{NEW}	3F Zeta L UGR 30 LED EP L1194	34	5487	4000	>80	1194x62x65
10845 ^{NEW}	3F Zeta L UGR 40/940 LED EP L1489	41	5624	4000	>90	1489x62x65
10846 ^{NEW}	3F Zeta L UGR 30/940 LED EP L1194	34	4499	4000	>90	1194x62x65

3F Zeta L AS



Transparent methacrylate asymmetric distribution lenses with a flat external surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

10605	3F Zeta L AS 40 LED L1489	40	6894	4000	>80	1489x62x65
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DALI electronic wiring 230V-50/60Hz

10606	3F Zeta L AS 40 LED DALI L1489	40	6894	4000	>80	1489x62x65
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EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

10607	3F Zeta L AS 40 LED EP L1489	41	6894	4000	>80	1489x62x65
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3F Zeta D

Construction characteristics

Illuminotechnical characteristics

Diffused symmetric distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester, obtained through rolling process.
 Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.
 Curved screen in self-extinguishing polycarbonate, UV stabilised, opal, with smooth outer surface.
 End caps in white polycarbonate.
 Stainless steel mounting brackets with anti-slip screws.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
 The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- housing and accessories in different RAL colours
- wiring: CLO (more information on page 568)
- class II
- emergency versions

Applications

Environments: architectural, commercial, transit areas, cornices, large mirrors, boards.

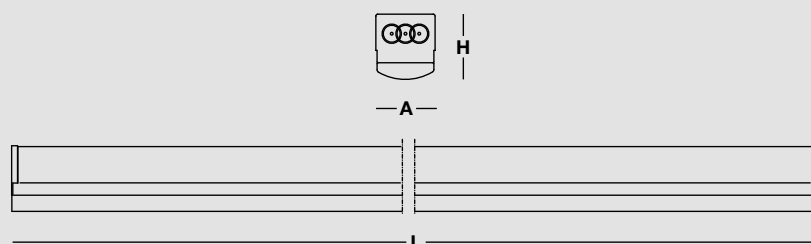
Installation

Ceiling, suspension or wall installation.

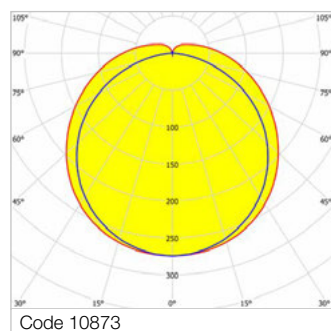
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Zeta D



Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

10872	3F Zeta D 1x9 LED L605	10	1247	4000	>80	605x62x81
10871	3F Zeta D 1x18 LED L1194	20	2494	4000	>80	1194x62x81
10875	3F Zeta D 2x9 LED L605	20	2495	4000	>80	605x62x81
10870	3F Zeta D 1x22 LED L1489	24.5	3118	4000	>80	1489x62x81
10874	3F Zeta D 2x18 LED L1194	40	4988	4000	>80	1194x62x81
10873	3F Zeta D 2x22 LED L1489	49	6236	4000	>80	1489x62x81

DALI electronic wiring 230V-50/60Hz

10962	3F Zeta D 1x18 LED DALI L1194	20	2494	4000	>80	1194x62x81
10961	3F Zeta D 1x22 LED DALI L1489	24.5	3118	4000	>80	1489x62x81
10965	3F Zeta D 2x18 LED DALI L1194	40	4988	4000	>80	1194x62x81
10964	3F Zeta D 2x22 LED DALI L1489	49	6236	4000	>80	1489x62x81

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

10980	3F Zeta D 1x22 LED EP L1489	25.5	3118	4000	>80	1489x62x81
10982	3F Zeta D 2x22 LED EP L1489	50	6236	4000	>80	1489x62x81



3F Zeta DR

Construction characteristics

Illuminotechnical characteristics

Diffused, direct and asymmetric controlled distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester, obtained through rolling process.

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.

End caps in white polycarbonate.

Stainless steel mounting brackets with anti-slip screws.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- housing and accessories in different RAL colours
- wiring: CLO (more information on page 568)
- class II
- emergency versions

Applications

Environments: architectural, commercial, transit areas, cornices, large mirrors, boards.

UGR version

Environments: exhibition areas, staterooms, with VDTs, halls, shops, great halls, offices.

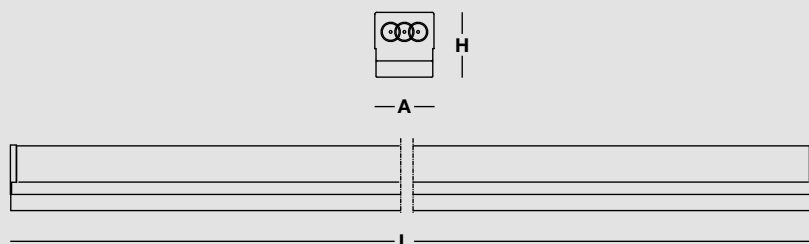
Installation

Ceiling, suspension or wall installation.

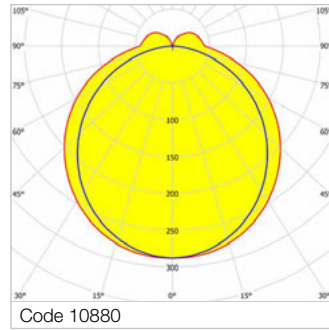
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Zeta DR



Diffused symmetric distribution.
Rectangular screen in self-extinguishing polycarbonate, UV stabilised, opal, with smooth outer surface.

Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

10879	3F Zeta DR 1x9 LED L605	10	1251	4000	>80	605x62x81
10878	3F Zeta DR 1x18 LED L1194	20	2500	4000	>80	1194x62x81
10882	3F Zeta DR 2x9 LED L605	20	2501	4000	>80	605x62x81
10877	3F Zeta DR 1x22 LED L1489	24.5	3126	4000	>80	1489x62x81
10881	3F Zeta DR 2x18 LED L1194	40	5001	4000	>80	1194x62x81
10880	3F Zeta DR 2x22 LED L1489	49	6253	4000	>80	1489x62x81

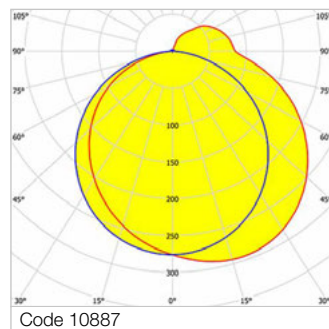
DALI electronic wiring 230V-50/60Hz

10968	3F Zeta DR 1x18 LED DALI L1194	20	2500	4000	>80	1194x62x81
10967	3F Zeta DR 1x22 LED DALI L1489	24.5	3126	4000	>80	1489x62x81
10971	3F Zeta DR 2x18 LED DALI L1194	40	5001	4000	>80	1194x62x81
10970	3F Zeta DR 2x22 LED DALI L1489	49	6253	4000	>80	1489x62x81

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

10984	3F Zeta DR 1x22 LED EP L1489	25.5	3126	4000	>80	1489x62x81
10986	3F Zeta DR 2x22 LED EP L1489	50	6253	4000	>80	1489x62x81

3F Zeta DR AS



Asymmetric distribution.
Rectangular screen in self-extinguishing polycarbonate, UV stabilised, opal, with smooth outer surface.
Internal recuperator in white painted steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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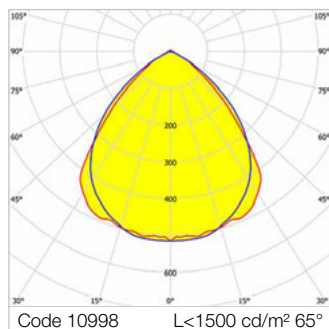
ON/OFF electronic wiring 230V-50/60Hz

10886	3F Zeta DR AS 1x30 LED L1489	35	3451	4000	>80	1489x62x81
10887	3F Zeta DR AS 2x22 LED L1489	49	5096	4000	>80	1489x62x81

DALI electronic wiring 230V-50/60Hz

10973	3F Zeta DR AS 1x30 LED DALI L1489	35	3451	4000	>80	1489x62x81
10974	3F Zeta DR AS 2x22 LED DALI L1489	49	5096	4000	>80	1489x62x81

3F Zeta DR UGR



Controlled symmetric distribution.

1x - Average luminance <1500 cd/m² for radial angles >65°.

2x - Average luminance <3000 cd/m² for radial angles >65°.

Rectangular transparent polycarbonate diffuser.

Semi-specular aluminium internal louvre with prismatic methacrylate filter above the louvre blades for complete shielding of the louvre compartment.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

10599	3F Zeta DR UGR 1x12 LED L605	15	1497	4000	>80	605x62x81
10598	3F Zeta DR UGR 2x9 LED L605	20	2144	4000	>80	605x62x81
10592	3F Zeta DR UGR 1x24 LED L1194	28	2786	4000	>80	1194x62x81
10998	3F Zeta DR UGR 1x30 LED L1783	35	3487	4000	>80	1783x62x81
10591	3F Zeta DR UGR 2x18 LED L1194	40	4287	4000	>80	1194x62x81
10997	3F Zeta DR UGR 2x22 LED L1783	49	5361	4000	>80	1783x62x81
11003	3F Zeta DR UGR 2x22/940 LED L1783	49	4396	4000	>90	1783x62x81

DALI electronic wiring 230V-50/60Hz

10601	3F Zeta DR UGR 1x12 LED DALI L605	15	1497	4000	>80	605x62x81
10600	3F Zeta DR UGR 2x9 LED DALI L605	20	2144	4000	>80	605x62x81
10594	3F Zeta DR UGR 1x24 LED DALI L1194	28	2786	4000	>80	1194x62x81
11000	3F Zeta DR UGR 1x30 LED DALI L1783	35	3487	4000	>80	1783x62x81
10593	3F Zeta DR UGR 2x18 LED DALI L1194	40	4287	4000	>80	1194x62x81
10999	3F Zeta DR UGR 2x22 LED DALI L1783	49	5361	4000	>80	1783x62x81
11004	3F Zeta DR UGR 2x22/940 LED DALI L1783	49	4396	4000	>90	1783x62x81

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

11002	3F Zeta DR UGR 1x30 LED EP L1783	36	3487	4000	>80	1783x62x81
11001	3F Zeta DR UGR 2x22 LED EP L1783	50	5361	4000	>80	1783x62x81

3F Zeta | Accessories



Suspension with regulator, galvanised steel cable 1.5 mm diameter, load 15 kg.

Code	Item
A0660	Suspension with adjustment - 1 m
A0661	Suspension with adjustment - 2 m
A0662	Suspension with adjustment - 3 m
A0663	Suspension with adjustment - 4 m
A0664	Suspension with adjustment - 5 m
A0665	Suspension with adjustment - 6 m

Attention: each product requires two suspensions with regulator.



Caddy hook to create a point from which to suspend the system or the loads to false ceilings with visible profiles.

Code	Item
A02562	Caddy for exposed profiles of 24 mm

To be installed on exposed profiles (width 24 mm) of false ceilings. We recommend reinforcing the false-ceiling fixing at the point where the Caddy is to be installed. Supplied complete with nut and washer. The suspension must be purchased separately. These accessories must ALWAYS be used with one of the following codes: A0660 - A0661 - A0662 - A0663 - A0664 - A0665.



Hook to suspended luminaires to a chain.

Code	Item
A20452	Stainless steel hook for chain



Element to connect in hot-galvanised steel.

Code	Item
A20433	Linear connecting element



Galvanised steel cable, diameter 1.5 mm, composed of 49 wires. 15 kg capacity (ratio 5:1).

Code	Item
A0716	Coil galv. cable diam. 1.5mm - 100m The pack contains 100 metres.
A0717	Coil galv. cable diam. 1.5mm - 500m The pack contains 500 metres.
A0718	Coil galv. cable diam. 1.5mm - 1000m The pack contains 1000 metres.

These accessories must ALWAYS be used with one of the following codes: A20452 - A0714 - A0659.



Clamp in nickel-plated brass suitable for fixing and adjustment of galvanised steel wire (diameter 1,25 mm - 1,5 mm - 2 mm), complete with locking screws. The 2 hole clamp allows to block and adjust the cable on a bearing element (part of the building) or on rounded eye bolt.

Code	Item
A0714	Clamp 2 holes susp.- 100 pcs The pack contains 100 pieces.



Clamp suitable for fixing and adjustment of galvanised steel wire (diameter 1.5 mm), with quick adjustment through unlock buttons. The clamp with 2 holes allow to fix and adjust the cable on the carrier structural element (belonging to the building) or with eye screw fixing.

Code	Item
A0659	Adjustable clamp 2 holes - 10 pcs The pack contains 10 pieces.

This accessory can be used with one of the following codes: A0716 - A0717 - A0718.



Safety bracket in white painted steel to secure lighting elements if installed vertically.

Code	Item
A20478	Anti-slip term. incli. 3F Linux

This accessory must always be used in combination with end terminals.



Wall-mounting bracket, in white painted steel.

Code	Item
A0052 ^{NEW}	Wall-mounting brack



Electric supply with white polycarbonate case, internal bracket in galvanised steel.

Code	Item
A0679	5 pole rectangular rose (no cable) WH





3F Dìagon P

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Average luminance <3000 cd/m² for angles >65°.

Colour temperature available /830 - /840, /930 - /940.

Lifetime (L95/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L80/B10): 80000 h. (tq+25°C)

Lifetime (L75/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

White painted frame.

Height only 40 mm.

Housing in hot-galvanised steel, painted in white polyester.

Honeycombed diagonal screen in white anti-glare polycarbonate.

Opal methacrylate rhomboid lenses with differentiated, engraved and prismatic surfaces for diffused, soft lighting and excellent visual comfort.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Quick connection.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- suspension installation
- different power levels, colour rendering indices and colour temperatures
- wiring: twin-circuit, CLO (more information on page 568)
- Sensor version
- transparent lens versions
- emergency versions

Applications

Environments: staterooms, with VDTs, offices.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

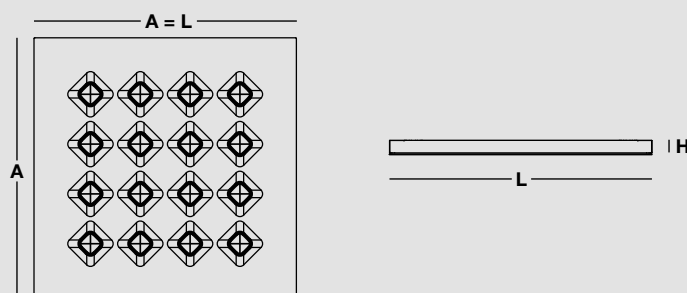
Installation

Ceiling installation.

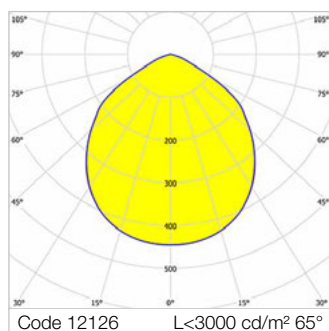
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Diagon P Soft UGR



Installation Interdistance Transv.D = 1.20 x hu - Long.D = 1.20 x hu.

Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

12126	3F Diagon P 25W/830 SOFT UGR 596x596	28	3607	3000	>80	596x596x40
12130	3F Diagon P 25W/840 SOFT UGR 596x596	28	3797	4000	>80	596x596x40
12134	3F Diagon P 39W/930 SOFT UGR 596x596	40	3723	3000	>90	596x596x40
12138	3F Diagon P 39W/940 SOFT UGR 596x596	40	3939	4000	>90	596x596x40

DALI electronic wiring 230V-50/60Hz

12127	3F Diagon P 25W/830 DALI SOFT UGR 596x596	28	3607	3000	>80	596x596x40
12131	3F Diagon P 25W/840 DALI SOFT UGR 596x596	28	3797	4000	>80	596x596x40
12135	3F Diagon P 39W/930 DALI SOFT UGR 596x596	40	3723	3000	>90	596x596x40
12139	3F Diagon P 39W/940 DALI SOFT UGR 596x596	40	3939	4000	>90	596x596x40

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

12128	3F Diagon P 25W/830 EP SOFT UGR 596x596	29	3607	3000	>80	596x596x40
12132	3F Diagon P 25W/840 EP SOFT UGR 596x596	29	3797	4000	>80	596x596x40
12136	3F Diagon P 39W/930 EP SOFT UGR 596x596	41	3723	3000	>90	596x596x40
12140	3F Diagon P 39W/940 EP SOFT UGR 596x596	41	3939	4000	>90	596x596x40



3F Diagon P Tunable White

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Average luminance $<3000 \text{ cd/m}^2$ for angles $>65^\circ$.

The colour temperature can be adjusted between 2700 K and 6500 K.

Lifetime (L95/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L80/B10): 80000 h. (tq+25°C)

Lifetime (L75/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

White painted frame.

Height only 40 mm.

Housing in hot-galvanised steel, painted in white polyester.

Honeycombed diagonal screen in white anti-glare polycarbonate.

Opal methacrylate rhomboid lenses with differentiated, engraved and prismatic surfaces for diffused, soft lighting and excellent visual comfort.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Cable with a DALI DT8 driver.

Quick connection.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- suspension installation
- different power levels, colour rendering indices and colour temperatures
- wiring: twin-circuit
- emergency versions

Applications

Any environments requiring light which aims for the wellness of people.

Environments: staterooms, with VDTs, offices.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

Installation

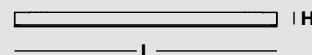
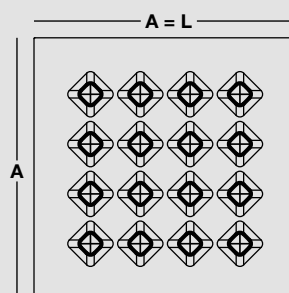
Ceiling installation.

Light Management

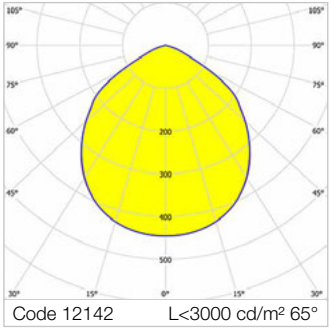
Thanks to the 3F HCL technology, our Tunable White products can be controlled by:

- Wired control systems (more information on page 562))
- 3F Bluetooth control systems (more information on page 564))

Dimensions



3F Diagon P Soft UGR Tunable White



Installation Interdistance Transv.D = 1.20 x hu - Long.D = 1.20 x hu.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI DT8 electronic wiring 230V-50/60Hz

12142	3F Diagon P 25W DT8 TW SOFT UGR 596x596	31.5 30 29	3686	2700 4000 6500	>80	596x596x40
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Surface luminaires
and suspensions



3F Petra LED

Construction characteristics

Illuminotechnical characteristics

Diffuse distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in self-

extinguishing V2 polycarbonate, UV stabilised, injection moulded, glazed. Ecologic anti-aging injected sealing gasket.

Diffuser in opal PMMA, injection moulded.

Gear-tray reflector unit in aluminium, painted in white polyester, fixed to the housing by quick-fastening steel devices, hinged opening.

Snug fit safety snap-lock clips for diffuser mounting in transparent polycarbonate, screwdriver opening.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Entry for power-supply cable at the top by means of sealing grommet or lateral after drilling.

Source characteristics

- Circular LED module.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- wiring: CLO (more information on page 568)
- LED module with different power levels, colour temperatures and colour rendering index
- emergency versions

Applications

Environments: architectural, transit areas, lobbies or waiting rooms, stairwells. Environments where ceiling indirect lighting and direct lighting supply a visual comfort. Virtually in all environments compatibly with the use of any chemicals which could compromise the use of plastic materials. Completely insect and dust proof.

Installation

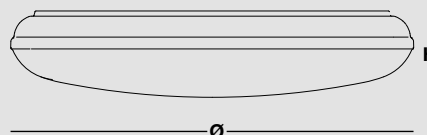
Wall or ceiling installation.

Thanks to the full compatibility of dimensions, fixing spacing and accessories with the previous fluorescent version, this product becomes the perfect solution for updating existing installations.

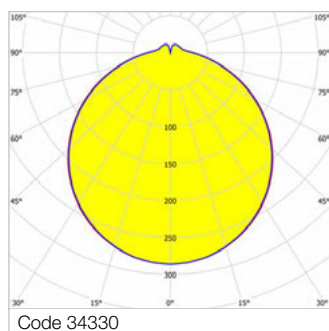
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Petra LED



Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	--------------------	------------------	---------	-----	---------------------

ON/OFF electronic wiring 230V-50/60Hz

34229	3F Petra OP 300 12W LED	14	1607	4000	>80	300x120
34234 ^{NEW}	3F Petra OP 300 12W/940 LED	14	1318	4000	>90	300x120
34330	3F Petra OP 380 22W LED	25	2841	4000	>80	380x117
34335 ^{NEW}	3F Petra OP 380 22W/940 LED	25	2330	4000	>90	380x117
34407	3F Petra OP 620 50W LED	55	5740	4000	>80	620x134

DALI electronic wiring 230V-50/60Hz

34230 ^{NEW}	3F Petra OP 300 12W LED DALI	14	1607	4000	>80	300x120
34235 ^{NEW}	3F Petra OP 300 12W/940 LED DALI	14	1318	4000	>90	300x120
34331 ^{NEW}	3F Petra OP 380 22W LED DALI	25	2841	4000	>80	380x117
34336 ^{NEW}	3F Petra OP 380 22W/940 LED DALI	25	2330	4000	>90	380x117
34408 ^{NEW}	3F Petra OP 620 50W LED DALI	55	5740	4000	>80	620x134

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

34231 ^{NEW}	3F Petra OP 300 12W LED EP	15	1607	4000	>80	300x120
34236 ^{NEW}	3F Petra OP 300 12W/940 LED EP	15	1318	4000	>90	300x120
34332	3F Petra OP 380 22W LED EP	26	2841	4000	>80	380x117
34337 ^{NEW}	3F Petra OP 380 22W/940 LED EP	26	2330	4000	>90	380x117
34409	3F Petra OP 620 50W LED EP	56	5740	4000	>80	620x134

Surface luminaires
and suspensions





3F Petra LED Sensor

Construction characteristics

Illuminotechnical characteristics

Diffuse distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in self-

extinguishing V2 polycarbonate, UV stabilised, injection moulded, glazed. Ecologic anti-aging injected sealing gasket.

Diffuser in opal PMMA, injection moulded.

Gear-tray reflector unit in aluminium, painted in white polyester, fixed to the housing by quick-fastening steel devices, hinged opening.

Snug fit safety snap-lock clips for diffuser mounting in transparent polycarbonate, screwdriver opening.

Electrical characteristics

In compliance with EN 60598-1.

Entry for power-supply cable at the top by means of sealing grommet or lateral after drilling.

Sensor mode: turns on and off depending on persons present.

Integrated presence sensor with ON/OFF function.

Source characteristics

- Circular LED module.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- 3F Petra OP 620 50W Sensor
- LED module with different power levels, colour temperatures and colour rendering index
- emergency versions

Applications

Environments: architectural, transit areas, lobbies or waiting rooms, stairwells. Environments where ceiling indirect lighting and direct lighting supply a visual comfort. Virtually in all environments compatibly with the use of any chemicals which could compromise the use of plastic materials. Completely insect and dust proof.

Installation

Wall or ceiling installation.

Thanks to the full compatibility of dimensions, fixing spacing and accessories with the previous fluorescent version, this product becomes the perfect solution for updating existing installations.

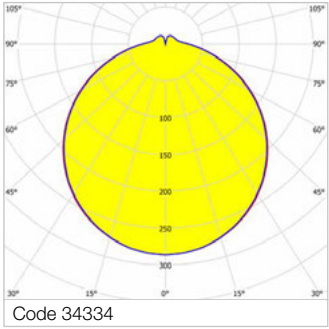
Light Management

For more information on 3F Sensor technology, refer to the specific chapter in the "Light Management" section.

Dimensions



3F Petra LED Sensor



CE

SAFE
LÜCKER

D

675°C

IP64

0,2J

IK02

Driver/LED
SELV

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	--------------------	------------------	---------	-----	---------------------

ON/OFF electronic wiring 230V-50/60Hz

34233	3F Petra OP 300 12W LED Sensor	15	1607	4000	>80	300x120
34334	3F Petra OP 380 22W LED Sensor	26	2841	4000	>80	380x117

Surface luminaires
and suspensions



3F Petra LED Suspended

Construction characteristics

Illuminotechnical characteristics

Diffuse distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in self-extinguishing V2 polycarbonate, UV stabilised, injection moulded, glazed. Ecologic anti-aging injected sealing gasket.

Diffuser in opal PMMA, injection moulded. Gear-tray reflector unit in aluminium, painted in white polyester, fixed to the housing by quick-fastening steel devices, hinged opening.

Snug fit safety snap-lock clips for diffuser mounting in transparent polycarbonate, screwdriver opening.

Adjustable suspension with Rose in white polycarbonate, with stainless steel cables, 2 m long.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Entry for power-supply cable at the top by means of double-membrane sealing grommet, or side-entry after drilling. Transparent 5x1.5 mm² power-supply cable.

Source characteristics

- Circular LED module.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- wiring: dimmable, CLO (more information on page 568)
- LED module with different power levels, colour temperatures and colour rendering index
- emergency versions

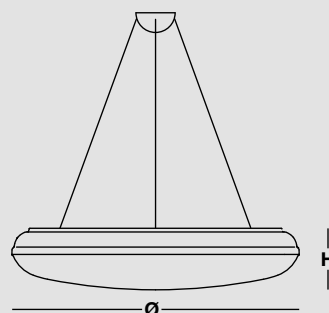
Applications

Environments: transit areas, great halls. Environments where ceiling indirect lighting and direct lighting supply a visual comfort. Virtually in all environments compatibly with the use of any chemicals which could compromise the use of plastic materials. Completely insect and dust proof.


Installation

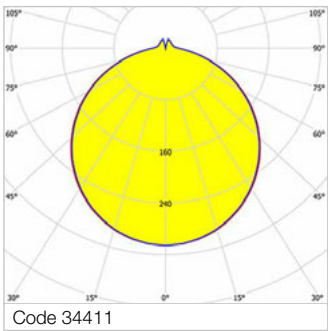
Suspension installation.

Dimensions





3F Petra LED Suspended





CE





675°C

IP65

0,2J

IK02

Driver/LED
SELV

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	--------------------	------------------	---------	-----	---------------------

ON/OFF electronic wiring 230V-50/60Hz

34411	3F Petra OP 620 50W LED SO	55	5740	4000	>80	620x134
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Surface luminaires
and suspensions



P 200 LED

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Average luminance $<1000 \text{ cd/m}^2$ for radial angles $>65^\circ$.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

2US parabolic louvre in semi-glossy aluminium with transverse blades closed at the top and prismatic PMMA diffusers for total shielding of the louvre compartment.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.

10W version

- Colour initial tolerance (MacAdam): SDCM 2.

24W, 30W versions

- Colour initial tolerance (MacAdam): SDCM 3.

On request

- parabolic louvres 2M, 2MG, 3AO
- different power levels, colour rendering indices and colour temperatures
- housing in RAL colours
- wiring: dimmable, CLO (more information on page 568)
- emergency versions

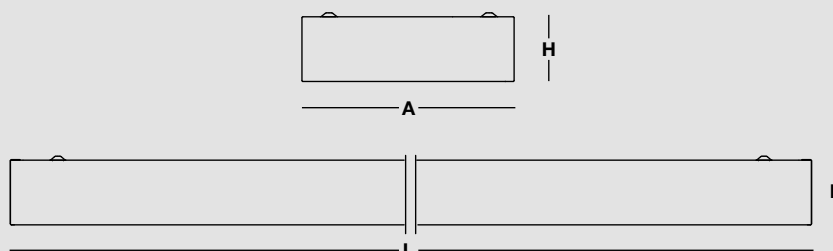
Applications

Environments: with VDTs, schools, offices.

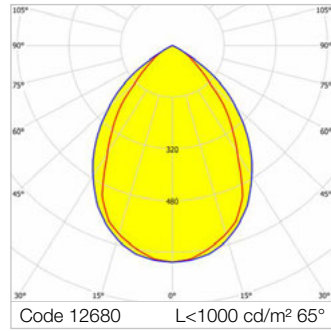
Installation

Ceiling mounted installation.

Dimensions



P 200 LED 2US



Average luminance <1000 cd/m² for radial angles >65°.
 2US parabolic louvre in semi-glossy aluminium, anti-glare, with transverse blades closed at the top.
 Prismatic PMMA diffuser for total shielding of the louvre compartment.
 Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

12675	P 201x30W LED 2US 156x1531	35	3529	4000	>80	1531x156x82
12692	P 203x10W LED 2US 596x596	34	3748	4000	>80	596x596x82
12687	P 202x24W LED 2US 270x1231	56	5531	4000	>80	1231x270x82
12680	P 202x24W LED 2US 196x1231	56	5871	4000	>80	1231x196x82
12689	P 202x30W LED 2US 270x1531	70	6922	4000	>80	1531x270x82
12682	P 202x30W LED 2US 196x1531	70	7348	4000	>80	1531x196x82



P 200 LED IP54

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

VS version

3x - Average luminance <1500 cd/m² for radial angles >65°.

4x - Average luminance <3000 cd/m² for radial angles >65°.

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.

10W version

- Colour initial tolerance (MacAdam): SDCM 2.

24W version

- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- diffuser in SMP microprismatic PMMA or SP polycarbonate, Selfextinguishing V2
- housing in different RAL colours
- wiring: dimmable, CLO (more information on page 568)
- emergency versions

Applications

Particularly suitable for environments where protection against water and dust is required, such as hospitals, pharmaceutical and chemical laboratories.

In environments with foodstuffs or machines with moving parts, with considerable sudden temperature changes, and in general in any environments requiring total protection against falling fragments, use the P 200 LED IP54 SP PC version (polycarbonate diffuser) available on request.

Tempered glass is not immune to falling fragments from harmless and caused by shocks or exceptionally derived from the tempering process.

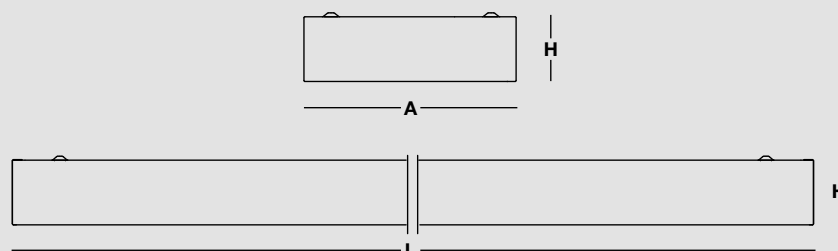
SP version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

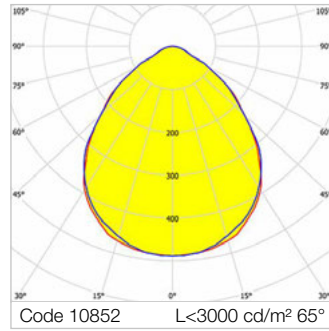
Installation

Ceiling mounted installation.

Dimensions



P 200 LED IP54 VS



Driver/LED
SELV

3x - Average luminance <1500 cd/m² for radial angles >65°.
4x - Average luminance <3000 cd/m² for radial angles >65°.
VS moulded glass, anti-glare, tempered, non-combustible, thickness 4 mm, locked to the white painted aluminium perimetrical frame, sealing gasket, hinged opening.

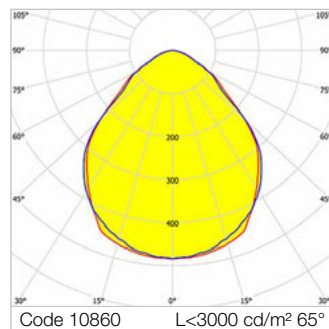
Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

10851	P 203x10W LED VS IP54 596x596	34	3986	4000	>80	596x596x82
10852	P 204x10W LED VS IP54 596x596	45	5253	4000	>80	596x596x82
10848	P 202x24W LED VS IP54 196x1231	56	6302	4000	>80	1231x196x82

P 200 LED IP54 SP



Driver/LED
SELV

SP transparent PMMA diffuser, prismatic, anti-glare, locked to the pre-painted white aluminium perimeter frame with sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

10859	P 203x10W LED SP IP54 596x596	34	4142	4000	>80	596x596x82
10860	P 204x10W LED SP IP54 596x596	45	5474	4000	>80	596x596x82
10856	P 202x24W LED SP IP54 196x1231	56	6567	4000	>80	1231x196x82

P 200 | Accessories



Wall-mounting bracket, in white painted steel.

Accessory compatible with 156 mm or 196 mm wide versions.

Code	Item
A0052 ^{NEW}	Wall-mounting brack



P 250 LED

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

SP version

Average luminance <3000 cd/m² for radial angles >65°.

LGS version

Average luminance <1500 cd/m² for radial angles >65°.

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Height only 55 mm.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.

10W version

- Colour initial tolerance (MacAdam): SDCM 2.

24W, 30W versions

- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- diffuser in SMP microprismatic PMMA or SP polycarbonate, Selfextinguishing V2
- housing in different RAL colours
- wiring: dimmable, CLO (more information on page 568)
- emergency versions

Applications

Particularly suitable for low height environments.

SP version

Environments: with VDTs, offices.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

OP version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

LGS version

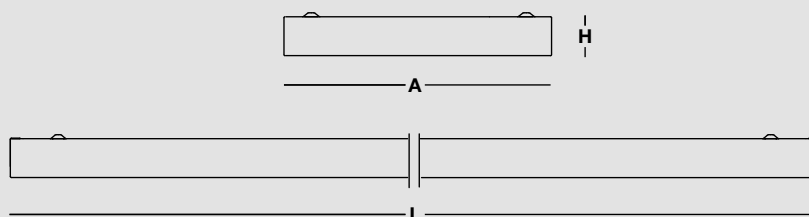
Environments: with video terminals, representative areas, offices.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

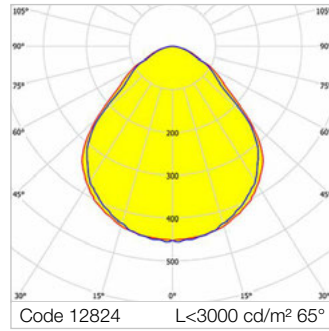
Installation

Ceiling mounted installation.

Dimensions



P 250 LED SP



Driver/LED
SELV

Average luminance <3000 cd/m² for radial angles >65°. SP transparent PMMA diffuser, prismatic, anti-glare, locked to the pre-painted white aluminium perimeter frame with sealing gasket, hinged opening.

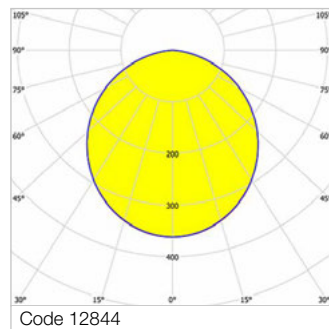
Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

12824	P 253x10W LED SP 596x596	34	4360	4000	>80	596x596x55
12815	P 251x30W LED SP 156x1531	35	4364	4000	>80	1531x156x55
12826	P 254x10W LED SP 596x596	45	5765	4000	>80	596x596x55
12820	P 252x24W LED SP 196x1231	56	6916	4000	>80	1231x196x55
12822	P 252x30W LED SP 196x1531	70	8655	4000	>80	1531x196x55

P 250 LED OP



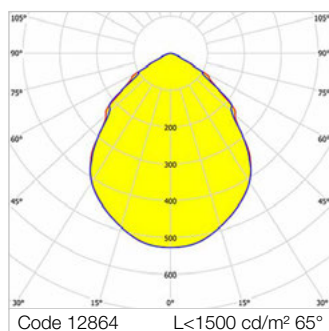
OP opal PMMA flat diffuser, anti-glare, locked to the pre-painted white aluminium perimeter frame with sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

12844	P 253x10W LED OP 596x596	34	4080	4000	>80	596x596x55
12835	P 251x30W LED OP 156x1531	35	4084	4000	>80	1531x156x55
12846	P 254x10W LED OP 596x596	45	5405	4000	>80	596x596x55
12840	P 252x24W LED OP 196x1231	56	6484	4000	>80	1231x196x55
12842	P 252x30W LED OP 196x1531	70	8116	4000	>80	1531x196x55

P 250 LED LGS



Driver/LED
SELV

Average luminance <1500 cd/m² for radial angles >65°.
LGS micro-prismatic flat diffuser in transparent methacrylate, multilenticular exterior, anti-glare, locked to the white painted aluminium perimetral frame, sealing gasket, hinged opening. Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

12864	P 253x10W LED LGS 596x596	34	3696	4000	>80	596x596x55
12855	P 251x30W LED LGS 156x1531	35	3700	4000	>80	1531x156x55
12866	P 254x10W LED LGS 596x596	45	4894	4000	>80	596x596x55
12860	P 252x24W LED LGS 196x1231	56	5871	4000	>80	1231x196x55
12862	P 252x30W LED LGS 196x1531	70	7348	4000	>80	1531x196x55





P 250 LED Diffused Light

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L90/B20): 30000 h. (tq+25°C)

Lifetime (L80/B20): 50000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

LGS version

Average luminance <1500 cd/m² for radial angles >65°.

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Height only 55 mm.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a

centralised CPSS emergency system must

be verified in the technical data sheets of

each individual device on our website.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- diffuser in SMP microprismatic PMMA or SP polycarbonate, Selfextinguishing V2
- housing in different RAL colours
- emergency versions

Applications

Particularly suitable for low height environments.

LGS version

Environments: with video terminals, representative areas, offices.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

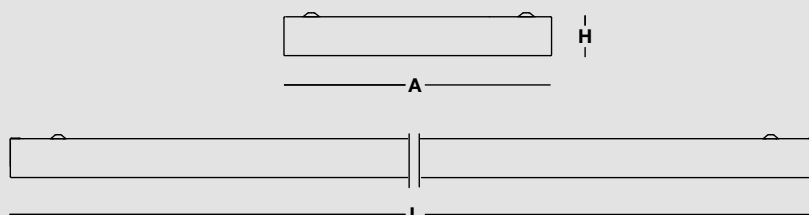
OP version

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

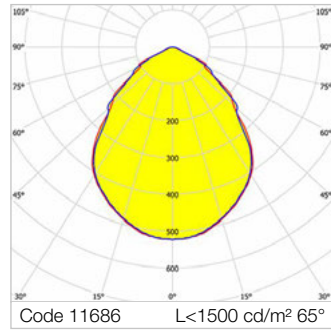
Installation

Ceiling mounted installation.

Dimensions



P 250 LED Diffused Light LGS



Driver/LED
SELV

Average luminance <1500 cd/m² for radial angles >65°. LGS micro-prismatic flat diffuser in transparent methacrylate, multi-lenticular exterior, anti-glare, locked to the white painted aluminium perimeter frame, hinged opening. Anti-glare opal polycarbonate filter for brightness uniformity.

Surface luminaires
and suspensions

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

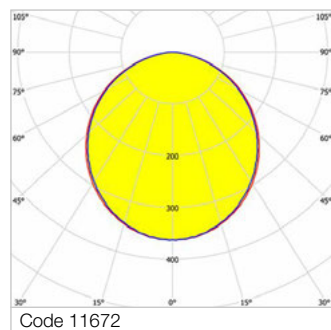
ON/OFF electronic wiring 230V-50/60Hz

11686	P 250 32W LED LGS 596x596	31	3418	4000	>80	596x596x55
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DALI electronic wiring 230V-50/60Hz

11688	P 250 32W LED DALI LGS 596x596	31	3418	4000	>80	596x596x55
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P 250 LED Diffused Light OP



OP opal PMMA flat diffuser, anti-glare, locked to the pre-painted white aluminium perimeter frame, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

11672	P 250 32W LED OP 596x596	31	3729	4000	>80	596x596x55
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DALI electronic wiring 230V-50/60Hz

11674	P 250 32W LED DALI OP 596x596	31	3729	4000	>80	596x596x55
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P 250 | Accessories



Wall-mounting bracket, in white painted steel.

Accessory compatible with 156 mm or 196 mm wide versions.

Code	Item
A0052 ^{NEW}	Wall-mounting brack



Mira Wall LED

Construction characteristics

Illuminotechnical characteristics

Asymmetric indirect distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted steel.
 Flow recuperator in specular aluminium with superficial titanium-magnesium treatment.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- housing in different RAL colours
- wiring: dimmable, CLO (more information on page 568)
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: transit areas, lobbies or waiting rooms, corridors, stairwells.

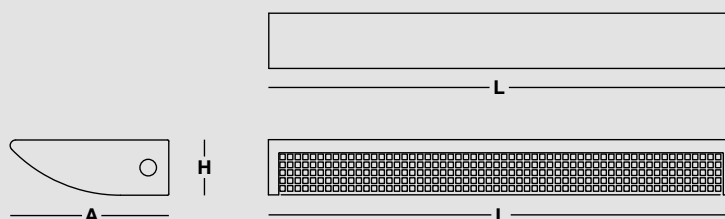
Environments where soft diffuse light is required for optimal visual comfort.

Installation

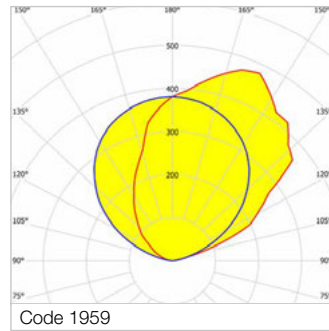
Wall installation.

Thanks to the full compatibility of dimensions, fixing spacing and accessories with the previous fluorescent version, this product becomes the perfect solution for updating existing installations.

Dimensions



Mira Par LED Ind



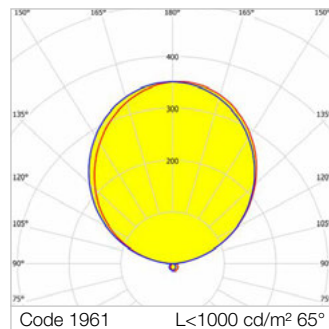
Indirect lighting.
Upper closing diffuser in selfextinguishing V2 transparent polycarbonate, UV stabilised.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

1959	MIRA PAR LED 4x12W IND L675	56	6453	4000	>80	675x230x80
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Mira Par LED Dec



Average luminance <1000 cd/m² for radial angles >65°.
Indirect and direct decorative lighting.
Body with reticular slots.
Opal acrylic upper diffuser.
Opal polycarbonate Inlay Cover for perforated housings.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

1961	MIRA PAR LED DE 4x12W L675	56	6321	4000	>80	675x230x80
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Mira | Accessories



5-pole terminal block, connection capacity from 2.5 to 6 mm², on galvanised steel bracket for cascade connection lines.

Code	Item
A0090	Bracket/5-pole terminal block



3F Emilio Wall

Construction characteristics

Illuminotechnical characteristics

Diffused symmetric distribution.
Lifetime (L90/B20): 30000 h. (tq+25°C)
Lifetime (L80/B20): 50000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Mechanical characteristics

Gear-tray casing in white painted aluminium for ceiling or wall installation. Single-piece in die-cast aluminium with passive dissipation, white colour, with perimeter cooling slots on upper edge, giving a crown of light effect to the fitting. Invisible lock for positioning the luminous flux.
PMMA opal methacrylate lens.
Positioning arm in galvanised brass with sphere to allow for vertical positioning at angles from 0° to 90° and horizontal positioning from 0° to 290°.

Electrical characteristics

In compliance with EN 60598-1.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- LED module with different power levels, colour temperatures and colour rendering index
- housing in different RAL colours
- dimmable wiring

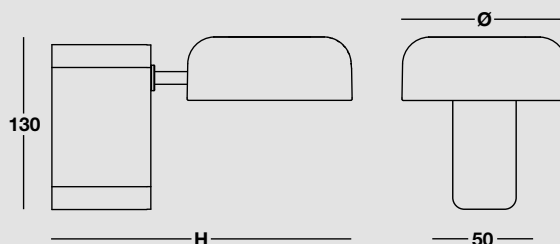
Applications

Environments: commercial, museums, shops.
Environments: transit areas, lobbies or waiting rooms, corridors, stairwells.
Environments where soft diffuse light is required for optimal visual comfort.

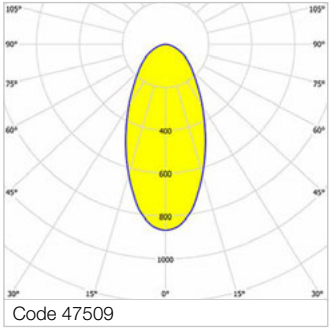
Installation

Wall or ceiling installation.
In cases where the body of the luminaire is facing the ceiling (for indirect lighting), to maintain high luminous efficiency we recommend cleaning the lens regularly.

Dimensions



3F Emilio Wall



PMMA opal methacrylate lens.

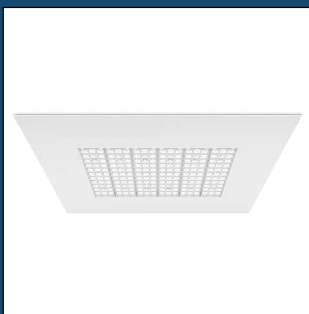
Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	---------------------

ON/OFF electronic wiring 230V-50/60Hz

47509	3F Emilio P LED 3000/840	50°	27.9	2844	4000	>80	130x156
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Surface luminaires
and suspensions

3F Six R



3F LED Panel



3F Dìagon



L 320



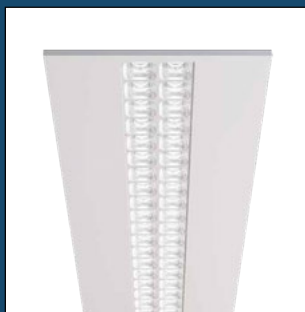
L 340



L 350



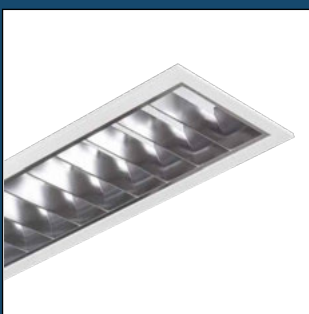
L 360



L 480



L 560



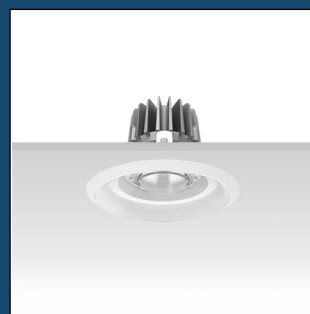
L 580



L 590



3F Reno



Galassia



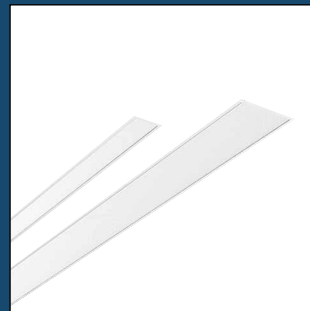
Lucequadro



3F Emilio R



3F HD R



Recessed luminaires

Page		Product	Lay-installation	Pull-up installation	Sterile environments	Slat ceiling
202		3F Six R				
204	NEW	3F Six R	•	with accessory		
210		3F LED Panel				
210	UPDATE	3F LED Panel	•			
222		3F Diagon				
222		3F Diagon Lay-in installation	•			
226		3F Diagon Tunable White Lay-in installation	•			
230	UPDATE	3F Diagon Pull-up installation		•		
236		L 320				
236		L 320 LED	•	with accessory		
246		L 340				
246	NEW	L 340 Diffused Light	•	with accessory		
250	NEW	L 340 Lite	•	with accessory		
252	NEW	L 340 Tunable White	•	with accessory		
254		L 350				
254		L 350 LED	•	with accessory		
258		L 360				
258		L 360	•			
260		L 480				
260		L 480		•		
264		L 560				
264		L 560 LED				•
268		L 580				
268		L 580 LED IP54	•	•	•	
272		L 590				
272		L 590 LED IP65	•	•	•	
278		3F Reno				
282		3F Reno White		downlight		
290		3F Reno Black		downlight		
298		Galassia				
298		Galassia 220		downlight		
304		Lucequadro				
304		Lucequadro LED		downlight		
308		3F Emilio R				
308		3F Emilio R		downlight		



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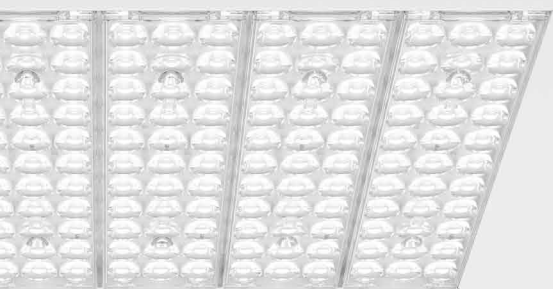
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2.09 1.73 1.16

MISTER POLARETTO

www.polaretto.it

1,79€



3F Six R

> www.3F-Filippi.com/3F Six R

3F Six R is the new recessed luminaire particularly suitable for shopping centres, exhibition areas and warehouses with important installation heights.

Thanks to the use of six methacrylate optical lenses installed on the fixture is it possible to obtain customised luminous distribution by choosing from the three types of optics available: wide, medium and UGR.

The latter configuration, designed to be used in environments with more stringent vision requirements or where there are VDTs, uses lenses with controlled luminance and a UGR<19 glare index.

3F Six R is available in a version with ON/OFF wiring or DALI control to manage the fixture and the energy consumption of the entire lighting system.

This product is also available in this version 3F Six (page 356).

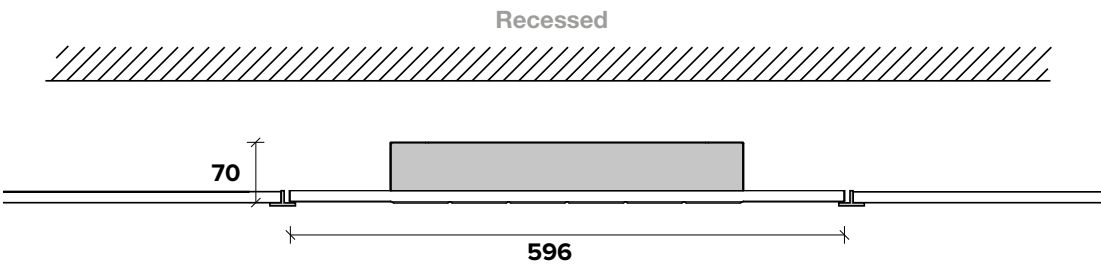
+ Overview

- Luminous efficacy up to 154 lumen/watt.
- Luminous fluxes from 6628 to 13622 lumens.
- Average luminance <3000 cd/m² (UGR version).
- UGR <19 (UGR version).
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Lay-installation	Pull-up installation
204	NEW 3F Six R	•	with accessory

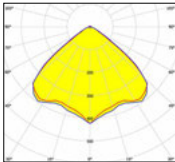
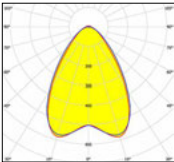
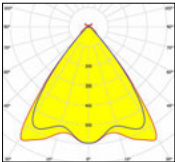
Product range

3F Six R



3F Six R



Model	Wide		Medium	UGR
Average luminance for angles> 65 (cd / m²)	>3000		>3000	<3000
UGR	<21		<21	<19
Protection class			IP40	
Photometric distribution				
Installation steps	Dt	1,39	1,16	1,39
	DI	1,43	1,19	1,30

10

PORTA OGGETTI CUCINA
ACCESSORI STOVIGLIE
VASI DA CONSERVA
CONTENTORI IN VETRO
CONTENTORI IN PLASTICA





3F Six R

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted steel.

PMMA lenses with external flat surface.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Power cable type H05Z1Z1-F

3-5x1.5 mm² that protrudes by 1 m with sheared ends.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different light distributions
- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- different dimensions
- emergency versions

Applications

Environments: commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops.

UGR version

Environments that need luminance control.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

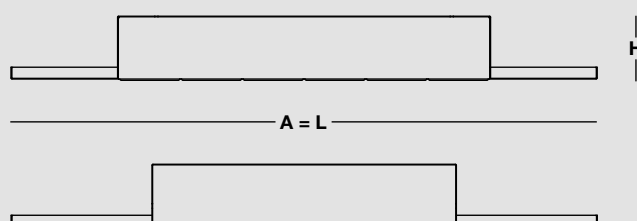
Installation

Lay-in installation.

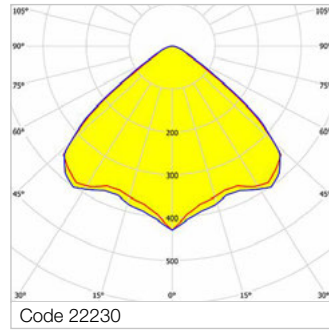
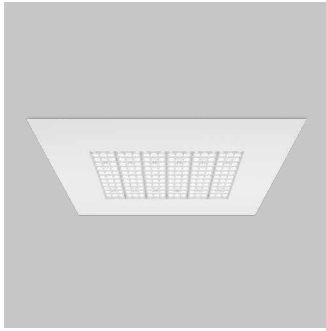
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



3F Six R Wide



650°C

IP40

1J

IK06

HACCP

Wide distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

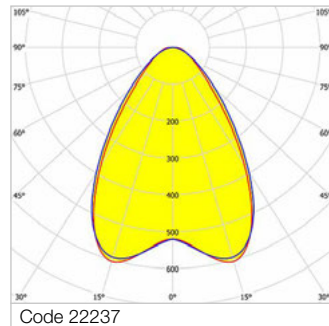
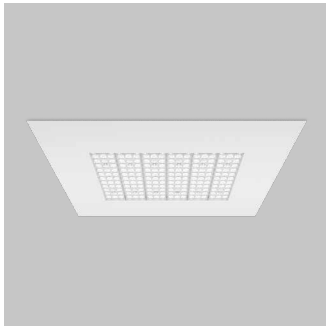
ON/OFF electronic wiring 230V-50/60Hz

22230 ^{NEW}	3F Six R 85/840 WIDE 596x596	94	13622	4000	>80	596x596x70
22231 ^{NEW}	3F Six R 70/840 WIDE 596x596	72	11050	4000	>80	596x596x70
22232 ^{NEW}	3F Six R 60/840 WIDE 596x596	62	9530	4000	>80	596x596x70

DALI electronic wiring 230V-50/60Hz

22233 ^{NEW}	3F Six R 85/840 DALI WIDE 596x596	94	13622	4000	>80	596x596x70
22234 ^{NEW}	3F Six R 70/840 DALI WIDE 596x596	72	11050	4000	>80	596x596x70
22235 ^{NEW}	3F Six R 60/840 DALI WIDE 596x596	62	9530	4000	>80	596x596x70

3F Six R Medium



650°C

IP40

1J

IK06

HACCP

Medium distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

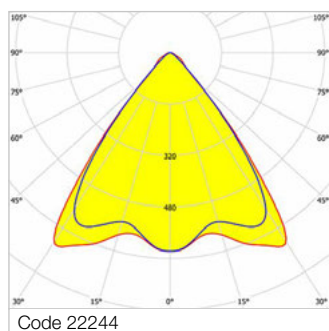
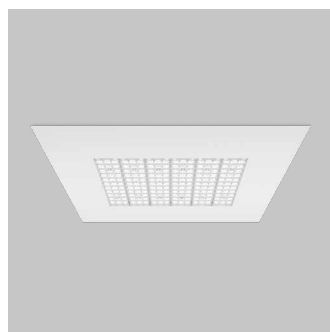
ON/OFF electronic wiring 230V-50/60Hz

22237 ^{NEW}	3F Six R 85/840 MEDIUM 596x596	94	13157	4000	>80	596x596x70
22238 ^{NEW}	3F Six R 70/840 MEDIUM 596x596	72	10673	4000	>80	596x596x70
22239 ^{NEW}	3F Six R 60/840 MEDIUM 596x596	62	9205	4000	>80	596x596x70

DALI electronic wiring 230V-50/60Hz

22240 ^{NEW}	3F Six R 85/840 DALI MEDIUM 596x596	94	13157	4000	>80	596x596x70
22241 ^{NEW}	3F Six R 70/840 DALI MEDIUM 596x596	72	10673	4000	>80	596x596x70
22242 ^{NEW}	3F Six R 60/840 DALI MEDIUM 596x596	62	9205	4000	>80	596x596x70

3F Six R UGR



Controlled symmetric distribution.
Average luminance <3000 cd/m² for radial angles >65°.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

22244 ^{NEW}	3F Six R 40/840 UGR 596x596	43	6628	4000	>80	596x596x70
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DALI electronic wiring 230V-50/60Hz

22245 ^{NEW}	3F Six R 40/840 DALI UGR 596x596	43	6628	4000	>80	596x596x70
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3F Six R | Accessories



Adapter frame in white-painted steel, for installing luminaires with dimensions of 596x596 mm for pull-up installations on plasterboard false ceilings.

Code	Item
A0798	621x621 frame + brackets



Anti-fall safety cable with pair of brackets for fixing the housing to the building structure. Length 2.5 m.

Code	Item
A0579 ^{NEW}	Safety wire with brackets





3F LED Panel

> www.3F-Filippi.com/3F LED Panel

3F LED Panel is 3F Filippi's new entry-level proposal: a functional product that aims to provide good lighting in indoor environments. Simplicity does not mean economy: the LED sources (available with CRI >80 and CRI >90) don't cause any photobiological risk, belonging to the RG0 class (Risk Exempt).

Furthermore, the very low level of Flickering guarantees more comfort and safety, especially after prolonged use in environments with VDTs.

The aluminium body guarantees lightness and gives a remarkable rigidity to the product, supplied as standard with the anti-fall safety cable to secure the body to the building structure.

Particular attention was paid to the frame that outlines the perimeter (made in a single piece) and to the rapidity of installation: the quick-coupling terminal block also allows the connection in cascade of several appliances.

+ Overview

- Luminous efficacy up to 130 lumen/watt.
- Luminous fluxes from 2316 to 5272 lumens.
- Average luminance <3000 cd/m².
- Extensive installation pitch.
- UGR <19.
- Excellent quality/price ratio.
- Technology by 3F Filippi.
- Multi-current power supply to choose different lighting levels.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Mechanical and electrical assembly without tools.
- Reliability guaranteed over time.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Lay-installation
210	UPDATE 3F LED Panel	•



3F LED Panel

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.
Average luminance $<3000 \text{ cd/m}^2$ for radial angles $>65^\circ$.
Lifetime (L93/B20): 30000 h. (tq+25°C)
Lifetime (L90/B20): 50000 h. (tq+25°C)
Lifetime (L75/B20): 80000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted aluminium.
Diffuser in SMP transparent microprismatic PMMA externally, anti-glare with high transmittance.
Perimetral frame in white polycarbonate.
Anti-fall safety cable.

Electrical characteristics

In compliance with EN 60598-1.
Multi-current power supply, to be ordered separately, that allows you to choose the driving current of the fixture at the time of installation according to the required illuminance.
Fixtures in compliance with EN 60598-2-22, for power supply from a centralised CPSS emergency system.
Class II.
EP permanent emergency kit, to be ordered separately, compliant with the EN S60598-2-22, high risk areas excluded.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

Applications

Environments: with VDTs, meeting rooms, offices.
Environments: recreational, transit areas, corridors, schools, stairwells.
Environments where soft diffuse light is required for optimal visual comfort.
Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

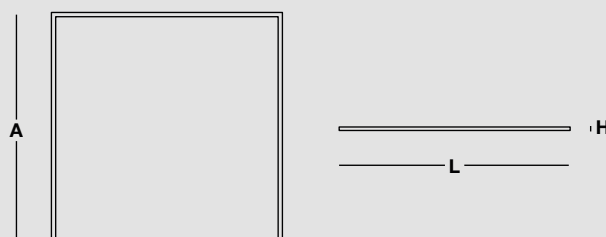
Installation

Lay-in or pull-up installation, Ceiling or suspension via accessory.

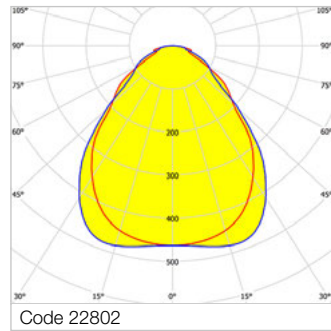
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.
In electrical systems without a regulation system (manual or automatic), a suitable jumper must be made on the DA-DA terminals of the appliance.

Dimensions



3F LED Panel



23W, 27W, 29W and 43W powers, are available with DALI wiring.
31W, 34W, 36W and 39W powers, are available with ON/OFF and DALI wiring.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
22790 <small>UPDATE</small>	3FLP6060UGR-830	23 27 29 31 34 36 39 43	2755 600mA 3207 700mA 3437 750mA 3640 800mA 3830 850mA 4010 900mA 4471 1000mA 4860 1100mA	3000	>80	595x595x9
22791 <small>UPDATE</small>	3FLP6060UGR-840	23 27 29 31 34 36 39 43	2990 600mA 3480 700mA 3730 750mA 3950 800mA 4160 850mA 4350 900mA 4850 1000mA 5272 1100mA	4000	>80	595x595x9
22792 <small>UPDATE</small>	3FLP6060UGR-930	23 27 29 31 34 36 39 43	2316 600mA 2696 700mA 2890 750mA 3060 800mA 3220 850mA 3370 900mA 3758 1000mA 4084 1100mA	3000	>90	595x595x9
22793 <small>UPDATE</small>	3FLP6060UGR-940	23 27 29 31 34 36 39 43	2513 600mA 2925 700mA 3135 750mA 3320 800mA 3500 850mA 3660 900mA 4081 1000mA 4436 1100mA	4000	>90	595x595x9
22794 <small>UPDATE</small>	3FLP30120UGR-940	23 27 29 31 34 36 39 43	2263 600mA 2634 700mA 2823 750mA 2990 800mA 3150 850mA 3300 900mA 3679 1000mA 4000 1100mA	4000	>90	1195x295x9

Recessed luminaires

3F LED Panel Driver



Code	Item
A01485 <small>NEW</small>	ZK700-900EL DRIVER ON-OFF DIP-SWITCH
A01486 <small>NEW</small>	DELT40C-MEL DRIVER DALI DIP-SWITCH



3F LED Panel | Accessories



Frame for ceiling installation of the product (driver included), made of white extruded aluminium. Kit to assemble. Dowels and screws supplied as standard.

Code	Item
A01490 <small>NEW</small>	3FLPLAFO603 - 60x60 ceiling frame kit
A01491 <small>NEW</small>	3FLPLAFO1203 - 30x120 ceiling frame kit

Attention: the code 3FLPLAFO603 is dedicated to 60x60 cm panels, while the code 3FLPLAFO1203 is dedicated to 120x30 cm panels.



600x600 carter in white painted steel, for installing 596x596 mm luminaires in abutment on false ceilings with metal panels.

Code	Item
A01495 <small>NEW</small>	600x600 carter for metal panels

This accessory is suitable for square products only.



Adjustable suspension with 1.5 m long cables.

Code	Item
A01492 <small>NEW</small>	3FKTLP-SPU - Suspension with adjustment - 1,5m



Kit of 4 metal springs for recessed installation of the product.

Code	Item
A01493 <small>NEW</small>	3FKTLPW1-MS - Built-in springs



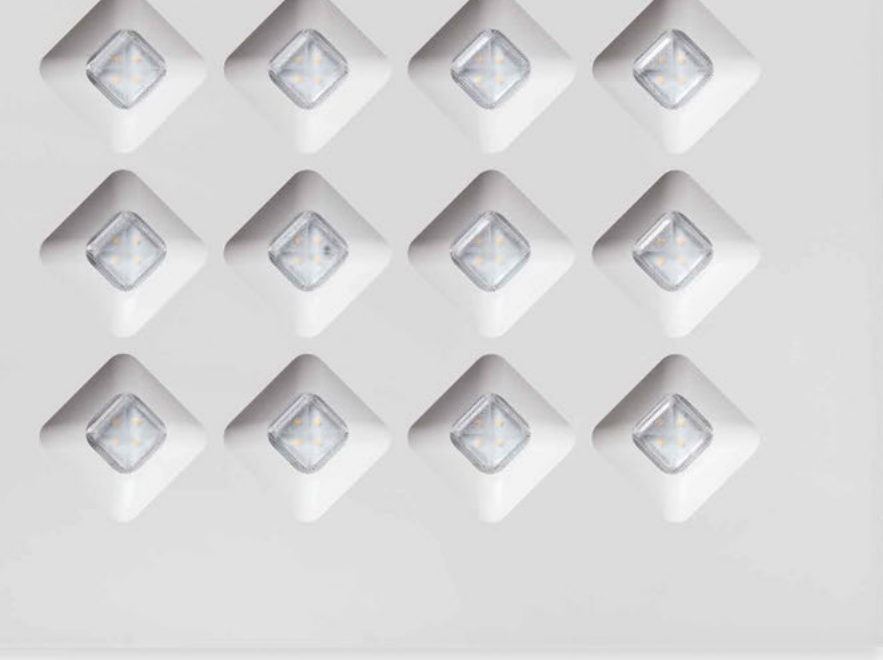
EP maintained emergency wiring, 3hr duration with 24hrs recharge. EN 60598-2-22 standard compliant, high-risk areas excluded. Dimensions 135x45x23 mm.

Code	Item
A01494 <small>NEW</small>	3FKTEMR03 - Kit EP 3h

EP







3F Diagon

> [www.3F-Filippi.com/3F Diagon](http://www.3F-Filippi.com/3F_Diagon)

Light to improve working environments, shops and passage ways: providing this is 3F Diagon, a square shaped recessed fixture whose 16 recessed cells are equipped with state-of-the-art LED sources. The fixture is only 30 millimetres high which allows installation in ceiling cavities up to a minimum height of 110 mm. Every truncated square pyramid shaped cell is equipped with a lens that is designed to maximise the light output of the state-of-the-art LED sources.

This means a system efficiency of up to 160 lm/ W for the version with transparent lenses and up to 135 lm/ W for the Soft UGR version.

Available in three different sizes (596x596 mm, 599x599mm and 621x621mm) and with two different types of lenses (transparent and Soft UGR), the fixture comes with on/off wiring, DALI control, Tunable White and an Emergence light.

3F Diagon is suitable for surface installation on false ceilings with a visible support system, a pull-up installation version on plasterboard false ceilings, metal ceilings and for ceiling installation.

This product is also available in this version 3F Diagon P (page 174).

+ Overview

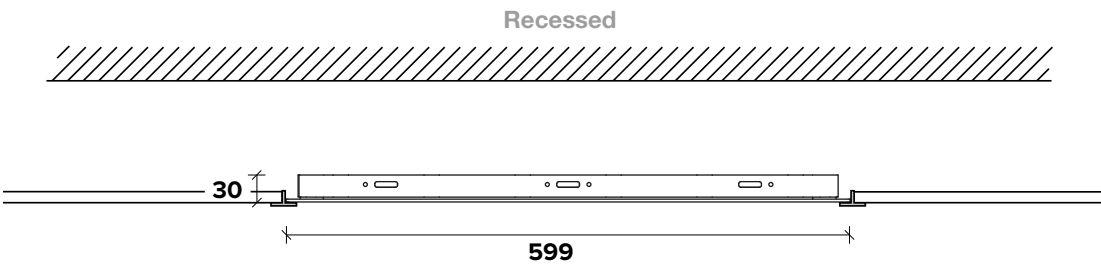
- Luminous efficacy up to 161 lumen/watt.
- Luminous fluxes from 2738 to 5547 lumens.
- Average luminance <1500 cd/m².
- UGR <16.
- Optics with 45° oriented light cells.
- Available with integrated sensors.
- Emergency version with kit integrated into the body.
- Driver integrated in the fixture.
- Essential and functional design.
- Tunable White version.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Mechanical and electrical assembly without tools.

Page	Product	Lay-in installation	Pull-up installation
222	3F Diagon Lay-in installation	•	
226	3F Diagon Tunable White Lay-in installation	•	
230	UPDATE 3F Diagon Pull-up installation		•

Product range

3F Dìagon

Lay-in
installation



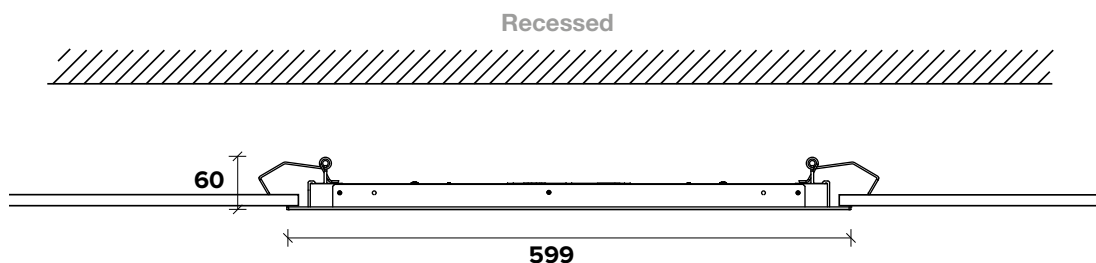
3F Dìagon
Lay-in
installation



Model	Standard		Soft UGR	Soft UGR TW
Average luminance for angles> 65 (cd / m²)	<1500		<3000	<3000
UGR	<19		<19	<19
Protection class			IP20 IP43	
Photometric distribution				
Installation steps	Dt	1,40	1,20	1,20
	DI	1,40	1,20	1,20

3F Dìagon

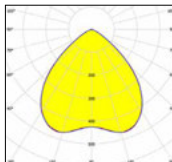
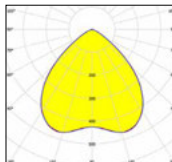
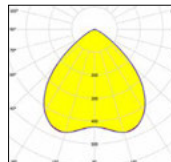
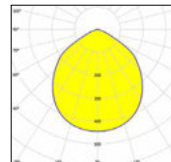
Pull-up
installation



More information on the “Mounting details” page

3F Dìagon
Pull-up installation



Model	FCL	FCH	FP	FP Soft UGR
Average luminance for angles > 65 (cd / m²)	<1500	<1500	<1500	<3000
UGR	<19	<19	<19	<19
Protection class	IP20 IP43			
Photometric distribution				
Installation steps	Dt	1,40	1,40	1,20
	DI	1,40	1,40	1,20

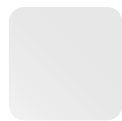
Screens and finishes

3F Dìagon | Transparent lenses

Versions equipped with transparent lenses, suitable for boardrooms with visual display terminals, offices or environments with exacting visual tasks where a diffused soft light is required for optimal visual comfort.
The 15W, 19W and 25W power versions provide a glare degree lower than 1500 cd/m² and UGR <16. The 39W power version provides luminances with values below 3000 cd/m², despite output fluxes from the luminaire exceeding 5500 lumens.



Finishes



White

On request



Black

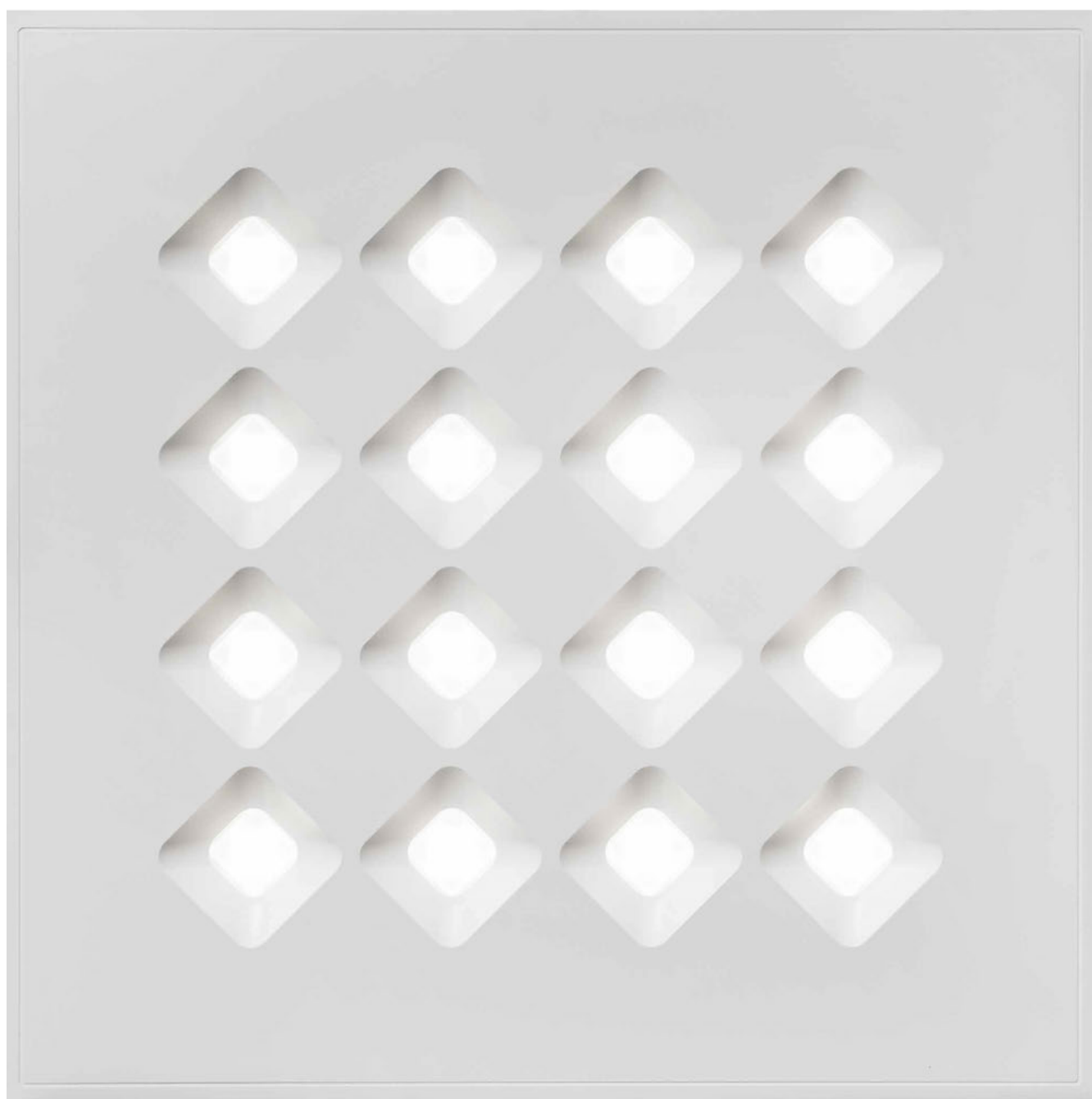


Grey

3F Dìagon | Soft UGR lenses

The versions equipped with Soft UGR lens are particularly suitable for illuminating environments where maximum comfort is required for diffused and soft lighting.

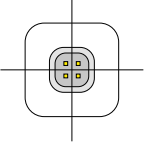
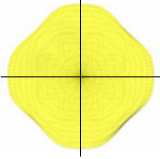
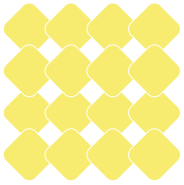
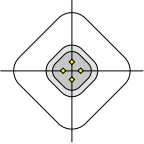
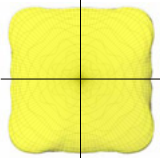
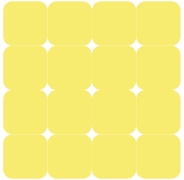
Suitable for representative environments, with video terminals, offices, meeting rooms, transit areas, reception and waiting rooms. They provide luminance control with values lower than 3000 cd/m² for angles > 65°.



Product advantages

45° ANGLE CELLS

The 45° angle cells were designed to minimise shadow areas inside the illuminated space. This idea came from careful analysis of multi-lens fixtures on the market that have the lenses parallel to the edge of the fixture:

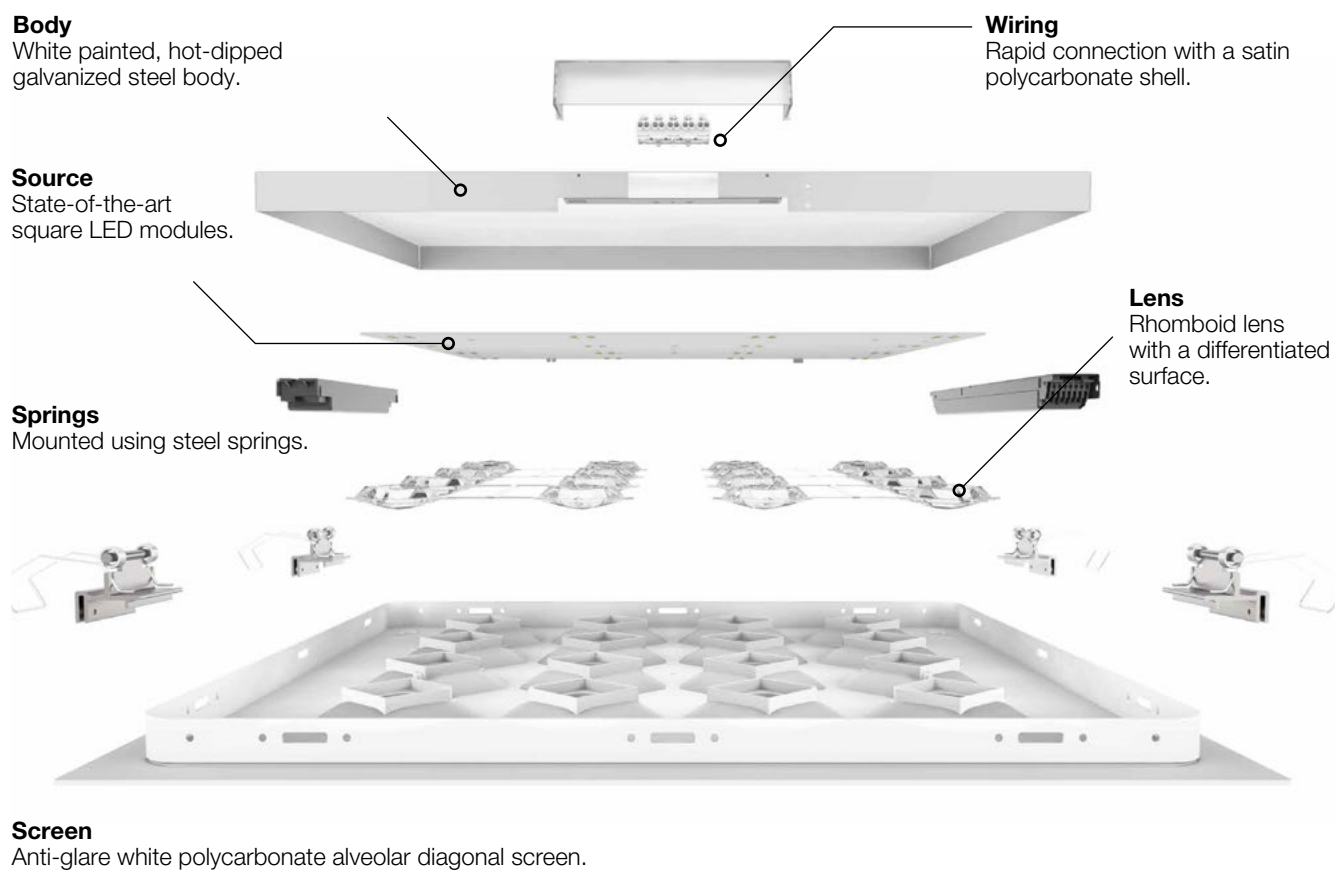
	Cell distribution	Light distribution of a single cell	Uniformity of light on the ground
Market solution			
3F Diagon			

As can be seen with 45 degree angled cells uniformity on the ground is higher because the light distribution of the cell fills most of the available space even by using micro prisms on the lens edges and state-of-the-art LED sources.

LED/Lens Features



- Direct symmetric distribution
- Colour temperatures available: /830 - /840, /930 - /940 or HCL (on request)
- Useful life (L80/B10): 80000 hours (tq+25°C)
- Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471).
- State-of-the-art square LED modules
- Initial colour tolerance (MacAdam): SDCM 3
- Transparent lens performance > 90%
- Soft UGR lens efficiency> 75%



Thanks to the compact height of 30 millimetres, 3F Diagon is the ideal solution for installation in false ceilings with limited space.





3F Dìagon | Lay-in installation

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Colour temperature available /830 - /840, /930 - /940.

Lifetime (L95/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L80/B10): 80000 h. (tq+25°C)

Lifetime (L75/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Honeycombed diagonal screen in white anti-glare polycarbonate.

Height only 30 mm.

Installation in false ceilings with exposed structure.

The 621x621 version is dedicated to false ceilings that have modular dimensions of 625x625.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Quick connection.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: twin-circuit, CLO (more information on page 568)
- Sensor version
- emergency versions

Applications

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

Representative environments, with video terminals, offices, meeting rooms, transit areas, reception and waiting rooms.

Installation

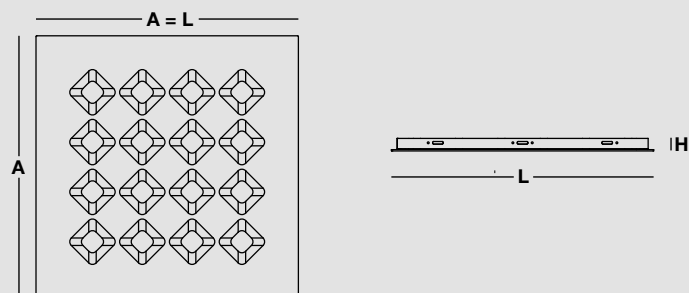
Lay-in installation.

Installation and assembly diagrams on page 228.

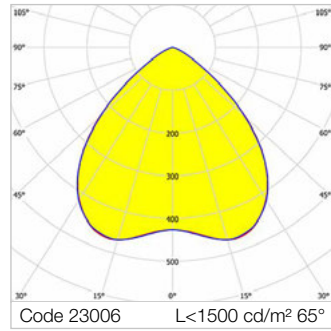
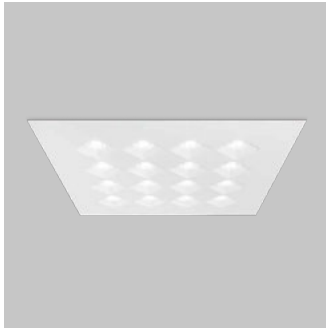
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Diagon



Average luminance <1500 cd/m² for radial angles >65°.
 39W - Average luminance <3000 cd/m² for radial angles >65°.
 Installation Interdistance Transv.D = 1.40 x hu - Long.D = 1.40 x hu.
 Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in transparent methacrylate.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F Diagon 596x596 - ON/OFF electronic wiring 230V-50/60Hz

23025	3F Diagon 15W/840 596x596	17	2738	4000	>80	596x596x30
23024	3F Diagon 19W/840 596x596	21	3291	4000	>80	596x596x30
23098	3F Diagon 25W/930 596x596	28	3399	3000	>90	596x596x30
23122	3F Diagon 25W/940 596x596	28	3597	4000	>90	596x596x30
23002	3F Diagon 25W/830 596x596	28	4167	3000	>80	596x596x30
23026	3F Diagon 25W/840 596x596	28	4386	4000	>80	596x596x30
23027	3F Diagon 39W/840 596x596	40	5547	4000	>80	596x596x30

3F Diagon 596x596 - DALI electronic wiring 230V-50/60Hz

23029	3F Diagon 15W/840 DALI 596x596	17	2738	4000	>80	596x596x30
23028	3F Diagon 19W/840 DALI 596x596	21	3291	4000	>80	596x596x30
23102	3F Diagon 25W/930 DALI 596x596	28	3399	3000	>90	596x596x30
23126	3F Diagon 25W/940 DALI 596x596	28	3597	4000	>90	596x596x30
23006	3F Diagon 25W/830 DALI 596x596	28	4167	3000	>80	596x596x30
23030	3F Diagon 25W/840 DALI 596x596	28	4386	4000	>80	596x596x30
23031	3F Diagon 39W/840 DALI 596x596	40	5547	4000	>80	596x596x30

3F Diagon 596x596 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23033	3F Diagon 15W/840 EP 596x596	18	2738	4000	>80	596x596x30
23032	3F Diagon 19W/840 EP 596x596	22	3291	4000	>80	596x596x30
23106	3F Diagon 25W/930 EP 596x596	29	3399	3000	>90	596x596x30
23130	3F Diagon 25W/940 EP 596x596	29	3597	4000	>90	596x596x30
23010	3F Diagon 25W/830 EP 596x596	29	4167	3000	>80	596x596x30
23034	3F Diagon 25W/840 EP 596x596	29	4386	4000	>80	596x596x30
23035	3F Diagon 39W/840 EP 596x596	41	5547	4000	>80	596x596x30

3F Diagon 621x621 - ON/OFF electronic wiring 230V-50/60Hz

23409	3F Diagon 15W/840 621x621	17	2738	4000	>80	621x621x30
23408	3F Diagon 19W/840 621x621	21	3291	4000	>80	621x621x30
23482	3F Diagon 25W/930 621x621	28	3399	3000	>90	621x621x30
23506	3F Diagon 25W/940 621x621	28	3597	4000	>90	621x621x30
23386	3F Diagon 25W/830 621x621	28	4167	3000	>80	621x621x30
23410	3F Diagon 25W/840 621x621	28	4386	4000	>80	621x621x30
23411	3F Diagon 39W/840 621x621	40	5547	4000	>80	621x621x30

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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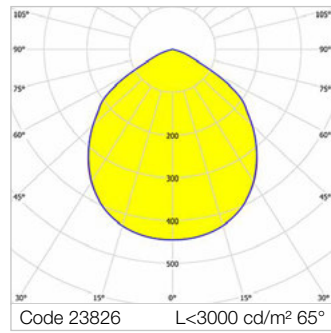
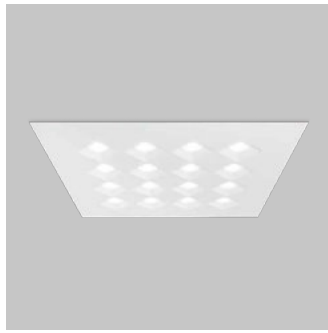
3F Diagon 621x621 - DALI electronic wiring 230V-50/60Hz

23413	3F Diagon 15W/840 DALI 621x621	17	2738	4000	>80	621x621x30
23412	3F Diagon 19W/840 DALI 621x621	21	3291	4000	>80	621x621x30
23486	3F Diagon 25W/930 DALI 621x621	28	3399	3000	>90	621x621x30
23510	3F Diagon 25W/940 DALI 621x621	28	3597	4000	>90	621x621x30
23390	3F Diagon 25W/830 DALI 621x621	28	4167	3000	>80	621x621x30
23414	3F Diagon 25W/840 DALI 621x621	28	4386	4000	>80	621x621x30
23415	3F Diagon 39W/840 DALI 621x621	40	5547	4000	>80	621x621x30

3F Diagon 621x621 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23417	3F Diagon 15W/840 EP 621x621	18	2738	4000	>80	621x621x30
23416	3F Diagon 19W/840 EP 621x621	22	3291	4000	>80	621x621x30
23490	3F Diagon 25W/930 EP 621x621	29	3399	3000	>90	621x621x30
23514	3F Diagon 25W/940 EP 621x621	29	3597	4000	>90	621x621x30
23394	3F Diagon 25W/830 EP 621x621	29	4167	3000	>80	621x621x30
23418	3F Diagon 25W/840 EP 621x621	29	4386	4000	>80	621x621x30
23419	3F Diagon 39W/840 EP 621x621	41	5547	4000	>80	621x621x30

3F Diagon Soft UGR



Average luminance <3000 cd/m² for angles >65°.
Installation Interdistance Transv.D = 1.20 x hu - Long.D = 1.20 x hu.
Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in opal methacrylate.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F Diagon 596x596 - ON/OFF electronic wiring 230V-50/60Hz

23826	3F Diagon 25W/830 SOFT UGR 596x596	28	3607	3000	>80	596x596x30
23812	3F Diagon 25W/840 SOFT UGR 596x596	28	3797	4000	>80	596x596x30
23842	3F Diagon 39W/930 SOFT UGR 596x596	40	3723	3000	>90	596x596x30
23834	3F Diagon 39W/940 SOFT UGR 596x596	40	3939	4000	>90	596x596x30

3F Diagon 596x596 - DALI electronic wiring 230V-50/60Hz

23828	3F Diagon 25W/830 DALI SOFT UGR 596x596	28	3607	3000	>80	596x596x30
23814	3F Diagon 25W/840 DALI SOFT UGR 596x596	28	3797	4000	>80	596x596x30
23844	3F Diagon 39W/930 DALI SOFT UGR 596x596	40	3723	3000	>90	596x596x30
23836	3F Diagon 39W/940 DALI SOFT UGR 596x596	40	3939	4000	>90	596x596x30

3F Diagon 596x596 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23827	3F Diagon 25W/830 EP SOFT UGR 596x596	29	3607	3000	>80	596x596x30
23813	3F Diagon 25W/840 EP SOFT UGR 596x596	29	3797	4000	>80	596x596x30
23843	3F Diagon 39W/930 EP SOFT UGR 596x596	41	3723	3000	>90	596x596x30
23835	3F Diagon 39W/940 EP SOFT UGR 596x596	41	3939	4000	>90	596x596x30

3F Diagon 621x621 - ON/OFF electronic wiring 230V-50/60Hz

23830	3F Diagon 25W/830 SOFT UGR 621x621	28	3607	3000	>80	621x621x30
23819	3F Diagon 25W/840 SOFT UGR 621x621	28	3797	4000	>80	621x621x30
23846	3F Diagon 39W/930 SOFT UGR 621x621	40	3723	3000	>90	621x621x30
23838	3F Diagon 39W/940 SOFT UGR 621x621	40	3939	4000	>90	621x621x30

3F Diagon 621x621 - DALI electronic wiring 230V-50/60Hz

23832	3F Diagon 25W/830 DALI SOFT UGR 621x621	28	3607	3000	>80	621x621x30
23821	3F Diagon 25W/840 DALI SOFT UGR 621x621	28	3797	4000	>80	621x621x30
23848	3F Diagon 39W/930 DALI SOFT UGR 621x621	40	3723	3000	>90	621x621x30
23840	3F Diagon 39W/940 DALI SOFT UGR 621x621	40	3939	4000	>90	621x621x30

3F Diagon 621x621 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23831	3F Diagon 25W/830 EP SOFT UGR 621x621	29	3607	3000	>80	621x621x30
23820	3F Diagon 25W/840 EP SOFT UGR 621x621	29	3797	4000	>80	621x621x30
23847	3F Diagon 39W/930 EP SOFT UGR 621x621	41	3723	3000	>90	621x621x30
23839	3F Diagon 39W/940 EP SOFT UGR 621x621	41	3939	4000	>90	621x621x30



3F Diagon Tunable White | Lay-in installation

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.
The colour temperature can be adjusted between 2700 K and 6500 K.
Lifetime (L95/B10): 30000 h. (tq+25°C)
Lifetime (L90/B10): 50000 h. (tq+25°C)
Lifetime (L80/B10): 80000 h. (tq+25°C)
Lifetime (L75/B10): 100000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.
Honeycombed diagonal screen in white anti-glare polycarbonate.
Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in opal methacrylate.
Height only 30 mm.
Installation in false ceilings with exposed structure.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
Cable with a DALI DT8 driver.
5-pole terminal block (L-N-PE-DA/DA) quick connection for line connection with connection capacity 2x2.5 mm².

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- emergency versions

Applications

Any environments requiring light which aims for the wellness of people.
Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.
Representative environments, with video terminals, offices, meeting rooms, transit areas, reception and waiting rooms.

Installation

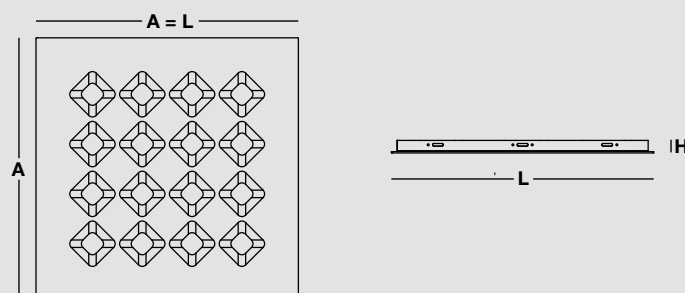
Lay-in installation.
Installation and assembly diagrams on page 228.

Light Management

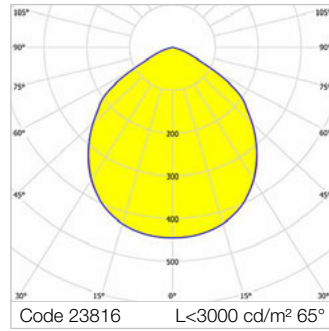
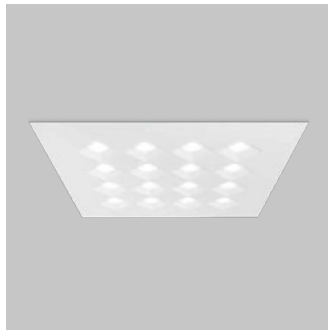
Thanks to the 3F HCL technology, our Tunable White products can be controlled by:

- Wired control systems (more information on page 562))
- 3F Bluetooth control systems (more information on page 564))

Dimensions



3F Diagon Soft UGR Tunable White



Average luminance <3000 cd/m² for angles >65°.
Installation Interdistance Transv.D = 1.20 x hu - Long.D = 1.20 x hu.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F Diagon 596x596 - DALI electronic wiring 230V-50/60Hz

23816	3F Diagon 25W DT8 TW SOFT UGR 596x596	31.5 30 29	3686	2700 4000 6500	>80	596x596x30
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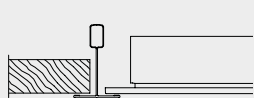
3F Diagon 621x621 - DALI electronic wiring 230V-50/60Hz

23823	3F Diagon 25W DT8 TW SOFT UGR 621x621	31.5 30 29	3686	2700 4000 6500	>80	621x621x30
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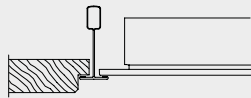
Mounting details

1



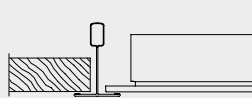
Panels in mineral fibre
with exposed structure
600x600.

2



Panels in mineral fibre
with decoration in relief
600x600.

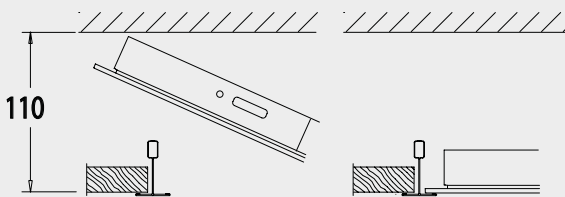
3



Panels in mineral fibre
with exposed structure
625x625.

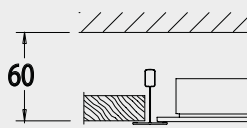
Installation

110



Installation following false ceiling mounting, supported by
the exposed structure, minimum void of 110 mm from the
structure's lower edge.

60



Installation simultaneously with
the false ceiling, minimum void
of 60 mm from the structure's
lower edge.



3F Dìagon | Pull-up installation

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L95/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L80/B10): 80000 h. (tq+25°C)

Lifetime (L75/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Honeycombed diagonal screen in white anti-glare polycarbonate.

Height only 30 mm.

The FP (For Plasterboard) version is dedicated to plasterboard false ceilings.

The FCL (For Complanar Low) version is dedicated to plasterboard with metal panels and low structures.

The FCH (For Complanar High) version is dedicated to plasterboard with metal panels and high structures.

For all versions, spring fixing in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Quick connection.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: twin-circuit, CLO (more information on page 568)
- luminaires for pull-up installation with brackets
- 3F Tunable White versione
- 3F Diagon Soft UGR, for FCL and FCH versions
- emergency versions

Applications

FCL, FCH, FP versions

Environments: staterooms, with VDTs, offices.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

Version FP Soft UGR

Environments where soft diffuse light is required for optimal visual comfort and total shielding of the source.

Installation

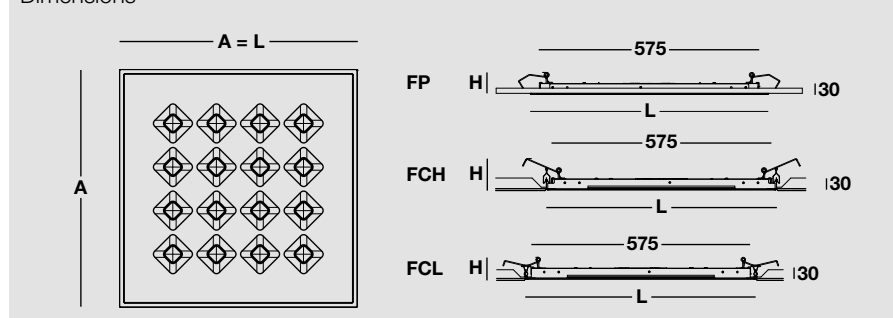
Installation and assembly diagrams on page 233.

Do not hesitate to contact our Sales Network or our Technical Offices to check the compatibility of the FCH and FCL models with the various types of metallic false ceilings.

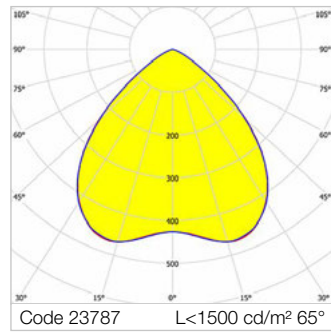
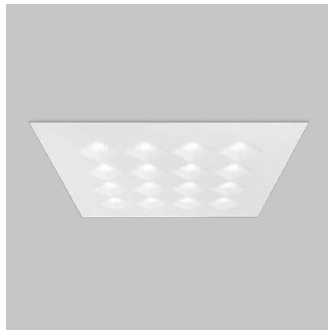
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Diagon FCL



Average luminance <1500 cd/m² for radial angles >65°.
 Installation Interdistance Transv.D = 1.40 x hu - Long.D = 1.40 x hu.
 Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in transparent methacrylate.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F Diagon 599x599 - ON/OFF electronic wiring 230V-50/60Hz

23785	3F Diagon FCL 19W/840 599x599	21	3291	4000	>80	599x599x60
23786	3F Diagon FCL 25W/840 599x599	28	4386	4000	>80	599x599x60

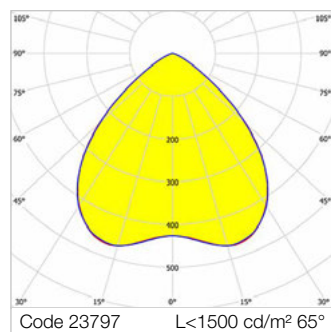
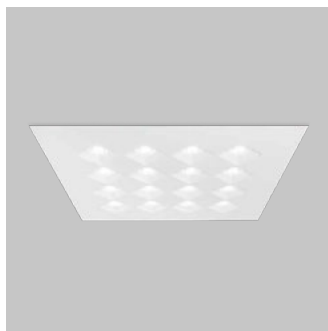
3F Diagon 599x599 - DALI electronic wiring 230V-50/60Hz

23787	3F Diagon FCL 19W/840 DALI 599x599	21	3291	4000	>80	599x599x60
23788	3F Diagon FCL 25W/840 DALI 599x599	28	4386	4000	>80	599x599x60

3F Diagon 599x599 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23789	3F Diagon FCL 19W/840 EP 599x599	22	3291	4000	>80	599x599x60
23790	3F Diagon FCL 25W/840 EP 599x599	29	4386	4000	>80	599x599x60

3F Diagon FCH



Average luminance <1500 cd/m² for radial angles >65°.
 Installation Interdistance Transv.D = 1.40 x hu - Long.D = 1.40 x hu.
 Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in transparent methacrylate.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F Diagon 599x599 - ON/OFF electronic wiring 230V-50/60Hz

23795	3F Diagon FCH 19W/840 599x599	21	3291	4000	>80	599x599x60
23796	3F Diagon FCH 25W/840 599x599	28	4386	4000	>80	599x599x60

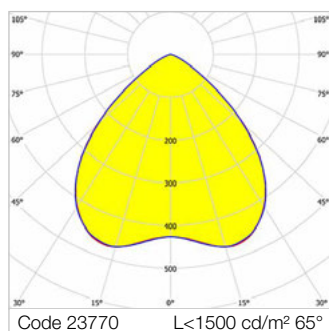
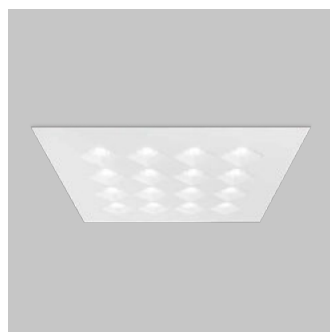
3F Diagon 599x599 - DALI electronic wiring 230V-50/60Hz

23797	3F Diagon FCH 19W/840 DALI 599x599	21	3291	4000	>80	599x599x60
23798	3F Diagon FCH 25W/840 DALI 599x599	28	4386	4000	>80	599x599x60

3F Diagon 599x599 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23799	3F Diagon FCH 19W/840 EP 599x599	22	3291	4000	>80	599x599x60
23800	3F Diagon FCH 25W/840 EP 599x599	29	4386	4000	>80	599x599x60

3F Diagon FP



Average luminance <1500 cd/m² for radial angles >65°.
Installation Interdistance Transv.D = 1.40 x hu - Long.D = 1.40 x hu.
Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in transparent methacrylate.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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3F Diagon 599x599 - ON/OFF electronic wiring 230V-50/60Hz

24048 ^{NEW}	3F Diagon FP 19W/840 599x599	21	3291	4000	>80	599x599x60
24049 ^{NEW}	3F Diagon FP 25W/840 599x599	28	4386	4000	>80	599x599x60

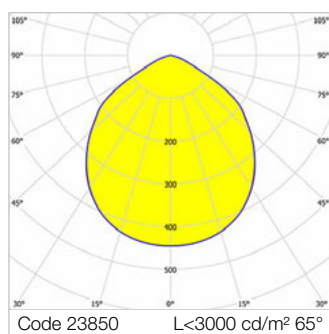
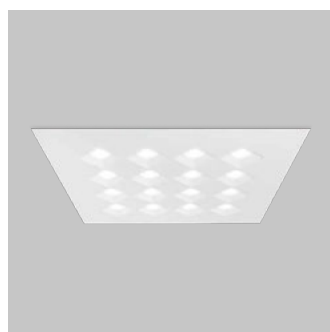
3F Diagon 599x599 - DALI electronic wiring 230V-50/60Hz

24050 ^{NEW}	3F Diagon FP 19W/840 DALI 599x599	21	3291	4000	>80	599x599x60
24051 ^{NEW}	3F Diagon FP 25W/840 DALI 599x599	28	4386	4000	>80	599x599x60

3F Diagon 599x599 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

24052 ^{NEW}	3F Diagon FP 19W/840 EP 599x599	22	3291	4000	>80	599x599x60
24053 ^{NEW}	3F Diagon FP 25W/840 EP 599x599	29	4386	4000	>80	599x599x60

3F Diagon FP Soft UGR



Average luminance <3000 cd/m² for angles >65°.
Installation Interdistance Transv.D = 1.20 x hu - Long.D = 1.20 x hu.
Rhomboidal lenses with differentiated surfaces, etched and prismatic to optimise the orientation of the luminous flux, in opal methacrylate.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

3F Diagon 599x599 - ON/OFF electronic wiring 230V-50/60Hz

23853 ^{NEW}	3F Diagon FP 25W/840 SOFT UGR 599x599	28	3797	4000	>80	599x599x60
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3F Diagon 599x599 - DALI electronic wiring 230V-50/60Hz

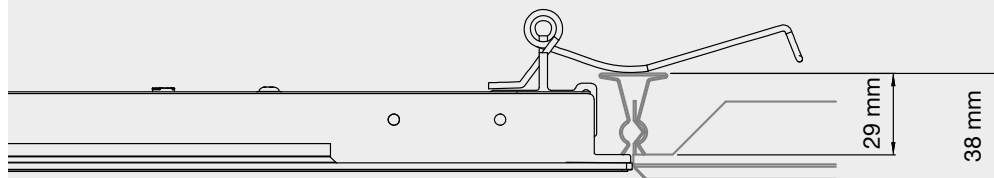
23855 ^{NEW}	3F Diagon FP 25W/840 DALI SOFT UGR 599x599	28	3797	4000	>80	599x599x60
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3F Diagon 599x599 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23854 ^{NEW}	3F Diagon FP 25W/840 EP SOFT UGR 599x599	29	3797	4000	>80	599x599x60
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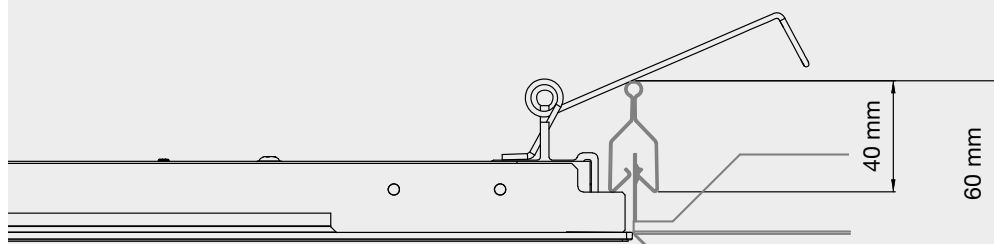
Mounting details

FCL - Version for metal panels with low structures

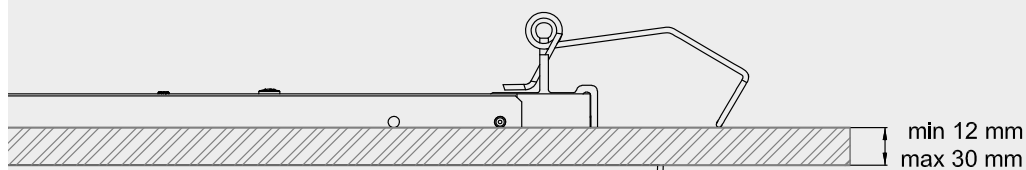


Do not hesitate to contact our Sales Network or our Technical Offices to check the compatibility of the FCH and FCL models with the various types of metallic false ceilings.

FCH - Version for metal panels with high structures



FP - Version for Plasterboard



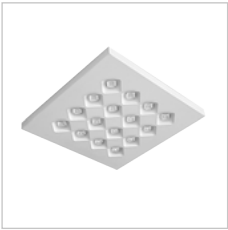
In the event that the type of false ceiling reported is not that envisaged by the installation, it is necessary to consult our Sales Network.

3F Diagon | Accessories



Anti-fall safety cable for fixing the housing to the building structure. Length 2.5 m.

Code	Item
A0477	Safety wire



White painted polyester hot-dip galvanised steel frame for 3F Diagon Plafone. Height only 40 mm.

Accessory compatible with 3F Diagon | Lay-in installation, 3F Diagon Tunable White | Lay-in installation.

Code	Item
A0686	596x596 Diagon frame ceiling instal.



Suction cup to extract "3F Diagon" installed in abutment. To be used in false ceilings with metal panels, where the space between the luminaire and the surrounding panels does not allow the use of other tools.

Accessory compatible with 3F Diagon | Pull-up installation.

Code	Item
A0702	Suction cup for Diagon maintenance





L 320 LED

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Attention: before ordering these products, we ask you to check the installation instructions if the type of installation requires accessory brackets.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Source characteristics

- Linear LED modules.

10W version

- Colour initial tolerance (MacAdam): SDCM 2.

18W version

- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- Sensor version
- diffuser in OP opal PMMA or SP polycarbonate, self-extinguishing V2
- luminaires for pull-up installation with brackets
- emergency versions

Applications

Environments: staterooms, with VDTs, offices.

Environments where demanding visual tasks are performed and soft diffuse light is required for optimal visual comfort and total shielding of the light source.

SP version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

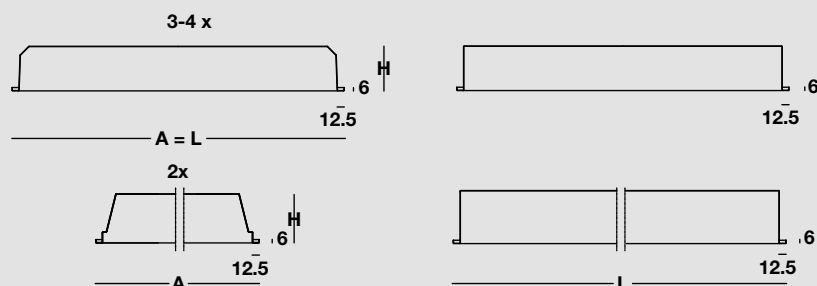
Installation

Lay-in or pull-up installation with brackets.

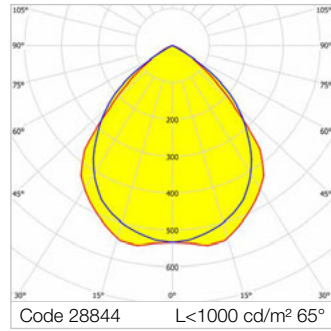
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



L 320 LED 2MG



Average luminance <1000 cd/m² for radial angles >65°.
2MG parabolic louvre, high efficiency, in specular aluminium with superficial titanium-magnesium treatment, non-iridescent, with transverse blades closed at the top.
Prismatic PMMA diffuser for total shielding of the louvre compartment.
Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

28844	L 323x10W LED 2MG 596x596	34	4287	4000	>80	596x596x80
22722	L 323x10W/940 LED 2MG 596x596	34	3515	4000	>90	596x596x80
28846	L 322x18W LED 2MG 296x1196	40	5179	4000	>80	1196x296x95

DALI electronic wiring 230V-50/60Hz

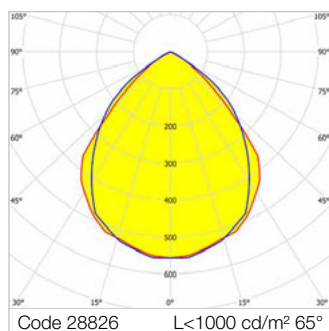
28856	L 323x10W LED DALI 2MG 596x596	34	4287	4000	>80	596x596x80
22724	L 323x10W/940 LED DALI 2MG 596x596	34	3515	4000	>90	596x596x80
28858	L 322x18W LED DALI 2MG 296x1196	40	5179	4000	>80	1196x296x95

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

28847	L 323x10W LED EP 2MG 596x596	35	4287	4000	>80	596x596x80
22723	L 323x10W/940 LED EP 2MG 596x596	35	3515	4000	>90	596x596x80
28849	L 322x18W LED EP 2MG 296x1196	41	5179	4000	>80	1196x296x95



L 320 LED 2S



Average luminance <1000 cd/m² for radial angles >65°.
 2S parabolic louvre in semi-specular aluminium, non-reflecting, with transverse blades closed at the top.
 Prismatic PMMA diffuser for total shielding of the louvre compartment.
 Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

28826	L 323x10W LED 2S 596x596	34	3997	4000	>80	596x596x80
22716	L 323x10W/940 LED 2S 596x596	34	3277	4000	>90	596x596x80
28828	L 322x18W LED 2S 296x1196	40	4730	4000	>80	1196x296x95

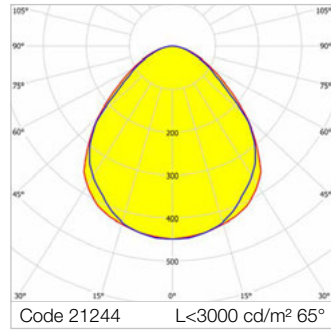
DALI electronic wiring 230V-50/60Hz

28838	L 323x10W LED DALI 2S 596x596	34	3997	4000	>80	596x596x80
22718	L 323x10W/940 LED DALI 2S 596x596	34	3277	4000	>90	596x596x80
28840	L 322x18W LED DALI 2S 296x1196	40	4730	4000	>80	1196x296x95

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

28829	L 323x10W LED EP 2S 596x596	35	3997	4000	>80	596x596x80
22717	L 323x10W/940 LED EP 2S 596x596	35	3277	4000	>90	596x596x80
28831	L 322x18W LED EP 2S 296x1196	41	4730	4000	>80	1196x296x95

L 320 LED SP



Average luminance <3000 cd/m² for radial angles >65°.
SP transparent PMMA diffuser, prismatic exterior, anti-glare, locked to the prepainted white aluminium perimeter frame with sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

21244	L 323x10W LED SP 596x596	34	4163	4000	>80	596x596x80
22701	L 323x10W/940 LED SP 596x596	34	3413	4000	>90	596x596x80
21287	L 322x18W LED SP 296x1196	40	5272	4000	>80	1196x296x95
21245	L 324x10W LED SP 596x596	45	5516	4000	>80	596x596x80
22702	L 324x10W/940 LED SP 596x596	45	4523	4000	>90	596x596x80

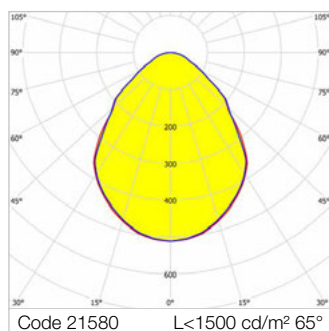
DALI electronic wiring 230V-50/60Hz

21256	L 323x10W LED DALI SP 596x596	34	4163	4000	>80	596x596x80
22703	L 323x10W/940 LED DALI SP 596x596	34	3413	4000	>90	596x596x80
21290	L 322x18W LED DALI SP 296x1196	40	5272	4000	>80	1196x296x95
21257	L 324x10W LED DALI SP 596x596	45	5516	4000	>80	596x596x80
22704	L 324x10W/940 LED DALI SP 596x596	45	4523	4000	>90	596x596x80

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

21262	L 323x10W LED EP SP 596x596	35	4163	4000	>80	596x596x80
22705	L 323x10W/940 LED EP SP 596x596	35	3413	4000	>90	596x596x80
21293	L 322x18W LED EP SP 296x1196	41	5272	4000	>80	1196x296x95
21263	L 324x10W LED EP SP 596x596	46	5516	4000	>80	596x596x80
22706	L 324x10W/940 LED EP SP 596x596	46	4523	4000	>90	596x596x80

L 320 LED LGS



2x - 4x - Average luminance <3000 cd/m² for radial angles >65°.
 3x - Average luminance <1500 cd/m² for radial angles >65°.
 LGS micro-prismatic flat diffuser in transparent methacrylate, multilenticular exterior, anti-glare, locked to the white painted aluminium perimetral frame, sealing gasket, hinged opening. Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

21580	L 323x10W LED LGS 596x596	34	3178	4000	>80	596x596x80
21600	L 322x18W LED LGS 296x1196	40	4102	4000	>80	1196x296x95
21581	L 324x10W LED LGS 596x596	45	4292	4000	>80	596x596x80
22709	L 324x10W/940 LED LGS 596x596	45	3520	4000	>90	596x596x80

DALI electronic wiring 230V-50/60Hz

21586	L 323x10W LED DALI LGS 596x596	34	3178	4000	>80	596x596x80
21603	L 322x18W LED DALI LGS 296x1196	40	4102	4000	>80	1196x296x95
21587	L 324x10W LED DALI LGS 596x596	45	4292	4000	>80	596x596x80
22710	L 324x10W/940 LED DALI LGS 596x596	45	3520	4000	>90	596x596x80

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

21589	L 323x10W LED EP LGS 596x596	35	3178	4000	>80	596x596x80
21606	L 322x18W LED EP LGS 296x1196	41	4102	4000	>80	1196x296x95
21590	L 324x10W LED EP LGS 596x596	46	4292	4000	>80	596x596x80
22711	L 324x10W/940 LED EP LGS 596x596	46	3520	4000	>90	596x596x80

L 320 | Accessories



Anti-fall safety cable for fixing the housing to the building structure. Length 2.5 m.

Code	Item
A0477	Safety wire



Plug for quick connection of the luminaire, 3-pole irreversible to be snapped (Snap-in), with integrated locking device, H07 V2-U HT90° 1.5 mm² cables, for the connection to the terminal block of the luminaire. Connection for single-circuit wiring: order white plug. Connection for twin-circuit, dimmable, emergency wiring: order white plug plus black plug.

Code	Item
A0720	Wieland (white plug)
A0721	Wago (white plug)
A0722	Ensto white plug + adapter
A0725	Wieland (black plug)
A0726	Wago (black plug)
A0727	Ensto black plug + adapter

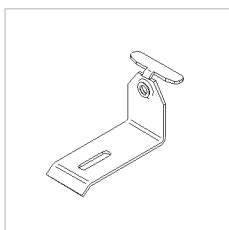
This accessory is suitable for square products only.



Adapter frame in white-painted steel, for installing luminaires with dimensions of 596x596 mm for pull-up installations on plasterboard false ceilings.

Code	Item
A0798	621x621 frame + brackets

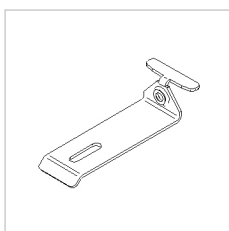
This accessory is suitable for square products only.



Galvanised steel fixing bracket for pull-up installation on plasterboard. Pack for 1 luminaire.

Code	Item
A0173	15HI Brackets - L320-L350-L450 The pack contains 4 pieces.

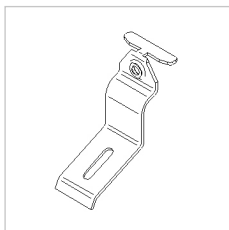
Excursion min. 0 mm, max. 25 mm.
This accessory is suitable for square products only.



Fixing bracket in galvanised steel. Pack for 1 luminaire.

Code	Item
A0177	15ZH Brackets - L320-L350-L560 The pack contains 4 pieces.

For square luminaires with louvre (excursion min. 0 mm, max. 60 mm), with diffuser and glass (excursion min. 15 mm, max. 60 mm).
For rectangular luminaires (excursion min. 45 mm, max. 72 mm), with diffuser and glass (excursion min. 27 mm, max. 65 mm).
Suitable for pull-up installation on plasterboard.

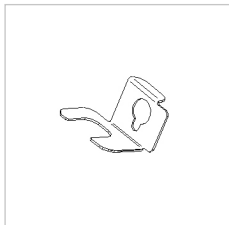


Fixing bracket in galvanised steel for ceiling pull-up installation. Pack for 1 luminaire.

Code	Item
A0170	15BS Brackets - L320-L400-L560 The pack contains 4 pieces.

For rectangular luminaires with louvre (excursion min. 18 mm, max. 45 mm), with diffuser (excursion min. 0 mm, max. 40 mm).

Not suitable for diffused light recessed luminaires.



Fixing bracket in galvanised steel for installation coplanar with metal panels with concealed structure. Pack for 1 luminaire.

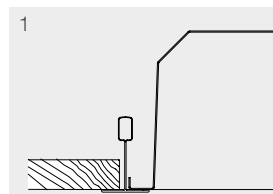
Code	Item
A0179	15LB Brackets - L320-350 met.pan. The pack contains 4 pieces.

For square luminaires with louvre, mounting in two positions (23/36 mm, 53/66 mm) with diffuser (36 mm and 66 mm).

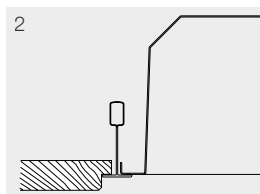
Not suitable for diffused light recessed luminaires.

Mounting details

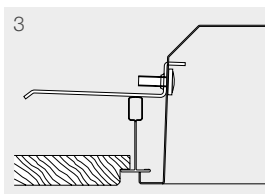
Square version H80 - 596x596



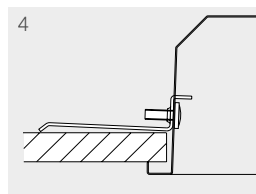
1
Panels in mineral fibre with exposed structure 600x600.



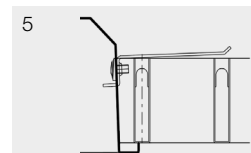
2
Panels in mineral fibre with decoration in relief 600x600.



3
Panels in mineral fibre with decoration 600x600, small voids.
Luminaires on request, installed flush with bracket accessory 15 ZH.

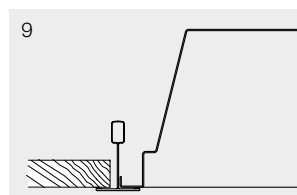


4
Plasterboard.
Luminaires on request, installed flush with bracket accessory 15 ZH.

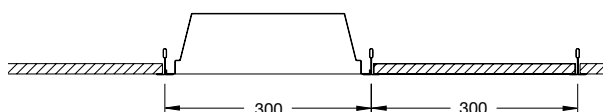


5
Pull-up installation on grid false ceilings.
Luminaires on request, installed flush with bracket accessory 15 ZH.

Rectangular version H95 - 296x1196



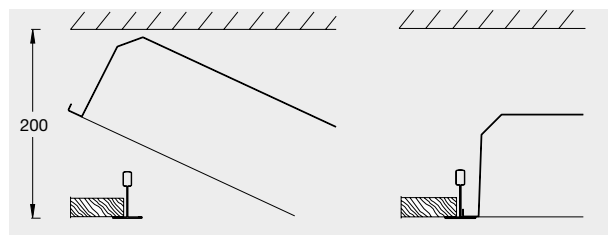
9
Mineral fibre panels 600x600, 600x1200 with exposed structure.



Note: rectangular luminaires have a width of 296mm. When installed on 600mm wide panels with exposed structure (600x600 or 600x1200), a further T profile must be used.

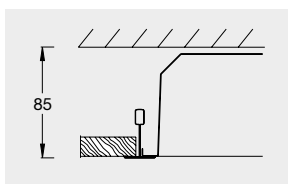
Installation (square versions only)

H80 version

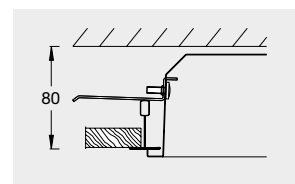


Installation following false ceiling mounting, supported by the exposed structure, minimum void of 200 mm from the structure's lower edge.

H80 version



Installation simultaneously with the false ceiling, minimum void of 85 mm from the structure's lower edge.



Minimum void of 80 mm from the structure's lower edge.
Luminaires on request, installed flush with bracket accessory 15 ZH.





L 340

> [www.3F-Filippi.com/L 340](http://www.3F-Filippi.com/L_340)

L 340 is the new recessed fixture dedicated to the world of offices, banks, architectural environments and commercial and representative spaces.

Thanks to the low glare values obtained using glass or methacrylate prismatic and micro prismatic diffusers, it is particularly suitable for environments with video terminals, meeting rooms and offices where diffused and soft lighting is required for excellent visual comfort and to completely shield the source.

Furthermore, the L 340 is suitable from a hygiene point of view for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

The fixture can be installed on lintels or abutments (thanks to the frame accessory).

From a photometric point of view the excellent visual comfort is supported by LGS methacrylate (average luminance <1500 cd/m² >65° radial), SP (average luminance <3000 cd/m² >65° radials) and VS glass screens (Average luminance <3000 cd/m² >65° radials).

The L 340 is available in a version with on/off electronic cabling or DALI, while there are also versions with Permanent Emergency cabling.

Versions equipped with DALI drivers can be controlled manually with 3F Easy Dim technology or automatically/manually with 3F Smart Dimming technology.

+ Overview

- Luminous efficacy up to 131 lumen/watt.
- Luminous fluxes from 3338 to 6537 lumens.
- Average luminance <1500 cd/m² (LGS version).
- UGR <19.
- Uniformly illuminated screen.
- Essential and functional design.
- IP65 version, visible part for more severe applications.
- Tunable White version.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page		Product	Lay-installation	Pull-up installation
246	NEW	L 340 Diffused Light	•	with accessory
250	NEW	L 340 Lite	•	with accessory
252	NEW	L 340 Tunable White	•	with accessory

L 340 Diffused Light

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Perimetral frame in white polycarbonate.

The 621x621 version is dedicated to false ceilings that have modular dimensions of 625x625.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Wiring on a separate unit.

Class II.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- diffuser in SP prismatic PMMA or SP polycarbonate, Selfextinguishing V2
- emergency versions

Applications

In environments requiring protection and simplified cleaning.

Hospitals, pharmaceutical, chemical, aseptic laboratories, sterilised rooms.

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where demanding visual tasks are performed and soft diffuse light is required for optimal visual comfort and total shielding of the light source.

Luminaires suitable, from a hygienic point

of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

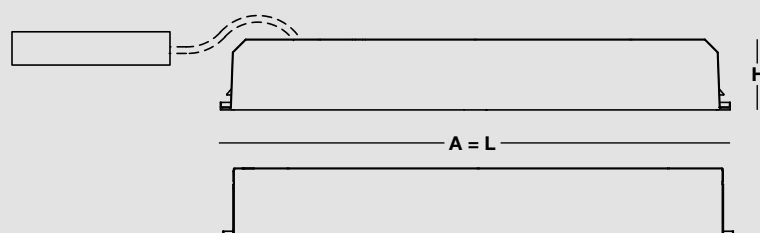
Installation

Lay-on or pull-up installation using the frame accessory.

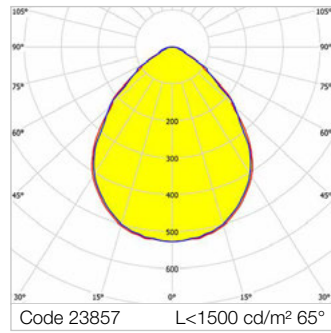
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



L 340 Diffused Light LGS



Average luminance <1500 cd/m² for radial angles >65°.
LGS micro-prismatic flat diffuser in transparent methacrylate,
multi-lenticular exterior, anti-glare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

23857 ^{NEW}	L 340 25W/840 LGS 596x596	29	3785	4000	>80	596x596x80
23858 ^{NEW}	L 340 38W/840 LGS 596x596	45	5677	4000	>80	596x596x80
23859 ^{NEW}	L 340 45W/840 LGS 596x596	52	6537	4000	>80	596x596x80
23860 ^{NEW}	L 340 25W/840 LGS 621x621	29	3785	4000	>80	621x621x80
23861 ^{NEW}	L 340 38W/840 LGS 621x621	45	5677	4000	>80	621x621x80
23862 ^{NEW}	L 340 45W/840 LGS 621x621	52	6537	4000	>80	621x621x80
23881 ^{NEW}	L 340 29W/940 LGS 596x596	35	3611	4000	>90	596x596x80
23882 ^{NEW}	L 340 45W/940 LGS 596x596	52	5361	4000	>90	596x596x80
23883 ^{NEW}	L 340 29W/940 LGS 621x621	35	3611	4000	>90	621x621x80
23884 ^{NEW}	L 340 45W/940 LGS 621x621	52	5361	4000	>90	621x621x80

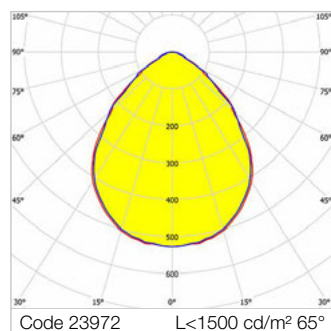
DALI electronic wiring 230V-50/60Hz

23863 ^{NEW}	L 340 25W/840 DALI LGS 596x596	29	3785	4000	>80	596x596x80
23864 ^{NEW}	L 340 38W/840 DALI LGS 596x596	43	5677	4000	>80	596x596x80
23865 ^{NEW}	L 340 45W/840 DALI LGS 596x596	50	6537	4000	>80	596x596x80
23866 ^{NEW}	L 340 25W/840 DALI LGS 621x621	29	3785	4000	>80	621x621x80
23867 ^{NEW}	L 340 38W/840 DALI LGS 621x621	43	5677	4000	>80	621x621x80
23868 ^{NEW}	L 340 45W/840 DALI LGS 621x621	50	6537	4000	>80	621x621x80
23885 ^{NEW}	L 340 29W/940 DALI LGS 596x596	35	3611	4000	>90	596x596x80
23886 ^{NEW}	L 340 45W/940 DALI LGS 596x596	52	5361	4000	>90	596x596x80
23887 ^{NEW}	L 340 29W/940 DALI LGS 621x621	35	3611	4000	>90	621x621x80
23888 ^{NEW}	L 340 45W/940 DALI LGS 621x621	52	5361	4000	>90	621x621x80

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23869 ^{NEW}	L 340 25W/840 EP LGS 596x596	30	3785	4000	>80	596x596x80
23870 ^{NEW}	L 340 38W/840 EP LGS 596x596	46	5677	4000	>80	596x596x80
23871 ^{NEW}	L 340 45W/840 EP LGS 596x596	53	6537	4000	>80	596x596x80
23872 ^{NEW}	L 340 25W/840 EP LGS 621x621	30	3785	4000	>80	621x621x80
23873 ^{NEW}	L 340 38W/840 EP LGS 621x621	46	5677	4000	>80	621x621x80
23874 ^{NEW}	L 340 45W/840 EP LGS 621x621	53	6537	4000	>80	621x621x80
23889 ^{NEW}	L 340 29W/940 EP LGS 596x596	36	3611	4000	>90	596x596x80
23890 ^{NEW}	L 340 45W/940 EP LGS 596x596	53	5361	4000	>90	596x596x80
23891 ^{NEW}	L 340 29W/940 EP LGS 621x621	36	3611	4000	>90	621x621x80
23892 ^{NEW}	L 340 45W/940 EP LGS 621x621	53	5361	4000	>90	621x621x80

L 340 Diffused Light LGS IP65V



Average luminance <1500 cd/m² for radial angles >65°.
LGS micro-prismatic flat diffuser in transparent methacrylate,
multi-lenticular exterior, anti-glare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

23972 ^{NEW}	L 340 25W/840 LGS IP65V 596x596	29	3785	4000	>80	596x596x80
23973 ^{NEW}	L 340 38W/840 LGS IP65V 596x596	45	5677	4000	>80	596x596x80
23974 ^{NEW}	L 340 45W/840 LGS IP65V 596x596	52	6537	4000	>80	596x596x80
23975 ^{NEW}	L 340 25W/840 LGS IP65V 621x621	29	3785	4000	>80	621x621x80
23976 ^{NEW}	L 340 38W/840 LGS IP65V 621x621	45	5677	4000	>80	621x621x80
23977 ^{NEW}	L 340 45W/840 LGS IP65V 621x621	52	6537	4000	>80	621x621x80
23996 ^{NEW}	L 340 29W/940 LGS IP65V 596x596	35	3611	4000	>90	596x596x80
23997 ^{NEW}	L 340 45W/940 LGS IP65V 596x596	52	5361	4000	>90	596x596x80
23998 ^{NEW}	L 340 29W/940 LGS IP65V 621x621	35	3611	4000	>90	621x621x80
23999 ^{NEW}	L 340 45W/940 LGS IP65V 621x621	52	5361	4000	>90	621x621x80

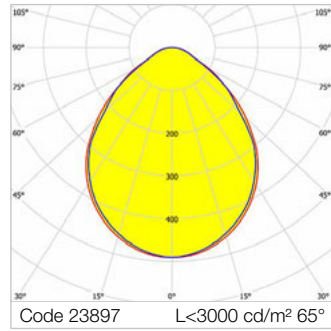
DALI electronic wiring 230V-50/60Hz

23978 ^{NEW}	L 340 25W/840 DALI LGS IP65V 596x596	29	3785	4000	>80	596x596x80
23979 ^{NEW}	L 340 38W/840 DALI LGS IP65V 596x596	43	5677	4000	>80	596x596x80
23980 ^{NEW}	L 340 45W/840 DALI LGS IP65V 596x596	50	6537	4000	>80	596x596x80
23981 ^{NEW}	L 340 25W/840 DALI LGS IP65V 621x621	29	3785	4000	>80	621x621x80
23982 ^{NEW}	L 340 38W/840 DALI LGS IP65V 621x621	43	5677	4000	>80	621x621x80
23983 ^{NEW}	L 340 45W/840 DALI LGS IP65V 621x621	50	6537	4000	>80	621x621x80
24000 ^{NEW}	L 340 29W/940 DALI LGS IP65V 596x596	35	3611	4000	>90	596x596x80
24001 ^{NEW}	L 340 45W/940 DALI LGS IP65V 596x596	52	5361	4000	>90	596x596x80
24002 ^{NEW}	L 340 29W/940 DALI LGS IP65V 621x621	35	3611	4000	>90	621x621x80
24003 ^{NEW}	L 340 45W/940 DALI LGS IP65V 621x621	52	5361	4000	>90	621x621x80

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23984 ^{NEW}	L 340 25W/840 EP LGS IP65V 596x596	30	3785	4000	>80	596x596x80
23985 ^{NEW}	L 340 38W/840 EP LGS IP65V 596x596	46	5677	4000	>80	596x596x80
23986 ^{NEW}	L 340 45W/840 EP LGS IP65V 596x596	53	6537	4000	>80	596x596x80
23987 ^{NEW}	L 340 25W/840 EP LGS IP65V 621x621	30	3785	4000	>80	621x621x80
23988 ^{NEW}	L 340 38W/840 EP LGS IP65V 621x621	46	5677	4000	>80	621x621x80
23989 ^{NEW}	L 340 45W/840 EP LGS IP65V 621x621	53	6537	4000	>80	621x621x80
24004 ^{NEW}	L 340 29W/940 EP LGS IP65V 596x596	36	3611	4000	>90	596x596x80
24005 ^{NEW}	L 340 45W/940 EP LGS IP65V 596x596	53	5361	4000	>90	596x596x80
24006 ^{NEW}	L 340 29W/940 EP LGS IP65V 621x621	36	3611	4000	>90	621x621x80
24007 ^{NEW}	L 340 45W/940 EP LGS IP65V 621x621	53	5361	4000	>90	621x621x80

L 340 Diffused Light VS IP65V



Average luminance <3000 cd/m² for radial angles >65°. VS moulded glass, anti-glare, tempered, non-combustible, thickness 4 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

23897 ^{NEW}	L 340 25W/840 VS IP65V 596x596	29	3499	4000	>80	596x596x80
23898 ^{NEW}	L 340 38W/840 VS IP65V 596x596	45	5248	4000	>80	596x596x80
23899 ^{NEW}	L 340 45W/840 VS IP65V 596x596	52	6044	4000	>80	596x596x80
23900 ^{NEW}	L 340 25W/840 VS IP65V 621x621	29	3499	4000	>80	621x621x80
23901 ^{NEW}	L 340 38W/840 VS IP65V 621x621	45	5248	4000	>80	621x621x80
23902 ^{NEW}	L 340 45W/840 VS IP65V 621x621	52	6044	4000	>80	621x621x80
23921 ^{NEW}	L 340 29W/940 VS IP65V 596x596	35	3338	4000	>90	596x596x80
23922 ^{NEW}	L 340 45W/940 VS IP65V 596x596	52	4956	4000	>90	596x596x80
23923 ^{NEW}	L 340 29W/940 VS IP65V 621x621	35	3338	4000	>90	621x621x80
23924 ^{NEW}	L 340 45W/940 VS IP65V 621x621	52	4956	4000	>90	621x621x80

DALI electronic wiring 230V-50/60Hz

23903 ^{NEW}	L 340 25W/840 DALI VS IP65V 596x596	29	3499	4000	>80	596x596x80
23904 ^{NEW}	L 340 38W/840 DALI VS IP65V 596x596	43	5248	4000	>80	596x596x80
23905 ^{NEW}	L 340 45W/840 DALI VS IP65V 596x596	50	6044	4000	>80	596x596x80
23906 ^{NEW}	L 340 25W/840 DALI VS IP65V 621x621	29	3499	4000	>80	621x621x80
23907 ^{NEW}	L 340 38W/840 DALI VS IP65V 621x621	43	5248	4000	>80	621x621x80
23908 ^{NEW}	L 340 45W/840 DALI VS IP65V 621x621	50	6044	4000	>80	621x621x80
23925 ^{NEW}	L 340 29W/940 DALI VS IP65V 596x596	35	3338	4000	>90	596x596x80
23926 ^{NEW}	L 340 45W/940 DALI VS IP65V 596x596	52	4956	4000	>90	596x596x80
23927 ^{NEW}	L 340 29W/940 DALI VS IP65V 621x621	35	3338	4000	>90	621x621x80
23928 ^{NEW}	L 340 45W/940 DALI VS IP65V 621x621	52	4956	4000	>90	621x621x80

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23909 ^{NEW}	L 340 25W/840 EP VS IP65V 596x596	30	3499	4000	>80	596x596x80
23910 ^{NEW}	L 340 38W/840 EP VS IP65V 596x596	46	5248	4000	>80	596x596x80
23911 ^{NEW}	L 340 45W/840 EP VS IP65V 596x596	53	6044	4000	>80	596x596x80
23912 ^{NEW}	L 340 25W/840 EP VS IP65V 621x621	30	3499	4000	>80	621x621x80
23913 ^{NEW}	L 340 38W/840 EP VS IP65V 621x621	46	5248	4000	>80	621x621x80
23914 ^{NEW}	L 340 45W/840 EP VS IP65V 621x621	53	6044	4000	>80	621x621x80
23929 ^{NEW}	L 340 29W/940 EP VS IP65V 596x596	36	3338	4000	>90	596x596x80
23930 ^{NEW}	L 340 45W/940 EP VS IP65V 596x596	53	4956	4000	>90	596x596x80
23931 ^{NEW}	L 340 29W/940 EP VS IP65V 621x621	36	3338	4000	>90	621x621x80
23932 ^{NEW}	L 340 45W/940 EP VS IP65V 621x621	53	4956	4000	>90	621x621x80



L 340 Lite

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Perimetral frame in white polycarbonate.

The 621x621 version is dedicated to false ceilings that have modular dimensions of 625x625.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Wiring on a separate unit.

Class II.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- Sensor version
- IP65 exposed part version
- diffuser in LGS microprismatic PMMA or SP polycarbonate, Selfextinguishing V2
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where demanding visual tasks are performed and soft diffuse light is required for optimal visual comfort and total shielding of the light source. Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

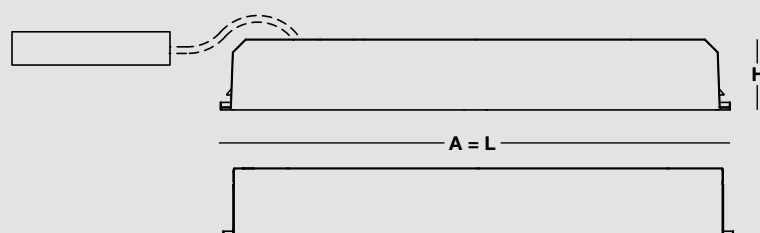
Installation

Lay-on or pull-up installation using the frame accessory.

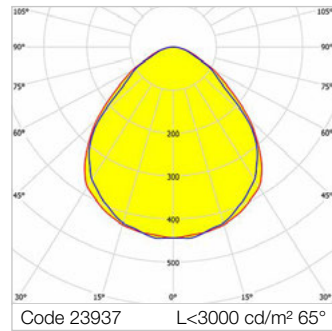
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



L 340 Lite SP



Average luminance <3000 cd/m² for radial angles >65°.
SP transparent methacrylate diffuser, prismatic outside, antiglare.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

23937 ^{NEW}	L 343x10W/840 SP 596x596	34	4318	4000	>80	596x596x80
23957 ^{NEW}	L 343x10W/840 SP 621x621	34	4318	4000	>80	621x621x80
23940 ^{NEW}	L 343x12W/940 SP 596x596	43	4502	4000	>90	596x596x80
23960 ^{NEW}	L 343x12W/940 SP 621x621	43	4502	4000	>90	621x621x80

DALI electronic wiring 230V-50/60Hz

23938 ^{NEW}	L 343x10W/840 DALI SP 596x596	34	4318	4000	>80	596x596x80
23958 ^{NEW}	L 343x10W/840 DALI SP 621x621	34	4318	4000	>80	621x621x80
23941 ^{NEW}	L 343x12W/940 DALI SP 596x596	43	4502	4000	>90	596x596x80
23961 ^{NEW}	L 343x12W/940 DALI SP 621x621	43	4502	4000	>90	621x621x80

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

23939 ^{NEW}	L 343x10W/840 EP SP 596x596	35	4318	4000	>80	596x596x80
23959 ^{NEW}	L 343x10W/840 EP SP 621x621	35	4318	4000	>80	621x621x80
23942 ^{NEW}	L 343x12W/940 EP SP 596x596	44	4502	4000	>90	596x596x80
23962 ^{NEW}	L 343x12W/940 EP SP 621x621	44	4502	4000	>90	621x621x80



L 340 Tunable White

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Perimetral frame in white polycarbonate.

The 621x621 version is dedicated to false ceilings that have modular dimensions of 625x625.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Wiring on a separate unit.

Class II.

Source characteristics

- Squared LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- diffuser in SP prismatic PMMA or SP polycarbonate, Selfextinguishing V2
- IP65 exposed part version
- emergency versions

Applications

Any environments requiring light which aims for the wellness of people.

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

Environments where demanding visual tasks are performed and soft diffuse light is required for optimal visual comfort and total shielding of the light source.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Installation

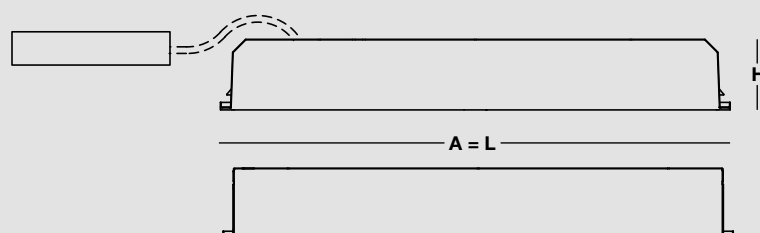
Lay-on or pull-up installation using the frame accessory.

Light Management

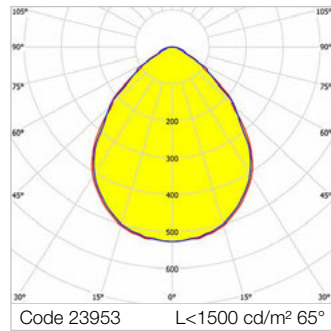
Thanks to the 3F HCL technology, our Tunable White products can be controlled by:

- Wired control systems (more information on page 562))
- 3F Bluetooth control systems (more information on page 564))

Dimensions



L 340 Tunable White LGS



Average luminance <1500 cd/m² for radial angles >65°.
LGS micro-prismatic flat diffuser in transparent methacrylate,
multi-lenticular exterior, anti-glare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI DT8 electronic wiring 230V-50/60Hz

23953 ^{NEW}	L 340 25W DALI DT8 TW LGS 596x596	30	3368 3785 3671	2700 4000 6500	>80	596x596x80
23954 ^{NEW}	L 340 25W DALI DT8 TW LGS 621x621	30	3368 3785 3671	2700 4000 6500	>80	621x621x80

L 340 | Accessories



Anti-fall safety cable with pair of brackets for fixing the housing to the building structure. Length 2.5 m.

Code	Item
A0579 ^{NEW}	Safety wire with brackets



Adapter frame in white-painted steel, for installing luminaires with dimensions of 596x596 mm for pull-up installations on plasterboard false ceilings.

Code	Item
A0798	621x621 frame + brackets



L 350 LED

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L80/B20): 80000 h. (tq+25°C)

Lifetime (L70/B20): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Attention: before ordering these products, we ask you to check the installation instructions if the type of installation requires accessory brackets.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Quick connection.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 7 compliant.

On request

- different power levels, colour rendering indices and colour temperatures
- luminaires for pull-up installation with brackets
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: architectural, commercial, exhibition areas.

Environments where high levels of light are required.

Warning: 3AO luminaire not suitable for installation in false ceilings without heat removal capacity.

Minimum void of 200 mm required.

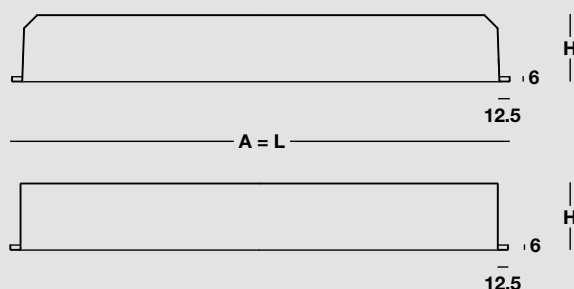
Installation

Lay-in or pull-up installation with brackets.

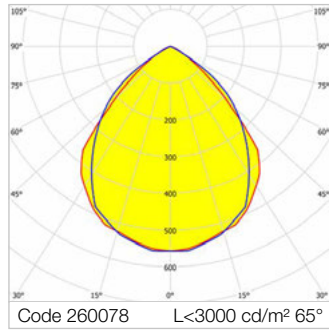
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



L 350 LED 3AO



Average luminance <3000 cd/m² for radial angles >65°. 3AO Decorative parabolic louvre in matt silver aluminium, antiglare, with transverse blades closed at the top and prismatic PMMA diffusers for total shielding of the louvre compartment. Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

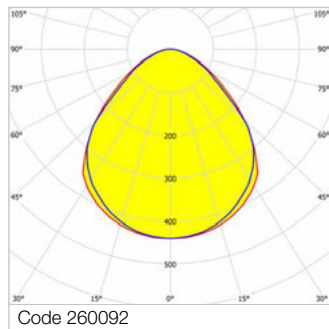
ON/OFF electronic wiring 230V-50/60Hz

260078	L 353x25W LED 3AO 596x596	75	9740	4000	>80	596x596x80
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DALI electronic wiring 230V-50/60Hz

260080	L 353x25W LED DALI 3AO 596x596	75	9740	4000	>80	596x596x80
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L 350 LED SP



SP transparent PMMA diffuser, prismatic exterior, anti-glare, locked to the prepainted white aluminium perimeter frame with sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

260092	L 353x14W LED SP 54V 596x596	47	6160	4000	>80	596x596x80
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DALI electronic wiring 230V-50/60Hz

260094	L 353x14W LED DALI SP 54V 596x596	47	6160	4000	>80	596x596x80
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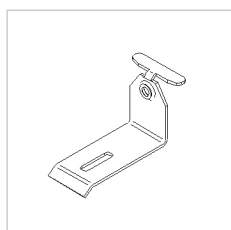
L 350 | Accessories



Plug for quick connection of the luminaire, 3-pole irreversible to be snapped (Snap-in), with integrated locking device, H07 V2-U HT90° 1.5 mm² cables, for the connection to the terminal block of the luminaire. Connection for single-circuit wiring: order white plug. Connection for twin-circuit, dimmable, emergency wiring: order white plug plus black plug.

Code	Item
A0720	Wieland (white plug)
A0721	Wago (white plug)
A0722	Ensto white plug + adapter
A0725	Wieland (black plug)
A0726	Wago (black plug)
A0727	Ensto black plug + adapter

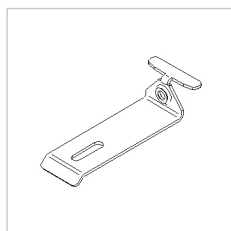
This accessory is suitable for square products only.



Galvanised steel fixing bracket for pull-up installation on plasterboard. Pack for 1 luminaire.

Code	Item
A0173	15HI Brackets - L320-L350-L450 The pack contains 4 pieces.

Excursion min. 0 mm, max. 25 mm.



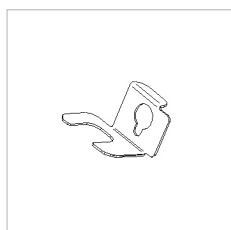
Fixing bracket in galvanised steel. Pack for 1 luminaire.

Code	Item
A0177	15ZH Brackets - L320-L350-L560 The pack contains 4 pieces.

3AO (excursion min. 0 mm, max. 60 mm).

SP (excursion min. 15 mm, max. 60 mm).

Suitable for pull-up installation on plasterboard.



Fixing bracket in galvanised steel for installation coplanar with metal panels with concealed structure. Pack for 1 luminaire.

Code	Item
A0179	15LB Brackets - L320-350 met.pan. The pack contains 4 pieces.

For square luminaires with louvre, mounting in two positions (23/36 mm, 53/66 mm) with diffuser (36 mm and 66 mm).



Anti-fall safety cable for fixing the housing to the building structure. Length 2.5 m.

Code	Item
A0477	Safety wire

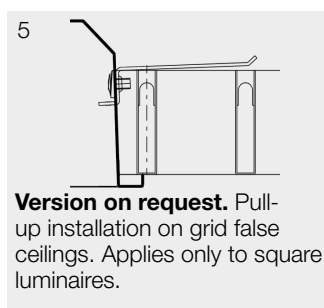
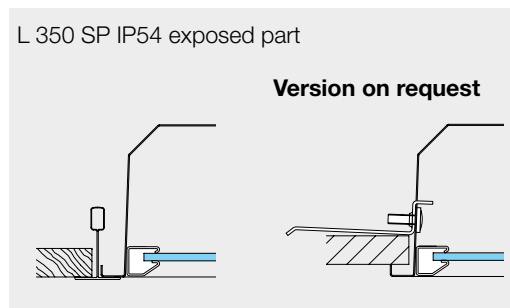
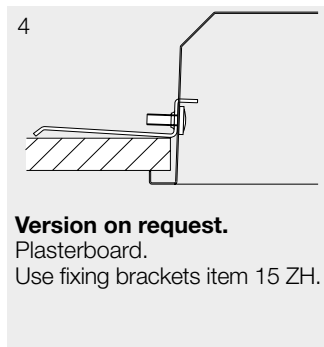
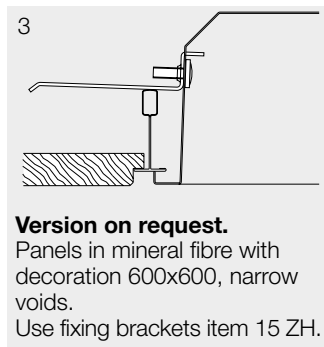
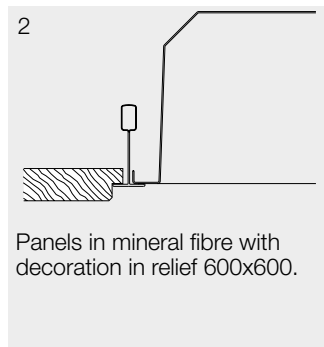
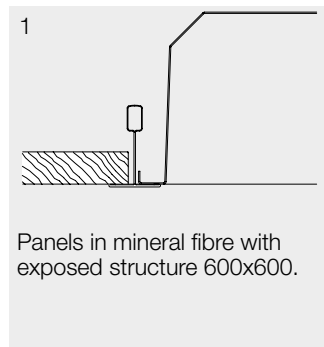


Adapter frame in white-painted steel, for installing luminaires with dimensions of 596x596 mm for pull-up installations on plasterboard false ceilings.

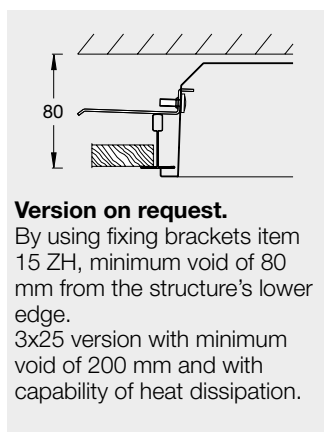
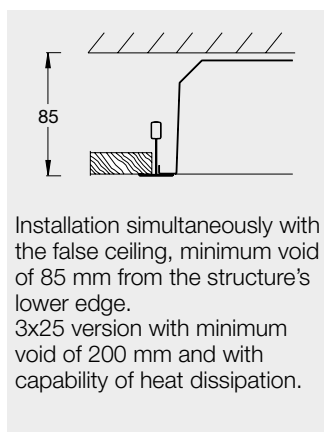
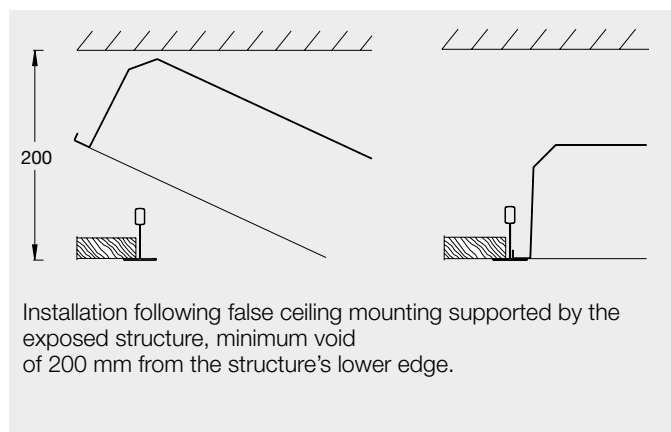
Code	Item
A0798	621x621 frame + brackets

This accessory is suitable for square products only.

Mounting details



Installation





L 360

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Average luminance $<2500 \text{ cd/m}^2$ for angles $>45^\circ$.

Average luminance $<1500 \text{ cd/m}^2$ for angles $>65^\circ$.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted steel.

Transparent methacrylate lenses with different facets to optimise the direction of the luminous flux.

Anti-reflective white polycarbonate alveolar optic.

The 308x1246 version is dedicated to false ceilings that have modular dimensions of 312x1250.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a

centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- anti-reflective black polycarbonate alveolar optic
- different dimensions
- emergency versions

Applications

Environments with very exacting visual tasks and control of luminance at angles of $>45^\circ$ compared to the LEED certification.

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

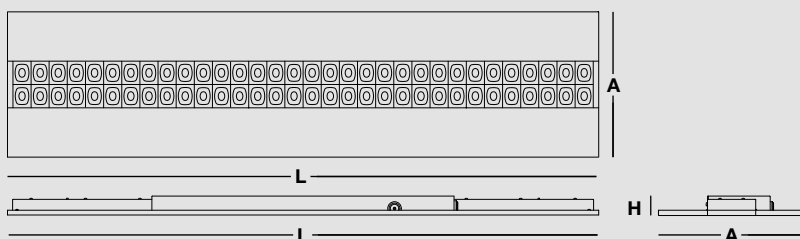
Installation

Lay-in installation.

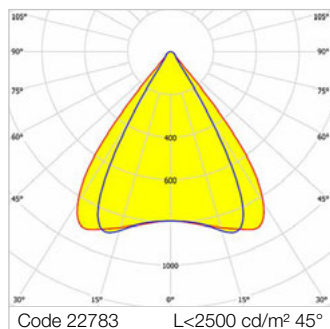
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



L 360 OCW



Optics Control White - LEED Compliant.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

22782	L 362x12W LED OCW 296x1196	27	3570	4000	>80	1196x296x40
22786	L 362x12W LED OCW 308x1246	27	3570	4000	>80	1246x308x40

DALI electronic wiring 230V-50/60Hz

22783	L 362x12W LED DALI OCW 296x1196	27	3570	4000	>80	1196x296x40
22787	L 362x12W LED DALI OCW 308x1246	27	3570	4000	>80	1246x308x40

Recessed luminaires





L 480

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted white.

Removable gear-tray, functions as flux recuperator.

Pair of quick regulators for suspended installation (steel cable to be ordered separately).

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Quick connection of the power supply from the outside of the body with the possibility of cascade connection in / out.

Source characteristics

- Linear LED module.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- mounting brackets
- emergency versions

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: architectural, commercial, staterooms, banks.

OP version

Environments where dynamic, soft and diffuse light is required for optimal visual comfort.

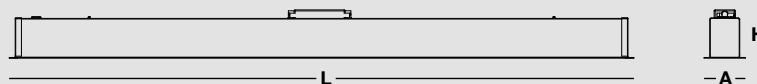
Installation

Pull-up recessed fitting, to be used with inspectable false-ceilings.

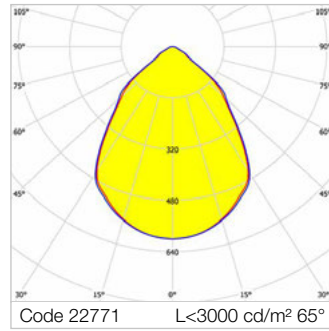
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



L 480 GSP



Average luminance <3000 cd/m² for angles >65°.
SP transparent methacrylate diffuser, prismatic outside, antiglare.
Anti-glare opal polycarbonate filter for brightness uniformity.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

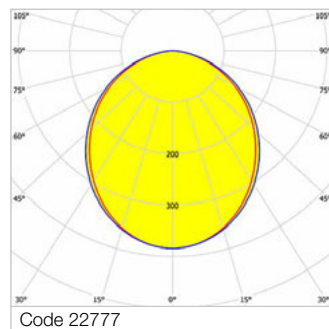
ON/OFF electronic wiring 230V-50/60Hz

22767	L 480 24W LED GSP 80x1210	28	2347	4000	>80	1210x80x95
22768	L 480 30W LED GSP 80x1510	35	2937	4000	>80	1510x80x95

DALI electronic wiring 230V-50/60Hz

22770	L 480 24W LED DALI GSP 80x1210	28	2347	4000	>80	1210x80x95
22771	L 480 30W LED DALI GSP 80x1510	35	2937	4000	>80	1510x80x95

L 480 OP



OP opal methacrylate flat diffuser, anti-glare.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

22773	L 480 24W LED OP 80x1210	28	2699	4000	>80	1210x80x95
22774	L 480 30W LED OP 80x1510	35	3378	4000	>80	1510x80x95

DALI electronic wiring 230V-50/60Hz

22776	L 480 24W LED DALI OP 80x1210	28	2699	4000	>80	1210x80x95
22777	L 480 30W LED DALI OP 80x1510	35	3378	4000	>80	1510x80x95

L 480 | Accessories



Suspension without controller, galvanised steel cable 1.5 mm diameter, load 15 kg.

Code	Item
A20485	Suspension without adjustment - 0.5 m
A20486	Suspension without adjustment - 1 m
A20487	Suspension without adjustment - 2 m
A20488	Suspension without adjustment - 3 m
A20489	Suspension without adjustment - 4 m
A20490	Suspension without adjustment - 5 m
A20491	Suspension without adjustment - 6 m



Galvanised steel cable, diameter 1.5 mm, composed of 49 wires. 15 kg capacity (ratio 5:1).

Code	Item
A0716	Coil galv. cable diam. 1.5mm - 100m The pack contains 100 metres.
A0717	Coil galv. cable diam. 1.5mm - 500m The pack contains 500 metres.
A0718	Coil galv. cable diam. 1.5mm - 1000m The pack contains 1000 metres.



Clamp in nickel-plated brass suitable for fixing and adjustment of galvanised steel wire (diameter 1,25 mm - 1,5 mm - 2 mm), complete with locking screws. The 2 hole clamp allows to block and adjust the cable on a bearing element (part of the building) or on rounded eye bolt.

Code	Item
A0714	Clamp 2 holes susp.- 100 pcs The pack contains 100 pieces.

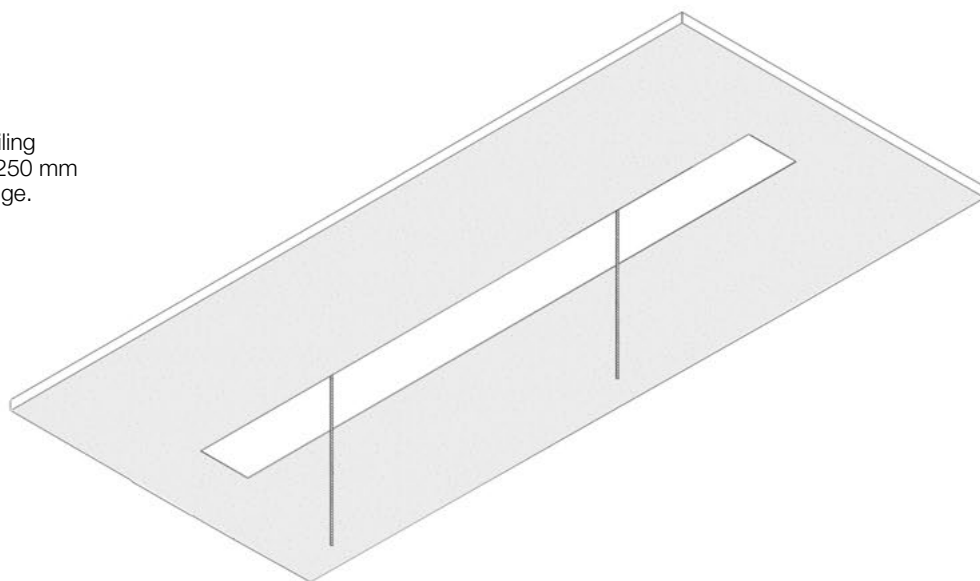


Clamp suitable for fixing and adjustment of galvanised steel wire (diameter 1.5 mm), with quick adjustment through unlock buttons. The clamp with 2 holes allow to fix and adjust the cable on the carrier structural element (belonging to the building) or with eye screw fixing.

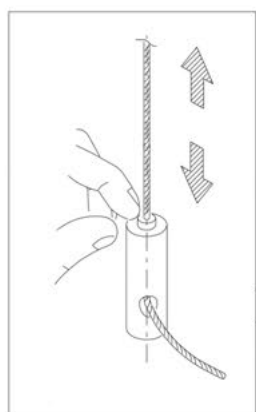
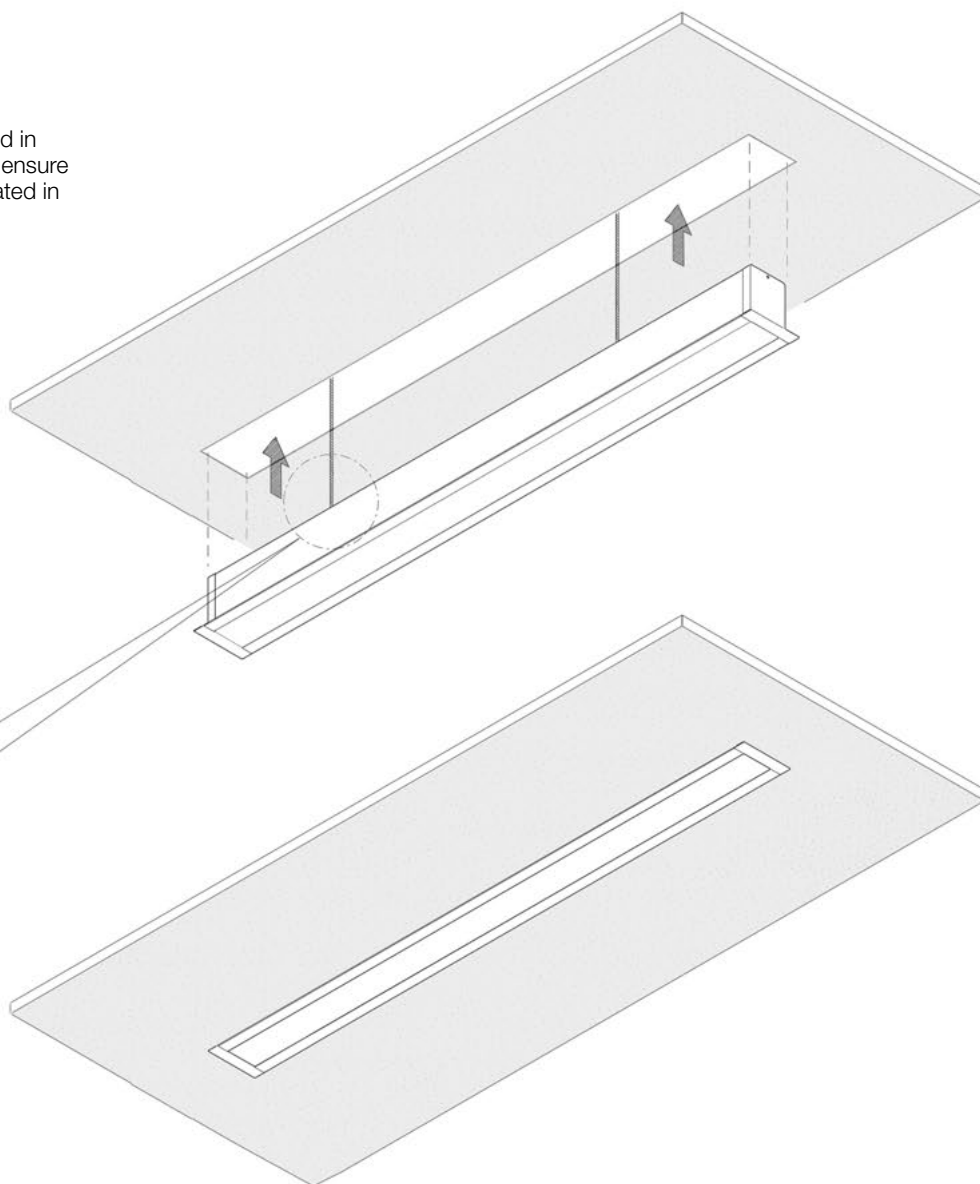
Code	Item
A0659	Adjustable clamp 2 holes - 10 pcs The pack contains 10 pieces.

Mounting details

Installation following false ceiling mounting, minimum void of 250 mm from the structure's lower edge.



The product must be installed in inspectable false ceilings, to ensure access to the regulators located in the upper part.





L 560 LED

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted galvanised steel.

Attention: before ordering these products, we ask you to check the Installation instructions if the type of installation requires accessory brackets.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- parabolic louvres 2M, 2MG, 2US, 3AO
- different power levels, colour rendering indices and colour temperatures
- diffuser in SMP microprismatic PMMA or SP polycarbonate, Selfextinguishing V2
- wiring: dimmable, CLO (more information on page 568)
- emergency versions

Applications

2S version

Environments: with VDTs, schools, offices.

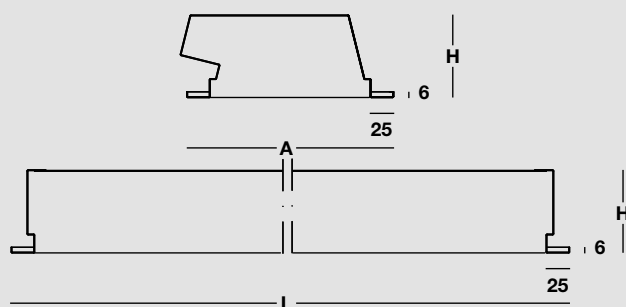
SP version

Environments where demanding visual tasks are performed and soft diffuse light is required for optimal visual comfort and total shielding of the light source.

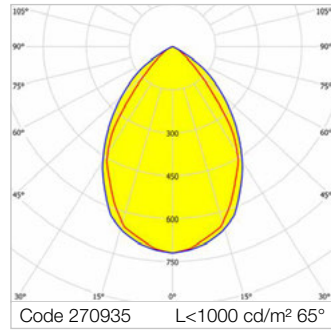
Installation

Slat ceiling installation.

Dimensions



L 560 LED 2S



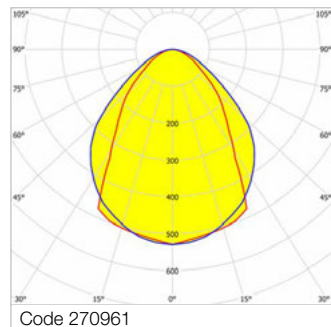
1x - Average luminance <1000 cd/m² for radial angles >65°.
 2x - Average luminance <1500 cd/m² for radial angles >65°.
 2S parabolic louvre in semi-specular aluminium, non-reflecting, with transverse blades closed at the top.
 Prismatic PMMA diffuser for total shielding of the louvre compartment.
 Film protective against dust and finger marks, adhesive, attached to louvre.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

270931	L 561x12W LED 2S 221x647	15	1452	4000	>80	647x221x95
270933	L 561x24W LED 2S 221x1256	28	2906	4000	>80	1256x221x95
270937	L 562x12W LED 2S 221x647	29	2771	4000	>80	647x221x95
270935	L 561x30W LED 2S 221x1556	35	3637	4000	>80	1556x221x95
270939	L 562x24W LED 2S 221x1256	56	5547	4000	>80	1256x221x95
270941	L 562x30W LED 2S 221x1556	70	6943	4000	>80	1556x221x95

L 560 LED SP



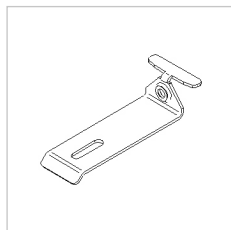
SP transparent PMMA diffuser, prismatic exterior, anti-glare, locked to the prepainted white aluminium perimeter frame with sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

270957	L 561x12W LED SP 221x647	15	1466	4000	>80	647x221x95
270959	L 561x24W LED SP 221x1256	28	2935	4000	>80	1256x221x95
270963	L 562x12W LED SP 221x647	29	2875	4000	>80	647x221x95
270961	L 561x30W LED SP 221x1556	35	3674	4000	>80	1556x221x95
270965	L 562x24W LED SP 221x1256	56	5755	4000	>80	1256x221x95
270967	L 562x30W LED SP 221x1556	70	7202	4000	>80	1556x221x95

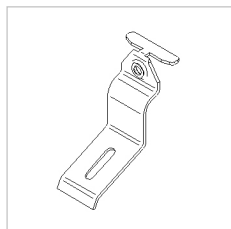
L 560 | Accessories



Fixing bracket in galvanised steel. Pack for 1 luminaire.

Code	Item
A0177	15ZH Brackets - L320-L350-L560 The pack contains 4 pieces.

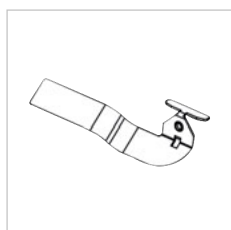
Brackets for lay-in installation on load bearing side profiles parallel to the luminaire with louvre (min. adjustment 45 mm, max 72 mm) with diffuser (min. adjustment 27 mm, max 65 mm).



Fixing bracket in galvanised steel for ceiling pull-up installation. Pack for 1 luminaire.

Code	Item
A0170	15BS Brackets - L320-L400-L560 The pack contains 4 pieces.

Brackets for lay-in installation on load bearing side profiles parallel to the luminaire with louvre (min. adjustment 18 mm, max 45 mm) with diffuser (min. adjustment 0 mm, max 40 mm).



Head fixings bracket for installation of the luminaire on load bearing structures (transverse by the luminaire). Pack for 1 luminaire.

Code	Item
A0174	15DP Brackets - L560 The pack contains 4 pieces.

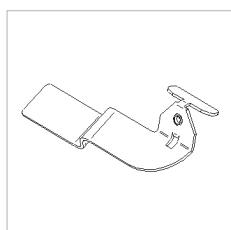
The bracket protruding 55 mm beyond the head side. Excursion min. 55 mm, max. 75 mm. Not suitable for diffused light recessed luminaires.



Head fixings bracket for installation of the luminaire on load bearing structures (transverse by the luminaire). Pack for 1 luminaire.

Code	Item
A0175	15GF Brackets - L560 The pack contains 4 pieces.

The bracket protruding 60 mm beyond the head side. Excursion min. 37 mm, max. 55 mm.



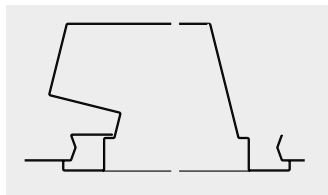
Head fixings bracket for installation of the luminaire on load bearing structures (transverse by the luminaire). Pack for 1 luminaire.

Code	Item
A0176	15XB Brackets - L560 The pack contains 4 pieces.

The bracket protruding 55 mm beyond the head side. Excursion min. 20 mm, max. 37 mm.

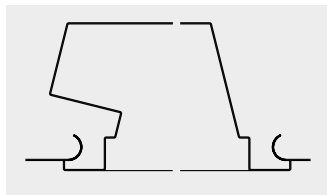
Mounting details

Staves spaced 100



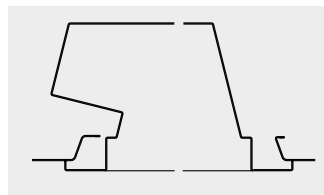
Staves spaced 100

Fixing brackets item 15 DP,
15 GF, 15 XB.



HD staves, spaced 100

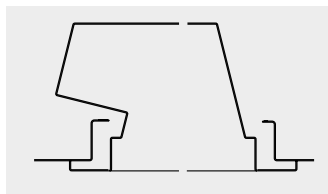
Fixing brackets item 15 DP,
15 GF.



Staves spaced 100

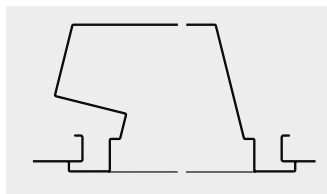
Fixing brackets item 15 DP,
15 GF, 15 XB.

Staves spaced 100 - 200



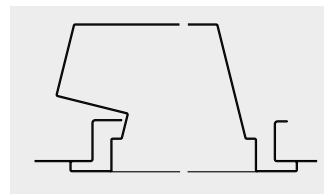
Staves spaced 100-200

Fixing brackets item 15 DP,
15 GF.



Staves spaced 100-200

Fixing brackets item 15 DP,
15 GF.



Staves spaced 100-200

Fixing brackets item 15 DP,
15 GF.

Spacing of load-bearing profiles



For perfect installation of the luminaires, the load-bearing profile sections should be positioned at the distances indicated above (net space between profiles).



L 580 LED IP54

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted galvanised steel.
Total IP54 protection degree.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 2.

On request

- diffuser in OP opal PMMA or SP polycarbonate, self-extinguishing V2
- different power levels, colour rendering indices and colour temperatures
- different dimensions
- wiring: dimmable D1-10V, CLO (more information on page 568)
- brackets for pull-up installation
- emergency versions

Applications

Environments: hospital premises, aseptic, sterilised rooms, laboratories.

Environments requiring a high level of protection, high levels of light, lamp shielding and simplified cleaning. Tempered glass is not immune to falling fragments from harmless and caused by shocks or exceptionally derived from the tempering process.

Environments in which there are foodstuffs or machines with moving parts, with large

temperature fluctuations, and generally, in any environments that require total protection against falling fragments, SP PC version with a polycarbonate diffuser can be supplied. If necessary an L/E version i.e. with the smooth part mounted externally, or specific luminaires with laminated glass with suitable frame can also be supplied.

SP version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Installation

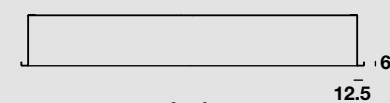
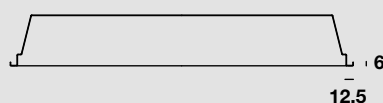
Lay-in or pull-up installation.

Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

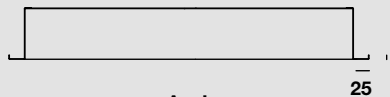
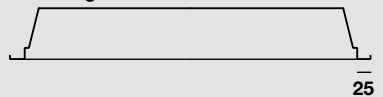
Dimensions

Standard



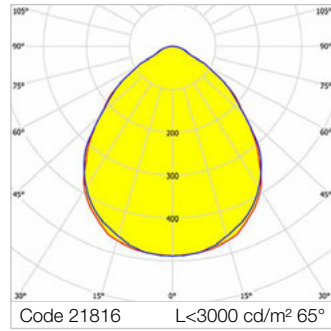
$$A = L$$

Wide Edge



$$A = L$$

L 580 LED VS



Driver/LED
SELV

Average luminance <3000 cd/m² for radial angles >65°.
VS moulded glass, anti-glare, tempered, non-combustible,
thickness 4 mm, locked to the white painted aluminium perimetrical
frame, sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

21815	L 583x10W LED VS IP54 596x596	34	3986	4000	>80	596x596x95
21816	L 584x10W LED VS IP54 596x596	45	5253	4000	>80	596x596x95

DALI electronic wiring 230V-50/60Hz

21843	L 583x10W LED DALI VS IP54 596x596	34	3986	4000	>80	596x596x95
21844	L 584x10W LED DALI VS IP54 596x596	45	5253	4000	>80	596x596x95

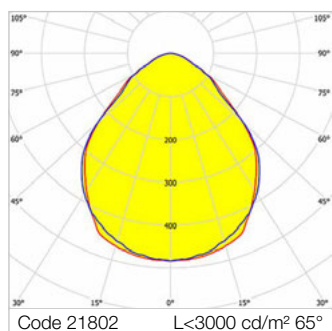
Wide edge - ON/OFF electronic wiring 230V-50/60Hz

21822	L 583x10W LED VS IP54 621x621	34	3986	4000	>80	621x621x95
21823	L 584x10W LED VS IP54 621x621	45	5253	4000	>80	621x621x95

Wide edge - DALI electronic wiring 230V-50/60Hz

21850	L 583x10W LED DALI VS IP54 621x621	34	3986	4000	>80	621x621x95
21851	L 584x10W LED DALI VS IP54 621x621	45	5253	4000	>80	621x621x95

L 580 LED SP



Average luminance <3000 cd/m² for radial angles >65°.
SP transparent PMMA diffuser, prismatic, anti-glare, locked to the pre-painted white aluminium perimeter frame with sealing gasket, hinged opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

21801	L 583x10W LED SP IP54 596x596	34	4142	4000	>80	596x596x95
21802	L 584x10W LED SP IP54 596x596	45	5474	4000	>80	596x596x95

DALI electronic wiring 230V-50/60Hz

21829	L 583x10W LED DALI SP IP54 596x596	34	4142	4000	>80	596x596x95
21830	L 584x10W LED DALI SP IP54 596x596	45	5474	4000	>80	596x596x95

Wide edge - ON/OFF electronic wiring 230V-50/60Hz

21808	L 583x10W LED SP IP54 621x621	34	4142	4000	>80	621x621x95
21809	L 584x10W LED SP IP54 621x621	45	5474	4000	>80	621x621x95

Wide edge - DALI electronic wiring 230V-50/60Hz

21836	L 583x10W LED DALI SP IP54 621x621	34	4142	4000	>80	621x621x95
21837	L 584x10W LED DALI SP IP54 621x621	45	5474	4000	>80	621x621x95

L 580 | Accessories

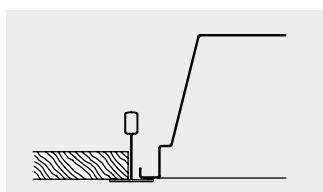


Anti-fall safety cable with pair of brackets for fixing the housing to the building structure. Length 2.5 m.

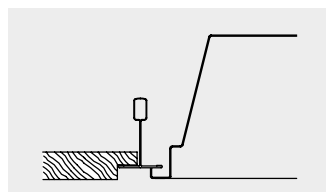
Code	Item
A0579 ^{NEW}	Safety wire with brackets

Mounting details

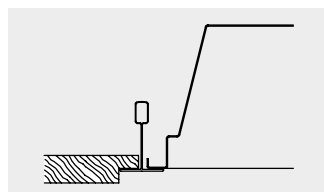
596x596 versions VS Moulded glass, SP Flat prismatic methacrylate diffuser



Luminaires for panels with exposed structure 600x600.

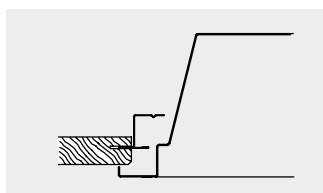


Luminaires for panels with decoration in relief 600x600.
Hanging from rough ceiling.

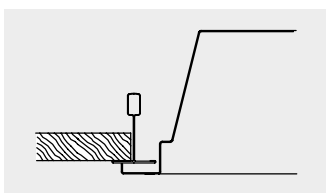


Luminaires for panels with decoration in relief 600x600.

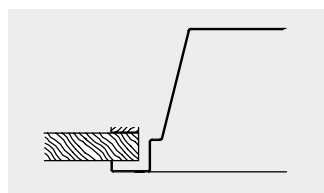
621x621 versions with wide edge VS Moulded glass, SP Flat prismatic methacrylate diffuser



Luminaires for panels with hidden structure 600x600.
Hanging from rough ceiling.



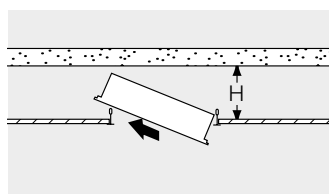
Luminaires for panels with exposed structure 600x600.
Hanging from rough ceiling.



Luminaires for plasterboard.
Hanging from rough ceiling.

Installation

Installation following false ceiling mounting supported by the exposed structure.
Minimum void H 200.





L 590 LED IP65

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester.

Flow recuperator in specular aluminium, high efficiency, with superficial titanium-magnesium treatment, non-iridescent.

Perimetrical frame in white painted stainless steel, sealing gasket, hinged opening, stainless steel closing screws. Total IP65 protection degree.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 2.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: dimmable D1-10V, CLO (more information on page 568)
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- brackets for pull-up installation
- emergency versions

Applications

Environments: hospital premises, transit areas, laboratories, platform-roof, underpasses.

Environments: sterilized, aseptic.

In hospital environments, food industry or machines with parts in motion, with considerable sudden temperature changes, and in general in any environments requiring total protection against falling fragments, use luminaires

with laminated glass only.

Tempered glass is not immune to falling fragments from harmless and caused by shocks or exceptionally derived from the tempering process.

Environments requiring a high level of protection, high levels of light, lamp shielding and simplified cleaning.

Environments with exacting visual tasks, where diffused soft light for optimum visual comfort is required.

Installation

Lay-in or pull-up installation.

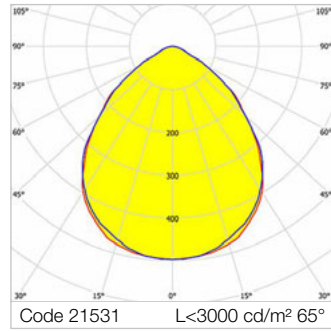
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



L 590 LED RVS



Driver/LED
SELV

VS moulded glass, anti-glare, tempered, non-combustible, thickness 4 mm, locked to the white painted stainless steel perimetrical frame, sealing gasket, hinged opening. On request, HACCP versions for use in the food industry.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

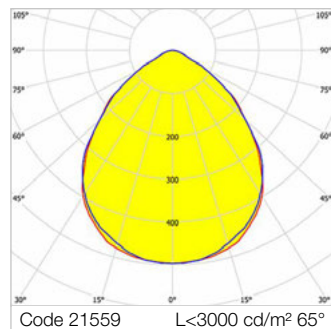
ON/OFF electronic wiring 230V-50/60Hz

21522	L 594x10W LED RVS 599x599	45	5516	4000	>80	599x599x95
21529	L 594x10W/940 LED RVS 599x599	45	4523	4000	>90	599x599x95
22754	L 592x24W/940 LED RVS 299x1199	56	5426	4000	>90	1199x299x95
21524	L 596x10W LED RVS 599x599	70	8274	4000	>80	599x599x95
21531	L 596x10W/940 LED RVS 599x599	70	6784	4000	>90	599x599x95

DALI electronic wiring 230V-50/60Hz

21536	L 594x10W LED DALI RVS 599x599	45	5516	4000	>80	599x599x95
21538	L 596x10W LED DALI RVS 599x599	70	8274	4000	>80	599x599x95
21543	L 594x10W/940 LED DALI RVS 599x599	45	4523	4000	>90	599x599x95
21545	L 596x10W/940 LED DALI RVS 599x599	70	6784	4000	>90	599x599x95
22757	L 592x24W/940 LED DALI RVS 299x1199	56	5426	4000	>90	1199x299x95

L 590 LED RVSS



VSS moulded laminated dipped glass, non-combustible, thickness 7 mm, stuck to the perimeter frame in white painted stainless steel, with sealing gasket, hinged opening. Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

21557	L 594x10W/940 LED RVSS 599x599	45	4206	4000	>90	599x599x95
22755	L 592x24W/940 LED RVSS 299x1199	56	5045	4000	>90	1199x299x95
21559	L 596x10W/940 LED RVSS 599x599	70	6308	4000	>90	599x599x95

DALI electronic wiring 230V-50/60Hz

21571	L 594x10W/940 LED DALI RVSS 599x599	45	4206	4000	>90	599x599x95
21573	L 596x10W/940 LED DALI RVSS 599x599	70	6308	4000	>90	599x599x95
22758	L 592x24W/940 LED DALI RVSS 299x1199	56	5045	4000	>90	1199x299x95

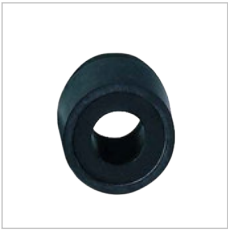
L 590 | Accessories



Anti-condensation diffuser cable gland.

Code	Item
A0187	Anti-condensation cable gland

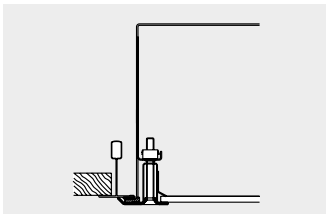
Recommended for installations in environments with temperature sudden changes or subject to condensation.



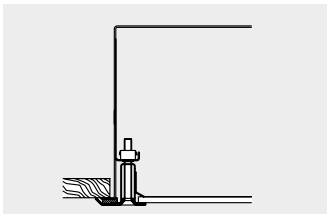
Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm

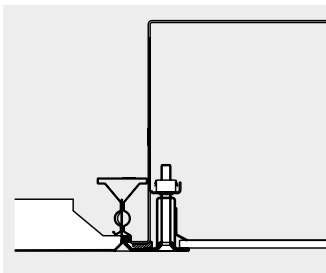
Mounting details



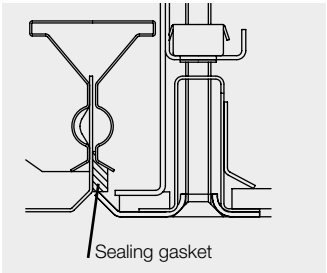
Mineral fibre panels
with exposed structure.
Hanging from rough ceiling.



Plasterboard.
Hanging from rough ceiling.



false-ceiling with metal panels,
we recommend installing
adhesive gasket
(not supplied by 3F Filippi)
on the side of the panels
surrounding the luminaire.



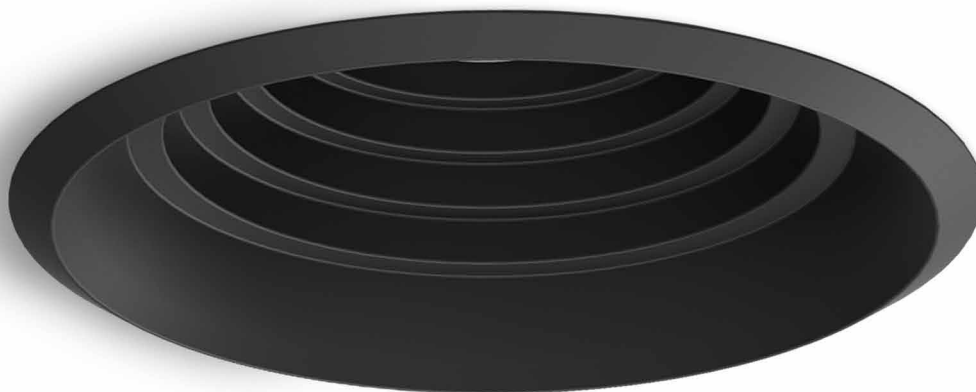
Sealing gasket

Notes:

- Luminaires for false ceilings with exposed structure 600x600 and plasterboard, pull-up installation.







3F Reno

> [www.3F-Filippi.com/3F Reno](http://www.3F-Filippi.com/3F_Reno)

To combine comfort, effectiveness and efficiency: this is the objective of 3F Reno, the new recessed spotlight designed to provide quality lighting in every context, from professional to commercial environments.

Available in 3 different sizes (100, 150 and 200 millimetre recessed holes), it provides maximum installation flexibility: a wide range of luminous fluxes (from 900 lumen right up to more than 4000 lumen), excellent colour rendering and a high level of visual comfort.

3F Reno is available with 4 different luminous flux distributions:

Wide, Spot, Elliptical and UGR.

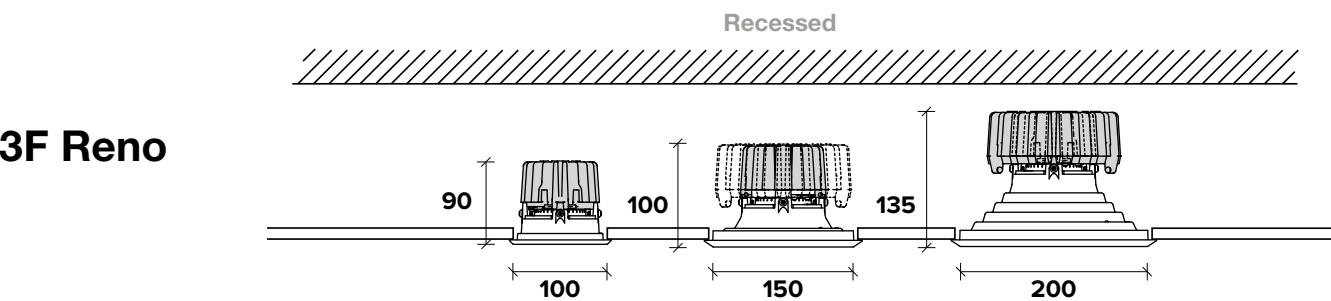
3F Reno comes in two different colours (black and white) to adapt better to the different contexts it is used in.

+ Overview

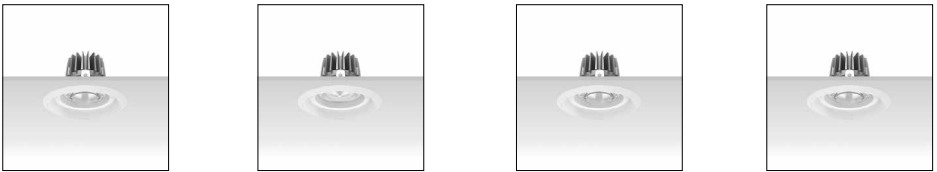
- Luminous efficacy up to 125 lumen/watt.
- Luminous fluxes from 1150 to 4103 lumens.
- Extensive installation pitch.
- UGR <16 (UGR version).
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Pull-up installation
282	3F Reno White	downlight
290	3F Reno Black	downlight

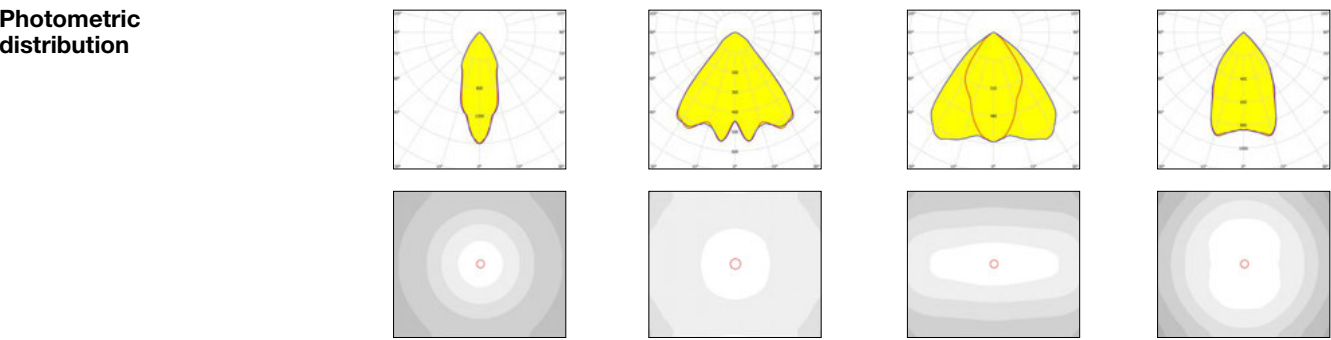
Product range

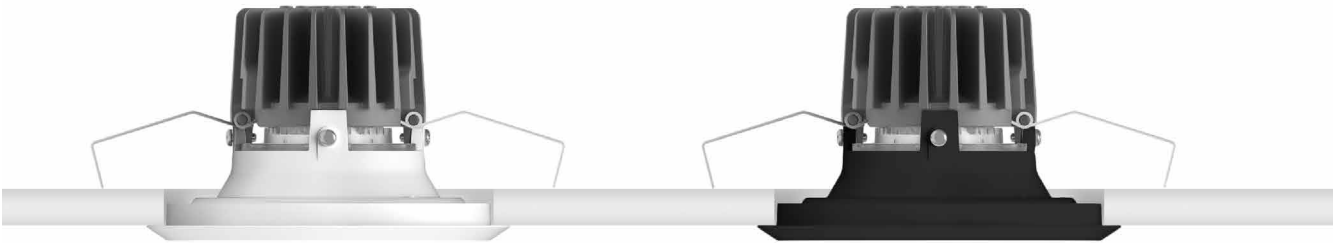


3F Reno
White



Model		SPOT	Wide	Elliptical	UGR
Average luminance for angles> 65 (cd / m²)		<3000	>3000	>3000	<1000
UGR	100	<21	/	<21	/
	150	<21	/	<21	<19
	200	<19	<21	<21	<19

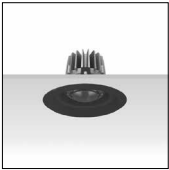
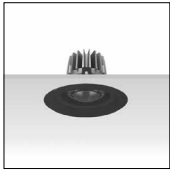
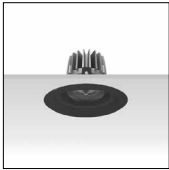
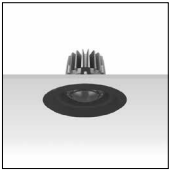




3F Reno 150
White

3F Reno 150
Black

3F Reno
Black



Model		SPOT	Wide	Elliptical	UGR
Average luminance for angles> 65 (cd / m²)		<3000	>3000	>3000	<500
UGR	100	<21	/	<21	/
	150	<21	<21	<21	<19
	200	<19	<19	<21	<19
Photometric distribution					

Product advantages

3F Reno was developed to obtain the lowest luminance level possible by working with the lens on flow distribution: the percentage of light emitted directly (which therefore does not interact with the reflector) is higher than **95%**.

The stepped surface visibly halves the reflective surface: this structure practically eliminates annoying reflections that can affect the viewer's eye even if they are at a discrete distance

from the product (as in open plan offices).

In installations where minimum luminance values are required, the BK version with black reflector has reduced values up to **95%**

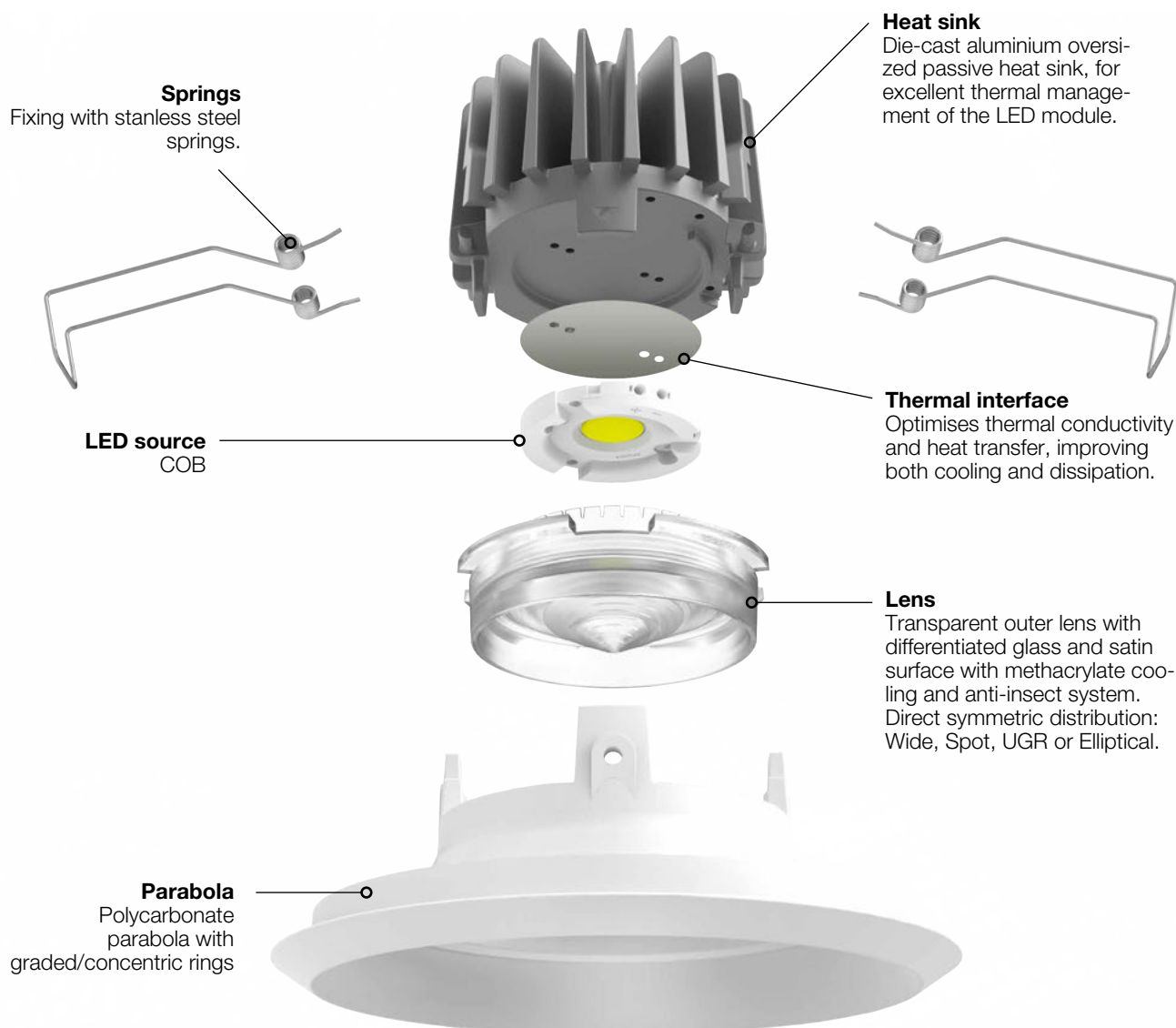
(3F Reno 200 BK WIDE) compared to the WH version made of white polycarbonate.

VERSIONS WITH A WHITE REFLECTOR (WH):



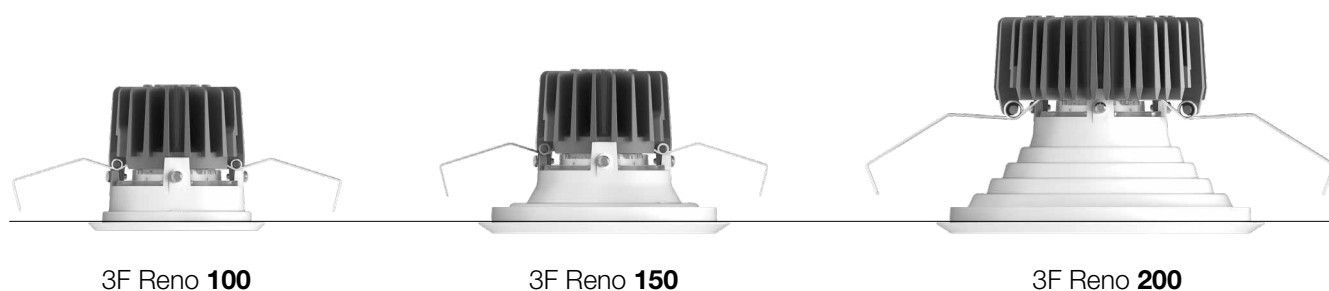
VERSIONS WITH A BLACK REFLECTOR (BK):





Every environment is unique: to provide the most appropriate lighting according to specific needs and requirements 3F Reno comes in 3 different sized recessed holes: 100mm, 150mm and 200mm (actual sizes 116mm, 166mm and 216mm). To facilitate the installation of every product every fixture is supplied with a template to make the hole.

All versions share a significant advantage in terms of practicality: we have developed a highly efficient, compact heat sink that facilitates installation in shallow technical spaces, ensuring that these sizes do not vary **regardless of the photometric distribution used** (unlike what happens for most products on the market). This way the recessed dimensions from the external edge of the plasterboard are as follows:





3F Reno White

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution: wide, spot, UGR, elliptical.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L70/B10): 80000 h. (tq+25°C)

Colour temperature available /840 and /930.

UGR version

Average luminance <1000 cd/m² for radial angles >65°.

Mechanical characteristics

Passive heat dissipator in die-casting aluminium, oversized, for optimum thermal management of the LED module. Parabolic element with graduated/concentric rings in white polycarbonate. Transparent external lens with glossy and satin differentiated surfaces, with a cooling and anti-insect system in methacrylate. Internal specular metallic louvre to optimise control of the luminous flux in polycarbonate in Spot, UGR and Elliptical versions. Fastening spring clips in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Wiring on a separate unit.

Class II.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: architectural, commercial, exhibition areas, transit areas, corridors, shops, display windows, service areas. In false ceilings with narrow voids.

Wide version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

UGR version

In environments with VDTs, managerial offices and staterooms, public offices and schools.

Installation

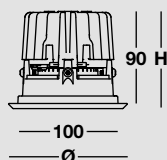
Pull-up installation.

Light Management

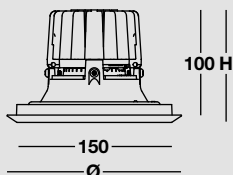
The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions

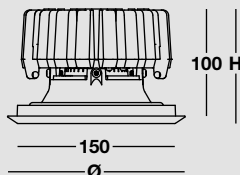
3F Reno 100
1000 - 2000



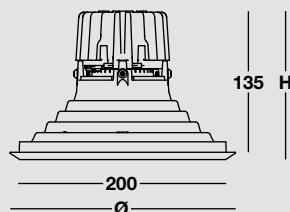
3F Reno 150
1500 - 2000



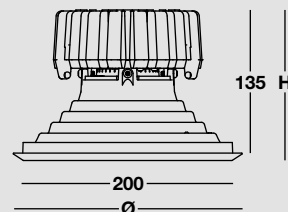
3F Reno 150
3000



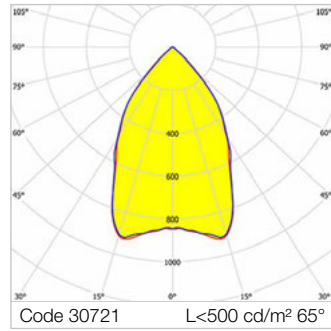
3F Reno 200
2000



3F Reno 200
2500 - 3000 -



3F Reno White UGR



150 WH - Average luminance <1000 cd/m² for radial angles >65°.
 200 WH - Average luminance <500 cd/m² for radial angles >65°.
 Internal UGR louvre in metallic polycarbonate.
 External lens in transparent methacrylate.
 Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

30408	3F Reno 150 WH 1500/840 UGR	64°	14	1756	4000	>80	166x107
30409	3F Reno 150 WH 2000/840 UGR	64°	20	2430	4000	>80	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

30430	3F Reno 150 WH 1500/840 DALI UGR	64°	14	1756	4000	>80	166x107
30431	3F Reno 150 WH 2000/840 DALI UGR	64°	20	2430	4000	>80	166x107

3F Reno 150 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30419	3F Reno 150 WH 1500/840 EP UGR	64°	15	1756	4000	>80	166x107
30420	3F Reno 150 WH 2000/840 EP UGR	64°	21	2430	4000	>80	166x107

3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

30721	3F Reno 200 WH 2000/840 UGR	65°	20	2411	4000	>80	216x142
30725	3F Reno 200 WH 2000/930 UGR	65°	24	2308	3000	>90	216x142
30730	3F Reno 200 WH 2500/930 UGR	65°	29	2571	3000	>90	216x142
30726	3F Reno 200 WH 3000/840 UGR	65°	28	3235	4000	>80	216x142

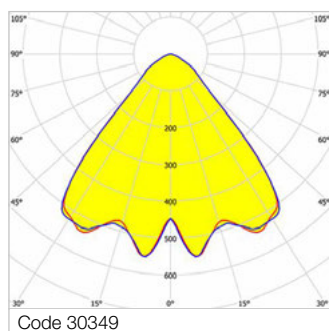
3F Reno 200 - DALI electronic wiring 230V-50/60Hz

30753	3F Reno 200 WH 2000/840 DALI UGR	65°	20	2411	4000	>80	216x142
30757	3F Reno 200 WH 2000/930 DALI UGR	65°	24	2308	3000	>90	216x142
30762	3F Reno 200 WH 2500/930 DALI UGR	65°	29	2571	3000	>90	216x142
30758	3F Reno 200 WH 3000/840 DALI UGR	65°	28	3235	4000	>80	216x142

3F Reno 200 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30737	3F Reno 200 WH 2000/840 EP UGR	65°	21	2411	4000	>80	216x142
30741	3F Reno 200 WH 2000/930 EP UGR	65°	25	2308	3000	>90	216x142
30746	3F Reno 200 WH 2500/930 EP UGR	65°	29	2571	3000	>90	216x142
30742	3F Reno 200 WH 3000/840 EP UGR	65°	29	3235	4000	>80	216x142

3F Reno White Wide



Wide lens in transparent methacrylate.
Photobiological safety in compliance with IEC/TR 62778: RG0 low risk, (IEC 62471) excluding versions 4000 - RG1 (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 100 - ON/OFF electronic wiring 230V-50/60Hz

30073	3F Reno 100 WH 1000/930 WIDE	84°	14	1150	3000	>90	116x95
30069	3F Reno 100 WH 1000/840 WIDE	84°	14	1252	4000	>80	116x95
30077	3F Reno 100 WH 2000/840 WIDE	84°	20	1953	4000	>80	116x95
30081	3F Reno 100 WH 2000/930 WIDE	84°	24	1870	3000	>90	116x95

3F Reno 100 - DALI electronic wiring 230V-50/60Hz

30107	3F Reno 100 WH 1000/930 DALI WIDE	84°	14	1150	3000	>90	116x95
30103	3F Reno 100 WH 1000/840 DALI WIDE	84°	14	1252	4000	>80	116x95
30111	3F Reno 100 WH 2000/840 DALI WIDE	84°	20	1953	4000	>80	116x95
30115	3F Reno 100 WH 2000/930 DALI WIDE	84°	24	1870	3000	>90	116x95

3F Reno 100 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30090	3F Reno 100 WH 1000/930 EP WIDE	84°	15	1150	3000	>90	116x95
30086	3F Reno 100 WH 1000/840 EP WIDE	84°	15	1252	4000	>80	116x95
30094	3F Reno 100 WH 2000/840 EP WIDE	84°	21	1953	4000	>80	116x95
30098	3F Reno 100 WH 2000/930 EP WIDE	84°	25	1870	3000	>90	116x95

3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

30341	3F Reno 150 WH 2000/840 WIDE	84°	20	2014	4000	>80	166x107
30345	3F Reno 150 WH 2000/930 WIDE	84°	24	1928	3000	>90	166x107
30349	3F Reno 150 WH 3000/840 WIDE	84°	28	2703	4000	>80	166x107
30353	3F Reno 150 WH 3000/930 WIDE	84°	37	2712	3000	>90	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

30375	3F Reno 150 WH 2000/840 DALI WIDE	84°	20	2014	4000	>80	166x107
30379	3F Reno 150 WH 2000/930 DALI WIDE	84°	24	1928	3000	>90	166x107
30383	3F Reno 150 WH 3000/840 DALI WIDE	84°	28	2703	4000	>80	166x107
30387	3F Reno 150 WH 3000/930 DALI WIDE	84°	37	2712	3000	>90	166x107

3F Reno 150 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30358	3F Reno 150 WH 2000/840 EP WIDE	84°	21	2014	4000	>80	166x107
30362	3F Reno 150 WH 2000/930 EP WIDE	84°	25	1928	3000	>90	166x107
30366	3F Reno 150 WH 3000/840 EP WIDE	84°	29	2703	4000	>80	166x107
30370	3F Reno 150 WH 3000/930 EP WIDE	84°	38	2712	3000	>90	166x107

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

30621	3F Reno 200 WH 2000/840 WIDE	85°	20	1925	4000	>80	216x142
30625	3F Reno 200 WH 2000/930 WIDE	85°	24	1843	3000	>90	216x142
30629	3F Reno 200 WH 3000/840 WIDE	85°	28	2584	4000	>80	216x142
30637	3F Reno 200 WH 4000/840 WIDE	85°	36	3273	4000	>80	216x142
30633	3F Reno 200 WH 3000/930 WIDE	85°	37	2592	3000	>90	216x142
30641	3F Reno 200 WH 4000/930 WIDE	85°	43	2922	3000	>90	216x142

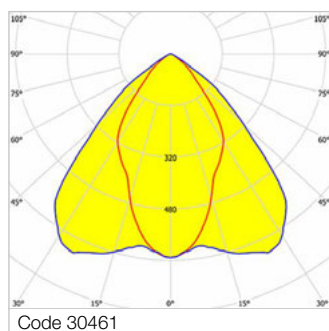
3F Reno 200 - DALI electronic wiring 230V-50/60Hz

30671	3F Reno 200 WH 2000/840 DALI WIDE	85°	20	1925	4000	>80	216x142
30675	3F Reno 200 WH 2000/930 DALI WIDE	85°	24	1843	3000	>90	216x142
30679	3F Reno 200 WH 3000/840 DALI WIDE	85°	28	2584	4000	>80	216x142
30687	3F Reno 200 WH 4000/840 DALI WIDE	85°	36	3273	4000	>80	216x142
30683	3F Reno 200 WH 3000/930 DALI WIDE	85°	37	2592	3000	>90	216x142
30691	3F Reno 200 WH 4000/930 DALI WIDE	85°	43	2922	3000	>90	216x142

**3F Reno 200 - EP maintained emergency wiring, 1hr duration with 24hrs recharge
(BLF emergency fluxes indicated in the datasheets)**

30646	3F Reno 200 WH 2000/840 EP WIDE	85°	21	1925	4000	>80	216x142
30650	3F Reno 200 WH 2000/930 EP WIDE	85°	25	1843	3000	>90	216x142
30654	3F Reno 200 WH 3000/840 EP WIDE	85°	29	2584	4000	>80	216x142
30662	3F Reno 200 WH 4000/840 EP WIDE	85°	37	3273	4000	>80	216x142
30658	3F Reno 200 WH 3000/930 EP WIDE	85°	38	2592	3000	>90	216x142
30666	3F Reno 200 WH 4000/930 EP WIDE	85°	44	2922	3000	>90	216x142

3F Reno White Elliptical



Internal elliptical louvre in metallic polycarbonate.
External lens in transparent methacrylate.
Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 100 - ON/OFF electronic wiring 230V-50/60Hz

30209	3F Reno 100 WH 1000/930 ELL	90° - 64°	14	1221	3000	>90	116x95
30205	3F Reno 100 WH 1000/840 ELL	90° - 64°	14	1330	4000	>80	116x95
30213	3F Reno 100 WH 2000/840 ELL	90° - 64°	20	2075	4000	>80	116x95
30217	3F Reno 100 WH 2000/930 ELL	90° - 64°	24	1987	3000	>90	116x95

3F Reno 100 - DALI electronic wiring 230V-50/60Hz

30243	3F Reno 100 WH 1000/930 DALI ELL	90° - 64°	14	1221	3000	>90	116x95
30239	3F Reno 100 WH 1000/840 DALI ELL	90° - 64°	14	1330	4000	>80	116x95
30247	3F Reno 100 WH 2000/840 DALI ELL	90° - 64°	20	2075	4000	>80	116x95
30251	3F Reno 100 WH 2000/930 DALI ELL	90° - 64°	24	1987	3000	>90	116x95

3F Reno 100 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30226	3F Reno 100 WH 1000/930 EP ELL	90° - 64°	15	1221	3000	>90	116x95
30222	3F Reno 100 WH 1000/840 EP ELL	90° - 64°	15	1330	4000	>80	116x95
30230	3F Reno 100 WH 2000/840 EP ELL	90° - 64°	21	2075	4000	>80	116x95
30234	3F Reno 100 WH 2000/930 EP ELL	90° - 64°	25	1987	3000	>90	116x95

3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

30453	3F Reno 150 WH 2000/840 ELL	90° - 62°	20	2097	4000	>80	166x107
30457	3F Reno 150 WH 2000/930 ELL	90° - 62°	24	2008	3000	>90	166x107
30461	3F Reno 150 WH 3000/840 ELL	90° - 62°	28	2815	4000	>80	166x107
30465	3F Reno 150 WH 3000/930 ELL	90° - 62°	37	2824	3000	>90	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

30487	3F Reno 150 WH 2000/840 DALI ELL	90° - 62°	20	2097	4000	>80	166x107
30491	3F Reno 150 WH 2000/930 DALI ELL	90° - 62°	24	2008	3000	>90	166x107
30495	3F Reno 150 WH 3000/840 DALI ELL	90° - 62°	28	2815	4000	>80	166x107
30499	3F Reno 150 WH 3000/930 DALI ELL	90° - 62°	37	2824	3000	>90	166x107

3F Reno 150 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30470	3F Reno 150 WH 2000/840 EP ELL	90° - 62°	21	2097	4000	>80	166x107
30474	3F Reno 150 WH 2000/930 EP ELL	90° - 62°	25	2008	3000	>90	166x107
30478	3F Reno 150 WH 3000/840 EP ELL	90° - 62°	29	2815	4000	>80	166x107
30482	3F Reno 150 WH 3000/930 EP ELL	90° - 62°	38	2824	3000	>90	166x107

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

30785	3F Reno 200 WH 2000/840 ELL	90° - 65°	20	2053	4000	>80	216x142
30789	3F Reno 200 WH 2000/930 ELL	90° - 65°	24	1965	3000	>90	216x142
30793	3F Reno 200 WH 3000/840 ELL	90° - 65°	28	2755	4000	>80	216x142
30801	3F Reno 200 WH 4000/840 ELL	90° - 65°	36	3490	4000	>80	216x142
30797	3F Reno 200 WH 3000/930 ELL	90° - 65°	38	2764	3000	>90	216x142
30805	3F Reno 200 WH 4000/930 ELL	90° - 65°	43	3116	3000	>90	216x142

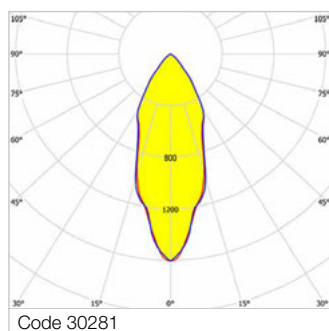
3F Reno 200 - DALI electronic wiring 230V-50/60Hz

30835	3F Reno 200 WH 2000/840 DALI ELL	90° - 65°	20	2053	4000	>80	216x142
30839	3F Reno 200 WH 2000/930 DALI ELL	90° - 65°	24	1965	3000	>90	216x142
30843	3F Reno 200 WH 3000/840 DALI ELL	90° - 65°	28	2755	4000	>80	216x142
30851	3F Reno 200 WH 4000/840 DALI ELL	90° - 65°	36	3490	4000	>80	216x142
30847	3F Reno 200 WH 3000/930 DALI ELL	90° - 65°	37	2764	3000	>90	216x142
30855	3F Reno 200 WH 4000/930 DALI ELL	90° - 65°	43	3116	3000	>90	216x142

**3F Reno 200 - EP maintained emergency wiring, 1hr duration with 24hrs recharge
(BLF emergency fluxes indicated in the datasheets)**

30810	3F Reno 200 WH 2000/840 EP ELL	90° - 65°	21	2053	4000	>80	216x142
30814	3F Reno 200 WH 2000/930 EP ELL	90° - 65°	25	1965	3000	>90	216x142
30818	3F Reno 200 WH 3000/840 EP ELL	90° - 65°	29	2755	4000	>80	216x142
30826	3F Reno 200 WH 4000/840 EP ELL	90° - 65°	37	3490	4000	>80	216x142
30822	3F Reno 200 WH 3000/930 EP ELL	90° - 65°	38	2764	3000	>90	216x142
30830	3F Reno 200 WH 4000/930 EP ELL	90° - 65°	44	3116	3000	>90	216x142

3F Reno White Spot



Internal spotlight louvre in metallic polycarbonate.
External lens in transparent methacrylate.
Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 100 - ON/OFF electronic wiring 230V-50/60Hz

30005	3F Reno 100 WH 1000/930 SPOT	37°	14	1424	3000	>90	116x95
30001	3F Reno 100 WH 1000/840 SPOT	37°	14	1550	4000	>80	116x95
30009	3F Reno 100 WH 2000/840 SPOT	37°	20	2419	4000	>80	116x95
30013	3F Reno 100 WH 2000/930 SPOT	37°	24	2316	3000	>90	116x95

3F Reno 100 - DALI electronic wiring 230V-50/60Hz

30039	3F Reno 100 WH 1000/930 DALI SPOT	37°	14	1424	3000	>90	116x95
30035	3F Reno 100 WH 1000/840 DALI SPOT	37°	14	1550	4000	>80	116x95
30043	3F Reno 100 WH 2000/840 DALI SPOT	37°	20	2419	4000	>80	116x95
30047	3F Reno 100 WH 2000/930 DALI SPOT	37°	24	2316	3000	>90	116x95

3F Reno 100 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30022	3F Reno 100 WH 1000/930 EP SPOT	37°	15	1424	3000	>90	116x95
30018	3F Reno 100 WH 1000/840 EP SPOT	37°	15	1550	4000	>80	116x95
30026	3F Reno 100 WH 2000/840 EP SPOT	37°	21	2419	4000	>80	116x95
30030	3F Reno 100 WH 2000/930 EP SPOT	37°	25	2316	3000	>90	116x95

3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

30273	3F Reno 150 WH 2000/840 SPOT	37°	20	2424	4000	>80	166x107
30277	3F Reno 150 WH 2000/930 SPOT	37°	24	2321	3000	>90	166x107
30281	3F Reno 150 WH 3000/840 SPOT	37°	28	3254	4000	>80	166x107
30285	3F Reno 150 WH 3000/930 SPOT	37°	37	3264	3000	>90	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

30307	3F Reno 150 WH 2000/840 DALI SPOT	37°	20	2424	4000	>80	166x107
30311	3F Reno 150 WH 2000/930 DALI SPOT	37°	24	2321	3000	>90	166x107
30315	3F Reno 150 WH 3000/840 DALI SPOT	37°	28	3254	4000	>80	166x107
30319	3F Reno 150 WH 3000/930 DALI SPOT	37°	37	3264	3000	>90	166x107

3F Reno 150 - EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

30290	3F Reno 150 WH 2000/840 EP SPOT	37°	21	2424	4000	>80	166x107
30294	3F Reno 150 WH 2000/930 EP SPOT	37°	25	2321	3000	>90	166x107
30298	3F Reno 150 WH 3000/840 EP SPOT	37°	29	3254	4000	>80	166x107
30302	3F Reno 150 WH 3000/930 EP SPOT	37°	38	3264	3000	>90	166x107

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

30521	3F Reno 200 WH 2000/840 SPOT	37°	20	2413	4000	>80	216x142
30525	3F Reno 200 WH 2000/930 SPOT	37°	24	2311	3000	>90	216x142
30529	3F Reno 200 WH 3000/840 SPOT	37°	28	3239	4000	>80	216x142
30537	3F Reno 200 WH 4000/840 SPOT	37°	36	4103	4000	>80	216x142
30533	3F Reno 200 WH 3000/930 SPOT	37°	37	3249	3000	>90	216x142
30541	3F Reno 200 WH 4000/930 SPOT	37°	43	3664	3000	>90	216x142

3F Reno 200 - DALI electronic wiring 230V-50/60Hz

30571	3F Reno 200 WH 2000/840 DALI SPOT	37°	20	2413	4000	>80	216x142
30575	3F Reno 200 WH 2000/930 DALI SPOT	37°	24	2311	3000	>90	216x142
30579	3F Reno 200 WH 3000/840 DALI SPOT	37°	28	3239	4000	>80	216x142
30587	3F Reno 200 WH 4000/840 DALI SPOT	37°	36	4103	4000	>80	216x142
30583	3F Reno 200 WH 3000/930 DALI SPOT	37°	37	3249	3000	>90	216x142
30591	3F Reno 200 WH 4000/930 DALI SPOT	37°	43	3664	3000	>90	216x142

**3F Reno 200 - EP maintained emergency wiring, 1hr duration with 24hrs recharge
(BLF emergency fluxes indicated in the datasheets)**

30546	3F Reno 200 WH 2000/840 EP SPOT	37°	21	2413	4000	>80	216x142
30550	3F Reno 200 WH 2000/930 EP SPOT	37°	25	2311	3000	>90	216x142
30554	3F Reno 200 WH 3000/840 EP SPOT	37°	29	3239	4000	>80	216x142
30562	3F Reno 200 WH 4000/840 EP SPOT	37°	37	4103	4000	>80	216x142
30558	3F Reno 200 WH 3000/930 EP SPOT	37°	38	3249	3000	>90	216x142
30566	3F Reno 200 WH 4000/930 EP SPOT	37°	44	3664	3000	>90	216x142



3F Reno Black

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution: wide, spot, UGR, elliptical.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L70/B10): 80000 h. (tq+25°C)

Colour temperature available /840 and /930.

UGR version

Average luminance <500 cd/m² for radial angles >65°.

Mechanical characteristics

Passive heat dissipator in die-casting aluminium, oversized, for optimum thermal management of the LED module.

Parabolic element with graduated/ concentric rings in black polycarbonate.

Transparent external lens with glossy and satin differentiated surfaces, with a cooling and anti-insect system in methacrylate.

Internal specular metallic louvre to optimise control of the luminous flux in polycarbonate in Spot, UGR and Elliptical versions.

Fastening spring clips in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Wiring on a separate unit.

Class II.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: architectural, commercial, exhibition areas, transit areas, corridors, shops, display windows, service areas. In false ceilings with narrow voids.

Wide version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

UGR version

In environments with VDTs, managerial offices and staterooms, public offices and schools.

Installation

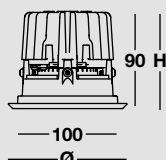
Pull-up installation.

Light Management

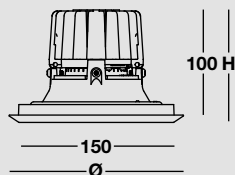
The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions

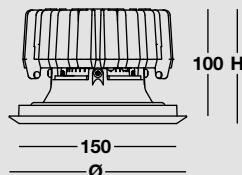
3F Reno 100
2000



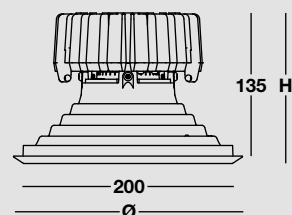
3F Reno 150
2000



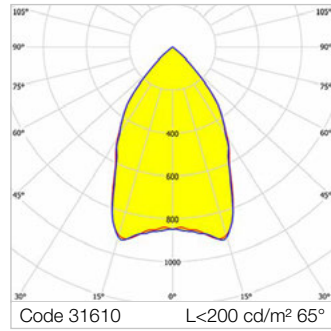
3F Reno 150
3000



3F Reno 200
2500 - 3000 -



3F Reno Black UGR



650°C

IP20
IP44

0,5J

IK04



150 BK - Average luminance <500 cd/m² for radial angles >65°.
 200 BK - Average luminance <200 cd/m² for radial angles >65°.
 Internal UGR louvre in metallic polycarbonate.
 External lens in transparent methacrylate.
 Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

31293	3F Reno 150 BK 2000/840 UGR	65°	20	2413	4000	>80	166x107
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3F Reno 150 - DALI electronic wiring 230V-50/60Hz

31315	3F Reno 150 BK 2000/840 DALI UGR	65°	20	2413	4000	>80	166x107
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3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

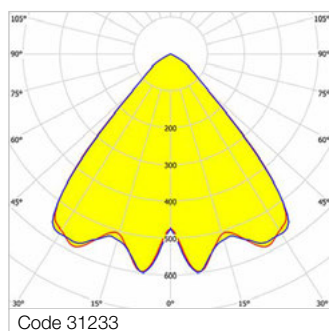
31614	3F Reno 200 BK 2500/930 UGR	64°	29	2530	3000	>90	216x142
31610	3F Reno 200 BK 3000/840 UGR	64°	28	3183	4000	>80	216x142

3F Reno 200 - DALI electronic wiring 230V-50/60Hz

31646	3F Reno 200 BK 2500/930 DALI UGR	64°	29	2530	3000	>90	216x142
31642	3F Reno 200 BK 3000/840 DALI UGR	64°	28	3183	4000	>80	216x142



3F Reno Black Wide



Wide lens in transparent methacrylate.
Photobiological safety in compliance with IEC/TR 62778: RG0 low risk, (IEC 62471) excluding versions 4000 - RG1 (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 100 - ON/OFF electronic wiring 230V-50/60Hz

30961	3F Reno 100 BK 2000/840 WIDE	83°	20	1703	4000	>80	116x95
30965	3F Reno 100 BK 2000/930 WIDE	83°	24	1631	3000	>90	116x95

3F Reno 100 - DALI electronic wiring 230V-50/60Hz

30995	3F Reno 100 BK 2000/840 DALI WIDE	83°	20	1703	4000	>80	116x95
30999	3F Reno 100 BK 2000/930 DALI WIDE	83°	24	1631	3000	>90	116x95

3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

31233	3F Reno 150 BK 3000/840 WIDE	83°	28	2338	4000	>80	166x107
31237	3F Reno 150 BK 3000/930 WIDE	83°	37	2346	3000	>90	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

31267	3F Reno 150 BK 3000/840 DALI WIDE	83°	28	2338	4000	>80	166x107
31271	3F Reno 150 BK 3000/930 DALI WIDE	83°	37	2346	3000	>90	166x107

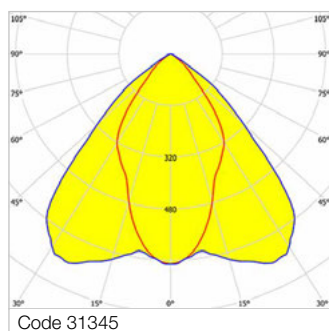
3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

31521	3F Reno 200 BK 4000/840 WIDE	84°	36	2801	4000	>80	216x142
31525	3F Reno 200 BK 4000/930 WIDE	84°	43	2501	3000	>90	216x142

3F Reno 200 - DALI electronic wiring 230V-50/60Hz

31571	3F Reno 200 BK 4000/840 DALI WIDE	84°	36	2801	4000	>80	216x142
31575	3F Reno 200 BK 4000/930 DALI WIDE	84°	43	2501	3000	>90	216x142

3F Reno Black Elliptical



Internal elliptical louvre in metallic polycarbonate.
External lens in transparent methacrylate.
Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 100 - ON/OFF electronic wiring 230V-50/60Hz

31097	3F Reno 100 BK 2000/840 ELL	89° - 62°	20	1917	4000	>80	116x95
31101	3F Reno 100 BK 2000/930 ELL	89° - 62°	24	1835	3000	>90	116x95

3F Reno 100 - DALI electronic wiring 230V-50/60Hz

31131	3F Reno 100 BK 2000/840 DALI ELL	89° - 62°	20	1917	4000	>80	116x95
31135	3F Reno 100 BK 2000/930 DALI ELL	89° - 62°	24	1835	3000	>90	116x95

3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

31345	3F Reno 150 BK 3000/840 ELL	89° - 61°	28	2610	4000	>80	166x107
31349	3F Reno 150 BK 3000/930 ELL	89° - 61°	37	2618	3000	>90	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

31379	3F Reno 150 BK 3000/840 DALI ELL	89° - 61°	28	2610	4000	>80	166x107
31383	3F Reno 150 BK 3000/930 DALI ELL	89° - 61°	37	2618	3000	>90	166x107

3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

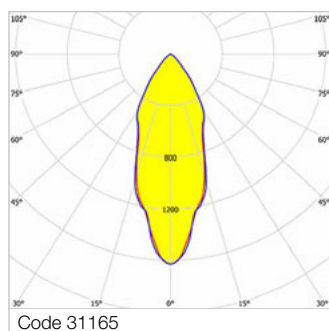
31685	3F Reno 200 BK 4000/840 ELL	89° - 62°	36	3117	4000	>80	216x142
31689	3F Reno 200 BK 4000/930 ELL	89° - 62°	43	2783	3000	>90	216x142

3F Reno 200 - DALI electronic wiring 230V-50/60Hz

31735	3F Reno 200 BK 4000/840 DALI ELL	89° - 62°	36	3117	4000	>80	216x142
31739	3F Reno 200 BK 4000/930 DALI ELL	89° - 62°	43	2783	3000	>90	216x142



3F Reno Black Spot



Internal spotlight louvre in metallic polycarbonate.
External lens in transparent methacrylate.
Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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3F Reno 100 - ON/OFF electronic wiring 230V-50/60Hz

30893	3F Reno 100 BK 2000/840 SPOT	37°	20	2375	4000	>80	116x95
30897	3F Reno 100 BK 2000/930 SPOT	37°	24	2274	3000	>90	116x95

3F Reno 100 - DALI electronic wiring 230V-50/60Hz

30927	3F Reno 100 BK 2000/840 DALI SPOT	37°	20	2375	4000	>80	116x95
30931	3F Reno 100 BK 2000/930 DALI SPOT	37°	24	2274	3000	>90	116x95

3F Reno 150 - ON/OFF electronic wiring 230V-50/60Hz

31165	3F Reno 150 BK 3000/840 SPOT	37°	28	3191	4000	>80	166x107
31169	3F Reno 150 BK 3000/930 SPOT	37°	37	3201	3000	>90	166x107

3F Reno 150 - DALI electronic wiring 230V-50/60Hz

31199	3F Reno 150 BK 3000/840 DALI SPOT	37°	28	3191	4000	>80	166x107
31203	3F Reno 150 BK 3000/930 DALI SPOT	37°	37	3201	3000	>90	166x107

3F Reno 200 - ON/OFF electronic wiring 230V-50/60Hz

31421	3F Reno 200 BK 4000/840 SPOT	37°	36	3985	4000	>80	216x142
31425	3F Reno 200 BK 4000/930 SPOT	37°	43	3558	3000	>90	216x142

3F Reno 200 - DALI electronic wiring 230V-50/60Hz

31471	3F Reno 200 BK 4000/840 DALI SPOT	37°	36	3985	4000	>80	216x142
31475	3F Reno 200 BK 4000/930 DALI SPOT	37°	43	3558	3000	>90	216x142

3F Reno | Accessories



VS moulded glass, micro-prismatic, anti-glare, tempered, non-combustible glass, affixed to the white polycarbonate trim. Accessory suitable for versions with wide distribution.

Accessory compatible with 3F Reno White.

Code	Item
A01035	VS 3F RENO WH 150
A01037	VS 3F RENO WH 200

1J

IK06



VS moulded glass, micro-prismatic, anti-glare, tempered, non-combustible glass, affixed to the black polycarbonate trim. Accessory suitable for versions with wide distribution.

Accessory compatible with 3F Reno Black.

Code	Item
A01036	VS 3F RENO BK 150
A01038	VS 3F RENO BK 200

1J

IK06



VT transparent glass, tempered, not flammable, locked and in line with the trim, in white polycarbonate. Accessory suitable for versions with spot, UGR and elliptic distribution.

Accessory compatible with 3F Reno White.

Code	Item
A01023	VT 3F RENO WH 150
A01025	VT 3F RENO WH 200

1J

IK06



VT transparent glass, tempered, not flammable, locked and in line with the trim, in black polycarbonate. Accessory suitable for versions with spot, UGR and elliptic distribution.

Accessory compatible with 3F Reno Black.

Code	Item
A01024	VT 3F RENO BK 150
A01026	VT 3F RENO BK 200

1J

IK06



Micro-prismatic SMP antiglare diffuser in PMMA, locked and in line with the trim, in white polycarbonate. Accessory suitable for versions with wide distribution.

Accessory compatible with 3F Reno White.

Code	Item
A01046	SMP 3F RENO WH 150
A01048	SMP 3F RENO WH 200

0,7J

IK05

HACCP



Micro-prismatic SMP antiglare diffuser in PMMA, locked and in line with the trim, in black polycarbonate. Accessory suitable for versions with wide distribution.

Accessory compatible with 3F Reno Black.

Code	Item
A01047	SMP 3F RENO BK 150
A01049	SMP 3F RENO BK 200

0,7J

IK05

HACCP



Reinforcing bracket for panels 600x600, 600x1200 with exposed structure, in hot-galvanised steel.

Code	Item
A0804	SF 3F Reno 150
A0805	SF 3F Reno 200



Reinforcing bracket for metal panels 600x600 with concealed structure, in hot-galvanised steel.

Code	Item
A0806	SM 3F Reno 150
A0807	SM 3F Reno 200



White adapter ring for 3F Reno 200 installation in holes with a diameter of 220 or 255 millimetres. Realised in steel.

Accessory compatible only with 3F Reno 200 models.

Code	Item
A01090 <small>NEW</small>	WH adapter ring for 220 mm hole
A01091 <small>NEW</small>	WH adapter ring for 255 mm hole

Versions for the 3F Reno 100 and 3F Reno 150 models are available on request.



White adapter ring for 3F Reno 200 installation in holes with a diameter of 300 millimetres, supplied with a reinforcement bracket for false ceilings with a thickness of less than or higher than 9 mm. Realised in steel.

Accessory compatible only with 3F Reno 200 models.

Code	Item
A01092 <small>NEW</small>	WH adapter ring for hole 300 mm <9 mm
A01093 <small>NEW</small>	WH adapter ring for hole 300 mm >9 mm

Versions for the 3F Reno 100 and 3F Reno 150 models are available on request.



Anti-fall safety cable for fixing the housing to the building structure. Length 2.5 m.

Code	Item
A0477	Safety wire





Galassia 220

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L70/B10): 80000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing and fixing brackets in galvanised steel.

Passive heat dissipator in anodised aluminium, oversized, for optimum thermal management of the LED module.

Parabolic louvre in polished anodised aluminium, anti-glare, non-iridescent.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Wiring on a separate unit.

Class II.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: architectural, commercial, exhibition areas, transit areas, corridors, shops, display windows.

In false ceilings with narrow voids.

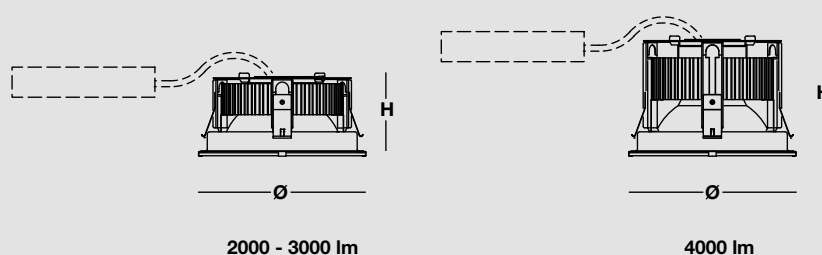
Installation

Pull-up installation.

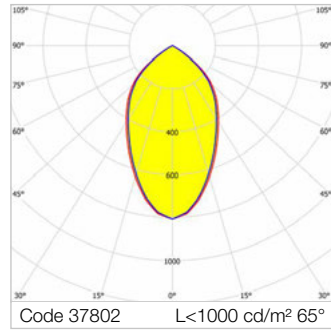
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



Galassia 220 VT



Average luminance <1000 cd/m² for radial angles >65°.
 Parabolic louvre in polished anodised aluminium, anti-glare, non-iridescent.
 Circular anti-glare LED shielding lens in opal PMMA for good visual comfort.
 VT transparent glass, tempered, not flammable, locked and in line with the trim.
 It does not allow the access of the insects into the luminous compartment, avoiding unpleasant visual effects and extraordinary maintenance.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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ON/OFF electronic wiring 230V-50/60Hz

37759	Galassia 220 LED 2000 VT	63°	20	2081	4000	>80	221x103
37802	Galassia 220 LED 3000 VT	63°	28	2792	4000	>80	221x103
37834	Galassia 220 LED 4000 VT	63°	36	3537	4000	>80	221x151

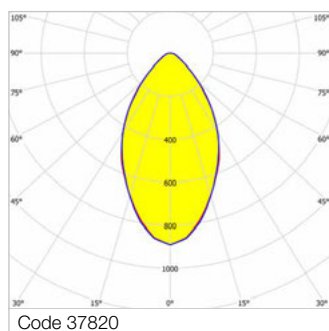
DALI electronic wiring 230V-50/60Hz

37760	Galassia 220 LED 2000 DALI VT	63°	20	2081	4000	>80	221x103
37803	Galassia 220 LED 3000 DALI VT	63°	28	2792	4000	>80	221x103
37836	Galassia 220 LED 4000 DALI VT	63°	36	3537	4000	>80	221x151

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

37761	Galassia 220 LED 2000 EP VT	63°	21	2081	4000	>80	221x103
37804	Galassia 220 LED 3000 EP VT	63°	29	2792	4000	>80	221x103

Galassia 220 VS



2000 - Average luminance <3000 cd/m² for radial angles >65°. Parabolic louvre in polished anodised aluminium, anti-glare, non-iridescent. Anti-glare microprismatic VS moulded glass, tempered, not flammable, locked and in line with the trim. It does not allow the access of the insects into the luminous compartment, avoiding unpleasant visual effects and extraordinary maintenance.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
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ON/OFF electronic wiring 230V-50/60Hz

37777	Galassia 220 LED 2000 VS	60°	20	2330	4000	>80	221x103
37820	Galassia 220 LED 3000 VS	60°	28	3127	4000	>80	221x103
37838	Galassia 220 LED 4000 VS	60°	36	3961	4000	>80	221x151

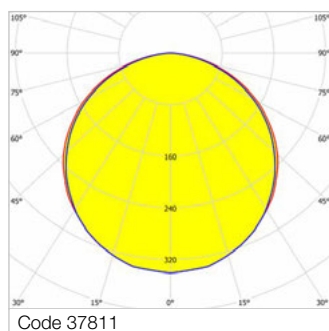
DALI electronic wiring 230V-50/60Hz

37778	Galassia 220 LED 2000 DALI VS	60°	20	2330	4000	>80	221x103
37821	Galassia 220 LED 3000 DALI VS	60°	28	3127	4000	>80	221x103
37840	Galassia 220 LED 4000 DALI VS	60°	36	3961	4000	>80	221x151

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

37779	Galassia 220 LED 2000 EP VS	60°	21	2330	4000	>80	221x103
37822	Galassia 220 LED 3000 EP VS	60°	29	3127	4000	>80	221x103

Galassia 220 VOP



Parabolic louvre in polished anodised aluminium, anti-glare, non-iridescent.
Glazed OP opal glass, tempered, non-combustible, locked in line with the trim.
It does not allow the access of the insects into the luminous compartment, avoiding unpleasant visual effects and extraordinary maintenance.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	------------------

ON/OFF electronic wiring 230V-50/60Hz

37768	Galassia 220 LED 2000 VOP	114°	20	1434	4000	>80	221x103
37811	Galassia 220 LED 3000 VOP	114°	28	1925	4000	>80	221x103
37842	Galassia 220 LED 4000 VOP	114°	36	2438	4000	>80	221x151

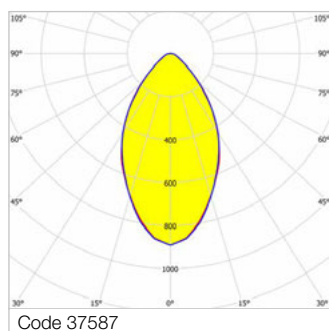
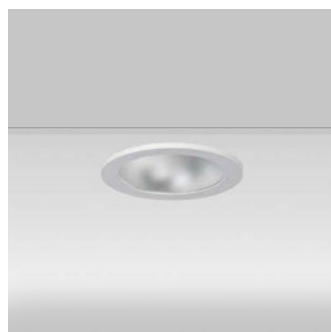
DALI electronic wiring 230V-50/60Hz

37769	Galassia 220 LED 2000 DALI VOP	114°	20	1434	4000	>80	221x103
37812	Galassia 220 LED 3000 DALI VOP	114°	28	1925	4000	>80	221x103
37844	Galassia 220 LED 4000 DALI VOP	114°	36	2438	4000	>80	221x151

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

37770	Galassia 220 LED 2000 EP VOP	114°	21	1434	4000	>80	221x103
37813	Galassia 220 LED 3000 EP VOP	114°	29	1925	4000	>80	221x103

Galassia 220 AB VS



2000 - Average luminance $<3000 \text{ cd/m}^2$ for radial angles $>65^\circ$.
AB trim in white moulded Bayblend.

Parabolic louvre in polished anodised aluminium, anti-glare, non-iridescent.

Anti-glare microprismatic VS moulded glass, tempered, not flammable, locked and in line with the trim.

It does not allow the access of the insects into the luminous compartment, avoiding unpleasant visual effects and extraordinary maintenance.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	---------------------

ON/OFF electronic wiring 230V-50/60Hz

37551	Galassia 220 LED AB 2000 VS	60°	20	2330	4000	>80	226x103
37587	Galassia 220 LED AB 3000 VS	60°	28	3127	4000	>80	226x103
37604	Galassia 220 LED AB 4000 VS	60°	36	3961	4000	>80	226x151

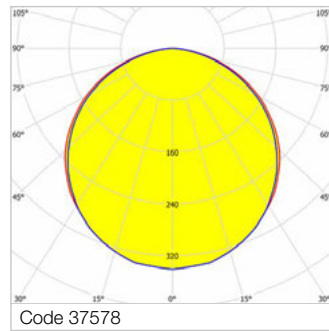
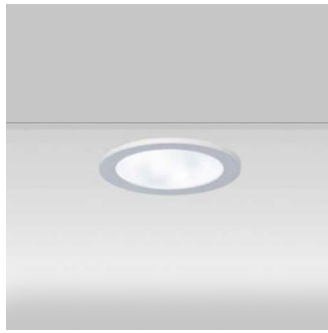
DALI electronic wiring 230V-50/60Hz

37552	Galassia 220 LED AB 2000 DALI VS	60°	20	2330	4000	>80	226x103
37588	Galassia 220 LED AB 3000 DALI VS	60°	28	3127	4000	>80	226x103
37606	Galassia 220 LED AB 4000 DALI VS	60°	36	3961	4000	>80	226x151

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

37553	Galassia 220 LED AB 2000 EP VS	60°	21	2330	4000	>80	226x103
37589	Galassia 220 LED AB 3000 EP VS	60°	29	3127	4000	>80	226x103

Galassia 220 AB VOP



AB trim in white moulded Bayblend.
Parabolic louvre in polished anodised aluminium, anti-glare, non-iridescent.
Glazed OP opal glass, tempered, non-combustible, locked in line with the trim.
It does not allow the access of the insects into the luminous compartment, avoiding unpleasant visual effects and extraordinary maintenance.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	------------------

ON/OFF electronic wiring 230V-50/60Hz

37542	Galassia 220 LED AB 2000 VOP	114°	20	1434	4000	>80	226x103
37578	Galassia 220 LED AB 3000 VOP	114°	28	1925	4000	>80	226x103
37608	Galassia 220 LED AB 4000 VOP	114°	36	2438	4000	>80	226x151

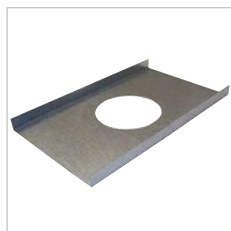
DALI electronic wiring 230V-50/60Hz

37543	Galassia 220 LED AB 2000 DALI VOP	114°	20	1434	4000	>80	226x103
37579	Galassia 220 LED AB 3000 DALI VOP	114°	28	1925	4000	>80	226x103
37610	Galassia 220 LED AB 4000 DALI VOP	114°	36	2438	4000	>80	226x151

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

37544	Galassia 220 LED AB 2000 EP VOP	114°	21	1434	4000	>80	226x103
37580	Galassia 220 LED AB 3000 EP VOP	114°	29	1925	4000	>80	226x103

Galassia | Accessories



Reinforcing bracket for panels 600x600, 600x1200 with exposed structure, in hot-galvanised steel.

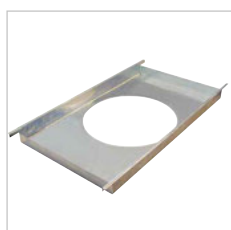
Code	Item
A0202	False ceiling brack. for luminaire D.220



Anti-rotation adapter for gridded ceiling with closing mats (always suggested to avoid stray light). Adapter made in steel - white colour, RAL 9010.

Code	Item
A0204	Grid adapter h40mm for luminaire D.220
A01523	Grid adapter h50mm - for luminaire D.220

On request: RAL colour.
Bracket size 289x289 mm for 50x50, 75x75, 100x100 mesh, slat 10 mm thick.



Reinforcing bracket for metal panels 600x600 with concealed structure, in hot-galvanised steel.

Code	Item
A0214	Metal pan. reinforcing bracket D.220



Lucequadro LED

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L70/B10): 80000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted steel.

Passive heat dissipator in anodised aluminium, oversized, for optimum thermal management of the LED module.

Flow recuperator in specular aluminium with superficial titanium-magnesium treatment, non-iridescent.

Lock-in mounting of the glass/PMMA in the lateral seats in specular aluminium.

Fixing brackets in galvanised steel, supplied.

Electrical characteristics

In compliance with EN 60598-1.

The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Wiring on a separate unit.

Class II.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- asymmetric louvre
- different power levels, colour rendering indices and colour temperatures
- wiring: dimmable, CLO (more information on page 568)
- IP54 version
- ceiling version
- emergency versions

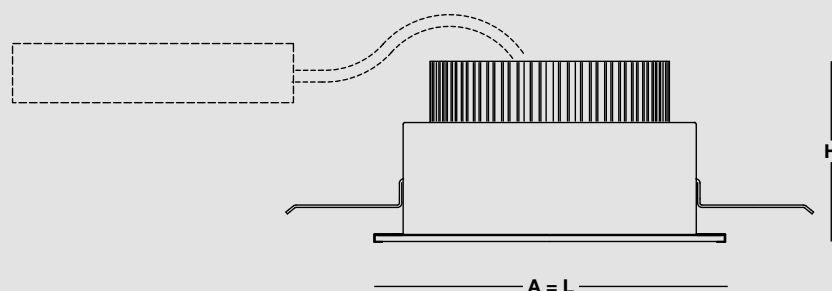
Applications

Environments: commercial, exhibition areas, transit areas, halls, shops, great halls, display windows.

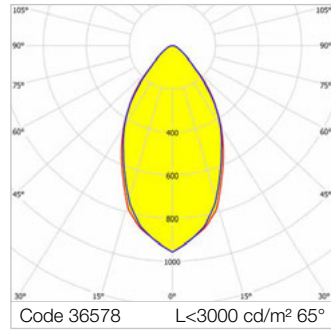
Installation

Pull-up installation.

Dimensions



Lucequadro LED VS



Average luminance <3000 cd/m² for radial angles >65°. VS moulded glass, anti-glare, tempered, non-combustible, thickness 4 mm.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	------------	--------------------	------------------	---------	-----	----------------------

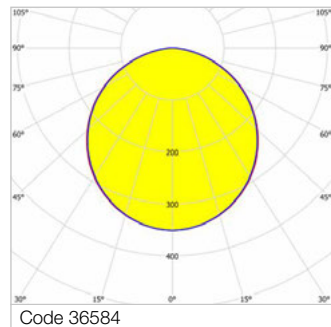
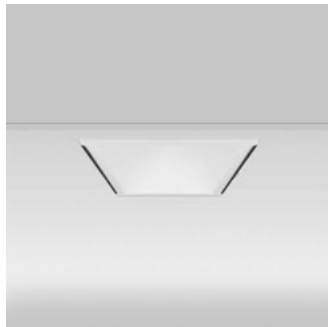
ON/OFF electronic wiring 230V-50/60Hz

36575	Lucequadro LED 2000 VS	58°	20	2247	4000	>80	235x235x116
36578	Lucequadro LED 3000 VS	58°	28	3016	4000	>80	235x235x116

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

36576	Lucequadro LED 2000 EP VS	58°	21	2247	4000	>80	235x235x116
36579	Lucequadro LED 3000 EP VS	58°	29	3016	4000	>80	235x235x116

Lucequadro LED VOP



Glazed VOP opal glass, tempered, non-combustible, thickness 4 mm.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	------------	--------------------	------------------	---------	-----	----------------------

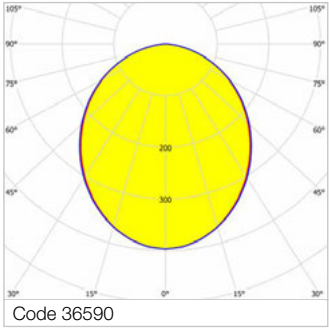
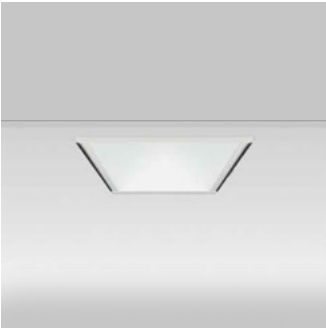
ON/OFF electronic wiring 230V-50/60Hz

36581	Lucequadro LED 2000 VOP	113°	20	1409	4000	>80	235x235x116
36584	Lucequadro LED 3000 VOP	113°	28	1891	4000	>80	235x235x116

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

36582	Lucequadro LED 2000 EP VOP	113°	21	1409	4000	>80	235x235x116
36585	Lucequadro LED 3000 EP VOP	113°	29	1891	4000	>80	235x235x116

Lucequadro LED SOP



CE

SAFE
LICKER

EP

D

650°C

IP20
IP44

5J

IK08

Classe II

Driver/LED
SELV

SOP opal methacrylate flat diffuser, anti-glare.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	------------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

36587	Lucequadro LED 2000 SOP	101°	20	2194	4000	>80	235x235x116
36590	Lucequadro LED 3000 SOP	101°	28	2945	4000	>80	235x235x116

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

36588	Lucequadro LED 2000 EP SOP	101°	21	2194	4000	>80	235x235x116
36591	Lucequadro LED 3000 EP SOP	101°	29	2945	4000	>80	235x235x116

Lucequadro | Accessories



Pair of reinforcing brackets for mineral fibre, metal and plasterboard panels, height 20 mm.

Code	Item
A0189	Reinf. brack. Lucequadro pan./plast.





3F Emilio R

Construction characteristics

Illuminotechnical characteristics

Vertical distribution adjustable from 0° to 70°.
Lifetime (L90/B20): 30000 h. (tq+25°C)
Lifetime (L80/B20): 50000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Mechanical characteristics

Single-piece in die-cast aluminium with passive dissipation with perimeter cooling slots on upper edge, giving a crown of light effect to the fitting.
Invisible lock for positioning the luminous flux.
Positioning arm in galvanised brass with sphere to allow for vertical positioning at angles from 0° to 65° and horizontal positioning from 0° to 360°.
Fastening spring clips in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.
Wiring on a separate unit.
Class II.

Source characteristics

- Compact LED module.
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- different power levels, colour rendering indices and colour temperatures
- housing in different RAL colours
- wiring: dimmable
- emergency versions

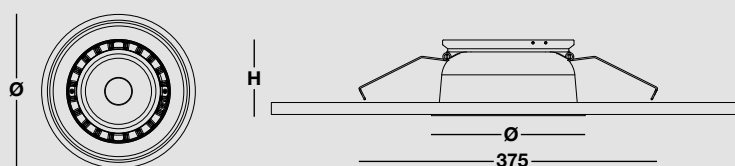
Applications

Environments: commercial, museums, shops.

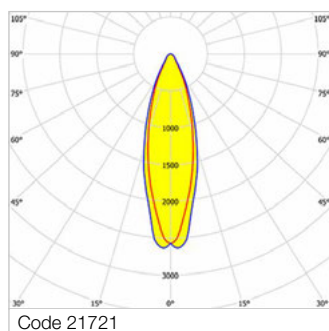
Installation

Pull-up installation.

Dimensions



3F Emilio R Spot



Spot lens.

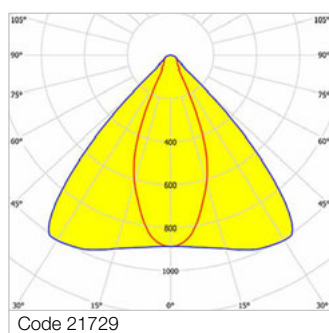
Lens made from transparent PMMA methacrylate with glossy surface and differentiated photo-etched.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	------------------

ON/OFF electronic wiring 230V-50/60Hz

21720	3F Emilio R LED 2000/840 SPOT	29°	19	2189	4000	>80	193x95
21721	3F Emilio R LED 2000/930 SPOT	29°	23	2000	3000	>90	193x95

3F Emilio R Elliptical



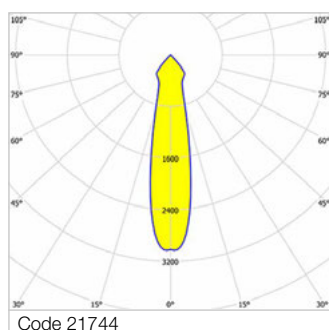
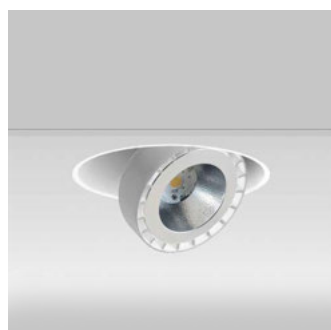
Horizontal ELL elliptical lens provides extensive installation pitch. Lens made from transparent PMMA methacrylate with glossy surface and differentiated photo-etched.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	------------------

ON/OFF electronic wiring 230V-50/60Hz

21728	3F Emilio R LED 2000/840 ELL	42° - 85°	19	2484	4000	>80	193x95
21729	3F Emilio R LED 2000/930 ELL	42° - 85°	23	2270	3000	>90	193x95

3F Emilio R Iperconcentrated



Bright anodised parabola in semi-specular, anti-reflective, anti-iridescent aluminium.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x H
------	------	------------	--------------------	------------------	---------	-----	------------------

ON/OFF electronic wiring 230V-50/60Hz

21736	3F Emilio R LED 2000/840 IPER	23°	19	2433	4000	>80	193x95
21737	3F Emilio R LED 2000/930 IPER	23°	23	2223	3000	>90	193x95
21744	3F Emilio R LED 3000/840 IPER	23°	28	3216	4000	>80	193x95

Zero 3F Track



3F Zeta Track



3F Linux



3F Six



3F Emilio Track



Binario 3F



Systems and track-mounted products

Page		Product	Screen	Optic	Lens
312		Zero 3F Track			
312	NEW	Zero 3F Track	•		
314		3F Zeta Track			
314		3F Zeta Track L			•
316	NEW	3F Zeta Track DR			•
320		3F Linux			
326		3F Linux S IP40			
328		3F Linux S IP54			
330	UPDATE	3F Linux L Light modules			•
340		3F Linux D Light modules	•		
342		3F Linux DR Light modules	•	•	
346		3F Linux Track			
356		3F Six			
358		3F Six Track			•
362		3F Six Blindo			•
368		3F Emilio Track			
372		3F Emilio Track			•
378		Binario 3F			
380		Binario 3F			

Systems and
track-mounted products

Zero 3F Track

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
Average luminance $<3000 \text{ cd/m}^2$ for radial angles $>65^\circ$.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Body in white pre-painted steel.
Diffuser with differentiated geometry, made of transparent methacrylate with microprismatic finish, anti-glare on the flat part and opal on the side.
Anti-glare opal methacrylate filter for brightness uniformity.
Lighting end caps in PMMA opal.
Supporting mechanical adapter.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
Track adapter, 4/6-way.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)

Applications

Environments: with VDTs, meeting rooms, offices.

Environments: recreational, transit areas, corridors, schools, stairwells.

Environments where soft diffuse light is required for optimal visual comfort.

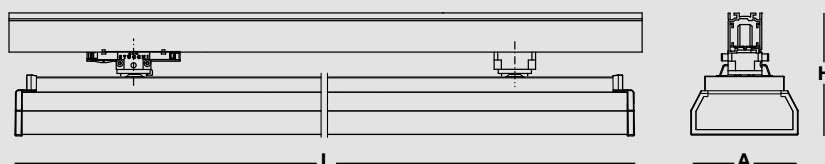
Installation

This product is suitable for installation on a 3-phase electrified busbar "Binario 3F" (on page 378).

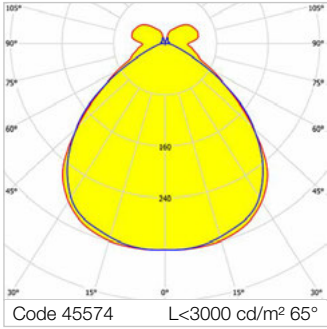
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



Zero 3F Track



Driver/LED
SELV

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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DALI electronic wiring 230V-50/60Hz

45573 <small>NEW</small>	03F TK 18W/940 DALI L620	20	1983	4000	>90	620x119x64
45574 <small>NEW</small>	03F TK 35W/940 DALI L1204	40	4152	4000	>90	1204x119x64
45575 <small>NEW</small>	03F TK 44W/940 DALI L1506	49	5190	4000	>90	1506x119x64
45576 <small>NEW</small>	03F TK 53W/940 DALI L1787	57	6227	4000	>90	1787x119x64



3F Zeta Track L

Construction characteristics

Illuminotechnical characteristics

Wide direct distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester, obtained through rolling process with adapters to busbar in white polycarbonate.

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.

PMMA lenses with external flat surface.

Supporting mechanical adapter.

End caps in white polycarbonate.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Truck adapter, 4/6-way.

Source characteristics

- LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different light distributions
- different power levels, colour rendering indices and colour temperatures
- housing and accessories in different RAL colours
- wiring: CLO (more information on page 568)

Applications

Environments: architectural, commercial, transit areas, cornices, boards.

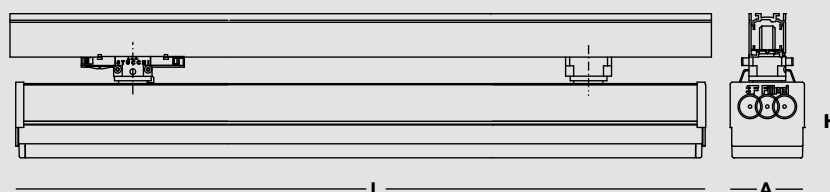
Installation

This product is suitable for installation on a 3-phase electrified busbar "Binario 3F" (on page 378).

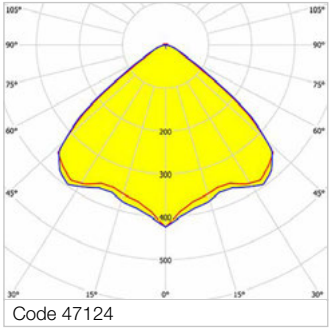
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Zeta Track L Wide



Wide distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

47136	3F Zeta TK L 15 AMPIO L605	16.5	2749	4000	>80	605x62x67
47132	3F Zeta TK L 30 AMPIO L1194	33	5498	4000	>80	1194x62x67
47124	3F Zeta TK L 50 AMPIO L1783	50	8247	4000	>80	1783x62x67

DALI electronic wiring 230V-50/60Hz

47152	3F Zeta TK L 15 DALI AMPIO L605	16.5	2749	4000	>80	605x62x67
47148	3F Zeta TK L 30 DALI AMPIO L1194	33	5498	4000	>80	1194x62x67
47140	3F Zeta TK L 50 DALI AMPIO L1783	50	8247	4000	>80	1783x62x67

Systems and
track-mounted products

3F Zeta Track DR

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
Average luminance $<1500 \text{ cd/m}^2$ for radial angles $>65^\circ$.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in hot-galvanised steel, painted in white polyester, obtained through rolling process with adapters to busbar in white polycarbonate.

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.

Rectangular transparent polycarbonate diffuser.

Semi-specular aluminium internal louvre with prismatic methacrylate filter above the louvre blades for complete shielding of the louvre compartment.

Supporting mechanical adapter.

End caps in white polycarbonate.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Truck adapter, 4/6-way.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)

Applications

Environments: exhibition areas, with VDTs, halls, shops, great halls, schools.

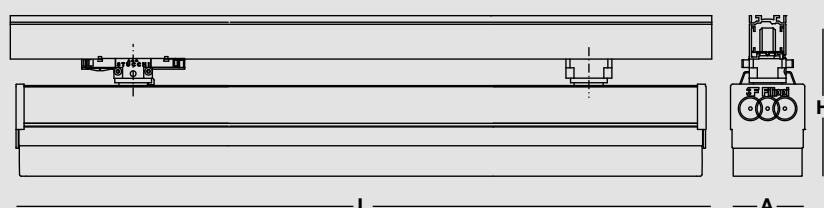
Installation

This product is suitable for installation on a 3-phase electrified busbar "Binario 3F" (on page 378).

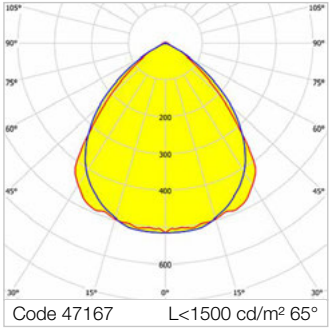
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



3F Zeta Track DR UGR



Driver/LED
SELV

Controlled symmetric distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

47167 <small>NEW</small>	3F Zeta TK DR UGR 1x24/940 L1194	28	2285	4000	>90	1194x62x67
47168 <small>NEW</small>	3F Zeta TK DR UGR 1x30/940 L1783	35	2859	4000	>90	1783x62x67

DALI electronic wiring 230V-50/60Hz

47169 <small>NEW</small>	3F Zeta TK DR UGR 1x24/940 DALI L1194	28	2285	4000	>90	1194x62x67
47170 <small>NEW</small>	3F Zeta TK DR UGR 1x30/940 DALI L1783	35	2859	4000	>90	1783x62x67

Systems and
track-mounted products





3F Linux

> www.3F-Filippi.com/3F Linux

3F Linux is more than a continuous line system: it was designed to compose channels in a simple and efficient way and significantly reduce the installation and maintenance costs of the system. Whether it's a relamping or a new project, 3F Linux is the winning choice in terms of performance and ease of installation: it has already been chosen by many big players in the retail, logistics and industrial production sectors all over the world. It is fitted with high-efficiency LED sources and features a compact body, modular components and accessories which give unrivalled freedom in terms of planning the installations.

+ Overview

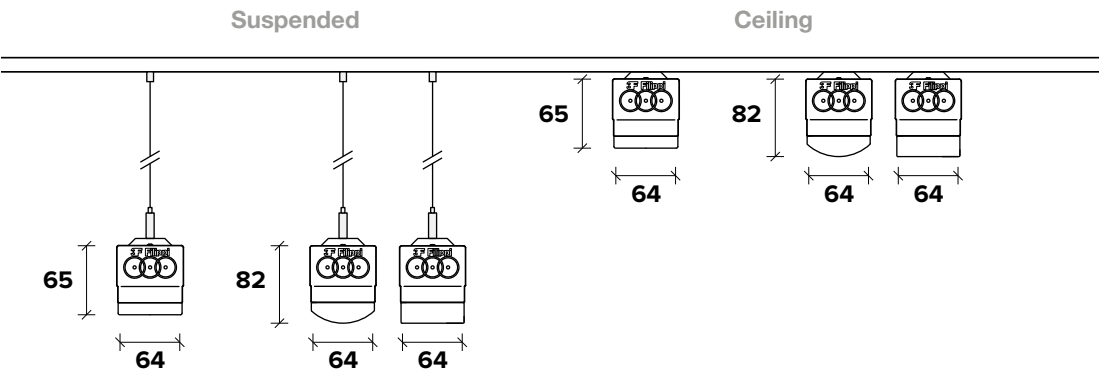
- Luminous efficacy up to 162 lumen/watt.
- Luminous fluxes from 3487 to 14130 lumens.
- Average luminance <1500 cd/m² (DR UGR version).
- Extensive installation pitch.
- UGR <19 (UGR version).
- Available with lenticular optics, recuperator or diffusers.
- Asymmetrical version.
- Version with electrified track.
- Module lengths optimised to reduce installation time and required accessories by up to 20%.
- Available on request with integrated sensors.
- Driver integrated in the fixture.
- Essential and functional design.
- Double anti-fall springs in case of accidental impacts.
- Through line up to 11 poles (on request).
- IP54 version for more severe applications.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Versatility of use in different environments.
- Mechanical and electrical assembly without tools.
- Union joint already assembled.
- Thanks to the FastWiring system, the installation time is drastically reduced.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Screen	Optic	Lens
326	3F Linux S IP40			
328	3F Linux S IP54			
330	UPDATE 3F Linux L Light modules			•
340	3F Linux D Light modules	•		
342	3F Linux DR Light modules	•	•	
346	3F Linux Track			

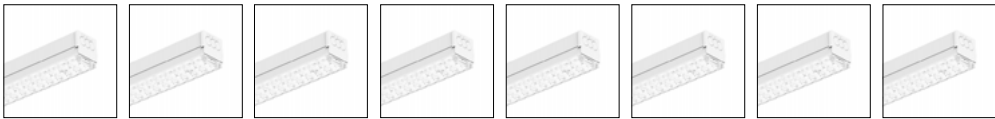
Product range

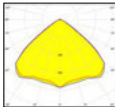
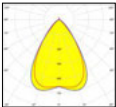
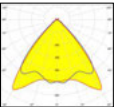
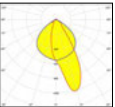
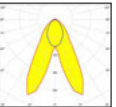
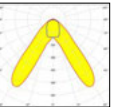
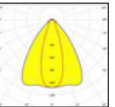
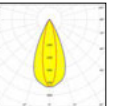
3F Linux S IP40

3F Linux L
3F Linux D
3F Linux DR



3F Linux L



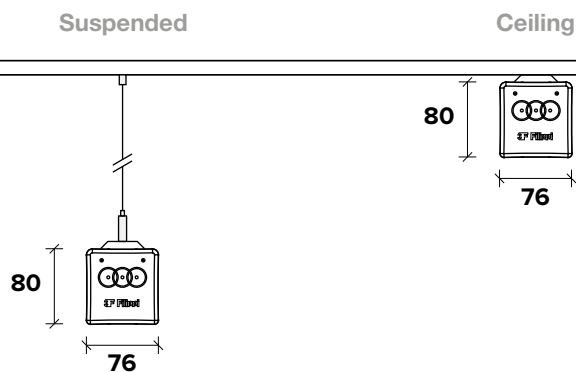
Model	Wide	Medium	UGR	AS	BAT	BAT WD	Conc	Iperconc
Average luminance for angles> 65 (cd / m²)	>3000	>3000	<3000	/	>3000	>3000	>3000	>3000
UGR	<21	<21	<19	/	<21	<21	<21	<21
Protection class	IP40 IP54							
Photometric distribution								
Power level	40	40	50	40	40	40	60	60
	50	50		50	50	50	85	85
	60	60		60	60	60		
	85	85		85				

NEW

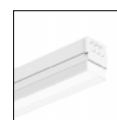
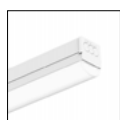
Arrange the version that best suits your needs quickly and easily
www.3f-filippi.com/en/3F-Linux-configurator

3F Linux S IP54

3F Linux L



3F Linux D 3F Linux DR



Model

D

DR

DR UGR

DR AS

Average luminance
for angles > 65
(cd / m²)

>3000

>3000

<3000

/

UGR

<21

<21

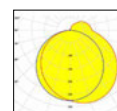
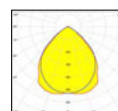
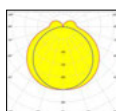
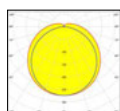
<19

/

Protection class

IP40

Photometric
distribution



Power level

2x22

2x22

1x30

2x30

2x30

2x30

2x22

Screens and finishes



3F Linux DR | IP40
Rectangular screen in self-extinguishing polycarbonate





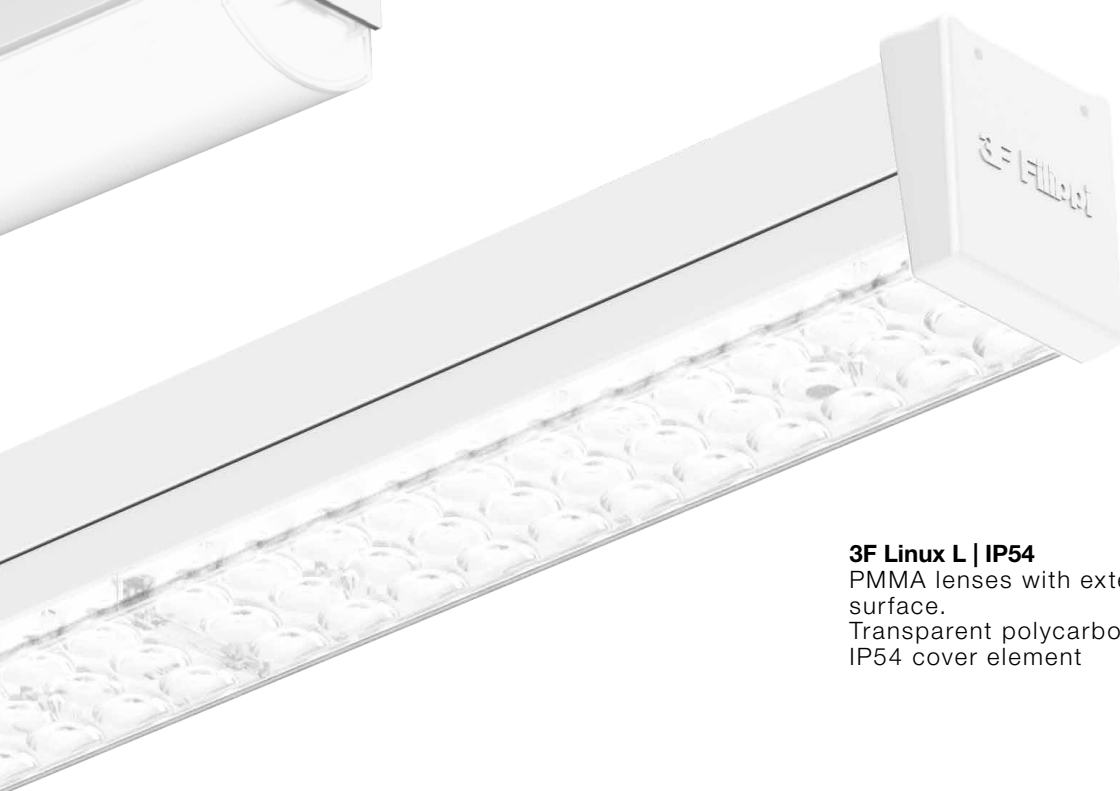
3F Linux L | IP40

PMMA lenses with external flat surface



3F Linux D | IP40

Curved screen in self-extinguishing polycarbonate



3F Linux L | IP54

PMMA lenses with external flat surface.
Transparent polycarbonate
IP54 cover element

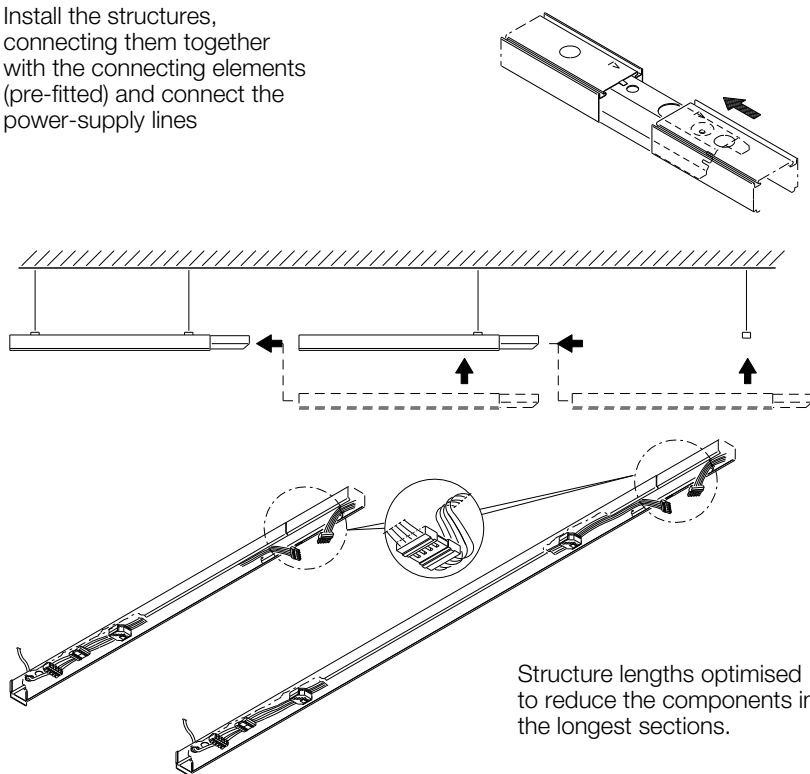
Simply modular



The **FastWiring system** reduces the time necessary to create a lighting channel:

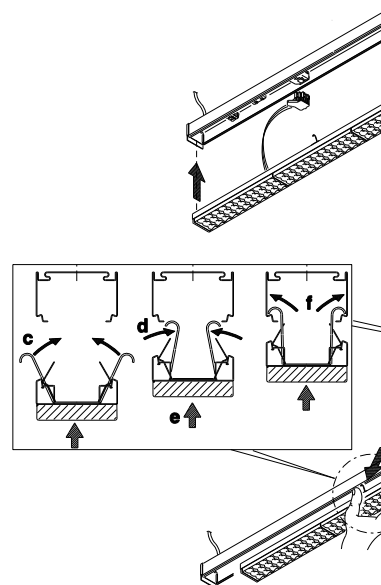
1

Install the structures, connecting them together with the connecting elements (pre-fitted) and connect the power-supply lines



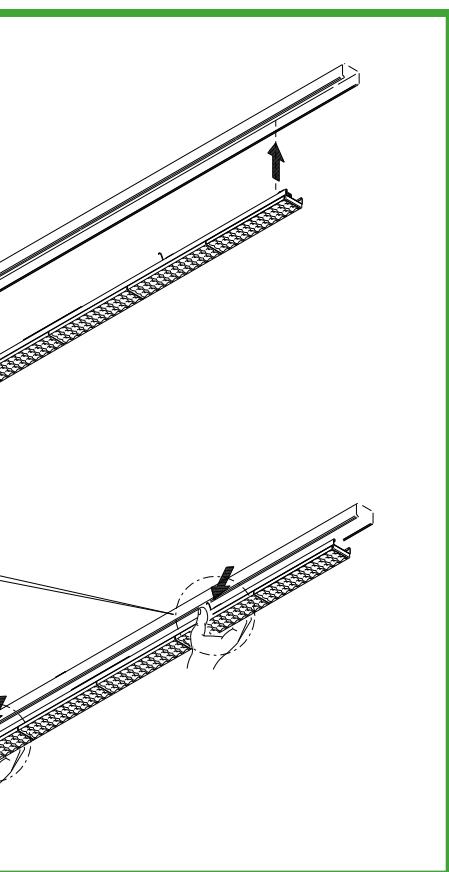
2

Connect the power-supply plug and secure the lighting element to the structure, moving it to the required point



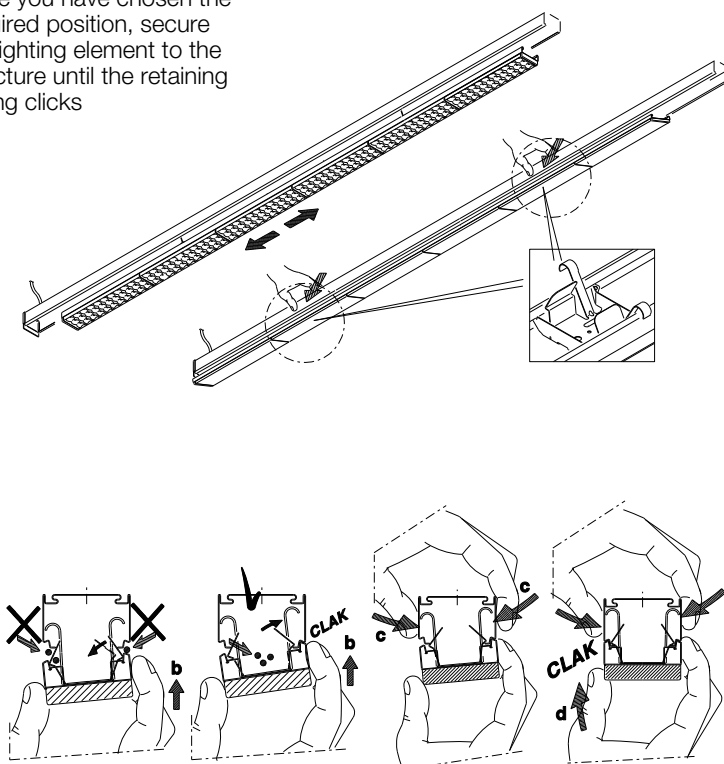


Installation requires just 3 steps, with limited tools required.



3

Once you have chosen the required position, secure the lighting element to the structure until the retaining spring clicks





3F Linux S | IP40

This fixture makes it possible to create light channels with IP40 protection.

Modular and flexible structural system with small dimensions to create continuous channels and compositions, transport electrical lines and fixing of various types of products.

Quick and easy ceiling or pendant installation.

Construction characteristics

Mechanical characteristics

Hot-galvanised wired structure, painted in polyester base white, obtained through rolling process.

Linear connecting element in hot galvanised steel for the formation of continuous channels. Standard on L3556 versions (optional for other lengths). For the completion accessories see accessories on page 348.

On request

- structure and accessories in different RAL colours
- through-wiring up to 11 poles

Applications

Environments: commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops, schools.

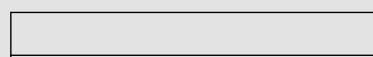
Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Installation

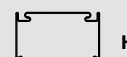
Ceiling, suspension or wall installation.

For more information, refer to the IP40 light channel composition guide (on page).

Dimensions



L

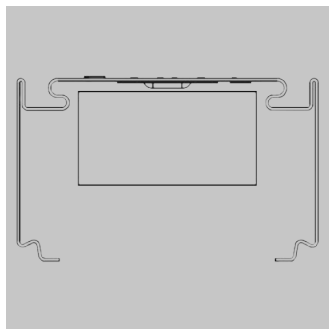


A



L

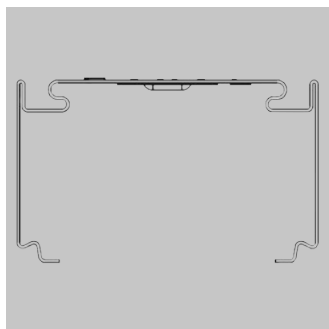
3F Linux S | IP40



Supporting structure with 5 or 7-pole through power supply lines with H07Z-U Halogen Free cables (2.5 mm² HT90 cross-section), equipped with quick connection start/end channel terminal blocks, non-reversible with intermediate power sockets.
 2 sockets for 3556 mm structures, 1 socket for 1778 mm structures (5P=N/T/1/2/3, 7P=N/T/1/2/3/+/-).
 Feeding input on top (at the beginning or in the middle of the structure).

Code	Item	Dimensions L x A x H
A20019	3F Linux S 5P L1778	1778x62x38
A20026	3F Linux S 7P L1778	1778x62x38
A20017	3F Linux S 5P L3556	3556x62x38
A20024	3F Linux S 7P L3556	3556x62x38

3F Linux S-NL | IP40



IP40

Supporting structure WITHOUT power supply line.
 Polycarbonate reinforced cable supports (for use every 500 mm approx.).
 Feeding input on top (at the beginning or in the middle of the structure).

Code	Item	Dimensions L x A x H
A20012	3F Linux S NL L1778	1778x62x38
A20011	3F Linux S NL L3556	3556x62x38



3F Linux S | IP54

This fixture makes it possible to create light channels with IP54 protection.

Construction characteristics

Mechanical characteristics

Hot-galvanised wired structure, painted in polyester base white, obtained through rolling process, with expanded EPDM rubber profiles.

Linear connecting element in hot galvanised steel with gasket for the formation of continuous channels, standard on L3556 versions (optional for other lengths).

Transparent polycarbonate IP54 cover element with methacrylate flexible parts. The L3556 versions have a locking collar for joining the covers.

For the completion accessories see accessories on page 348.

Electrical characteristics

Supporting structure with 5 or 7-pole through power supply lines with H07Z-U Halogen Free cables (2.5 mm² HT90 cross-section), equipped with quick connection start/end channel terminal blocks, non-reversible with intermediate power sockets.

2 sockets for 3556 mm structures,

1 socket for 1778 mm structures

(5P=N/T/1/2/3, 7P=N/T/1/2/3/+/-).

Feeding input on top at the beginning of the structure or at end cap.

On request

- structure and accessories in different RAL colours
- through-wiring up to 11 poles

Applications

Dry, dusty indoor environments, subject to occasional water splashes.

Virtually in all environments compatibly with the use of any chemicals which could compromise the use of plastic materials.

Not suitable in environments where chlorine fumes, ligroin, hydrocarbon mixtures, mineral oil vapours or fumes of lubricating emulsions to cool down machine tools are present.

Not suitable for installation on surfaces subject to important vibrations, exposed to weather conditions, on ropes or poles.

For specific applications please contact our technical offices.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

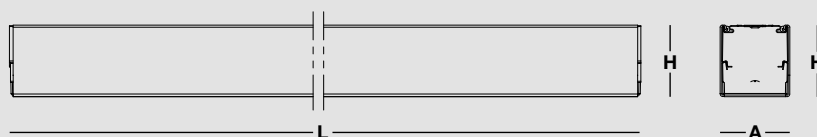
Installation

Ceiling mounted or suspension installation.

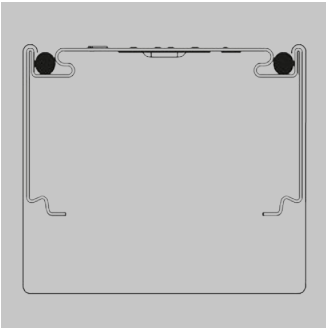
Attention: to obtain a light system with IP54 protection rating, it is necessary to use 3F Linux L light modules (or alternatively IP54 closing top) + closing terminals.

For more information, refer to the IP54 light channel composition guide (on page).

Dimensions



3F Linux S | IP54



All product codes include the support structure and cover element.
In the L3556 versions there is also an IP54 element that is used to protect the joins between the covers.

Code	Item	Dimensions L x A x H
A20726	3F Linux 5P IP54 L1778 System	1778x64x72
A20724	3F Linux 7P IP54 L1778 System	1778x64x72
A20725	3F Linux 5P IP54 L3556 System	3556x64x72
A20723	3F Linux 7P IP54 L3556 System	3556x64x72



3F Linux L | Light modules

Construction characteristics

Illuminotechnical characteristics

Direct distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.

PMMA lenses with external flat surface (superimposed to obtain full protection of LED modules).

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Connection to the structure with mobile

plug with phase selection (H05Z-U

Halogen Free cable section 0,5 mm²

HT90).

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- integrated light sensor
- HACCP versions for use in the food industry
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: industrial, commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

UGR version

Environments: staterooms, with VDTs, offices.

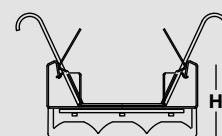
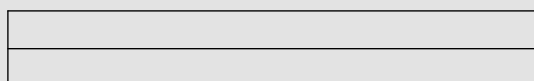
Installation

This lighting unit can be installed on profile 3F Linux S | IP40 and 3F Linux S | IP54 (see dedicated product pages).

Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

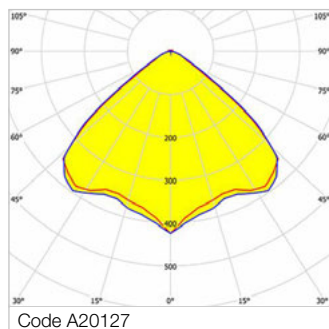
Dimensions



— L —

— H —

3F Linux L Wide



Wide distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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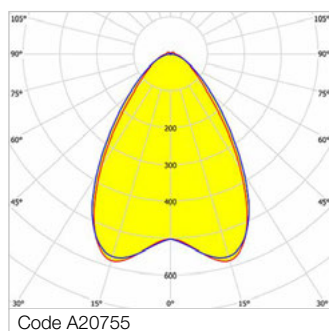
ON/OFF electronic wiring 230V-50/60Hz

A20127	3F Linux L 40 LED AMPIO L1778	43	6936 IP40 6607 IP54	4000	>80	1778x62x32
A20126	3F Linux L 50 LED AMPIO L1778	52	8247 IP40 7856 IP54	4000	>80	1778x62x32
A20125	3F Linux L 60 LED AMPIO L1778	62	9855 IP40 9388 IP54	4000	>80	1778x62x32
A20124	3F Linux L 85 LED AMPIO L1778	93	14086 IP40 13418 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20141	3F Linux L 40 LED DALI AMPIO L1778	43	6936 IP40 6607 IP54	4000	>80	1778x62x32
A20140	3F Linux L 50 LED DALI AMPIO L1778	52	8247 IP40 7856 IP54	4000	>80	1778x62x32
A20139	3F Linux L 60 LED DALI AMPIO L1778	62	9855 IP40 9388 IP54	4000	>80	1778x62x32
A20138	3F Linux L 85 LED DALI AMPIO L1778	93	14086 IP40 13418 IP54	4000	>80	1778x62x32

3F Linux L Medium



Medium distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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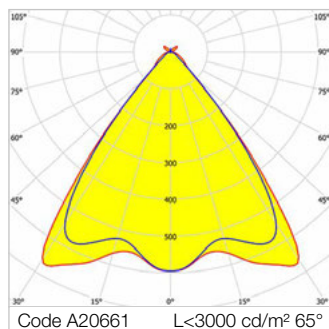
ON/OFF electronic wiring 230V-50/60Hz

A20757	3F Linux L 40 LED MEDIO L1778	43	6843 IP40 6499 IP54	4000	>80	1778x62x32
A20756	3F Linux L 50 LED MEDIO L1778	52	8136 IP40 7728 IP54	4000	>80	1778x62x32
A20755	3F Linux L 60 LED MEDIO L1778	62	9723 IP40 9235 IP54	4000	>80	1778x62x32
A20754	3F Linux L 85 LED MEDIO L1778	93	13898 IP40 13200 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20762	3F Linux L 40 LED DALI MEDIO L1778	43	6843 IP40 6499 IP54	4000	>80	1778x62x32
A20761	3F Linux L 50 LED DALI MEDIO L1778	52	8136 IP40 7728 IP54	4000	>80	1778x62x32
A20760	3F Linux L 60 LED DALI MEDIO L1778	62	9723 IP40 9235 IP54	4000	>80	1778x62x32
A20759	3F Linux L 85 LED DALI MEDIO L1778	93	13898 IP40 13200 IP54	4000	>80	1778x62x32

3F Linux L UGR



Controlled symmetric distribution.
 Average luminance < 3000 cd/m² for radial angles > 65°.
 Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.
 Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

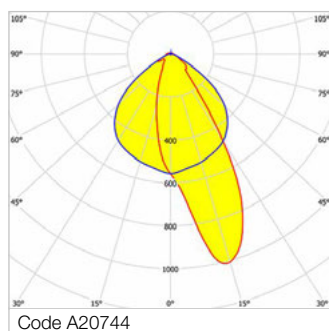
ON/OFF electronic wiring 230V-50/60Hz

A20661	3F Linux L 50 LED UGR L1778	52	8230 IP40 7932 IP54	4000	>80	1778x62x32
A20662 ^{NEW}	3F Linux L 40 LED UGR L1778	43	6921 IP40 6671 IP54	4000	>80	1778x62x32
A20664 ^{NEW}	3F Linux L 50/940 LED UGR L1778	52	6749 IP40 6505 IP54	4000	>90	1778x62x32
A20665 ^{NEW}	3F Linux L 40/940 LED UGR L1778	43	5675 IP40 5470 IP54	4000	>90	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20667	3F Linux L 50 LED DALI UGR L1778	52	8230 IP40 7932 IP54	4000	>80	1778x62x32
A20668 ^{NEW}	3F Linux L 40 LED DALI UGR L1778	43	6921 IP40 6671 IP54	4000	>80	1778x62x32
A20670 ^{NEW}	3F Linux L 50/940 LED DALI UGR L1778	52	6749 IP40 6505 IP54	4000	>90	1778x62x32
A20671 ^{NEW}	3F Linux L 40/940 LED DALI UGR L1778	43	5675 IP40 5470 IP54	4000	>90	1778x62x32

3F Linux L AS



Asymmetric distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

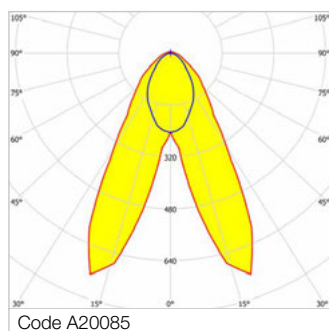
ON/OFF electronic wiring 230V-50/60Hz

A20747	3F Linux L 40 LED AS L1778	43	6957 IP40 6664 IP54	4000	>80	1778x62x32
A20746	3F Linux L 50 LED AS L1778	52	8272 IP40 7924 IP54	4000	>80	1778x62x32
A20745	3F Linux L 60 LED AS L1778	62	9886 IP40 9469 IP54	4000	>80	1778x62x32
A20744	3F Linux L 85 LED AS L1778	93	14130 IP40 13535 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20752	3F Linux L 40 LED DALI AS L1778	43	6957 IP40 6664 IP54	4000	>80	1778x62x32
A20751	3F Linux L 50 LED DALI AS L1778	52	8272 IP40 7924 IP54	4000	>80	1778x62x32
A20750	3F Linux L 60 LED DALI AS L1778	62	9886 IP40 9469 IP54	4000	>80	1778x62x32
A20749	3F Linux L 85 LED DALI AS L1778	93	14130 IP40 13535 IP54	4000	>80	1778x62x32

3F Linux L BAT



Double asymmetrical distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

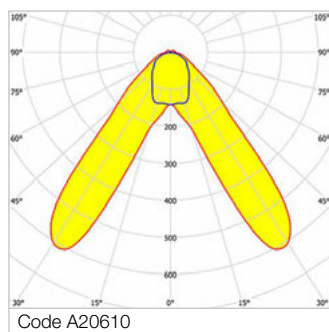
ON/OFF electronic wiring 230V-50/60Hz

A20085	3F Linux L 40 LED BAT L1778	43	6950 IP40 6599 IP54	4000	>80	1778x62x32
A20084	3F Linux L 50 LED BAT L1778	52	8264 IP40 7847 IP54	4000	>80	1778x62x32
A20083	3F Linux L 60 LED BAT L1778	62	9876 IP40 9378 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20099	3F Linux L 40 LED DALI BAT L1778	43	6950 IP40 6599 IP54	4000	>80	1778x62x32
A20098	3F Linux L 50 LED DALI BAT L1778	52	8264 IP40 7847 IP54	4000	>80	1778x62x32
A20097	3F Linux L 60 LED DALI BAT L1778	62	9876 IP40 9378 IP54	4000	>80	1778x62x32

3F Linux L BAT WD



Wide double symmetric distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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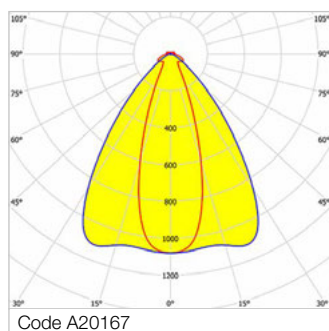
ON/OFF electronic wiring 230V-50/60Hz

A20610	3F Linux L 40 LED BAT WD L1778	43	6928 IP40 6528 IP54	4000	>80	1778x62x32
A20609	3F Linux L 50 LED BAT WD L1778	52	8238 IP40 7762 IP54	4000	>80	1778x62x32
A20608	3F Linux L 60 LED BAT WD L1778	62	9845 IP40 9276 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20624	3F Linux L 40 LED DALI BAT WD L1778	43	6928 IP40 6528 IP54	4000	>80	1778x62x32
A20623	3F Linux L 50 LED DALI BAT WD L1778	52	8238 IP40 7762 IP54	4000	>80	1778x62x32
A20622	3F Linux L 60 LED DALI BAT WD L1778	62	9845 IP40 9276 IP54	4000	>80	1778x62x32

3F Linux L Concentrated



Concentrated elliptical distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Recommended minimum installation height: 5 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

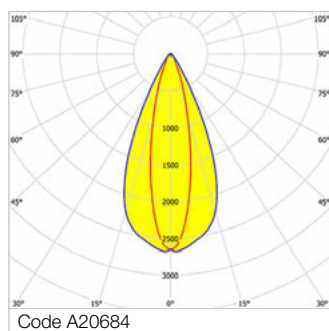
ON/OFF electronic wiring 230V-50/60Hz

A20167	3F Linux L 60 LED CONC L1778	62	9662 IP40 9154 IP54	4000	>80	1778x62x32
A20166	3F Linux L 85 LED CONC L1778	93	13810 IP40 13084 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20181	3F Linux L 60 LED DALI CONC L1778	62	9662 IP40 9154 IP54	4000	>80	1778x62x32
A20180	3F Linux L 85 LED DALI CONC L1778	93	13810 IP40 13084 IP54	4000	>80	1778x62x32

3F Linux L Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.

Structure height (3F Linux S | IP40 + 3F Linux L) equal to 65 mm.

Structure height (3F Linux S | IP54 + 3F Linux L) equal to 71 mm.

Recommended minimum installation height: 5 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

A20685	3F Linux L 60 LED IPERCONC L1778	62	9418 IP40 8910 IP54	4000	>80	1778x62x32
A20684	3F Linux L 85 LED IPERCONC L1778	93	13462 IP40 12736 IP54	4000	>80	1778x62x32

DALI electronic wiring 230V-50/60Hz

A20699	3F Linux L 60 LED DALI IPERCONC L1778	62	9418 IP40 8910 IP54	4000	>80	1778x62x32
A20698	3F Linux L 85 LED DALI IPERCONC L1778	93	13462 IP40 12736 IP54	4000	>80	1778x62x32



SALDI
SALDI
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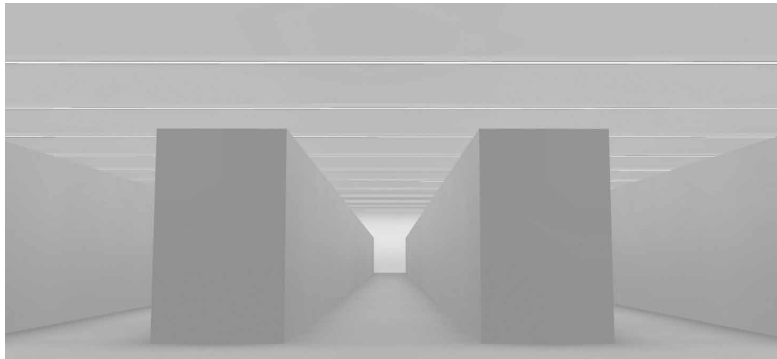
SALE **SALE**

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SALE

3F Linux L

Design reference tables - Installation **ACROSS** aisles



Design data:

Maintenance factor	K = 0.90
Reflection	ceiling 50% walls 50% floor 40%
Shelves	height 2.20 metres reflection 40%
Work surface height	0.85 metres
Aisle width	2 metres

Luminaire: **3F Linux L 85 AMPIO**

Installation pitch (metres)	Calculation surface	Installation height (metres)				
		3	3.5	4	4.5	5
3	Horizontal aisle	1601	1598	1571	1561	1569
	Vertical shelf	813	802	800	792	798
3.5	Horizontal aisle		1353	1348	1336	1341
	Vertical shelf		684	687	679	686
4	Horizontal aisle		1181	1177	1167	1172
	Vertical shelf		599	600	594	598
4.5	Horizontal aisle			1050	1042	1043
	Vertical shelf			540	529	532
5	Horizontal aisle				939	937
	Vertical shelf				481	478
5.5	Horizontal aisle					859
	Vertical shelf					439

Luminaire: **3F Linux L 60 AMPIO**

Installation pitch (metres)	Calculation surface	Installation height (metres)				
		3	3.5	4	4.5	5
3	Horizontal aisle	1196	1194	1173	1166	1171
	Vertical shelf	607	599	598	591	596
3.5	Horizontal aisle		1010	1007	997	1002
	Vertical shelf		511	513	508	512
4	Horizontal aisle		882	879	871	876
	Vertical shelf		447	448	443	446
4.5	Horizontal aisle			784	778	779
	Vertical shelf			403	395	398
5	Horizontal aisle				702	700
	Vertical shelf				359	357
5.5	Horizontal aisle					641
	Vertical shelf					328

Luminaire: **3F Linux L 50 AMPIO**

Installation pitch (metres)	Surface	Installation height (metres)				
		3	3.5	4	4.5	5
3	Horizontal aisle	1014	1012	995	989	993
	Vertical shelf	515	508	507	501	506
3.5	Horizontal aisle		856	854	846	849
	Vertical shelf		434	435	430	435
4	Horizontal aisle		748	745	739	743
	Vertical shelf		379	381	376	378
4.5	Horizontal aisle			666	660	660
	Vertical shelf			341	335	337
5	Horizontal aisle				595	594
	Vertical shelf				305	303
5.5	Horizontal aisle					544
	Vertical shelf					278

Luminaire: **3F Linux L 40 AMPIO**

Installation pitch (metres)	Surface	Installation height (metres)				
		3	3.5	4	4.5	5
3	Horizontal aisle	854	852	838	833	836
	Vertical shelf	434	428	427	423	425
3.5	Horizontal aisle		722	719	712	716
	Vertical shelf		365	367	363	366
4	Horizontal aisle		630	628	622	625
	Vertical shelf		319	320	317	319
4.5	Horizontal aisle			561	555	557
	Vertical shelf			287	282	284
5	Horizontal aisle				501	499
	Vertical shelf				257	255
5.5	Horizontal aisle					458
	Vertical shelf					234

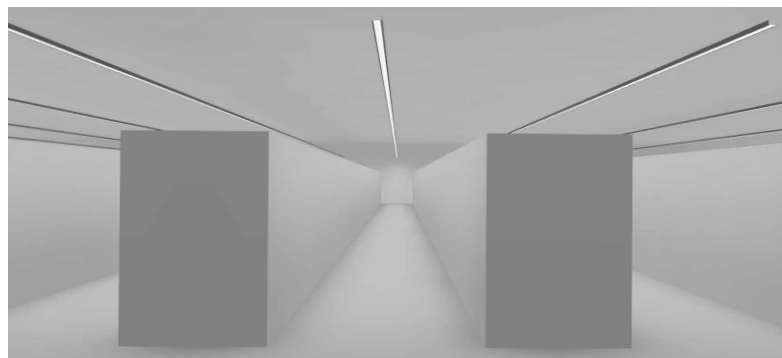
Notes:

The values in the tables are given in lux (lx).

■ Wide distrib.

■ Not recommended

Design reference tables - Installation **ALONG** aisles Up to 5 metres height



Design data:

Maintenance factor	K = 0.90
Reflection	ceiling 50% walls 50% floor 40%
Shelves	height 2.20 metres reflection 40%
Work surface height	0.85 metres
Aisle width	2 metres

Luminaire: **3F Linux L AMPIO**

Luminaire power	Calculation surface	Installation height (metres)				
		3	3.25	3.5	3.75	4
85 AMPIO	Horizontal aisle	1946	1728	1604	1483	1416
	Vertical shelf	1161	1064	947	855	782
60 AMPIO	Horizontal aisle	1453	1290	1198	1108	1058
	Vertical shelf	867	795	707	639	584
50 AMPIO	Horizontal aisle	1233	1094	1015	939	897
	Vertical shelf	736	674	600	542	495
40 AMPIO	Horizontal aisle	1038	921	855	791	756
	Vertical shelf	619	568	505	457	418

Luminaire: **3F Linux L MEDIUM**

Luminaire power	Calculation surface	Installation height (metres)				
		3	3.25	3.5	3.75	4
85 MEDIUM	Horizontal aisle	2513	2331	2170	2032	1918
	Vertical shelf	1050	1060	1034	988	934
60 MEDIUM	Horizontal aisle	1877	1741	1621	1518	1432
	Vertical shelf	784	792	772	738	697
50 MEDIUM	Horizontal aisle	1592	1477	1375	1287	1215
	Vertical shelf	666	672	654	625	591
40 MEDIUM	Horizontal aisle	1341	1243	1158	1084	1023
	Vertical shelf	561	566	551	527	498

Luminaire: **3F Linux L BAT**

Luminaire power	Calculation surface	Installation height (metres)				
		3	3.25	3.5	3.75	4
60 BAT	Horizontal aisle	1408	1251	1116	995	923
	Vertical shelf	890	863	825	792	740
50 BAT	Horizontal aisle	1194	1061	947	844	783
	Vertical shelf	755	731	700	672	628
40 BAT	Horizontal aisle	1005	894	797	711	659
	Vertical shelf	636	616	589	566	529

Luminaire: **3F Linux BAT WD**

Luminaire power	Calculation surface	Installation height (metres)				
		3	3.25	3.5	3.75	4
60 BAT WD	Horizontal aisle	1073	915	803	699	616
	Vertical shelf	1028	969	869	763	655
50 BAT WD	Horizontal aisle	909	776	682	593	523
	Vertical shelf	872	822	737	648	555
40 BAT WD	Horizontal aisle	766	653	573	499	440
	Vertical shelf	735	692	621	545	467

Notes:

The values in the tables are given in lux (lx).

Design reference tables - Installation **ALONG** aisles Over 5 metres height

Design data:

Reflection		Shelves		Work surface height	0.85 metres
ceiling	50%	height	4.5 / 5.5 / 6.5 / 7.5 metres	Aisle width	2 metres
walls	50%	reflection	40%		
floor	40%				

Luminaire: **3F Linux L CONC**

Luminaire power	Calculation surface	Installation height (metres)			
		5	6	7	8
85 CONC	Horizontal aisle	2106	1830	1595	1403
	Vertical shelf	541	506	473	439
60 CONC	Horizontal aisle	1573	1366	1191	1048
	Vertical shelf	404	377	353	328



3F Linux D | Light modules

Construction characteristics

Illuminotechnical characteristics

Diffused symmetric distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.
 Curved screen in self-extinguishing polycarbonate, UV stabilised, opal, with smooth outer surface.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
 Connection to the structure with mobile plug with phase selection (H05Z-U Halogen Free cable section 0,5 mm² HT90).

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- asymmetric lighting distribution
- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops, schools.

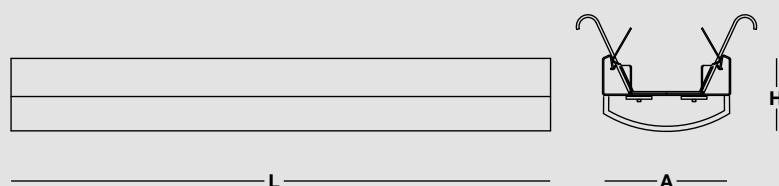
Installation

This lighting unit can be installed only on profile 3F Linux S | IP40 (see dedicated product pages).

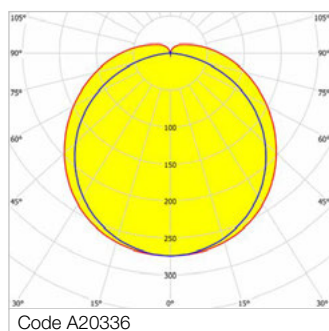
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Linux D



Diffuse distribution.
 Structure height (3F Linux S + 3F Linux D) equal to 81 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

A20336	3F Linux D 2x22 LED L1778	49	6236	4000	>80	1778x62x47
A20335	3F Linux D 2x30 LED L1778	70	7835	4000	>80	1778x62x47

DALI electronic wiring 230V-50/60Hz

A20350	3F Linux D 2x22 LED DALI L1778	49	6236	4000	>80	1778x62x47
A20349	3F Linux D 2x30 LED DALI L1778	70	7835	4000	>80	1778x62x47



3F Linux DR | Light modules

Construction characteristics

Illuminotechnical characteristics

Direct distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Light unit in hot-galvanised steel, painted in white polyester base with fixing springs and retractable safety hooks in stainless steel.

Rectangular screen in self-extinguishing polycarbonate, UV stabilised, with smooth outer surface.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Connection to the structure with mobile

plug with phase selection (H05Z-U

Halogen Free cable section 0,5 mm²

HT90).

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- emergency versions

Applications

Environments: commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops, schools.

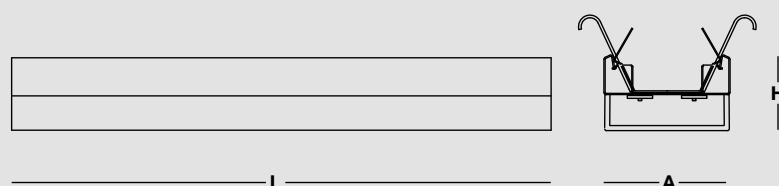
Installation

This lighting unit can be installed only on profile 3F Linux S | IP40 (see dedicated product pages).

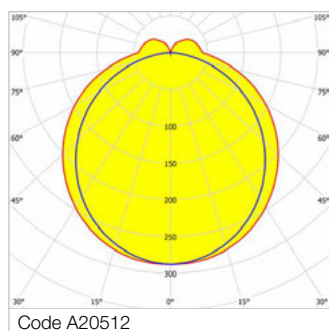
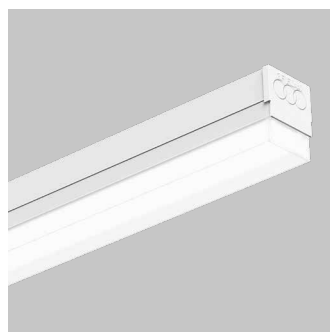
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Linux DR



Diffused symmetric distribution.
 Rectangular opal polycarbonate diffuser.
 Structure height (3F Linux S + 3F Linux DR) equal to 81 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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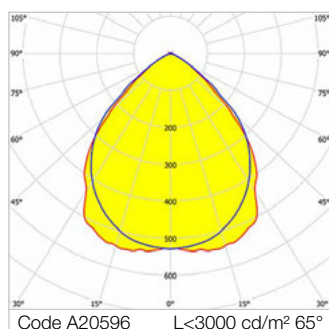
ON/OFF electronic wiring 230V-50/60Hz

A20512	3F Linux DR 2x22 LED L1778	49	6253	4000	>80	1778x62x47
A20511	3F Linux DR 2x30 LED L1778	70	7856	4000	>80	1778x62x47

DALI electronic wiring 230V-50/60Hz

A20526	3F Linux DR 2x22 LED DALI L1778	49	6253	4000	>80	1778x62x47
A20525	3F Linux DR 2x30 LED DALI L1778	70	7856	4000	>80	1778x62x47

3F Linux DR UGR



Controlled symmetric distribution.
 1x30 - Average luminance <1500 cd/m² for radial angles >65°.
 2x22 - Average luminance <3000 cd/m² for radial angles >65°.
 Rectangular transparent polycarbonate diffuser.
 Semi-specular aluminium internal louvre with prismatic methacrylate filter above the louvre blades for complete shielding of the louvre compartment.
 Structure height (3F Linux S + 3F Linux DR) equal to 81 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

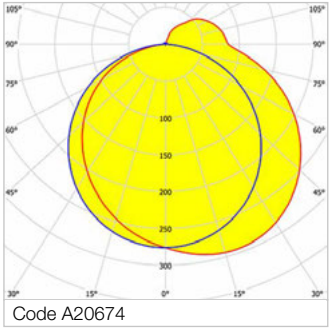
ON/OFF electronic wiring 230V-50/60Hz

A20595	3F Linux DR 1x30 LED UGR L1778	35	3487	4000	>80	1778x62x47
A20596	3F Linux DR 2x22 LED UGR L1778	49	5361	4000	>80	1778x62x47

DALI electronic wiring 230V-50/60Hz

A20599	3F Linux DR 1x30 LED DALI UGR L1778	35	3487	4000	>80	1778x62x47
A20600	3F Linux DR 2x22 LED DALI UGR L1778	49	5361	4000	>80	1778x62x47

3F Linux DR AS



Driver/LED
SELV

Asymmetric distribution.
Rectangular opal polycarbonate diffuser.
Internal flow recuperator in white steel.
Structure height (3F Linux S + 3F Linux DR) equal to 81 mm.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

A20674	3F Linux DR 2x30 LED AS L1778	70	6403	4000	>80	1778x62x47
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DALI electronic wiring 230V-50/60Hz

A20679	3F Linux DR 2x30 LED DALI AS L1778	70	6403	4000	>80	1778x62x47
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3F Linux Track

Construction characteristics

Mechanical characteristics

Light unit in hot-galvanised steel with white polyester powder coating, with retractable fastening clips and stainless steel safety hooks.

Electrified busbar made from extruded white aluminium, Eurostandard Plus compliant.

The wires are enclosed in rigid extruded profiles made of PVC insulating material with high dielectric strength.

Length of the electrified busbar: 1500 mm.

Electrical characteristics

Connection to the structure with mobile 7-pin plug with phase selection (H05Z-U Halogen Free cable section 0.5 mm² HT90).

(L1/L2/L3/N/GRD/DA/DA) 16A/440V
2x1A/50V FELV AC (DALI).

Copper conductors.

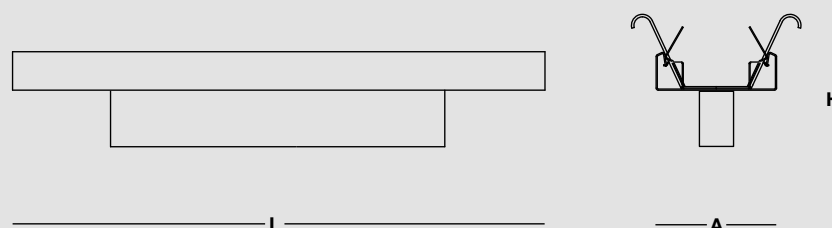
On request

- black and grey electrified busbar

Installation

This unit can be installed only on profile 3F Linux S | IP40 (see dedicated product pages).

Dimensions



3F Linux Track



960°C

IP20

Eurostandard Plus 6-conductor (plus earth) busbar (L1/L2/L3/N/GRD/DA/DA) 16A/440V with power supply cap and closing cap.

Code	Item	Dimensions L x A x H
A20424	3F Linux TK L1778	1778x62x57

3F Linux | Accessories



Free-position invisible sliding bracket with regulator in stainless steel.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20450	Slid.invis.brack.w/adj.for susp.3F Linux

The suspension cable must be made of galvanised steel with 49 elementary wires of minimum 1.5 mm diameter (for a weight of 15 kg) and 2 mm (for a weight of 25 kg).



Free-position sliding bracket in stainless steel.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20451	Slid.invis.brack.ceiling instal.3F Linux



Free-position sliding bracket in stainless steel.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20453	S-shaped chain hook w/slid.bra. 3F Linux

Supplied with S-hook for galvanised steel chain.



Wall-mounting bracket, in white painted steel.

Code	Item
A0052 ^{NEW}	Wall-mounting brack



Safety screw for locking the sliding bracket, made of hot galvanised steel.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20474	Safety screw locking slid.bra.3F Linux S

These accessories must ALWAYS be used with one of the following codes: A20450 - A20451 - A20453.



Hook to suspended luminaires to a chain.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20452	Stainless steel hook for chain

These accessories must ALWAYS be used with one of the following codes: A20451.



Suspension without controller, galvanised steel cable 1.5 mm diameter, load 15 kg.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20485	Suspension without adjustment - 0.5 m
A20486	Suspension without adjustment - 1 m
A20487	Suspension without adjustment - 2 m
A20488	Suspension without adjustment - 3 m
A20489	Suspension without adjustment - 4 m
A20490	Suspension without adjustment - 5 m
A20491	Suspension without adjustment - 6 m

In the case of purchase of only one sliding bracket with controller (code A20450), the suspension cable must be made of galvanised steel with 49 elementary wires of minimum 1.5 mm diameter (for a weight of 15 kg).



Caddy hook to create a point from which to suspend the system or the loads to false ceilings with visible profiles.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A02562	Caddy for exposed profiles of 24 mm

To be installed on exposed profiles (width 24 mm) of false ceilings. We recommend reinforcing the false-ceiling fixing at the point where the Caddy is to be installed. Supplied complete with nut and washer. The suspension must be purchased separately. These accessories must ALWAYS be used with one of the following codes: A20485 - A20486 - A20487 - A20488 - A20489 - A20490 - A20491.



Galvanised steel cable, diameter 1.5 mm, composed of 49 wires. 15 kg capacity (ratio 5:1).

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A0716	Coil galv. cable diam. 1.5mm - 100m The pack contains 100 metres.
A0717	Coil galv. cable diam. 1.5mm - 500m The pack contains 500 metres.
A0718	Coil galv. cable diam. 1.5mm - 1000m The pack contains 1000 metres.

These accessories must ALWAYS be used with one of the following codes: A20450, (A20452+A0714) o (A20451+A0659).



Clamp in nickel-plated brass suitable for fixing and adjustment of galvanised steel wire (diameter 1,25 mm - 1,5 mm - 2 mm), complete with locking screws. The 2 hole clamp allows to block and adjust the cable on a bearing element (part of the building) or on rounded eye bolt.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A0714	Clamp 2 holes susp.- 100 pcs The pack contains 100 pieces.



Clamp suitable for fixing and adjustment of galvanised steel wire (diameter 1.5 mm), with quick adjustment through unlock buttons. The clamp with 2 holes allow to fix and adjust the cable on the carrier structural element (belonging to the building) or with eye screw fixing.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A0659	Adjustable clamp 2 holes - 10 pcs The pack contains 10 pieces.

This accessory can be used with one of the following codes: A20450 - A0716 - A0717 - A0718.



Element to connect in hot-galvanised steel.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20433	Linear connecting element



T-shaped connecting element in hot-galvanised steel.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20434	T-Connecting element 3F Linux



L-shaped connecting element in hot-galvanised steel.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20436	L-Connecting element 3F L Linux



Pair of closing end 3F Linux S, made of white polycarbonate.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20448	Pair of closing end 3F Linux

850°C



Safety bracket in white painted steel to secure lighting elements if installed vertically.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20478	Anti-slip term. incli. 3F Linux

This accessory must always be used in combination with end terminals.



High closing top, with a length of 1778 mm that can be cut to 889 mm, made of impact-resistant white PVC.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20442	Closing Top HIGH - L1778

650°C



IP54 high closing top, with a length of 1778 mm that can be cut to 889 mm, made of impact-resistant white PVC.

Accessory compatible with 3F Linux S | IP54.

Code	Item
A20743	IP54 - L1778 Closing Top

650°C



Cuttable low closing top, with a length of 1778 mm that can be cut, made of impact-resistant white PVC.

Accessory compatible ONLY with 3F Linux S-NL | IP40.

Code	Item
A20428	Closing Top LOW - L1778

650°C



Electric cable support. One every 50 cm is recommended. Made of polycarbonate.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

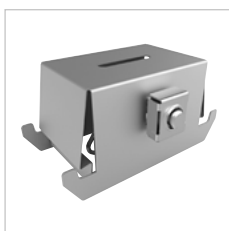
Code	Item
A20475	3F Linux Cable Support (10 pcs) The pack contains 10 pieces.



Brackets for the installation of luminaries on 3F Linux S and S-NL bars (check the compatibility with our technical departments). Made of hot galvanised steel.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20470	Pair of mounting brack. lum. 3F Linux S



Brackets for installation of 3F Linda luminaries on 3F Linux S structures. Made from hot-galvanised steel.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20498	Pair brack.3F Linda instal.in 3F Linux S



Closing end 3F Linux S IP54, made of white polycarbonate.

Accessory compatible with 3F Linux S | IP54.

Code	Item
A20740	IP54 3F Linux End terminal



IP54 end terminal with a power-supply line entry hole.

Accessory compatible with 3F Linux S | IP54.

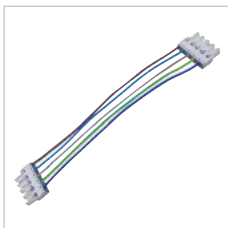
Code	Item
A20741	IP54 3F Linux End terminal with 1 hole



IP54 end terminal with two power-supply line entry holes.

Accessory compatible with 3F Linux S | IP54.

Code	Item
A20742	IP54 3F Linux End terminal with 2 holes

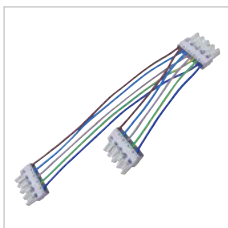


Electric branch with plug-socket to realise L-shaped connections.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20459	5-pole socket-plug L-branch 3F Linux S
A20460	7-pole socket-plug L-branch 3F Linux S

These accessories must always be used in conjunction with L connecting elements. **Accessories not compatible with 3F Linux S-NL (cod.: A20011, A20012).**

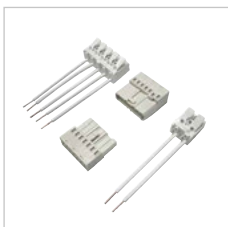


Electric branch with plug-socket to realise T-shaped connections.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20464	5-pole socket-plug T-branch 3F Linux S
A20465	7-pole socket-plug T-branch 3F Linux S

These accessories must always be used in conjunction with T connecting elements. **Accessories not compatible with 3F Linux S-NL (cod.: A20011, A20012).**



Quick connection non-reversible plug-socket terminal block, for connection to the power line at the start or end of the channel.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20454	5-pole socket-plug term.block 3F Linux S
A20455	7-pole socket-plug term.block 3F Linux S

Accessories not compatible with 3F Linux S-NL (cod.: A20011, A20012).



Quick connection non-reversible plug-socket terminal block, for connection to the power line at the centre of the channel.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A20500	Cen.pow-sup.soc-plug ter-blo.3FLinuxS 5P
A20501	Cen.pow-sup.soc-plug ter-blo.3FLinuxS 7P

Accessories not compatible with 3F Linux S-NL (cod.: A20011, A20012).



Connection to the earth, by means of galvanised M5 screw and nut, for Ø 6 mm hole at the end of every structure.

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A0490	Connection to the earth



Power cable for luminaires not part of the 3F Linux system.

Accessory compatible with 3F Linux S | IP40.

Code	Item
A20479	Power cable for luminaires 3P-3F Linux
A20480	Power cable for luminaires 5P-3F Linux

Accessories not compatible with 3F Linux S-NL (cod.: A20011, A20012).



Extension cord to connect some light modules interspersed with blind covers with a length of 889 mm (contact our technical department).

Accessory compatible with 3F Linux S | IP40, 3F Linux S | IP54.

Code	Item
A0801	Electric ext. with plug 3F Linux DALI-EP
A0802	Electric extension with plug 3F Linux

Attention: the code A0801 is supplied with a 5-pole electric line, while the code A0802 is supplied with a 3-pole electric line.



Additional contact for light unit plug.

Accessory compatible with 3F Linux S | IP40, 3F Linux L | Light modules, 3F Linux D | Light modules, 3F Linux DR | Light modules, 3F Linux Track.

Code	Item
A20476	Contact pin for 3F Linux plug (50 pcs.) The pack contains 50 pieces.

Accessory not compatible with 3F Linux S-NL (cod.: A20011, A20012).



DAL 29 OTTOBRE
AL 1° NOVEMBRE
RITIRALA UGUALE
IL BUONO SRESAQ/136

5€
Buono regalo
valido per
spese superiori
a 30€

UTILIZZALO
DAL 2 ALL'8 NOVEMBRE
SU UNA SPESA MINIMALE DI 30€

Spese di consegna e punti vendita Coop Alimento 3.0
esclusi dal buono

DAL 19 OTTOBRE AL 1° NOVEMBRE
SPECIALE VINI
1+1=3
PRENDI 3 PAGHI 2

USCITA DI
EMERGENZA

Pavesini





3F Six

> www.3F-Filippi.com/3F Six

3F Six is the new compact fixture designed by 3F Filippi. Thanks to its compact height and flat shape with a visible edge of only 3 cm, is particularly suitable for shopping centres, exhibition areas and warehouses. The fixture (available in both a square and rectangular version), can be installed in a flexible way on busways or electrified tracks. Thanks to the use of six methacrylate optical lenses installed on the fixture is it possible to obtain customised luminous distribution by choosing from the eight types of optics available: wide, double asymmetric, wide double asymmetric, asymmetric, medium, concentrated, hyper concentrated and UGR. The latter configuration, designed to be used in environments with more stringent vision requirements or where there are VDTs, uses lenses with controlled luminance and a UGR<19 glare index. 3F Six is available in a version with ON/OFF wiring or DALI control to manage the fixture and the energy consumption of the entire lighting system.

This product is also available in this version 3F Six R (page 202).

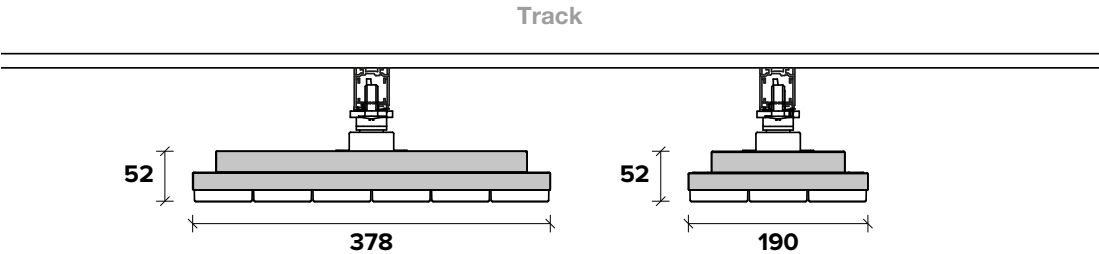
+ Overview

- Luminous efficacy up to 162 lumen/watt.
- Luminous fluxes from 6843 to 14086 lumens.
- Average luminance <3000 cd/m² (UGR version).
- Extensive installation pitch.
- UGR <19 (UGR version).
- Driver integrated in the fixture.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Versatility of use in different environments.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Lens
358	3F Six Track	•
362	3F Six Blindo	•

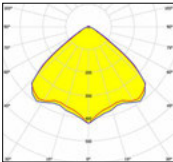
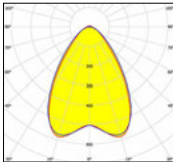
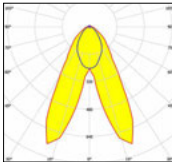
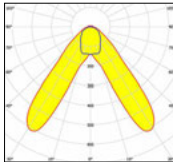
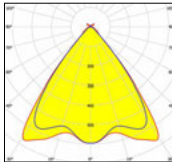
Product range

3F Six Track

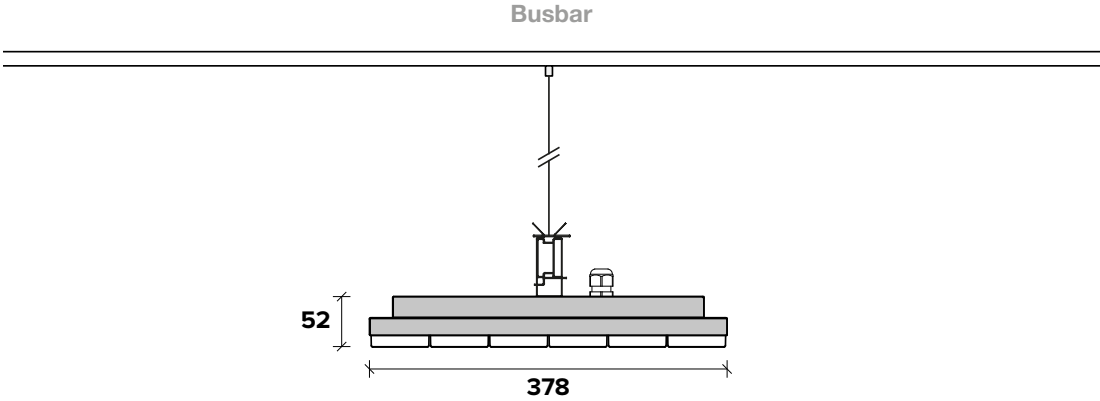


3F Six Track



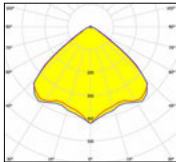
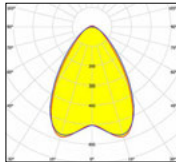
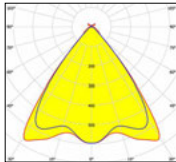
Model	Wide	Medium	BAT	BAT WD	UGR	
Average luminance for angles> 65 (cd / m²)	>3000	>3000	>3000	>3000	<3000	
UGR	<21	<21	<21	<21	<19	
Protection class	IP40					
Photometric distribution						
Installation steps	Dt	1,39	1,16	/	/	1,39
	DI	1,43	1,19	/	/	1,30

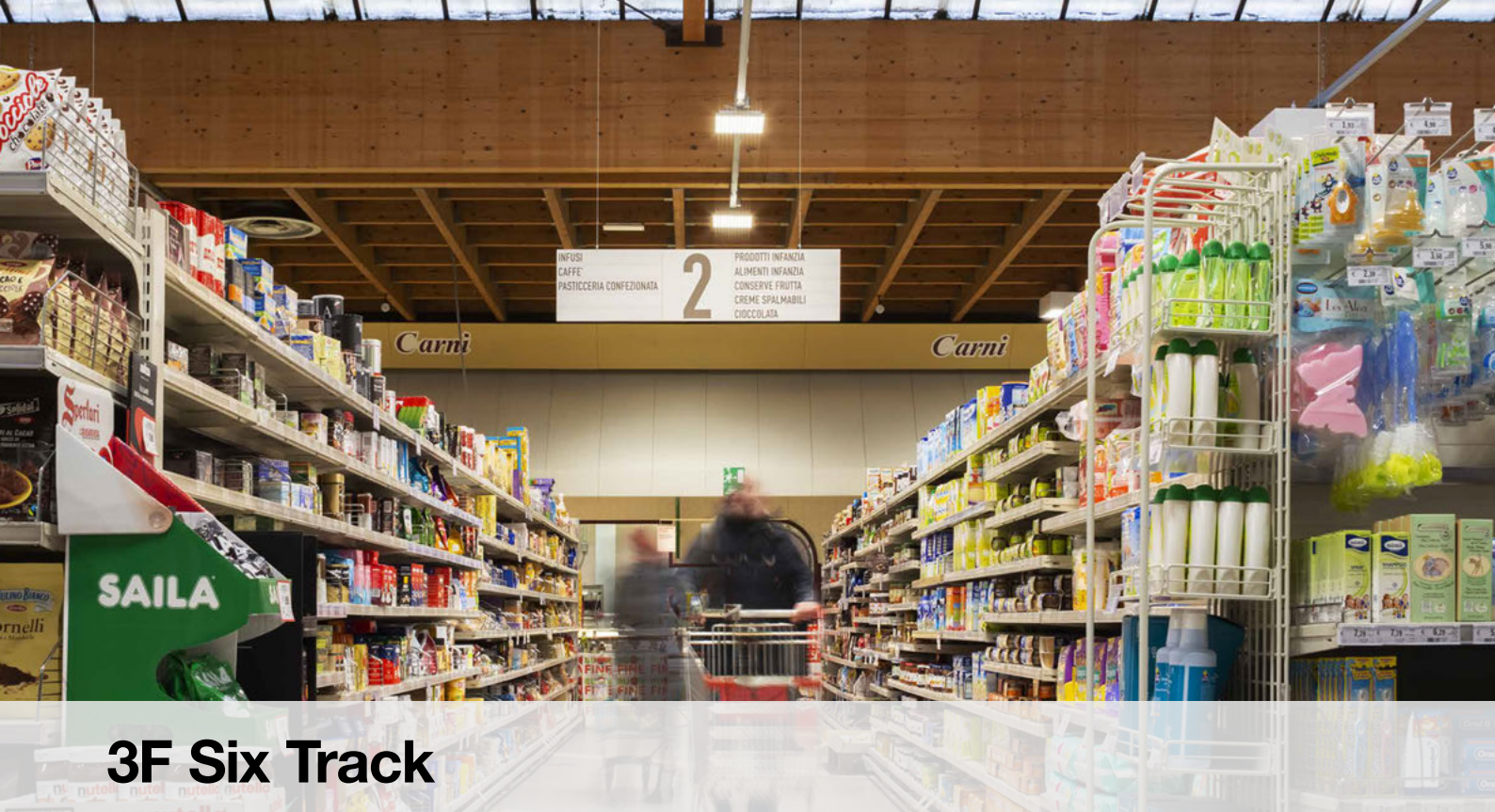
3F Six
Blindo



3F Six Blindo



Model	Wide	Medium	UGR	
Average luminance for angles> 65 (cd / m²)	>3000	>3000	<3000	
UGR	<21	<21	<19	
Protection class	IP40			
Photometric distribution				
Installation steps	Dt	1,39	1,16	1,39
	DI	1,43	1,19	1,30



3F Six Track

Construction characteristics

Illuminotechnical characteristics

Direct distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted steel.

Height only 52 mm.

PMMA lenses with external flat surface.

The fixture can be rotated horizontally from 0° to 330°.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a

centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Truck adapter, 4/6-way.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different light distributions
- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- fixture rotation lock bracket

Applications

Environments: industrial, commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

UGR version

Environments that need luminance control.

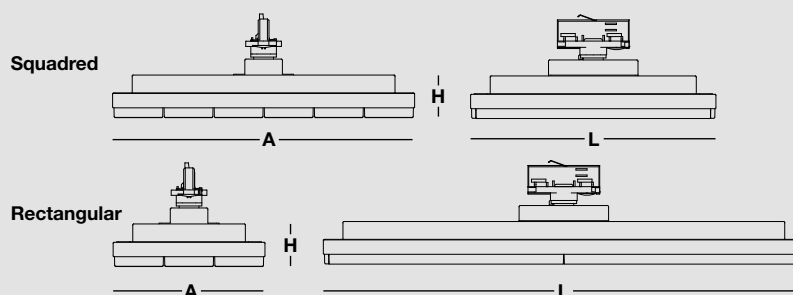
Installation

This product is suitable for installation on a 3-phase electrified busbar "Binario 3F" (on page 378).

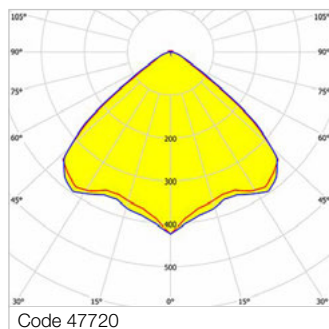
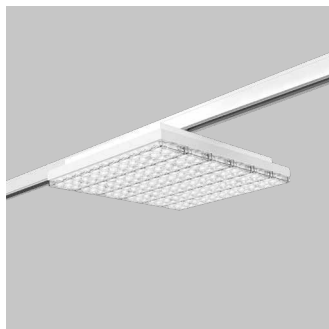
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Six Track Wide



Wide distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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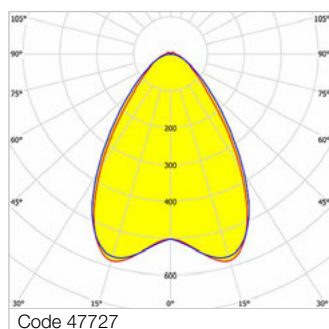
ON/OFF electronic wiring 230V-50/60Hz

47722	3F Six TK WH 40/840 WIDE 307x378	43	6936	4000	>80	307x378x52
47742	3F Six TK WH 40/840 WIDE 190x602	43	6936	4000	>80	602x190x52
47721	3F Six TK WH 50/840 WIDE 307x378	52	8247	4000	>80	307x378x52
47741	3F Six TK WH 50/840 WIDE 190x602	52	8247	4000	>80	602x190x52
47720	3F Six TK WH 60/840 WIDE 307x378	62	9855	4000	>80	307x378x52
47740	3F Six TK WH 60/840 WIDE 190x602	62	9855	4000	>80	602x190x52

DALI electronic wiring 230V-50/60Hz

47725	3F Six TK WH 40/840 DALI WIDE 307x378	43	6936	4000	>80	307x378x52
47745	3F Six TK WH 40/840 DALI WIDE 190x602	43	6936	4000	>80	602x190x52
47724	3F Six TK WH 50/840 DALI WIDE 307x378	52	8247	4000	>80	307x378x52
47744	3F Six TK WH 50/840 DALI WIDE 190x602	52	8247	4000	>80	602x190x52
47723	3F Six TK WH 60/840 DALI WIDE 307x378	62	9855	4000	>80	307x378x52
47743	3F Six TK WH 60/840 DALI WIDE 190x602	62	9855	4000	>80	602x190x52

3F Six Track Medium



Medium distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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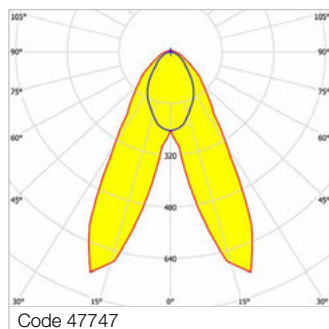
ON/OFF electronic wiring 230V-50/60Hz

47729	3F Six TK WH 40/840 MEDIUM 307x378	43	6843	4000	>80	307x378x52
47728	3F Six TK WH 50/840 MEDIUM 307x378	52	8136	4000	>80	307x378x52
47727	3F Six TK WH 60/840 MEDIUM 307x378	62	9723	4000	>80	307x378x52

DALI electronic wiring 230V-50/60Hz

47732	3F Six TK WH 40/840 DALI MEDIUM 307x378	43	6843	4000	>80	307x378x52
47731	3F Six TK WH 50/840 DALI MEDIUM 307x378	52	8136	4000	>80	307x378x52
47730	3F Six TK WH 60/840 DALI MEDIUM 307x378	62	9723	4000	>80	307x378x52

3F Six Track BAT



Double asymmetrical distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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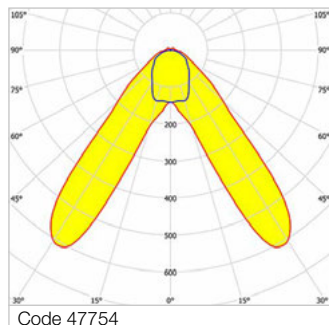
ON/OFF electronic wiring 230V-50/60Hz

47749	3F Six TK WH 40/840 BAT 190x602	43	6950	4000	>80	602x190x52
47748	3F Six TK WH 50/840 BAT 190x602	52	8264	4000	>80	602x190x52
47747	3F Six TK WH 60/840 BAT 190x602	62	9876	4000	>80	602x190x52

DALI electronic wiring 230V-50/60Hz

47752	3F Six TK WH 40/840 DALI BAT 190x602	43	6950	4000	>80	602x190x52
47751	3F Six TK WH 50/840 DALI BAT 190x602	52	8264	4000	>80	602x190x52
47750	3F Six TK WH 60/840 DALI BAT 190x602	62	9876	4000	>80	602x190x52

3F Six Track BAT WD



Wide double symmetric distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

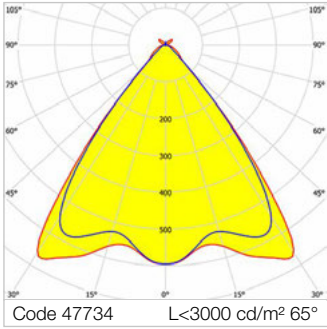
ON/OFF electronic wiring 230V-50/60Hz

47756	3F Six TK WH 40/840 BAT WD 190x602	43	6928	4000	>80	602x190x52
47755	3F Six TK WH 50/840 BAT WD 190x602	52	8238	4000	>80	602x190x52
47754	3F Six TK WH 60/840 BAT WD 190x602	62	9845	4000	>80	602x190x52

DALI electronic wiring 230V-50/60Hz

47759	3F Six TK WH 40/840 DALI BAT WD 190x602	43	6928	4000	>80	602x190x52
47758	3F Six TK WH 50/840 DALI BAT WD 190x602	52	8238	4000	>80	602x190x52
47757	3F Six TK WH 60/840 DALI BAT WD 190x602	62	9845	4000	>80	602x190x52

3F Six Track UGR



Controlled symmetric distribution.
Average luminance <3000 cd/m² for radial angles >65°.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

47761	3F Six TK WH 40/840 UGR 190x602	43	6921	4000	>80	602x190x52
47734	3F Six TK WH 40/840 UGR 307x378	43	6921	4000	>80	307x378x52

DALI electronic wiring 230V-50/60Hz

47762	3F Six TK WH 40/840 DALI UGR 190x602	43	6921	4000	>80	602x190x52
47735	3F Six TK WH 40/840 DALI UGR 307x378	43	6921	4000	>80	307x378x52



3F Six Blindo

Construction characteristics

Illuminotechnical characteristics

Direct distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted steel.

Height only 52 mm.

PMMA lenses with external flat surface.

Can be positioned transversally or longitudinally to the busway.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Power cable type H05Z1Z1-F

3-5x1.5 mm² that protrudes by 1 m with sheared ends.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different light distributions
- different powers
- LED sources with different colour temperatures
- housing in different RAL colours
- wiring: CLO (more information on page 568)
- versions with rectangular shape
- different dimensions
- emergency versions

Applications

Environments: industrial, commercial, exhibition areas, transit areas, lobbies or waiting rooms, shops.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

UGR version

Environments that need luminance control.

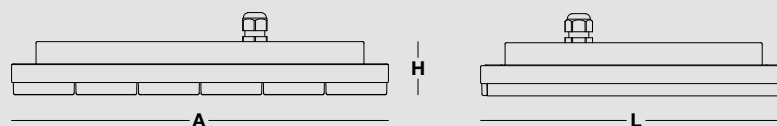
Installation

This product is suitable for installation on a busway (hooking brackets not included).

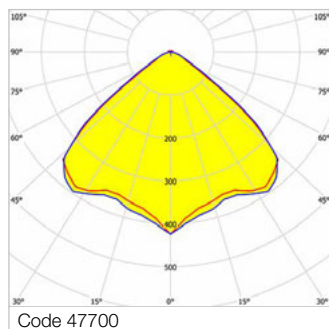
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Six Blindo Wide



Wide distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

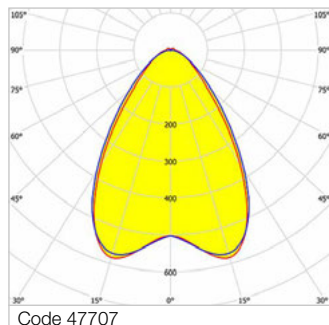
ON/OFF electronic wiring 230V-50/60Hz

47700	3F Six WH 60/840 WIDE 307x378	62	9855	4000	>80	307x378x52
47699	3F Six WH 70/840 WIDE 307x378	72	11427	4000	>80	307x378x52
47698	3F Six WH 85/840 WIDE 307x378	94	14086	4000	>80	307x378x52

DALI electronic wiring 230V-50/60Hz

47703	3F Six WH 60/840 DALI WIDE 307x378	62	9855	4000	>80	307x378x52
47702	3F Six WH 70/840 DALI WIDE 307x378	72	11427	4000	>80	307x378x52
47701	3F Six WH 85/840 DALI WIDE 307x378	94	14086	4000	>80	307x378x52

3F Six Blindo Medium



Medium distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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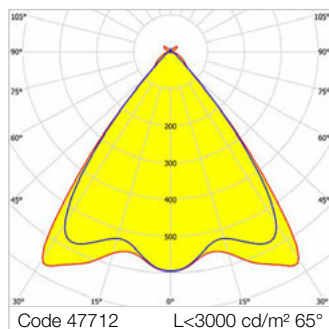
ON/OFF electronic wiring 230V-50/60Hz

47707	3F Six WH 60/840 MEDIUM 307x378	62	9723	4000	>80	307x378x52
47706	3F Six WH 70/840 MEDIUM 307x378	72	11273	4000	>80	307x378x52
47705	3F Six WH 85/840 MEDIUM 307x378	94	13898	4000	>80	307x378x52

DALI electronic wiring 230V-50/60Hz

47710	3F Six WH 60/840 DALI MEDIUM 307x378	62	9723	4000	>80	307x378x52
47709	3F Six WH 70/840 DALI MEDIUM 307x378	72	11273	4000	>80	307x378x52
47708	3F Six WH 85/840 DALI MEDIUM 307x378	94	13898	4000	>80	307x378x52

3F Six Blindo UGR



Controlled symmetric distribution.
Average luminance <3000 cd/m² for radial angles >65°.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

47712	3F Six WH 40/840 UGR 307x378	43	6921	4000	>80	307x378x52
-------	------------------------------	----	------	------	-----	------------

DALI electronic wiring 230V-50/60Hz

47713	3F Six WH 40/840 DALI UGR 307x378	43	6921	4000	>80	307x378x52
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Boulangerie Michel d'Ohain
BY FOODIE'S MARKET





3F Emilio Track

> [www.3F-Filippi.com/3F Emilio Track](http://www.3F-Filippi.com/3F_Emilio_Track)

3F Emilio is the high-end LED spotlight designed by Belgian designers Serge and Robert Cornelissen. The lighting body has been designed to obtain the best energy and lighting performance in various contexts. In order to obtain excellent thermal efficiency with a high size to luminous flux ratio, the body of the spotlight has inner fins, while the outside is smooth to facilitate cleaning. The 3F Filippi technology used in this system also allows effective control of luminance, without affecting the optical performance and visual comfort. Its simple and refined lines, which alongside its reduced size represent an additional advantage, makes 3F Emilio the most suitable solution for numerous environments, from retail to contract.

This product is also available in this version 3F Emilio Table (page 126), 3F Emilio Wall (page 196), 3F Emilio R (page 308).

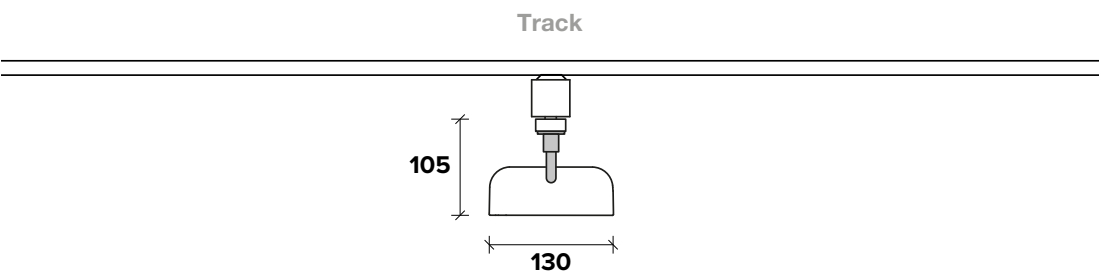
+ Overview

- Luminous efficacy up to 131 lumen/watt.
- Luminous fluxes from 1823 to 4086 lumens.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.

Page	Product	Lens
372	3F Emilio Track	•

Product range

3F Emilio Track

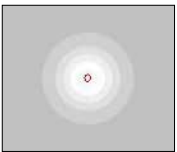
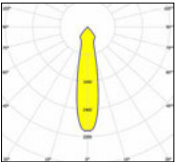
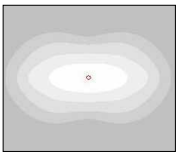
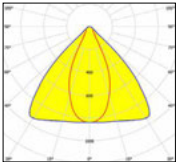
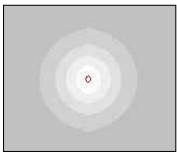
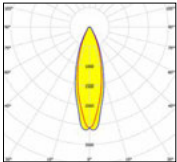


3F Emilio Track



Model		SPOT	Elliptical	Iperconc
Beam angle		29°-39°	42°-88°	23°
CCT (K)	BREAD	2400	2400	2400
		2700	2700	2700
		3000	3000	3000
	MEAT	3000	3000	3000
	CRISP	3000	3000	3000
		4000	4000	4000

Photometric distribution





Different accents to create your light



3F Emilio Track is the LED spotlight with a simple and refined design which, thanks to its high efficiency, represents the ideal solution for emphasising products in points of sale, even those of significant size.

• The following versions of LED sources are available:

- Warm white (2700K).
- White (3000K).
- Neutral white (4000K).
- Meat (specific version for lighting meat).
- Crisp (specific version for clothing and perfumes).
- Bread (specific version for lighting bread).

High colour rendering index (CRI) on request.



Here is a brief guide for choosing the correct colour temperature version:

	/840	/830	/827	/940	/930	/MEAT	/BREAD	/CRISP
General	•							
Fish/seafood	•			•				
Wine		•	•		•			
Fruit/veg		•			•			
Cheese/dairy		•	•		•			
Meat						•		
Deli		•			•	•		
Bread/baked goods			•				•	
Clothing				•	•			•
Chicken/roisserie		•			•	•		
Pastries			•				•	
Perfumes	•			•				•
Flowers/plants		•		•	•			

These are just provided as design tips and are not intended to replace personal taste or the choices of individual lighting designers, rather they are meant only as a quick consultation tool.



3F Emilio Track

Construction characteristics

Illuminotechnical characteristics

Symmetrical (TK), elliptical (TK ELL) and hyperconcentrated (TK IPER) spot distribution.

Lifetime (L90/B20): 30000 h. (tq+25°C)

Lifetime (L80/B20): 50000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG1 low risk, (IEC 62471) (further information on page 18).

Mechanical characteristics

Wired unit in polycarbonate with busbar adaptor.

Single-piece in die-cast aluminium with passive dissipation with perimeter cooling slots on upper edge, giving a crown of light effect to the fitting.

Invisible lock for positioning the luminous flux.

Lens made from transparent PMMA methacrylate with glossy surface and differentiated photo-etched.

Positioning arm in galvanised brass with sphere to allow for vertical positioning at angles from 0° to 90° and horizontal positioning from 0° to 360°.

Electrical characteristics

In compliance with EN 60598-1.

Wiring unit separate from the body, invisible and integrated into the busbar. Class II.

Source characteristics

- Compact LED module.
- Compact LED modules, /MEAT (version for meats), /BREAD (version for bakery) / CRISP (version for wardrobe with white enhancement).
- Colour initial tolerance (MacAdam): SDCM 3.
- Zhaga Book 3 compliant.

On request

- different power levels, colour rendering indices and colour temperatures
- housing in different RAL colours

Applications

Environments: commercial, museums, shops.

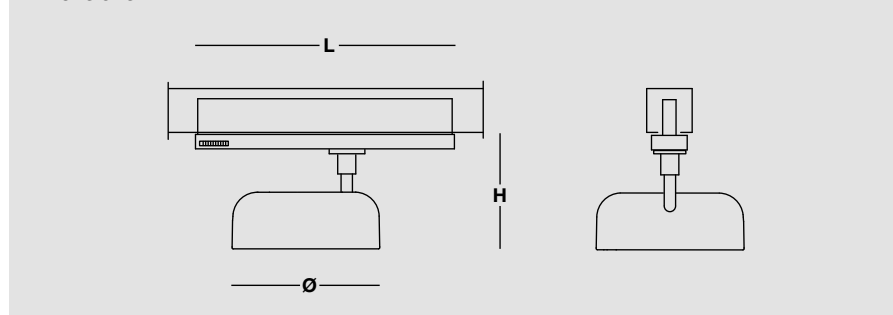
Installation

This product is suitable for installation on a 3-phase electrified busbar "Binario 3F" (on page 378).

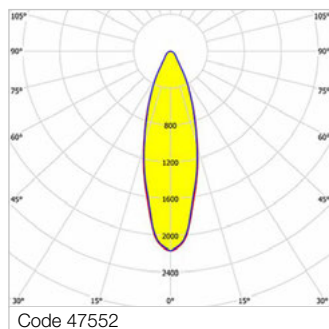
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Emilio Track Spot



Spot lens.

Body and wired unit in polycarbonate with busbar adaptor.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x L x H
------	------	------------	--------------------	------------------	---------	-----	-------------------------

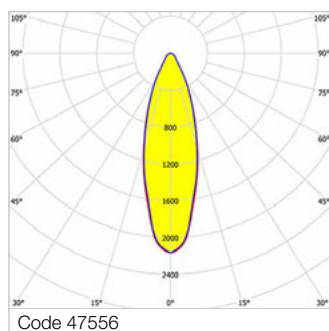
ON/OFF electronic wiring 230V-50/60Hz

○ 47551	3F Emilio TK LED 3000/840	29°	28.7	3067	4000	>80	130x230x105
○ 47562	3F Emilio TK LED 2000/930	29°	29.1	2462	3000	>90	130x230x105
○ 47555	3F Emilio TK LED 3000/830	29°	30.9	3106	3000	>80	130x230x105
○ 47559	3F Emilio TK LED 3000/827	29°	33.8	3142	2700	>80	130x230x105
○ 47552	3F Emilio TK LED 4000/840	31°	34.1	3961	4000	>80	130x230x105
○ 47566	3F Emilio TK LED 4000/830	31°	34.1	3807	3000	>80	130x230x105
○ 47561	3F Emilio TK LED 3000/940	29°	36.1	3137	4000	>90	130x230x105
○ 47563	3F Emilio TK LED 3000/930	29°	35	2868	3000	>90	130x230x105
● 47576	3F Emilio TK BK LED 3000/840	29°	28.7	2822	4000	>80	130x230x105
● 47587	3F Emilio TK BK LED 2000/930	29°	29.1	2266	3000	>90	130x230x105
● 47580	3F Emilio TK BK LED 3000/830	29°	30.9	2858	3000	>80	130x230x105
● 47591	3F Emilio TK BK LED 4000/830	31°	34.1	3502	3000	>80	130x230x105
● 47584	3F Emilio TK BK LED 3000/827	29°	33.8	2891	2700	>80	130x230x105
● 47577	3F Emilio TK BK LED 4000/840	31°	34.1	3644	4000	>80	130x230x105
● 47588	3F Emilio TK BK LED 3000/930	29°	35	2639	3000	>90	130x230x105
● 47586	3F Emilio TK BK LED 3000/940	29°	36.1	2887	4000	>90	130x230x105

DALI electronic wiring 230V-50/60Hz

○ 47536	3F Emilio TK LED 2000/930 DALI	29°	29.1	2462	3000	>90	130x260x105
○ 47535	3F Emilio TK LED 3000/830 DALI	29°	30.9	3106	3000	>80	130x260x105
○ 47534	3F Emilio TK LED 3000/840 DALI	29°	28.7	3067	4000	>80	130x260x105

3F Emilio Track Spot - Meat/Bread/Crisp



Spot lens.

Meat - Specific source to light up meat and cold cuts.

Bread - Specific source to light up bread.

Crisp - specific source for illuminating textile products and enhancing white colours.

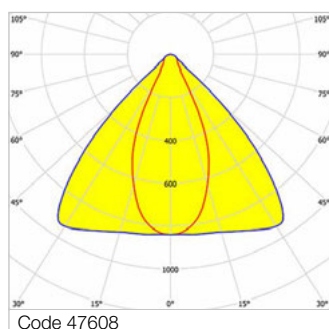
Body and wired unit in polycarbonate with busbar adaptor.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x L x H
------	------	------------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 47556	3F Emilio TK LED 2000/MEAT	31°	32.2	2147	3000	87	130x230x105
○ 47574	3F Emilio TK LED 2500/CRISP	31°	32.7	2433	3000	92	130x230x105
○ 47572	3F Emilio TK LED 2000/BREAD	39°	35.1	1982	2400	>90	130x230x105
● 47581	3F Emilio TK BK LED 2000/MEAT	31°	32.2	1975	3000	87	130x230x105
● 47599	3F Emilio TK BK LED 2500/CRISP	31°	32.7	2238	3000	92	130x230x105
● 47597	3F Emilio TK BK LED 2000/BREAD	39°	35.1	1823	2400	>90	130x230x105

3F Emilio Track Elliptical



Horizontal ELL elliptical lens provides extensive installation pitch.

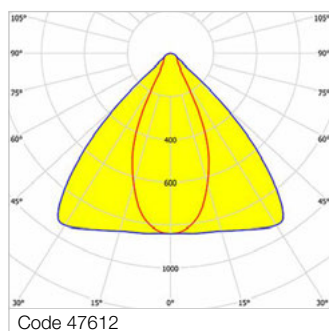
Body and wired unit in white polycarbonate with busbar adaptor.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x L x H
------	------	------------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 47607	3F Emilio TK LED 3000/840 ELL	42° - 85°	28.7	3203	4000	>80	130x230x105
○ 47618	3F Emilio TK LED 2000/930 ELL	42° - 85°	29.1	2571	3000	>90	130x230x105
○ 47611	3F Emilio TK LED 3000/830 ELL	42° - 85°	30.9	3243	3000	>80	130x230x105
○ 47615	3F Emilio TK LED 3000/827 ELL	42° - 85°	33.8	3281	2700	>80	130x230x105
○ 47608	3F Emilio TK LED 4000/840 ELL	46° - 88°	34.1	4086	4000	>80	130x230x105
○ 47622	3F Emilio TK LED 4000/830 ELL	46° - 88°	34.1	3927	3000	>80	130x230x105
○ 47617	3F Emilio TK LED 3000/940 ELL	42° - 85°	36.1	3275	4000	>90	130x230x105
○ 47619	3F Emilio TK LED 3000/930 ELL	42° - 85°	35	2994	3000	>90	130x230x105

3F Emilio Track Elliptical - Meat/Bread/Crisp



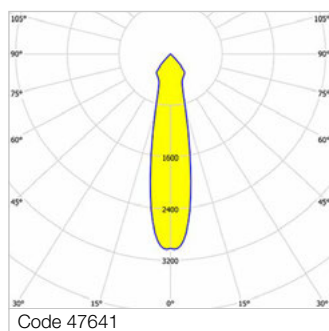
Horizontal ELL elliptical lens provides extensive installation pitch.
 Meat - Specific source to light up meat and cold cuts.
 Bread - Specific source to light up bread.
 Crisp - specific source for illuminating textile products and enhancing white colours.
 Body and wired unit in white polycarbonate with busbar adaptor.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x L x H
------	------	------------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 47612	3F Emilio TK LED 2000/MEAT ELL	46° - 88°	32.2	2215	3000	87	130x230x105
○ 47630	3F Emilio TK LED 2500/CRISP ELL	46° - 88°	32.7	2509	3000	92	130x230x105
○ 47628	3F Emilio TK LED 2000/BREAD ELL	53° - 88°	35.1	1998	2400	>90	130x230x105

3F Emilio Track Iperconcentrated



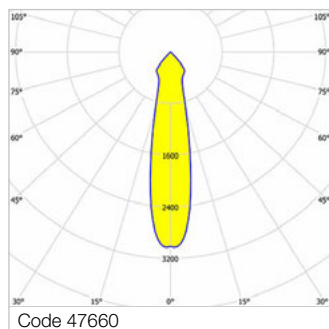
Bright anodised parabola in semi-specular, anti-reflective, anti-iridescent aluminium.
 Body and wired unit in polycarbonate with busbar adaptor.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x L x H
------	------	------------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 47640	3F Emilio TK LED 3000/840 IPER	23°	28.7	3137	4000	>80	130x230x105
○ 47654	3F Emilio TK LED 2000/930 IPER	23°	29.1	2518	3000	>90	130x230x105
○ 47644	3F Emilio TK LED 3000/830 IPER	23°	30.9	3176	3000	>80	130x230x105
○ 47648	3F Emilio TK LED 3000/827 IPER	23°	33.8	3213	2700	>80	130x230x105
○ 47645	3F Emilio TK LED 4000/830 IPER	23°	34.1	3794	3000	>80	130x230x105
○ 47641	3F Emilio TK LED 4000/840 IPER	23°	34.1	3948	4000	>80	130x230x105
○ 47655	3F Emilio TK LED 3000/930 IPER	23°	35	2933	3000	>90	130x230x105
○ 47652	3F Emilio TK LED 3000/940 IPER	23°	36.1	3208	4000	>90	130x230x105
● 47668	3F Emilio TK BK LED 3000/840 IPER	23°	28.7	3137	4000	>80	130x230x105
● 47682	3F Emilio TK BK LED 2000/930 IPER	23°	29.1	2518	3000	>90	130x230x105
● 47672	3F Emilio TK BK LED 3000/830 IPER	23°	30.9	3176	3000	>80	130x230x105
● 47676	3F Emilio TK BK LED 3000/827 IPER	23°	33.8	3213	2700	>80	130x230x105
● 47673	3F Emilio TK BK LED 4000/830 IPER	23°	34.1	3794	3000	>80	130x230x105
● 47669	3F Emilio TK BK LED 4000/840 IPER	23°	34.1	3948	4000	>80	130x230x105
● 47683	3F Emilio TK BK LED 3000/930 IPER	23°	35	2933	3000	>90	130x230x105
● 47680	3F Emilio TK BK LED 3000/940 IPER	23°	36.1	3208	4000	>90	130x230x105

3F Emilio Track Iperconcentrated - Meat/Bread/Crisp



Bright anodised parabola in semi-specular, anti-reflective, anti-iridescent aluminium.

Meat - Specific source to light up meat and cold cuts.

Bread - Specific source to light up bread.

Crisp - specific source for illuminating textile products and enhancing white colours.

Body and wired unit in polycarbonate with busbar adaptor.

Code	Item	Beam angle	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions ø x L x H
------	------	------------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

○ 47657	3F Emilio TK LED 2000/MEAT IPER	23°	32.2	2140	3000	87	130x230x105
○ 47664	3F Emilio TK LED 2500/CRISP IPER	23°	32.7	2425	3000	92	130x230x105
○ 47660	3F Emilio TK LED 2000/BREAD IPER	23°	35.1	1975	2400	>90	130x230x105
● 47685	3F Emilio TK BK LED 2000/MEAT IPER	23°	32.2	2140	3000	87	130x230x105
● 47692	3F Emilio TK BK LED 2500/CRISP IPER	23°	32.7	2425	3000	92	130x230x105
● 47688	3F Emilio TK BK LED 2000/BREAD IPER	23°	35.1	1975	2400	>90	130x230x105



1961

L'annuncio di una nuova Parrocchia
Il 2 settembre del 1961 il vescovo cardinal Giovanni Caracciolo
annuncia l'istituzione di una nuova parrocchia nel centro
storico di Napoli, nella zona del "Vergine".
Nella foto: la chiesa, come appare oggi, con
la sua forma moderna e la sua
posizione in un'area di alta densità
urbanistica.



1967

La consacrazione della Chiesa
Il 15 settembre del 1967 la chiesa è
consacrata dal vescovo cardinal Giovanni
Caracciolo.



1985

Chiesa e comunità
La chiesa è diventata un punto di
incontro per la comunità, con
attività culturali e sociali.



1993

La chiesa e la comunità
La chiesa è diventata un punto di
incontro per la comunità, con
attività culturali e sociali.

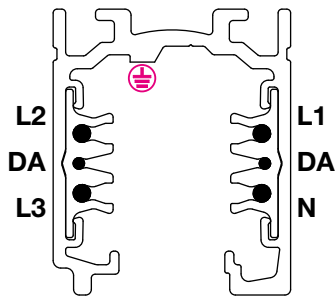
1988

La conversione
La chiesa è diventata un punto di
incontro per la comunità, con
attività culturali e sociali.



Binario 3F

Busbar



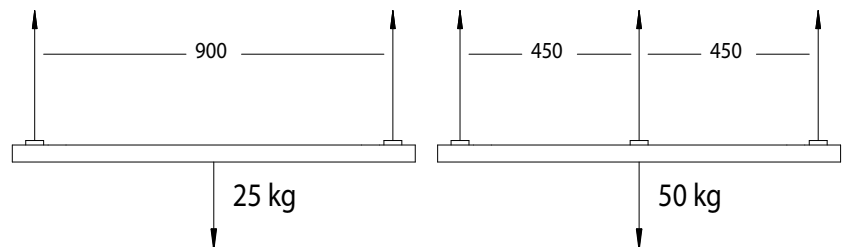
Scale: 1:1

Characteristics

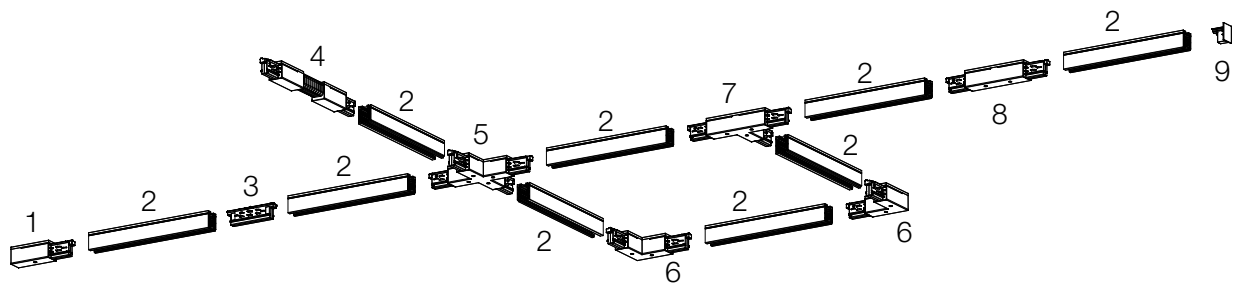
Binario 3F is an extruded aluminium busbar housing 6 conductors (4 for three-phase mode, 2 for DALI mode): the 3 phase conductors (with common neutral) form 3 distinct circuits, allowing 3 separate on commands.

The conductors are enclosed in rigid extruded profiles made from high-rigidity insulating material.

The versatility of this product allows the creation of ceiling-mount or suspended installations (within the maximum suspendable load limit). EN 60570 compliant.



Structural elements



- 1 - Power-supply cap
- 2 - Binario 3F busbar
- 3 - Linear connecting element

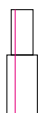
- 4 - Flexible connecting element
- 5 - Cross connector
- 6 - L connector

- 7 - T connector
- 8 - Central power supply
- 9 - Closing cap

Defining the earth conductor position

Note: the side positioning of the earth contact makes the busbar structure asymmetrical and the connectors must be chosen on the basis of this. In particular, this indication applies only to the following components:

Power-supply cap

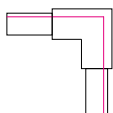


In the S (LH) version, the conductor is located on the left when looking at the composition from above.

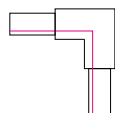


In the D (RH) version, the conductor is located on the right when looking at the composition from above.

L connector

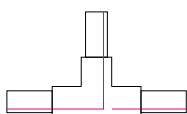


In the EXT version, the conductor is located on the outside when looking at the composition from above.

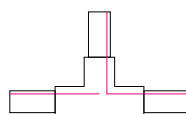


In the INT version, the conductor is located on the inside when looking at the composition from above.

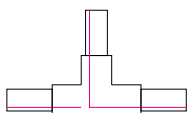
T connector



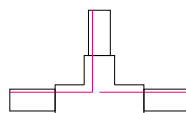
In the EXT + D (external + RHS) version, the third conductor is located on the right when looking at the composition from above.



In the INT + D (internal + RHS) version, the third conductor is located on the right when looking at the composition from above.

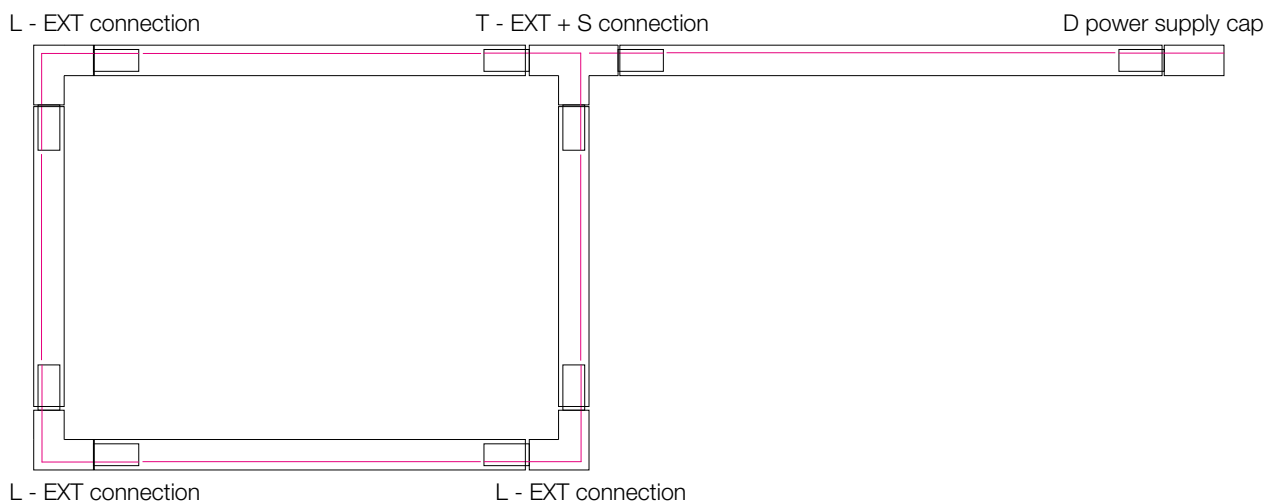


In the EXT + S (external + LHS) version, the third conductor is located on the left when looking at the composition from above.



In the INT + S (internal + LHS) version, the third conductor is located on the left when looking at the composition from above.

Structure composition example - top-down view





Binario 3F

The Binario 3F is a mixed 3-phase system with two extra conductors for the management of any signal (eg DALI). The system is certified according to EN 60570 and its installation must be performed by qualified personnel.

Three types of fixing:

- directly on the surface (using the holes already provided in binary)
- surface mounted using the metal clip
- suspended by tension steel cables and various clamps and brackets without exceeding the maximum loads are planned

Construction characteristics

Mechanical characteristics

Electrified track made from extruded aluminium, Eurostandard Plus compliant. The wires are enclosed in rigid extruded profiles made of PVC insulating material with high dielectric strength. Length: 1000-2000-3000-4000 mm. Available colours: white (B) and anodized aluminium (GR).

(L1/L2/L3/N/GRD/DA/DA) 16A/440V
2x1A/50V FELV AC (DALI).
Copper conductors.

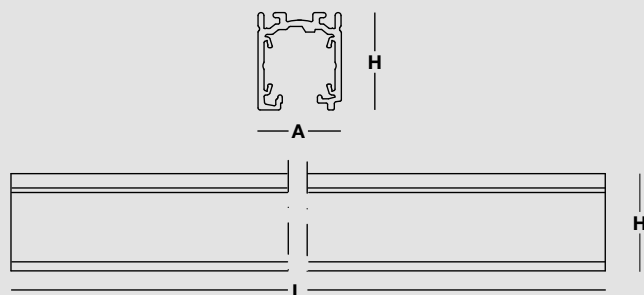
Construction characteristics

Mechanical characteristics

Electrified track made from extruded aluminium, Eurostandard Plus compliant. The wires are enclosed in rigid extruded profiles made of PVC insulating material with high dielectric strength. Length: 1000-2000-3000-4000 mm. Available colours: white (B) and anodized aluminium (GR).

(L1/L2/L3/N/GRD/DA/DA) 16A/440V
2x1A/50V FELV AC (DALI).
Copper conductors.

Dimensions



Binario 3F



Aluminium extruded track with 6 copper conductors (L1/L2/L3/N/GRD/DA/DA) 16A/440V.

Code	Item	Dimensions L x A x H
○ A4151	Binario 3F - L1000 - WH	1000x32x38
○ A4152	Binario 3F - L2000 - WH	2000x32x38
○ A4153	Binario 3F - L3000 - WH	3000x32x38
○ A4154	Binario 3F - L4000 - WH	4000x32x38
○ A4158	Binario 3F - L1000 - GR	1000x32x38
○ A4159	Binario 3F - L2000 - GR	2000x32x38
○ A4160	Binario 3F - L3000 - GR	3000x32x38
○ A4161	Binario 3F - L4000 - GR	4000x32x38
● A4144	Binario 3F - L1000 - BK	1000x32x38
● A4145	Binario 3F - L2000 - BK	2000x32x38
● A4146	Binario 3F - L3000 - BK	3000x32x38
● A4147	Binario 3F - L4000 - BK	4000x32x38

Systems and
track-mounted products

Binario 3F | Accessories



960°C

Power connection: polycarbonate body and copper alloy contacts. Warning: as the track structure is asymmetrical because of the grounding element placed laterally, feeding heads and connecting joints must be chosen accordingly.

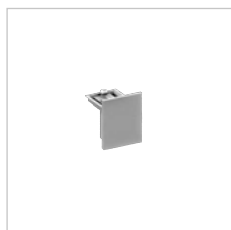
Code	Item
A4174	Power-supply head DX - WH
A4166	Power-supply head DX - GR
A4209	Power-supply head DX - BK
A4196	Power-supply head SX - WH
A4190	Power-supply head SX - GR
A4218	Power-supply head SX - BK



960°C

Central power supply with polycarbonate body and copper alloy contacts.

Code	Item
A4175	Central power-supply - WH
A4167	Central power-supply - GR
A4210	Central power-supply - BK



960°C

Polycarbonate closing cap with locking screw.

Code	Item
A4180	End cap - WH
A4172	End cap - GR
A4215	End cap - BK



960°C

Linear connecting element with a polycarbonate body and copper alloy contacts.

Code	Item
A4188	Linear connecting element - WH
A4182	Linear connecting element - GR
A4217	Linear connecting element - BK



960°C

Flexible connecting element with polycarbonate body and copper alloy contacts.

Code	Item
A4176	Flexible connecting element - WH
A4168	Flexible connecting element - GR
A4211	Flexible connecting element - BK



"L"-shaped connecting element with polycarbonate body and copper alloy contacts. Warning: as the track structure is asymmetrical because of the grounding element placed laterally, feeding heads and connecting joints must be chosen accordingly.

Code	Item
A4177	L-joint - EXT - WH
A4169	L-joint - EXT - GR
A4212	L-joint - EXT - BK
A4197	L-joint - INT - WH
A4191	L-joint - INT - GR
A4219	L-joint - INT - BK



"T"-shaped connecting element with polycarbonate body and copper alloy contacts. Warning: as the track structure is asymmetrical because of the grounding element placed laterally, feeding heads and connecting joints must be chosen accordingly.

Code	Item
A4198	T-joint - EXT + DX - WH
A4178	T-joint - EXT + SX - WH
A4192	T-joint - EXT + DX - GR
A4170	T-joint - EXT + SX - GR
A4220	T-joint - EXT + DX - BK
A4213	T-joint - EXT + SX - BK
A4200	T-joint - INT + DX - WH
A4199	T-joint - INT + SX - WH
A4194	T-joint - INT + DX - GR
A4193	T-joint - INT + SX - GR
A4222	T-joint - INT + DX - BK
A4221	T-joint - INT + SX - BK



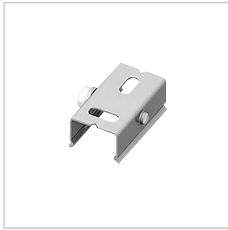
Cross-shaped connecting element with polycarbonate body and copper alloy contacts.

Code	Item
A4179	Cross joint - WH
A4171	Cross joint - GR
A4214	Cross joint - BK



PVC cover for track closing.

Code	Item
A4181	PVC closing top - L1000 - WH
A4173	PVC closing top - L1000 - GR
A4216	PVC closing top - L1000 - BK



Sliding ceiling bracket with locking screw in galvanised steel.

Code	Item
A4183	Steel bracket for ceiling installation



Adjustable suspension kit with galvanised steel sliding bracket and locking screw, metal rose and steel cable with diameter of 1.5 mm.

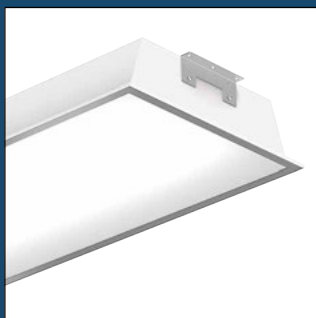
Code	Item
A4204	Adj. susp. boss + 1.5m bracket
A4205	Adj. susp. boss + 3m bracket
A4206	Adj. susp. boss + 5m bracket



3F Tank ATEX



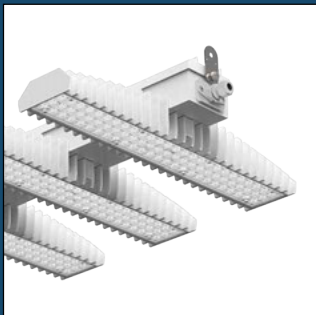
Beta 500



3F Linda



3F LEM



Beta 235



Beta i3F LED



Retrofit Beta A3F - i3F



Retrofit Beta 430



3F Cub



Waterproof and corrosion-proof

Page	Product	Steel	Stainless steel	Stainless steel	Polycarbonate
390	3F Tank ATEX				
394	NEW 3F Tank ATEX				•
404	Beta 500				
406	NEW Beta 500		•		
414	3F Linda				
418	UPDATE 3F Linda LED				•
426	3F Linda LED HS				•
428	UPDATE 3F Linda LED Transparent				•
430	3F Linda LED Ice				•
432	3F Linda LED Sensor				•
442	3F LEM				
448	3F LEM	•	•		
452	3F LEM High Output	•	•		
456	3F LEM Sensor	•	•		
460	3F LEM High Temperature	•	•		
464	UPDATE 3F LEM Sport	•	•		
466	NEW 3F LEM Sport High Output	•	•		
474	Beta 235				
478	Beta 235 LED Steel	•			
486	Beta 235 LED Stainless Steel			•	
492	Beta i3F LED				
492	Beta i3F LED	•			
498	Retrofit Beta A3F - i3F				
498	Retrofit Beta A3F - i3F				
502	Retrofit Beta 430				
502	Retrofit Beta 430				
506	3F Cub				
506	3F Cub LED		•		

Waterproof and
corrosion-proof





3F Tank ATEX

> www.3F-Filippi.com/3F Tank ATEX

Safety is important in every workplace, but in high-risk production contexts it is fundamental.

3F Filippi has created 3F Tank ATEX, the light fixture that ensures maximum safety for workers and provides quality lighting at the same time.

The state-of-the-art LED sources are protected by a polycarbonate cylinder that is resistant to UV rays and ensures maximum protection from dust, water and impact.

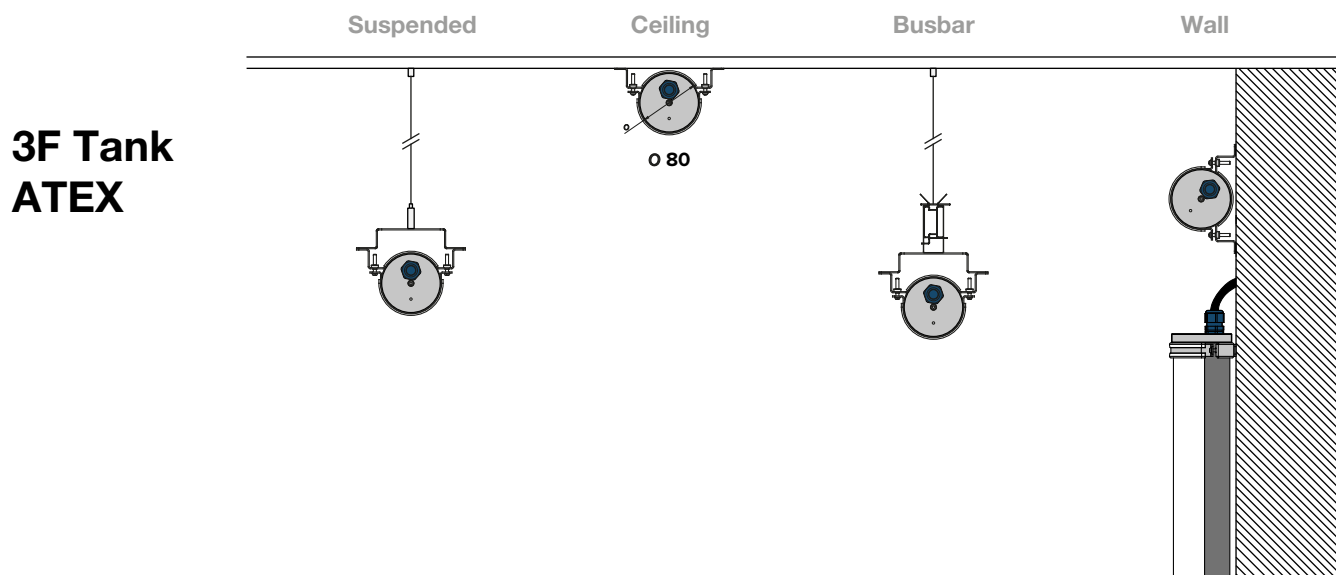
This fixture is the ultimate answer for those looking for the safest lighting solution for more challenging industrial contexts thanks to its IK10 maximum mechanical resistance and IP69K (IP66 ATEX applications) protection rating, that makes it suitable for contexts where equipment is cleaned intensely with high-pressure water or steam.

+ Overview


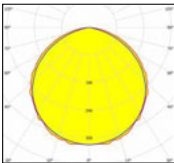
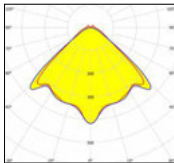
- Luminous efficacy up to 158 lumen/watt.
- Luminous fluxes from 1820 to 9767 lumens.
- Average luminance <3000 cd/m² (UGR version).
- Extensive installation pitch.
- UGR <19 (UGR version).
- 5 different photometric distributions.
- Quick and easy cleaning.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- ATEX - Group II, Category 3D, Ex tc IIIC T85°C Dc.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Polycarbonate
394	NEW 3F Tank ATEX	•

Product range



3F Tank ATEX

Model	Lite	Wide
Average luminance for angles> 65 (cd / m²)	>3000	>3000
UGR	<21	<21
ATEX Certification	 Group II, Category 3D, Ex tc IIIC T85°C Dc.	
Photometric distribution		
Power level	2x29 2x18 2x22	13 45 55 70

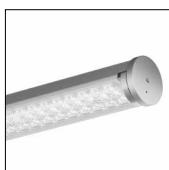


3F Tank ATEX Lite



3F Tank ATEX

3F Tank ATEX



Model

Medium

UGR

Concentrated

Average luminance
for angles > 65
(cd / m²)

>3000

<3000

>3000


UGR

<21

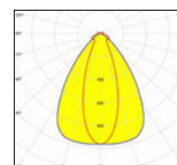
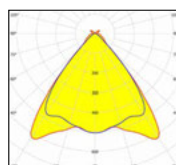
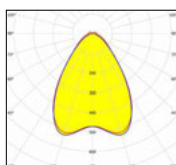
<19

<21

ATEX Certification

 Group II, Category 3D, Ex tc IIIC T85°C Dc.

Photometric
distribution



Power level

13
45
55
70

35
40

13
45
55
70

Waterproof and
corrosion-proof

Challenging environments

3F Tank ATEX meets the compliance requirements listed in two EU ATEX directives, the acronym of “ATmosphere EXplosive” relating to equipment intended for environments with explosive atmospheres and the safety conditions for those working in these particular contexts.

3F Tank ATEX is a fixture that is designed to be installed on horizontal/vertical surfaces that, thanks to its dust proof body ensures a very high level of protection in areas where explosive atmospheres may be present in the air (for short periods) in the form of flammable dust clouds .



Fixture suitable for environments with explosive atmospheres ATEX, group II, category 3D, Ex tc IIIC T85°C Dc. Compliant with directive 2014/34/EU and standard IEC/EN 60079. IP66 protection degree.



Good resistance in the marine environment and railway applications thanks to the 6082-T6 aluminium head and AISI 316 stainless steel brackets/screws.



Fixture with an IP69K protection rating designed for environments where cleaning of work areas is carried out intensely with high pressure water or steam.



Fixture suitable from a hygiene point of view to be used in production plants in the food industry (HACCP, IFS, BRC Standard).



Fixture made of polycarbonate resistant to UV rays with a HS (Hard Skin) finish that guarantees high resistance in environments where aggressive chemical agents are present (high resistance especially to ammonia NH3).

Product advantages

Exceptional results are obtained by paying attention to the smallest details. To develop 3F Tank ATEX and offer it as the ultimate solution we considered every single detail of the fixture very carefully.

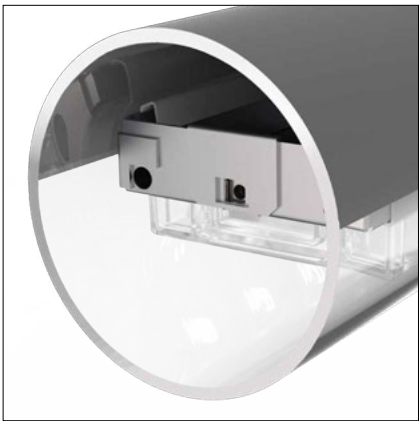
BRACKETS FOR INSTALLATION

The screws and the brackets to install the fixture are made of stainless steel to avoid oxidation and wear over time.



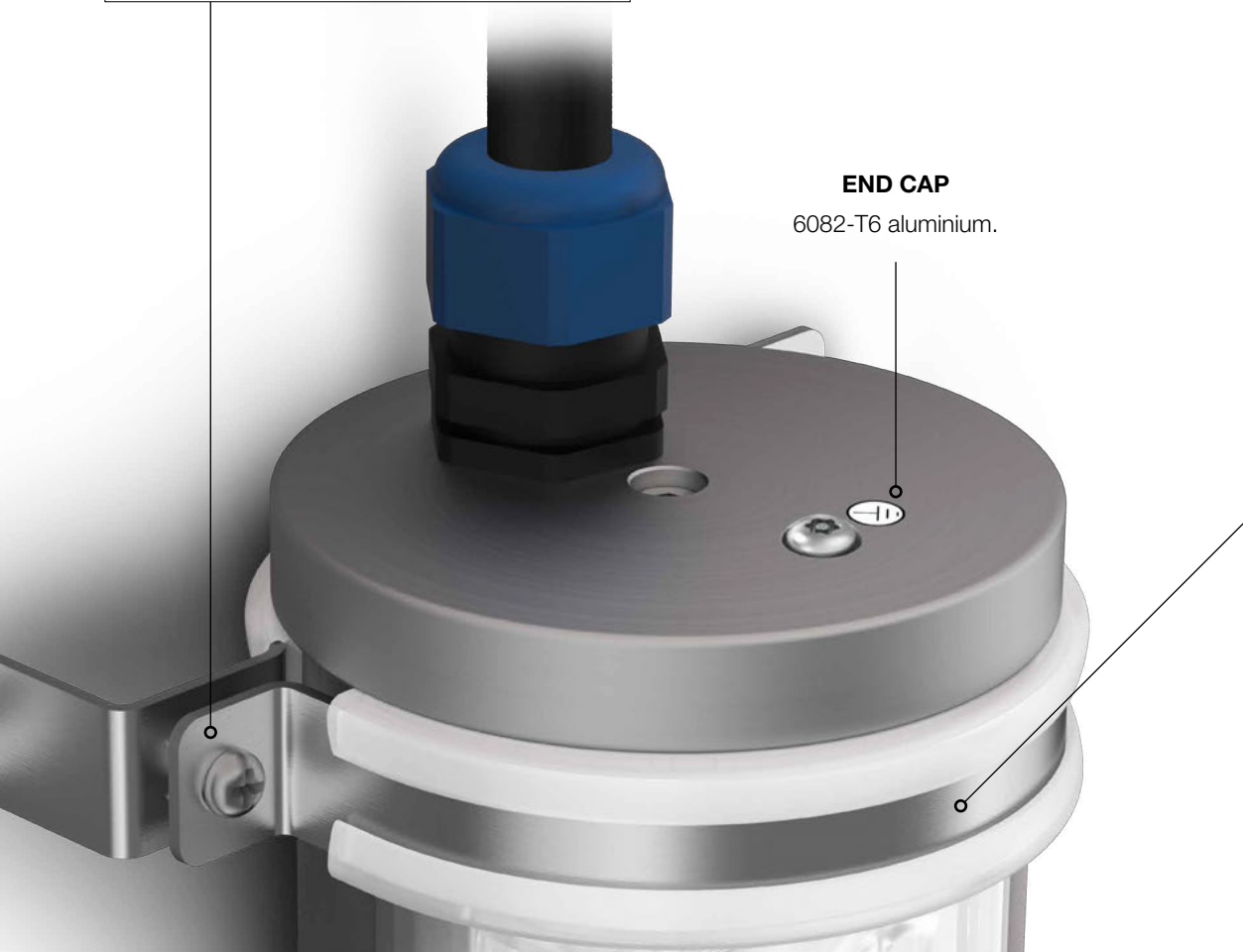
WATERTIGHT

A very thick polycarbonate cylinder with a high performance silicone seal ensure it is completely watertight.



END CAP

6082-T6 aluminium.



Waterproof and
corrosion-proof



3F Tank ATEX

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+40°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

High thickness tubular body in high transparency and UV Resistant polycarbonate with GI-CHEM surface treatment, which guarantees resistance to aggressive chemical agents.

Aluminium 6082-T6 end caps.

NBR sealing gasket.

Gear-holder reflector in hot-dip galvanised steel, painted with white polyester base.

Fixing brackets and screws in AISI 316 stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Quick connection via M20x1.5 cable gland in fibreglass reinforced polyamide with 2m H07RN-F 3/5G1.5mm² cable.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different light distributions
- different power levels, colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568)
- AISI 316 stainless steel end caps
- emergency versions

Applications

Environments with ATEX explosive atmosphere, group II, category 3D, T85°C, Zone 22 Dc

(compliance with directive 2014/34/EU and IEC/EN 60079 standard), severe industrial, food and agri-food industries, scientific and food processing laboratories, environments with high humidity, swimming pools, railway, aeronautical and port applications.

Hygienically suitable product for installation in food production plants (HACCP), IFS (Food Version 6), BRC (GSFS Food Version 7).

In environments with temperature from -20°C to +40°C, except the ones where the luminaire materials are unsuitable. Body resistant to the following substances: Ethyl alcohol (24 hours at 20°C), aqueous

detergents, hydrochloric acid (produces a slight halo), DOT4 brake oil, sulfuric acid (produces a slight halo), ammonia.

When using this data, remember that it is the result of laboratory tests, and therefore valid only under those test conditions: the data is to be considered approximate and, in the absence of practical experience, it is advisable to carry out tests under actual operating conditions.

Temperature and concentration of the chemical agent can have a decisive impact on the materials and influence the LED technology.

For specific applications please contact our technical offices.

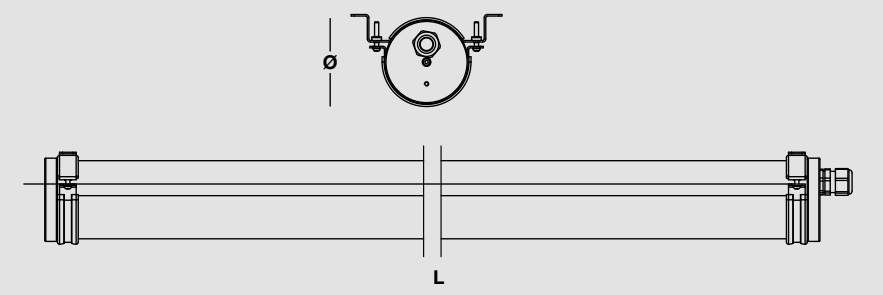
Installation

Ceiling, suspension or wall installation.

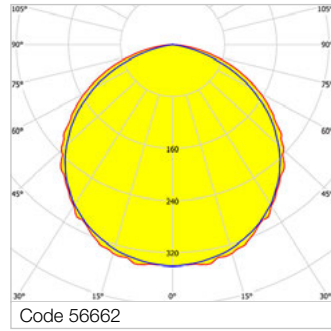
Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

Dimensions



3F Tank ATEX Lite



HACCP

Diffuse distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x ø
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ON/OFF electronic wiring 230V-50/60Hz

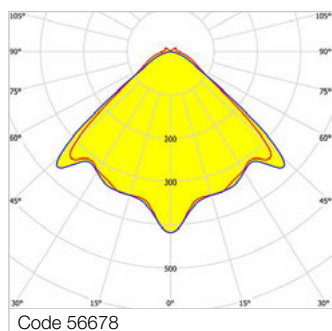
56660 ^{NEW}	3F Tank Lite 2x9W/840 L675	20	3056	4000	>80	676x80
56661 ^{NEW}	3F Tank Lite 2x18W/840 L1265	40	6203	4000	>80	1264x80
56662 ^{NEW}	3F Tank Lite 2x22W/840 L1560	49	7761	4000	>80	1558x80
56668 ^{NEW}	3F Tank Lite 2x9W/865 L675	20	2965	6500	>80	676x80
56669 ^{NEW}	3F Tank Lite 2x18W/865 L1265	40	6017	6500	>80	1264x80
56670 ^{NEW}	3F Tank Lite 2x22W/865 L1560	49	7528	6500	>80	1558x80

DALI electronic wiring 230V-50/60Hz

56664 ^{NEW}	3F Tank Lite 2x9W/840 DALI L675	20	3056	4000	>80	676x80
56665 ^{NEW}	3F Tank Lite 2x18W/840 DALI L1265	40	6203	4000	>80	1264x80
56666 ^{NEW}	3F Tank Lite 2x22W/840 DALI L1560	49	7761	4000	>80	1558x80
56672 ^{NEW}	3F Tank Lite 2x9W/865 DALI L675	20	2965	6500	>80	676x80
56673 ^{NEW}	3F Tank Lite 2x18W/865 DALI L1265	40	6017	6500	>80	1264x80
56674 ^{NEW}	3F Tank Lite 2x22W/865 DALI L1560	49	7528	6500	>80	1558x80

Waterproof and corrosion-proof

3F Tank ATEX Wide



Wide distribution.
PMMA lenses with external flat surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x ø
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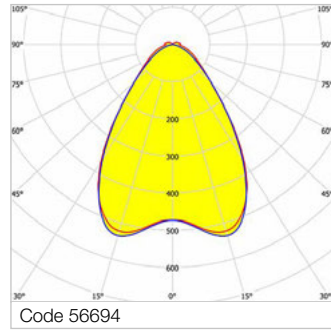
ON/OFF electronic wiring 230V-50/60Hz

56676 ^{NEW}	3F Tank 13W/840 WIDE L675	15	1856	4000	>80	676x80
56677 ^{NEW}	3F Tank 45W/840 WIDE L1265	50	6459	4000	>80	1264x80
56678 ^{NEW}	3F Tank 55W/840 WIDE L1560	62	8073	4000	>80	1558x80
56679 ^{NEW}	3F Tank 70W/840 WIDE L1850	74	9688	4000	>80	1852x80
56684 ^{NEW}	3F Tank 13W/865 WIDE L675	15	1800	6500	>80	676x80
56685 ^{NEW}	3F Tank 45W/865 WIDE L1265	50	6265	6500	>80	1264x80
56686 ^{NEW}	3F Tank 55W/865 WIDE L1560	62	7831	6500	>80	1558x80
56687 ^{NEW}	3F Tank 70W/865 WIDE L1850	74	9397	6500	>80	1852x80

DALI electronic wiring 230V-50/60Hz

56680 ^{NEW}	3F Tank 13W/840 DALI WIDE L675	15	1856	4000	>80	676x80
56681 ^{NEW}	3F Tank 45W/840 DALI WIDE L1265	50	6459	4000	>80	1264x80
56682 ^{NEW}	3F Tank 55W/840 DALI WIDE L1560	62	8073	4000	>80	1558x80
56683 ^{NEW}	3F Tank 70W/840 DALI WIDE L1850	74	9688	4000	>80	1852x80
56688 ^{NEW}	3F Tank 13W/865 DALI WIDE L675	15	1800	6500	>80	676x80
56689 ^{NEW}	3F Tank 45W/865 DALI WIDE L1265	50	6265	6500	>80	1264x80
56690 ^{NEW}	3F Tank 55W/865 DALI WIDE L1560	62	7831	6500	>80	1558x80
56691 ^{NEW}	3F Tank 70W/865 DALI WIDE L1850	74	9397	6500	>80	1852x80

3F Tank ATEX Medium



Medium distribution.
PMMA lenses with external flat surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x ø
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ON/OFF electronic wiring 230V-50/60Hz

56692 ^{NEW}	3F Tank 13W/840 MEDIUM L675	15	1847	4000	>80	676x80
56693 ^{NEW}	3F Tank 45W/840 MEDIUM L1265	50	6429	4000	>80	1264x80
56694 ^{NEW}	3F Tank 55W/840 MEDIUM L1560	62	8035	4000	>80	1558x80
56695 ^{NEW}	3F Tank 70W/840 MEDIUM L1850	74	9643	4000	>80	1852x80
56700 ^{NEW}	3F Tank 13W/865 MEDIUM L675	15	1792	6500	>80	676x80
56701 ^{NEW}	3F Tank 45W/865 MEDIUM L1265	50	6236	6500	>80	1264x80
56702 ^{NEW}	3F Tank 55W/865 MEDIUM L1560	62	7794	6500	>80	1558x80
56703 ^{NEW}	3F Tank 70W/865 MEDIUM L1850	74	9354	6500	>80	1852x80

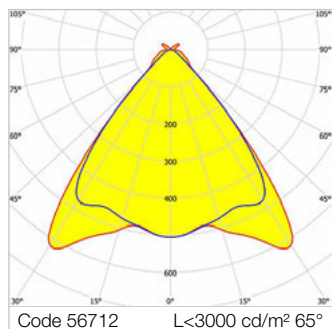
DALI electronic wiring 230V-50/60Hz

56696 ^{NEW}	3F Tank 13W/840 DALI MEDIUM L675	15	1847	4000	>80	676x80
56697 ^{NEW}	3F Tank 45W/840 DALI MEDIUM L1265	50	6429	4000	>80	1264x80
56698 ^{NEW}	3F Tank 55W/840 DALI MEDIUM L1560	62	8035	4000	>80	1558x80
56699 ^{NEW}	3F Tank 70W/840 DALI MEDIUM L1850	74	9643	4000	>80	1852x80
56704 ^{NEW}	3F Tank 13W/865 DALI MEDIUM L675	15	1792	6500	>80	676x80
56705 ^{NEW}	3F Tank 45W/865 DALI MEDIUM L1265	50	6236	6500	>80	1264x80
56706 ^{NEW}	3F Tank 55W/865 DALI MEDIUM L1560	62	7794	6500	>80	1558x80
56707 ^{NEW}	3F Tank 70W/865 DALI MEDIUM L1850	74	9354	6500	>80	1852x80

Waterproof and
corrosion-proof



3F Tank ATEX UGR



Controlled distribution.
Average luminance <3000 cd/m² for radial angles >65°.
PMMA lenses with external flat surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x ø
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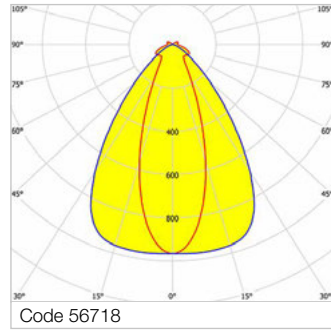
ON/OFF electronic wiring 230V-50/60Hz

56708 ^{NEW}	3F Tank 35W/840 UGR L1560	39	5258	4000	>80	1558x80
56709 ^{NEW}	3F Tank 40W/840 UGR L1850	47	6311	4000	>80	1852x80
56712 ^{NEW}	3F Tank 35W/865 UGR L1560	39	5100	6500	>80	1558x80
56713 ^{NEW}	3F Tank 40W/865 UGR L1850	47	6122	6500	>80	1852x80

DALI electronic wiring 230V-50/60Hz

56710 ^{NEW}	3F Tank 35W/840 DALI UGR L1560	39	5258	4000	>80	1558x80
56711 ^{NEW}	3F Tank 40W/840 DALI UGR L1850	47	6311	4000	>80	1852x80
56714 ^{NEW}	3F Tank 35W/865 DALI UGR L1560	39	5100	6500	>80	1558x80
56715 ^{NEW}	3F Tank 40W/865 DALI UGR L1850	47	6122	6500	>80	1852x80

3F Tank ATEX Concentrated



Concentrated distribution.
PMMA lenses with external flat surface.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x ø
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ON/OFF electronic wiring 230V-50/60Hz

56716 ^{NEW}	3F Tank 13W/840 CONC L675	15	1871	4000	>80	676x80
56717 ^{NEW}	3F Tank 45W/840 CONC L1265	50	6511	4000	>80	1264x80
56718 ^{NEW}	3F Tank 55W/840 CONC L1560	62	8139	4000	>80	1558x80
56719 ^{NEW}	3F Tank 70W/840 CONC L1850	74	9767	4000	>80	1852x80
56724 ^{NEW}	3F Tank 13W/865 CONC L675	15	1815	6500	>80	676x80
56725 ^{NEW}	3F Tank 45W/865 CONC L1265	50	6316	6500	>80	1264x80
56726 ^{NEW}	3F Tank 55W/865 CONC L1560	62	7894	6500	>80	1558x80
56727 ^{NEW}	3F Tank 70W/865 CONC L1850	74	9474	6500	>80	1852x80

DALI electronic wiring 230V-50/60Hz

56720 ^{NEW}	3F Tank 13W/840 DALI CONC L675	15	1871	4000	>80	676x80
56721 ^{NEW}	3F Tank 45W/840 DALI CONC L1265	50	6511	4000	>80	1264x80
56722 ^{NEW}	3F Tank 55W/840 DALI CONC L1560	62	8139	4000	>80	1558x80
56723 ^{NEW}	3F Tank 70W/840 DALI CONC L1850	74	9767	4000	>80	1852x80
56728 ^{NEW}	3F Tank 13W/865 DALI CONC L675	15	1815	6500	>80	676x80
56729 ^{NEW}	3F Tank 45W/865 DALI CONC L1265	50	6316	6500	>80	1264x80
56730 ^{NEW}	3F Tank 55W/865 DALI CONC L1560	62	7894	6500	>80	1558x80
56731 ^{NEW}	3F Tank 70W/865 DALI CONC L1850	74	9474	6500	>80	1852x80

Waterproof and
corrosion-proof



3F Tank ATEX | Accessories



Pair of AISI 316 stainless steel brackets for suspended installation.

Code	Item
A0305 ^{NEW}	Pair of suspension brackets



Pair of mounting brackets and hooks for wall-mounting, with nuts and bolts for luminaire fastening, everything in stainless steel.

Code	Item
A0835	Pair brack.+hooks for wall

This accessory must always be used in combination with pair of suspension brackets.



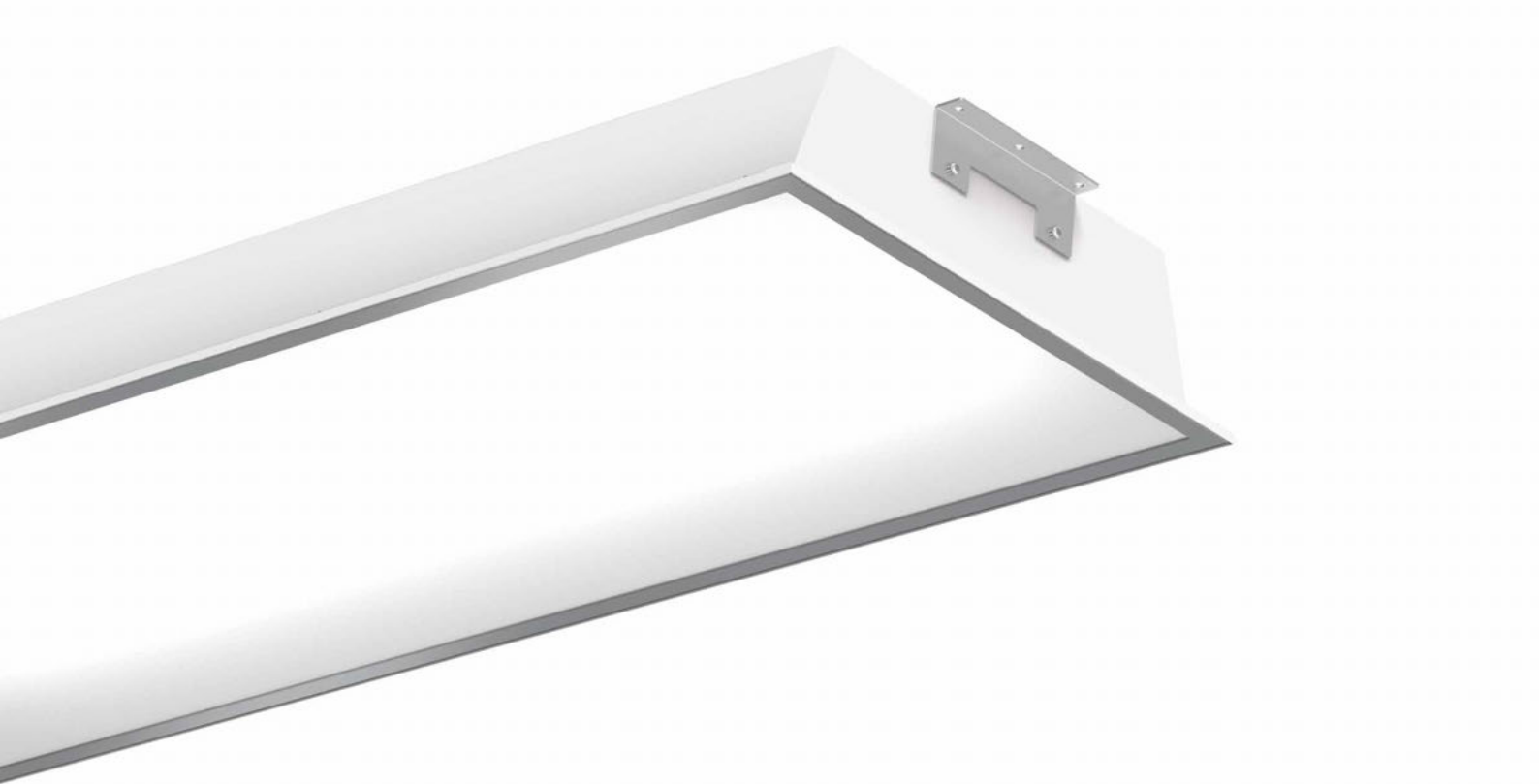
Suspension with regulator, galvanised steel cable 1.5 mm diameter, load 15 kg.

Code	Item
A0660	Suspension with adjustment - 1 m
A0661	Suspension with adjustment - 2 m
A0662	Suspension with adjustment - 3 m
A0663	Suspension with adjustment - 4 m
A0664	Suspension with adjustment - 5 m
A0665	Suspension with adjustment - 6 m

Attention: each product requires two suspensions with regulator.







Beta 500

> www.3F-Filippi.com/Beta 500

Beta 500 is an extremely functional product that makes solidity and power its strengths: it is the result of 3F Filippi's many years of experience in the industry.

Thanks to its high degree of protection IP66, it is totally protected against dust and powerful water jets: its shape facilitates cleaning operations and this makes it suitable for many areas of application, including food and pharmaceuticals sectors.

Product reliability has been taken care of down to the smallest detail: to obtain correct thermal management and guarantee the quality of light for many years, our designers have combined a sturdy aluminium body and a frame made of stainless steel to house first-class LEDs and drivers.

The uniformity of its light leaves maximum freedom of layout configuration in today's and future production departments, supported by innovative diffusers or "3F Lens" optics entirely developed and manufactured by 3F Filippi.

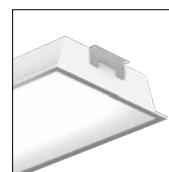
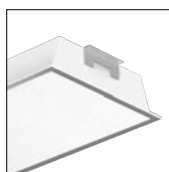
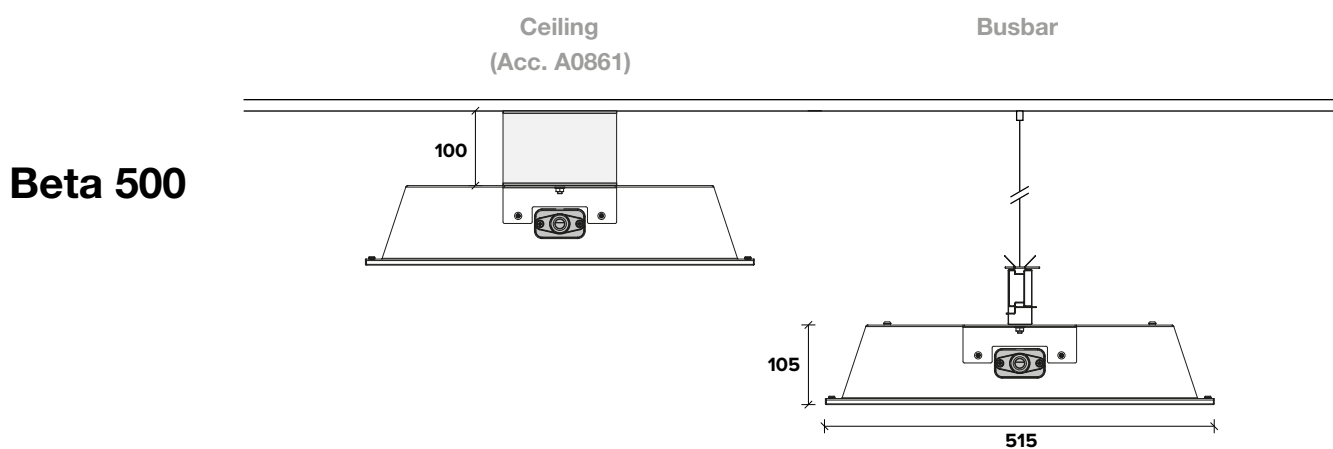
The latest generation LED sources are available with 4000K or 6500K colour temperatures, offering lighting designers a wide range of luminous fluxes (from 18,000 to more than 40,000 lumens).

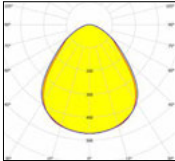
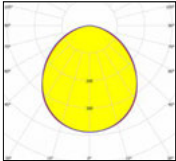
+ Overview

- Luminous efficacy up to 160 lumen/watt.
- Luminous fluxes from 19343 to 44417 lumens.
- Extensive installation pitch.
- Uniformly illuminated screen.
- 3 different photometric distributions.
- Quick and easy cleaning.
- Essential and functional design.
- Ease of assembly and maintenance.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Versatility of use in different environments.
- Thanks to the FastWiring system, the installation time is drastically reduced.
- Product suitable for use in the food industry (HACCP / IFS / BRC-Standard).

Page	Product	Stainless steel
406	NEW Beta 500	•

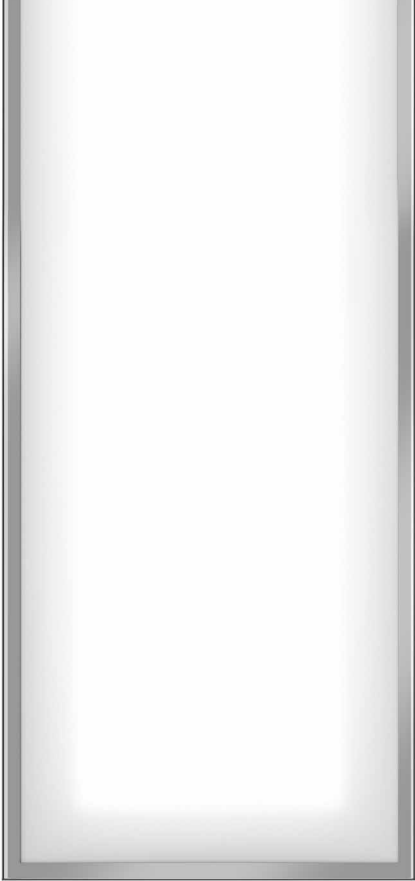
Product range



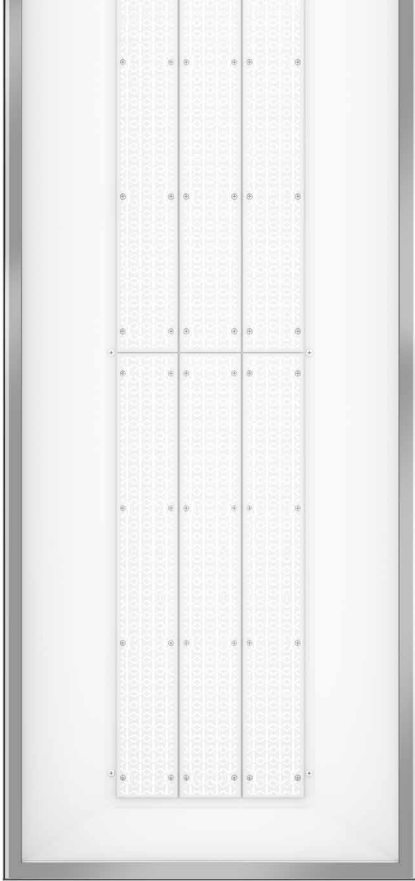
Model	SP	VA
UGR	<21	<21
Finishes	Prismatic PMMA	Frosted glass
Photometric distribution		
Installation steps	Dt	1,25
	DI	1,25



Beta 500 **SP**



Beta 500 **VA**



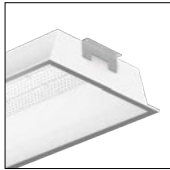
Beta 500 **SL** | Beta 500 **VT**

Beta 500

Model



**SL
Conc**



**VT
Conc**

UGR

<21

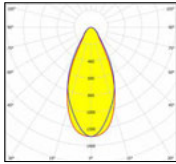
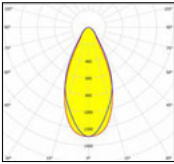
<21

Finishes

Trasparent PMMA

Trasparent glass

**Photometric
distribution**



Installation steps

Dt
DI

0,75
0,75

0,75
0,75

Waterproof and
corrosion-proof



Beta 500

Construction characteristics

Illuminotechnical characteristics

Direct symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in white painted epoxy-polyester powder aluminium.

White aluminium non-iridescent high efficiency.

Perimetrical frame in stainless steel with vandal-proof opening and stainless steel nuts and bolts.

Polyurethane foam seal, ecological, anti-aging, installed using a continuous automatic process with no joints.

Fixing bracket in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

ON/OFF electronic wiring: twin-circuit for 4x50W versions 3x100W.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- transparent or frosted polycarbonate diffuser, laminated glass
- wiring: dimmable, CLO (more information on page 568), single-circuit
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

Applications

Ambient temperature from -20°C to +45°C. Commercial and industrial environments and warehouses.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Installation

Ceiling mounted, suspension or busway installation.

Light Management

The device, equipped with DALI driver, can be controlled manually with 3F Easy Dim technology or automatically / manually with 3F Smart Dimming technology.

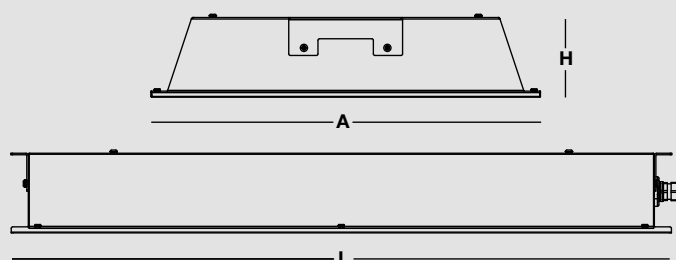
Notes

HST glass

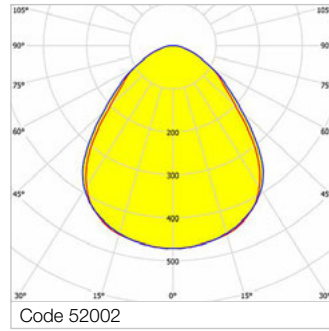
HST glass is composed of a tempered glass sheet which has undergone a thermal stabilisation process (Heat Soak Test) which reduces the risk of spontaneous breakage caused by nickel-sulfide inclusions inside the glass. It is not immune from harmless falling fragments, caused by shocks or, exceptionally, derived from the tempering process.

It is the user's responsibility to identify the most suitable type of diffuser for the application type.

Dimensions



Beta 500 SP



Medium distribution.

SP transparent methacrylate diffuser, prismatic outside, antiglare.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

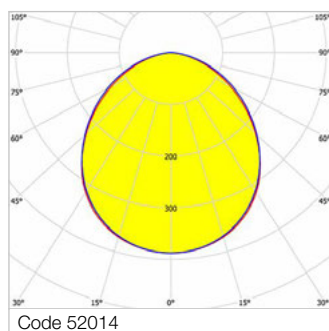
52001 ^{NEW}	Beta 500 3x45W/840 SP L870	135	19638	4000	>80	870x515x105
52002 ^{NEW}	Beta 500 4x50W/840 SP L870	205	27998	4000	>80	870x515x105
52003 ^{NEW}	Beta 500 3x100W/840 SP L1230	308	41442	4000	>80	1230x475x130
52007 ^{NEW}	Beta 500 3x45W/865 SP L870	135	19049	6500	>80	870x515x105
52008 ^{NEW}	Beta 500 4x50W/865 SP L870	205	27158	6500	>80	870x515x105
52009 ^{NEW}	Beta 500 3x100W/865 SP L1230	308	40199	6500	>80	1230x475x130

DALI electronic wiring 230V-50/60Hz

52004 ^{NEW}	Beta 500 3x45W/840 DALI SP L870	135	19638	4000	>80	870x515x105
52005 ^{NEW}	Beta 500 4x50W/840 DALI SP L870	205	27998	4000	>80	870x515x105
52006 ^{NEW}	Beta 500 3x100W/840 DALI SP L1230	308	41442	4000	>80	1230x475x130
52010 ^{NEW}	Beta 500 3x45W/865 DALI SP L870	135	19049	6500	>80	870x515x105
52011 ^{NEW}	Beta 500 4x50W/865 DALI SP L870	205	27158	6500	>80	870x515x105
52012 ^{NEW}	Beta 500 3x100W/865 DALI SP L1230	308	40199	6500	>80	1230x475x130

Waterproof and
corrosion-proof

Beta 500 VA



Medium distribution.
Frosted glass HST tempered, non-combustible.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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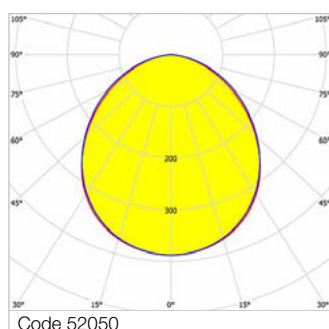
ON/OFF electronic wiring 230V-50/60Hz

52013 ^{NEW}	Beta 500 3x45W/840 VA L870	135	20383	4000	>80	870x515x105
52014 ^{NEW}	Beta 500 4x50W/840 VA L870	205	29414	4000	>80	870x515x105
52015 ^{NEW}	Beta 500 3x100W/840 VA L1230	308	42302	4000	>80	1230x475x130
52019 ^{NEW}	Beta 500 3x45W/865 VA L870	135	19772	6500	>80	870x515x105
52020 ^{NEW}	Beta 500 4x50W/865 VA L870	205	28532	6500	>80	870x515x105
52021 ^{NEW}	Beta 500 3x100W/865 VA L1230	308	41033	6500	>80	1230x475x130

DALI electronic wiring 230V-50/60Hz

52016 ^{NEW}	Beta 500 3x45W/840 DALI VA L870	135	20383	4000	>80	870x515x105
52017 ^{NEW}	Beta 500 4x50W/840 DALI VA L870	205	29414	4000	>80	870x515x105
52018 ^{NEW}	Beta 500 3x100W/840 DALI VA L1230	308	42302	4000	>80	1230x475x130
52022 ^{NEW}	Beta 500 3x45W/865 DALI VA L870	135	19772	6500	>80	870x515x105
52023 ^{NEW}	Beta 500 4x50W/865 DALI VA L870	205	28532	6500	>80	870x515x105
52024 ^{NEW}	Beta 500 3x100W/865 DALI VA L1230	308	41033	6500	>80	1230x475x130

Beta 500 VA HO



Medium distribution.
Frosted glass HST tempered, non-combustible.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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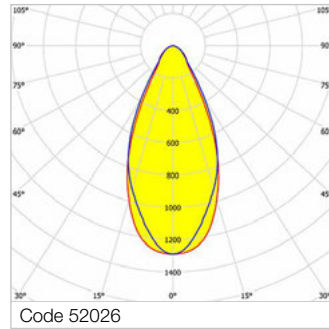
ON/OFF electronic wiring 230V-50/60Hz

52049 ^{NEW}	Beta 500 HO 3x45W/840 VA L870	134	21404	4000	>80	870x515x105
52050 ^{NEW}	Beta 500 HO 4x50W/840 VA L870	198	30886	4000	>80	870x515x105
52051 ^{NEW}	Beta 500 HO 3x100W/840 VA L1230	298	44417	4000	>80	1230x475x130

DALI electronic wiring 230V-50/60Hz

52052 ^{NEW}	Beta 500 HO 3x45W/840 DALI VA L870	134	21404	4000	>80	870x515x105
52053 ^{NEW}	Beta 500 HO 4x50W/840 DALI VA L870	198	30886	4000	>80	870x515x105
52054 ^{NEW}	Beta 500 HO 3x100W/840 DALI VA L1230	298	44417	4000	>80	1230x475x130

Beta 500 SL Concentrated



Concentrated distribution.
3F Lens lenses with high luminous efficiency, transparent PMMA,
fixed to the LED modules.
SL transparent PMMA flat diffuser.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

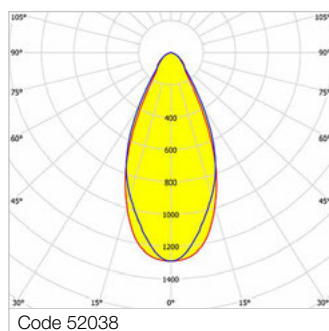
52025 ^{NEW}	Beta 500 3x45W/840 CONC SL L870	135	20080	4000	>80	870x515x105
52026 ^{NEW}	Beta 500 4x50W/840 CONC SL L870	205	28571	4000	>80	870x515x105
52027 ^{NEW}	Beta 500 3x100W/840 CONC SL L1230	308	42201	4000	>80	1230x475x130
52031 ^{NEW}	Beta 500 3x45W/865 CONC SL L870	135	19478	6500	>80	870x515x105
52032 ^{NEW}	Beta 500 4x50W/865 CONC SL L870	205	27714	6500	>80	870x515x105
52033 ^{NEW}	Beta 500 3x100W/865 CONC SL L1230	308	40935	6500	>80	1230x475x130

DALI electronic wiring 230V-50/60Hz

52028 ^{NEW}	Beta 500 3x45W/840 DALI CONC SL L870	135	20080	4000	>80	870x515x105
52029 ^{NEW}	Beta 500 4x50W/840 DALI CONC SL L870	205	28571	4000	>80	870x515x105
52030 ^{NEW}	Beta 500 3x100W/840 DALI CONC SL L1230	308	42201	4000	>80	1230x475x130
52034 ^{NEW}	Beta 500 3x45W/865 DALI CONC SL L870	135	19478	6500	>80	870x515x105
52035 ^{NEW}	Beta 500 4x50W/865 DALI CONC SL L870	205	27714	6500	>80	870x515x105
52036 ^{NEW}	Beta 500 3x100W/865 DALI CONC SL L1230	308	40935	6500	>80	1230x475x130

Waterproof and
corrosion-proof

Beta 500 VT Concentrated



Concentrated distribution.
3F Lens lenses with high luminous efficiency, transparent PMMA, fixed to the LED modules.
Transparent glass HST tempered, non-combustible.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

52037 ^{NEW}	Beta 500 3x45W/840 CONC VT L870	135	20080	4000	>80	870x515x105
52038 ^{NEW}	Beta 500 4x50W/840 CONC VT L870	205	28571	4000	>80	870x515x105
52039 ^{NEW}	Beta 500 3x100W/840 CONC VT L1230	308	42201	4000	>80	1230x475x130
52043 ^{NEW}	Beta 500 3x45W/865 CONC VT L870	135	19478	6500	>80	870x515x105
52044 ^{NEW}	Beta 500 4x50W/865 CONC VT L870	205	27714	6500	>80	870x515x105
52045 ^{NEW}	Beta 500 3x100W/865 CONC VT L1230	308	40935	6500	>80	1230x475x130

DALI electronic wiring 230V-50/60Hz

52040 ^{NEW}	Beta 500 3x45W/840 DALI CONC VT L870	135	20080	4000	>80	870x515x105
52041 ^{NEW}	Beta 500 4x50W/840 DALI CONC VT L870	205	28571	4000	>80	870x515x105
52042 ^{NEW}	Beta 500 3x100W/840 DALI CONC VT L1230	308	42201	4000	>80	1230x475x130
52046 ^{NEW}	Beta 500 3x45W/865 DALI CONC VT L870	135	19478	6500	>80	870x515x105
52047 ^{NEW}	Beta 500 4x50W/865 DALI CONC VT L870	205	27714	6500	>80	870x515x105
52048 ^{NEW}	Beta 500 3x100W/865 DALI CONC VT L1230	308	40935	6500	>80	1230x475x130

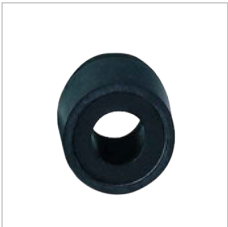
Beta 500 | Accessories



Anti-condensation diffuser cable gland.

Code	Item
A0187	Anti-condensation cable gland

Recommended for installations in environments with temperature sudden changes or subject to condensation.



Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm



Brackets for mounting of luminaire on ceiling.

Code	Item
A0861 <small>NEW</small>	Pair of brack. ceiling instal. Beta500

Waterproof and
corrosion-proof





3F Linda

> www.3F-Filippi.com/3F Linda

3F Linda LED has become famous for its soft and smooth lines, its patented snug fit snap-lock clips, its compact egg-shaped housing (110 millimetres maximum in the case of ceiling installation with brackets), its internal reinforcement structure and its elastic, shatterproof polycarbonate diffuser.

Thanks to its flexibility, it finds applications in residential, commercial and even food industry environments (IFS, HACCP and BRC certification).

3F Linda LED is available in three different lengths (600, 1200 and 1500 mm) with different power and luminous flux levels, and with both housing widths (100 millimetres and 160 millimetres).

Its efficient electronic wiring decreases power consumption and start-up times.

Thanks to the photo-etched diffuser, 3F Linda LED is now even higher-performance and economical, with improved diffusion and softer light, and increased visual comfort.

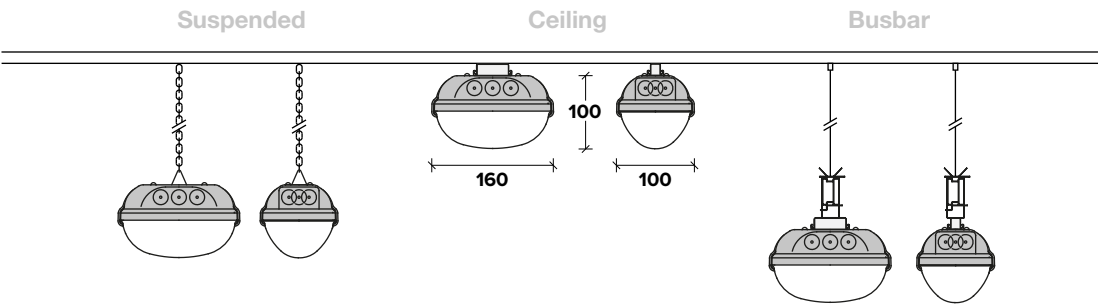
+ Overview

- Luminous efficacy up to 140 lumen/watt.
- Luminous fluxes from 461 to 9533 lumens.
- Extensive installation pitch.
- 5 different photometric distributions.
- Available with integrated sensors.
- Emergency version with kit integrated into the body.
- Quick and easy cleaning.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Fast relamping thanks to the fixing centres compatible with previous generations.
- Versatility of use in different environments.

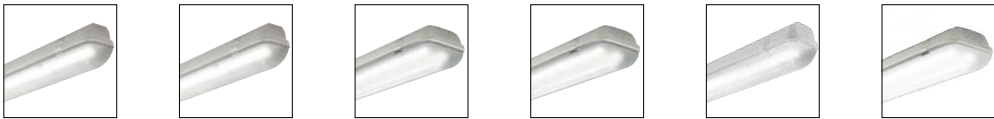
Page	Product	Polycarbonate
418	UPDATE 3F Linda LED	•
426	3F Linda LED HS	•
428	UPDATE 3F Linda LED Transparent	•
430	3F Linda LED Ice	•
432	3F Linda LED Sensor	•

Product range

3F Linda



3F Linda



Model	Standard		HQ		Wide	Concentrated	Basic		Soft		
UGR	<21		<21		<21	<21	<21		<21		
Photometric distribution											
Dimensions	100	160	100	160	160	160	100	160	100	160	
Installation steps	Dt	1,77	1,52	1,77	1,52	3,54	0,89	1,77	1,35	1,39	1,35
	DI	1,17	1,17	1,17	1,17	1,32	1,18	1,17	1,24	1,21	1,24
Applications	High-performance watertight luminaire		Watertight luminaire with CRI> 90 sources		Version with wide distribution	Version with concentrated distribution	The ideal solution for replacing old fluorescent solutions		Watertight luminaire with high visual comfort		



3F Linda 100 mm



3F Linda 160 mm

3F Linda



Compact



HS



Transparent



Ice



Sensor



**Sensor
Bluetooth**

UGR

<21

<21

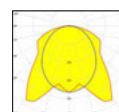
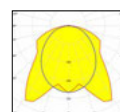
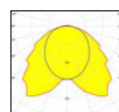
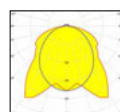
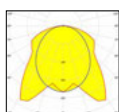
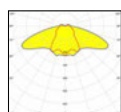
<21

<21

<21

<21

**Photometric
distribution**



Dimensions

100 160

100 160

100 160

100 160

100 160

100 160

**Installation
steps**

Dt

1,87 1,32

1,77 1,52

1,72 1,54

1,77 1,52

1,77 1,52

1,77 1,35

DI

1,39 1,45

1,17 1,17

1,16 1,17

1,17 1,17

1,17 1,17

1,17 1,24

Applications

Luminaire 300 mm
in length

Watertight luminaire
for environments
with corrosive
substances

Watertight luminaire
with transparent
body and diffuser

Watertight luminaire
for refrigeration cells
with temperatures
down to -30°C

Watertight luminaire
with integrated
presence sensor

Watertight
luminaire
controlled via
Bluetooth radio
signal

Waterproof and
corrosion-proof

Product advantages

EFFICIENT AND ECOLOGICAL. FOR YOU, FOR THE WORLD.

3F Linda LED shows off the best of 3F Filippi's design philosophy in looking for the best production solutions which respect the environment and lead to a reduction in materials and energy across the whole of the product's life cycle, by:

- Reducing power consumption and increasing the efficiency of our products thanks to the introduction of intelligent electronic wiring, high-efficiency sources and optimisation of the distribution of the luminous flux, thanks also to the possibility of installing flow recuperators.
- Limited use of different materials in order to facilitate the assembly, installation and recycling phases: only polycarbonate (body, diffuser, clips), aluminium or steel (flow recuperator, gear tray and stainless-steel clips) and the copper in the wires (completely removable) are used in 3F Linda LED. Moreover, connection between components are all reversible and use completely recyclable materials, facilitating disassembly and disposal of the product at the end of its lifetime.
- Reduced ecological footprint, with products manufactured with energy from PV solar panels and product handling following a "zero-mile" philosophy.
- Installation compatibility with previous versions: the new 3F Linda LED integrates perfectly in all environments, becoming the perfect solution to update existing installations – thanks to its full compatibility with the previous fluorescent version in terms of its size and accessories.
- Reuse of these elements means that less energy is used to create new products and accessories for adaption of previous installations.



- Recyclable green packaging, like all of 3F Filippi's products, in recycled cardboard.
- **Installation is quick and safe** thanks to the fixing brackets made entirely of stainless steel (both the internal and external part); the weight is distributed optimally. The sliding quick connection bracket can also be adjusted to suit the thermal expansion of the luminaire even in environments with a notable temperature range. The set of three fixing brackets is supplied with each luminaire.
- For installations with direct exposure to sunlight, use of the "Beta 235" or "Beta A3F - i3F" product is recommended.
- The sliding quick connection bracket can also be adjusted to suit the thermal expansion of the luminaire even in environments with a notable temperature range. The set of three fixing brackets is supplied with each luminaire.
- 3F Linda LED is a luminaire with Fire Reaction Class 1 as per Italian Ministerial Decree of 24 June 1984 (Classification of reaction to fire and type-approval of materials for fire-prevention purposes).
- This classification meets the requirements of Italian Ministerial Decrees of 11 January 1988 (Fire-prevention standards in subways) and of 28 October 2005 (Safety in railway tunnels).

"New Fiat 500e" production line - Photo Courtesy: FCA





3F Linda LED

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Self-extinguishing V2 polycarbonate housing, injection moulded, RAL 7035 grey.
 Ecologic anti-aging injected sealing gasket.
 Gear-tray reflector unit in hot-galvanised steel, painted in white polyester, fixed to the housing by means of steel rapid devices, hinged opening.
 Diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded with smooth outer surface.
 Stainless steel fixing brackets, L=300 mm versions excluded.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
 The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

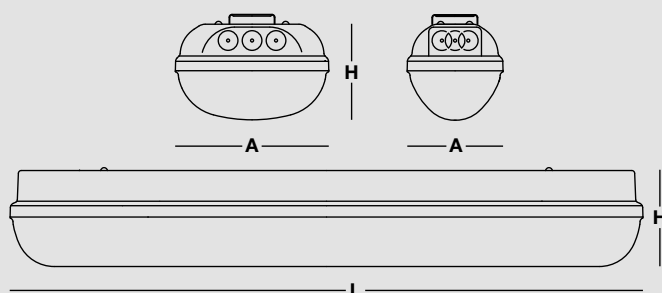
On request

- different colour rendering indices and colour temperatures
- wiring: CLO (more information on page 568), dimmable D1-10V, class II
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- ATEX category 3D, Zone 22 version
- emergency versions

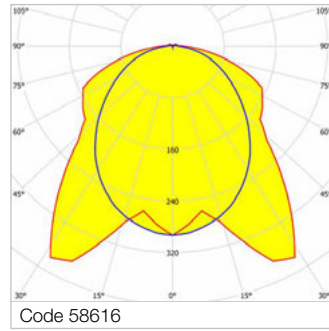
Applications

Dry, dusty indoor environments, subject to occasional water splashes.
 Virtually shatterproof polycarbonate compatibly with the fumes / atmospheres that compromise the elasticity of plastic materials (further information on page 609).
 Not suitable in environments where chlorine fumes, ligroin, hydrocarbon mixtures, mineral oil vapours or fumes of lubricating emulsions to cool down machine tools are present.
 Not suitable for installation on surfaces subject to important vibrations, exposed to weather conditions, on ropes or poles.
 Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).
 Suitable for illumination of public car parks and parking grounds referred to DIN 67528:2018-04.
 For specific applications please contact our technical offices.

Dimensions



3F Linda LED



Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.
Fixing brackets in stainless steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

58563	3F Linda LED 1x6W L660	7.5	1029	4000	>80	660x100x100
58561	3F Linda LED 1x12W L660	15	1918	4000	>80	660x100x100
58583	3F Linda LED 1x24W L1270	28	3914	4000	>80	1270x100x100
58585	3F Linda LED 1x24W/830 L1270	28	3718	3000	>80	1270x100x100
58584	3F Linda LED 1x24W/865 L1270	28	3797	6500	>80	1270x100x100
58572	3F Linda LED 2x12W L660	29	3732	4000	>80	660x160x100
58605	3F Linda LED 1x30W L1570	35	4899	4000	>80	1570x100x100
58607	3F Linda LED 1x30W/830 L1570	35	4654	3000	>80	1570x100x100
58606	3F Linda LED 1x30W/865 L1570	35	4752	6500	>80	1570x100x100
58594	3F Linda LED 2x24W L1270	56	7617	4000	>80	1270x160x100
58596	3F Linda LED 2x24W/830 L1270	56	7236	3000	>80	1270x160x100
58595	3F Linda LED 2x24W/865 L1270	56	7389	6500	>80	1270x160x100
58616	3F Linda LED 2x30W L1570	70	9533	4000	>80	1570x160x100
58618	3F Linda LED 2x30W/830 L1570	70	9056	3000	>80	1570x160x100
58617	3F Linda LED 2x30W/865 L1570	70	9247	6500	>80	1570x160x100

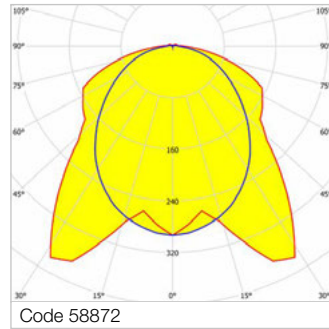
DALI electronic wiring 230V-50/60Hz

58549	3F Linda LED 1x12W DALI L660	15	1918	4000	>80	660x100x100
58550	3F Linda LED 2x12W DALI L660	29	3732	4000	>80	660x160x100
58551	3F Linda LED 1x24W DALI L1270	28	3914	4000	>80	1270x100x100
58553	3F Linda LED 1x30W DALI L1570	35	4899	4000	>80	1570x100x100
58552	3F Linda LED 2x24W DALI L1270	56	7617	4000	>80	1270x160x100
58554	3F Linda LED 2x30W DALI L1570	70	9533	4000	>80	1570x160x100

Waterproof and
corrosion-proof

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)						
58569	3F Linda LED 1x6W EP LA L660	8.5	1029	4000	>80	660x160x100
58567	3F Linda LED 1x12W EP LA L660	16	1918	4000	>80	660x160x100
58589	3F Linda LED 1x24W EP L1270	29	3914	4000	>80	1270x100x100
58591	3F Linda LED 1x24W/830 EP L1270	29	3718	3000	>80	1270x100x100
58590	3F Linda LED 1x24W/865 EP L1270	29	3797	6500	>80	1270x100x100
58611	3F Linda LED 1x30W EP L1570	36	4899	4000	>80	1570x100x100
58613	3F Linda LED 1x30W/830 EP L1570	36	4654	3000	>80	1570x100x100
58612	3F Linda LED 1x30W/865 EP L1570	36	4752	6500	>80	1570x100x100
58600	3F Linda LED 2x24W EP L1270	57	7617	4000	>80	1270x160x100
58602	3F Linda LED 2x24W/830 EP L1270	57	7236	3000	>80	1270x160x100
58601	3F Linda LED 2x24W/865 EP L1270	57	7389	6500	>80	1270x160x100
58623	3F Linda LED 2x30W EP L1570	71	9533	4000	>80	1570x160x100
58625	3F Linda LED 2x30W/830 EP L1570	71	9056	3000	>80	1570x160x100
58624	3F Linda LED 2x30W/865 EP L1570	71	9247	6500	>80	1570x160x100
ENP non-permanent emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)						
58705	3F Linda LED 1x12W ENP LA L660		543	4000	>80	660x160x100
58713	3F Linda LED 1x24W ENP L1270		544	4000	>80	1270x100x100

3F Linda LED HQ



Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.
Fixing brackets in stainless steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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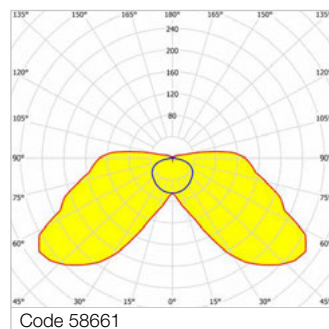
ON/OFF electronic wiring 230V-50/60Hz

58867 ^{NEW}	3F Linda LED 1x12W/940 L660	15	1573	4000	>90	660x100x100
58868 ^{NEW}	3F Linda LED 2x12W/940 L660	29	3060	4000	>90	660x160x100
58869 ^{NEW}	3F Linda LED 1x24W/940 L1270	28	3210	4000	>90	1270x100x100
58870 ^{NEW}	3F Linda LED 2x24W/940 L1270	56	6246	4000	>90	1270x160x100
58871 ^{NEW}	3F Linda LED 1x30W/940 L1570	35	4017	4000	>90	1570x100x100
58872 ^{NEW}	3F Linda LED 2x30W/940 L1570	70	7817	4000	>90	1570x160x100

DALI electronic wiring 230V-50/60Hz

58873 ^{NEW}	3F Linda LED 1x12W/940 DALI L660	15	1573	4000	>90	660x100x100
58874 ^{NEW}	3F Linda LED 2x12W/940 DALI L660	29	3060	4000	>90	660x160x100
58875 ^{NEW}	3F Linda LED 1x24W/940 DALI L1270	28	3210	4000	>90	1270x100x100
58876 ^{NEW}	3F Linda LED 2x24W/940 DALI L1270	56	6246	4000	>90	1270x160x100
58877 ^{NEW}	3F Linda LED 1x30W/940 DALI L1570	35	4017	4000	>90	1570x100x100
58878 ^{NEW}	3F Linda LED 2x30W/940 DALI L1570	70	7817	4000	>90	1570x160x100

3F Linda LED Wide



Wide distribution.
Flux recuperator in specular aluminium, high efficiency.
Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.

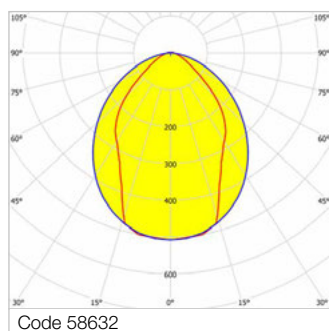
Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

58659	3F Linda LED 2x24W AMPIO L1270	56	7600	4000	>80	1270x160x100
58661	3F Linda LED 2x30W AMPIO L1570	70	9511	4000	>80	1570x160x100

Waterproof and
corrosion-proof

3F Linda LED Concentrated



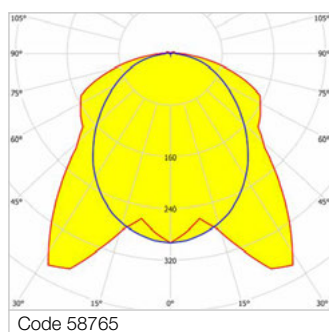
Concentrated elliptical distribution.
Flux recuperator in specular aluminium, high efficiency.
Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

58630	3F Linda LED 2x24W CONC L1270	56	7465	4000	>80	1270x160x100
58632	3F Linda LED 2x30W CONC L1570	70	9342	4000	>80	1570x160x100

3F Linda LED Basic



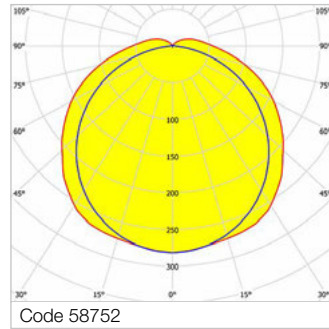
Snug fit snap-lock clips for diffuser mounting, in polycarbonate, tamper-proof screwdriver opening.
In compliance with EN 60598-1.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

58762	3F Linda LED Basic 1x19W L1270	22	2956	4000	>80	1270x100x100
58764	3F Linda LED Basic 1x23W L1570	29	3708	4000	>80	1570x100x100
58766	3F Linda LED Basic ST 2x16W L1270	36	5005	4000	>80	1270x100x100
58763	3F Linda LED Basic 2x19W L1270	41	5357	4000	>80	1270x160x100
58767	3F Linda LED Basic ST 2x20W L1570	45	6291	4000	>80	1570x100x100
58765	3F Linda LED Basic 2x23W L1570	49	6722	4000	>80	1570x160x100

3F Linda LED Soft



Soft opal diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded. Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening. In compliance with EN 60598-1.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

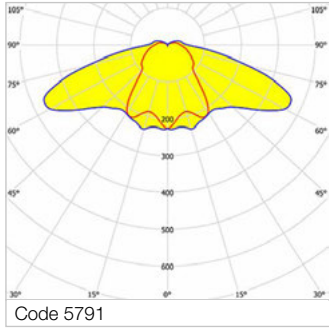
58731	3F Linda LED Soft 1x12W L660	15	1760	4000	>80	660x100x100
58732	3F Linda LED Soft 2x12W L660	29	3376	4000	>80	660x160x100
58733	3F Linda LED Soft 1x24W L1270	28	3593	4000	>80	1270x100x100
58734	3F Linda LED Soft 1x30W L1570	35	4497	4000	>80	1570x100x100
58751	3F Linda LED Soft 2x22W L1570	50	6838	4000	>80	1570x160x100
58737	3F Linda LED Soft 2x24W L1270	56	6890	4000	>80	1270x160x100
58752	3F Linda LED Soft 2x30W L1570	70	8623	4000	>80	1570x160x100









DALI electronic wiring 230V-50/60Hz




58735	3F Linda LED Soft 1x24W DALI L1270	28	3593	4000	>80	1270x100x100
58736	3F Linda LED Soft 1x30W DALI L1570	35	4497	4000	>80	1570x100x100
58753	3F Linda LED Soft 2x22W DALI L1570	50	6838	4000	>80	1570x160x100
58738	3F Linda LED Soft 2x24W DALI L1270	56	6890	4000	>80	1270x160x100
58754	3F Linda LED Soft 2x30W DALI L1570	70	8623	4000	>80	1570x160x100

Waterproof and
corrosion-proof

3F Linda LED Compact







Wide longitudinal distribution.
LED modules on an adjustable aluminium support and transparent methacrylate lenses.
In compliance with EN 60598-1.
Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

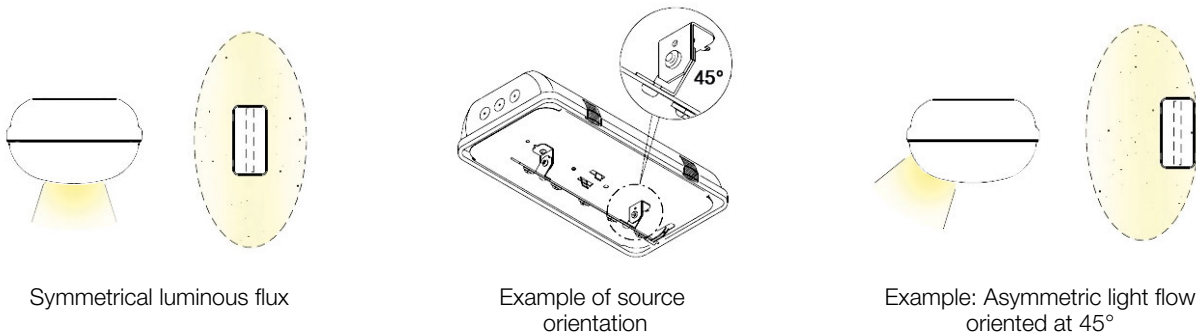
5791	3F Linda Compatta LED 1x5W 160x300	7.5	464	4000	>80	300x160x100
5790	3F Linda Compatta LED 1x5W 100x300	7.5	461	4000	>80	300x100x100

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

5794	3F Linda Compatta LED 1x5W EP 160x300	8.5	464	4000	>80	300x160x100
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The **Linda LED Compact** version is specially designed to be installed in corridors, emergency exits and transit areas: its light guides you along very clearly with its distribution which has been optimised to create light corridors.
Thanks to a new type of LED specially designed for this device, consistent energy savings can be achieved and maintenance costs eliminated (average estimated LED source lifetime 80,000 h).

Both **Linda Compact LED** versions can be wall or ceiling mounted, and offer the possibility to direct the LED source, easily adapting the light strip to any type of installation.
The rotating support the LED is fixed to allows the light flow to be oriented up to 45° in both directions, meeting any dedicated lighting requirements and allowing these adjustments to be made with great precision directly on site:







3F Linda LED HS

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
Lifetime (L93/B10): 30000 h. (tq+25°C)
Lifetime (L90/B10): 50000 h. (tq+25°C)
Lifetime (L85/B10): 80000 h. (tq+25°C)
Lifetime (L80/B10): 100000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Body and screen in polycarbonate with additional protective treatment for use in environments with aggressive substances. Ecologic anti-aging injected sealing gasket.
Gear-tray reflector unit in hot-galvanised steel, painted in white polyester, fixed to the housing by means of steel rapid devices, hinged opening.
Diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded with smooth outer surface.
Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.
Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- **Linear anti-sulfur LED modules (SiO₂), with special protection against aggressive chemically-volatile substances, for standard LED technology.**
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour temperatures
- wiring: dimmable, CLO (more information on page 568), class II
- emergency versions

Applications

Dry, dusty indoor environments, subject to occasional water splashes.
Hygienically suitable product for installation in food production plants (HACCP), IFS (Food Version 6), BRC (GSFS Food Version 7).
Virtually shatterproof polycarbonate compatibly with the fumes / atmospheres that compromise the elasticity of plastic materials (further information on page 609).

Not suitable for installation on surfaces subject to important vibrations, exposed to weather conditions, on ropes or poles.

Luminaire complete with linear anti-sulfur LED modules (SiO₂), with special protection against aggressive chemically-volatile substances, for standard LED technology.

Body and diffuser resistant to the following substances: Ethyl alcohol (24 hours at 20°C), aqueous detergents, hydrochloric acid (leaves slight mark), DOT4 brake oil, sulphuric acid (leaves slight mark), ammonia.

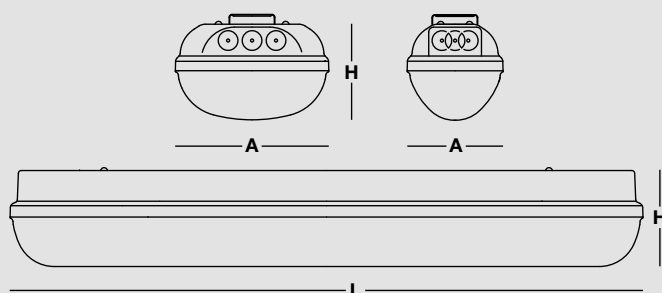
When using this data, remember that it is the result of laboratory tests, and therefore valid only under those test conditions: the data is to be considered approximate and, in the absence of practical experience, it is advisable to carry out tests under actual operating conditions.

Please refer to the resistance to corrosive substances table on page 609.

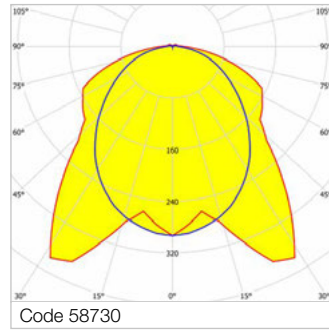
The temperature and concentration of the chemical substance may significantly affect the materials and the LED technology.

For specific applications please contact our technical offices.

Dimensions



3F Linda LED HS



Luminaire complete with linear LED modules (SiO₂), with special protection against aggressive chemically-volatile substances, for standard LED technology.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

58722	3F Linda LED HS 1x24W L1270	28	3914	4000	>80	1270x100x100
58724	3F Linda LED HS 1x30W L1570	35	4899	4000	>80	1570x100x100
58728	3F Linda LED HS 2x24W L1270	56	7617	4000	>80	1270x160x100
58730	3F Linda LED HS 2x30W L1570	70	9533	4000	>80	1570x160x100

Waterproof and
corrosion-proof



3F Linda LED Transparent

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
 Lifetime (L92/B10): 30000 h. (tq+25°C)
 Lifetime (L85/B10): 50000 h. (tq+25°C)
 Lifetime (L75/B10): 80000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in transparent self-extinguishing V2 polycarbonate, injection moulded.
 Ecologic anti-aging injected sealing gasket.
 Gear-tray reflector unit in hot-galvanised steel, painted in white polyester, fixed to the housing by means of steel rapid devices, hinged opening.
 Diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded with smooth outer surface.
 Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.
 Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- wiring: dimmable, CLO (more information on page 568), class II
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

Applications

Dry, dusty indoor environments, subject to occasional water splashes.

Environments: transit areas, parking lots. Environments where soft diffuse light is required for optimal visual comfort.

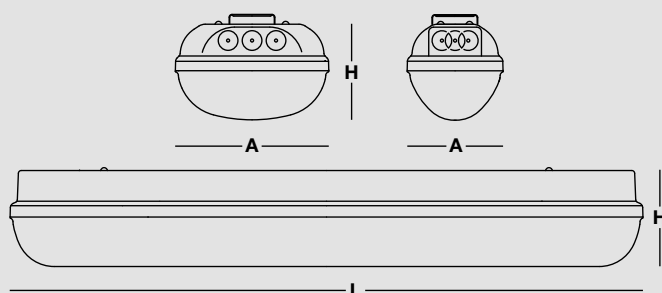
Virtually shatterproof polycarbonate compatibly with the fumes / atmospheres that compromise the elasticity of plastic materials (further information on page 609). Not suitable in environments where chlorine fumes, ligroin, hydrocarbon mixtures, mineral oil vapours or fumes of lubricating emulsions to cool down machine tools are present.

Not suitable for installation on surfaces subject to important vibrations, exposed to weather conditions, on ropes or poles.

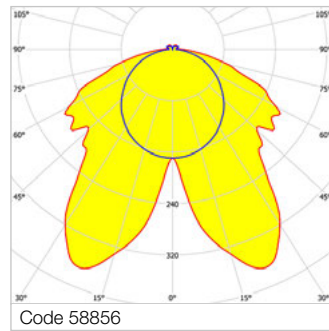
Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Suitable for illumination of public car parks and parking grounds referred to DIN 67528:2018-04.

Dimensions



3F Linda LED Transparent



Transparent polycarbonate housing.
Snug fit safety snap-lock clips in stainless steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

58852 ^{NEW}	3F Linda LED Lite TR 1x12W L660	15	1992	4000	>80	660x100x100
58853 ^{NEW}	3F Linda LED Lite TR 1x19W L1270	22	2962	4000	>80	1270x100x100
58854 ^{NEW}	3F Linda LED Lite TR 1x23W L1570	29	3716	4000	>80	1570x100x100
58855 ^{NEW}	3F Linda LED Lite TR 2x16W L1270	36	4923	4000	>80	1270x160x100
58856 ^{NEW}	3F Linda LED Lite TR 2x20W L1570	45	6188	4000	>80	1570x160x100

Waterproof and
corrosion-proof



3F Linda LED Ice

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
Lifetime (L93/B10): 30000 h. (tq+25°C)
Lifetime (L90/B10): 50000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Self-extinguishing V2 polycarbonate housing, injection moulded, RAL 7035 grey.
Ecologic anti-aging injected sealing gasket.
Gear-tray reflector unit in hot-galvanised steel, painted in white polyester, fixed to the housing by means of steel rapid devices, hinged opening.
Diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded with smooth outer surface.
Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.
Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
L-N-E line terminal block with ceramic isolator protection powder-filled fuse, rapid type, 5x20 mm, of suitable capacity, breaking capacity 1500 A.
Solid single-core silicone rubber insulated wiring cable with fibreglass braid type UG4T2/2 cross section 0.75 mm².

Source characteristics

- Linear LED modules UR95.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- DALI version

Applications

Cells with temperature from -30°C to + 40°C with a humidity degree up to 95%.
Virtually shatterproof polycarbonate compatibly with the fumes / atmospheres that compromise the elasticity of plastic materials (further information on page 609).
For applications in environments in which disturbances on the power network may be present and/or involve use at low temperatures, surge protection devices should be fitted on the power supply and any causes of undervoltages eliminated.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Installation

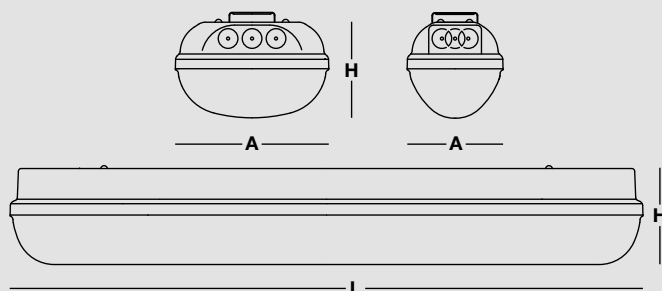
Thanks to new 3F LED technology, the advantages of using 3F Linda LED ICE technology are manifold:

- switch-on time less than 5 seconds
- unlimited on cycles
- lifetime of LED source does not decline in relation to the number of on cycles

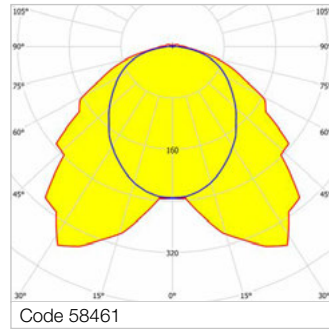
All this results in cost reductions thanks to:

- power consumption lower than for fluorescent versions
- no heat transfer from the luminaire to the cooled environment

Dimensions



3F Linda LED Ice 1x



HACCP

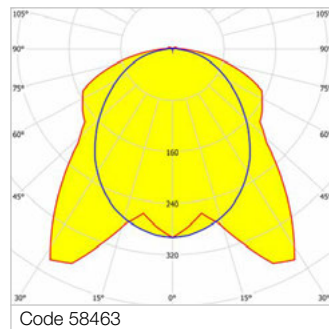
Controlled wide distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz, fuse

58457	3F Linda LED Ice 1x24W UR95 L1270	28	3914	4000	>80	1270x100x100
58461	3F Linda LED Ice 1x30W UR95 L1570	35	4899	4000	>80	1570x100x100

3F Linda LED Ice 2x



HACCP

Controlled wide distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz, fuse

58459	3F Linda LED Ice 2x24W UR95 L1270	56	7617	4000	>80	1270x160x100
58463	3F Linda LED Ice 2x30W UR95 L1570	70	9533	4000	>80	1570x160x100

Waterproof and corrosion-proof



3F Linda LED Sensor

Construction characteristics

Illuminotechnical characteristics

Controlled symmetric distribution.
Lifetime (L93/B10): 30000 h. (tq+25°C)
Lifetime (L90/B10): 50000 h. (tq+25°C)
Lifetime (L85/B10): 80000 h. (tq+25°C)
Lifetime (L80/B10): 100000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Self-extinguishing V2 polycarbonate housing, injection moulded, RAL 7035 grey.
Ecologic anti-aging injected sealing gasket.
Gear-tray reflector unit in hot-galvanised steel, painted in white polyester, fixed to the housing by means of steel rapid devices, hinged opening.
Diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded with smooth outer surface.
Snug fit safety snap-lock clips for diffuser mounting in stainless steel, screwdriver opening.
Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.
Integrated presence sensor.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

Applications

Dry, dusty indoor environments, subject to occasional water splashes.
Environments: transit areas, parking lots.
Virtually shatterproof polycarbonate compatibly with the fumes / atmospheres that compromise the elasticity of plastic materials (further information on page 609).
Not suitable in environments where chlorine fumes, ligroin, hydrocarbon mixtures, mineral oil vapours or fumes of lubricating emulsions to cool down machine tools are present.

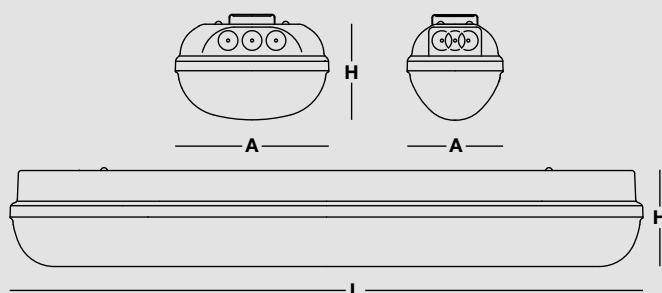
Not suitable for installation on surfaces subject to important vibrations, exposed to weather conditions, on ropes or poles.
For specific applications please contact our technical offices.

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).
Suitable for illumination of public car parks and parking grounds referred to DIN 67528:2018-04.

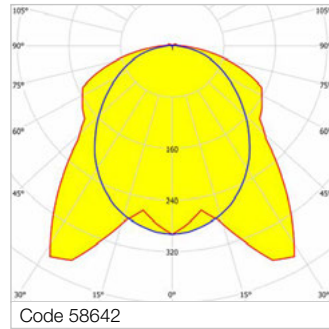
Light Management

For more information on 3F Sensor technology, refer to the specific chapter in the "Light Management" section.

Dimensions



3F Linda LED Sensor



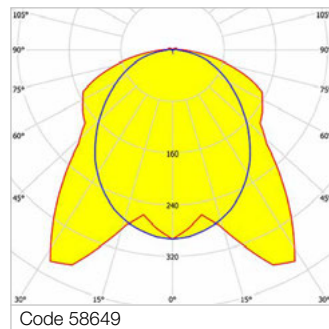
Integrated presence sensor with ON/OFF function.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

58638	3F Linda LED 1x30W Sensor L1570	36	4899	4000	>80	1570x100x100
58642	3F Linda LED 2x30W Sensor L1570	71	9533	4000	>80	1570x160x100

3F Linda LED Sensor Corridor Function



Integrated presence sensor with Corridor Function mode, even with the environment free of people, the luminous flux is maintained at 10%.

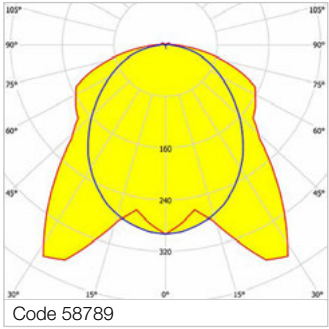
Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

58645	3F Linda LED 1x30W Sensor CF L1570	36	4899	4000	>80	1570x100x100
58649	3F Linda LED 2x30W Sensor CF L1570	71	9533	4000	>80	1570x160x100

Waterproof and
corrosion-proof

3F Linda LED Sensor Bluetooth



Integrated Bluetooth presence sensor that allows to adjust and create a wireless network between DALI-BLE fixtures.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

DALI electronic wiring 230V-50/60Hz

58786	3F Linda LED 1x24W Sensor DALI-BLE L1270	29	3914	4000	>80	1270x100x100
58787	3F Linda LED 1x30W Sensor DALI-BLE L1570	36	4899	4000	>80	1570x100x100
58788	3F Linda LED 2x24W Sensor DALI-BLE L1270	57	7617	4000	>80	1270x160x100
58789	3F Linda LED 2x30W Sensor DALI-BLE L1570	71	9533	4000	>80	1570x160x100

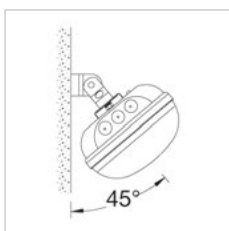
3F Linda | Accessories



Snug fit snap-lock clips for diffuser mounting, in stainless steel, safety opening.

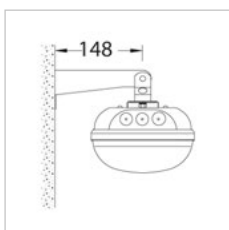
Accessory compatible with 3F Linda LED.

Code	Item
A0160	Inox clips 3F Linda L660 -4pcs The pack contains 4 pieces.
A0161	Inox clips 3F Linda L1270 -8pcs The pack contains 8 pieces.
A0162	Inox clips 3F Linda L1570 -10pcs The pack contains 10 pieces.



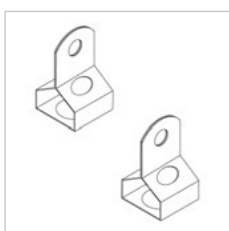
Pair of brackets and hooks in stainless steel, with nuts and bolts for fixing to 3F Linda, for ceiling or wall-mounting, single and twin-lamp luminaires. Minimum tilt angle = 45°.

Code	Item
A0449	15 GZI w/brack.+ hooks Linda L300
A0450	15 RIT w/bra.+hooks Linda L660-1270-1570



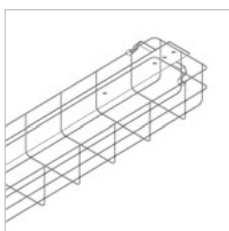
Pair of brackets and hooks in stainless steel, with nuts and bolts for fixing to 3F Linda, for wall-mounting, single and twin-lamp luminaires.

Code	Item
A0451	15 MBI w/brack.+ hooks Linda L300
A0452	15 FBR w/bra.+hooks Linda L660-1270-1570



Pair of stainless steel hooks for suspended installation, with cable clip and nuts and bolts for installation to 3F Linda.

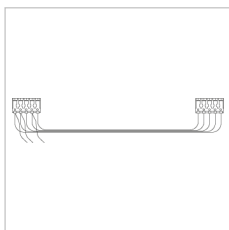
Code	Item
A0462	13 GSI (pair of susp. hooks Linda L300)
A0463	13 TRM pair of susp.hooks Linda



Wire-guard for applications in dry environments, against shocks coming from any directions, galvanised steel rod Ø 5 mm.

Code	Item
A0455	Wireguard 180x1330 3F Linda
A0456	Wireguard 180x1330 3F Linda
A0457	Wireguard 280x1330 3F Linda/3F Beta
A0458	Wireguard 280x1630 3F Linda/3F Beta

Only for luminaires fixed without hooks.



5-pole cascade connection line, stiff cable H07 V2-U, HT 90°C, 1.5 mm², terminal blocks with connection capacity 2x2.5 mm².

Accessory compatible with 3F Linda LED, 3F Linda LED HS, 3F Linda LED Ice, 3F Linda LED Sensor.

Code	Item
A0447	3F Linda through-line L1570

Accessory not compatible with ST versions of 3F Linda LED Basic.

Waterproof and
corrosion-proof



Anti-condensation diffuser cable gland.

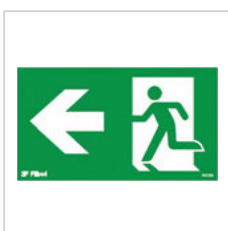
Code	Item
A0187	Anti-condensation cable gland

Recommended for installations in environments with temperature sudden changes or subject to condensation.



Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm



Pictograms for warning signs to be applied on emergency luminaire's diffusers 160 mm wide. Pictogram, 135 mm high, 240 mm long for L300 luminaires, 605 mm long for L660 luminaires. Pictograms complying with European standards concerning health and safety signals on the workplace.

Code	Item
A0464	26 CSG (pictogram P1 Linda L300)
A0465	26 MTH (pictogram P1 Linda L660)



Pictograms for warning signs to be applied on emergency luminaire's diffusers 160 mm wide. Pictogram, 135 mm high, 240 mm long for L300 luminaires, 605 mm long for L660 luminaires. Pictograms complying with European standards concerning health and safety signals on the workplace.

Code	Item
A0466	26 DVI (pictogram P2 Linda L300)
A0467	26 MVL (pictogram P2 Linda L660)



Pictograms for warning signs to be applied on emergency luminaire's diffusers 160 mm wide. Pictogram, 135 mm high, 240 mm long for L300 luminaires, 605 mm long for L660 luminaires. Pictograms complying with European standards concerning health and safety signals on the workplace.

Code	Item
A0468	26 GZM (pictogram P3 Linda L300)
A0469	26 PXN (pictogram P3 Linda L660)



VARCO TECNICO
VIETATO ACCENDERE O SOSTARE

949
IMBALLAGGI IN MATERIALI RESISTENTI

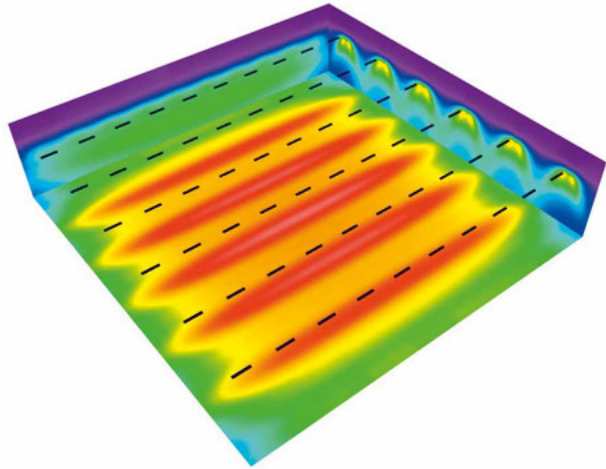
3F Linda LED

Examples of design

Comparison with waterproof Fluorescent 2x58 Starter

Design data:

Room dimensions	30x30 metres
Room height	7 metres
Installation height	5 metres
Number of luminaires:	60 luminaires
Like-for-like replacement of light points	
Reflection	ceiling 30% walls 30% floor 10%
Work surface height	0.85 metres



	Current system Waterproof Fluorescent 2x58W	Like-for-like replacement of light points 3F Linda LED Basic ST 2x20W L1570	Reduction in light points 3F Linda LED 2x30W L1570
Lighting values	300 lx	321 lx	329 lx
Number of light points	60	60	42**
Total luminaire	8,460 W (starter) 6,600 W (electronic)	2,700 W	2,940 W
Difference		-68% (starter) -59% (electronic)	-65% (starter) -55% (electronic)
Average source life	10,000 hours (starter) 18,000 hours (electronic)	>50,000 hours	>50,000 hours
2,000 hours annual operation (8 hours per day) 0.18 €/kWh			
Energy costs	51€ (starter) 40€ (electronic)	16€	17€**
Energy savings for each luminaire currently installed		35€* (starter) 24€* (electronic)	34€* (starter) 23€* (electronic)

3000 hours annual operation (12 hours per day) 0.18 €/kWh

Energy costs	76€ (starter) 59€ (electronic)	24€	26€**
Energy savings for each luminaire currently installed		52€* (starter) 35€* (electronic)	50€* (starter) 33€* (electronic)

*Savings from the drastic reduction in maintenance costs should then be added to this!

**Less investment for the fixture purchase and installation

Comparison table between fluorescent and LED luminaires

Fluorescent Version			Power consumption (W)	Corresponding LED	Power consumption (W)	Savings
T8	2x58W	starter	141	3F Linda LED Basic ST 2x20W L1570	45	68%
		HF	109			59%
	2x36W	starter	90	3F Linda LED Basic ST 2x16W L1270	36	60%
		HF	71			49%
	2x18W	starter	45	3F Linda LED 1x12W L660	15	67%
		HF	35			57%
	1x58W	starter	70	3F Linda LED Basic 1x23W L1570	29	59%
		HF	55			47%
	1x36W	starter	45	3F Linda LED Basic 1x19W L1270	21	53%
		HF	36			42%
	1x18W	starter	27	3F Linda LED 1x6W L660	7.5	72%
		HF	19			61%
T5	2x49W		106	3F Linda LED Basic ST 2x20W L1570	45	58%
	2x35W		76	3F Linda LED 1x30W L1570	35	54%
	2x28W		60	3F Linda LED 1x24W L1270	28	53%
	2x14W		31	3F Linda LED 1x12W L660	15	52%
	1x80W		86	3F Linda LED 1x30W L1570	35	59%
	1x49W		53	3F Linda LED Basic 1x23W L1570	29	45%
	1x35W		38	3F Linda LED Basic 1x19W L1270	21	45%
	1x28W		31	3F Linda LED 1x12W L660	15	52%
	1x14W		16	3F Linda LED 1x6W L660	7.5	53%

Why choose 3F Linda LED?



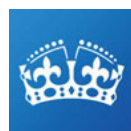
Never-ending light

3F Linda LED is equipped with new 3F LED technology whose sources specially developed for demanding applications guarantee an operating lifetime of over 50,000 hours, at the end of which at least 90% of the LED will still be providing 90% of their initial light output! (50,000h L90/B10).



You won't believe your wallet!

- 3F LED technology allows you to save up to 60% compared to traditional sources.
- Existing luminaires can be replaced while maintaining the same light locations and wiring system, but reducing energy consumption.
- Reduced maintenance significantly lowers running costs.



Beauty which doesn't blind!

The new 3F Linda LED photo-etched diffuser cancels out all glare to provide truly enviable lighting uniformity. Its clean, elegant lines make 3F Linda LED a luminaire which can fit in perfectly with any environment.



Eco-logical

- 3F Linda LED has been created according to the principles of Eco Design, and stands out for:
- Manufactured using energy from solar panels and assembled according to our "zero mileage" philosophy.
 - Limited use of different materials, facilitating assembly, installation and recycling.
 - Recyclable green packaging.



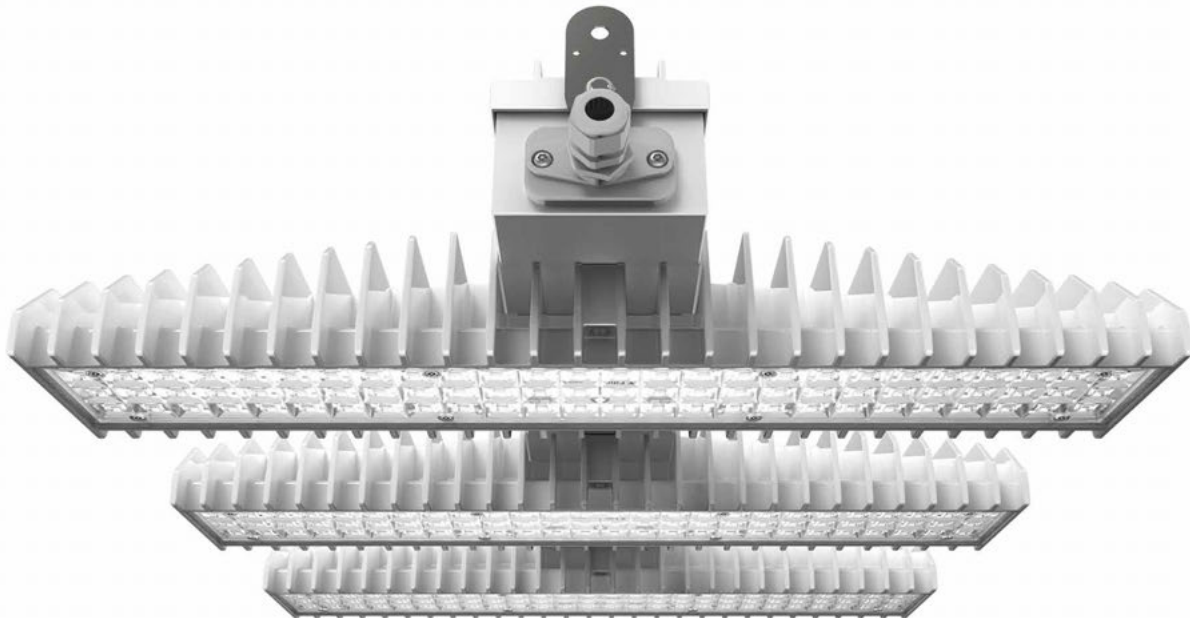
Significant reduction in maintenance costs

- Longer life means less maintenance.
Less maintenance means greater savings.
Less maintenance means fewer problems.
Fewer problems means greater peace of mind.



Your day is over
30
D

Your day is over
30
C



3F LEM

> www.3F-Filippi.com/3F LEM

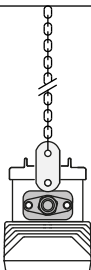
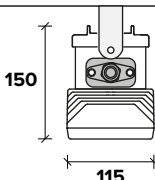
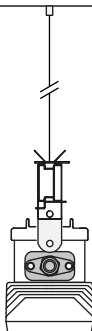
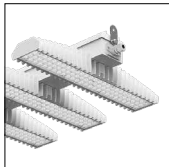
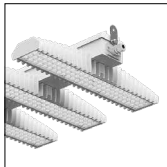
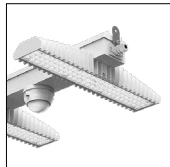
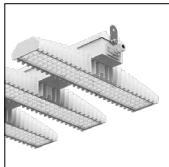
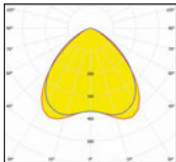
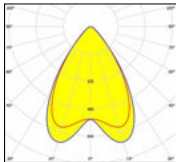
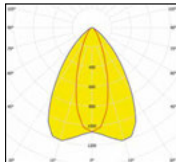
3F LEM is a highly specialised product, designed to satisfy customers who need to light large areas evenly. We have designed and manufactured it with large injection-moulded shielding which permits different photometric distributions and lighting modules in aluminium alloy which are able to optimally dissipate the heat generated by the latest LED sources. The design of the 3F LEM is based on simplification and modularity of design: "LEM" means "Light Emitting Modules", and thanks to common platforms and structures it is possible to obtain advantages for the customer in terms of the use, during installation and even when changing the sources at the end of the product life cycle.

+ Overview

- Luminous efficacy up to 163 lumen/watt.
- Luminous fluxes from 7066 to 56175 lumens.
- Extensive installation pitch.
- UGR <22.
- 3 different photometric distributions.
- Resistance against ball impacts in accordance with DIN 18032-3.
- Available with integrated sensors.
- Quick and easy cleaning.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Versatility of use in different environments.
- Thanks to the FastWiring system, the installation time is drastically reduced.

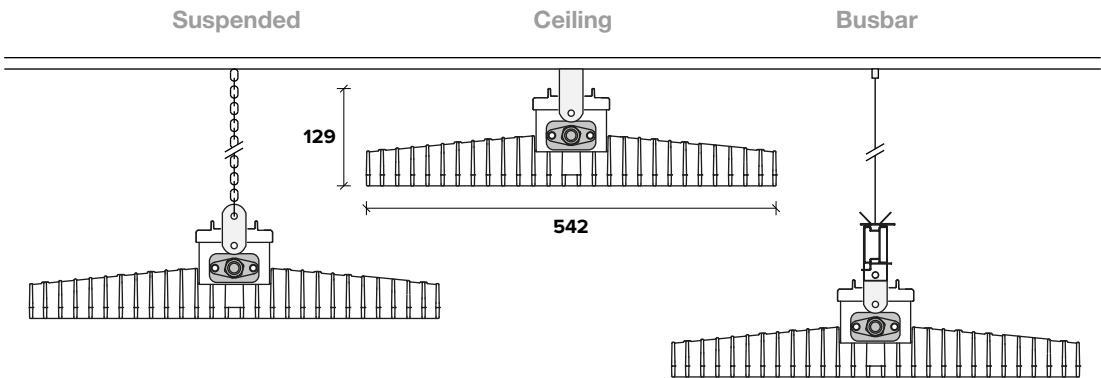
Page	Product	Steel	Stainless steel
448	3F LEM	•	•
452	3F LEM High Output	•	•
456	3F LEM Sensor	•	•
460	3F LEM High Temperature	•	•
464	UPDATE 3F LEM Sport	•	•
466	NEW 3F LEM Sport High Output	•	•

Product range

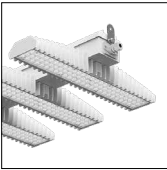
	Suspended		Ceiling	Busbar	
3F LEM 3F LEM 1 3F LEM 1+1					
3F LEM					
	Standard		High Output	Sensor	High Temperature
Versions	3F LEM 1 3F LEM 1+1 3F LEM 2 3F LEM 3 3F LEM 4 3F LEM 5		3F LEM 1 3F LEM 1+1 3F LEM 2 3F LEM 3 3F LEM 4 3F LEM 5		3F LEM 2 3F LEM 3 3F LEM 4 3F LEM 5
Photometric distribution	Wide		Medium		Concentrated
					
Installation steps	Dt	1,50	1,20	0,60	
	DI	1,40	1,20	1,20	
UGR	<21		<19	<21	

3F LEM

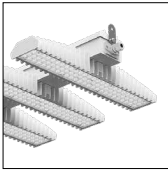
- 3F LEM 2
- 3F LEM 3
- 3F LEM 4
- 3F LEM 5



3F LEM



Sport



Sport High Output

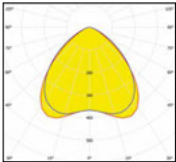
Versions

- 3F LEM 2
- 3F LEM 3
- 3F LEM 4

- 3F LEM 2
- 3F LEM 3

Photometric distribution

Wide



Installation steps

Dt	1,50
DI	1,40

UGR

<21

Waterproof and corrosion-proof

Optimized distribution

3F LEM is equipped with the highest quality LED sources with a CRI>80, but on request can be fitted with sources with CRI>90. It is also possible to obtain light with a colour temperature of 4000K (neutral white), 6500K (cold white) and, on request, 3000K (warm white).

With a UGR value of <22, we respect the vision of those who work under 3F LEM lights, as well as respecting health by ensuring all luminaires are RG0 class (photobiological risk absent).

3F LEM fully complies with all applicable illuminotechnical standards and legislation: its lighting distribution comes from careful analysis of BS EN 12464-1 which covers lighting of indoor work environments.

We have paid great attention to the requirements of the market and believe that the two different distributions are capable of satisfying even the most demanding customers:

PMMA lenses with high luminous efficiency.

WIDE DISTRIBUTION



MEDIUM DISTRIBUTION



CONCENTRATED DISTRIBUTION

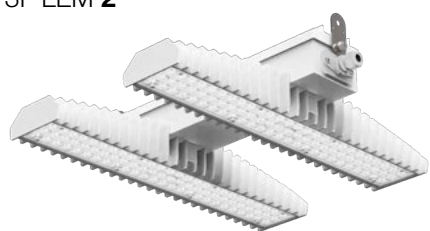


Versions

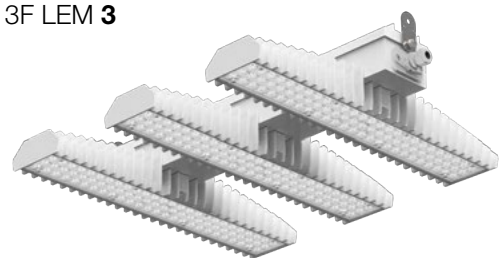
3F LEM 1



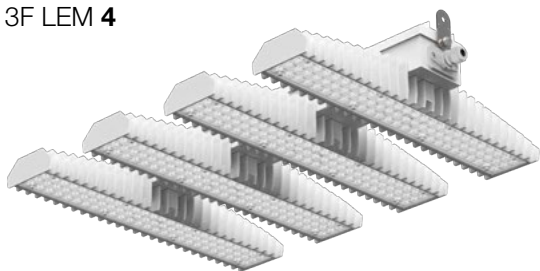
3F LEM 2



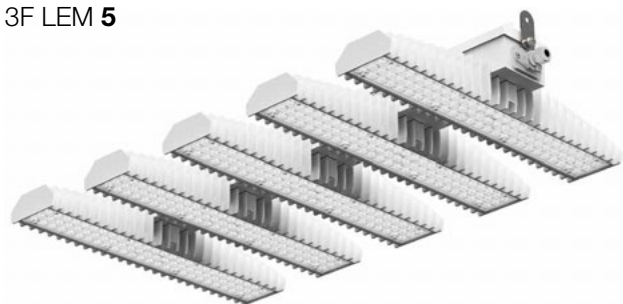
3F LEM 3



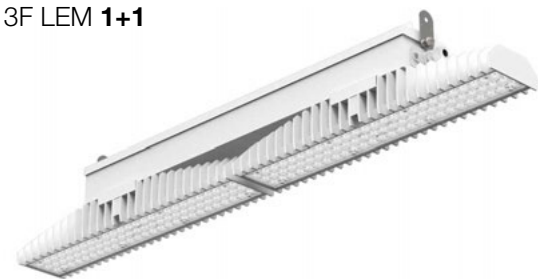
3F LEM 4



3F LEM 5



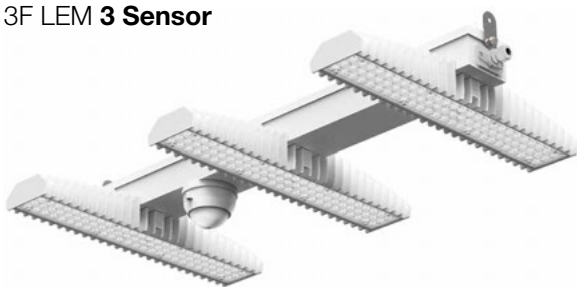
3F LEM 1+1



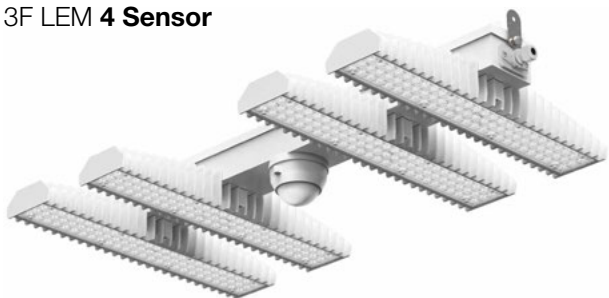
3F LEM 2 Sensor



3F LEM 3 Sensor



3F LEM 4 Sensor



Waterproof and
corrosion-proof

Product range

PASSION, EXPERIENCE AND EXPERTISE

3F Filippi is an Emilia-Romagna-based company, and a passion for mechanical engineering is part of our culture and expertise. It is for precisely this reason that when creating the 3F LEM heatsink module we consulted the foremost authority in the field, the mechanical engineering department at the University of Bologna.

Their precious support and expertise led to the creation of the heart of the 3F LEM, the heatsink, or dissipator, module. This is the common denominator across all modules in the product family, and the performance of LEDs depends in large part on their ability to dissipate the heat they generate. Our goal was to create a product which could be installed in high-temperature environments and which would be able to make the sources work correctly.

The result is a body made from an innovative pressure die-cast body, which can be installed in environments with temperatures up to 70°C.

Heat dissipation is not the only innovation on 3F LEM:

Air passage

3F LEM has been designed to have the best possible air passage in all installation conditions. Aerodynamic analysis has allowed dust deposits on the heat dissipators to be avoided.

Wiring compartment separate from heat dissipators

The power supplies are not affected by the heat emitted by the modules. This solution also allows wiring compartments of different lengths to be created.

Upgradability

Shielding, sources and power supplies can be replaced at the end of their life cycle, upgraded to next-generation sources.

Mid-Power LED

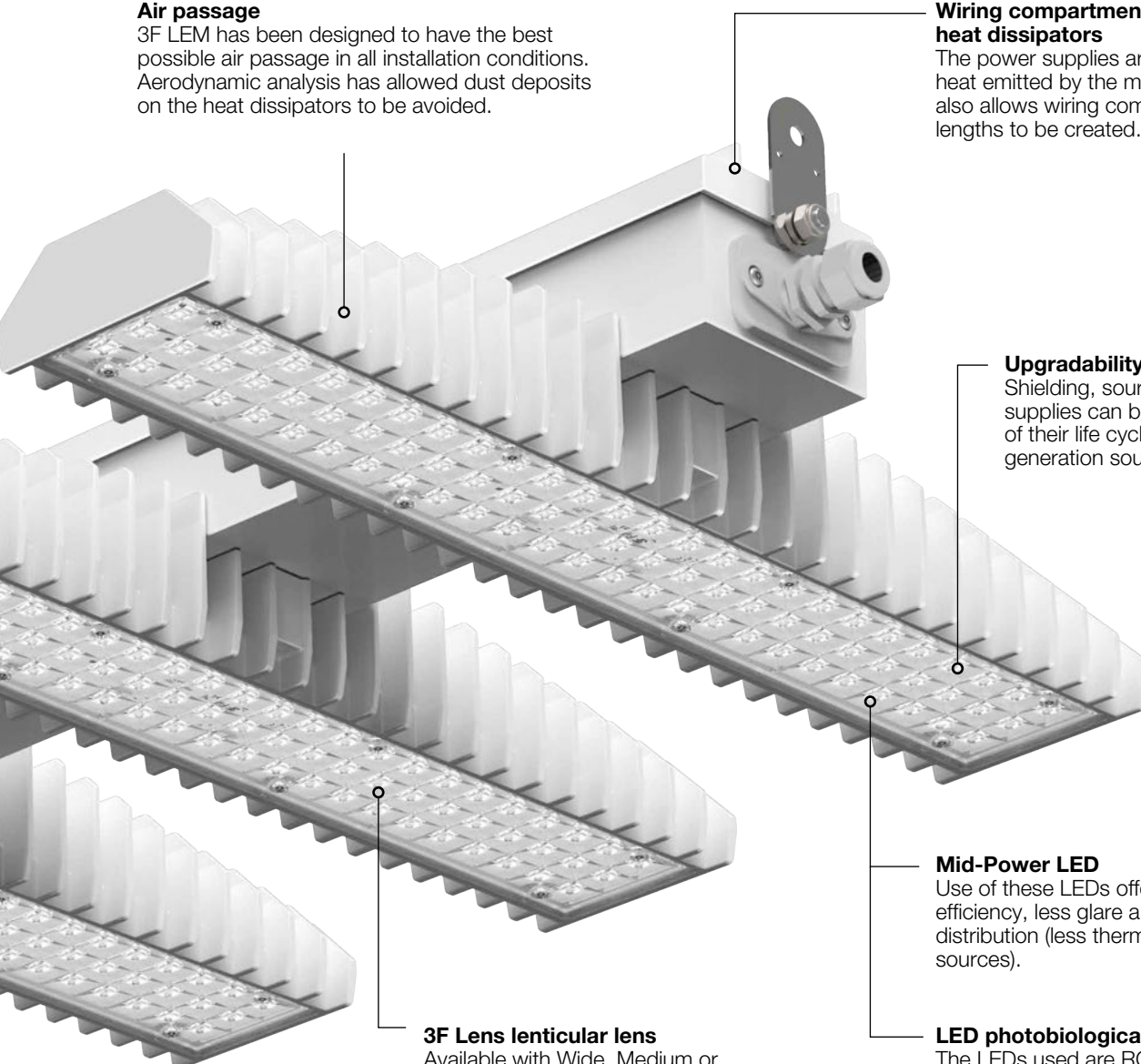
Use of these LEDs offers improved efficiency, less glare and optimised heat distribution (less thermal stress on the sources).

LED photobiological safety: RG0

The LEDs used are RG0 class (photobiological risk absent).

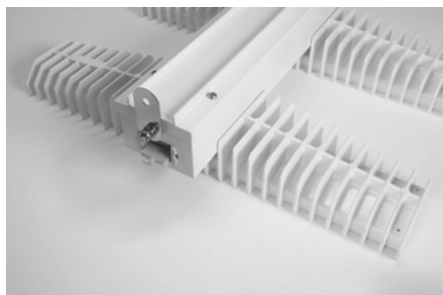
3F Lens lenticular lens

Available with Wide, Medium or Concentrated controlled emission (UGR <22).



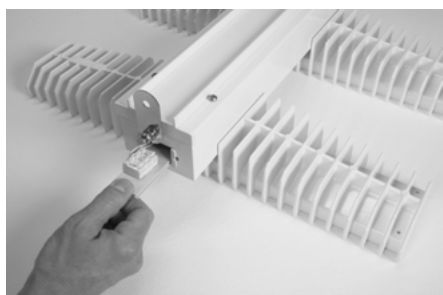
QUICK CONNECTION

Thanks to the FastWiring system, the installation time for 3f lem is significantly reduced:



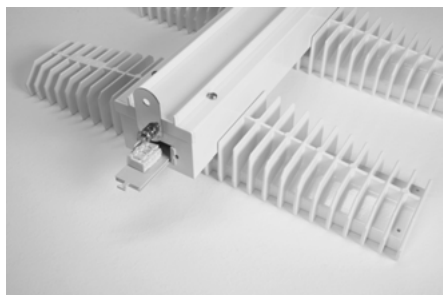
1

3F LEM is supplied with our new “FastWiring” quick connector. Here is what it looks like when removed from the packaging.



2

Remove the support by grasping the tab.



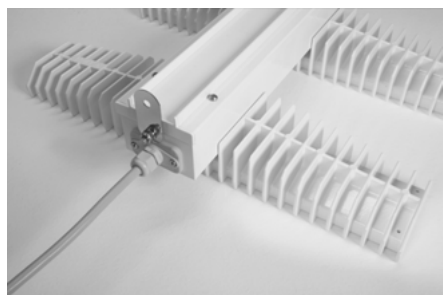
3

At this point the quick connection closing cap and the cable gland are inserted onto the cable and the electrical cables can be connected to the quick connect terminal board. No tools are required.



4

Push the sliding support into the luminaire and screw down the two phillips head screws on the closing cap.



5

Done!
3F LEM is now ready for installation.



3F LEM

Construction characteristics

Illuminotechnical characteristics

Wide, medium, concentrated symmetric elliptical distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Passive modular heatsinks in die-casted aluminium, painted in white colour.

To optimize the thermal management of the LED module, the heatsinks are oversized and provided with self-cleaning of cooling fins.

Wiring body in aluminium and galvanised steel anchored solidly to the sinks and thermally separated.

3F Lens lenses with high luminous efficiency, transparent PMMA, fixed to the LED modules.

Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Power unit positioned on a separate compartment by the LED module to ensure optimum temperatures of cabling components, to be inspectable and maintainable.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- double quick connection
- polycarbonate lenses (IK08 - 5J)
- wiring: twin-circuit, CLO (more information on page 568)

- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- HACCP versions for use in the food industry
- emergency versions

Applications

Ambient temperature from -30°C to +55°C. Dry, dusty indoor environments, subject to occasional water splashes.

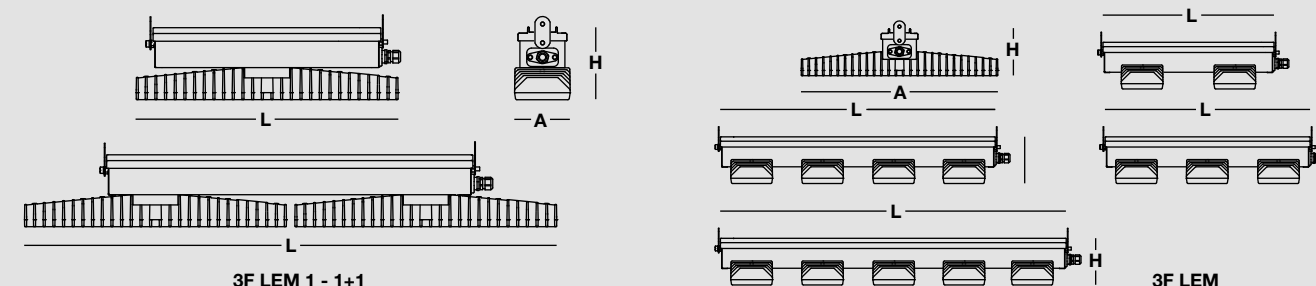
Commercial, industrial and sporting environments (with no high-flying balls), as well as warehouses.

Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with polycarbonate lenses.

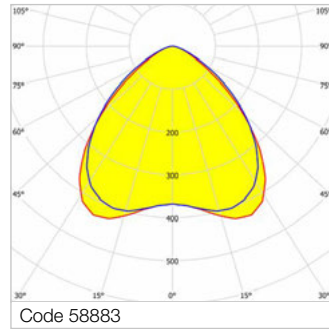
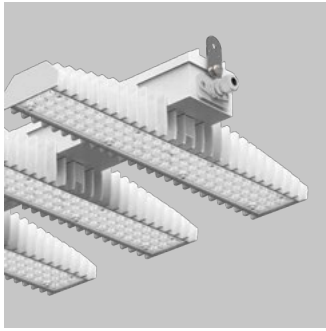
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F LEM Wide



Wide distribution with rectangular shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

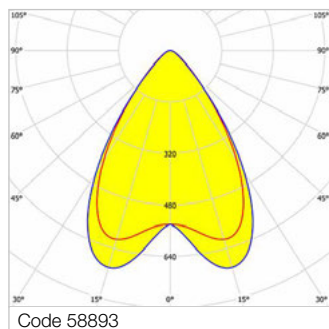
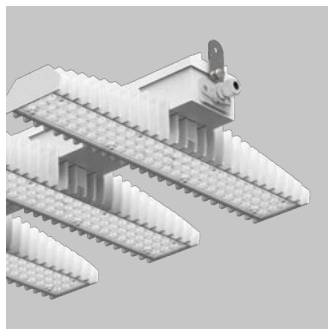
58881	3F LEM 1 LED 50 CR AMPIO	56	8369	4000	>80	542x115x150
59157	3F LEM 1 LED 50/865 CR AMPIO	56	8118	6500	>80	542x115x150
58885	3F LEM 1+1 LED 100 CR AMPIO	109	16738	4000	>80	1099x115x150
59161	3F LEM 1+1 LED 100/865 CR AMPIO	109	16235	6500	>80	1099x115x150
58882	3F LEM 2 LED 100 CR AMPIO	109	16738	4000	>80	470x542x129
59158	3F LEM 2 LED 100/865 CR AMPIO	109	16235	6500	>80	470x542x129
58883	3F LEM 3 LED 150 CR AMPIO	165	25106	4000	>80	657x542x129
59159	3F LEM 3 LED 150/865 CR AMPIO	165	24353	6500	>80	657x542x129
58884	3F LEM 4 LED 200 CR AMPIO	218	33475	4000	>80	757x542x129
59160	3F LEM 4 LED 200/865 CR AMPIO	218	32471	6500	>80	757x542x129
58886	3F LEM 5 LED 250 CR AMPIO	274	41844	4000	>80	952x542x129

DALI electronic wiring 230V-50/60Hz

58899	3F LEM 1 LED 50 DALI CR AMPIO	56	8369	4000	>80	542x115x150
58903	3F LEM 1+1 LED 100 DALI CR AMPIO	109	16738	4000	>80	1099x115x150
58900	3F LEM 2 LED 100 DALI CR AMPIO	109	16738	4000	>80	470x542x129
58901	3F LEM 3 LED 150 DALI CR AMPIO	165	25106	4000	>80	657x542x129
58902	3F LEM 4 LED 200 DALI CR AMPIO	218	33475	4000	>80	757x542x129
58904	3F LEM 5 LED 250 DALI CR AMPIO	274	41844	4000	>80	952x542x129

Waterproof and
corrosion-proof

3F LEM Medium



Medium distribution with square shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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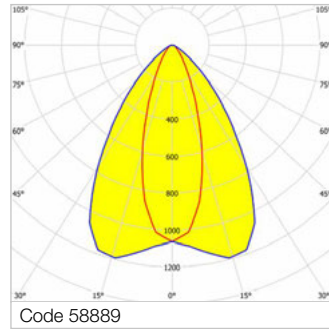
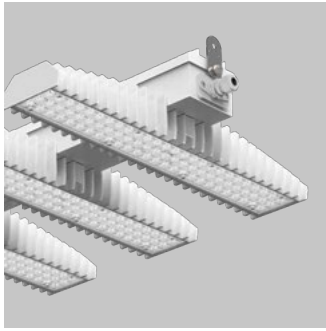
ON/OFF electronic wiring 230V-50/60Hz

58896	3F LEM 1+1 LED 100 CR MEDIO	109	17133	4000	>80	1099x115x150
58893	3F LEM 2 LED 100 CR MEDIO	109	17133	4000	>80	470x542x129
58894	3F LEM 3 LED 150 CR MEDIO	165	25700	4000	>80	657x542x129
58895	3F LEM 4 LED 200 CR MEDIO	218	34266	4000	>80	757x542x129
58897	3F LEM 5 LED 250 CR MEDIO	274	42833	4000	>80	952x542x129

DALI electronic wiring 230V-50/60Hz

58914	3F LEM 1+1 LED 100 DALI CR MEDIO	109	17133	4000	>80	1099x115x150
58911	3F LEM 2 LED 100 DALI CR MEDIO	109	17133	4000	>80	470x542x129
58912	3F LEM 3 LED 150 DALI CR MEDIO	165	25700	4000	>80	657x542x129
58913	3F LEM 4 LED 200 DALI CR MEDIO	218	34266	4000	>80	757x542x129
58915	3F LEM 5 LED 250 DALI CR MEDIO	274	42833	4000	>80	952x542x129

3F LEM Concentrated



Concentrated elliptical distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

58887	3F LEM 1 LED 50 CR CONC	56	8567	4000	>80	542x115x150
58888	3F LEM 2 LED 100 CR CONC	109	17133	4000	>80	470x542x129
59164	3F LEM 2 LED 100/865 CR CONC	109	16619	6500	>80	470x542x129
58889	3F LEM 3 LED 150 CR CONC	165	25700	4000	>80	657x542x129
59165	3F LEM 3 LED 150/865 CR CONC	165	24929	6500	>80	657x542x129
58890	3F LEM 4 LED 200 CR CONC	218	34266	4000	>80	757x542x129
59166	3F LEM 4 LED 200/865 CR CONC	218	33238	6500	>80	757x542x129

DALI electronic wiring 230V-50/60Hz

58905	3F LEM 1 LED 50 DALI CR CONC	56	8567	4000	>80	542x115x150
58906	3F LEM 2 LED 100 DALI CR CONC	109	17133	4000	>80	470x542x129
58907	3F LEM 3 LED 150 DALI CR CONC	165	25700	4000	>80	657x542x129
58908	3F LEM 4 LED 200 DALI CR CONC	218	34266	4000	>80	757x542x129

Waterproof and
corrosion-proof



3F LEM High Output

Construction characteristics

Illuminotechnical characteristics

Wide, medium, concentrated symmetric elliptical distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Passive modular heatsinks in die-casted aluminium, painted in white colour.

To optimize the thermal management of the LED module, the heatsinks are oversized and provided with self-cleaning of cooling fins.

Wiring body in aluminium and galvanised steel anchored solidly to the sinks and thermally separated.

3F Lens lenses with high luminous efficiency, transparent PMMA, fixed to the LED modules.

Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Power unit positioned on a separate compartment by the LED module to ensure optimum temperatures of cabling components, to be inspectable and maintainable.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- double quick connection
- polycarbonate lenses (IK08)
- wiring: twin-circuit, CLO (more information on page 568)

- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- HACCP versions for use in the food industry
- emergency versions

Applications

Ambient temperature from -30°C to +45°C. Dry, dusty indoor environments, subject to occasional water splashes.

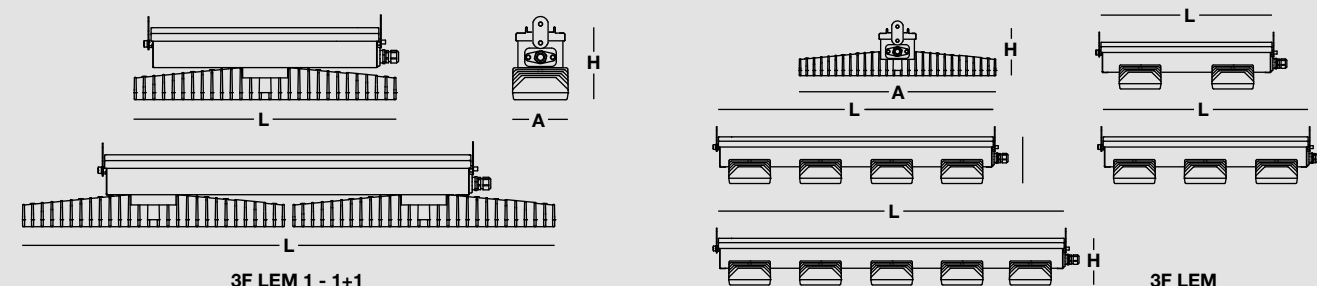
Commercial, industrial and sporting environments (with no high-flying balls), as well as warehouses.

Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with polycarbonate lenses.

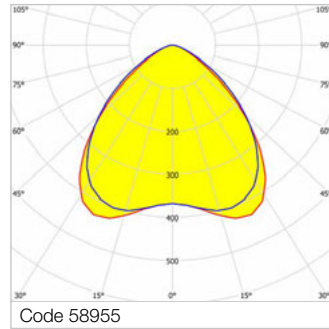
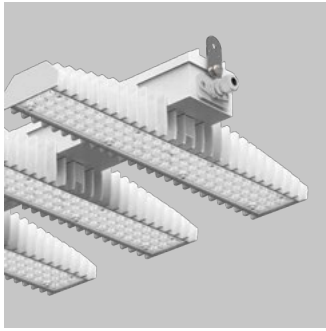
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F LEM HO Wide



Wide distribution with rectangular shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

58953	3F LEM 1 HO LED 70 CR AMPIO	71	10976	4000	>80	542x115x150
58957	3F LEM 1+1 HO LED 140 CR AMPIO	138	21951	4000	>80	1099x115x150
58954	3F LEM 2 HO LED 140 CR AMPIO	138	21951	4000	>80	470x542x129
58955	3F LEM 3 HO LED 210 CR AMPIO	207	32927	4000	>80	657x542x129
58956	3F LEM 4 HO LED 280 CR AMPIO	276	43902	4000	>80	757x542x129
58958	3F LEM 5 HO LED 350 CR AMPIO	345	54878	4000	>80	952x542x129

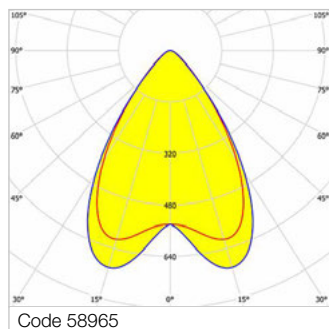
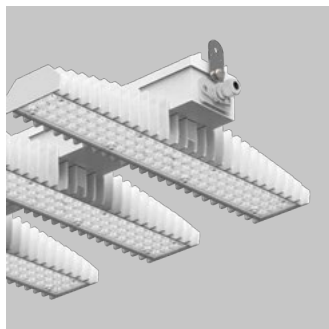
DALI electronic wiring 230V-50/60Hz

58971	3F LEM 1 HO LED 70 DALI CR AMPIO	71	10976	4000	>80	542x115x150
58975	3F LEM 1+1 HO LED 140 DALI CR AMPIO	138	21951	4000	>80	1099x115x150
58972	3F LEM 2 HO LED 140 DALI CR AMPIO	138	21951	4000	>80	470x542x129
58973	3F LEM 3 HO LED 210 DALI CR AMPIO	207	32927	4000	>80	657x542x129
58974	3F LEM 4 HO LED 280 DALI CR AMPIO	276	43902	4000	>80	757x542x129
58976	3F LEM 5 HO LED 350 DALI CR AMPIO	345	54878	4000	>80	952x542x129

Waterproof and
corrosion-proof



3F LEM HO Medium



Medium distribution with square shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

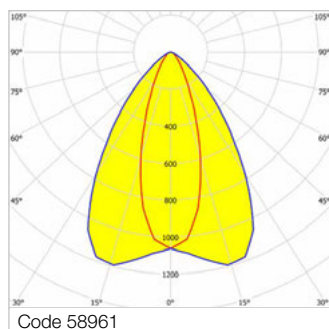
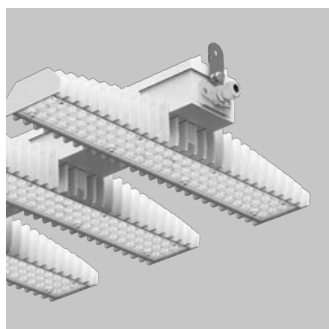
ON/OFF electronic wiring 230V-50/60Hz

58968	3F LEM 1+1 HO LED 140 CR MEDIO	138	22470	4000	>80	1099x115x150
58965	3F LEM 2 HO LED 140 CR MEDIO	138	22470	4000	>80	470x542x129
58966	3F LEM 3 HO LED 210 CR MEDIO	207	33705	4000	>80	657x542x129
58967	3F LEM 4 HO LED 280 CR MEDIO	276	44940	4000	>80	757x542x129
58969	3F LEM 5 HO LED 350 CR MEDIO	345	56175	4000	>80	952x542x129

DALI electronic wiring 230V-50/60Hz

58986	3F LEM 1+1 HO LED 140 DALI CR MEDIO	138	22470	4000	>80	1099x115x150
58983	3F LEM 2 HO LED 140 DALI CR MEDIO	138	22470	4000	>80	470x542x129
58984	3F LEM 3 HO LED 210 DALI CR MEDIO	207	33705	4000	>80	657x542x129
58985	3F LEM 4 HO LED 280 DALI CR MEDIO	276	44940	4000	>80	757x542x129
58987	3F LEM 5 HO LED 350 DALI CR MEDIO	345	56175	4000	>80	952x542x129

3F LEM HO Concentrated



Concentrated elliptical distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

58959	3F LEM 1 HO LED 70 CR CONC	71	11235	4000	>80	542x115x150
58960	3F LEM 2 HO LED 140 CR CONC	138	22470	4000	>80	470x542x129
58961	3F LEM 3 HO LED 210 CR CONC	207	33705	4000	>80	657x542x129

DALI electronic wiring 230V-50/60Hz

58977	3F LEM 1 HO LED 70 DALI CR CONC	71	11235	4000	>80	542x115x150
58978	3F LEM 2 HO LED 140 DALI CR CONC	138	22470	4000	>80	470x542x129
58979	3F LEM 3 HO LED 210 DALI CR CONC	207	33705	4000	>80	657x542x129





3F LEM Sensor

Construction characteristics

Illuminotechnical characteristics

Wide, medium, concentrated symmetric elliptical distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Passive modular heatsinks in die-casted aluminium, painted in white colour.

To optimize the thermal management of the LED module, the heatsinks are oversized and provided with self-cleaning of cooling fins.

Wiring body in aluminium and galvanised steel anchored solidly to the sinks and thermally separated.

3F Lens lenses with high luminous efficiency, transparent PMMA, fixed to the LED modules.

Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Power unit positioned on a separate compartment by the LED module to ensure optimum temperatures of cabling components, to be inspectable and maintainable.

Integrated DALI light sensor on the luminaire, able to maintain a constant level of illumination as a function of the natural light.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- presence function
- manual light intensity adjustment
- double quick connection
- polycarbonate lenses (IK08)
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- HACCP versions for use in the food industry
- emergency versions

Applications

Ambient temperature from -25°C to +50°C.

Recommended in environments with strong amount of natural light (or areas with staff present discontinuously).

Dry, dusty indoor environments, subject to occasional water splashes.

Commercial, industrial and sporting environments (with no high-flying balls), as well as warehouses.

Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with polycarbonate lenses.

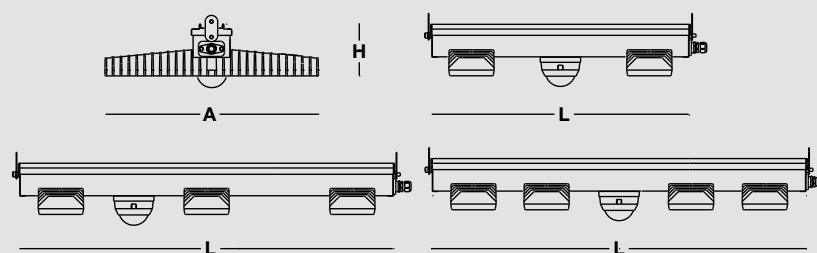
Installation

Recommended maximum height 13 m.

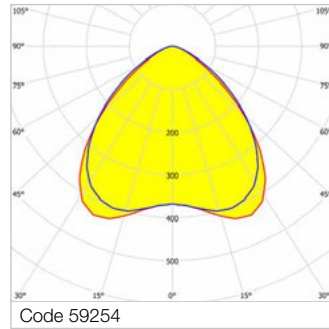
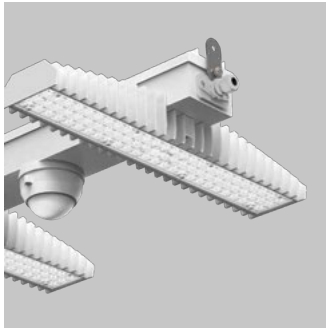
Light Management

The DALI SENSOR products from this product family are all fitted with DALI light sensors integrated into the luminaire (see "Light Management" chapter).

Dimensions



3F LEM Sensor Wide



650°C

IP54

0,5J

IK04

Wide distribution with rectangular shape.

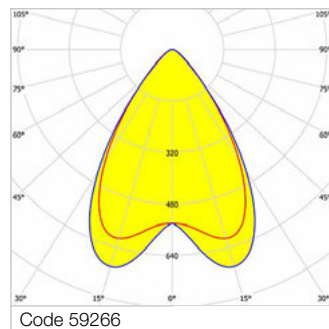
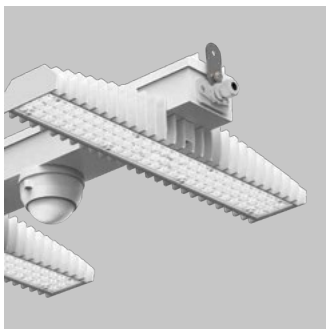
Integrated DALI light sensor on the luminaire, able to maintain a constant level of illumination as a function of the natural light.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

DALI electronic wiring 230V-50/60Hz

59253	3F LEM 2 LED 100 DALI Sensor CR AMPIO	110	16738	4000	>80	657x542x129
59254	3F LEM 3 LED 150 DALI Sensor CR AMPIO	166	25106	4000	>80	952x542x129
59255	3F LEM 4 LED 200 DALI Sensor CR AMPIO	219	33475	4000	>80	952x542x129

3F LEM Sensor Medium



650°C

IP54

0,5J

IK04

Medium distribution with square shape.

Integrated DALI light sensor on the luminaire, able to maintain a constant level of illumination as a function of the natural light.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

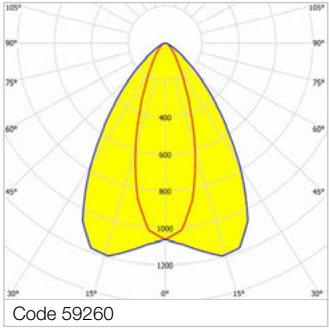
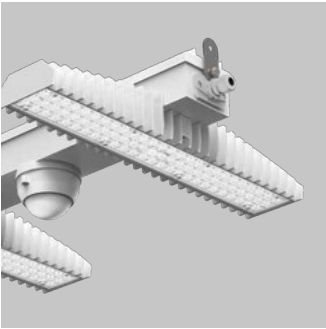
DALI electronic wiring 230V-50/60Hz

59265	3F LEM 2 LED 100 DALI Sensor CR MEDIO	110	17133	4000	>80	657x542x129
59266	3F LEM 3 LED 150 DALI Sensor CR MEDIO	166	25700	4000	>80	952x542x129
59267	3F LEM 4 LED 200 DALI Sensor CR MEDIO	219	34266	4000	>80	952x542x129

Waterproof and
corrosion-proof



3F LEM Sensor Concentrated



CE

D

650°C

IP54

0,5J

IK04

Concentrated elliptical distribution.
Integrated DALI light sensor on the luminaire, able to maintain a constant level of illumination as a function of the natural light.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

DALI electronic wiring 230V-50/60Hz

59259	3F LEM 2 LED 100 DALI Sensor CR CONC	110	17133	4000	>80	657x542x129
59260	3F LEM 3 LED 150 DALI Sensor CR CONC	166	25700	4000	>80	952x542x129
59261	3F LEM 4 LED 200 DALI Sensor CR CONC	219	34266	4000	>80	952x542x129





3F LEM High Temperature

Construction characteristics

Illuminotechnical characteristics

Wide, medium, concentrated symmetric elliptical distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Luminous flux at +70°C: -13.5%.
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Passive modular heatsinks in die-casted aluminium, painted in white colour.

To optimize the thermal management of the LED module, the heatsinks are oversized and provided with self-cleaning of cooling fins.

Wiring body in aluminium and galvanised steel anchored solidly to the sinks and thermally separated.

3F Lens lenses with high luminous efficiency, transparent polycarbonate, fixed to the LED modules.

Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the

EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Power unit positioned on a separate compartment by the LED module to ensure optimum temperatures of cabling components, to be inspectable and maintainable.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different power levels, colour rendering indices and colour temperatures
- double quick connection
- wiring: twin-circuit, dimmable, CLO (more information on page 568)
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- HACCP versions for use in the food industry

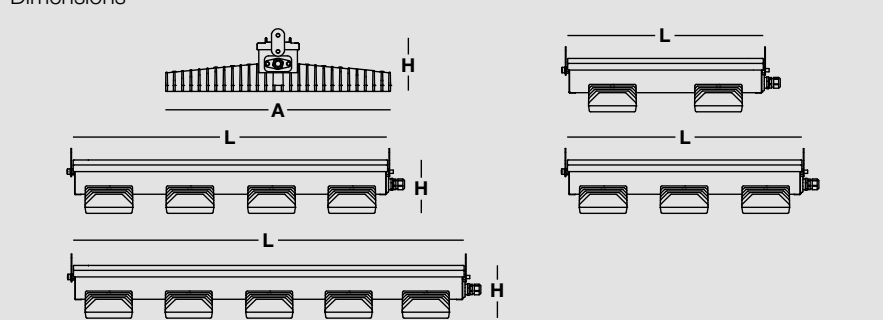
Applications

Ambient temperature from -30°C to +70°C. Dry, dusty indoor environments, subject to occasional water splashes.

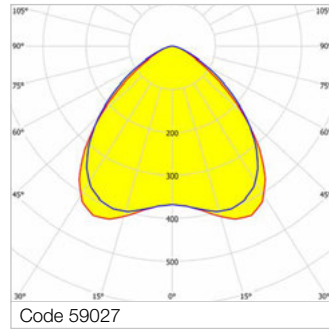
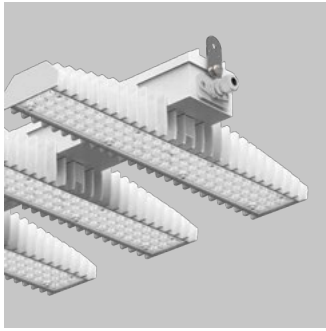
Commercial, industrial and sporting environments (with no high-flying balls), as well as warehouses.

Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with polycarbonate lenses.

Dimensions



3F LEM HT Wide



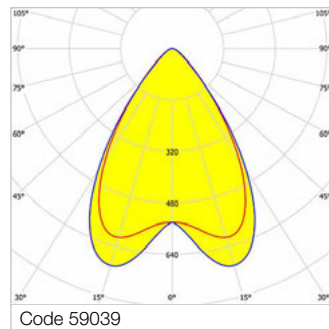
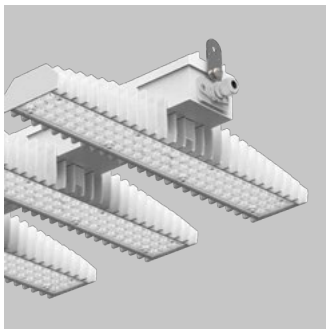
Wide distribution with rectangular shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

59026	3F LEM 2 HT LED 60 CR AMPIO	68	10615	4000	>80	470x542x129
59027	3F LEM 3 HT LED 90 CR AMPIO	102	15922	4000	>80	657x542x129
59028	3F LEM 4 HT LED 120 CR AMPIO	136	21230	4000	>80	757x542x129
59030	3F LEM 5 HT LED 150 CR AMPIO	170	26537	4000	>80	952x542x129

3F LEM HT Medium



Medium distribution with square shape.

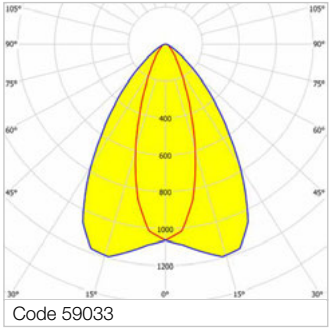
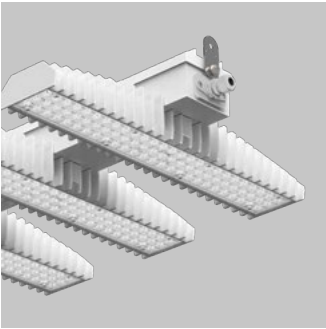
Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

59039	3F LEM 4 HT LED 120 CR MEDIO	136	21725	4000	>80	757x542x129
59041	3F LEM 5 HT LED 150 CR MEDIO	170	27156	4000	>80	952x542x129

Waterproof and
corrosion-proof

3F LEM HT Concentrated



Concentrated elliptical distribution.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

59032	3F LEM 2 HT LED 60 CR CONC	68	10863	4000	>80	470x542x129
59033	3F LEM 3 HT LED 90 CR CONC	102	16294	4000	>80	657x542x129
59034	3F LEM 4 HT LED 120 CR CONC	136	21725	4000	>80	757x542x129



3F LEM Sport

Construction characteristics

Illuminotechnical characteristics

Wide symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Passive modular heatsinks in die-casted aluminium, painted in white colour.

To optimize the thermal management of the LED module, the heatsinks are oversized and provided with self-cleaning of cooling fins.

Wiring body in aluminium and steel in white colour, specially strengthened, anchored solidly to the sinks and thermally separated.

3F Lens lenses with high luminous efficiency, transparent PMMA, fixed to the LED modules.

Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Power unit positioned on a separate compartment by the LED module to ensure optimum temperatures of cabling components, to be inspectable and maintainable.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers or colour temperatures
- double quick connection
- polycarbonate lenses (IK08 - 5J)
- wiring: twin-circuit, CLO (more information on page 568)
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

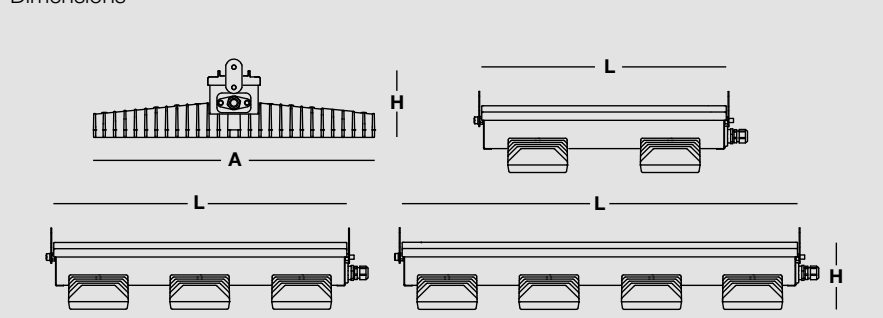
Applications

Ambient temperature from -30°C to +55°C. Luminaire suitable for gyms as well as sports, commercial, exhibition and industrial environments.

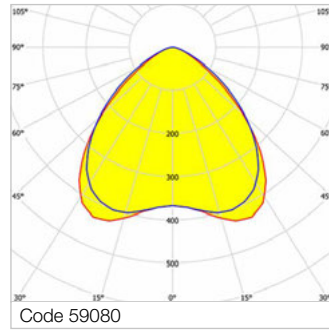
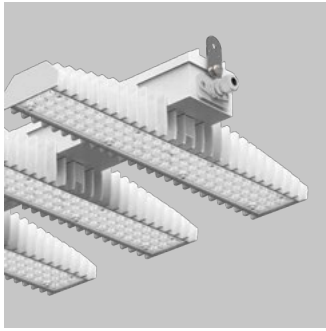
Resistance against ball impacts in accordance with DIN 18032-3 (more information on page 607).

Dry, dusty indoor environments, subject to occasional water splashes.

Dimensions



3F LEM Sport Wide



Wide distribution with rectangular shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

59080	3F LEM 2 SPORT LED 100 CR AMPIO	109	16738	4000	>80	470x542x129
59081	3F LEM 3 SPORT LED 150 CR AMPIO	165	25106	4000	>80	657x542x129
59082 ^{NEW}	3F LEM 4 SPORT LED 200 CR AMPIO	218	33475	4000	>80	757x542x129
59275 ^{NEW}	3F LEM 2 SPORT LED 100/940 CR AMPIO	109	13725	4000	>90	470x542x129
59276 ^{NEW}	3F LEM 3 SPORT LED 150/940 CR AMPIO	165	20587	4000	>90	657x542x129
59277 ^{NEW}	3F LEM 4 SPORT LED 200/940 CR AMPIO	218	27450	4000	>90	757x542x129

DALI electronic wiring 230V-50/60Hz

59093 ^{NEW}	3F LEM 2 SPORT LED 100 DALI CR AMPIO	109	16738	4000	>80	470x542x129
59094 ^{NEW}	3F LEM 3 SPORT LED 150 DALI CR AMPIO	165	25106	4000	>80	657x542x129
59095 ^{NEW}	3F LEM 4 SPORT LED 200 DALI CR AMPIO	218	33475	4000	>80	757x542x129
59281 ^{NEW}	3F LEM 2 SPORT LED 100/940 DALI CR AMPIO	109	13725	4000	>90	470x542x129
59282 ^{NEW}	3F LEM 3 SPORT LED 150/940 DALI CR AMPIO	165	20587	4000	>90	657x542x129
59283 ^{NEW}	3F LEM 4 SPORT LED 200/940 DALI CR AMPIO	218	27450	4000	>90	757x542x129

Waterproof and
corrosion-proof





3F LEM Sport High Output

Construction characteristics

Illuminotechnical characteristics

Wide symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Passive modular heatsinks in die-casted aluminium, painted in white colour.

To optimize the thermal management of the LED module, the heatsinks are oversized and provided with self-cleaning of cooling fins.

Wiring body in aluminium and steel in white colour, specially strengthened, anchored solidly to the sinks and thermally separated.

3F Lens lenses with high luminous efficiency, transparent PMMA, fixed to the LED modules.

Fixing brackets in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Power unit positioned on a separate compartment by the LED module to ensure optimum temperatures of cabling components, to be inspectable and maintainable.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different powers or colour temperatures
- double quick connection
- polycarbonate lenses (IK08 - 5J)
- wiring: twin-circuit, CLO (more information on page 568)
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

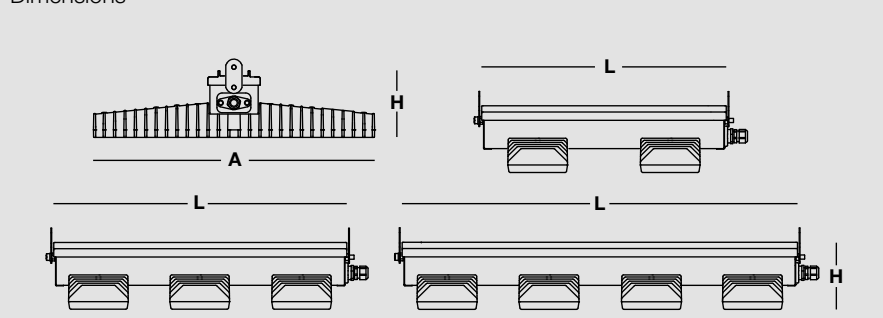
Applications

Ambient temperature from -30°C to +45°C. Luminaire suitable for gyms as well as sports, commercial, exhibition and industrial environments.

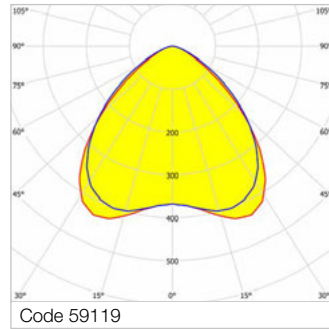
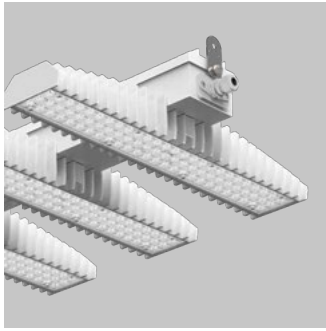
Resistance against ball impacts in accordance with DIN 18032-3 (more information on page 607).

Dry, dusty indoor environments, subject to occasional water splashes.

Dimensions



3F LEM Sport HO Wide



Wide distribution with rectangular shape.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz

59119 ^{NEW}	3F LEM 2 HO SPORT LED 140 CR AMPIO	138	21951	4000	>80	470x542x129
59120 ^{NEW}	3F LEM 3 HO SPORT LED 210 CR AMPIO	207	32927	4000	>80	657x542x129
59287 ^{NEW}	3F LEM 2 HO SPORT LED 140/940 CR AMPIO	147	17143	4000	>90	470x542x129
59288 ^{NEW}	3F LEM 3 HO SPORT LED 210/940 CR AMPIO	222	25715	4000	>90	657x542x129

DALI electronic wiring 230V-50/60Hz

59132 ^{NEW}	3F LEM 2 HO SPORT LED 140 DALI CR AMPIO	138	21951	4000	>80	470x542x129
59133 ^{NEW}	3F LEM 3 HO SPORT LED 210 DALI CR AMPIO	207	32927	4000	>80	657x542x129
59293 ^{NEW}	3F LEM 2 HO SPORT LED 140/940 DALI CR AMPIO	147	17143	4000	>90	470x542x129
59294 ^{NEW}	3F LEM 3 HO SPORT LED 210/940 DALI CR AMPIO	222	25715	4000	>90	657x542x129

Waterproof and
corrosion-proof

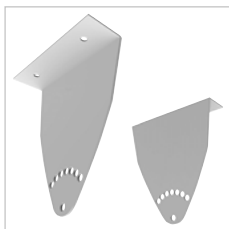
3F LEM | Accessories



Brackets for mounting of luminaire on ceiling or on bus ducts, stainless steel.

Code	Item
A0652	Pair of brack. ceiling instal. 3F LEM

Please note: these brackets do NOT provide free orientation of the luminaire. To allow free orientation, accessories A0651+A0632 must be installed.



Brackets for ceiling mounting, in hot-galvanised steel painted in white polyester.

Code	Item
A0632	Pair of brack. ceiling instal. 3F LEM

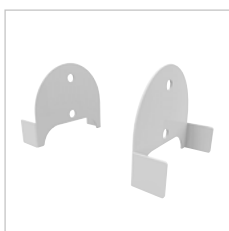
The bracket A0632 allows the luminaire to be ceiling mounted without the possibility to rotate it. To allow free orientation, both accessories (A0651+A0632) must be installed.



Brackets for wall mounting, in hot-galvanised steel painted in white polyester.

Code	Item
A0654	Pair of wall brackets - 3F LEM

The bracket A0654 allows the luminaire to be wall mounted without the possibility to rotate it. To allow free orientation, both accessories (A0651+A0654) must be installed.



Additional bracket that, combined with the A0654 or A0632 accessories, makes it possible for the luminaires to be oriented on the ceiling or the wall, in hot-galvanised steel painted in white polyester.

Code	Item
A0651	Bracket rotation support 3F LEM

This accessory must ALWAYS be used with one of the following codes: A0632 - A0654.



Brackets for rotating luminaires mounted on ceilings or on bus ducts.

Code	Item
A0776	Horiz. rot. bracket 90° 3F LEM 1-2
A0777	Horiz. rot. brack. 90° 3F LEM 3-2 Sensor
A0778	Horizontal rotating bracket 90° 3F LEM 4

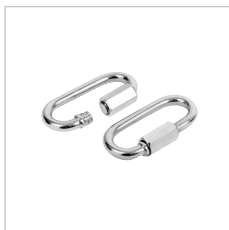


Dust covers for food processing areas in white-painted galvanised steel.

Code	Item
A0728	Cover for food appl. 3F LEM 1
A0733	Cov.food appl.single mod.3F LEM(2-3-4-5)

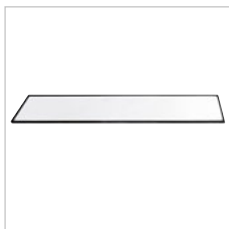
For a LEM 3, for example, 3 pcs of the cod. A0733 must be ordered. Not available for the 1+1 version. Note: the maximum ambient operating temperatures of the fixtures decrease by 10°C in all families, except for the High Output versions in which the reduction is 5°C. The reduction in the luminous flux emitted is equal to 3% in all models in the range.

HACCP



Snap hooks clips for chain suspension, galvanised steel.

Code	Item
A0653	Pair of fixing carab.for chain instal.



Glass with gasket to protect the louvre compartment from dust and noxious fumes. Recommended for use in very dirty environments or in which aggressive chemical agents are used.

Code	Item
A0811	Transparent glass with gasket (10pcs) The pack contains 10 pieces.
A0812	Moulded glass with gasket (10pcs) The pack contains 10 pieces.



Anti-fall safety cable Ø 2 mm for fastening the body to the building structure.

Code	Item
A0242	15SS galvanized steel cable coil 100m The pack contains 100 metres.
A0243	15BF galvanized steel cable coil 500m The pack contains 500 metres.

Coupling accessory A0714 to one of the two safety cables (A0242 or A0243) provides an anti-fall kit fixing and adjusting the cable on the load-bearing element of the building structure. The cable passes between the two passage holes on the hanging brackets mounted on the 3F LEM. Suitable for environments subject to impacts or seismic zones.



Clamp in nickel-plated brass suitable for fixing and adjustment of galvanised steel wire (diameter 1,25 mm - 1,5 mm - 2 mm), complete with locking screws. The 2 hole clamp allows to block and adjust the cable on a bearing element (part of the building) or on rounded eye bolt.

Code	Item
A0714	Clamp 2 holes susp.- 100 pcs The pack contains 100 pieces.



Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm



IR remote control for user, compatible with DALI sensors (incompatible with On-Off and Slave sensors).

Accessory compatible with 3F LEM Sensor.

Code	Item
A3021	IR DALI - Remote controller



Waterproof and
corrosion-proof



IR remote control for programmer, compatible with DALI sensors (incompatible with On-Off and Slave sensors).

Accessory compatible with 3F LEM Sensor.

Code	Item
A3020	IR DALI - Programmer



IR adapter for Smartphones, compatible with all programmable sensors. Free App available for Android and iOS devices.

Accessory compatible with 3F LEM Sensor.

Code	Item
A3022	IR - Adapter for Smartphone



3F LEM

Examples of design

Comparison to 400W JM reflector

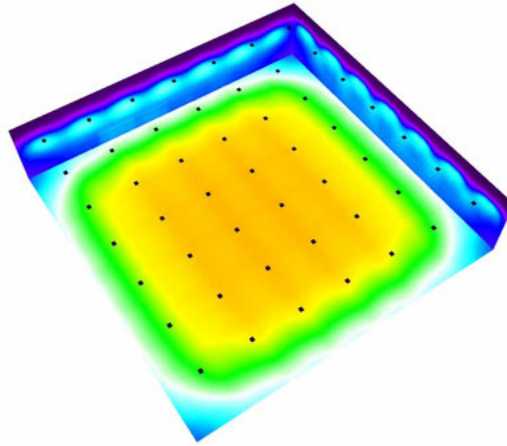
Design data:

Room dimensions 50x50 metres
Room height 11 metres
Installation height 10 metres

Like-for-like replacement of light points

Reflection ceiling 30%
walls 30%
floor 10%

Work surface height 0.85 metres



	Current system 400 JM reflector	Like-for-like replacement of light points 3F LEM 2 HO LED 140	Reduction in light points 3F LEM 4 HO LED 280
Lighting values	290 lx	385 lx (MEDIO) - 361 lx (AMPIO)	325 lx (MEDIO) - 301 lx (AMPIO)
Number of light points	49	49	20
Total luminaire	21.560 W	6.762 W	5.520 W
Difference		-69%	-74%
Average source life	8.000 hours	>100.000 hours	>100.000 hours

Comparison to 250W JM reflector

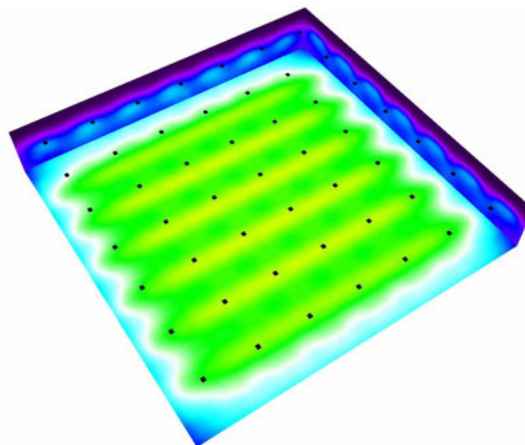
Design data:

Room dimensions 50x50 metres
Room height 8 metres
Installation height 7 metres

Like-for-like replacement of light points

Reflection ceiling 30%
walls 30%
floor 10%

Work surface height 0.85 metres



	Current system 250 JM reflector	Like-for-like replacement of light points 3F LEM 2 LED 100	Reduction in light points 3F LEM 2 LED 100
Lighting values	174 lx	287 lx (MEDIO) - 276 lx (AMPIO)	247 lx (MEDIO) - 237 lx (AMPIO)
Number of light points	49	49	42
Total luminaire	14.210 W	5.390 W	4.620 W
Difference		-62%	-67%
Average source life	8.000 hours	>100.000 hours	>100.000 hours

Waterproof and
corrosion-proof





Beta 235

> [www.3F-Filippi.com/Beta 235](http://www.3F-Filippi.com/Beta%20235)

An extremely versatile lighting body, 3F Beta 235 is the ideal lighting design solution for working environments requiring increased levels of protection.

It is equipped with LED sources with very high luminous fluxes (135 lm/W) and is particularly suitable for environments such as warehouses, garages and production areas thanks to the wide range of operation, from -20° C to 45° C.

Available in 655 mm, 1,265 mm and 1,565 mm widths, 3F Beta 235 is composed of a steel or stainless steel body and offers a choice between a glass or polycarbonate diffuser to achieve the best performance for the specific installation location.

In addition to the technical performance and high strength of this product is its ease of installation and maintenance: the new quick connection reduces installation time and makes the work of the installers much easier.

This product is also available in this version Beta i3F LED (page 492).

+ Overview

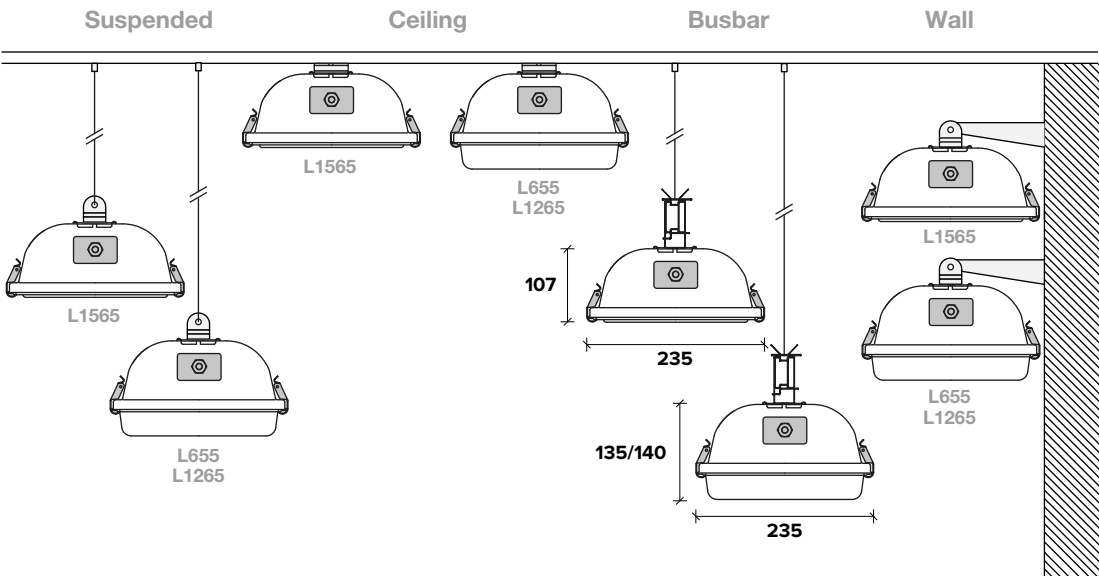
- Luminous efficacy up to 149 lumen/watt.
- Luminous fluxes from 3372 to 16990 lumens.
- Extensive installation pitch.
- 4 different photometric distributions.
- Quick and easy cleaning.
- Essential and functional design.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.
- Fast relamping thanks to the fixing centres compatible with previous generations.
- Versatility of use in different environments.
- Thanks to the FastWiring system, the installation time is drastically reduced.

Page	Product	Steel	Stainless steel
478	Beta 235 LED Steel	•	
486	Beta 235 LED Stainless Steel		•

Product range

Beta 235

Polycarbonate screen



Beta 235



Model

PC
Wide

PC
Medium

VS
Wide

VS
Medium

VT
Wide

VT
Medium

UGR

<21

<19

<21

<19

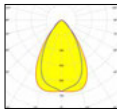
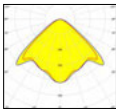
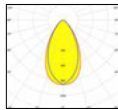
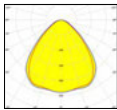
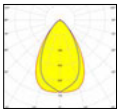
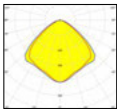
<21

<19

Finishes

Steel | Stainless steel

Photometric distribution



Installation steps

Dt

1,20

1,00

1,30

0,90

1,20

1,10

DI

1,30

0,90

1,30

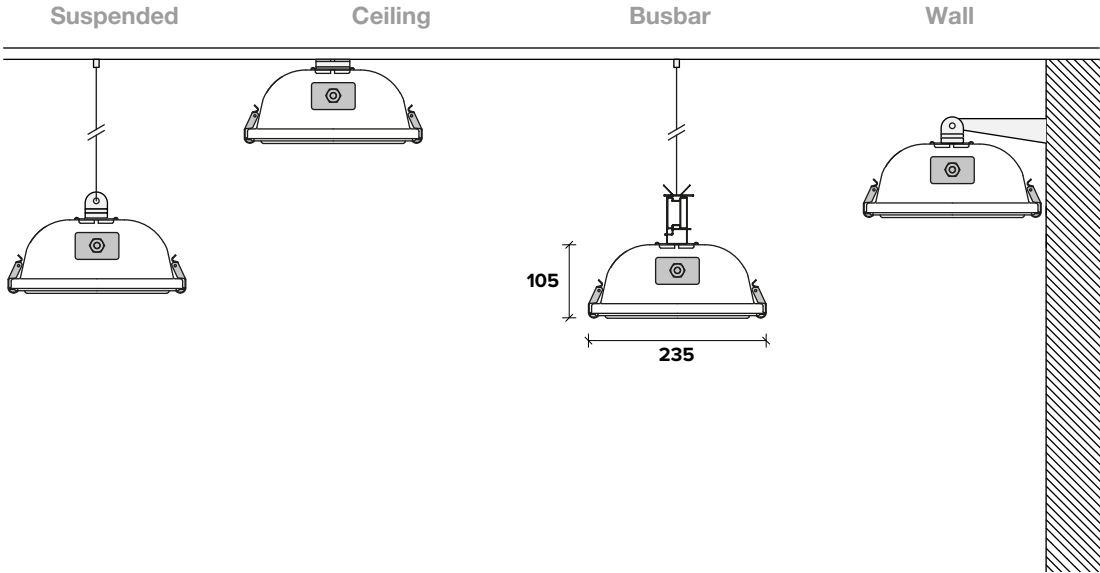
0,80

1,20







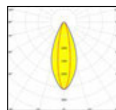
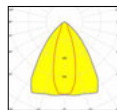
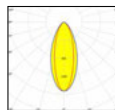
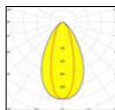
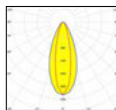
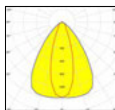
0,90

Beta 235

Glass screen



Beta 235

Beta 235	<div></div>						
	Model	PC Conc	PC Iperconc	VS Conc	VS Iperconc	VT Conc	VT Iperconc
UGR	<19	<19	<19	<19	<19	<19	
Finishes	Steel Stainless steel						
Photometric distribution	<div></div>						
Installation steps	Dt	0,60	0,40	0,60	0,50	0,50	0,40
	DI	1,20	0,70	0,90	0,70	1,20	0,70

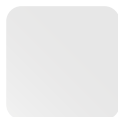
Waterproof and corrosion-proof

Product advantages

SCREENS AND FINISHES

Beta 235 is available in two different versions and three different diffuser types:

Finishes



Steel



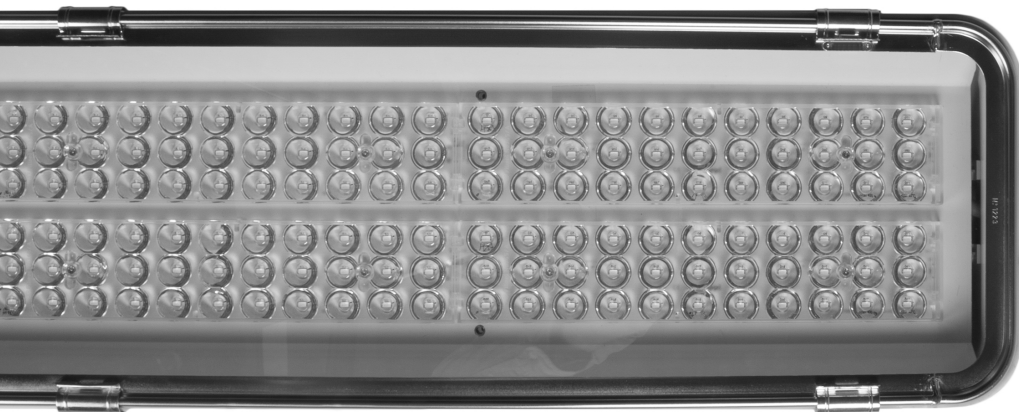
Stainless steel



PC
Polycarbonate Diffuser



VS
Moulded Glass



VT
Transparent Glass

QUICK CONNECTION

Thanks to the FastWiring system, the installation time for Beta 235 is significantly reduced:



1

Beta 235 is supplied with our new “FastWiring” quick connector. Here is what it looks like when removed from the packaging.



2

Remove the support by grasping the tab.



3

At this point the quick connection closing cap and the cable gland are inserted onto the cable and the electrical cables can be connected to the quick connect terminal board. No tools are required.



4

Push the sliding support into the luminaire and screw down the two phillips head screws on the closing cap.



5

Done!
Beta 235 is now ready for installation.



Beta 235 LED Steel

Construction characteristics

Illuminotechnical characteristics

Symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Single-piece housing in pressed steel, powder-coated in white epoxy-polyester. Ecologic anti-aging injected sealing gasket.

Highly reflective white polyester painted, hot-dip galvanised steel, oversized cable housing reflector, fixed to the body with screws.

PMMA lenses with external flat surface.

Galvanised steel snap-lock clips for attaching screens (safety n° 4 per fixture).

Electrical characteristics

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Source characteristics

- LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- different powers
- laminated glass
- wiring: CLO (more information on page 568), twin-circuit
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

Applications

Ambient temperature from -20°C to +45°C. Dry, dusty indoor environments, subject to occasional water splashes.

Industrial environments, warehouses, environments requiring safety luminaires, such as prisons, thanks to the clips that can be locked by bolts (on request).

Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with laminated glass.

Tempered glass is not immune to falling fragments from harmless and caused by

shocks or exceptionally derived from the tempering process.

PC version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

VT version

On request, HACCP versions for use in the food industry.

Installation

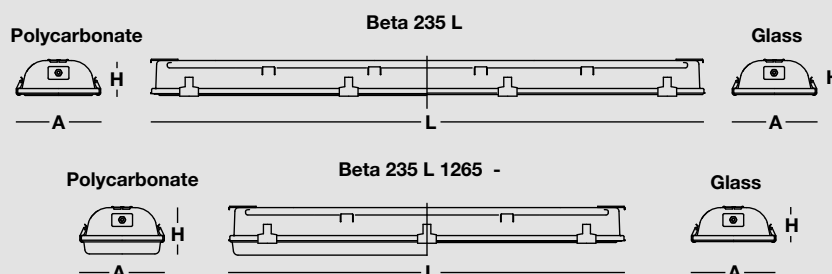
Ceiling, suspended, on busbar or wall-mounted.

For mounting hooks and brackets see accessories on page 490.

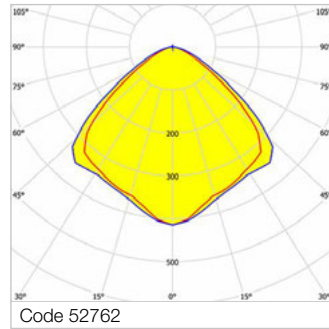
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



Beta 235 LED 75 PC Wide



Wide symmetric lighting distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection moulded.

Attention: the diffuser supplied with our L655 and L1265 long luminaires is higher than the one which is supplied with our L1565 long versions (please consult Dimensions table).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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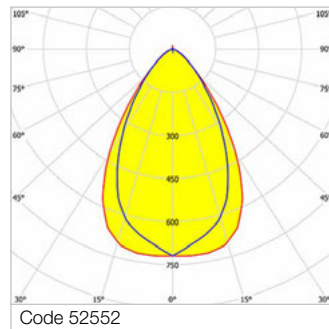
ON/OFF electronic wiring 230V-50/60Hz

52931	Beta 235 LED 751x25 AMPIO L655	27.5	3683	4000	>80	655x235x140
52930	Beta 235 LED 752x20 AMPIO L655	42	6247	4000	>80	655x235x140
52849	Beta 235 LED 751x50 AMPIO L1265	56	7365	4000	>80	1265x235x135
52765	Beta 235 LED 751x60 AMPIO L1565	67	9259	4000	>80	1565x235x107
52846	Beta 235 LED 752x45 AMPIO L1265	94	13014	4000	>80	1265x235x135
52762	Beta 235 LED 752x55 AMPIO L1565	116	16300	4000	>80	1565x235x107

DALI electronic wiring 230V-50/60Hz

52807	Beta 235 LED 751x60 DALI AMPIO L1565	67	9259	4000	>80	1565x235x107
52888	Beta 235 LED 752x45 DALI AMPIO L1265	94	13014	4000	>80	1265x235x135
52804	Beta 235 LED 752x55 DALI AMPIO L1565	116	16300	4000	>80	1565x235x107

Beta 235 LED 75 PC Medium



Medium symmetric distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection moulded.

Attention: the diffuser supplied with our L655 and L1265 long luminaires is higher than the one which is supplied with our L1565 long versions (please consult Dimensions table).

Waterproof and corrosion-proof

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

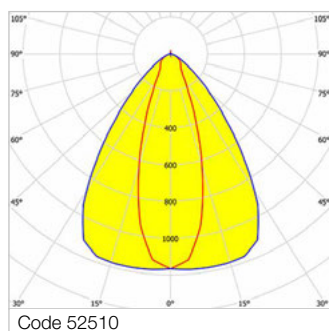
ON/OFF electronic wiring 230V-50/60Hz

52567	Beta 235 LED 751x50 MEDIO L1265	56	7440	4000	>80	1265x235x135
52553	Beta 235 LED 751x60 MEDIO L1565	67	9362	4000	>80	1565x235x107
52566	Beta 235 LED 752x45 MEDIO L1265	94	13059	4000	>80	1265x235x135
52552	Beta 235 LED 752x55 MEDIO L1565	116	16431	4000	>80	1565x235x107

DALI electronic wiring 230V-50/60Hz

52574	Beta 235 LED 751x50 DALI MEDIO L1265	56	7440	4000	>80	1265x235x135
52560	Beta 235 LED 751x60 DALI MEDIO L1565	67	9362	4000	>80	1565x235x107
52573	Beta 235 LED 752x45 DALI MEDIO L1265	94	13059	4000	>80	1265x235x135
52559	Beta 235 LED 752x55 DALI MEDIO L1565	116	16431	4000	>80	1565x235x107

Beta 235 LED 75 PC Concentrated



Concentrated elliptical distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection moulded.

Attention: the diffuser supplied with our L655 and L1265 long luminaires is higher than the one which is supplied with our L1565 long versions (please consult Dimensions table).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

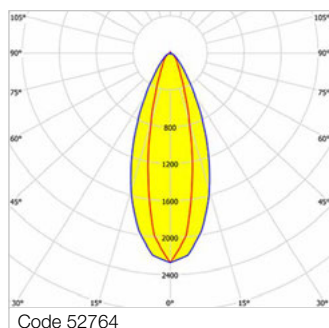
ON/OFF electronic wiring 230V-50/60Hz

52511	Beta 235 LED 751x60 CONC L1565	67	9155	4000	>80	1565x235x107
52524	Beta 235 LED 752x45 CONC L1265	94	12760	4000	>80	1265x235x135
52510	Beta 235 LED 752x55 CONC L1565	116	16431	4000	>80	1565x235x107

DALI electronic wiring 230V-50/60Hz

52518	Beta 235 LED 751x60 DALI CONC L1565	67	9155	4000	>80	1565x235x107
52531	Beta 235 LED 752x45 DALI CONC L1265	94	12760	4000	>80	1265x235x135
52517	Beta 235 LED 752x55 DALI CONC L1565	116	16431	4000	>80	1565x235x107

Beta 235 LED 75 PC Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection moulded.

Attention: the diffuser supplied with our L655 and L1265 long luminaires is higher than the one which is supplied with our L1565 long versions (please consult Dimensions table).

Recommended minimum installation height: 4 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

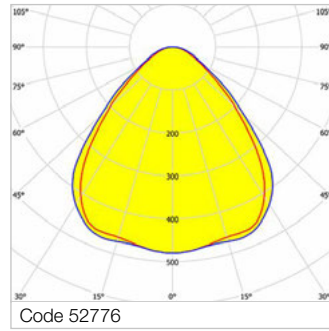
ON/OFF electronic wiring 230V-50/60Hz

52848	Beta 235 LED 752x45 IPERCONC L1265	94	11820	4000	>80	1265x235x135
52764	Beta 235 LED 752x55 IPERCONC L1565	116	15293	4000	>80	1565x235x107

DALI electronic wiring 230V-50/60Hz

52890	Beta 235 LED 752x45 DALI IPERCONC L1265	94	11820	4000	>80	1265x235x135
52806	Beta 235 LED 752x55 DALI IPERCONC L1565	116	16990	4000	>80	1565x235x107

Beta 235 LED 76 VS Wide



Wide symmetric lighting distribution.
VS moulded anti-glare glass, non-combustible, single-piece
perimeter frame in galvanised steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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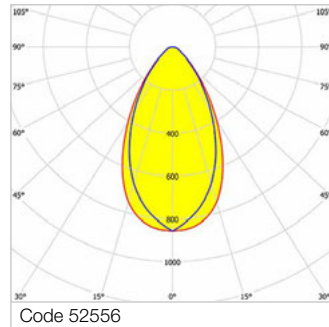
ON/OFF electronic wiring 230V-50/60Hz

52937	Beta 235 LED 761x25 AMPIO VS L655	27.5	3372	4000	>80	655x235x110
52936	Beta 235 LED 762x20 AMPIO VS L655	42	5566	4000	>80	655x235x110
52863	Beta 235 LED 761x50 AMPIO VS L1265	56	6743	4000	>80	1265x235x105
52779	Beta 235 LED 761x60 AMPIO VS L1565	67	8429	4000	>80	1565x235x105
52860	Beta 235 LED 762x45 AMPIO VS L1265	94	11596	4000	>80	1265x235x105
52776	Beta 235 LED 762x55 AMPIO VS L1565	116	14491	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52821	Beta 235 LED 761x60 DALI AMPIO VS L1565	67	8429	4000	>80	1565x235x105
52902	Beta 235 LED 762x45 DALI AMPIO VS L1265	94	11596	4000	>80	1265x235x105
52818	Beta 235 LED 762x55 DALI AMPIO VS L1565	116	14491	4000	>80	1565x235x105

Beta 235 LED 76 VS Medium



Medium symmetric distribution.
VS moulded anti-glare glass, non-combustible, single-piece
perimeter frame in galvanised steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

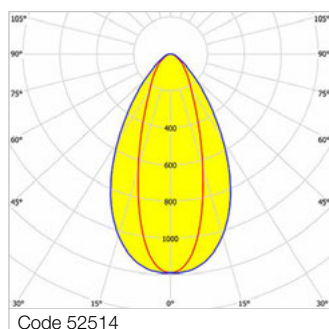
52571	Beta 235 LED 761x50 MEDIO VS L1265	56	6751	4000	>80	1265x235x105
52557	Beta 235 LED 761x60 MEDIO VS L1565	67	8440	4000	>80	1565x235x105
52570	Beta 235 LED 762x45 MEDIO VS L1265	94	11626	4000	>80	1265x235x105
52556	Beta 235 LED 762x55 MEDIO VS L1565	116	14528	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52578	Beta 235 LED 761x50 DALI MEDIO VS L1265	56	6751	4000	>80	1265x235x105
52564	Beta 235 LED 761x60 DALI MEDIO VS L1565	67	8440	4000	>80	1565x235x105
52577	Beta 235 LED 762x45 DALI MEDIO VS L1265	94	11626	4000	>80	1265x235x105
52563	Beta 235 LED 762x55 DALI MEDIO VS L1565	116	14528	4000	>80	1565x235x105

Waterproof and
corrosion-proof

Beta 235 LED 76 VS Concentrated



Concentrated elliptical distribution.
VS moulded anti-glare glass, non-combustible, single-piece
perimeter frame in galvanised steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

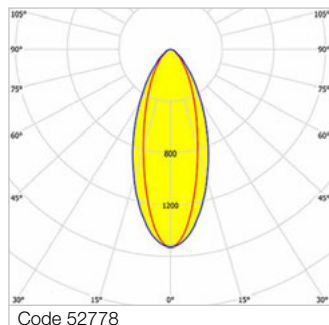
ON/OFF electronic wiring 230V-50/60Hz

52515	Beta 235 LED 761x60 CONC VS L1565	67	8450	4000	>80	1565x235x105
52528	Beta 235 LED 762x45 CONC VS L1265	94	11820	4000	>80	1265x235x105
52514	Beta 235 LED 762x55 CONC VS L1565	116	14771	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52522	Beta 235 LED 761x60 DALI CONC VS L1565	67	8450	4000	>80	1565x235x105
52535	Beta 235 LED 762x45 DALI CONC VS L1265	94	11820	4000	>80	1265x235x105
52521	Beta 235 LED 762x55 DALI CONC VS L1565	116	14771	4000	>80	1565x235x105

Beta 235 LED 76 VS Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.
VS moulded anti-glare glass, non-combustible, single-piece
perimeter frame in galvanised steel.
Recommended minimum installation height: 4 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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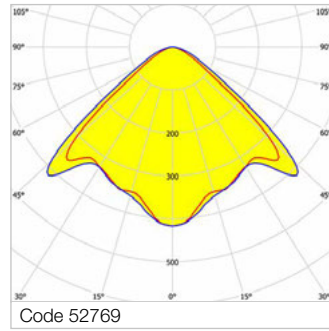
ON/OFF electronic wiring 230V-50/60Hz

52862	Beta 235 LED 762x45 IPERCONC VS L1265	94	11133	4000	>80	1265x235x105
52778	Beta 235 LED 762x55 IPERCONC VS L1565	116	13913	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52904	Beta 235 LED 762x45 DALI IPERCONC VS L1265	94	11133	4000	>80	1265x235x105
52820	Beta 235 LED 762x55 DALI IPERCONC VS L1565	116	13913	4000	>80	1565x235x105

Beta 235 LED 76 VT Wide



Wide symmetric lighting distribution.
VT transparent glass, non-combustible, single-piece perimeter frame in galvanised steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

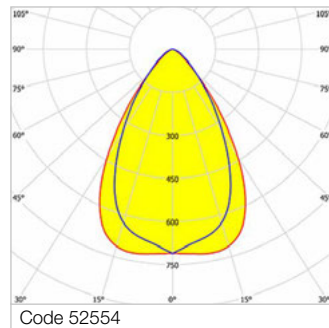
ON/OFF electronic wiring 230V-50/60Hz

52856	Beta 235 LED 761x50 AMPIO VT L1265	56	7539	4000	>80	1265x235x105
52772	Beta 235 LED 761x60 AMPIO VT L1565	67	9425	4000	>80	1565x235x105
52853	Beta 235 LED 762x45 AMPIO VT L1265	94	13103	4000	>80	1265x235x105
52769	Beta 235 LED 762x55 AMPIO VT L1565	116	16375	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52814	Beta 235 LED 761x60 DALI AMPIO VT L1565	67	9425	4000	>80	1565x235x105
52895	Beta 235 LED 762x45 DALI AMPIO VT L1265	94	13103	4000	>80	1265x235x105
52811	Beta 235 LED 762x55 DALI AMPIO VT L1565	116	16375	4000	>80	1565x235x105

Beta 235 LED 76 VT Medium



Medium symmetric distribution.
VT transparent glass, non-combustible, single-piece perimeter frame in galvanised steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

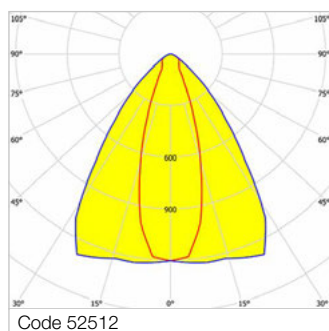
52569	Beta 235 LED 761x50 MEDIO VT L1265	56	7556	4000	>80	1265x235x105
52555	Beta 235 LED 761x60 MEDIO VT L1565	67	9445	4000	>80	1565x235x105
52568	Beta 235 LED 762x45 MEDIO VT L1265	94	13267	4000	>80	1265x235x105
52554	Beta 235 LED 762x55 MEDIO VT L1565	116	16580	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52576	Beta 235 LED 761x50 DALI MEDIO VT L1265	56	7556	4000	>80	1265x235x105
52562	Beta 235 LED 761x60 DALI MEDIO VT L1565	67	9445	4000	>80	1565x235x105
52575	Beta 235 LED 762x45 DALI MEDIO VT L1265	94	13267	4000	>80	1265x235x105
52561	Beta 235 LED 762x55 DALI MEDIO VT L1565	116	16580	4000	>80	1565x235x105

Waterproof and
corrosion-proof

Beta 235 LED 76 VT Concentrated



Concentrated elliptical distribution.
VT transparent glass, non-combustible, single-piece perimeter frame in galvanised steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

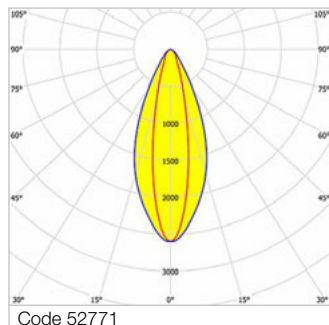
ON/OFF electronic wiring 230V-50/60Hz

52513	Beta 235 LED 761x60 CONC VT L1565	67	9207	4000	>80	1565x235x105
52526	Beta 235 LED 762x45 CONC VT L1265	94	13103	4000	>80	1265x235x105
52512	Beta 235 LED 762x55 CONC VT L1565	116	16375	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52520	Beta 235 LED 761x60 DALI CONC VT L1565	67	9207	4000	>80	1565x235x105
52533	Beta 235 LED 762x45 DALI CONC VT L1265	94	13103	4000	>80	1265x235x105
52519	Beta 235 LED 762x55 DALI CONC VT L1565	116	16375	4000	>80	1565x235x105

Beta 235 LED 76 VT Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.
VT transparent glass, non-combustible, single-piece perimeter frame in galvanised steel.
Recommended minimum installation height: 4 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

52855	Beta 235 LED 762x45 IPERCONC VT L1265	94	12297	4000	>80	1265x235x105
52771	Beta 235 LED 762x55 IPERCONC VT L1565	116	15368	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52897	Beta 235 LED 762x45 DALI IPERCONC VT L1265	94	12297	4000	>80	1265x235x105
52813	Beta 235 LED 762x55 DALI IPERCONC VT L1565	116	15368	4000	>80	1565x235x105



Accettazione

KG 3000



Beta 235 LED Stainless Steel

Construction characteristics

Illuminotechnical characteristics

Symmetric distribution.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing in AISI 304 stainless steel, pressed in one single piece.

Oversized gear-tray reflector unit in highly reflective white painted hot-galvanised steel.

PMMA lenses with external flat surface.

Stainless steel snap-lock clips for attaching screens (safety n° 4 per fixture).

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Quick connection in polycarbonate with M20x1,5 cable gland, to access the terminal block positioned on a removable runner.

Source characteristics

- LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- different powers
- laminated glass
- wiring: CLO (more information on page 568), twin-circuit
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

Applications

Ambient temperature from -20°C to +45°C. Dry, dusty indoor environments, subject to occasional water splashes.

Any environments except the ones where the luminaire materials are unsuitable.

Environments requiring safety luminaires, such as prisons, thanks to the clips that can be locked by bolts (on request).

Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with laminated glass.

Tempered glass is not immune to falling

fragments from harmless and caused by shocks or exceptionally derived from the tempering process.

PC version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

VT version

On request, HACCP versions for use in the food industry.

Installation

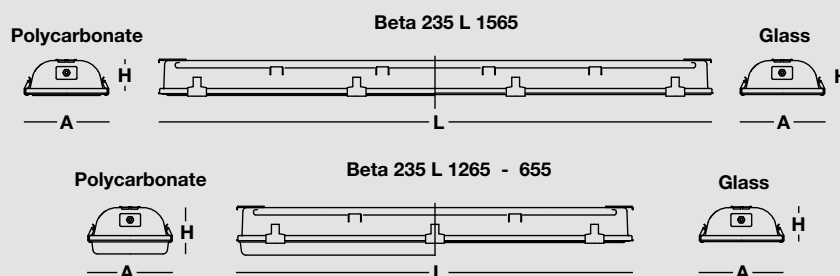
Ceiling, suspended, on busbar or wall-mounted.

For mounting hooks and brackets see accessories on page 490.

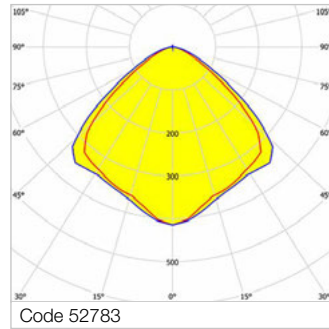
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



Beta 235 LED 92 PC Wide



Wide symmetric lighting distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection moulded.

Attention: the diffuser supplied with our L655 and L1265 long luminaires is higher than the one which is supplied with our L1565 long versions (please consult Dimensions table).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

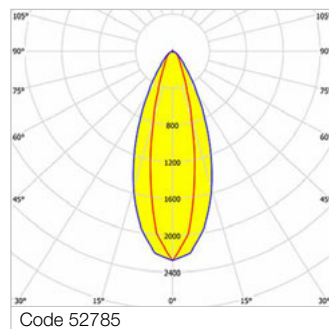
ON/OFF electronic wiring 230V-50/60Hz

52940	Beta 235 LED 921x25 AMPIO L655	27.5	3620	4000	>80	655x235x140
52939	Beta 235 LED 922x15 AMPIO L655	34.5	4736	4000	>80	655x235x140
52870	Beta 235 LED 921x50 AMPIO L1265	56	7241	4000	>80	1265x235x135
52786	Beta 235 LED 921x60 AMPIO L1565	67	9103	4000	>80	1565x235x107
52867	Beta 235 LED 922x40 AMPIO L1265	82	11407	4000	>80	1265x235x135
52783	Beta 235 LED 922x50 AMPIO L1565	101	14290	4000	>80	1565x235x107

DALI electronic wiring 230V-50/60Hz

52828	Beta 235 LED 921x60 DALI AMPIO L1565	67	9103	4000	>80	1565x235x107
52909	Beta 235 LED 922x40 DALI AMPIO L1265	82	11407	4000	>80	1265x235x135
52825	Beta 235 LED 922x50 DALI AMPIO L1565	101	14290	4000	>80	1565x235x107

Beta 235 LED 92 PC Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection moulded.

Attention: the diffuser supplied with our L1265 long luminaires is higher than the one which is supplied with our L1565 long versions (please consult Dimensions table).

Recommended minimum installation height: 4 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

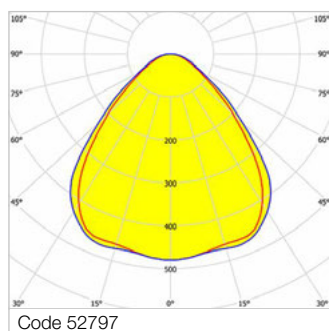
52869	Beta 235 LED 922x40 IPERCONC L1265	82	10368	4000	>80	1265x235x135
52785	Beta 235 LED 922x50 IPERCONC L1565	101	13409	4000	>80	1565x235x107

DALI electronic wiring 230V-50/60Hz

52911	Beta 235 LED 922x40 DALI IPERCONC L1265	82	10368	4000	>80	1265x235x135
52827	Beta 235 LED 922x50 DALI IPERCONC L1565	101	13409	4000	>80	1565x235x107

Waterproof and
corrosion-proof

Beta 235 LED 93 VS Wide



Wide symmetric lighting distribution.
VS moulded anti-glare glass, non-combustible, single-piece
perimeter frame in stainless steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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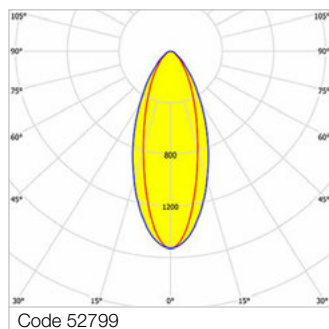
ON/OFF electronic wiring 230V-50/60Hz

52946	Beta 235 LED 931x25 AMPIO VS L655	27.5	3372	4000	>80	655x235x110
52945	Beta 235 LED 932x15 AMPIO VS L655	34.5	4294	4000	>80	655x235x110
52884	Beta 235 LED 931x50 AMPIO VS L1265	56	6743	4000	>80	1265x235x105
52800	Beta 235 LED 931x60 AMPIO VS L1565	67	8429	4000	>80	1565x235x105
52881	Beta 235 LED 932x40 AMPIO VS L1265	82	10342	4000	>80	1265x235x105
52797	Beta 235 LED 932x50 AMPIO VS L1565	101	12926	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52842	Beta 235 LED 931x60 DALI AMPIO VS L1565	67	8429	4000	>80	1565x235x105
52923	Beta 235 LED 932x40 DALI AMPIO VS L1265	82	10342	4000	>80	1265x235x105
52839	Beta 235 LED 932x50 DALI AMPIO VS L1565	101	12926	4000	>80	1565x235x105

Beta 235 LED 93 VS Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.
VS moulded anti-glare glass, non-combustible, single-piece
perimeter frame in stainless steel.
Recommended minimum installation height: 4 metres from the
ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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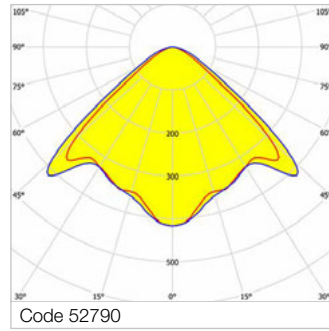
ON/OFF electronic wiring 230V-50/60Hz

52883	Beta 235 LED 932x40 IPERCONC VS L1265	82	9929	4000	>80	1265x235x105
52799	Beta 235 LED 932x50 IPERCONC VS L1565	101	12410	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52925	Beta 235 LED 932x40 DALI IPERCONC VS L1265	82	9929	4000	>80	1265x235x105
52841	Beta 235 LED 932x50 DALI IPERCONC VS L1565	101	12410	4000	>80	1565x235x105

Beta 235 LED 93 VT Wide



Wide symmetric lighting distribution.
VT transparent glass, non-combustible, single-piece perimeter frame in stainless steel.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

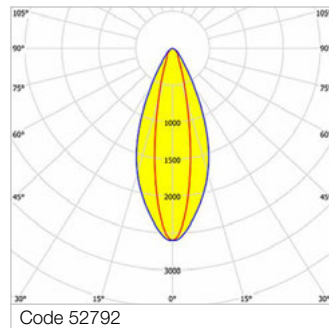
ON/OFF electronic wiring 230V-50/60Hz

52877	Beta 235 LED 931x50 AMPIO VT L1265	56	7539	4000	>80	1265x235x105
52793	Beta 235 LED 931x60 AMPIO VT L1565	67	9425	4000	>80	1565x235x105
52874	Beta 235 LED 932x40 AMPIO VT L1265	82	11686	4000	>80	1265x235x105
52790	Beta 235 LED 932x50 AMPIO VT L1565	101	14606	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52835	Beta 235 LED 931x60 DALI AMPIO VT L1565	67	9425	4000	>80	1565x235x105
52916	Beta 235 LED 932x40 DALI AMPIO VT L1265	82	11686	4000	>80	1265x235x105
52832	Beta 235 LED 932x50 DALI AMPIO VT L1565	101	14606	4000	>80	1565x235x105

Beta 235 LED 93 VT Iperconcentrated



Symmetrical elliptical hyperconcentrated distribution.
VT transparent glass, non-combustible, single-piece perimeter frame in stainless steel.
Recommended minimum installation height: 4 metres from the ground.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz

52876	Beta 235 LED 932x40 IPERCONC VT L1265	82	10967	4000	>80	1265x235x105
52792	Beta 235 LED 932x50 IPERCONC VT L1565	101	13708	4000	>80	1565x235x105

DALI electronic wiring 230V-50/60Hz

52918	Beta 235 LED 932x40 DALI IPERCONC VT L1265	82	10967	4000	>80	1265x235x105
52834	Beta 235 LED 932x50 DALI IPERCONC VT L1565	101	13708	4000	>80	1565x235x105

Waterproof and corrosion-proof

Beta 235 | Accessories



Anti-condensation diffuser cable gland.

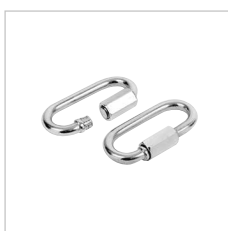
Code	Item
A0187	Anti-condensation cable gland

Recommended for installations in environments with temperature sudden changes or subject to condensation.



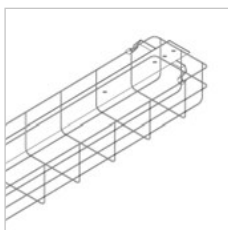
Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm



Snap hooks clips for chain suspension, galvanised steel.

Code	Item
A0653	Pair of fixing carab.for chain instal.



Wire-guard for applications in dry environments, against shocks coming from any directions, galvanised steel rod Ø 5 mm.

Code	Item
A0457	Wireguard 280x1330 3F Linda/3F Beta
A0458	Wireguard 280x1630 3F Linda/3F Beta

Only for luminaires fixed without hooks.



Safety screw that prevents improper opening of the luminaire.

Code	Item
A0471	Security screws - Beta 235 (100 pcs) The pack contains 100 pieces.

The products from the Beta 235 range are equipped with safety snap-lock clips: L655mm (4 clips), L1265 (6 clips) and L1565 (8 clips) - of which only 4 are equipped with pre-mounted safety screws. In applications requiring a total inaccessibility to the luminaire, the screws can be fitted to the open snap-lock clips.



Pair of mounting brackets and hooks for ceiling mounting, with nuts and bolts for fastening the luminaire, everything in stainless steel.

Code	Item
A0324	Pair fixed brack. for ceiling Beta 235



Pair of mounting brackets and hooks for wall-mounting, with nuts and bolts for luminaire fastening, everything in stainless steel.

Code	Item
A0835	Pair brack.+hooks for wall



Pair of steel hooks for suspended installation, with nuts and bolts for luminaire fastening.

Code	Item
A0836	Pair of galv.hooks for susp.- Beta 235
A0837	Pair of stain.steel hooks susp.-Beta 235

In case of chain suspension installation, ALWAYS use one of the following codes: A0653.



Pair of hooks in galvanised steel for suspended installation, with nuts and bolts for luminaire fastening.

Code	Item
A0838	Pair of S-hooks for chain - Beta 235



Safety screw for locking to busbar.

Code	Item
A0325	Mounting kit on busbar - Beta 235



Beta i3F LED

Construction characteristics

Illuminotechnical characteristics

Wide or concentrated direct distribution.
Lifetime (L93/B10): 30000 h. (tq+25°C)
Lifetime (L90/B10): 50000 h. (tq+25°C)
Lifetime (L85/B10): 80000 h. (tq+25°C)
Lifetime (L80/B10): 100000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Single-piece housing in pressed steel, powder-coated in white epoxy-polyester. Oversized flux recuperator in specular aluminium, with titanium-magnesium surface treatment, non-iridescent. Gear-tray unit in hot-galvanised steel, painted in white polyester, fixed to the housing by means of "Ribloc" rapid devices in galvanised steel, hinged opening. Stainless steel screen fixing clips.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. The luminaires with EP permanent emergency wiring on board comply with EN 60598-2-22 standard, high risk areas excluded.
Entry for power-supply cable at one end cap, through M20x1,5 self-extinguishing nylon cable gland.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- different powers
- laminated glass
- wiring: dimmable, CLO (more information on page 568), twin-circuit, class II
- safety snap-lock clips
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- body in painted aluminium or stainless steel
- emergency versions

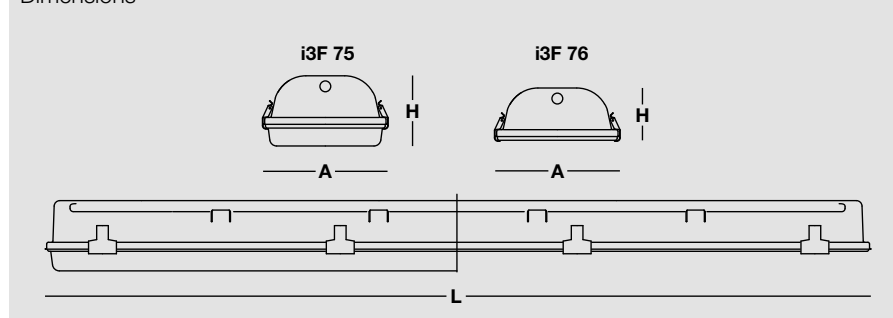
Applications

Ambient temperature from -20°C to +35°C. Dry, dusty indoor environments, subject to occasional water splashes. Industrial environments, warehouses, environments requiring safety luminaires, such as prisons, thanks to the clips that can be locked by bolts (on request). Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use luminaires with laminated glass. Tempered glass is not immune to falling fragments from harmless and caused by shocks or exceptionally derived from the tempering process.

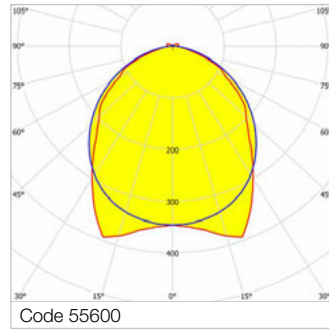
Installation

Ceiling, suspended, on busbar or wall-mounted.
For mounting hooks and brackets see accessories on page 496.

Dimensions



Beta i3F LED 75 PC Wide



Wide distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection molded, sealing gasket, hinged opening. Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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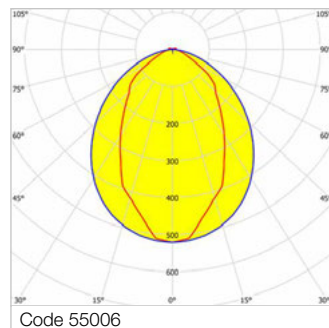
ON/OFF electronic wiring 230V-50/60Hz

55596	i3F LED 752x12W AMPIO L655	29	3732	4000	>80	655x235x140
55598	i3F LED 752x24W AMPIO L1265	56	7471	4000	>80	1265x235x135
55600	i3F LED 752x30W AMPIO L1565	70	9351	4000	>80	1565x235x135

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

55607	i3F LED 752x12W EP AMPIO L655	30	3732	4000	>80	655x235x140
55609	i3F LED 752x24W EP AMPIO L1265	57	7471	4000	>80	1265x235x135
55611	i3F LED 752x30W EP AMPIO L1565	71	9351	4000	>80	1565x235x135

Beta i3F LED 75 PC Concentrated



Concentrated elliptical distribution.

Polycarbonate screen etched internally, V2 self-extinguishing, UV stabilised, injection molded, sealing gasket, hinged opening. Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

Waterproof and
corrosion-proof

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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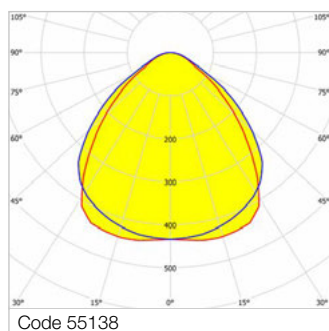
ON/OFF electronic wiring 230V-50/60Hz

55006	i3F LED 752x30W CONC L1565	70	9236	4000	>80	1565x235x135
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EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

55017	i3F LED 752x30W EP CONC L1565	71	9236	4000	>80	1565x235x135
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Beta i3F LED 76 VS Wide



Driver/LED
SELV

Wide distribution.
VS molded antiglare glass, non-combustible, monobloc perimetrical frame in galvanised steel, with sealing gasket, hinged opening.
On request, HACCP versions for use in the food industry.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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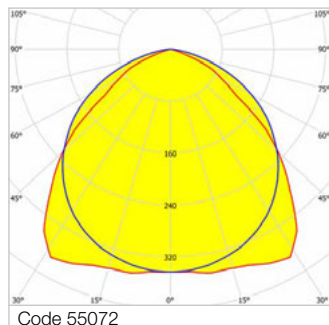
ON/OFF electronic wiring 230V-50/60Hz

55134	i3F LED 762x12W AMPIO VS L655	29	3388	4000	>80	655x235x110
55136	i3F LED 762x24W AMPIO VS L1265	56	6783	4000	>80	1265x235x105
55138	i3F LED 762x30W AMPIO VS L1565	70	8489	4000	>80	1565x235x105

EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

55145	i3F LED 762x12W EP AMPIO VS L655	30	3388	4000	>80	655x235x110
55147	i3F LED 762x24W EP AMPIO VS L1265	57	6783	4000	>80	1265x235x105
55149	i3F LED 762x30W EP AMPIO VS L1565	71	8489	4000	>80	1565x235x105

Beta i3F LED 76 VT Wide



Driver/LED
SELV

Wide distribution.
VT transparent glass, non-combustible, monobloc perimetrical frame in galvanised steel, with sealing gasket, hinged opening.
On request, HACCP versions for use in the food industry.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

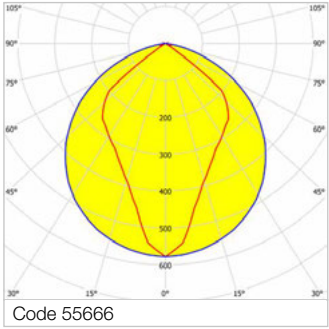
ON/OFF electronic wiring 230V-50/60Hz

55072	i3F LED 762x30W AMPIO VT L1565	70	9402	4000	>80	1565x235x105
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EP maintained emergency wiring, 1hr duration with 24hrs recharge (BLF emergency fluxes indicated in the datasheets)

55083	i3F LED 762x30W EP AMPIO VT L1565	71	9402	4000	>80	1565x235x105
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Beta i3F LED 76 VT Concentrated



EP

960°C

IP65

10J

IK09

Driver/LED
SELV

Concentrated elliptical distribution.
VT transparent glass, non-combustible, monobloc perimetrical frame in galvanised steel, with sealing gasket, hinged opening.
On request, HACCP versions for use in the food industry.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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ON/OFF electronic wiring 230V-50/60Hz

55666	i3F LED 762x30W CONC VT L1565	70	9454	4000	>80	1565x235x105
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EP maintained emergency wiring, 1hr duration with 24hrs recharge
(BLF emergency fluxes indicated in the datasheets)

55677	i3F LED 762x30W EP CONC VT L1565	71	9454	4000	>80	1565x235x105
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Waterproof and corrosion-proof

Beta i3F LED | Accessories



Pair of mounting brackets and hooks for wall-mounting, with nuts and bolts for luminaire fastening, everything in stainless steel.

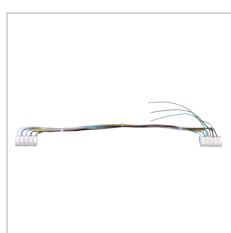
Code	Item
A0503	15 CD pair of bracket/hooks A3F



Pair of steel hooks for suspended installation, with nuts and bolts for luminaire fastening.

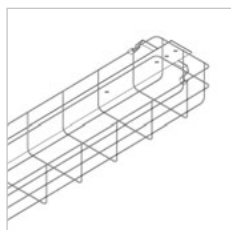
Code	Item
A0500	13 DH pair susp.galv.steel hooks i3F
A0501	13 HC pair susp.stain.steel hooks A3F

In case of chain suspension installation, ALWAYS use one of the following codes: A0653.



5-pole cascade connection line, stiff cable H07 V2-U, HT 90°C, 1.5 mm², terminal blocks with connection capacity 2x2.5 mm².

Code	Item
A0508	20 TKA (casc. conn. line i3F/A3F 1265)
A0509	20 ZFE (casc. conn. line i3F/A3F 1565)



Wire-guard for applications in dry environments, against shocks coming from any directions, galvanised steel rod Ø 5 mm.

Code	Item
A0457	Wireguard 280x1330 3F Linda/3F Beta
A0458	Wireguard 280x1630 3F Linda/3F Beta

Only for luminaires fixed without hooks.



Anti-condensation diffuser cable gland.

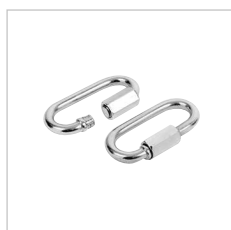
Code	Item
A0187	Anti-condensation cable gland

Recommended for installations in environments with temperature sudden changes or subject to condensation.



Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm



Snap hooks clips for chain suspension, galvanised steel.

Code	Item
A0653	Pair of fixing carab.for chain instal.





Retrofit Beta A3F - i3F

Construction characteristics

Illuminotechnical characteristics

Wide or concentrated direct distribution.
 Lifetime (L93/B10): 30000 h. (tq+25°C)
 Lifetime (L90/B10): 50000 h. (tq+25°C)
 Lifetime (L85/B10): 80000 h. (tq+25°C)
 Lifetime (L80/B10): 100000 h. (tq+25°C)
 Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Gear-tray in hot galvanised steel, painted in white polyester, to be fixed to the body by rapid devices "Ribloc".

2x40W version

PMMA lenses with external flat surface.
 For installations prior to 2010, the hinge opening is lost.

Electrical characteristics

In compliance with EN 60598-1.
 Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- retrofit Kit for luminaires of length 655mm (1-2x18W), power 1x36W - 1x58W, for Beta Stainless A3F 92-93, for Beta Ice 90
- wiring: dimmable, CLO (more information on page 568), twin-circuit, different powers
- version with asymmetric lighting distribution
- wide flux recuperator to increase luminous flux by 5%
- different colour rendering indices and colour temperatures
- emergency versions

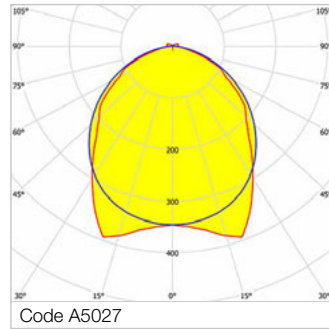
Installation

Correct installation of the Retrofit LED kit, compliant with EN 60598-1 and CE marked, must be only performed by qualified personnel to ensure compliance with the national installation standards.

Notes

Evaluate the use of moulded anti-glare glass according to the application.

Kit LED Retrofit for polycarbonate diffuser



Wide or concentrated symmetric lighting distribution.
Flow recuperator in specular aluminium, with superficial titanium-magnesium treatment, non-iridescent (only for 2x22W CONCENTRATED version).
Internal transparent methacrylate lenses (only for 2x40W version).
Diffuser in self-extinguishing V2 polycarbonate, photo-engraved interior, UV stabilised, injection moulded, with smooth outer surface, sealing gasket.
The high output versions are NOT SELV.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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Version without recuperator - Driver/LED SELV - ON/OFF electronic wiring 230V-50/60Hz

A5057	Kit LED i3F 75,A3F 90-92 L1265 2x18W +PC	40	5952	4000	>80	1265x235x135
A5027	Kit LED i3F 75, A3F 90, A3F 92-L1565 - 2X22W+PC	49	6996	4000	>80	1565x235x135
A5026	KIT LED i3F 75, A3F 90-L1565 - 2x30W+PC	70	8790	4000	>80	1565x235x135

Version with CONCENTRATED recuperator - Driver/LED SELV - ON/OFF electronic wiring 230V-50/60Hz

A5013	Kit LED i3F75,A3F 90,A3F 92-L1565-2X22W CONC+PC	49	7351	4000	>80	1565x235x135
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High output version with WIDE lenses - ON/OFF electronic wiring 230V-50/60Hz

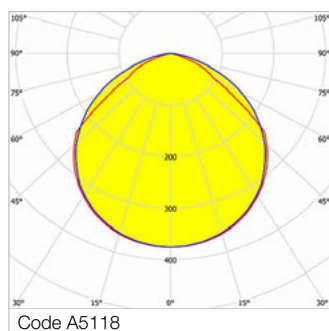
A5215	Kit LED i3F 75,A3F 90 - L1565 - L 2x40W AMPIO + PC	84	11988	4000	>80	1565x235x135
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High output version with CONCENTRATED lenses - ON/OFF electronic wiring 230V-50/60Hz

A5217	Kit LED i3F 75,A3F 90 - L1565 - L 2x40W CONC + PC	84	11889	4000	>80	1565x235x135
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Waterproof and corrosion-proof

Kit LED Retrofit for glass diffuser



Wide or concentrated symmetric lighting distribution.
Flow recuperator in specular aluminium, with superficial titanium-magnesium treatment, non-iridescent (only for 2x22W CONCENTRATED version).
Internal transparent methacrylate lenses (only for 2x40W version).
Glass diffuser is NOT included in the kit.
The high output versions are NOT SELV.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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Version without recuperator - Driver/LED SELV - ON/OFF electronic wiring 230V-50/60Hz

A5148	KIT LED i3F 76, A3F 91, A3F 93-L1265-2x18W	40	5549	4000	>80	1265x235x105
A5118	Kit LED i3F 76, A3F 91, A3F 93 - L1565-2X22W	49	6938	4000	>80	1565x235x135
A5117	KIT LED i3F 76, A3F 91 - L1565-2x30W	70	8718	4000	>80	1565x235x105

Version with CONCENTRATED recuperator - Driver/LED SELV - ON/OFF electronic wiring 230V-50/60Hz

A5104	Kit LED i3F 76, A3F 91, A3F 93-L1565-2X22W CONC	49	7525	4000	>80	1565x235x135
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High output version with WIDE lenses - ON/OFF electronic wiring 230V-50/60Hz

A5210	Kit LED i3F 76, A3F 91 - L1565 - L 2x40W AMPIO	84	11860	4000	>80	1565x235x105
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High output version with CONCENTRATED lenses - ON/OFF electronic wiring 230V-50/60Hz

A5212	Kit LED i3F 76, A3F 91 - L1565 - L 2x40W CONC	84	11959	4000	>80	1565x235x105
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Retrofit Beta A3F - i3F | Accessories



Moulded anti-glare glass for retrofit LED kits, non-combustible, tempered, mounted and locked by a galvanised steel mono-block perimetrical frame with a sealing gasket. For installations prior to 2010, the hinge opening is lost. On request: versions with stainless steel frame for Beta 2x A3F91 - A3F93.

Code	Item
A5184	Moulded glass Beta 2x i3F 76 - L1565
A5185	Moulded glass Beta 2x i3F 76 - L1265

960°C	10J	IK09
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ESTINTORE



MANIGLIONE
ANTIPANICO
apertura a spinta



Retrofit Beta 430

Construction characteristics

Illuminotechnical characteristics

Wide or concentrated direct distribution.
Lifetime (L93/B10): 30000 h. (tq+25°C)
Lifetime (L90/B10): 50000 h. (tq+25°C)
Lifetime (L85/B10): 80000 h. (tq+25°C)
Lifetime (L80/B10): 100000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Gear-tray unit in white pre-painted steel.
PMMA lenses with external flat surface.

Electrical characteristics

In compliance with EN 60598-1.
Compliance with the EN 60598-2-22 standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website.
Twin-circuit.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- wiring: CLO (more information on page 568), dimmable, different powers
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- emergency versions

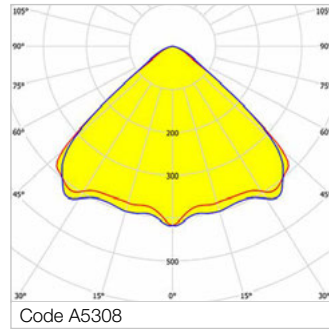
Installation

Correct installation of the Retrofit LED kit, compliant with EN 60598-1 and CE marked, must be only performed by qualified personnel to ensure compliance with the national installation standards.

Notes

Evaluate the use of moulded anti-glare glass according to the application.

Retrofit Kit to replace the 4x49W T5 Amalgam or the 4x58W T8 version



650°C

Wide or concentrated symmetric lighting distribution.
Transparent methacrylate lenses.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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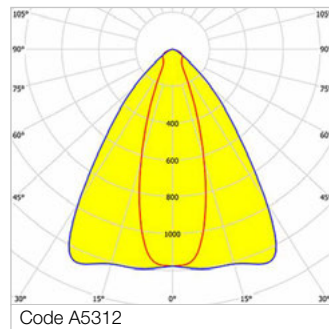
Version with WIDE lenses - ON/OFF electronic wiring 230V-50/60Hz

A5308	Kit LED Beta 430 - L1551 - 2X65W AMPIO	133	18872	4000	>80	1551x430x159
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Version with CONCENTRATED lenses - ON/OFF electronic wiring 230V-50/60Hz

A5309	Kit LED Beta 430 - L1551 - 2X65W CONC	133	18431	4000	>80	1551x430x159
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Retrofit Kit to replace the 4x80W - 6x49W T5 Amalgam version



650°C

Wide or concentrated symmetric lighting distribution.
Transparent methacrylate lenses.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

Version with WIDE lenses - ON/OFF electronic wiring 230V-50/60Hz

A5311	Kit LED Beta 430 - L1551 - 3X65W AMPIO	200	27804	4000	>80	1551x430x159
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Version with CONCENTRATED lenses - ON/OFF electronic wiring 230V-50/60Hz

A5312	Kit LED Beta 430 - L1551 - 3X65W CONC	200	27300	4000	>80	1551x430x159
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Waterproof and corrosion-proof

Retrofit Beta 430 | Accessories

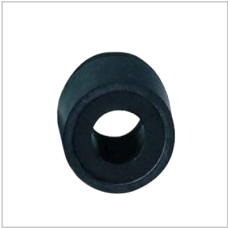


Moulded anti-glare glass for retrofit LED kits, non-combustible, tempered, mounted and locked by a galvanised steel mono-block perimetrical frame with a sealing gasket. For installations prior to 2010, the hinge opening is lost.

Code	Item
A5322	Moulded glass with frame Beta 430-L1551

5J

IK08



Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm





3F Cub LED

Construction characteristics

Illuminotechnical characteristics

Wide symmetric distribution.

Lifetime (L90/B10): 30000 h. (tq+25°C)

Lifetime (L85/B10): 50000 h. (tq+25°C)

Lifetime (L80/B20): 80000 h. (tq+25°C)

Lifetime (L70/B20): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Housing with double casing in pressed aluminium, powder-coated in white epoxy-polyester, hinged opening. Quick connection in polycarbonate M20x1.5 cable gland for access to the terminal block.

Ecologic anti-aging injected sealing gaskets.

Stainless steel clips.

Total flow recuperator in specular aluminium, with superficial titanium-magnesium treatment, non-iridescent. Fixing bracket.

Electrical characteristics

In compliance with EN 60598-1.

Compliance with the EN 60598-2-22

standard for power supply from a centralised CPSS emergency system must be verified in the technical data sheets of each individual device on our website. Quick connection.

Source characteristics

- Linear LED modules.
- Colour initial tolerance (MacAdam): SDCM 3.

On request

- different colour rendering indices and colour temperatures
- concentrated distribution
- laminated glass
- wiring: single-circuit, CLO (more information on page 568)
- linear LED modules, with special protection against aggressive chemically-volatile substances, for standard LED technology
- double quick connection
- HACCP versions for use in the food industry
- emergency versions

Applications

100W version

Ambient temperature from -20°C to +45°C.

150W version

Ambient temperature from -20°C to +40°C.

Environments: commercial, industrial, sports, stores, sports halls, gymnasiums. Environments in which it is necessary a total protection against falling fragments (eg environments with foodstuffs or machines with moving parts or with extreme temperature changes), use

luminaires with laminated glass.

Tempered glass is not immune to falling fragments from harmless and caused by shocks or exceptionally derived from the tempering process.

SP version

Luminaires suitable, from a hygienic point of view, for use in production plants in the food industry (HACCP / IFS / BRC-Standard).

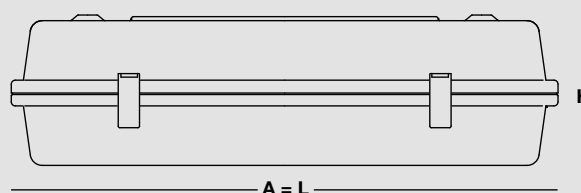
Installation

Suspension mounted on a bus bar or with a chain attached to the ceiling. For brackets see accessories on page 508.

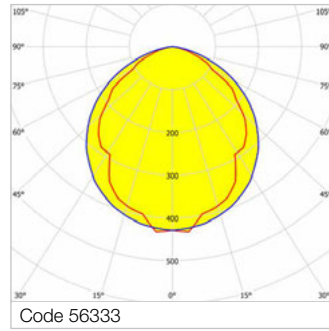
Light Management

The DALI products of this family can be controlled manually with the technology 3F Easy Dim or even automatically and manually using the 3F Smart Dimming technology (see "Light Management" chapter).

Dimensions



3F Cub LED VT



960°C

IP64

20J

IK10

Transparent glass VT tempered, non-combustible.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

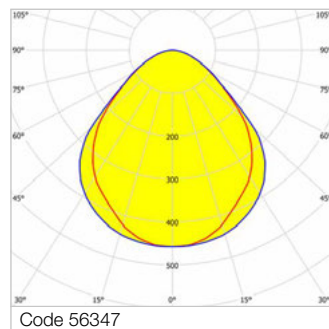
ON/OFF electronic wiring 230V-50/60Hz, twin-circuit

56330	3F CUB LED 100W CR VT	110	14957	4000	>80	680x680x187
56333	3F CUB LED 150W CR VT	163	22234	4000	>80	680x680x187

DALI electronic wiring 230V-50/60Hz

56332	3F CUB LED 100W DALI CR VT	110	14957	4000	>80	680x680x187
56335	3F CUB LED 150W DALI CR VT	163	22234	4000	>80	680x680x187

3F Cub LED SP



650°C

IP64

5J

IK08

SP transparent methacrylate diffuser, prismatic outside, antiglare.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	----------------------

ON/OFF electronic wiring 230V-50/60Hz, twin-circuit

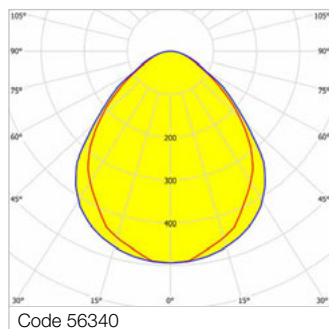
56344	3F CUB LED 100W CR SP	110	14098	4000	>80	680x680x187
56347	3F CUB LED 150W CR SP	163	20844	4000	>80	680x680x187

DALI electronic wiring 230V-50/60Hz

56346	3F CUB LED 100W DALI CR SP	110	14098	4000	>80	680x680x187
56349	3F CUB LED 150W DALI CR SP	163	20844	4000	>80	680x680x187

Waterproof and corrosion-proof

3F Cub LED VS



VS moulded glass, anti-glare, tempered, non-combustible.

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz, twin-circuit

56337	3F CUB LED 100W CR VS	110	13762	4000	>80	680x680x187
56340	3F CUB LED 150W CR VS	163	20415	4000	>80	680x680x187

DALI electronic wiring 230V-50/60Hz

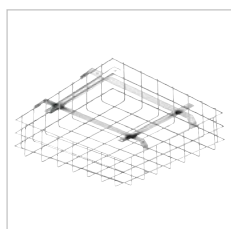
56339	3F CUB LED 100W DALI CR VS	110	13762	4000	>80	680x680x187
56342	3F CUB LED 150W DALI CR VS	163	20415	4000	>80	680x680x187

3F Cub | Accessories



Ceiling-mounted bracket in hot-galvanised steel.

Code	Item
A0213	Ceiling-mounted bracket



Wire-guard for indoor dry applications, with double fastening (wire-guard and luminaire), for shocks coming from any directions, not transmitting the shocks to the luminaire but to the ceiling; in galvanised steel rod Ø 5 mm. To install it, ceiling-mounted bracket code A0213 is always necessary.

Code	Item
A0210	Wireguard 3F Cub



Reducing sealing ring, dedicated to the use of cables with an external diameter of up to 8 mm.

Code	Item
A0521	Reducing sealing ring diam.8mm



3F Cub LED

Examples of design

Comparison to 400W JM reflector

Design data:

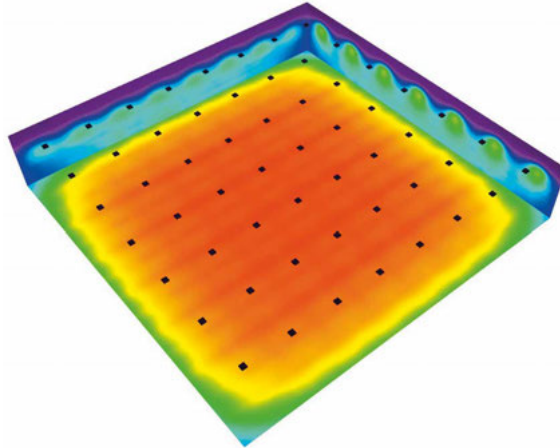
Room dimensions 50x50 metres
Room height 9 metres
Installation height 8 metres

Number of luminaires 56 luminaires
(6.3x7.1 metre grid)

Like-for-like replacement of light points

Reflection ceiling 30%
walls 30%
floor 10%

Work surface height 0.85 metres



	400W JM reflector	3F Cub LED 150W CR VT	Difference
Lighting values	345 lx	381 lx	+ 10%
Luminaire power	440 W	163 W	- 63%
Circuit type	Single circuit (100%)	Twin circuit (50% - 100%)	
Regulation of luminous flux and power?	No	Yes, depending on requirements	
Source life	8,000 hours	>50,000 hours	+42,000 hours

Comparison to 3F Cub R90 4x55 IP43

Design data:

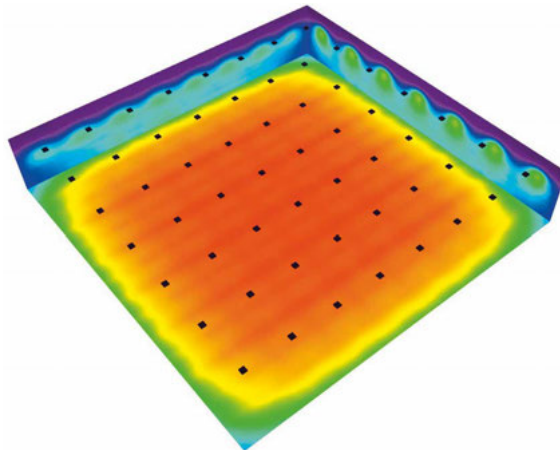
Room dimensions 50x50 metres
Room height 9 metres
Installation height 8 metres

Number of luminaires: 56 luminaires
(6.3x7.1 metre grid)

Like-for-like replacement of light points

Reflection ceiling 30%
walls 30%
floor 10%

Work surface height 0.85 metres

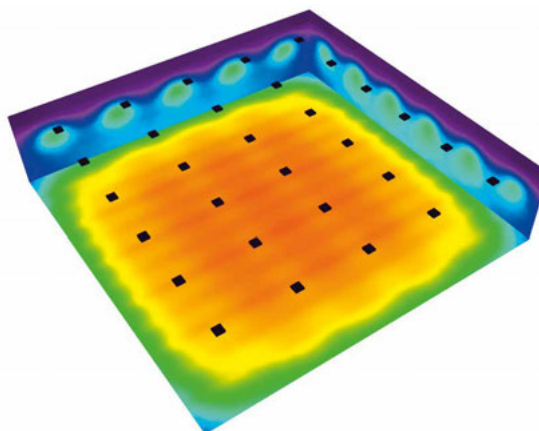


	3F Cub R90 4x55 IP43	3F Cub LED 150W CR VT	Difference
Lighting values	334 lx	381 lx	+ 14%
Luminaire power	240 W	163 W	- 32%
Circuit type	Twin circuit (50% - 100%)	Twin circuit (50% - 100%)	
Regulation of luminous flux and power?	Yes, depending on requirements	Yes, depending on requirements	
Source life	15,000 hours	>50,000 hours	+35,000 hours

Comparison to 3F Cub 4x55 VT IP64

Design data:

Room dimensions	30x30 metres
Room height	7 metres
Installation height	6 metres
Number of luminaires:	30 luminaires (6x5 metre grid)
Like-for-like replacement of light points	
Reflection	ceiling 30% walls 30% floor 10%
Work surface height	0.85 metres



	3F Cub 4x55 CR VT IP64	3F Cub LED 100W CR VT	Difference
Lighting values	334 lx	380 lx	+ 14%
Luminaire power	240 W	110 W	- 54%
Circuit type	Twin circuit (50% - 100%)	Twin circuit (50% - 100%)	
Regulation of luminous flux and power?	Yes, depending on requirements	Yes, depending on requirements	
Source life	15,000 hours	>50,000 hours	+35,000 hours

Why choose 3F Cub LED?



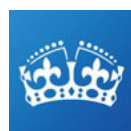
Never-ending light

3F Cub LED is equipped with new 3F LED technology whose sources specially developed for demanding applications guarantee an operating lifetime of over 50,000 hours, at the end of which at least 50% of the LED will still be providing 80% of their initial light output.



You won't believe your wallet!

- 3F LED technology allows you to save up to 60% compared to traditional sources.
- Existing luminaires can be replaced while maintaining the same light locations and wiring system, but reducing energy consumption.
- Reduced maintenance significantly lowers running costs.



Beauty which doesn't blind!

The 3F Cub LED diffuser attenuates or cancels out all glare and creates a truly enviable lighting uniformity (in relation to the installation height). Its clean, elegant lines make 3F Cub LED a luminaire which can fit in perfectly with any environment.



Eco-logical

- 3F Cub LED has been created according to the principles of Eco Design, and stands out for:
- Manufactured using energy from solar panels and assembled according to our "zero mileage" philosophy.
 - Limited use of different materials, facilitating assembly, installation and recycling.
 - Recyclable green packaging.



Significant reduction in maintenance costs

Longer life means less maintenance.
Less maintenance means greater savings.
Less maintenance means fewer problems.
Fewer problems means greater peace of mind.

3F Manta



3F 66



Outdoor

Page	Product	Wall	Bollard
516	3F Manta		
526	UPDATE 3F Manta	•	•
532	3F 66		
532	3F 66 LED	•	

Outdoor





3F Manta

> www.3F-Filippi.com/3F Manta

3F Manta was created to bring the outstanding lighting technology that our company has been offering for over 60 years inside production facilities, retail areas, and architectural spaces outdoors. Thanks to the intense activity in its research laboratories, 3F Filippi is launching its first lighting fixture for outdoor work areas, a cutting edge solution dedicated to lighting private areas where vehicles and pedestrians pass through such as parking lots, perimeter areas of production facilities, loading/unloading docks, and other areas that refer to regulation EN 12464-2 "Lighting of outdoor work areas". 3F Manta is the result of precise design covering every facet, from the mechanical elements to the use of cutting-edge technological components.

The sum of the individual details makes this fixture the ideal answer to the expectations of those who are looking for perfect, durable outdoor lighting.

+ Overview

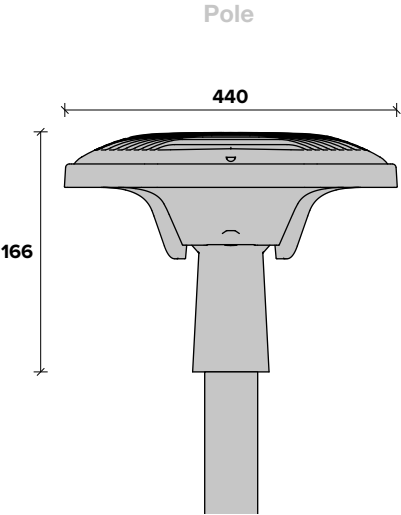
- Luminous efficacy up to 139 lumen/watt.
- Luminous fluxes from 6193 to 22451 lumens.
- Extensive installation pitch.
- 3 different photometric distributions.
- Available on request with integrated sensors.
- Quick and easy cleaning.
- Essential and functional design.
- LED sources with colour rendering: >70, >80.
- Class wiring: Class I, Class II.
- EcoDesign: power supplies and sources replaceable at the end of product life.
- Ease of assembly and maintenance.

Page	Product	Wall	Bollard
526	UPDATE 3F Manta	•	•

Product range

3F Manta

Pole
installation



3F HD
3F HD R
Direct Emission



Wide



Medium

Insulation classes

Class I | Class II

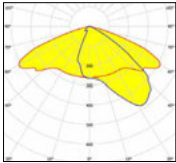
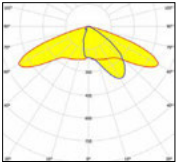
Protection class

IP66

Mechanical strength
to impact

IK08

Photometric
distribution

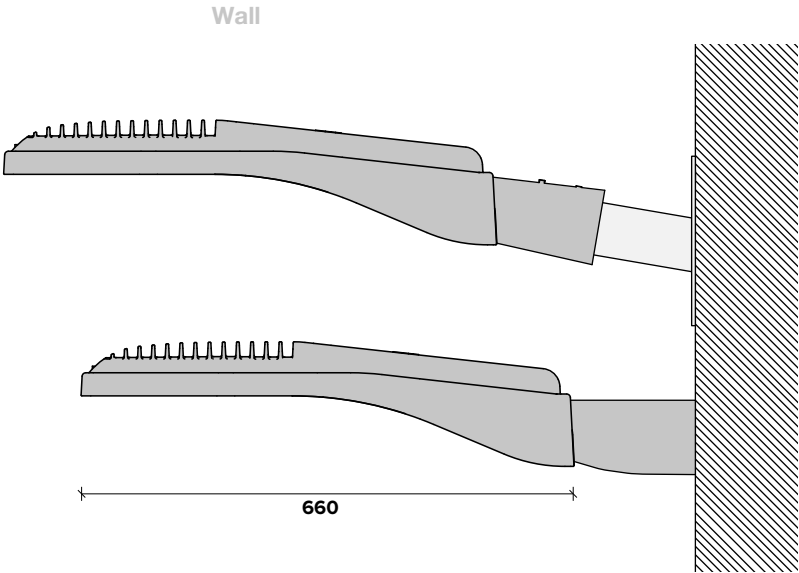


3F Manta

Wall
installation

(Acc. A01479)

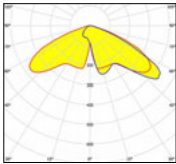
(Acc. A01480)



3F HD
Direct / Indirect
Emission



Front

Insulation classes	Class I Class II
Protection class	IP66
Mechanical strength to impact	IK08
Photometric distribution	

Outdoor

Precision optics

For 3F Manta we developed an ad hoc multifaceted optics, with total luminous flux recovery cells, entirely made of semi-specular high reflection aluminium with titanium and magnesium surface treatment, without iridescence and luminous contrasts.



The aluminium allows the optical performance to be maintained over time, even in the most severe weather conditions, unlike chrome elements.

The versatile and mechanically solid optical group is comprised of:

8 completely separate optical compartments for maximum flux recovery.

Versatile parabolic sides, with double optical focus, designed to provide different beam angles and optimise installation in different applications.

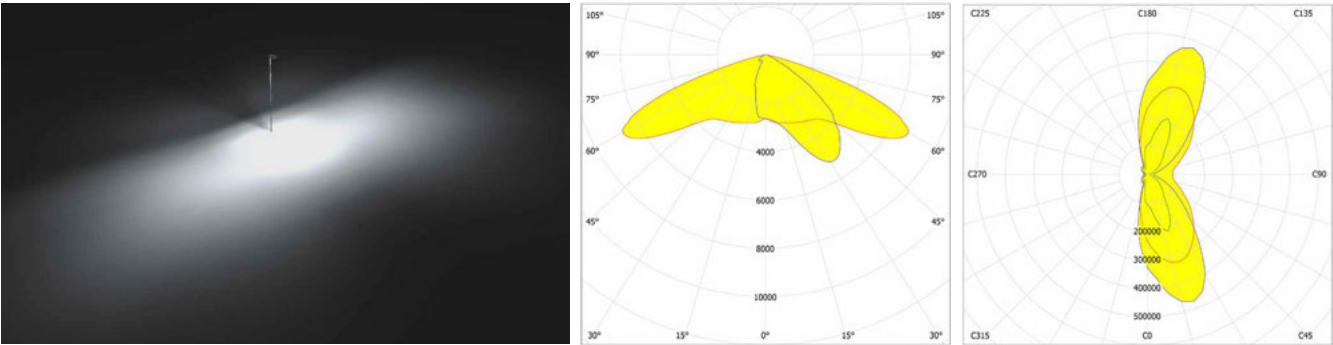
Specifically modelled blades to create the right optical shielding and optimise asymmetrical frontal distribution without flux dispersion on the back of the fixture.

In designing and creating 3F Manta, special attention was paid to the light distribution, which is perfectly controlled and guarantee the cancellation of light pollution (in compliance with current standards). The distributions, with three different optics, are designed for lighting large spaces, meeting the depth or width requirements.

WIDE

Asymmetric Optic Front 30° - Side 60°

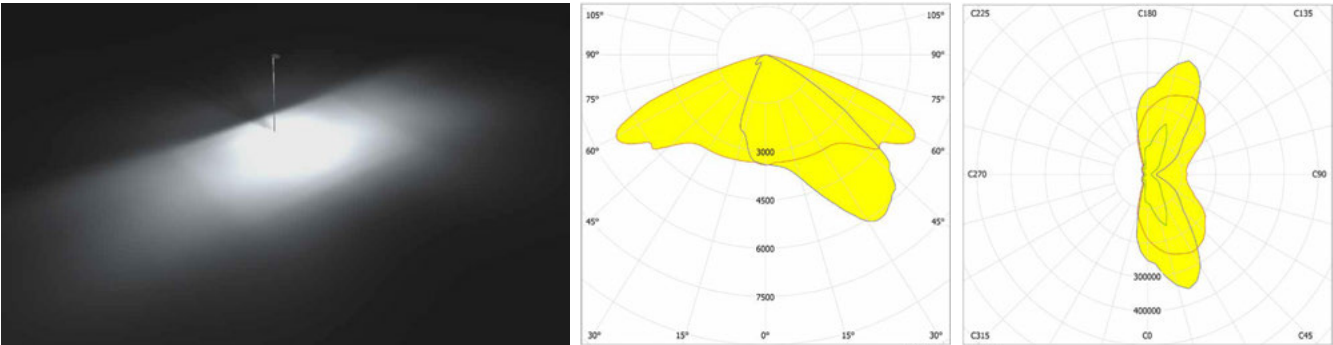
Asymmetric distribution with wide bilateral emission.



MEDIUM

Asymmetric Optic Front 40° - Side 60°

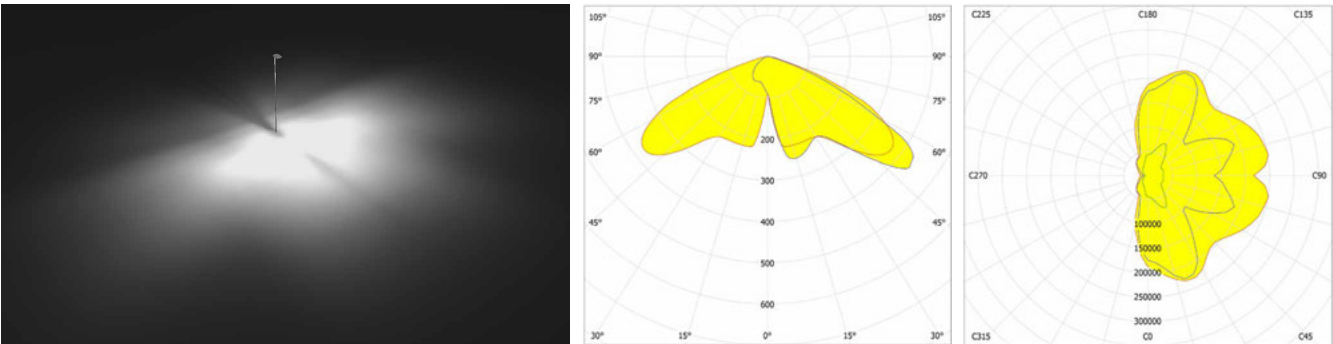
Asymmetric distribution with medium bilateral emission.



FRONT

Asymmetric Optic Front 50° - Side 50°

Asymmetric distribution with wide bilateral and front emission.



Design examples

Loading / unloading area

Wall installation

3F Manta 135/830 Wide

Installation height 8 m

Installation spacing 20 m

Average illumination at the ground 35 lux

Site perimeter

Pole installation

3F Manta 50/830 Front

Installation height 8 m

Installation spacing 20 m

Average illumination at the ground 10 lux

Perimeter road

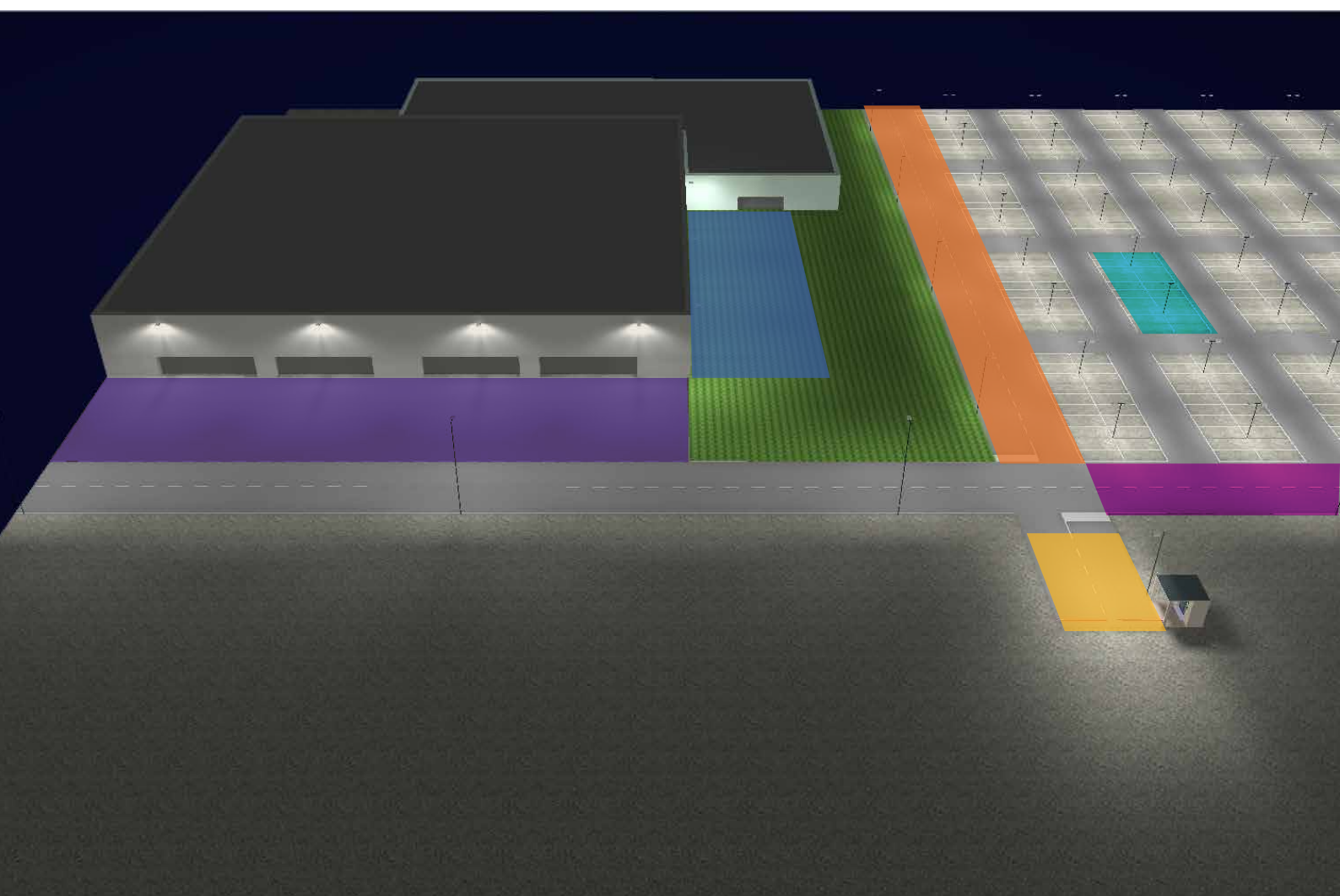
Pole installation

3F Manta 75/830 Wide

Installation height 8 m

Installation spacing 32 m

Average illumination at the ground 25 lux



Input

Pole installation

3F Manta 185/830 Medium

Installation height 8 m

Average illumination at the ground 50 lux

Roadway

Pole installation

3F Manta 100/830 Wide

Installation height 12 m

Installation spacing 48 m

Average illumination at the ground 20 lux

Parking Lot

Pole installation

3F Manta 50/830 Medium

Installation height 5 m

Installation spacing 15 m

Average illumination at the ground 65 lux



Product advantages

SAFETY AND RELIABILITY

3F Manta is made with top quality components to ensure excellent performance in every aspect. The cutting-edge technology also make 3F Manta a reliable technical solution that maintains its performance over time.

Since 1952 we have been working to facilitate the work of planners and installers, even through very strict tests that we perform in our CTFs Level 2 certified laboratories under the supervision of a recognised Third Party: 3F Manta followed strict internal protocols to minimise any faults over the longest possible period of time.



Stainless Steel hardware

They prevent oxidation over time and are also used inside the body, allowing easy access even in severe weather conditions.

Aluminium optics

They allow the photometric performance to remain constant over time.

Gasket in polyurethane

The watertight seal and IP66 protection rating are also guaranteed by the gaskets made of polyurethane, which is particularly resistant to weather and pollution.

Nema Socket - Ready (Zhaga Book 18)

The upper part of the fixture is made ready for the installation of devices created for the creation of Smart Lighting solutions (sensors, wireless antennas, video cameras, etc.).

SPD System

The SPD (Surge Protective Device) technology ensures adequate protection against atmospheric or electrical surges.

NTC System

The LED module is equipped with a thermistor to prevent exceeding the expected operating temperatures.

INSTALLATION AND MAINTENANCE

The 3F Filippi Team has designed and developed 3F Manta considering many technical and practical aspects. Among these, our technicians were very attentive to installation and maintenance of the fixture in order to facilitate the installers' work, allowing them to reduce work times and operate with maximum safety.

INSULATION CLASSES

3F Manta is available in two insulation Classes:

Class I - connection to the earth system is necessary and mandatory.

Class II - connection to the earth system is prohibited.

This version is simplified for installation in systems without the earthing system.

Practical and flexible installation

The wide 40° adjustment angle allows the luminaire to be tilted based on different needs, even after installation is complete.

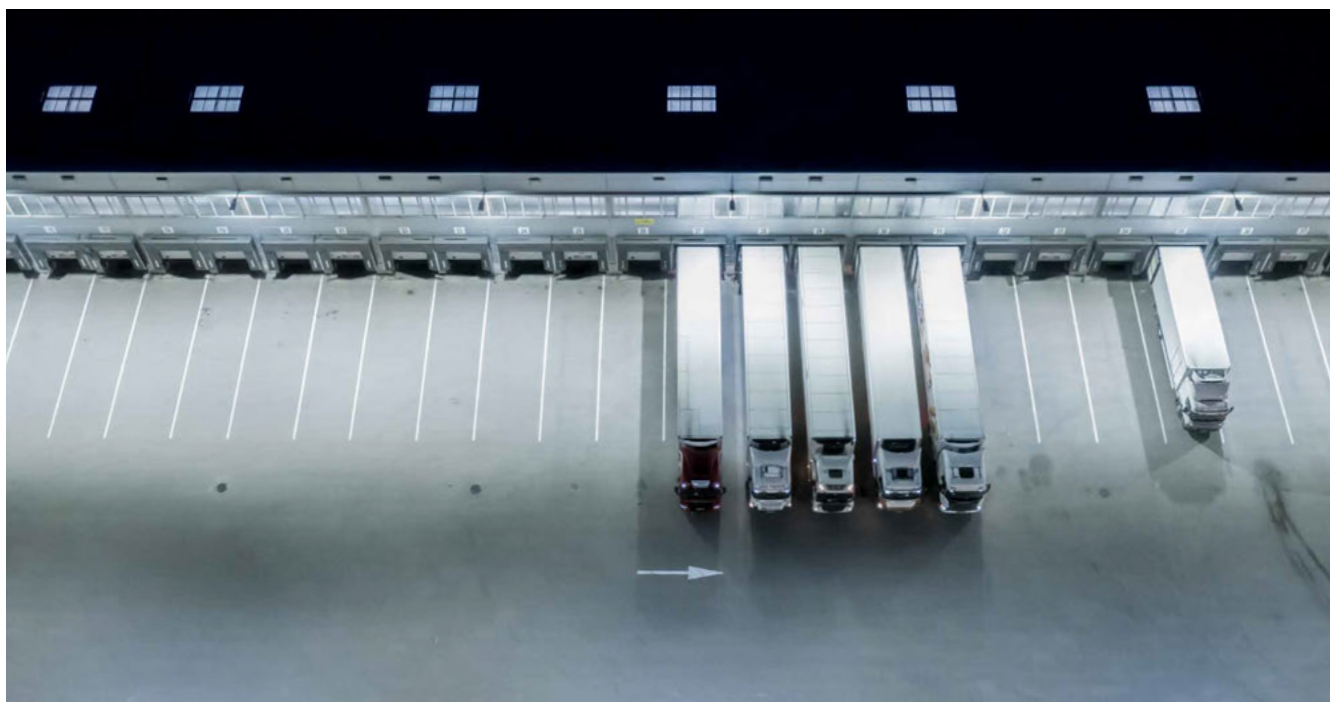


Safe and quick installation

The bayonet terminal block and the anticlosure block eliminate the risk of accidents when working on the luminaire.



Work well at night



During the design phase of 3F Manta fundamental factors to support work in external areas were taken into consideration:

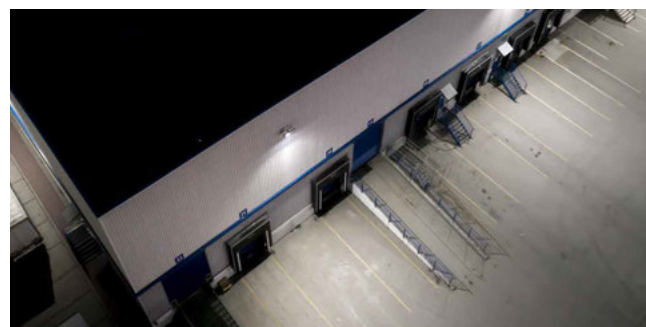
- correct perception of space and objects to identify possible dangers and workers working alone
- maximum light diffusion in work areas and attenuation of shadows and glare to reduce visual adaptation time when moving from lit to dark environments and vice versa
- compliance with regulations on limiting upward dispersion of luminous flux in Zone 1 (UNI 10819) and sources with temperatures of 3000K (to align ourselves with recommendations from main regional regulations)

For this reason we equipped our fixtures with the best LED sources available with different colour rendering indexes:



CRI 70 for:

- roads
- traffic areas
- open areas
- car parks



CRI 80 for:

- maintenance areas
- vehicle loading/unloading areas
- work areas with reading systems and where tools are used
- passenger passage areas
- fruit and vegetable markets
- port and airport areas

Virtual midnight

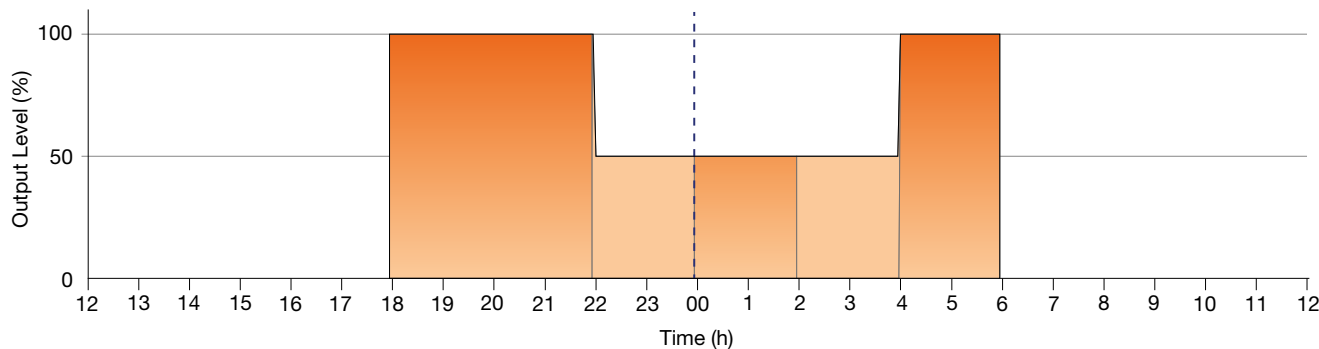
In order to further increase energy savings when lighting outdoor areas (and others), when the light does not need to be operating at full power, the “virtual midnight” system allows the creation of a stand-alone control of the fixtures without the need for an external control infrastructure or any change to the existing system.

It consists of activating a multi-level power reduction on the luminaire through a self-learning process that, based on previous times when switched on or off, determines the hypothetical “virtual midnight” between when it was switched on (sunset) and off (sunrise).

“Virtual midnight” is the reference point for applying the reduction of the output power according to the selected profile.

The default setting regulates it on two power levels: 100% and 50%.

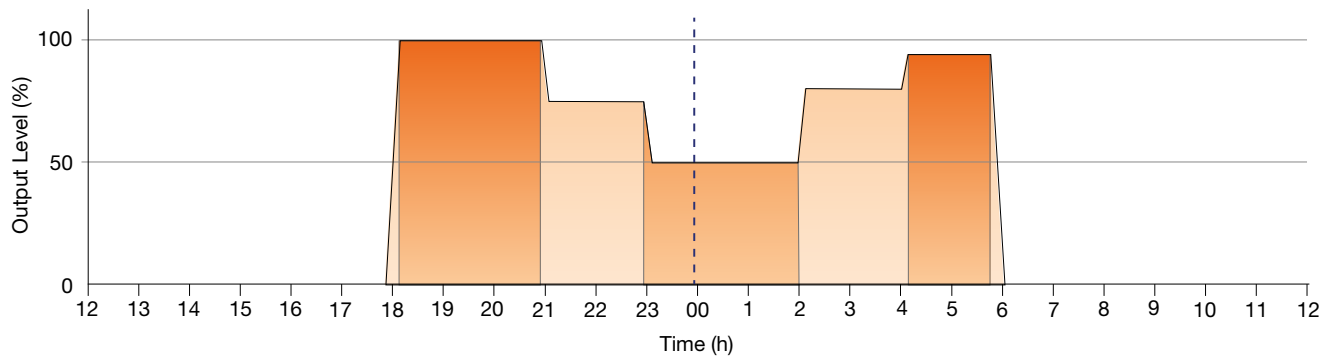
A microprocessor calculates the reduction time starting from “virtual midnight”. The default setting calls for 2 hours before and 4 hours after “virtual midnight” as follows:

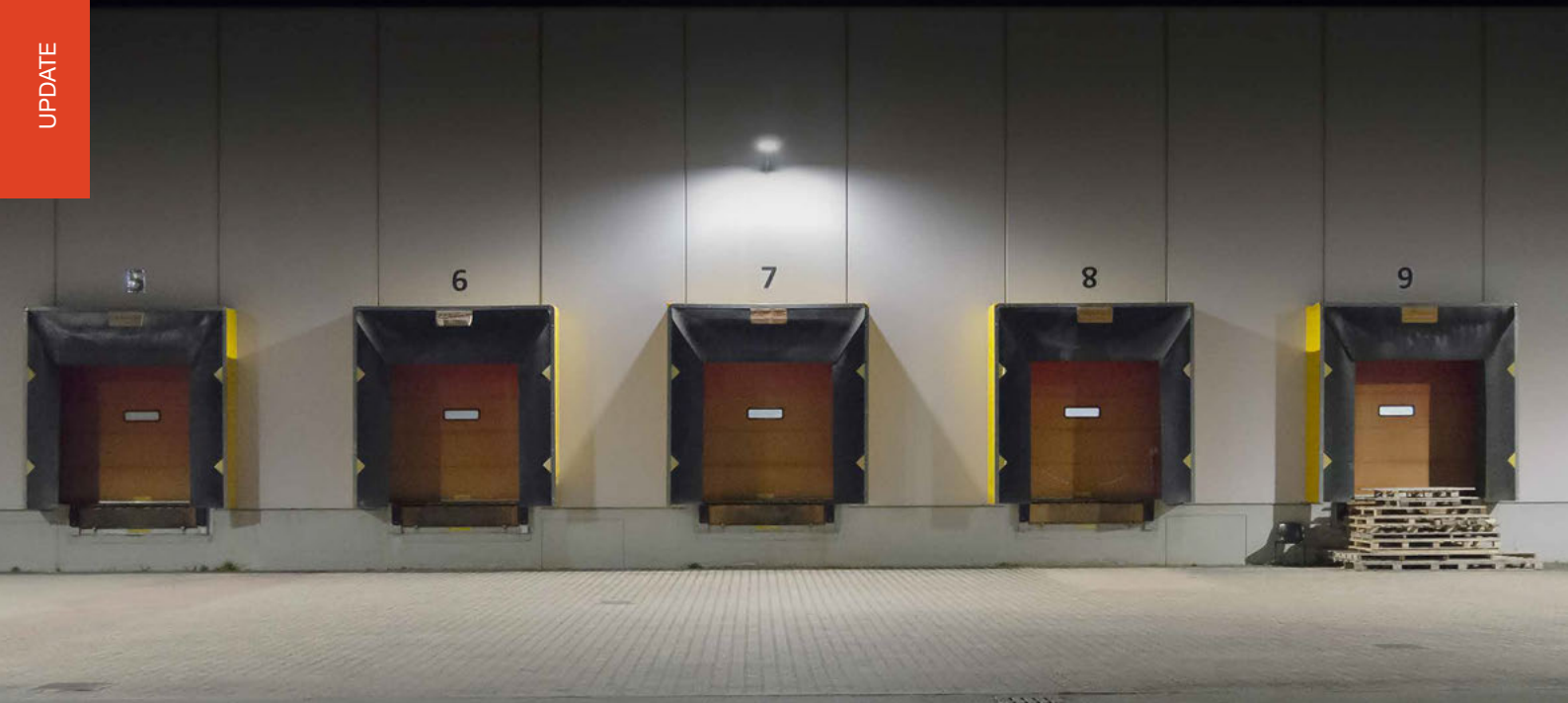


The system allows the implementation of customised adjustment profiles (optionals to be requested specifically during the order process), which allow even greater control flexibility. In fact, it is possible to:

1. Set the output levels in an interval between 10% and 100%, with 1% increases divided over 5 different time intervals.
2. Create the passage from one adjustment level to the next by means of a fade with a programmed duration.
3. Switch the light on and off through a fade. This function allows further energy savings during the twilight stages.
4. Activate an adjustments that also takes into account the sunrise and sunset in the location described by the geographic coordinates in order to further optimise the power reduction periods.

The graph below shows an example of a programming profiles that summarizes the possibilities described in points 1, 2, and 3.





3F Manta

Construction characteristics

Illuminotechnical characteristics

Asymmetric distribution with frontal, wide or medium bilateral.

No higher ULOR emission.

Lifetime (L93/B10): 30000 h. (tq+25°C)

Lifetime (L90/B10): 50000 h. (tq+25°C)

Lifetime (L85/B10): 80000 h. (tq+25°C)

Lifetime (L80/B10): 100000 h. (tq+25°C)

Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Aerodynamically-shaped die-cast aluminium double-shell body for low wind resistance, equipped with fins to optimize the cooling of the internal components.

Shell closure using stainless steel screws on stainless steel bushings, with hinged opening for easy access to the wiring compartment, equipped with system against accidental closure.

Polyester powder coating with degreasing pre-treatment and phosphate layer deposit on the metal, UV stabilised, corrosion resistant, anthracite colour, salt spray resistance ISO 9227 >1000 h.

Parabolic cellular optics with total recovery, entirely made of semi-specular high reflection aluminium with titanium and magnesium surface treatment, to maintain optical performance over time.

Polyurethane foam seals, ecological, anti-aging, installed using a continuous automatic process with no joints.

VT extra transparent tempered glass diffuser, 4 mm thick, non-combustible.

Stainless steel internal and external screws.

Electrical characteristics

In compliance with EN 60598-1, EN 60598-2-3.

Flicker: <10%.

Safety break switch to shut off the power supply when opening the device.

SPD type 2+3 (combined) device to protect against voltage surges up to 10 kV in common and differential mode.

Thermal protection of the LED module via NTC sensor (Negative Temperature Coefficient).

M20x1.5 IP68 nylon cable gland for feeding input (cables with an min-max diameter 6-13mm).

Pressure compensating valve with anti-condensation effect.

Source characteristics

- Squared LED module with special protection against aggressive chemically-volatile substances, for standard LED technology.
- Colour initial tolerance (MacAdam): SDCM 5.

On request

- different power levels, colour rendering indices and colour temperatures
- wiring: DALI, CLO (more information on page 568), D1-10V, Wireless
- Customised Virtual Midnight up to 5 independent intervals / levels
- watertight socket / plug connectors

Applications

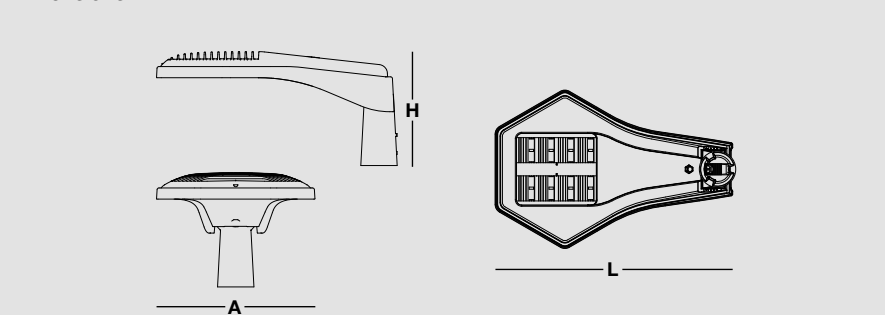
Ambient temperature from -30°C to +45°C. Outdoor environments, general lighting, work and roadway lighting, transit areas and building perimeters, parking lots, trade fairs.

Control of light pollution, in accordance with the legislative requirements in force.

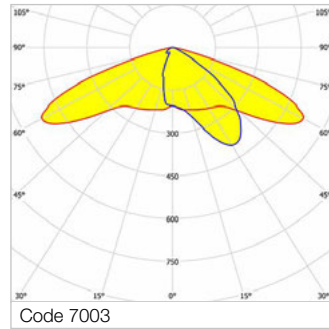
Installation

Pole or wall mounted using always necessary accessories (see on page 530).

Dimensions



3F Manta Wide



Asymmetric distribution with wide bilateral.

This model is available in two different Protection Classes against electric shock (more information on page 601).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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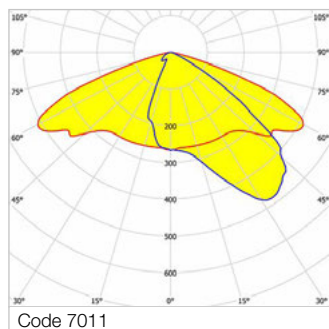
Class I - ON/OFF electronic wiring 230V-50/60Hz

7001	3F Manta AN 50/730 WIDE	52	6950	3000	>70	660x440x166
7002	3F Manta AN 75/730 WIDE	77	9717	3000	>70	660x440x166
7003	3F Manta AN 100/730 WIDE	101	13101	3000	>70	660x440x166
7004	3F Manta AN 135/730 WIDE	147	17458	3000	>70	660x440x166
7022 ^{NEW}	3F Manta AN 50/830 WIDE	52	6227	3000	>80	660x440x166
7023 ^{NEW}	3F Manta AN 75/830 WIDE	77	8707	3000	>80	660x440x166
7024 ^{NEW}	3F Manta AN 100/830 WIDE	101	11738	3000	>80	660x440x166
7025 ^{NEW}	3F Manta AN 135/830 WIDE	147	15642	3000	>80	660x440x166

Class II - ON/OFF electronic wiring 230V-50/60Hz

7026 ^{NEW}	3F Manta AN 50/730 II WIDE	52	6950	3000	>70	660x440x166
7027 ^{NEW}	3F Manta AN 75/730 II WIDE	77	9717	3000	>70	660x440x166
7028 ^{NEW}	3F Manta AN 100/730 II WIDE	101	13101	3000	>70	660x440x166
7029 ^{NEW}	3F Manta AN 135/730 II WIDE	147	17458	3000	>70	660x440x166
7030 ^{NEW}	3F Manta AN 50/830 II WIDE	52	6227	3000	>80	660x440x166
7031 ^{NEW}	3F Manta AN 75/830 II WIDE	77	8707	3000	>80	660x440x166
7032 ^{NEW}	3F Manta AN 100/830 II WIDE	101	11738	3000	>80	660x440x166
7033 ^{NEW}	3F Manta AN 135/830 II WIDE	147	15642	3000	>80	660x440x166

3F Manta Medium



Asymmetric distribution with medium bilateral.

This model is available in two different Protection Classes against electric shock (more information on page 601).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
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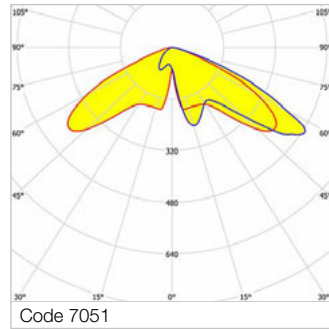
Class I - ON/OFF electronic wiring 230V-50/60Hz

7009	3F Manta AN 50/730 MEDIUM	52	6912	3000	>70	660x440x166
7010	3F Manta AN 75/730 MEDIUM	77	9663	3000	>70	660x440x166
7011	3F Manta AN 100/730 MEDIUM	101	13028	3000	>70	660x440x166
7012	3F Manta AN 135/730 MEDIUM	147	17360	3000	>70	660x440x166
7020	3F Manta AN 185/730 MEDIUM	195	22451	3000	>70	660x440x166
7035 ^{NEW}	3F Manta AN 50/830 MEDIUM	52	6193	3000	>80	660x440x166
7036 ^{NEW}	3F Manta AN 75/830 MEDIUM	77	8658	3000	>80	660x440x166
7037 ^{NEW}	3F Manta AN 100/830 MEDIUM	101	11673	3000	>80	660x440x166
7038 ^{NEW}	3F Manta AN 135/830 MEDIUM	147	15555	3000	>80	660x440x166
7039 ^{NEW}	3F Manta AN 185/830 MEDIUM	195	20116	3000	>80	660x440x166

Class II - ON/OFF electronic wiring 230V-50/60Hz

7040 ^{NEW}	3F Manta AN 50/730 II MEDIUM	52	6912	3000	>70	660x440x166
7041 ^{NEW}	3F Manta AN 75/730 II MEDIUM	77	9663	3000	>70	660x440x166
7042 ^{NEW}	3F Manta AN 100/730 II MEDIUM	101	13028	3000	>70	660x440x166
7043 ^{NEW}	3F Manta AN 135/730 II MEDIUM	147	17360	3000	>70	660x440x166
7044 ^{NEW}	3F Manta AN 185/730 II MEDIUM	195	22451	3000	>70	660x440x166
7045 ^{NEW}	3F Manta AN 50/830 II MEDIUM	52	6193	3000	>80	660x440x166
7046 ^{NEW}	3F Manta AN 75/830 II MEDIUM	77	8658	3000	>80	660x440x166
7047 ^{NEW}	3F Manta AN 100/830 II MEDIUM	101	11673	3000	>80	660x440x166
7048 ^{NEW}	3F Manta AN 135/830 II MEDIUM	147	15555	3000	>80	660x440x166
7049 ^{NEW}	3F Manta AN 185/830 II MEDIUM	195	20116	3000	>80	660x440x166

3F Manta Front



Asymmetric distribution with deep bilateral.

This model is available in two different Protection Classes against electric shock (more information on page 601).

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

Class I - ON/OFF electronic wiring 230V-50/60Hz

7051 ^{NEW}	3F Manta AN 50/730 FRONT	52	7242	3000	>70	660x440x166
7052 ^{NEW}	3F Manta AN 75/730 FRONT	77	10266	3000	>70	660x440x166
7053 ^{NEW}	3F Manta AN 100/730 FRONT	101	12830	3000	>70	660x440x166
7054 ^{NEW}	3F Manta AN 135/730 FRONT	147	15913	3000	>70	660x440x166
7055 ^{NEW}	3F Manta AN 50/830 FRONT	52	6474	3000	>80	660x440x166
7056 ^{NEW}	3F Manta AN 75/830 FRONT	77	9177	3000	>80	660x440x166
7057 ^{NEW}	3F Manta AN 100/830 FRONT	101	11969	3000	>80	660x440x166
7058 ^{NEW}	3F Manta AN 135/830 FRONT	147	14226	3000	>80	660x440x166

Class II - ON/OFF electronic wiring 230V-50/60Hz

7059 ^{NEW}	3F Manta AN 50/730 II FRONT	52	7242	3000	>70	660x440x166
7060 ^{NEW}	3F Manta AN 75/730 II FRONT	77	10266	3000	>70	660x440x166
7061 ^{NEW}	3F Manta AN 100/730 II FRONT	101	12830	3000	>70	660x440x166
7062 ^{NEW}	3F Manta AN 135/730 II FRONT	147	15913	3000	>70	660x440x166
7063 ^{NEW}	3F Manta AN 50/830 II FRONT	52	6474	3000	>80	660x440x166
7064 ^{NEW}	3F Manta AN 75/830 II FRONT	77	9177	3000	>80	660x440x166
7065 ^{NEW}	3F Manta AN 100/830 II FRONT	101	11969	3000	>80	660x440x166
7066 ^{NEW}	3F Manta AN 135/830 II FRONT	147	14226	3000	>80	660x440x166

3F Manta | Accessories



Pole mount in die-cast aluminium with the same paint treatment as the body (for Ø 60 mm and Ø 76 mm poles) equipped with special teeth for adjusting the inclination on the head of the device by $\pm 20^\circ$ with an adjustment pitch of 5° . Possibility of installing on vertical pole (pole head) and horizontal pole (arm). Mounting on the device using the supplied stainless steel screws on self-locking stainless steel nuts.

Code	Item
A0439	Pole mounting diameter 60mm
A0440	Pole mounting diameter 76mm

Not suitable for fixing on fibreglass pole.



Reducer in galvanised steel, suitable for poles with a diameter of 76 mm.

Code	Item
A0441 <small>NEW</small>	Reducer from 76 mm to 60 mm

To install this accessory, it is always necessary to use the pole connection code A0439.



Galvanised steel bracket for fixing on flat facades. 3 mm thick and 200 mm long arm. Powder coated polyester paint, anthracite colour. This bracket DOES NOT allow adjustment of the inclination of the product.

Code	Item
A01480	Fixed position wall bracket

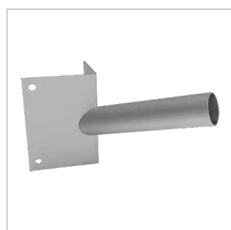
Options on request: painting in different RAL colour.



Galvanised steel bracket for fixing on flat facades. Arm length 250 mm, diameter 60 mm, inclination of 15° . This bracket allows adjustment of the inclination of the product.

Code	Item
A01479	Wall bracket 15° diam 60mm

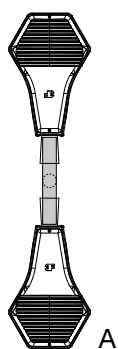
To install this accessory, it is always necessary to use the pole connection code A0439. Options on request: painting in RAL colours / 500 mm outreach / horizontal pole.



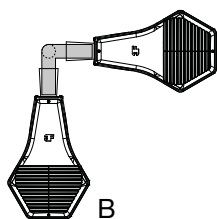
Galvanised steel bracket for fixing on the corner between facades. Arm length 250 mm, diameter 60 mm, inclination of 15° . This bracket allows adjustment of the inclination of the product.

Code	Item
A01481	Corner wall bracket 15° diam 60mm

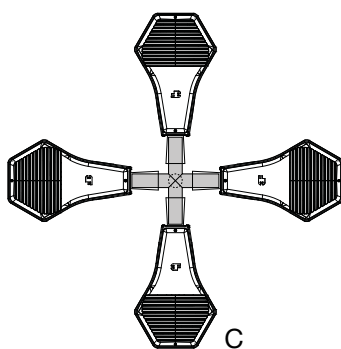
To install this accessory, it is always necessary to use the pole connection code A0439. Options on request: painting in RAL colours / 500 mm outreach / horizontal pole.



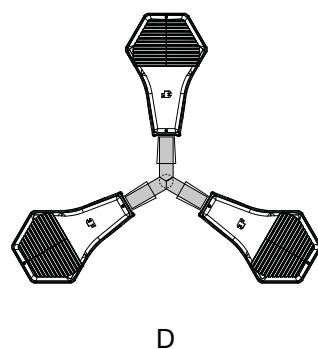
A



B



C



D

If you require more information, do not hesitate to contact our Sales Network or our Technical Offices.





3F 66 LED

Construction characteristics

Illuminotechnical characteristics

Downward bilateral distribution.
Lifetime (L75/B10): 30000 h. (tq+25°C)
Lifetime (L70/B10): 50000 h. (tq+25°C)
Photobiological safety in compliance with IEC/TR 62778: RG0 risk exempt, (IEC 62471) (further information on page 18).

Mechanical characteristics

Self-extinguishing V2 polycarbonate housing, injection moulded, RAL 7035 grey.
Flow recuperator in specular aluminium with superficial titanium-magnesium treatment, non-iridescent.
Transparent PMMA diffuser, injection moulded, with smooth outer surface and differentiated prismatic inner surface.
Sealing gaskets between housing and diffuser in ecological anti-aging EPDM.
Diffuser safety seal with 4 latches attaching it to the housing, in stainless steel.

Electrical characteristics

In compliance with EN 60598-1.
Double insulated cables.
Line entry at rear through rubber seal or at side after drilling.
Class II.

Source characteristics

- LED modules.
- Colour initial tolerance (MacAdam): SDCM 4.

On request

- LED sources with different colour temperatures
- different powers
- emergency versions

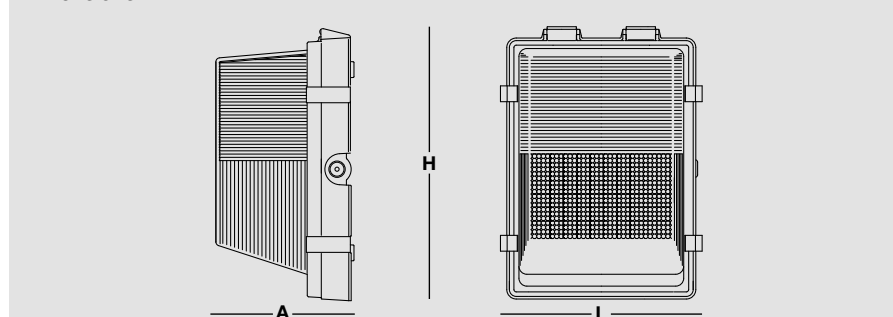
Applications

Wall mounting, particularly suitable for outdoor lighting of civil and industrial buildings, porticos, underpasses and walkways.

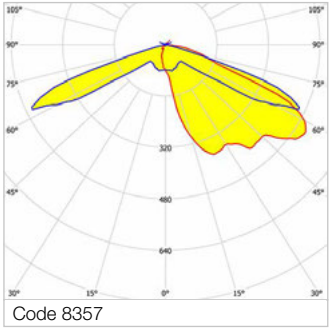
Downwards bilateral controlled distribution allows to optimise the perimeter lighting uniformity of buildings.

Control of light pollution, in accordance with the legislative requirements in force.

Dimensions



3F 66 LED



Driver/LED
SELV

Code	Item	Absorbed power (W)	Output flux (lm)	CCT (K)	CRI	Dimensions L x A x H
------	------	--------------------	------------------	---------	-----	-------------------------

ON/OFF electronic wiring 230V-50/60Hz, fuse

8357	3F 66 1 LED 6 II	9	689	4000	>80	255x176x344
8358	3F 66 2 LED 12 II	15	1361	4000	>80	255x176x344

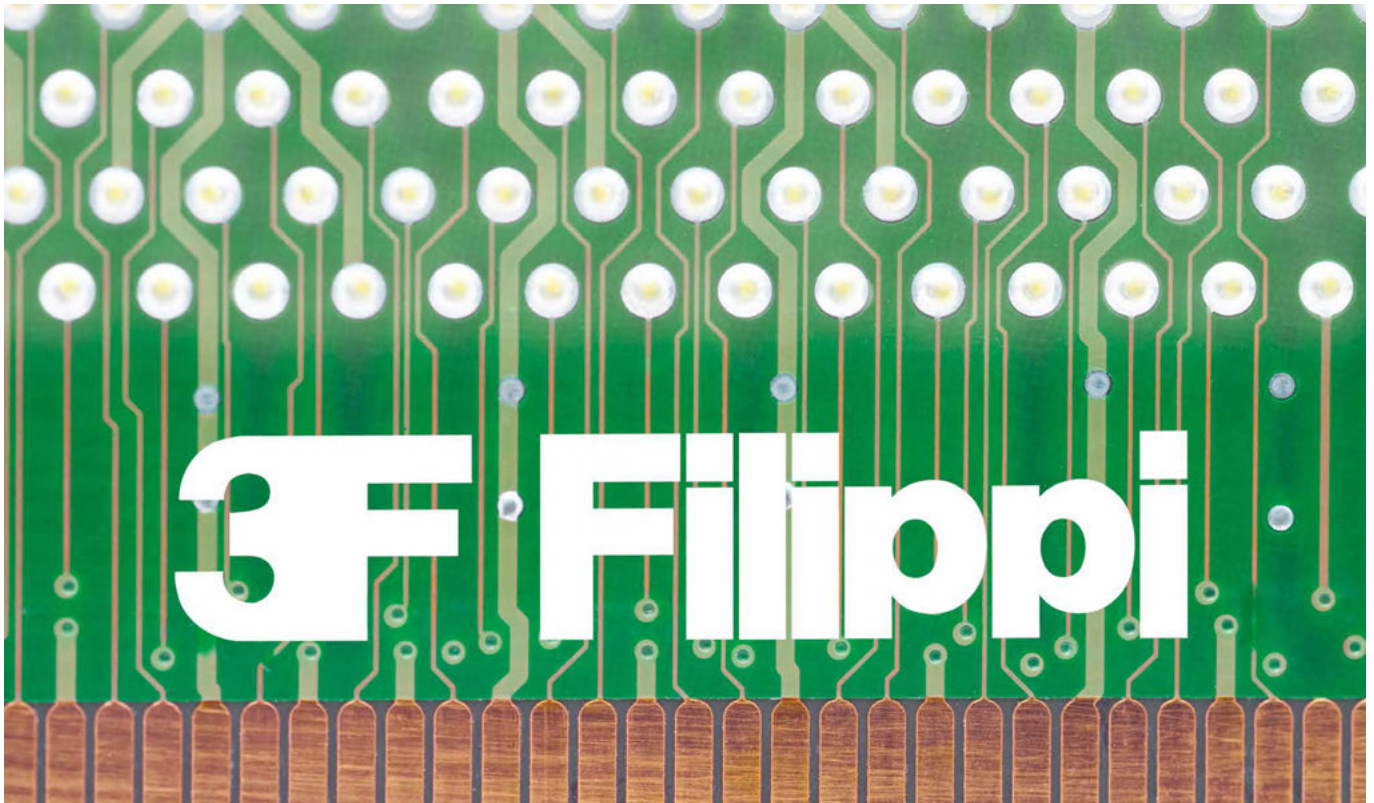
Outdoor

Light Management

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542	Overview 3F Sensor / 3F Sensor CF / 3F Sensor Bluetooth / 3F DALI Sensor
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Light Management

Good for you, excellent for the environment



3F Filippi is always at the forefront of energy savings and improving the efficiency of systems: this is why we are constantly striving to create luminaires which are able to interact with environments and with the people who live and work there.

One of the most important aspects of managing workplaces is certainly the lighting: it is indeed proven that poor illumination is not only harmful to workers, but creates both direct (higher power consumption or waste) and indirect (worker illness, decreases in productivity, stress or even physical issues) economic problems.

Good lighting may often seem difficult to obtain, but in reality small measures can obtain big results. Here are three useful tips:

- **Let in the sun:** natural light improves quality of life and saves you money!
- **Use low-energy sources:** luminaires fitted with LED sources are the best weapons in cutting costs, especially when they are optimised like those manufactured by 3F Filippi.
- **Use luminaires with luminous fluxes which can be regulated according to requirements:** dimming the luminaires lets you lower electricity consumption by up to 80%, at the same time creating a more pleasant and functional working environment.

Systems which are able to regulate the artificial lighting on the basis of the available natural light can be created, using only the power required to maintain an appropriate level of lighting in the environment, allowing you to save up to 80% on electricity bills. After performing analyses alongside lighting designers, we noticed that adopting control systems which can regulate lighting on the basis of the available natural light provides wide margins for improving the energy efficiency of systems, particularly during the summer months.

Adopting systems such as KNX - which can also be used throughout the building for automating all types of systems (HVAC, lighting, opening, blinds etc.) - combined with measurement of the natural light level provides excellent results, in part due to intelligent positioning of light measurement sensors in relation to the position of the workplace and geographical orientation.

3F Filippi offers light regulation systems to help you save energy and protect the environment: from manual regulation systems to luminaires able to turn on and off thanks to integrated brightness and presence sensors, energy management systems linked to building automation, right through to components which help you to create made-to-measure lighting installations with ease.

3F Filippi is at your side to offer you the best solutions both for your environment and your workers.

3F Smart Lighting

3F Easy Dim

Manual regulation systems which allow you to adjust the luminous flux of the luminaires.

3F Sensor

Luminaires with integrated ON-OFF radar movement sensor

3F Sensor Bluetooth

Fixtures with DALI-BLE motion radar sensors to turn on and regulate groups of fixtures

3F CLO

Automatic regulation system which compensates for the decline in luminous flux, providing a constant level of lighting over time

3F Wireless

A 868MHz wireless control and regulation system that allows for communication between light fixtures and sensors

3F Smart Dimming

Stand-alone sensors for ON/OFF control and regulation (DALI versions only) of groups of luminaires

3F DALI Sensor

DALI luminaires with integrated DALI sensor for automatic regulation and on/off control of the luminous flux on the basis of the natural light

3F HCL for TW fixtures

TW Tunable White fixtures for manual or automatic variation (with HCL systems) of colour temperature

3F & KNX

Luminaires equipped with DALI driver able to interface with KNX systems for automated remote management of the technological systems of a building

3F Bluetooth

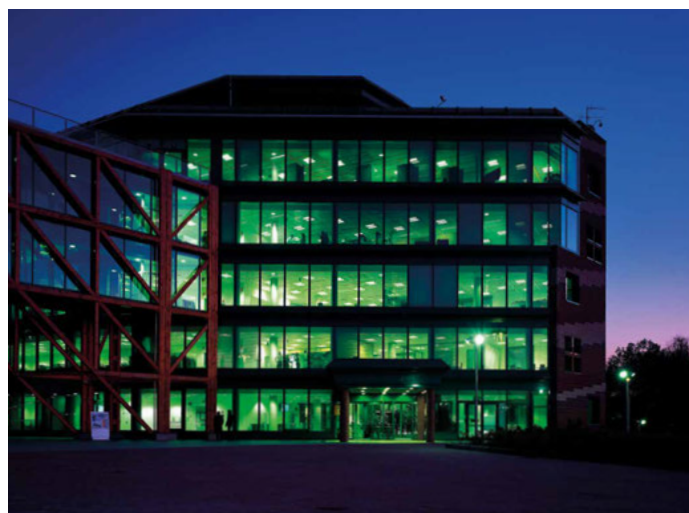
Bluetooth adjustment and control system, allows communication between lighting devices and management via APP

These lighting management systems comply with UNI EN 15232 "Energy performance of buildings. Impact of Building Automation, Controls and Building Management" which introduces four energy efficiency categories for the control functions of building technical systems.

Introducing **3F Smart Lighting** control and light management systems - even in systems already equipped with high-efficiency light sources - can provide significant further energy efficiency improvements.

A great advantage of automated systems, like **3F Sensor**, **3F DALI Sensor** and **3F Smart Dimming**, is that regulation is completely automatic, without any requirement for operators to intervene, ensuring that the systems is constantly adapting itself to the required conditions.

3F Filippi lighting and Smart Buildings



Both for new builds and for existing systems, the costs of implementing these solutions are more than offset by simplification of the electrical wiring and corresponding installation: this reduction in conductors, conduits, power and control switchboards means that the time required to see a return on investment is drastically reduced.

Our sales and technical offices are at your disposal to support you in choosing the best solutions available; these can also be customised to the application you require.

3F Easy Dim

Savings in your hands



Characteristics

3F Easy Dim technology lets you regulate luminous flux in an easy, low-cost and customisable manner. In terms of the system, it is composed of a commercially available push-button (up to 6 ballasts) and a DALI repeater (to manage up to 64 ballasts). This mode allows you to perform the following functions:

- Turning the luminaire **ON/OFF**.
- **Manual regulation of the luminaire's luminous flux** on the basis of specific requirements.

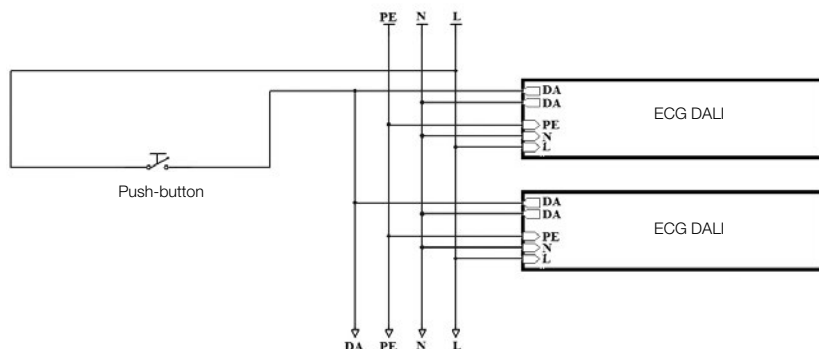
Advantages

The advantage of this technology is that it gives the user the possibility to customise the quantity of light present in the environment depending on taste and requirements, while using genuinely low-cost components. The control provided is manual, and as such savings will depend on how it is managed.

Savings

- **Installation phase:** up to 6 ballasts with PUSH DIM function, controlled via a commercially available push-button (environments without interference). Between 7 and 64 ballasts requires a DALI repeater.
- **Use:** if the luminous flux output is below 100%, power consumption of the luminaire is significantly reduced.

Up to 6 ballasts



N.b.: in environments where there is signal interference present, and with dimmer wire lengths of over 20 metres, the installation of a DALI repeater is advisable.

Results obtainable

- **Manually turning the luminaire ON/OFF.**
- **Manual regulation of the luminaire's luminous flux** on the basis of user requirements.

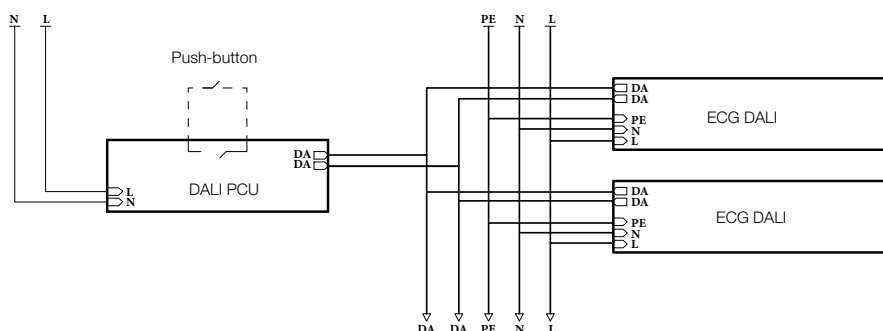
Compatible luminaires

Any luminaire from the 3F Filippi range, as long as it is equipped with DALI PUSH DIM ballast.

Components required

- 1 commercial push-button.

Up to 25 ballasts



Results obtainable

- **Manually turning the luminaire ON/OFF.**
- **Manual regulation of the luminaire's luminous flux** on the basis of user requirements.

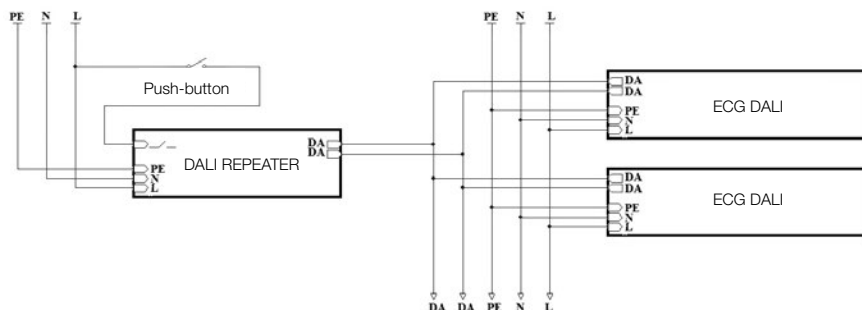
Compatible luminaires

Any luminaire from the 3F Filippi range, as long as it is equipped with DALI ballast.

Components required

- 1 commercial push-button.
- 1 DALI PCU fixture for each button (button cable length 15 cm – max 100 cm).

Up to 64 ballasts



Results obtainable

- **Manually turning the luminaire ON/OFF.**
- **Manual regulation of the luminaire's luminous flux** on the basis of user requirements.

Compatible luminaires

Any luminaire from the 3F Filippi range, as long as it is equipped with DALI ballast.

Components required

- 1 commercial push-button.
- 1 DALI repeater.

3F Easy Dim | Accessories



Signal Repeater for expansion of DALI systems (64 drivers - 300 metres of line), size 189x30x21 mm, integrated installation into the device or into the Box (cod. A3010).

Code	Item
A3008	DALI ext - Repeater



IP20



Signal Repeater for expansion of DALI systems (64 drivers - 300 metres of line), size 96x72x62 mm, DIN rail mounting.

Code	Item
A3009	DALI DIN - Repeater

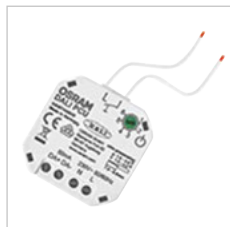


IP20



Box mounted housing DALI Repeater ext (cod. A3008), size 261x71x27 mm.

Code	Item
A3010	DALI - Box for repeater



DALI control panel for recessed installation, dimensions 48x49x22 mm, allows to regulate the flow power on/off of a up to a maximum of 25 DALI drivers (max 300 m in a line) with just one commercial button (normally open).

Code	Item
A3007	DALI PCU - push button interface



IP20



3F Sensor

A small revolution bringing you big advantages

Available luminaires

3F Petra LED Sensor - 3F Linda Sensor
L 320 LED Sensor CF - 3F Linda LED Sensor CF

Characteristics

Sensor technology allows you to make savings and manage your lighting systems in an easy, low-cost and customisable manner without investing significant capital in costly systems.

What we have done is extremely simple: we have incorporated an ON/OFF high-frequency (HF) 5.8GHz radar movement sensor inside the luminaire.

Advantages

The advantages of this technology create significant savings for the end customer:

- **Time savings during installation:** integrating these functions inside the luminaire means it is no longer necessary to install a network of sensors (and corresponding wiring) and connect it to the luminaires.
- **Cost savings:** you save money on installation time, electrical supplies and system calibration time.
- **Ease of installation:** it is no longer necessary to create or modify electrical systems. Just connect the luminaires to the mains
- **Customisation of brightness levels:** each luminaire "works" independently from the others, allowing you to create "made to measure" lighting.

Products equipped with 3F Sensor technology are individual, independent luminaires which cannot be connected together.

Savings

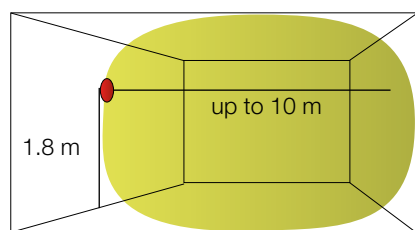
In practical terms, the advantages are real and tangible in these aspects for the end customer:

- **Installation:** to create a network of luminaires, it is no longer necessary to connect them physically; this means you no longer have to spend extra for wiring supplies and installation time.
- **Independence and precision:** Each luminaire is independent; this means that lights turn on in an increasingly localised and precise manner, with corresponding electricity savings.
- **Simplicity:** dimming and presence sensors are integrated and already operational. All that is left for you to do is to connect the phase, neutral and earth wires: wasting time setting up and adjusting the system is a thing of the past!
- **Integration with existing installations:** the same lighting connections, using standard electrical wiring: this means not wasting money adapting the systems.

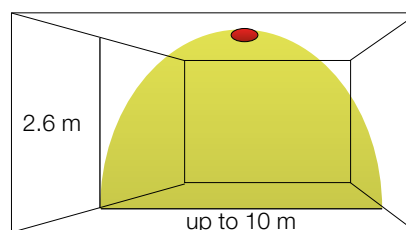
3F Sensor: saves you money even before the light is turned on.

Versions	Sensor	Corridor Sensor Function
Standard position (no movement)	Luminaire off	Kept on at 10% power
Automatic	Via ON/OFF high-frequency (HF) 5.8GHz radar movement sensor	
Mounting height	Wall installation at max 2.7 metres - Ceiling installation at max 4 metres	
Twilight function	Daylight / 300 lux / 150 lux / Twilight / Night / Programmable mode (default setting "daylight")	
On time	From 10 seconds to 30 minutes (default setting 900s)	
Sensitivity/detection field	20% - 30% - 50% - 75% - 100% (default setting 75%)	

Sensitivity



Luminaire wall installation



Installation Ceiling luminaires

RADAR technology goes beyond glass, wood and plasterboard, therefore for the correct functioning of the luminaire, the sensor detection field (see instruction sheet) must be adjusted according to the type of installation/room.

3F Sensor

Components required

- ON/OFF high-frequency (HF) 5.8GHz radar movement sensor incorporated in the luminaire.
- Luminaires with standard ON/OFF driver.

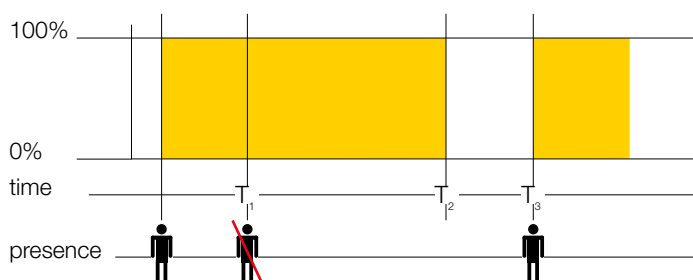
Results obtainable

- Luminaire switching on the basis of the chosen light level (deactivated by default, but can be modified to meet requirements) and movement of persons within the range of the sensor.
- Regulation of the luminaire's on time, on the basis of specific requirements.

Available luminaires

3F Petra LED Sensor, 3F Linda LED Sensor.

Operation graph



Legend:

- $T_1 \rightarrow T_2$ - latency time managed by the sensor - default 900s
- $T_2 \rightarrow T_3$ - period of zero luminous flux - unlimited time

3F Sensor CF

Components required

- ON/OFF high-frequency (HF) 5.8GHz radar movement sensor incorporated in the luminaire.
- Luminaires with DALI driver programmed with Corridor Function (CF).

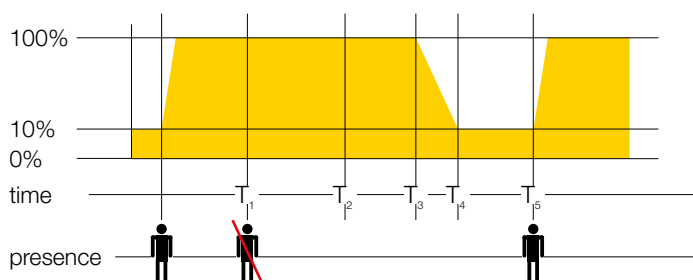
Results obtainable

- Two lighting levels (minimum 10% without movement and 100% with movement).
- The luminaire's luminous flux cannot be dimmed.

Available luminaires

L 320 LED Sensor CF, 3F Linda LED Sensor CF.

Operation graph



Legend:

- $T_1 \rightarrow T_2$ - latency time managed by the sensor - default 900s
- $T_2 \rightarrow T_3$ - latency time managed by the driver - 120 seconds
- $T_3 \rightarrow T_4$ - luminous flux decrease time - 32 seconds
- $T_4 \rightarrow T_5$ - period of minimum luminous flux - unlimited time

3F Bluetooth Sensor

Fixtures available

3F Linda Sensor DALI-BLE

Components

DALI-Bluetooth regulator with a high frequency radar motion detector (HF) 5.8GHz, integrated inside the fixture.
Smartphone or Tablet app to configure fixtures.

Obtainable result

The fixture switches on according to the brightness level chosen (default disabled but can be changed as needed) and the movement of people within the range of the sensor.

Preferred functions can be programmed using the APP.

It is also possible to set up a mesh network between DALI-BLE fixtures using Wireless Bluetooth communication.

The presence function can be excluded.

The corridor function can be set up with personalised times and levels.

Configure groups of fixtures (master-slave) without modifying the electrical system.

Characteristics

We have integrated a high frequency DALI radar motion detector (HF) 5.8GHz inside the fixture that operates Bluetooth with other DALI-BLE fixtures.

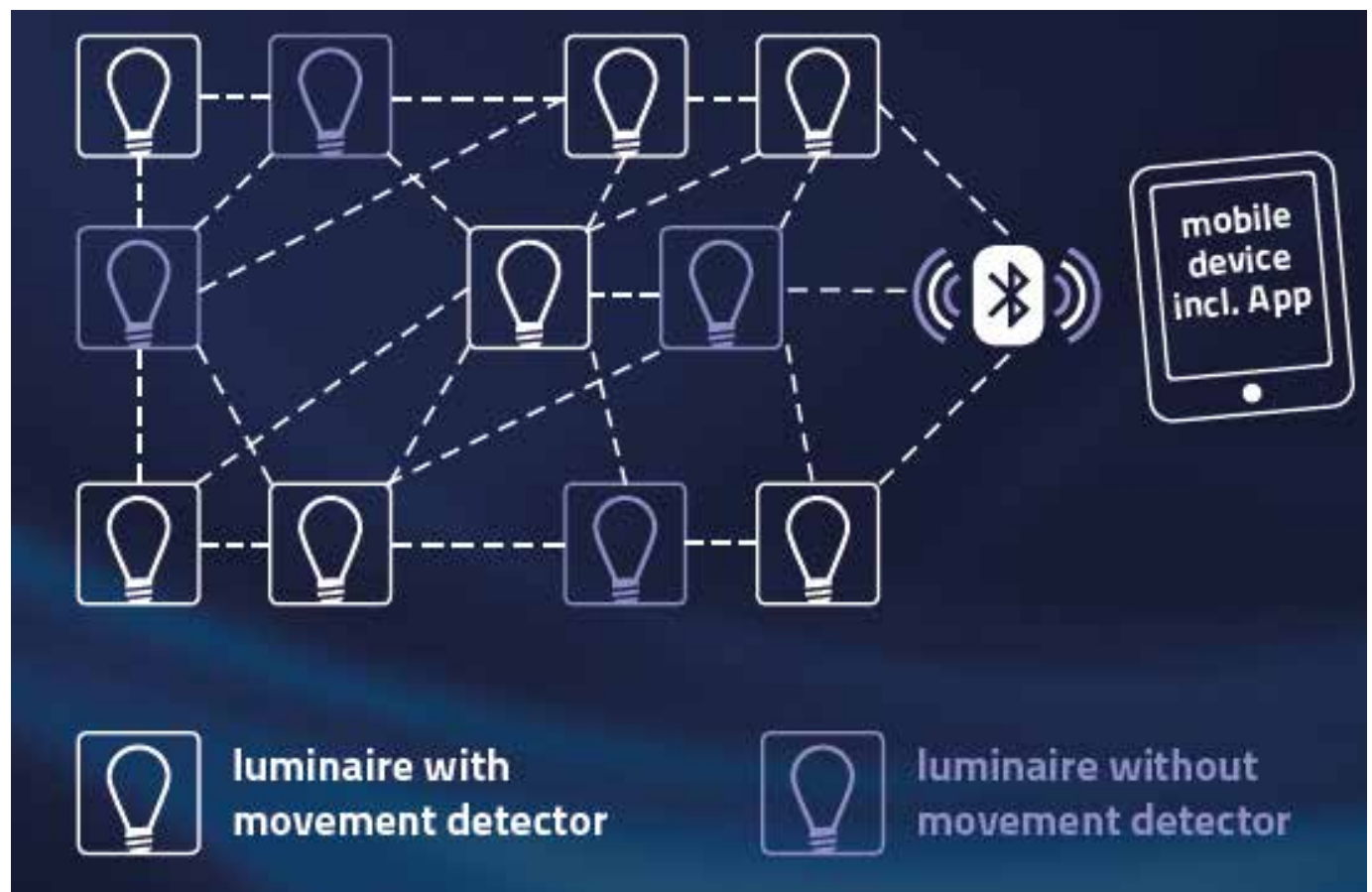
The onboard sensor makes it possible to regulate individual or groups of fixtures or profiles for a complete installation.

The distance between the fixtures can be up to 20 m for indoor installations. Fixtures with 3F Sensor Bluetooth technology can be managed in the following way:

Individually - every fixture turns on/off according to movement and adjusts according to programmed behaviour on the APP

Master-Slave configuration --- using the APP it is possible to create groups of fixtures to manage each area

RADAR technology goes beyond glass, wood and plasterboard; therefore for the correct functioning of the luminaire, the sensor detection field (see instruction sheet) must be adjusted according to the type of installation/room.



Advantages

It is not necessary to modify the existing electrical system, you just need to connect the fixtures to the power grid, saving on installation time.

3F Sensor DALI-BLE technology unlike 3F Sensor allows for:

Bluetooth communication between fixtures

the creation of groups of fixtures without any other physical connections different function profiles that can be easily programmed by the end user using an APP on a Tablet or Smartphone (available for iOS and Android) for example:

- Sensitivity 10 ... 100%
- Hold time 5 seconds ... 60 minutes
- Daylight sensor 1 Lux ... 500 Lux; ; teach in
- DIM level 0 ... 100 %
- Program Mode On / Off, Permanent, Corridor,
- Soft-DIM: active / inactive

3F DALI Sensor

Available luminaires

3F LEM LED DALI Sensor

Characteristics

Luminaires with 3F DALI Sensor technology are equipped with a DALI brightness and presence sensor which allows the luminous flux to be switched on/off and regulated automatically on the basis of the natural light (the presence detection function is deactivated by default. It can be activated by removing the jumper on the sensor's R-L terminals).

Luminaires with 3F DALI Sensor technology can be installed in the two following ways:

Individually - each luminaire switches on/off and regulates its flow independently with respect to the other luminaires, and it is therefore no longer necessary to create or modify existing electrical systems, only to connect the luminaires to the mains supply, thus reducing installation times.

Master - Slave configuration – each 3F DALI Sensor luminaire can be connected to other standard 3F dimmable DALI luminaires by following the method given in the application examples. In this case, switching on/off and regulation of the luminous flux will be managed in zones/groups of luminaires, saving on the number of sensors in the field.

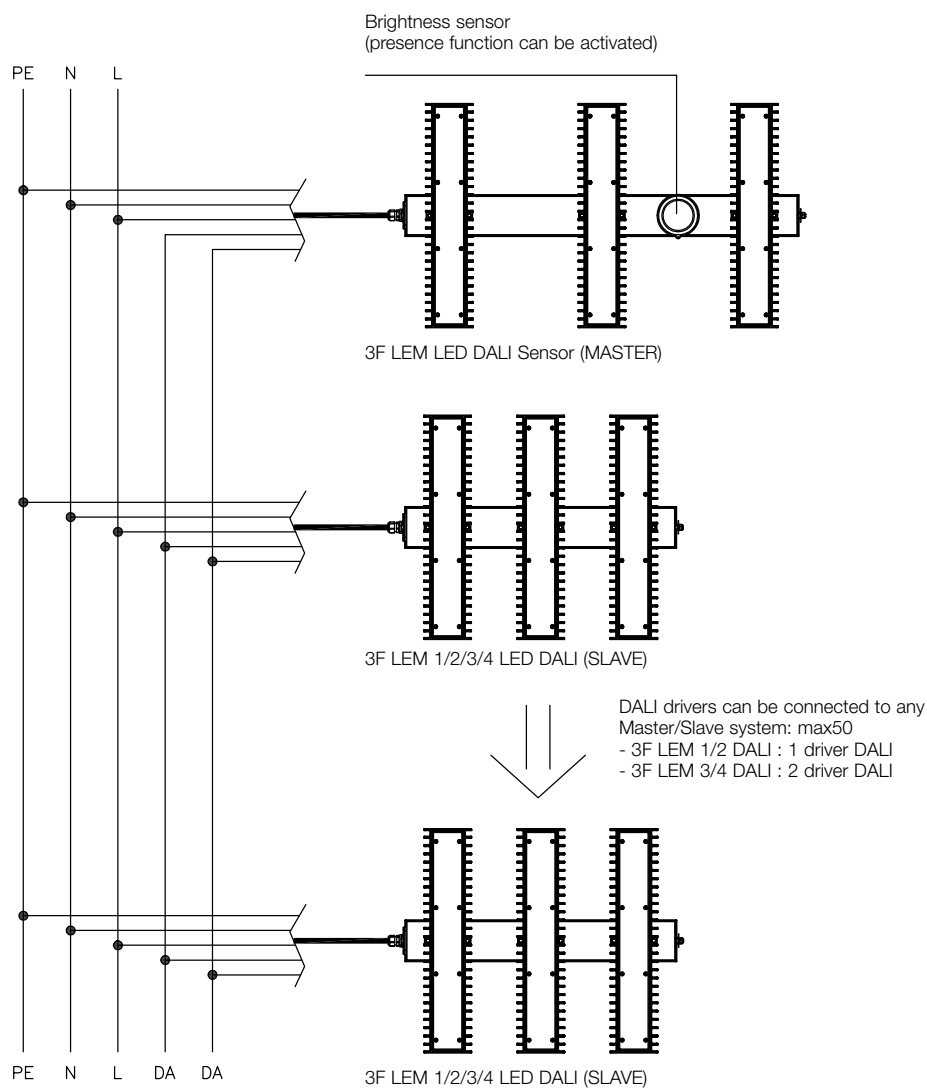
In both solutions, the initial programming of the sensor can be performed simply and conveniently with the use of the DALI IR programmer (code A3020).

For technical specifications and for further information, see the details in the **“3F Smart Dimming accessories”** chapter, or contact our technical department.



Typical application example for 3F LEM DALI Sensor

Connection diagram for broadcast operation, between the 3F Travetta LED DALI LS luminaire (with integrated DALI presence and brightness sensor - MASTER function) and 3F Travetta LED DALI luminaires (equipped with DALI drivers - SLAVE function). Allows the level of lighting to be kept constant between all connected luminaires, on the basis of the natural light, as well as centralised on/off commands (thus when motion is detected and with the twilight threshold set).



IMPORTANT: the DALI line of the MASTER luminaires cannot be connected to buttons!
If you require manual regulation, contact our technical department.

3F Smart Dimming



Characteristics

Smart Dimming technology allows you to make savings and manage your lighting systems in an easy, low-cost and customisable manner without investing significant capital in costly systems. Products in this range have functions such as:

- Turning on and automatically regulating the luminaire **on the basis of the chosen level of brightness.**
- Luminaire switching **on the basis of presence** of persons in the radius of operation of the luminaire (the detection area can be extended using slave sensors).
- **Manual regulation and ON/OFF** via accessory remote controls or push-buttons.

Advantages

The advantages of this technology offer significant energy savings for the end customer, calculated as being up to 80% compared to an on-off solution with combined sensors for light and presence regulation. It is also possible to create made-to-measure lighting based on the requirements of the environment and the light level required.

Savings

The advantages are real and tangible in these aspects for the end customer:

- **Quick, simple installation.**
- **Energy savings.**
- **Reduced time to see return on investment.**

Installation Reference - Corridor function



Standard position: the power output of the luminaires is dimmed to 10%, thus obtaining a minimum level of lighting.



As soon as the luminaires detect the presence of persons, or the level of natural light falls below a minimum set threshold, the CF function is activated and they switch to 100% power output for the set duration (this can be regulated during installation).

Results obtainable

- Luminous flux of 10% at rest, 100% flux when presence is detected via relay sensor.
- Activation of 100% of luminous flux depending on the amount of natural light and/or presence of personnel.
- Extension of the presence detection area through the use of slave sensors.

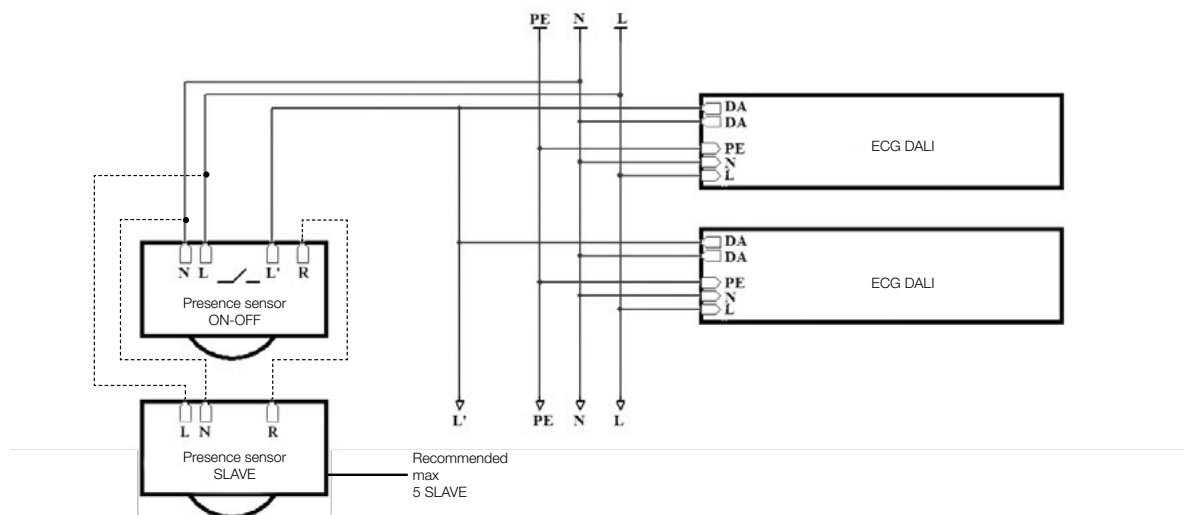
Compatible luminaires

Any luminaire from the 3F Filippi range, as long as it is equipped with DALI ballast with Corridor Function (to be specified when ordering).

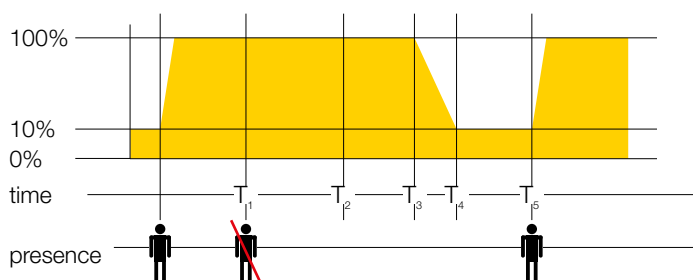
Components required

- Luminaire with activated DALI driver with Corridor Function.
 - IR adaptor for smartphones (optional) for managing the sensor.
 - ON/OFF IR programmer (optional).
 - 1 on-off Sensor A or 1 on/off-ext Sensor A (range of operation 10 metres).
 - or
 - 1 on-off Sensor B or 1 on/off-ext Sensor B (range of operation 24 metres).
 - or
 - 1 on-off CORR sensor or 1 on/off-ext CORR sensor (diameter of operation: tangential 40m, frontal 20m), can be used for installation heights up to 2.70m.
- In order to extend the presence detection area, it is possible to use:
- 1 Sensor A SLAVE or 1 Sensor A SLAVE-ext.
 - or
 - 1 Sensor B SLAVE or 1 Sensor B SLAVE-ext.
 - or
 - 1 Sensor CORR SLAVE or 1 Sensor CORR SLAVE-ext.

Wiring diagram



Operation graph



Legend:

- $T_1 \rightarrow T_2$ - latency time managed by the sensor - adjustable
 $T_2 \rightarrow T_3$ - latency time managed by the driver - 120 seconds
 $T_3 \rightarrow T_4$ - luminous flux decrease time - 32 seconds
 $T_4 \rightarrow T_5$ - period of minimum luminous flux - unlimited time

3F Smart Dimming

Installation Reference - Office / Open space

Up to 50 drivers/ballasts - Installation height up to 4 metres



Results obtainable

- **Manual ON/OFF/regulation** of the luminaire via optional remote control or push-button.
- **Automatic regulation of the luminaire's light flow** depending on the amount of natural light and/or presence of personnel.
- Extension of the presence detection area through the use of slave sensors.

Compatible luminaires

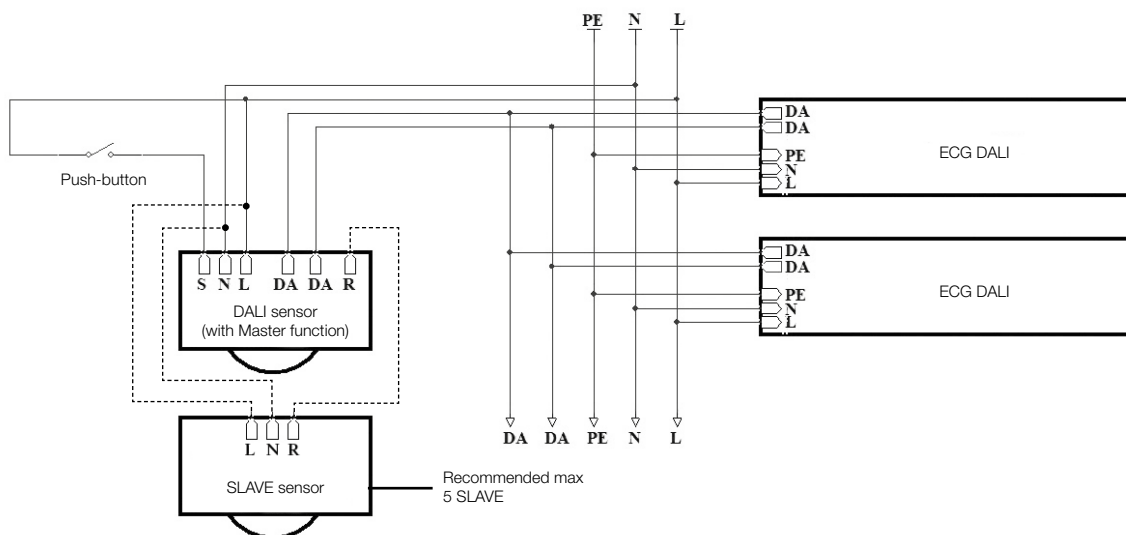
Any luminaire from the 3F Filippi range, as long as it is equipped with DALI ballast.

On request, can also be implemented with 1-10V components (drivers and sensors).

Components required

- 1 commercially available push-button (optional).
- Luminaire with DALI driver.
- 1 DALI Sensor A (recessed) or DALI ext Sensor A (ceiling mount).
- IR adaptor for Smartphones (optional).
- DALI IR programmer (optional).
- DALI IR remote control (optional).
- 1 Sensor A SLAVE or 1 Sensor A SLAVE-ext (optional for extending the presence detection area).

Wiring diagram



Note: to deactivate presence sensing, jump R and L directly on the sensor (with master function).

Installation Reference - Industrial / Gymnasiums

Up to 50 ballasts - Installation height between 4 and 9 metres



Results obtainable

- **Manual ON/OFF/regulation** of the luminaire via optional remote control or push-button.
- **Automatic regulation of the luminaire's light flow** depending on the amount of natural light and/or presence of personnel.
- Extension of the presence detection area through the use of slave sensors.

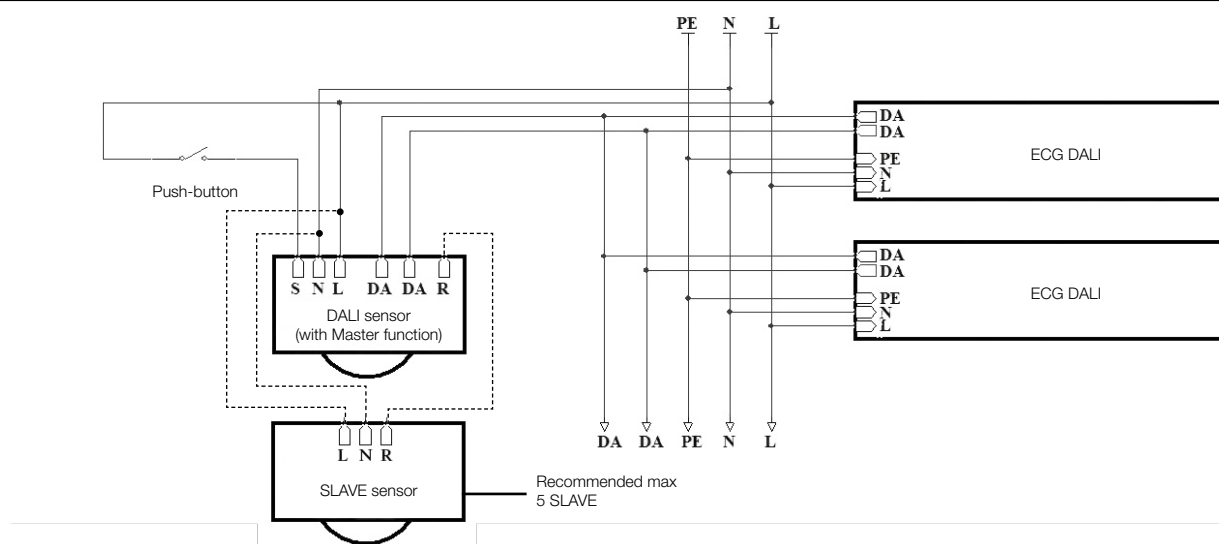
Compatible luminaires

Any luminaire from the 3F Filippi range, as long as it is equipped with DALI ballast.
On request, can also be implemented with 1-10V components (drivers and sensors).

Components required

- 1 commercially available push-button (optional).
- Luminaire with DALI driver.
- 1 DALI Sensor B (recessed) or DALI ext Sensor B (ceiling mount).
- IR adaptor for Smartphones (optional).
- DALI IR programmer (optional).
- DALI IR remote control (optional).
- 1 Sensor B SLAVE or 1 Sensor B SLAVE-ext (optional for extending the presence detection area).

Wiring diagram



N.b.: to deactivate presence sensing, R and L must be jumped directly on the sensor.

3F Smart Dimming

Installation Reference - School classroom

Up to 50 ballasts



Results obtainable

- **Manual ON/OFF/regulation** of the luminaire via optional remote control or push-button.
- **Automatic regulation of the luminous flux** of the luminaires in a differentiated manner depending on the natural light present in two different areas: the sensor measures the brightness at two points (for example, near the window and in the darkest area of the classroom), and adjusts the fluxes of the luminaires lighting those areas as a consequence.
- Extension of the presence detection area through the use of slave sensors.

Compatible luminaires

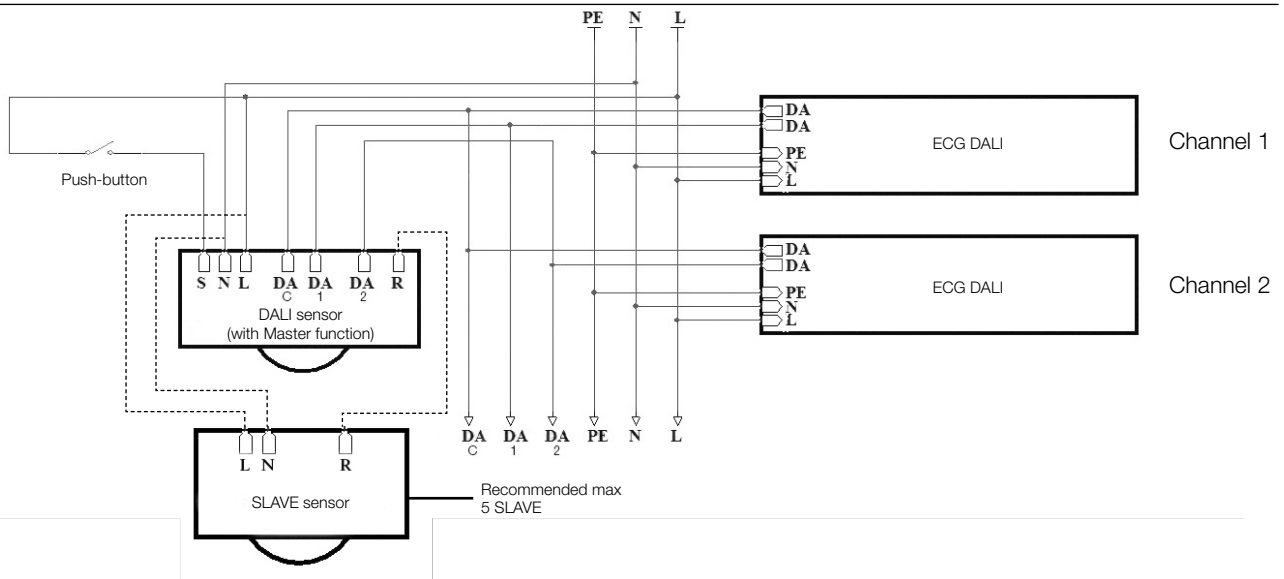
Any luminaire from the 3F Filippi range, as long as it is equipped with DALI ballast.

On request, can also be implemented with 1-10V components (drivers and sensors).

Components required

- 1 commercially available push-button (optional).
- Luminaire with DALI driver.
- 1 Dual-DALI Sensor B.
- IR adaptor for Smartphones (optional).
- DALI IR programmer (optional).
- DALI IR remote control (optional).
- 1 Sensor B SLAVE or 1 Sensor B SLAVE-ext (optional for extending the presence detection area).

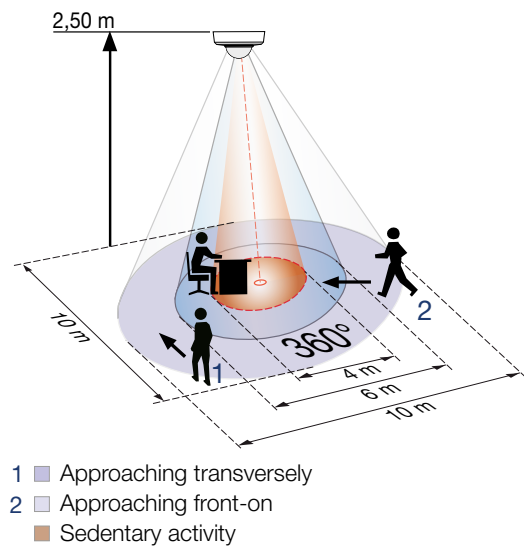
Wiring diagram



N.b.: to deactivate presence sensing, R and L must be jumped directly on the sensor.

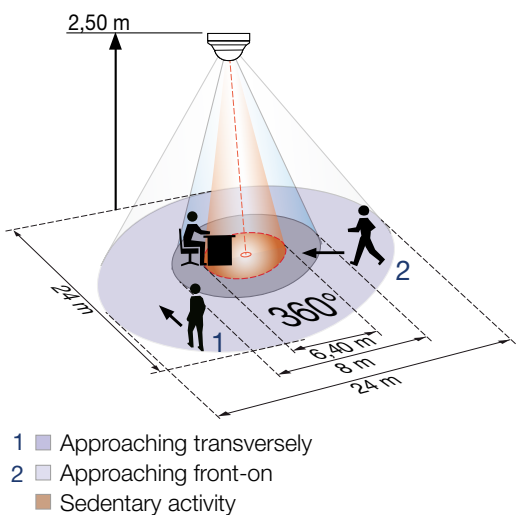
Detection field

Sensor A DALI, Sensor A ON/OFF, Sensor A SLAVE



Range of action (circular detection area) with T=18°			
Mounting height	Fixed position	Transverse movement	Approaching the detector front-on
2.00 m	r=1.60	r=4.00	r=2.50
2.50 m	r=2.40	r=5.00	r=3.00
3.00 m	-	r=6.00	r=3.70
3.50 m	-	r=7.00	r=4.30
4.00 m	-	r=8.00	r=4.80
4.50 m	-	r=9.00	r=5.40
5.00 m	-	r=10.00 m	r=6.00

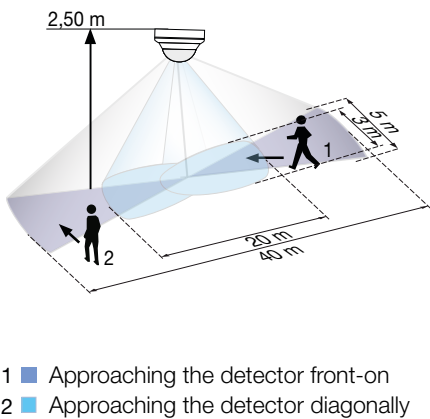
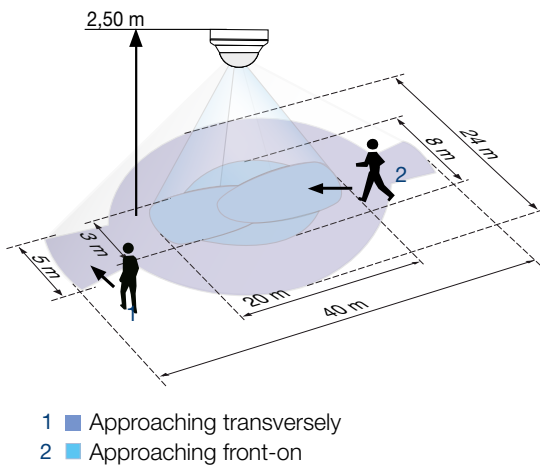
Sensor B DALI, Sensor B ON/OFF, Sensor B SLAVE, Sensor B Dual



Range of action (circular detection area) with T=18°			
Mounting height	Fixed position	Transverse movement	Approaching the detector front-on
2.00 m	r=2.60	r=8.50	r=3.20
2.50 m	r=3.20	r=12.00	r=4.00
3.00 m	r=3.80	r=14.50	r=4.80
3.50 m	r=4.50	r=17.00	r=5.50
4.00 m	-	r=19.50	r=6.80
4.50 m	-	r=22.00	r=7.20
5.00 m	-	r=24.00 m	r=8.00
10.00 m	-	r=24.00 m	r=8.00

Sensor Corr ON/OFF, Sensor Corr DALI

Sensor Corr Slave



3F Smart Dimming | Accessories

Type A sensors (H max = 5mt) for recessed installation



Presence detector On/Off, recessed, single channel (normally open, potential free) with a maximum load of 2 kW (with power factor 0.9), can be controlled remotely, circular detection area Ø 10 m, with Master function. Integrated twilight sensor. IP20 protection degree.

Code	Item
A3013	A on/off - Sensor

On request: programming with remote control code A3023 or with smartphone via accessory code A3022.



IP20



Presence detector On/Off, recessed, with one DALI interface, can be controlled remotely, circular detection area Ø 10 m, with Master function. Integrated light sensor for automatic constant light control. Drive up to 50 DALI drivers. IP20 protection degree.

Code	Item
A3011	A DALI - Sensor

On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20



Recessed Slave presence detector, compatible with sensors with Master function, such as Sensor A DALI and Sensor A on/off, circular detection area Ø 10 m. IP20 protection degree.

Code	Item
A3025	A SLAVE - Sensor



IP20

Type A sensors (H max = 5mt) for ceiling mounted installation



Presence detector On/Off, ceiling mounted, single channel (normally open, potential free) with a maximum load of 2 kW (with power factor 0.9), can be controlled remotely, circular detection area Ø 10 m, with Master function. Integrated twilight sensor. IP20/IP54 rated (exposed part).

Code	Item
A3014	A on/off-ext - Sensor

On request: programming with remote control code A3023 or with smartphone via accessory code A3022.



IP20
IP54



Presence detector, ceiling mounted, with one DALI interface, can be controlled remotely, circular detection area Ø 10 m, with Master function. Integrated light sensor for automatic constant light control. Drive up to 50 DALI drivers. IP20/IP54 rated (exposed part).

Code	Item
A3012	A DALI-ext - Sensor

On request: IP54 cap code A3024, to obtain total IP54 rating. On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20
IP54

Type A sensors (H max = 5mt) for ceiling mounted installation



Ceiling mounted Slave presence detector, compatible with sensors with Master function, such as Sensor A DALI and Sensor A on/off, circular detection area Ø 10 m. IP20/IP54 rated (exposed part).

Code	Item
A3026	A SLAVE-ext - Sensor

On request: IP54 cap code A3024, to obtain total IP54 rating.



IP20
IP54

Type B sensors (H max = 10mt) for recessed installation



Presence detector On/Off, recessed, single channel (normally open, potential free) with a maximum load of 2 kW (with power factor 0.9), can be controlled remotely, circular detection area Ø 24 m, with Master function. Integrated twilight sensor. IP20 protection degree.

Code	Item
A3018	B on/off - Sensor

On request: programming with remote control code A3023 or with smartphone via accessory code A3022.



IP20



Presence detector On/Off, recessed, with one DALI interface, can be controlled remotely, circular detection area Ø 24 m, with Master function. Integrated light sensor for automatic constant light control. Drive up to 50 DALI drivers. IP20 protection degree.

Code	Item
A3017	B DALI - Sensor

On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20



Presence detector, recessed, with two DALI interfaces, can be controlled remotely, circular detection area Ø 24 m, with Master function. Two integrated light sensors for automatic constant light control. Drive up to 50 digital electronic drivers for each channel. IP20 protection degree.

Code	Item
A3015	B Dual-DALI - Sensor

On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20



Recessed Slave presence detector, compatible with sensors with Master function, such as Sensor B DALI and Sensor B on/off, circular detection area Ø 24 m. IP20 protection degree.

Code	Item
A3027	B SLAVE - Sensor



IP20

Type B sensors (H max = 10mt) for ceiling mounted installation



Presence detector On/Off, ceiling mounted, single channel (normally open, potential free) with a maximum load of 2 kW (with power factor 0.9), can be controlled remotely, circular detection area Ø 24 m, with Master function. Integrated twilight sensor. IP20/IP54 rated (exposed part).

Code	Item
A3019	B on/off-ext - Sensor

On request: IP54 cap code A3024, to obtain total IP54 rating. On request: programming with remote control code A3023 or with smartphone via accessory code A3022.



IP20
IP54



Presence detector, ceiling mounted, with one DALI interface, can be controlled remotely, circular detection area Ø 24 m, with Master function. Integrated light sensor for automatic constant light control. Drive up to 50 DALI drivers. IP20-54 protection degree for the exposed part.

Code	Item
A3016	B DALI ext - Sensor

On request: IP54 cap code A3024, to obtain total IP54 rating. On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20
IP54



Ceiling mounted Slave presence detector, compatible with sensors with Master function, such as Sensor B DALI and Sensor B on/off, circular detection area Ø 24 m. IP54 protection degree.

Code	Item
A3028	B SLAVE-ext - Sensor



IP54

Type B sensors (H max = 16mt) for ceiling mounted installation



Presence detector with one DALI interface, ceiling mounted, for mounting at great heights, transverse detection area Ø 40 m, with Master function. Maximum installation height 16 m. Telescopic external light sensor for precise light measurement in a single application. Integrated twilight sensor. IP54 protection degree.

Code	Item
A3037 ^{NEW}	DALI Sensor - Type B - GH



IP54



IR remote control for programmer, compatible with DALI sensors (incompatible with On-Off and Slave sensors), especially for long distances.

Code	Item
A3038 ^{NEW}	IR DALI GH - Programmer



Type Corr sensor for recessed installation



Presence detector On/Off, recessed, special for corridors, single channel (normally open, potential free) with a maximum load of 2 kW (with power factor 0.9), can be controlled remotely, detection area tangential Ø 40 m, frontal Ø 20 m, with Master function. Maximum installation height 2.70 m. Integrated twilight sensor. IP20 protection degree.

Code	Item
A3029	Corridor on/off - Sensor

On request: programming with remote control code A3023 or with smartphone via accessory code A3022.



IP20



Presence detector with one DALI interface, recessed, special for corridors, can be controlled remotely, transverse detection area Ø 40 m, with Master function. Maximum installation height 2.70 m. Integrated light sensor for automatic constant light control. Drive up to 50 DALI drivers. IP20 protection degree.

Code	Item
A3031	Corridor DALI - Sensor

On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20



Recessed Slave presence detector, special for corridors, compatible with sensors with Master function, such as Sensor Corr DALI and Sensor Corr on/off, tangential detection area Ø 40 m, frontal Ø 20 m. IP20 protection degree. Maximum installation height 2.70 m.

Code	Item
A3033	Corridor SLAVE - Sensor



IP20

Type Corr sensor for ceiling mounted installation



Presence detector On/Off, ceiling mounted, special for corridors, single channel (normally open, potential free) with a maximum load of 2 kW (with power factor 0.9), can be controlled remotely, detection area tangential Ø 40 m, frontal Ø 20 m, with Master function. Maximum installation height 2.70 m. Integrated twilight sensor. IP54 protection degree.

Code	Item
A3030	Corridor on/off-ext - Sensor

On request: programming with remote control code A3023 or with smartphone via accessory code A3022.



IP54



Presence detector with one DALI interface, ceiling mounted, special for corridors, can be controlled remotely, transverse detection area Ø 40 m, with Master function. Maximum installation height 2.70 m. Integrated light sensor for automatic constant light control. Drive up to 50 DALI drivers. IP20/IP54 rated (exposed part).

Code	Item
A3032	Corridor DALI-ext - Sensor

On request: IP54 cap code A3024, to obtain total IP54 rating. On request: programming/regulation with remote control code A3020 and A3021 or with Smartphone via accessory code A3022.



IP20
IP54

Type Corr sensor for ceiling mounted installation



Ceiling mounted Slave presence detector, special for corridors, compatible with sensors with Master function, such as DALI Corr sensor and Corr sensor on/off, tangential detection area Ø 40 m, frontal Ø 20 m. IP54 protection degree. Maximum installation height 2.70 m.

Code	Item
A3034	Corridor SLAVE-ext - Sensor



IP54

Sensor programmers



IR remote control for programmer, compatible with DALI sensors (incompatible with On-Off and Slave sensors).

Code	Item
A3020	IR DALI - Programmer



IR remote control for user, compatible with DALI sensors (incompatible with On-Off and Slave sensors).

Code	Item
A3021	IR DALI - Remote controller



IR adapter for Smartphones, compatible with all programmable sensors. Free App available for Android and iOS devices.

Code	Item
A3022	IR - Adapter for Smartphone



IR remote control for programming on/off sensors incompatible with DALI and Slave sensors).

Code	Item
A3023	IR on/off - Programmer



Cap for ceiling mounted sensors



IP54

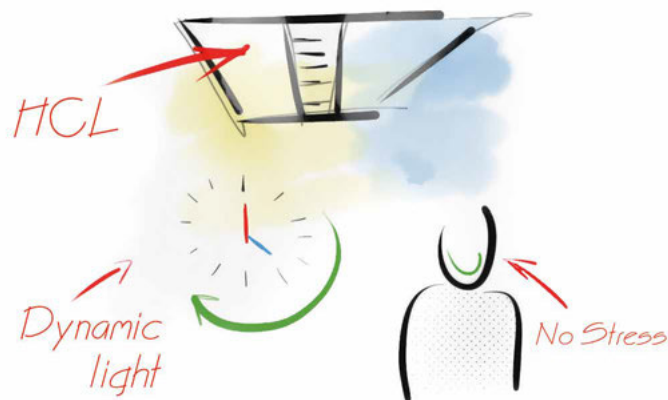
Cap for ceiling mounted sensors, to obtain IP54 rating (total) for H 15 mm. Compatible with the following sensors:

- Sensor A DALI ext code A3012
- Sensor A on/off ext code A3014
- Sensor B DALI ext code A3016
- Sensor B on/off ext code A3019
- Sensor A SLAVE ext code A3026
- Corr Sensor DALI ext code A3032

Code	Item
A3024	IP54 White fixing

3F HCL for Tunable White fixtures

System to vary colour temperature



People and their requirements have always been at the centre of our attention when designing our products.

Thanks to the new HCL luminaires, ensuring the comfort and health of the individual finds a new point of reference thanks to a solution which can actively stimulate biorhythms.

Natural light is one of the most important sensory stimuli for our body, and it also has an enormous effect on our mental and emotional state. For this reason, HCL luminaires have been designed to replicate natural light, taking the following requirements into consideration:

- Dynamism of light over time
- Dynamism of colour temperature over time
- Symmetrical light diffusion
- Freedom of use for each individual

The latest research in the sector has shown that those who work in environments with windows and good lighting are exposed to 173% more natural light during working hours and sleep on average 46 minutes longer (each night) compared to others, as they are less affected by problems such as insomnia. The result is a general increase in well-being.

There is ever-increasing evidence to support the fact that exposure to light during the day, particularly during the morning, is beneficial to health in terms of its effects on mood, mental lucidity and the metabolism.

The Human Centric Lighting technology can:



Offices

- increase employees' motivation and energy, improving day-to-day productivity, particularly in the period after lunch.
- in environments without natural light, it can help recreate daily biorhythms.



Commercial Premises

- offers the possibility to diversify light distribution and colour on the basis of scenarios linked to the products or concepts being presented.
- This provides a flexibility of use at each point of sale which offers savings in terms of time and money.



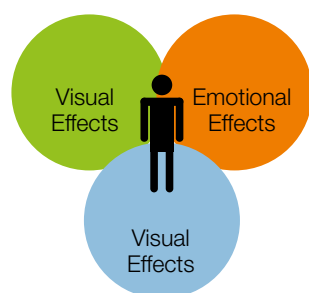
Schools

- significantly improve concentration and cognitive performance.
- a 45% reduction in errors and a 9% improvement in cognitive speed have been demonstrated.



Hospital

- reduce sleep disturbances, thus limiting the need for drugs and reducing medical assistance requirements
- improve patient well-being and activity during the day



Light influences mood and can trigger both positive and negative emotions.

HCL luminaires allow users to change both intensity and temperature of the emitted light, thus improving comfort and increasing the feeling of well-being.

A third photoreceptor in the human eye was discovered in 2001, which is responsible for our light response for regulating our biological clock and circadian rhythms.

Recent studies (performed by Lighting Europe) have shown that HCL luminaires improve concentration as well as the safety and efficiency of the workplace or training and school environments. For this reason, 3F Filippi has decided to create a series of new luminaires to help people feel better by putting their requirements at the centre of the design, also from a biological point of view.

In order to take proper advantage of these luminaires, it is essential that:

- The artificial light follows the cycle of the natural light
- The management systems can also be manually adjusted, according to each user's sensitivity
- Right from the lighting design stage, factors such as exposure of the environment to natural light, the users' biological situations and the tasks they must perform are taken into account

Always consult a qualified and reliable lighting designer

If you require more information, do not hesitate to contact our Sales Network or our Technical Offices.

Biorhythms depend on signals which derive from the quantity and the quality of natural light and the environmental colour temperature:



The brain is stimulated:

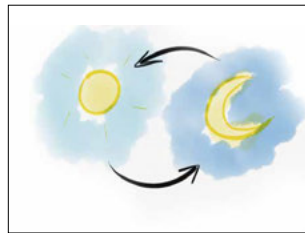
- By cold light present during daylight hours (6,500 K) which allows us to be more active and concentrate harder.
- By warm light present in the morning and evening (2,700K) which induces a greater level of relaxation.

Thanks to HCL technology, everyone can improve their sleep cycles, mental and emotional states by themselves.

HCL technology allows for:



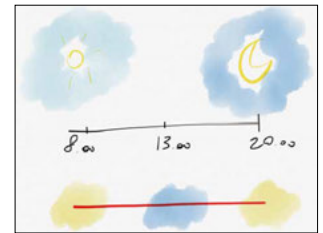
Comfort and well-being, particularly in environments in which a lot of time is spent.



Lighting which follows the **natural** daylight cycle.



Less **environmental stress**, which reduces physical and mental exertion.



Automatic and/or manual management of the light intensity and colour temperature.

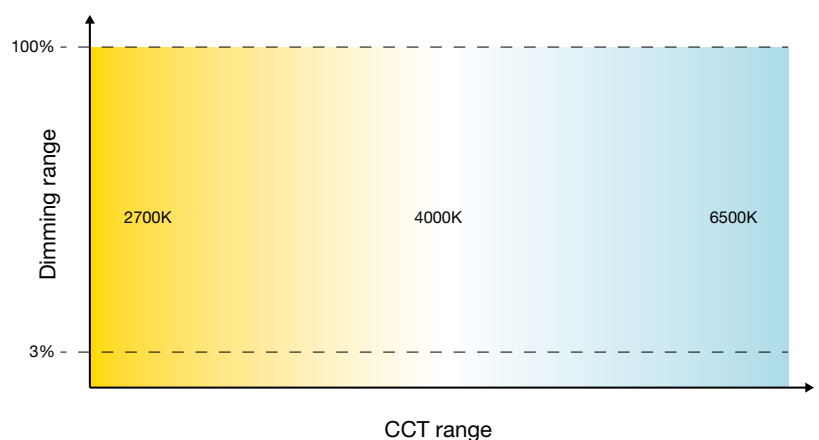
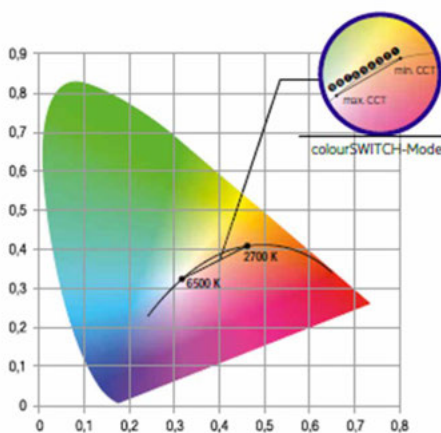
Characteristics:

- Control of variation of the white colour temperature (Tunable-white).
- Simulated changing of daylight over the course of the day.
- Modulation of the colour temperature along the Planck curve from 2700K to 6500K.
- Colour rendering index CRI >80.
- Colour tolerance: 3 MacAdam ellipses.
- LED source luminous efficiency - up to 155 lm/W.

2-channel DT8 driver - constant colorimetric on all attenuation levels

Second generation drivers provide even more room for maneuver in terms of design with the advanced adjustment range from 3% to 100%.

Color temperatures are precisely controlled and with infinite variability, while the drivers reliably maintain the selected range between all attenuation levels.



The TW Tunable White fixtures can be regulated using two different systems:

1. Wired automatic control system
2. 3F Bluetooth control system

Wired control system

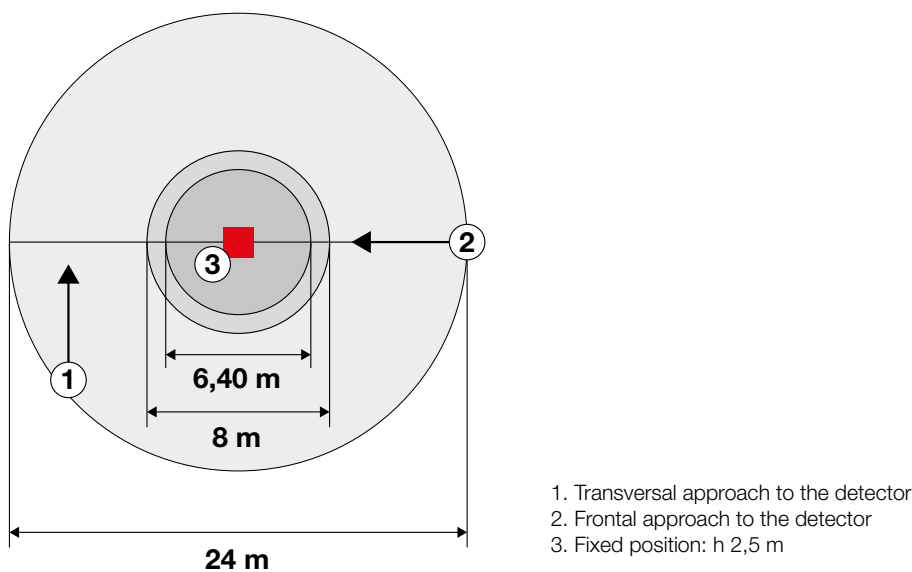
Features

The HCL DT8 presence and light sensors allow the management of a group of Tunable White (TW) devices, up to a maximum of 64 drivers.

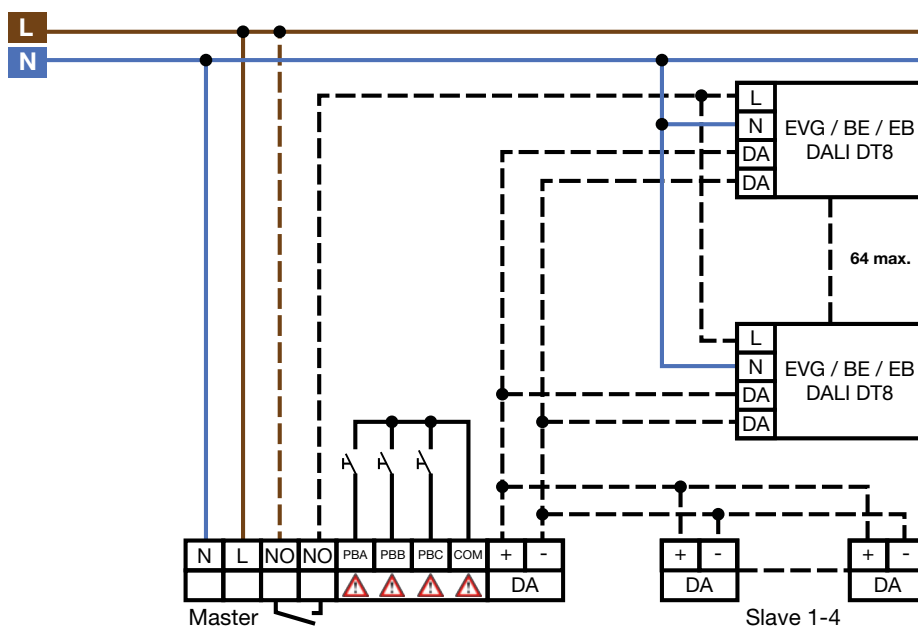
The sensors have the following characteristics:

- Integrated presence detector capable of controlling up to 64 DALI DT8 devices
- Integrated brightness detected for automatic adjustment of the luminous flux of the luminaires, based on the supply of natural light
- Integrated clock for automatically adjusting the color temperature following the circadian rhythm by programming from the free APP
- n. 3 output channels for HCL control of 3 groups of TW devices
- n. 1 DALI output channel
- n. 1 relay output channel (max 300W LED)
- n. 3 NO button inputs: 1 button to adjust the luminous flux of the HCL channel, 1 button for DALI channel control and 1 button for relay channel control

Detection scheme



Electrical connection diagram



Wired control systems | Accessories



Recessed presence detector with integrated clock for the management and control of Tunable White (TW) devices, remotely controllable, circular detection area Ø 24 m, equipped with Master function. Integrated light sensor for automatic regulation of constant light n. 3 output channels for HCL control of n. 3 groups of TW appliances, n. 1 DALI output channel, n. 1 relay output channel (max 300 W LED). Drive up to 64 DALI drivers.

Code	Item
A3035	Sensore HCL DT8



Ceiling presence detector with integrated clock for the management and control of Tunable White (TW) devices, remotely controllable, circular detection area Ø 24 m, equipped with Master function. Integrated light sensor for automatic regulation of constant light n. 3 output channels for HCL control of n. 3 groups of TW appliances, n. 1 DALI output channel, n. 1 relay output channel (max 300 W LED). Drive up to 64 DALI drivers.

Code	Item
A3036	Sensore HCL DT8-ext



IR adapter for Smartphones, compatible with all programmable sensors. Free App available for Android and iOS devices.

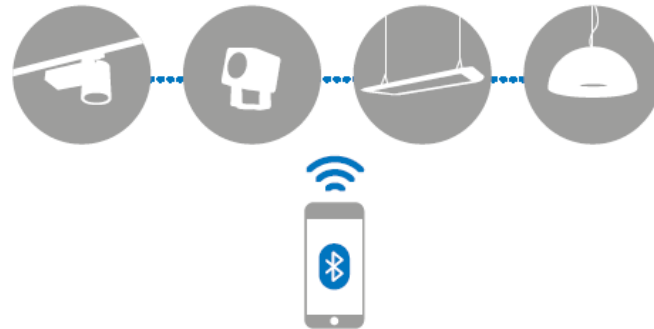
Code	Item
A3022	IR - Adapter for Smartphone

Mandatory accessory for programming the HCL DT8 sensors.

3F Bluetooth

Characteristics

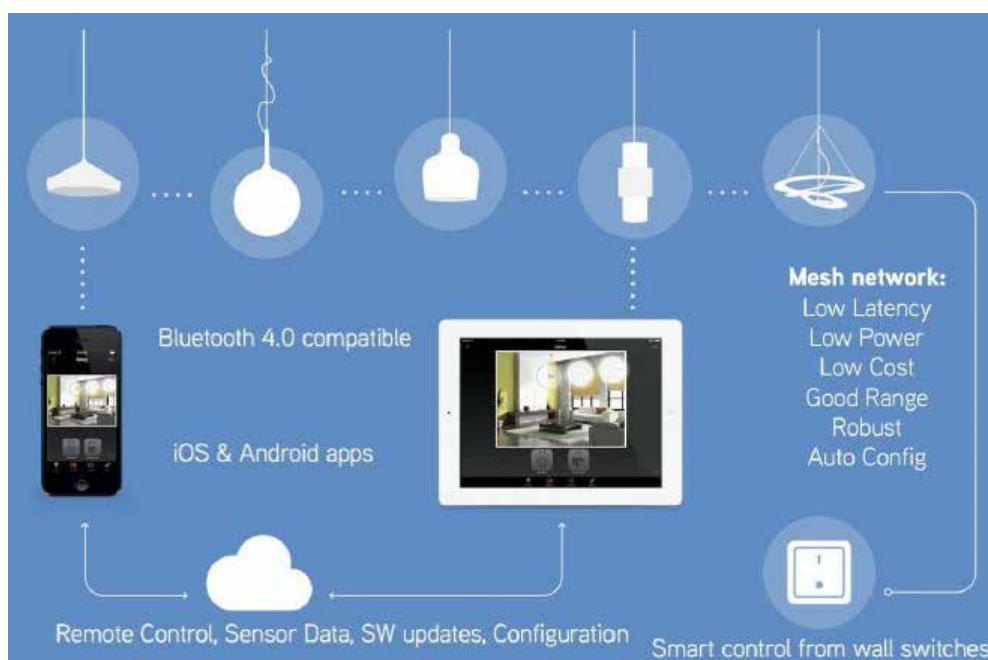
3F Bluetooth is the completely wireless regulation system that can manage DALI and Tunable White DALI DT8 fixtures. Thanks to the intuitive simplicity of the application developed for iOS and Android all you need is a mobile phone or another mobile device and anyone can create and manage their own lighting system autonomously by controlling fixtures individually or in groups according to the needs and functions required. It can also be managed through standard handsets using specific accessories



Functions

With the 3F Bluetooth management system it is possible to create a “mesh network” of fixtures which can be managed using mobile devices or handsets:

- Turn the fixtures on/off
- Regulate luminous intensity
- Regulate colour temperature
- Configure lighting scenes
- Configure animated scenes (dynamic scenes or different sequences of scenes).
- Timer Function: set fade times between scenes and animated scenes, programme the date and duration
- Geolocation: by activating this function it is possible to programme to turn the fixtures on/off that can be associated automatically to sunrise and sunset independently of the time of year (astronomical clock).
- Cloud Function: allows to share different fixtures and access the network remotely. Remote access one fixture which acts as an access point while the others connect via the Cloud.



3F Bluetooth control systems | Accessories



IP20

BLE DALI radio module, a wireless control unit with a DALI interface. The module can only be used in a closed system and must not be connected to an existing DALI network. The module is Bluetooth controlled using an app for Smartphones and Tablets using Bluetooth 4.0 technology. The fixtures automatically create an adaptive, robust and reliable Bluetooth mesh network allowing a large number of devices to be controlled in a simple and efficient way.

Code	Item
A3090	BLE DALI Radio Module

For further details regarding all the functions obtainable from Bluetooth accessories, please contact our technical offices.



IP40

BLE radio panel, Bluetooth user interface for wall installation. The BLE radio panel in addition to switching the light fixtures on and off allows to dim, change the colour temperature in the case of fixtures equipped with such technology, individual control of fixtures and to manage lighting or animation scenes.

Code	Item
A3091	BLE DALI Radio push-button panel



IP20

Extender IP20 1T5352, allows for Bluetooth control with DALI interface. Generates a local DALI bus with the capacity to drive up to 64 devices. Allows for control of groups of fixtures in indoor applications. It is also equipped with a relay that can control non-dimmable fixtures up to a maximum of 6A.

Code	Item
A3095	IP20 1T5352 EXTENDER



IP67

BLE DALI IP67 1E3048 radio module to control individual fixtures externally equipped with a DALI driver. The module needs to be positioned in order to receive the radio signal. The distance from the lighting fixtures can be up to 50 m.

Code	Item
A3096	IP67 BLE 1E3048 Radio Module



IP67

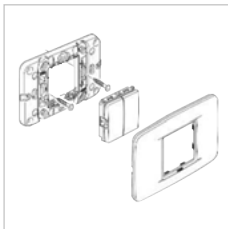
Extender IP67 1E3049, allows for Bluetooth control with DALI interface. Generates a local DALI bus with the capacity to drive up to 64 devices. Allows for control of groups of fixtures in outdoor applications.

Code	Item
A3097	IP67 1E3049 EXTENDER



BLE radio control, flat four button command with a 2.4 GHz radio transmitter, standard Bluetooth Low Energy, energy harvesting power supplied by the integrated electrodynamic generator, optional version with dedicated colour buttons Eikon 20506 or 20506.2, Arké 19506 or 19506.2 or Plana 14506 or 14506.2 - 2 modules.

Code	Item
A3099	BLE Radio control



Arké support kit, 2 buttons (4 switches) and a terminal panel to control the transmitter (code A3099).

Code	Item
A3100	Kit ArkE support buttons plate for A3099



3F & KNX

Building automation with KNX systems.



Characteristics

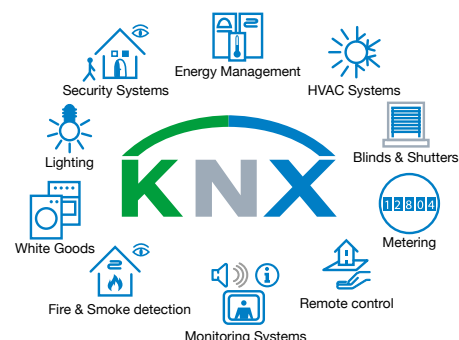
KNX is a worldwide open standard which meets the most important European and international standards and offers automated and decentralised management of technological systems for: commercial, industrial, public and office buildings, schools and many other structures besides.

KNX can be used in all applications and for control functions in buildings: from lighting to blinds, security, HVAC supervision, control of plumbing and alarms, energy management, electricity meters, domestic appliances, audio systems etc.

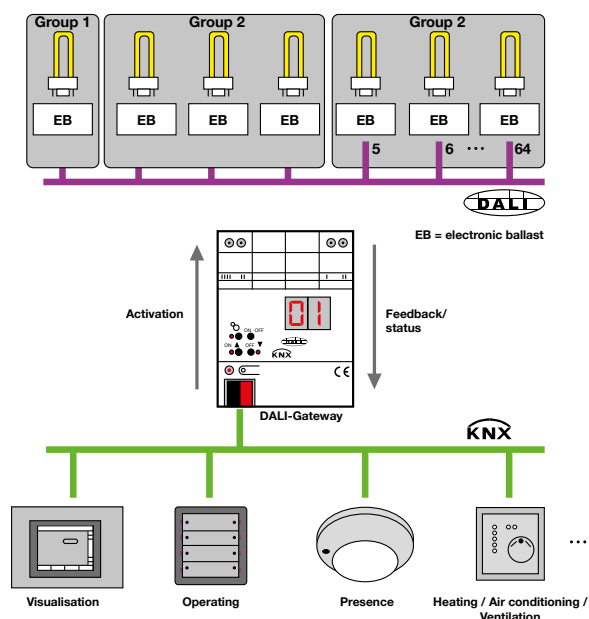
KNX improves comfort and security, as well as providing a strong contribution to energy savings (up to 50% for lighting and heating management) and to reducing environmental impact.

The KNX system can be used both in new and existing buildings.

KNX installations can be easily expanded and adapted to meet new requirements, quickly and with minimal financial investment (for example when new tenants enter a commercial building).



Example connection diagrams:



3F Filippi really believes in this standard, and it is for this reason that we offer a range of luminaires equipped with DALI ballasts which are able to interface with KNX systems seamlessly: the connection between the network and the luminaire occurs via gateways which allow information and commands to be transmitted via the LAN network.

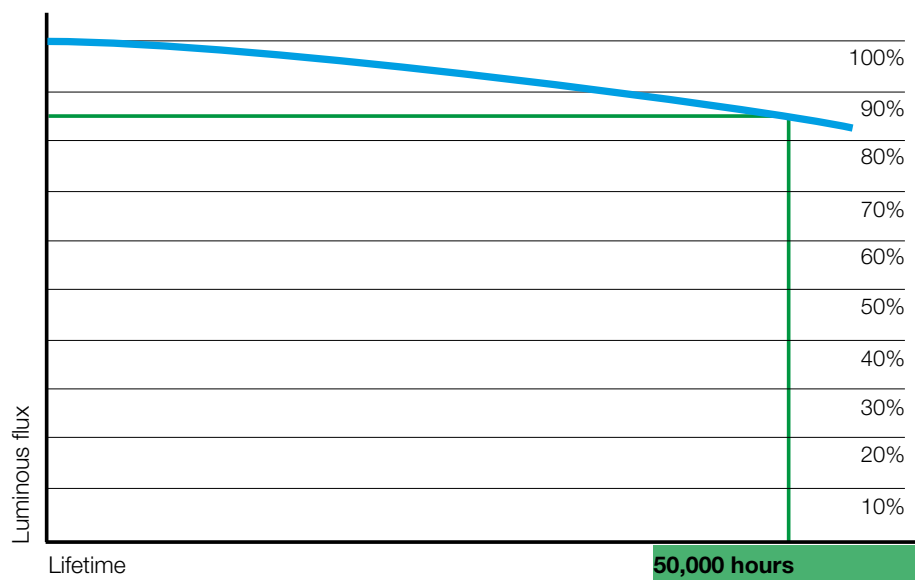
3F CLO

Time passes, the light stays the same

Introduction

The initial luminous flux of light sources diminishes gradually over time.

The percentage of decay of the luminous output referred to the hours of useful operation (50,000 hours) is determined with the parameter "L". LED sources classified as L85 (*) when they reach 50,000 hours will supply 85% of the initial output.



(*) data extrapolated from LM-80 (IES - Illuminating Engineering Society of North America) tests, performed as per standards after 6,000 hours of operation and calculated on the basis of the IESNA TM-21-11 guideline "Projecting Long Term Lumen Maintenance of LED Light Sources".

The task of the lighting designer is to look at all possible systems that can achieve energy savings for the final customer. 3F Filippi has always worked alongside professionals in the industry to find and transmit knowledge for a greener future.

What is CLO?

CLO is the acronym of Constant Light Output which is a function of the most evolved drivers to allow fixtures to emit constant output, following natural decay of LED source due to ageing.

Fixtures equipped with this function initially emit, and subsequently in a constant way, a luminous output decreased by 15% in consideration of the decay of the light.

At the same time the fixture has a reduced initial energy consumption (on average 15%) and an increasing regular consumption until it reaches the declared 100%.

The datasheets of fixtures equipped with this technology will show the initial Power and the final Power (for normal size electrical system)

What are the advantages of CLO?

Constant L100 luminous output for the entire life of the fixture.

Thanks to this technology adopted by 3F Filippi, it is no longer necessary to oversize from the first day of use the lighting system (on average 15%) as was done in the past, with an unprovoked energy expenditure.

This makes it possible to design lighting projects with $K=1.00$ maintenance factors, given that the fixture considers this integrated decay factor right from the first time it is turned on.

Energy savings

The drivers are designed in the Company to feed the LED sources initially at reduced power to then increase gradually over time.

Using the CLO function the energy savings that can be achieved over the life of the fixture is around 10% without any manual or system maintenance. You save simply without realising it.

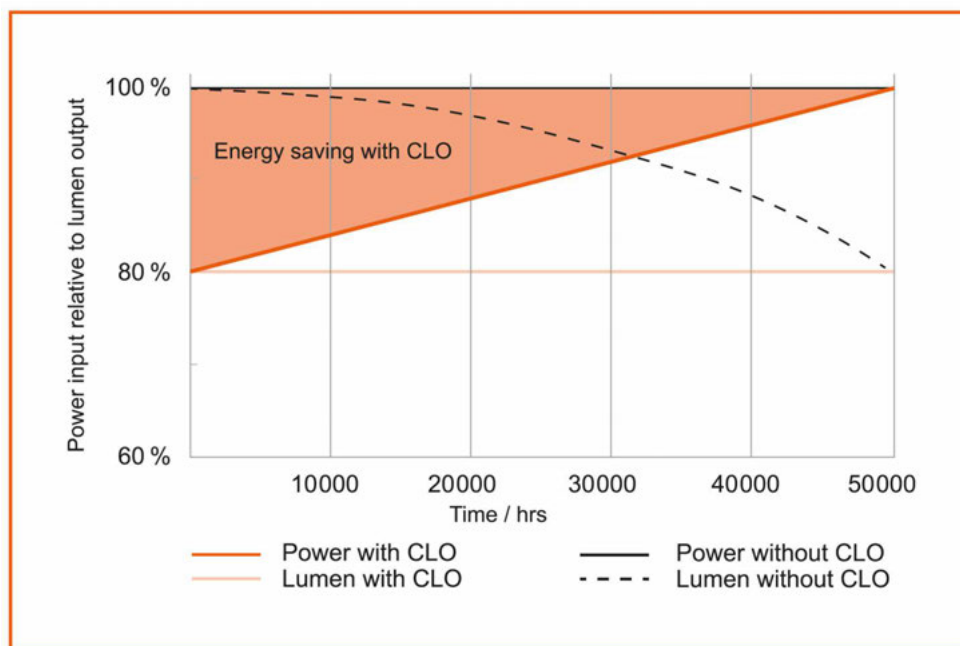
CLO and lighting design

The light fixtures will be constant throughout their entire life.

Drivers with the CLO function are able to compensate for the decay in luminous output of the LED sources and avoid output peaks/ excess power at the beginning of the installation while maintaining the required luminance values constant over time.

Energy consumption will increase over time to reach maximum consumption which would normally occur when first turned on, only after 50,000 operating hours.

Lighting levels required by regulations are ensured from the first to the last day without wasting any energy.



If you require more information, do not hesitate to contact our Sales Network or our Technical Offices.

3F Wireless

Wireless management and regulation of lighting systems

Introduction

Artificial lighting involves high energy consumption, due to the power used and the number of hours the system is switched on. Our LED luminaires, which are particularly efficient, allow existing systems to be updated, significantly reducing the power used and thus guaranteeing a fast return on investment. In order to achieve further energy savings, and therefore more significant economic advantages over the entire life cycle of the system, we recommend the use of control systems which are able to regulate the brightness of the luminaires on the basis of the natural light and presence of persons. Replacing simply the lighting bodies without the need to run new cables for regulation of the luminaires is possible using a wireless system to let the luminaires communicate, and with appropriate sensors. For this, 3F Filippi offers 3F Wireless technology, which allows luminaires and sensors to communicate via Radio Frequency signals using 868 MHz Mesh Network technology.

Characteristics

Thanks to the 3F Wireless control modules, it is possible to manage DALI digital dimmable luminaires and sensors directly via wireless, without running new cables for regulation of the luminaires. The radio communication system is reliable and secure, protected against interception by robust encryption algorithms.

Advantages

3F Wireless technology is particularly suitable for retrofitting to existing networks which do not have regulation systems; by simply installing new LED luminaires with wireless kits, without modifying the existing electrical system, it is possible to obtain a management and regulation system with features such as:

- **Cloud Lighting**
Software allows management of the systems both via local networks (intranet) and via cloud architecture, based on a web (internet) connection.
- **Monitoring of consumption**
The system is able to control all types of luminaire and monitor the system's power consumption. By using the various hardware and software solutions available, it is possible to incorporate the system into Building Automation systems.
- **Mesh Network**
Communication between the 3F Wireless modules (luminaires, sensors, servers) uses Radio Frequency signals with 868 MHz Mesh Network technology: an extremely robust and secure solution thanks to encryption of the transmitted data. Each wireless node receives, regenerates and retransmits the commands received in order to extend the range of the entire system.
- **Supervision and Control**
Software allows configuration, monitoring and control of each integrated system and each connected device, both via manual operations and automatic algorithms, based on a calendar, events and conditional logic.
- **Smartphone configuration**
Any mobile device (tablet or smartphone) can be used to configure and control the sensors. The integrated application (Web-App) is displayed via the device's web browser, without the need to install any app on the device.

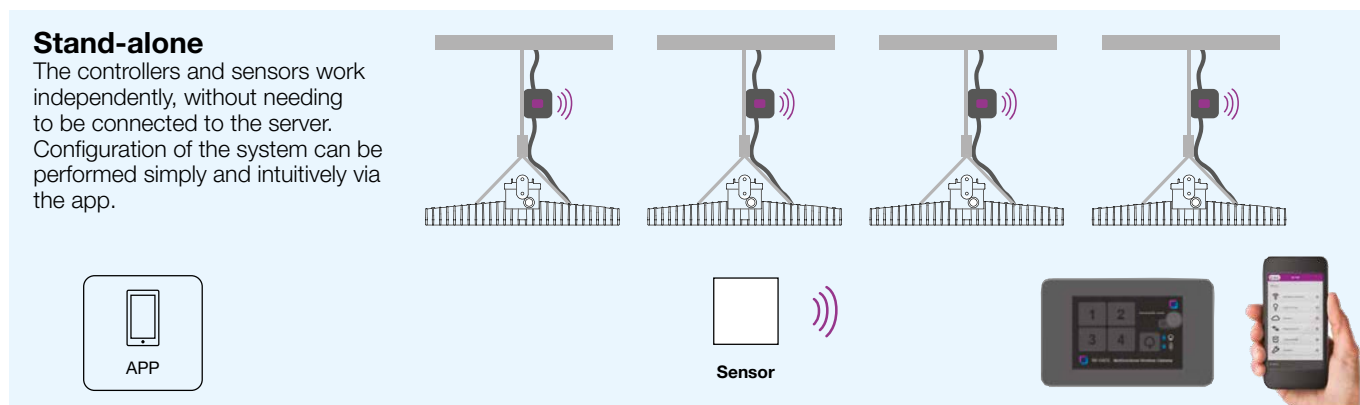
Savings

The advantages are real and tangible in these aspects for the end customer:

- **Installation:** the luminaires and sensors are connected via wireless, without running new cables for regulation of the luminaires; this means not spending more money for electrical supplies and installation labour.
- **Integration with existing installations:** the same lighting connections, using standard electrical wiring: this means not wasting money adapting the systems.
- **Energy savings:** the use of sensors combined with installation of analogue or digital dimmable luminaires permits significant energy savings for the end customer, calculated as being up to 80% compared to a solution with ON/OFF sensors.
- **Quicker return on investment:** savings in the materials and hours of labour for installation and/or updating of the existing systems, combined with the savings offered by the dimmable systems, provides a fast return on investment.

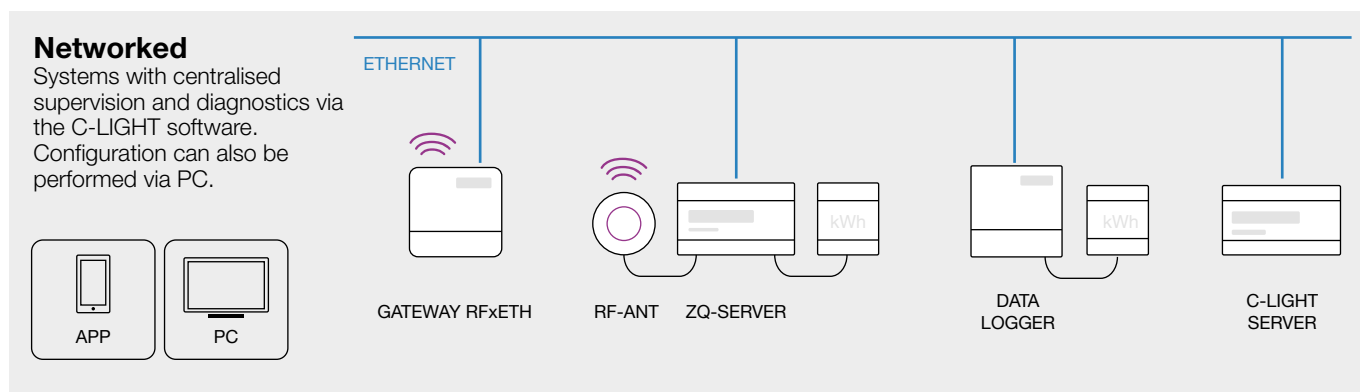
System architecture - What components are required?

Stand-alone. Each luminaire is equipped with a wireless control module which receives commands directly from the **brightness and presence sensor**. The entire wireless system is configured via **BLE RF Gateway** and **Smartphone** with dedicated App.



Networked. Depending on requirements, the system can also be integrated with the servers which manage all necessary information, and the following can be connected to the system:

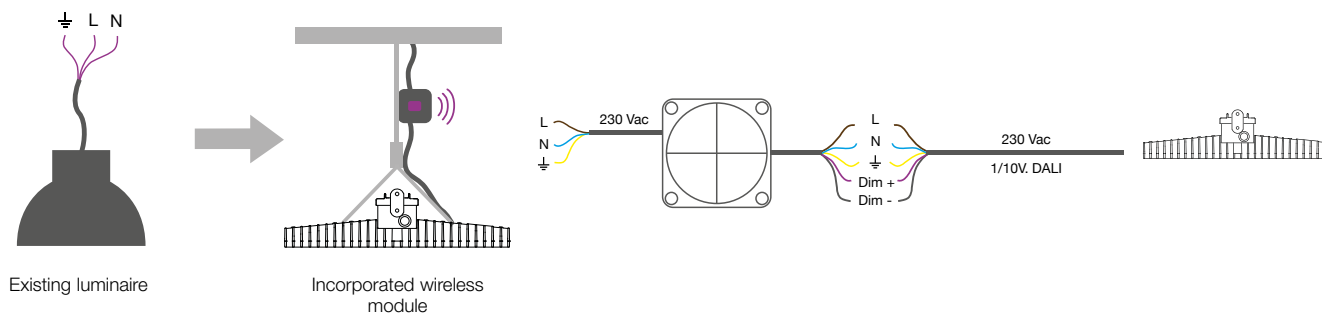
- **Buttons/switches** programmed to bring up control scenes.
- **Energy meters** to monitor the system's power consumption.
- **Control device:** a switch and/or a PC can be connected via the Ethernet interface, or even a Wifi Access Point to allow use of a mobile device (Tablet, Smartphone).



How to connect?

Management of the regulation system without modifying the existing system.

One of the fundamental advantages of using a wireless control system is not having to modify the existing electrical system or, in the case of a new installation, to avoid running dedicated cables for regulation of the luminaires. One-by-one replacement of the individual lighting bodies therefore does not require any additional connection beyond the power supply line.



3F Wireless | Accessories



Portable 868 MHz Bluetooth Gateway, equipped with on button and 4 x configurable buttons for sending wireless commands; battery powered (9V), with integrated digital lux metre for configuration of the wireless systems, in combination with the free App for smartphones (App Store and Google Play). Can be wall mounted for use as a wireless push-button panel: see instructions given on technical data sheet.

Code	Item
A3052	Gateway RF BLE



IP20

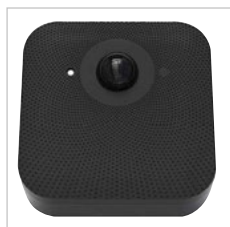


868 MHz wireless controller for the management of a DALI or D1-10V driver (possibility to connect through a DALI cable no. 4 driver, "broadcast" command), equipped with 500VA relay output and integrated wire antenna, housed inside a box made of plastic material 110x110x45mm, IP54 protection rating. 230Vac power supply.

Code	Item
A3055	RFxNODE IP54 Module



IP54

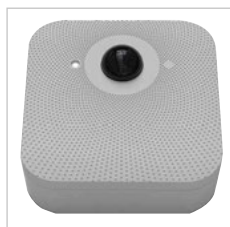


Brightness and movement sensor for high environment (Hmax 16m), equipped with 868 MHz wireless controller for the management of a DALI or D1-10V driver (possibility to connect via a DALI cable n.4 driver, "broadcast" command), 500VA relay output and integrated wire antenna, housed inside a box made of plastic material 110x110x45mm, IP54 protection rating. 230Vac power supply.

Code	Item
A3056	RFxSENSOR IP54 Sensor



IP54



Brightness and movement sensor for high environment (Hmax 16m), equipped with 868 MHz wireless controller for the management of a DALI or D1-10V driver (possibility to connect via a DALI cable n.4 driver, "broadcast" command or addressed), 500VA relay output, digital input, potential free contact and integrated wire antenna, housed inside a 110x110x45mm plastic case, IP54 protection rating. 230Vac power supply.

Code	Item
A3057	DALI-SENSE-HB IP54 Sensor



IP54



868 MHz wireless controller to manage a DALI or D1-10V driver (it is possible to connect 2 "broadcast" command DALI drivers using a cable), compatible with Philips Xitanium SR and Osram DEXAL, dimensions 83x30x19 mm, IP20 protection rating. DALI or 12 Vdc power supply.

Code	Item
A3058	RFxDRIVER IP20 Module



IP20



IP66 polypropylene, RAL 7035 colour box, dimensions 110x110x66 mm, to house the RFxDRIVER wireless control module.

Code	Item
A3059	IP66 Box for wireless module



DALI-SENSE-BMS manages a group of DALI/DALI DT8 fixtures that are cabled in automatic and manual mode using integrated brightness and movement sensors. DALI-SENSE-BMS works in an interconnected mode with all other components in the system and can therefore be used to create multi-group applications and can be centralised via Ethernet with BMS and third-party software.

Code	Item
A3060	DALI-SENSE-BMS Sensor



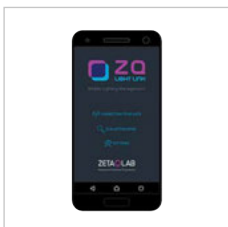
SERVER to control cables DALI fixtures (max 64 drivers) and wireless 868 MHz. Includes the web-based xSERVER Setup app to configure the system. Ethernet interface. Powered DALI interface. 4 digital inputs, 4 digital outputs. RS485 interface. USB Input. SMA connector for external antenna. 24 Vdc power astronomical clock. DIN rail installation (L=105 mm).

Code	Item
A3062	ZQxSERVER Server

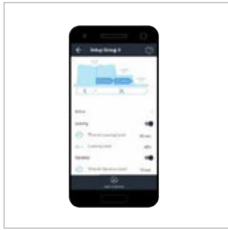


Gateway, module for centralisation of 868 MHz wireless nodes on the TCP/IP network. Ethernet interface. Integrated antenna. 230 Vac power supply. IP54.

Code	Item
A3063	RFxETH Gateway



App free to configure wireless 868 MHz ZETAQLAB devices, available for Apple (iOS) and Android Smartphones and Tablets.



DALI-SENSE App allows you to configure the operating parameters and working methods of the wireless multisensory DALI-SENSE and to manage the DALI fixtures connected manually. The DALISENSE App is compatible with Smartphones and Tablets with a Bluetooth Low Energy interface with Android or iOS operating systems and can connect directly with the DALISENSE sensors using a Bluetooth LE interface.



Software for local (intranet) and remote (internet) systems management that makes it possible to configure, monitor and control all integrated systems and all fixtures connected through manual operations and by using automatic algorithms based on calendar events and conditional logic. The software also allows to archive and export data relating to energy consumption and carry out automatic tests on Emergency devices and UPS, allowing to export the register of various activities, as prescribed by current regulations. For more information contact the headquarters or regional offices.

PASTICCERIA
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3F LED Technology

The real revolution is simplicity



**3F LED Technology.
Easy.**

Introduction

3F Filippi has put more than 60 years of experience in the field to work alongside its designers to create its new LED product line. And the difference is plain to see: in a market full of efficient light sources which is evolving and developing from one day to the next, 3F Filippi has decided to equip its luminaires with sources manufactured using the highest quality components available.

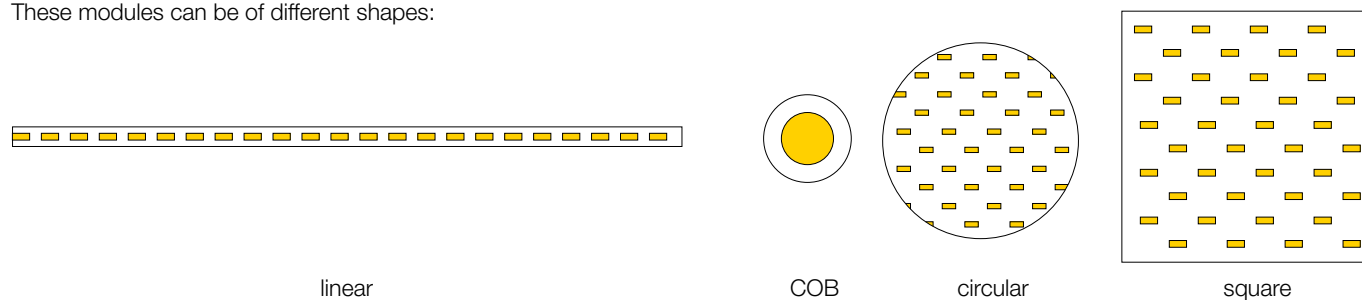
Unfortunately, one of the most common problems for lighting designers is the lack of a common standard to regulate how lighting companies advertise the performance of their products: these "tricks" hinder comprehension and comparability of products. For this reason, we have decided to shed light on the matter with this guide, by explaining LEDs and their most important characteristics simply yet exhaustively.

It is important to remember that the original technical features of LED lighting will change according to the operating conditions of each luminaire, and as such, it is incorrect to assume that every LED has the same characteristics in terms of service life, decrease of luminous flux (L) life expectancy (B), etc.

What is an LED?

LEDs are electronic components which emit light when an electrical current passes through them – the name, indeed, is an acronym for Light Emitting Diode. This is possible thanks to the optical properties of some semiconductors which emit photons when current is passed through them.

When a group of LEDs are installed on a printed circuit, this is known as an LED module. These modules can be of different shapes:



What are the advantages of 3F LED technology?

Illuminotechnical

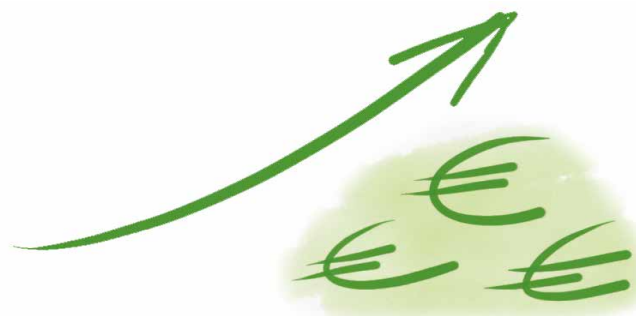
- High luminous efficiency LED: up to 200 lm/W
- Immediate on
- Control of the light flow, directed light
- Absence of emission of IR and UV components
- Very long lifetime, > 50,000 hours (professional range)
- Lower power than traditional light sources with equal light output
- Increased brightness
- Adjustment of luminous flux from as low as 1%

Environmental

- Mercury free
- Lower CO₂ emissions thanks to lower power
- Less use of polluting materials in LED production
- Less heat lost to the environment

For the customer

- Reduction of energy costs
- Reduction of maintenance costs
- Fast return on investment



Comparison chart between luminaires of the same length

	Total luminaire of luminaire	Total energy consumption	Annual saving
2x58W Fluorescent Wiring low-loss EEI=B2	141W	€102	0%
2x58W Fluorescent Wiring EEI A2 electronic wiring	109W	€78	24%
2x30W LED wiring ballast	70W	€50	51%
2x22W LED electronic ballast	49W	€35	66%

Table supposes electricity cost of €0.18 per kWh and total annual operation of 4,000 hours.

3F LED Technology

What are the aspects to consider when choosing an LED luminaire?

Reference standards

When studying and designing products, 3F Filippi refers to the most recent specific reference standards:

IEC 62722-2-1

Luminaire performance - Part 2-1: Particular requirements for LED luminaires

IEC 62717

LED modules for general lighting - Performance requirements

CIE 121

The Photometry and Goniophotometry of Luminaires

IEC TR 62778

Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires

IEC EN 62471

Photobiological safety of lamps and lamp systems

IEC EN 60598-1

Luminaires: General requirements and tests

REGULATION (EU) No. 1194/2012

sets out the rules for the application of European Parliament and European Council Directive 2009/125/EC on the specifics of environmentally-friendly design of directional lamps, lamps with light-emitting diodes and other relevant equipment.

Ideal operating temperature

In order for LED modules to be able to function correctly and ensure a long lifetime (>50,000 h), a limited drop in luminous flux over time (>L85) and high luminous efficiency (>140 lm/W), they must be able to correctly dissipate the heat they generate.

The rated data for LEDs applies only if the junction temperature (T_j) is not exceeded. For this reason, at 3F Filippi, we perform a series of thermal and illuminotechnical tests on our LED luminaires, which allow us to achieve the best combination of heat dissipation, luminous flux and rated power.

Ambient performance temperature “ t_q ” (IEC 62722-2-1)

The “ t_q ” value indicates the nominal ambient temperature recorded around the tested luminaire.

IEC standard 62722-2-1 “Luminaire performance - Part 2-1: Particular requirements for LED luminaires”, requires the manufacturer to declare the technical performance data relating to the ambient temperature (t_q) of +25°C. The luminous output, total power and the service life expectancy of fixtures indicated in official documents (web site, datasheets and photometric curves), therefore refer to the performance ambient temperature t_q +25°C (according to EN13032 standard requirements by the 3F Filippi CTFs2 certified photometric laboratory).

In order for designers to evaluate the decays of different operating durations in advance and to set up maintenance programmes on the system 3F Filippi also includes the useful life (L) and life expectancy values (B) on the datasheet which refer to:

30,000 hours, at performance ambient temperature (t_q +25°C);

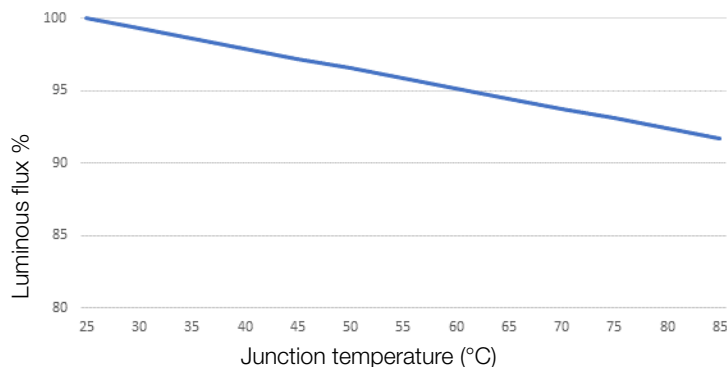
50,000 hours, at performance ambient temperature (t_q +25°C);

80,000 hours, at performance ambient temperature (t_q +25°C);

100,000 hours, at performance ambient temperature (t_q +25°C)

50,000 hours, at the maximum operating temperature (t_{max}) for luminaires with operating temperatures greater than t_q + 25° C.

Thermal management



LED Junction temperature	Tj 25°C	Tj 60°C
Lumens	1000	950
System	178 lm/W	169 lm/W
Useful life (@50,000h)	L 100	L 85
Life expectancy	B 0	B 10

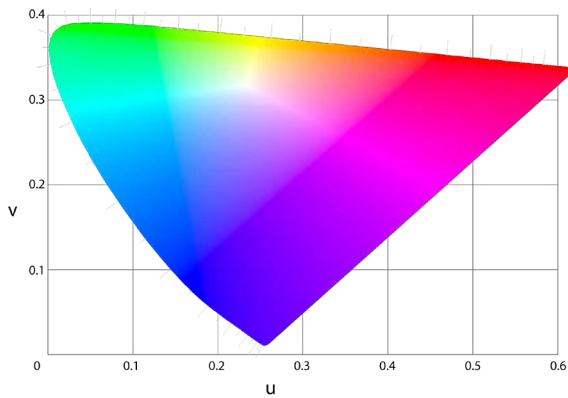
To increase LED luminaires' reliability to the maximum, correct thermal dissipation is essential.

The temperature is fundamentally important as it influences the luminosity and lifetime of the LED component.

3F Filippi pays great attention to this factor and as a result we develop luminaires which ensure optimum heat dissipation.

Above a chart that correlates the performance values at different junction temperatures T_j .

Colour rendering index (CRI)



The colour rendering index is an important parameter for the performance of a light source, and evaluates the source's ability to provide an accurate perception of an object's real colours. All LEDs used by 3F Filippi have colour rendering $R_a > 80$, with a typical average value of around 85. Where not already provided for, high colour rendering of $R_a > 90$ can be requested on some products.

The CRI index of 100 has always been attributed to traditional incandescent sources, with a continuous spectrum but poor in shades of blue (therefore not very suitable for the enhancement of objects with dominant blue). The LED sources, despite having a continuous spectrum with peaks on specific colors, have a maximum CRI of 98.

Below are the two main methods of measuring the color rendering of the light source or of what is emitted by the lighting luminaire (through its lenses, refractors or optical filters).

In the product documentation, the colorimetric characteristics are expressed both through the CRI method and through the TM30 method in order to provide the designer with all the information necessary for choosing the best light according to the specific need in the application to be illuminated.

CRI method

CRI (Color Rendering Index) is a measurement method for assessing the ability to recognize a color, developed by CIE 13.3. The R_a parameter provides an average indication over the entire light spectrum and is obtained from the average of the color rendering indexes of 8 unsaturated colors (normally individually referred to as R_1 to R_8).

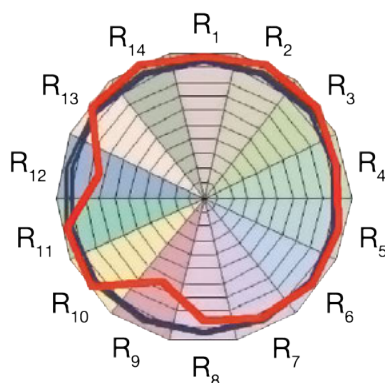
The less used parameter R_e , on the other hand, provides a more precise average indication of the entire light spectrum obtained in fact from the average of the color rendering indexes of 14 colors (normally called individually from R_1 to R_{14}). The added reference colors are the 6 most common typologies in daily life.

Index 100 means that the exposed color is recognized in a perfect way, as in sunlight, while lower indices indicate a greater growing difficulty in recognizing that particular color.

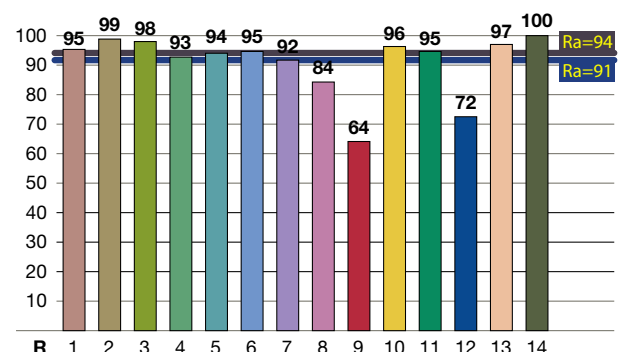
Auto:
ref.illuminant -
Planckian radiator
CCT=4159 K

$R_a = 94$

$R_e = 91$

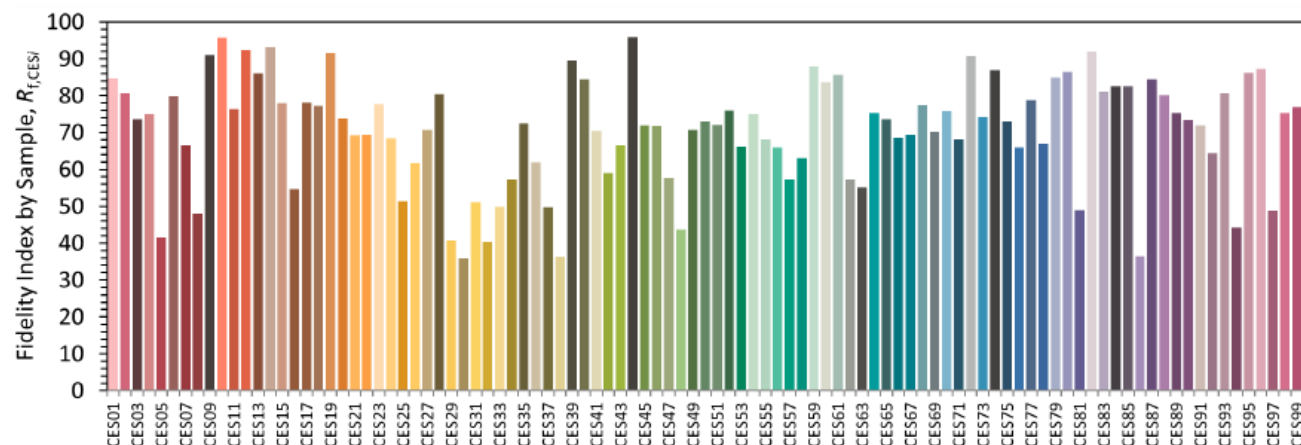


Auto: ref.illuminant - Planckian radiator CCT=4159 K



TM 30 method

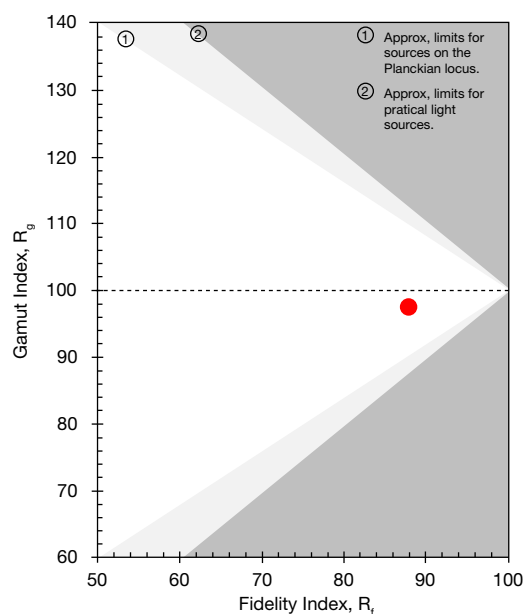
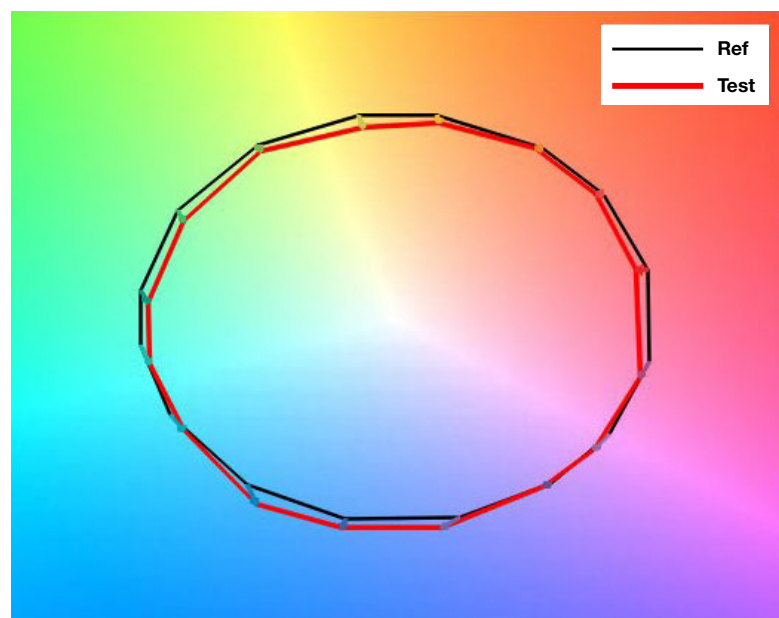
Very precise measurement method developed by the American IES (Illuminating Engineering Society), according to the TM30 as it is based on the color rendering comparison of 99 sample colors (Color Evaluation Samples - CES).



The spectroradiometric measurement provides the evaluation of two quantities:

- R_f Fidelity index
- R_g Saturation index (Gamut)

It also introduces important indications on the ability of the various sources to restore the fidelity of the materials and the color distortion diagram that represents the variations in hue and saturation of each source.



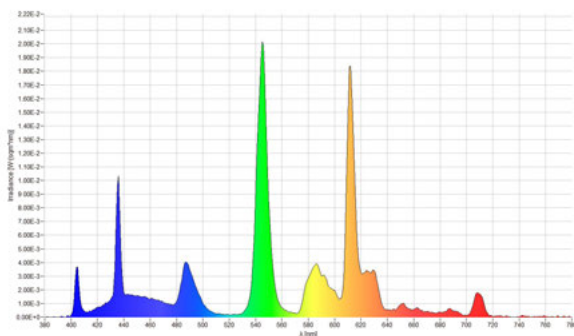
R_f (Fidelity) is similar to CRI but more precise and provides indications about the fidelity of color rendering. Its maximum value is 100.

R_g (Gamut) provides an indication of the source's ability to reproduce color saturation (amplitude of the color gamut). A value of 100 indicates that, on average, the test source does not change the hue and saturation of the ESCs, compared with the sample source. A value > 100 indicates an increase in color saturation and therefore more vivid colors. A value < 100 indicates a decrease in saturation.

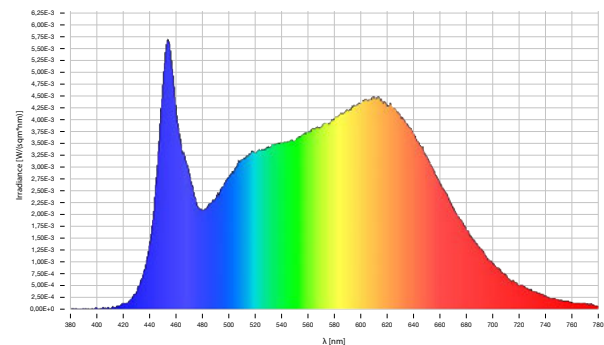
Combined with each other, " R_f " and " R_g " allow you to define the color rendering of a light source in a differentiated but more complete way.

Colorimetry and light spectrum

Typical light spectrum of fluorescence



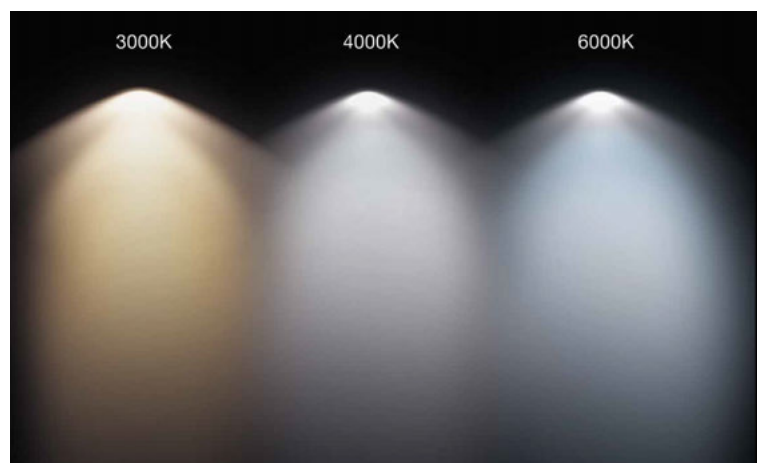
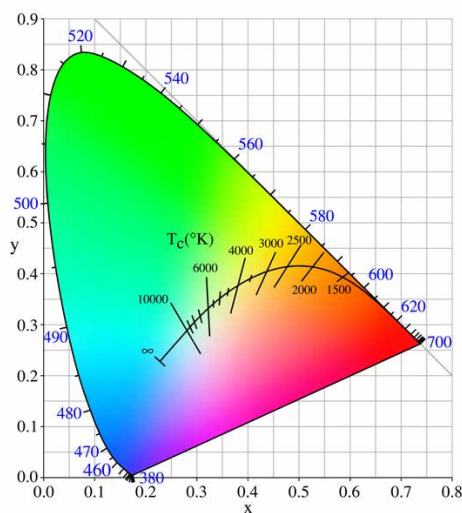
Typical light spectrum of LED



LED sources have a light spectrum with greater uniformity across the whole range of colours.

Unlike traditional light sources, LEDs do not have interruptions in colour, thus ensuring complete and much-improved vision of the entire colour spectrum - very similar to that seen with natural light.

Correlated Color Temperature (CCT)



The CCT correlated color temperature is expressed in Kelvin and is defined on the basis of comparison with the light emitted by an ideal black body of reference at the different temperatures. A source will therefore have a color temperature of 4,000K, when the light emitted will have the same hue as that of the black body brought to the reference temperature of 4,000K. It is important to specify that CCT is totally independent of the color rendering of the source and does not provide any information on it.



A warm light normally hovers around 3,000K, a neutral white hovers around 4,000K while a cold white hovers around 6,000K.

Chemical compatibility

For LED luminaires, care must be taken to ensure chemical compatibility with the individual LED chips which, when exposed to given organic compounds, for example substances containing sulphur (S), chlorine (C) or other halogens (ammonia, diesel etc.) are liable to sulphuration (or oxidation) of the component.

Sulphuration can cause reductions in flow and useful lifetime, a change in chromatic co-ordinates and, in extreme cases, interruption of the electrical circuit and breaking of the junction.

Even for the LEDs inside IP65 lighting bodies, which also benefit from significant protection, this cannot be considered absolute.

On request: for particularly corrosive applications, LED modules with special protection can be used.

3F LED Technology

Glossary



Luminous flux

The luminous flux, or light flow, coming from the luminaire represents the quantity of light actually coming out of the device, as its value is defined having already taken into account the luminous efficiency of the luminaire.

Luminous efficacy of the luminaire

The luminous efficacy of the luminaire is the most useful parameter for the designer to determine the right lighting luminaire because provides the practical data between the light emission and the overall absorption of the lighting luminaire.

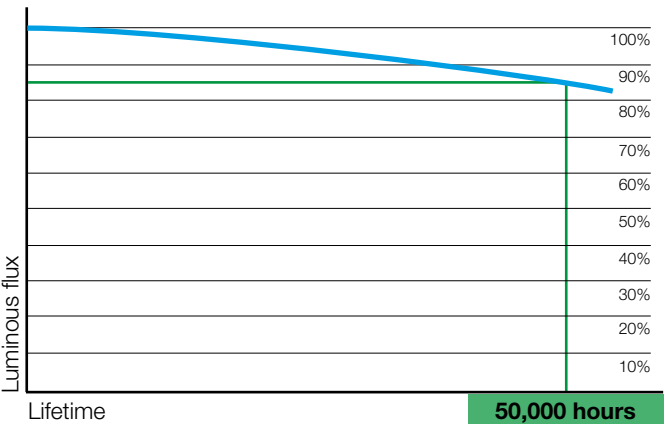
Relative humidity UR

For correct maintenance and operation of traditional LED modules over time, the maximum permissible humidity on the component is 85%.

For specific applications, UR95 LED modules may be required, guaranteeing correct operation at humidity values of up to 95%.

Lifetime (L value)

As previously mentioned, LED sources, unlike traditional lighting, do not tend to suddenly blow at the end of their lifetime; LEDs rather have a gradual reduction of their luminous output overtime before completely running out after a very long time.



The percentage decline of the luminous flux with reference to the useful number of operating hours (usually 50,000 hours) is therefore determined with the parameter "L".
L85:50000h therefore means that, having reached 50,000 h of operation, the LED module still provides 85% of its initial luminous flux.

LED life expectancy (B value)

In LED ratings the value B, followed by a value normally between 10 and 50, indicates the quality of the component used as it defines the percentage of components which, after the normal 50,000 h has elapsed, maintain their rated luminous flux.

An LED with declared values of L85/B10=50,000h indicates that on reaching 50,000h, 90% (B10) of the components will have a residual luminous flux of at least 85% of the initial value (L85).

If, in the listed characteristics of the LED luminaire, the value B is not indicated, this is considered to be a B50 device - or in other words, 50% of the LEDs do not guarantee the average useful life value indicated.

We should clarify that this parameter is strongly influenced by the operating conditions of the LED inside the luminaire, and the result is therefore a combination of the quality of the component and good research.



■ equal to or more than 85% of the initial flux

■ less than 85% of the initial flux

LED failure rate (C value)

This value indicates the percentage of LEDs which are no longer operational at the end of their lifetime.

This value can be indicated with two combinations:

- L85/B10/C0: 50,000 hours - indicates that after 50,000 hours, the percentage of LEDs no longer working is 0%.
- L85/B10: 50,000 hours - L0/C10: 200,000 hours - indicates that after 200,000 hours, the percentage of LEDs no longer working is 10%.

All LEDs used by 3F Filippi have a failure rate C0 after 50,000 hours. If this value is not indicated, it should be considered C0.

Colour tolerance (MacAdam ellipses) - SDCM

Measurement of the chromatic co-ordinates performed during production of the LED allows selection (known as Binning) to classify the LEDs on the basis of their chromatic differences.

This classification, performed via analysis of the so-called MacAdam ellipses (which express colour deviations on the XY axes), allows constant tonality to be obtained among the individual LEDs in the same group and an SDCM (Standard Deviation of Colour Matching) which can be classified as:

- With the value 1 there is no chromatic difference between the individual LEDs.
- With values 2 and 3 the difference is not visible to the human eye and the LEDs are considered of good quality.
- With a value of 4, the difference begins to become visible to the human eye.
- As the value increases, the difference is increasingly noticeable, and the type of application will dictate whether these differences in colouration in the LED group used are acceptable or not.

The LEDs used by 3F Filippi have, in most cases, an initial color tolerance value within the 3 SDCMs, except luminaires for which different tolerances are considered due to their specific type of application.

Energy efficiency class

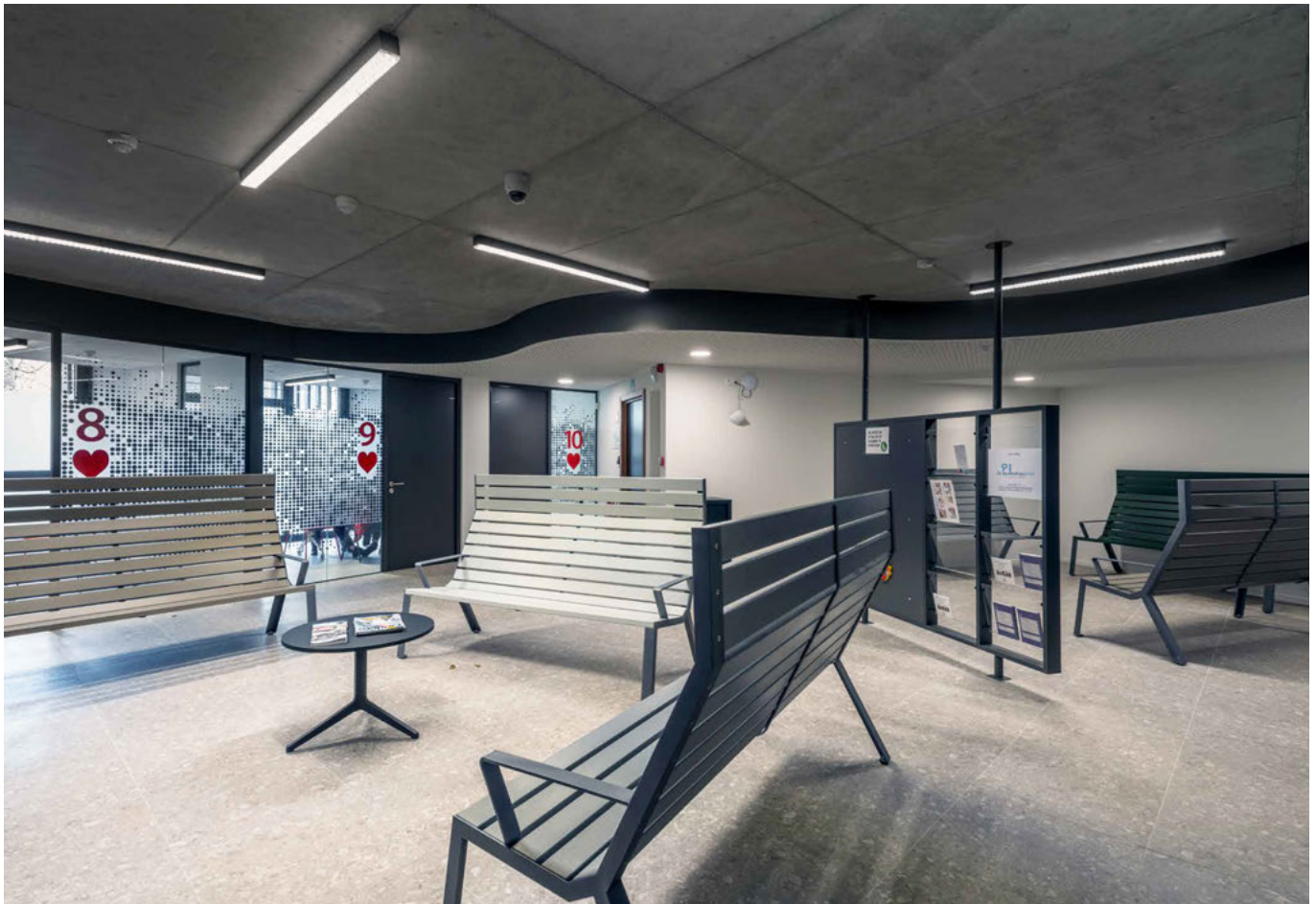
The Directive EU 874/2012 regarding the energy labelling of luminaires sold directly to end users stipulates that for all LED luminaires with integrated light sources, the Energy Efficiency Class (EEC) indicated must be as follows: A / A+ / A++.

Indicating a precise energy efficiency class means that the luminaire has been assessed as if it were a lamp/source.

As such, all 3F Filippi luminaires come with the best Energy Efficiency Class (EEC): A / A+ / A++ (EU 874/2012).

3F LED Technology

Flicker



Fixtures with the “SAFE FLICKER” logo have parameters of $P_{st}^{LM}=1$ and $SVM \leq 1$, in compliance with regulations IEC TR 61547-1 and IEC TR 63158, to ensure a more comfortable and safe light.

- **P_{st}^{LM} (Short-Term flicker)**

Quantifies visible Flicker that is harmful to human health caused by the modulation of light in the frequency range between 0.3Hz and 80Hz.

The recommended threshold is $P_{st}^{LM} = 1$.

Note – This value was determined based on a representative test group of people and identifies the average perception threshold of visible flicker.

- **SVM (Stroboscopic Visibility Measure)**

Quantifies stroboscopic effects that can occur in situations relating to objects in movement in the presence of modulation of light in the frequency range between 80Hz and 20KHz.

SVM=1 represents the visibility threshold in a test group of people that quantifies the stroboscopic effect in defined laboratory conditions.

Fixtures that do not bear the “SAFE FLICKER” logo on the other hand show the flicker value declared by the driver manufacturer which is not determined according to IEC criteria.

Constant renewal of drivers will bring about the introduction of new models in line with IEC requirements. For more details and/or specific needs please contact our technical department.

Technical details

Flicker is defined as “the rapid variation of the intensity of a light source over time”; in particular that relating to the frequency range between 0-80Hz.

When fluctuations on the other hand belong to the interval between 80Hz-2KHz this are called “Stroboscopic effects” in which light fluctuation produces an incorrect perception of the movement of objects lit by the same source by a static observer.

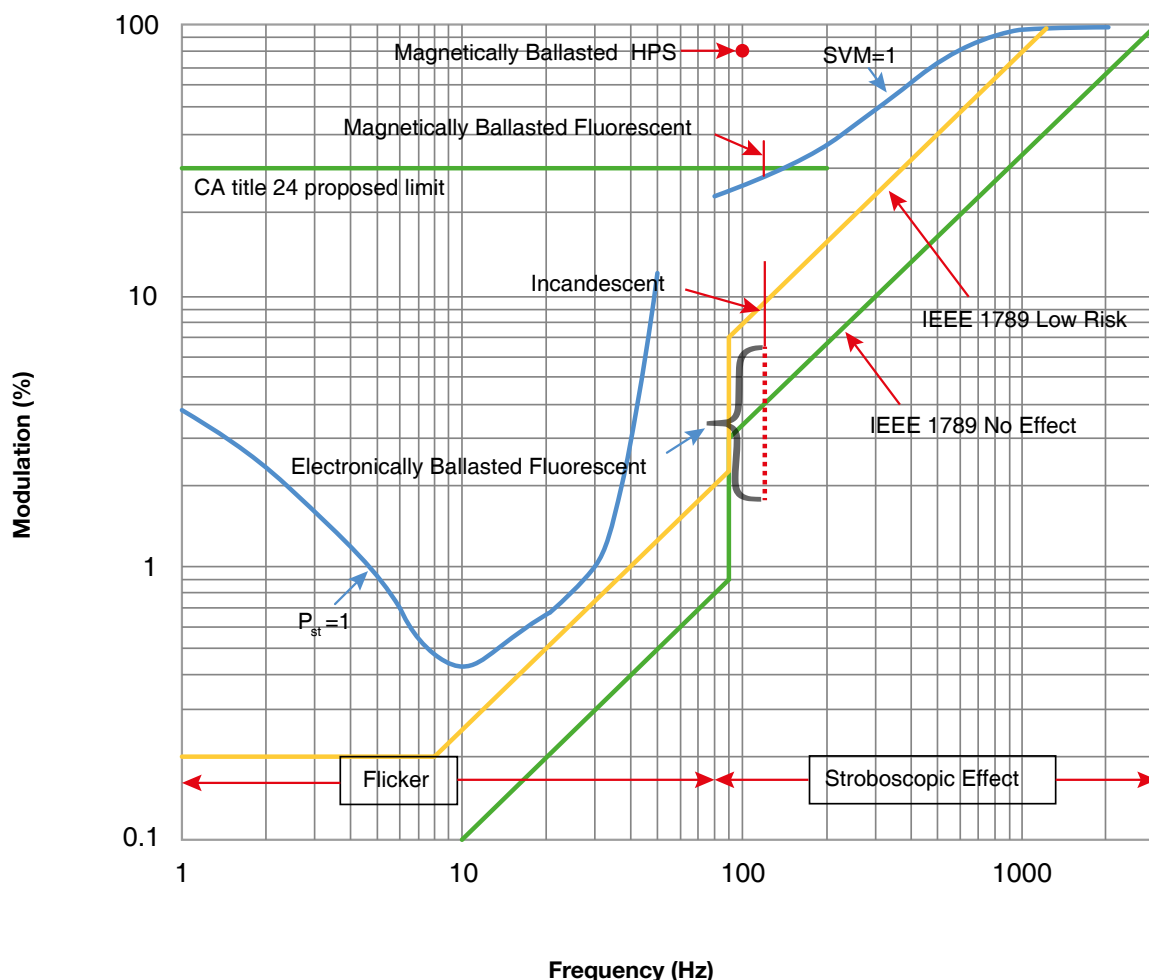
This phenomenon became increasingly important following the introduction of LED light sources for general lighting given the combination of the following aspects:

- LED sources are characterised by a high speed response to fluctuations in the power supply which translate into variations of the light emitted
- Unwanted residual fluctuations of the driving current of LED sources generated by the electronic power supplies used
- Modulation of the driving current of LED sources for example PWM (Pulse Width Modulation), necessary to adjust the emission level
- Any instability in the operation of dimmers connected externally to the LED source power supplies

This fluctuation in light intensity, according to the frequency, intensity, viewing angle, level of light in the environment, age of the observer and their sensitivity level, can be perceptible on a conscious and/or unconscious level and generate a series of side effects depending on the sensitivity level such as: headaches, visual fatigue, distraction etc.

In order to mitigate the risks on health in lighting contexts using LED sources, recommendations have been developed for the American market (see: IEEE Std 1789™-2015), and the European market with Technical Reports IEC TR 61547-1 and IEC TR 63158.

The graphic below summarises the limits provided for in the two different “regulations”, based on different evaluation mechanisms to establish when a fixture is “SAFE” for observers.



Built-in Emergency lighting

LED emergency wiring characteristics

The emergency fluxes (BLF) of the individual luminaires are indicated in the technical datasheets that can be downloaded from our website.

Wiring created with emergency lighting systems with the following characteristics:

- Rigid cables cross sectional area 0.50-0.75-1 mm² (0.75-1 mm² also Class II), HT heat resistant PVC 90°C, CEI 20-20.
- 230V-50/60Hz electronic inverter with protection against excessive battery discharge.
- Sealed Nickel-Cadmium or Nickel-Metal Hydride NiMH.
- LED to signal presence of power supply and battery charging.
- Recharge time 24 hrs.
- Running time = 1h minimum under heaviest working conditions.
- 3-pole terminal block with incorporated disconnecting fuse for standard power supply live-earthing-neutral (LTN).
- 2 pole terminal block for power supply of the emergency recharging line.
- Complies with IIEC 60598-1, CEI EN 60598-1 (CEI 34-21) and CEI EN 60598-2-22 (CEI 34-22).
- Suitable for rooms with temperature from 0°C to +25°C.
- Excluding high risk areas.

On request:

- Emergency mode with 3 hours duration, 24 hours recharge, or 1.5 hours duration and 12 hours recharge (according to feasibility), maintaining the same percentage of the standard luminous flux.
- Emergency lighting with 2 hours battery life and 12 hours charging (according to feasibility), for the emergency lighting luminous flux percentage contact our Sales team or our technical department.
- Wiring with intelligent control systems and centralised or local self-diagnostics of emergency lighting.

EP LED permanent emergency lighting

When power is on, EP luminaires operate like normal luminaires.

The LED module connected to the emergency kit turns on or remains on automatically in the absence of mains voltage.

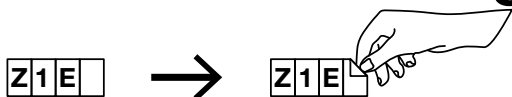
The luminous flux declared on the datasheets are the minimum required for the entire duration of nominal autonomy as required by the regulation CEI EN 60598-2-22 and are those to be considered in the design phase. The luminous flux indicated are the OUTPUT ratio of the fixture.

ENP non-permanent emergency LED lighting

In ENP luminaires, the LED module switches on only in emergency mode, when there is a power cut.

The luminous flux declared on the datasheets are the minimum required for the entire duration of nominal autonomy as required by the regulation CEI EN 60598-2-22 and are those to be considered in the design phase. The luminous flux indicated are the OUTPUT ratio of the fixture.

Centralised emergency lighting power supply



IEC/EN 60598-2-22

Fixtures in compliance with EN 60598-2-22 to power a centralised emergency system CPSS (Central Power Supply System), not integrated into the fixture – excluding high risk areas.

230Vdc Centralised power supply (As an example and subject to change without notice)

Normally when the centralised source is in 230Vdc direct current (nominal), in emergency lighting the following functions occur:

- Fixtures equipped with DALI drivers by default reduce their power and as a consequence their output flow by 15%.
- Fixtures equipped with NON ADJUSTABLE drivers maintain their power and as a result their output flow at a maximum level.

230Vac Centralised power supply (As an example and subject to change without notice)

When the centralised source is in 230Vac alternating current, in emergency lighting the following functions occur:

- Fixtures equipped with DALI drivers by default increase their power and as a result their output flow at a maximum level (100%) (when the DALI system fails).
- Fixtures equipped with NON ADJUSTABLE drivers maintain their power and as a result their output flow at a maximum level.

To check compliance with EN 60598-2-22 and AC/DC operating see the datasheets that can be downloaded from the website.

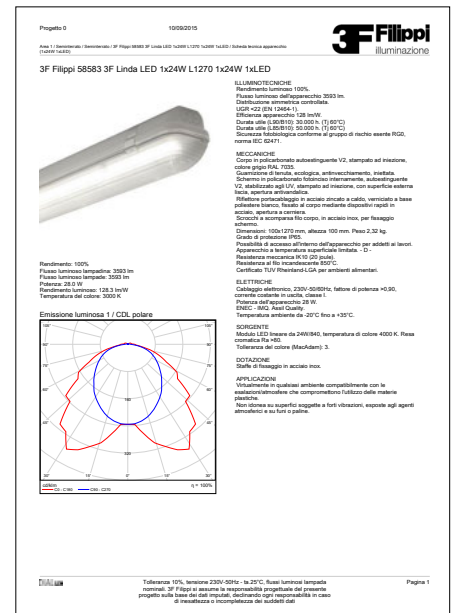
Assessment of compatibility between the centralised source and drivers as well as compliance with switching times between normal and emergency power supplies and battery life is the exclusive responsibility of the electrical systems designer.

For more information please do not hesitate to contact our Sales Network or Technical Department.



Professional lighting engineering design and free consultancy

- Consult the photometric characteristics of the luminaire in order to establish the correct application.
- Calculate and check the level of illumination, luminance, as well as the uniformity over horizontal work surfaces (such as work tops and ceiling), vertical work surfaces (such as walls or inclined virtual planes, vertical walls in the room, etc.) and to perform calculation for irregular layouts. With these results, data sheets can be produced with the values shown in point-by-point, isolux, tables, room surfaces, as well as 2D and 3D views of the environment.



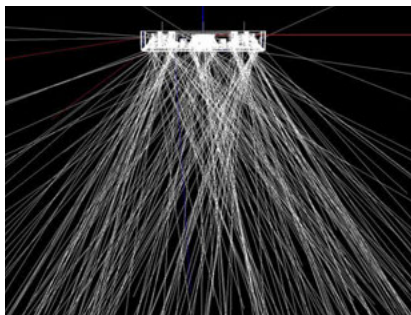
Product datasheet with indication of the lighting, mechanical and electrical characteristics.



- To make the calculations more precise and create very realistic environments, architectural and furnishing elements can be placed inside the program's simulation environment.
- The software and the 3F Filippi plug-in are available free to designers, installers and electrical distributors.
- Updates of photometric files and of the lighting engineering software can be downloaded free of charge from our website.
- For further information, contact our technical consultants.



3F Filippi



3F Filippi is UNI EN ISO 9001 certified for lighting engineering design too.

3F Filippi guarantees photometric data sheets, according to the latest European and international recommendations and standards, thanks to the support of the photometric laboratory, in line with official European laboratories.

The photometric tests are performed by procedures in accordance with the UNI EN 13032 and CIE 121 standards.

3F Filippi has the most advanced computer programs for research and optimisation of louvres and flow recuperators in order to achieve maximum efficiency and suitable light distribution for the most widely varying applications.

This commitment has been recognised and certified by the CSQ (Italian Company Quality Systems Certification) also for the entire phase of lighting engineering design, thus allowing operation under a Quality Assurance system that also covers interior lighting design in accordance with good engineering practice.

Our ISO 9001 certification, awarded by CSQ (certificate no. 9130.3FFI) can be viewed on our website in the "Certifications and Guarantees" section.

3F Filippi, as further guarantee of the quality of its products and care to meet the strictest standards, is a sustainer of the most lighting engineering associations in the world:



AIDI (The Italian Illumination Association) carries out incisive and constant scientific, cultural and technical reporting to spread knowledge of lighting issues.

www.aidiluce.it



ASSIL (Italian Lighting Producers' Association) provides technical and normative support for quality and performance improvements of lighting technology on the market, while helping respect people's visual comfort, energy-efficiency requirements and environmental protection.

www.assil.it



IESNA (Illuminating Engineering Society of North America) is the American lighting body which promulgates lighting engineering standards on the American market for designers, producers and professionals in the sector.

www.iesna.org

Lighting engineering calculation software

Don't trust in words. Make your own calculations.

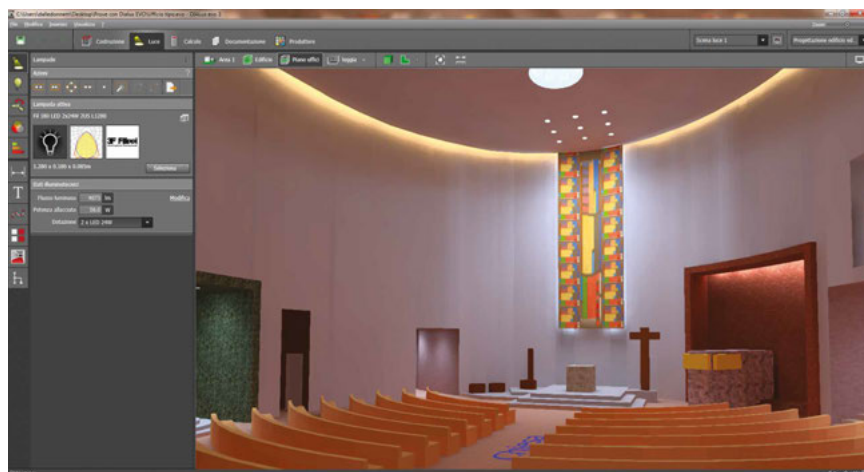
On our website we provide data sheets, product updates and specifications for our products - all of which are freely available and free of charge.

The Eulumdat files which you can find online can be used in any lighting engineering program, allowing you to continue using the software you prefer (e.g. DIALux, LITESTAR 4D Litecalc, AGi32 or 3D Studio Max).

In particular, 3F Filippi has decided to collaborate more closely with the software-houses Relux and DIAL to create plug-ins for their lighting engineering calculation programs:



RELUX®
light simulation tools
Relux



DIAL - DIALux evo

For particular requirements or to make a comparison, contact our Sales Network.



Lighting engineering

Reflection coefficients to use for lighting calculations

Reflections in % of painted surfaces and materials (ceiling max 85%; walls max 50%; floor max 30%).

White	75 ÷ 85	Panels in light-coloured mineral fibre	75 ÷ 85
Light cream	70 ÷ 80	Panels in light-coloured wood	50 ÷ 60
Yellow	60 ÷ 70	Plaster	70 ÷ 80
Light grey	45 ÷ 65	White paper	70 ÷ 80
Pink	45 ÷ 55	Window panes	06 ÷ 08
Light red	20 ÷ 30	Light-coloured curtains with narrow mesh	65 ÷ 70
Medium grey	20 ÷ 40	Light-coloured curtains with wide mesh	35 ÷ 40
Light blue, green	35 ÷ 55	Cement, rough concrete	20 ÷ 30
Dark grey, green, red	10 ÷ 20	Light-coloured marble	40 ÷ 60
Black	03 ÷ 05	Granite	15 ÷ 20

Maintenance factors to use for lighting calculations

The lighting of a room is the result of the interaction between the luminaires, their condition of use, the aging of the sources and the environment in which they are installed.

The reference standard is certainly ISO/CIE TS 22012 "Light and lighting - Maintenance factor determination - Way of working" which provides the designer with various information attachments with examples and reference values to be considered during the design phase.

The maintenance factor f_m is determined by the following formula:

$$f_M = f_{LF} \cdot f_S \cdot f_{LM} \cdot f_{SM}$$

f_{LF} (Luminous flux factor) is the decay factor of the luminous flux of the source over time (for LEDs it is the declared factor L_x).

The luminous flux (lumen) of an operating source gradually decreases over time.

This reduction depends on the type of light source and on the operating conditions related to the thermal management of the lighting luminaire.

This factor is defined on the basis of the drop in luminous flux before performing maintenance (changing the lamp or luminaire).

In the case of CLO (Constant light output) drivers the factor to be considered is 1.

f_S (Survival factor) represents the mortality rate of the light sources.

After a certain period of time the light sources can go out. This phenomenon suddenly reduces the level of lighting inside the rooms.

In the case of sources that do not have mortality due to their technology (for example the LED), this factor must be considered equal to 1.

f_{LM} (Luminaire maintenance factor) represents the reduction of the luminous flux of the luminaire due to dirt.

Dirt and dust present in almost all environments accumulate on the lamp, considerably reducing the amount of light emitted.

When they accumulate on the surfaces of the luminaire, the amount of light reflected or transmitted by these surfaces is also reduced.

This factor depends on the environment where the lighting luminaire is located, on the type of construction characteristics (for example: luminaire with or without screen, indirect lighting with greater dust deposit, degree of protection, any chimney effect that removes dust from the surfaces reflective), expected cleaning cycle (every 1-2-3-... years).

f_{SM} (Surface maintenance factor) represents the reduction of reflections on the surfaces of the room due to dirt.

Dirt on the surfaces of rooms tends to reduce the amount of reflected light.

Clean surfaces maintain the ambient lighting level more.

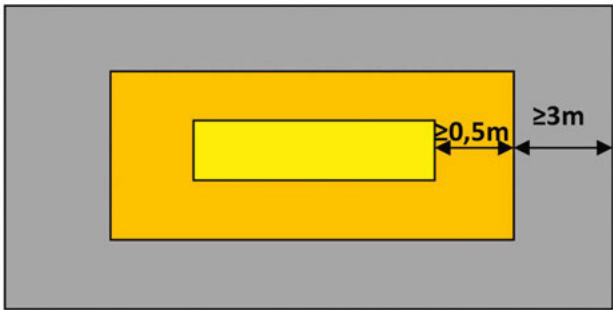
This factor depends on the type of activity carried out and the type of processing, for example in an office with weekly cleaning and repainting at regular intervals, this maintenance factor will be higher than in a factory with monthly cleaning intervals and repainting to be carried out only in case of real need.

Standards - Indoor lighting

EN 12464-1: 2011 Illumination of interior workplaces

This European standard for illumination of interior workplaces replaces the previous one from 2004, with an increase in the importance of illumination to allow workers to perform their visual tasks efficiently and accurately.

- Three calculation areas are defined:
- Task-area, determination of the visual task area. If this cannot be determined, the whole surface of the environment is considered.
 - Immediately surrounding area, at least 50 cm around the task area.
 - Background area, at least 3 m around the immediately surrounding area.



- Task area
- Immediately surrounding area
- Background area

Illumination of the immediately surrounding area may be lower than that of the task area but must not be lower than the values given below:

Task area	Immediately surrounding area
≥ 750 lx	500 lx
500 lx	300 lx
300 lx	200 lx
200 lx	150 lx
150 lx	Etask
100 lx	Etask
≤ 50 lx	Etask

Lighting values are unchanged: the design must include calculation of a maintenance factor that considers both decrease of luminous flux of lamps and level of dust accumulation in the room.

For good visual communication and recognition of objects, two requirements gain importance:

- Cylindrical illuminance.
- Modelling.

Cylindrical illuminance is calculated by the average of the vertical illuminances around the measuring point. The standard requires the following:

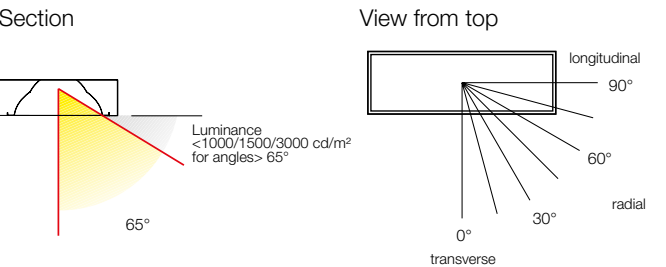
Average cylindrical illuminances in interior	
Seated persons 1.2m	Ez > 50 lx
Standing persons 1.7m	Ez > 50 lx
Good visual communication, e.g. offices, meeting rooms, teaching spaces, etc.	Ez > 50 lx
Uniformity	Uo ≥ 0,10

Modelling represents the equilibrium between diffuse and directional light and is calculated as the relationship between the cylindrical and horizontal illuminance at the measurement point. Good modelling is obtained with a value between 0.3 and 0.6.

EN 12464-1: 2011 introduced new limits of average luminance for lighting devices which reflect on computer screens:

Luminaire average luminance limits for radial angles >65°		
Screen luminance	High luminance screen L > 200 cd·m ⁻²	Medium luminance screen L ≤ 200 cd·m ⁻²
case A positive polarity and normal requirements regarding colours and details of information viewed, for example offices, schools etc.	≤ 3000 cd·m ⁻²	≤ 1500 cd·m ⁻²
case B negative polarity with greater requirements regarding colours and details of information viewed, for example for CAD, colour inspections etc.	≤ 1500 cd·m ⁻²	≤ 1000 cd·m ⁻²

Glare check for rooms with VDTs



Lighting engineering

Average illuminations maintained by EN 12464-1: 2011 (**indoor environments**)

Type of interior, task and activity	Em (lx)	Glare UGR _L	CRI
OFFICES			
Writing and data processing	500	19	80
CAD stations	500	19	80
Technical drawing	750	16	80
Conference and meeting rooms	500	19	80
Filing and copying	300	19	80
Archives	200	25	80
Reception	300	22	80
SCHOOLS			
Playrooms in nursery schools	300	19	80
Handicraft rooms	500	19	80
Classrooms in secondary schools	300	19	80
Classrooms in evening and adult education schools, art education	500	19	80
Technical drawing rooms	750	16	80
Music practice rooms, language labs	300	19	80
Common rooms and main hall	200	22	80
Preparation rooms and workshops	500	22	80
Computer labs	300	19	80
Vertical illumination of blackboards	500	19	80
Entrances	200	22	80
Teachers' rooms	300	19	80
Storage rooms for teaching material	100	25	80
Sports facilities, swimming pools (general use)	300	22	80
Canteen	200	22	80
Kitchen	500	22	80
LIBRARIES			
Reading areas	500	19	80
Vertical illumination of shelves	200	19	80
Public service areas	500	19	80
CANTEENS, RESTAURANTS AND SELF-SERVICE			
General lighting	200	22	80
Conference rooms	500	19	80
Wardrobe	200	25	80
Buffet, reception, cash desk and porter	300	22	80
Kitchen	500	22	80
Self-service restaurants	200	22	80
Corridors	100	25	80
TRANSIT AREAS AND ROOMS FOR GENERAL USE IN BUILDINGS			
Circulation areas and corridors (floor lighting)	100	28	40
Stairs, lifts, escalators	150	25	40
Rest rooms	100	22	80
Infirmary	500	19	80
Technical rooms, control panels	200	25	60
Baths, toilets, wardrobe	200	25	80
Minimum general emergency lighting (EN 1838)	min. 0.5		80
Minimum emergency lighting in exit routes (EN 1838)	min. 1		80
COMMERCIAL AND/OR EXHIBITION AREAS			
Sales areas	300 (1)	22 (1)	80
Cash desks	500	19	80
Packaging desk	500	19	80
Fairs, exhibition halls (general lighting)	300	22	80

Notes:

(1) Lighting and UGR depend on the type of shop.

Average illuminations maintained by EN 12464-1: 2011 (**indoor environments**)

Type of interior, task and activity	Em (lx)	Glare UGR _L	CRI
INDUSTRIAL AND ARTISANAL ENVIRONMENTS			
Agriculture			
- Loading and handling of goods, moving equipment	200	25	80
- Livestock buildings	50		40
- Preparation of fodder, dairies, tool washing, delivery rooms	200	25	80
Chemical, plastic, rubber industry			
- Workplaces with continuous presence of personnel	300	25	80
- Rooms for precision measurement, laboratories	500	19	80
- Pharmaceutical production, tyres	500	22	80
- Colour inspection	1000	16	90
- Cutting, finishing, inspection	750	19	80
Food industries			
- Beer breweries, jam/chocolate/sugar production plants	200	25	80
- Product selection and washing, packaging	300	25	80
- Work zones in slaughterhouses, dairies, mills	500	25	80
- Inspection of glass and bottles, product check	500	22	80
- Food production, kitchen work, cigarette manufacture	500	22	80
- Laboratories	500	19	80
- Colour inspection	1000	16	90
Metal working and transformation			
- Rough and medium machining	300	22	60
- Fine machining	500	19	60
- Marking off, inspection	750	19	60
- Manufacture of tools and cutting equipment	750	19	60
- Rough assembly	200	25	80
- Medium assembly	300	25	80
- Fine assembly	500	22	80
- Precision assembly	750	19	80
Power plants			
- Fuel supply facilities	50		20
- Boiler rooms	100	28	40
- Machine shop	200	25	80
- Pump rooms, condenser rooms, switching systems	200	25	60
- Control stations	500	16	80
- Outside control devices	20		20
Textile production and processing			
- Workplace in vicinity of baths	200	25	60
- Washing, ironing, spinning	300	22	80
- Spinning, twining, spooling	500	22	80
- Finishing, dying, weaving	500	22	80
- Sewing, fine-gauge knitting, mending	750	22	80
- Colour inspection, quality control	1000	16	90
Automotive			
- Body and assembly	500	22	80
- Painting, polishing booth	750	22	80
- Painting: retouching, inspection	1000	19	90
- Upholstery, final inspection	1000	19	80
Woodworking and wood processing			
- Automatic processing	50	28	40
- Steaming beds	150	28	40
- Saw frame	300	25	60
- Bench work, assembly	300	25	80
- Smoothing, painting	750	22	80
- Machine work	500	19	80
- Wood selection, inlay	750	22	90
- Quality control, inspection	1000	19	90
WAREHOUSES AND COLD STORAGE ROOMS			
Storage areas	100	25	60
Handling, packing, shipping areas	300	25	60
Warehouses with racking – corridor without personnel (lighting at floor)	20		40
Warehouses with racking – corridor with personnel (lighting at floor)	150	22	60
Control stations	150	22	60

Lighting engineering

Average illuminations maintained by EN 12464-1: 2011 (**indoor environments**)

Type of interior, task and activity	Em (lx)	Glare UGR _L	CRI
HEALTHCARE STRUCTURES			
Recovery rooms (general lighting, at floor)	100	19	80
Recovery rooms (lighting for reading and simple examination)	300	19	80
Corridors (day)	200	22	80
Corridors (night)	50	22	80
Public rooms	200	22	80
Diagnosis rooms (general lighting)	500	19	90
Diagnosis rooms (examination and treatment)	1000	19	90
Pre-operating rooms	500	19	90
Operating rooms	1000	19	90
Laboratory, pharmacy (general lighting)	500	19	80
Massage, radiotherapy, endoscopy, simple examinations	300	19	80
Examinations and intensive care	1000	19	90
Treatment, dialysis, plaster rooms	500	19	80
Dentists (general lighting)	500	19	90
Sterilisation and disinfection rooms	300	22	80
INDOOR SPORTS FACILITIES (2) - Standard EN 12193			
Physical exercise rooms	300		
Track and field	200-300-500		
Lawn bowling	200-300-500		
Swimming pool	200-300-500		
Wrestling, weight-lifting, judo	300-500		
Basketball, volleyball	300-500-750		
Boxing	300-500		
Tennis	200-300-750		
Table tennis	300-500-700		
Target-shooting (spring-board - target)	300-500		
Archery	150-300-400		
INDOOR PARKING			
Lanes and parking areas (floor lighting)	75	25	20
Entrance/exit ramps (day) (lighting at floor)	300	25	20
Entrance/exit ramps (night) (lighting at floor)	75	25	20
Ticket office	300	19	80
OUTDOOR AREAS (CIE 129)			
Parking areas for shops, schools, condominiums	5		
Very rough work, loading and unloading	20		
Rough work, transport and storage	50		
Pedestrian walkways	5		

KEY

- Em** Average lighting level, generally referring to a height of 0.85 m from the floor for work zones and at floor level for transit zones.
- UGR_L** Unified glare rating in room based on characteristics of observation and lay-out of luminaires, developed by IEC and required by European standard EN 12464-1 (see page 600).
- CRI** Minimum colour rendering index of sources (see pages 581 et 582).
- Notes:** Indoor sports facilities provide for 3 levels of lighting based on their use, specifically: Non-competitive sports, Competitive sports at local level, Competitive sports at national and international level.

Lighting engineering

Average illuminations maintained by EN 12464-2: 2012 (**outdoor environments**)

Outdoor activities, task and activities	Em (lx)	U _o	Glare RGL	CRI
GENERAL AREAS AND CLEANING OF WORKPLACES				
Pavements	5	0,25	50	20
Circulation areas with slow vehicles (max. 10 km/h)	10	0,25	50	20
Movement of vehicles (max 40 km/h)	20	0,40	45	20
Pedestrian crossings and loading/unloading from vehicles	50	0,40	50	20
AIRPORTS				
Hangar parking	20	0,10	55	20
Terminal parking	20	0,25	50	20
Loading Zone	20	0,25	50	20
Aircraft maintenance area	200	0,50	45	60
INDUSTRIAL SITES AND WAREHOUSES				
Loading and unloading of large solid goods	20	0,25	55	20
Loading and unloading of goods, lifting and descending areas for cranes	50	0,40	50	20
Covered loading areas, information reading, use of tools	100	0,50	45	20
Demanding installations and inspections	200	0,50	45	60
PARKING AREAS				
Light traffic (parking of shops and homes, bicycle parks)	5	0,25	56	20
Medium traffic (parking of supermarkets, offices, industrial plants, sports and multipurpose complexes)	10	0,25	50	20
Heavy traffic (parking in large shopping centers and complexes of sports and multipurpose buildings)	20	0,25	50	20
RAILWAYS AND TRAMWAYS				
Open areas, train stops	5	0,20	55	20
Open areas, small number of passengers (e.g. rural and local trains)	10	0,25	50	20
Open areas, average number of passengers (e.g. suburban or regional trains or intercity services)	20	0,30	45	20
Open areas, large number of passengers (e.g. intercity services)	50	0,40	45	20
Open areas, freight areas	20	0,40	50	20
Covered areas, small number of passengers (e.g. suburban or regional trains or intercity services)	50	0,40	45	40
Covered areas, large number of passengers (e.g. intercity services)	100	0,50	45	40
Covered areas, goods areas, short-term service	50	0,40	45	20
Covered areas, goods areas, continuous service	100	0,50	45	40
Tracks in passenger station areas, including parking areas	10	0,25	50	20
Sidewalks in railway areas, open pedestrian bridges	10	0,25	50	20
Level crossings	20	0,40	45	20
Maintenance areas for trains and locomotives	20	0,40	50	40
Maintenance areas for railway yards	30	0,40	50	20
Stairways, small number of passengers	50	0,40	45	40
Stairways, large number of passengers	100	0,50	45	40
Inspection pit	100	0,50	40	40

LEGEND

Em Average horizontal illuminances maintained referring to the reference surface of the application.

U_o Minimum uniformity of illumination on the reference plane.

RGL Limit value of the glare R_g (Glare Rating) based on the observation characteristics and the layout of the luminaires, developed by the CIE and required by the European standard EN 12464-2.

CRI: Minimum color rendering indexes for sources (see pages 581 and 582).

U.G.R. - Unified Glare Rating

UGR is a unified international index developed by CIE (Commission Internationale de l'Eclairage) in publication 117 of 1995, to **evaluate direct glare** in every specific application based on the position of luminaires, room characteristics (dimensions, reflections), and on the observation point of workers.

UGR reference values on CIE tables range between 10 and 30 in steps of 3 units (10, 13, 16, 19, 22, 25 and 28) and apply to both directions of view (transverse and longitudinal) to the luminaire: the lower the value, the less direct glare.

European standard EN 12464-1 for the lighting of indoor workplaces requires a UGR value for every application. Respecting the UGR value in workplaces with VDTs is a necessary but not sufficient condition because the average luminance requirement for luminaires (1000-3000 cd/m²) is still in effect (see the tables on the previous pages for specific values).

UGR tables are supplied for each luminaire, but are valid only for normal workplaces.

Example of calculation

office with 15W OCW luminaire
EN 12464-1 requires a UGR value of ≤19 for this application.
Data for room and installation:

- Room height: 3.2 m
- Height from worker's eye to luminaire H: 3.2-1.2= 2 m
- Transverse distance 8.0 m ÷ 2 m = 4H
- Longitudinal distance 16.0 m ÷ 2 m = 8H
- Reflection index: Ceiling 70%; Walls 50%; Floor 20%.

Calculations

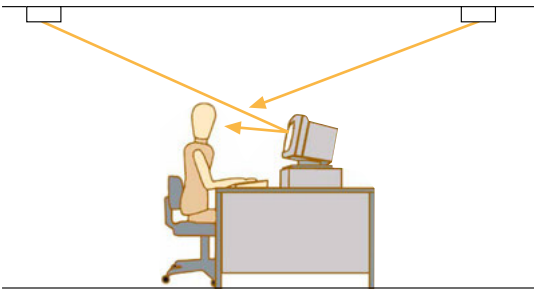
- Transverse UGR: 15.2 Value in direction of observation transverse to luminaires.
- Longitudinal UGR: 11.6 Value in direction of observation longitudinal to luminaires.

UGR Table - office luminaire 15W OCW

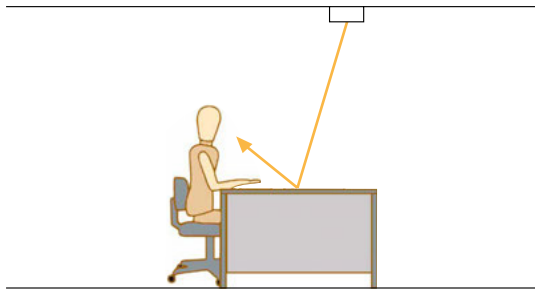
Ceiling		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor		20	20	20	20	20	20	20	20	20	20
Environment		Transverse view of luminaire					Longitudinal view of luminaire				
X	Y										
2H	2H	15.6	16.6	15.8	16.8	17.1	16.1	17.2	16.4	17.4	17.6
	3H	15.4	16.4	15.7	16.6	16.9	16.0	16.9	16.3	17.2	17.4
	4H	15.3	16.2	15.7	16.5	16.8	15.9	16.8	16.2	17.0	17.3
	6H	15.3	16.1	15.6	16.4	16.7	15.8	16.6	16.1	16.9	17.2
	8H	15.2	16.0	15.6	16.3	16.6	15.8	16.6	16.1	16.8	17.2
	12H	15.2	16.0	15.6	16.3	16.6	15.7	16.5	16.1	16.8	17.1
4H	2H	15.5	16.4	15.8	16.7	16.9	15.9	16.8	16.3	17.1	17.4
	3H	15.4	16.1	15.7	16.4	16.7	15.8	16.5	16.2	16.9	17.2
	4H	15.3	15.9	15.7	16.3	16.6	15.7	16.4	16.1	16.7	17.1
	6H	15.2	15.8	15.6	16.1	16.5	15.6	16.2	16.0	16.6	17.0
	8H	15.2	15.7	15.6	16.1	16.5	15.6	16.1	16.0	16.5	16.9
	12H	15.1	15.6	15.6	16.0	16.4	15.6	16.0	16.0	16.4	16.9
8H	4H	15.2	15.7	15.6	16.1	16.5	15.6	16.1	16.0	16.5	16.9
	6H	15.1	15.5	15.5	15.9	16.4	15.5	16.0	16.0	16.4	16.8
	8H	15.0	15.4	15.5	15.9	16.3	15.5	15.9	15.9	16.3	16.8
	12H	15.0	15.3	15.5	15.8	16.3	15.4	15.8	15.9	16.2	16.7
12H	4H	15.1	15.6	15.6	16.0	16.4	15.6	16.0	16.0	16.4	16.9
	6H	15.0	15.4	15.5	15.9	16.3	15.5	15.9	15.9	16.3	16.8
	8H	15.0	15.3	15.5	15.8	16.3	15.4	15.8	15.9	16.2	16.7

Glare

Direct and reflected on VDT.



Work surface and keyboard.



Electrical engineering and electronics

Marks and standards



The single European mark ENEC (European Norms Electrical Certification) certifies that a luminaire conforms to EN European standards. IMQ is one of the European certification bodies belonging to ENEC. Luminaires approved by IMQ on the basis of European standards are therefore ENEC-certified.



All 3F Filippi luminaires bear the CE marking. This marking attests to be fact that the luminaires conform to the requirements set out in Community Directives for electrical materials and that they may be freely marketed throughout the European Union. Directives applicable to lighting products are:

- the 2014/35/UE low-voltage directive
- the 2014/30/UE electromagnetic compatibility directive
- the 2014/34/UE ATEX “ATmosphere EXplosive” directive
- the RoHS 2011/65/EU directive
- the Ecodesign directive 2009/125/EC
- the 2017/2102/EU directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment
- the 2012/19/EU directive on waste electrical and electronic equipment (WEEE)
- the 2019/2020/EU directive, setting eco-design requirements for light sources and separate ballasts

The acronym EN refers to the European standards issued by CENELEC (European Committee for Electro-technical Standardisation). These must be adopted by all EU member states by means of national regulatory bodies (in Italy, the CEI). For luminaires, the reference standards are EN IEC 60598-1 and IEC 60598-2-22 (luminaires for emergency lighting). Compliance with these standards ensures that the luminaires are properly manufactured and can be used to build electrical systems that conform to the requirements stipulated by the applicable legislation (for example, Italian Decree Law no. 37 of 22 January 2008).

Protection against electric shock

Standard EN IEC 60598-1.

Luminaires are divided into four classes according to the type of protection provided against electric shock.

	Main features of the material	Safety precautions voltage	Symbols
Class 0	No earthing protection device	Environment without earth	
Class I	Earthing protection device provided	Connection to protective earth	
Class II	Additional insulation but no earthing protection device	No precaution necessary	
Class III	Intended for very low safety voltage	Connection to very low safety voltage	

Electrical engineering and electronics

Explosive atmospheres (ATEX)

ATEX is the French acronym for "ATmosphères EXplosives", which means "explosive atmospheres".


The risk arising from explosive atmospheres derives from a concentration of flammable substances such as gas, vapours, mists and dust and their exposure to ignition sources like sparks, electric arcs, static electricity, optical radiation, high temperatures and hot surfaces.

The ATEX 2014/34/EU Directive (relating to protective equipment and systems intended to be used in potentially explosive atmospheres), published by the Official Journal of the European Union (n° OJ EU L96) on 29th of March 2014 and implemented on the 30 March 2014, pursuant to article 43, ratified the repeal of the previous Directive 94/9/CE with effect from the 20 April 2016, without a transitional period. This applies to all electrical and mechanical products intended for potentially dangerous places.


The general requirements for fixtures are outlined in EN IEC 60079-0 that defines the general requirements relating to the manufacture of electrical equipment intended to be used in environments with explosive atmospheres given the presence of flammable gas, vapours, mists and dust.

Classification of explosive atmospheres is carried out based on the recommendations of legislation EN 60079-10-1 (gas), EN 60079-10-2 (dust) that divides dangerous areas into zones based on the probability of the formation and persistence of the explosive atmosphere.

Electrical products must be ATEX certified to be used in environments with dangerous atmospheres.

Example of **ATEX certification**:  **II 3D Ex Tc IIIC T85 ° C Dc**

Legend:

 = Specific mark of explosion protection.

II = Group II: equipment for surface work belongs to this group.

3D = Category 3 - equipment or protective systems that guarantee a normal level of protection - D: Dust

Ex tc = Protection method by means of "t" enclosures in the presence of combustible dusts

IIIC = Conductive dust

T85 ° C = Maximum allowed surface temperature of the equipment

Dc = Level of protection (EPL Dc): equipment for explosive atmospheres due to the presence of dust, with an "increased" level of protection which does not constitute a source of ignition during normal operation and which may have additional protections to ensure that it remains inactive how ignition source in the event of regular and expected failures.

Directive 2014/34/EU classifies and divides ATEX equipment into two groups:

Group I: equipment for work in mines with the presence of mine gas and/or combustible dust is included in this group. Group I in turn is divided into 2 categories:

- M1 - equipment or systems of protection that guarantee a very high level of protection; they must remain operational in the presence of explosive atmospheres.
- M2 - equipment or systems of protection that guarantee a high level of protection; they must be de-energised in the presence of gas.

Group II: equipment for work on the surface is included in this group.

Group II in turn is divided into 3 categories on the basis of the level of protection (area of use); the categories are identified as number 1, 2, 3 followed by the letter G (Gas) or D (Dust).

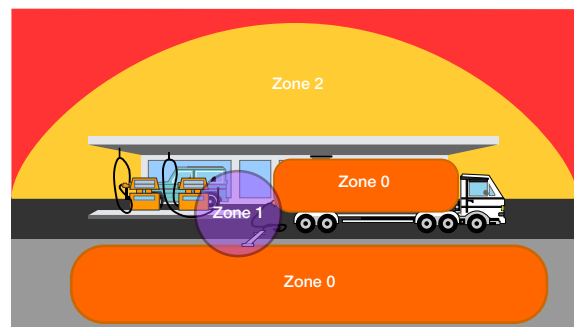
- Category 1 - equipment or systems of protection that guarantee a very high level of protection; for areas in which explosive atmospheres caused by mixtures of air and gases, vapours or mists or by air/dust mixtures are present continuously, for long periods or frequently. Equipment in this category must ensure the requisite level of protection, even in the event of rare incidents relating to equipment.
- Category 2 - equipment or systems of protection that guarantee a high level of protection; for use in areas in which explosive atmospheres caused by gases, vapours, mists or air/dust mixtures are likely to occur occasionally. Equipment in this category must ensure the requisite level of protection, even in the event of frequently occurring disturbances or equipment faults which normally have to be taken into account.
- Category 3 - equipment or systems of protection that guarantee a normal level of protection; for use in areas in which explosive atmospheres caused by gases, vapours, mists, or air/dust mixtures are unlikely to occur or, if they do occur, are likely to do so only infrequently and for a short period only. Equipment in this category must ensure the requisite level of protection during normal operation.

To summarise:

Dust	Gas
1D Suitability in zones 20, 21 and 22	1G Suitability in zones 0, 1 and 2
2D Suitability in zones 21 and 22	2G Suitability in zones 1 and 2
3D Suitability in zone 22	3G Suitability in zone 2

ATEX (G) for zones with GAS

Areas classified for the presence of gas, mists or vapours on the basis of the probability of the existence of the explosive atmosphere are divided into three zones:



Zone 0	Zone 1	Zone 2
An area in which an explosive mixture of gas is continuously present or frequently present for long periods.	An area in which an explosive mixture is likely to occur occasionally in normal operation.	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time.

The fault conditions for which the device is safe, indicated in the marking, are the following:

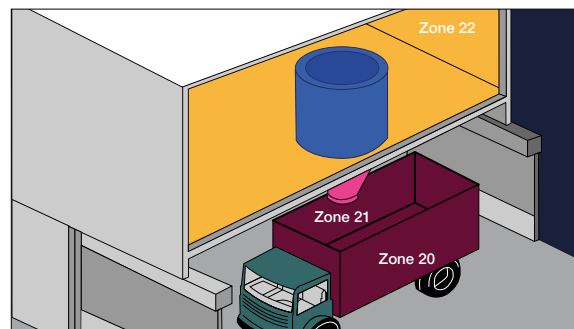
Ga: Equipment for explosive atmospheres due to the presence of gas, with a "very high" level of protection which is not a source of ignition during normal operation or in the event of an expected failure or when subject to a rare failure.

Gb: Equipment for use in explosive atmospheres due to the presence of gas, with a "high" level of protection that is not a source of ignition during normal operation or when subject to expected malfunctions, although not on a regular basis.

Gc: Equipment for use in explosive atmospheres due to the presence of gas, with an "increased" level of protection, which is not a source of ignition during normal operation and which has some additional protective measures to ensure that it remains a source ignition not active in the event of regularly expected events (for example for a lamp failure).

ATEX (D) for zones with Dust

In areas classified for the presence of dust the zones are identified on the basis of the frequency and duration of the formation of an explosive atmosphere:



Zone 20	Zone 21	Zone 22
An area in which an explosive mixture of dust in the form of a dust cloud is continuously present or frequently present for long periods .	An area in which an explosive mixture of dust in the form of a dust cloud, is likely to occur occasionally in normal operation.	An area in which an explosive mixture of dust in the form of a dust cloud, is not likely to occur in normal operation and if it occurs it will exist only for a short time.

The fault conditions for which the device is safe, indicated in the marking, are the following:

From: Equipment for explosive atmospheres due to the presence of combustible dusts, which has a "very high" level of protection and which is not a source of ignition in normal operation or when subject to rare failures.

Db: Equipment for explosive atmospheres due to the presence of combustible dusts, which has a "high" level of protection and which does not constitute a source of ignition in normal operation or when subject to expected failures, although not in a regular manner.

Dc: Equipment for explosive atmospheres due to the presence of dust, with an "increased" level of protection which does not constitute a source of ignition during normal operation and which may have additional protections to ensure that it remains inactive as a source of ignition in the event of faults regular and expected.

Compliance procedures

For equipment to be marked there are various compliance procedures according to the product function and the category they belong to.

- All electrical equipment in Category 1 and Category 2 must mandatorily be certified by ATEX (Notified Bodies), or bodies to which the national authority has assigned the task of verifying conformity with the Directive. Companies that manufacture electrical equipment in Category 1 and Category 2 are obliged to report and audit the quality systems and the identification number of the body must be displayed on the data plate label alongside the CE marking.
- All electrical equipment in Category 3 can be self-certified by the manufacturer (CE marking), with internal manufacturing controls.

Electrical engineering and electronics

Electronic wiring

The wiring of the Halogen Free LED luminaires are made with leading brand electronic drivers, which ensure extremely high levels of reliability and efficiency.

The main technical specifications of the typical LED drivers:

- 230Vac, 50-60Hz power supply, with tolerance +/- 10% of line voltage.
- 230Vdc power supply, with tolerance +/- 10%.
- Power factor greater than 0.95 (in general, with exceptions).
- Efficiency > 90%.
- Suitable for centralised emergency lighting pursuant to EN 50172 and EN 60598-2-22.
- ENEC certification.
- Thermal and short-circuit protection against overloads and voltage surges.
- Protection against excess temperatures.
- Suitable for environments with temperatures from -20°C to +30°C.
- Suitable for environments with max RH 85% (driver + LED).
- Protection class I; on request, we can check if it is possible to manufacture the luminaires with protection class II.
- Constant current LED power supply.
- Very low FLICKER value <4%: this value is not consciously perceivable to humans and does not interfere with video filming.

LED driver types:

3F Filippi uses two constant current driver types, depending on the type of luminaire:



- **SELV** **Safety Extra Low Voltage** output, below 60Vdc.
SELV Driver/LED devices can be used in total safety.
- **NON SELV** without output voltages greater than 60Vdc, which may represent a hazard if touched.
NON SELV Driver/LED luminaires may only be opened by a qualified electrician with special tools.

Installation notes:

For correct choice of the protective circuit breakers, check the inrush current and instructions provided by the manufacturers of the LED drivers. To assist in this task, when requested 3F Filippi will provide the technical data sheets for the drivers used and specify the quantity for each luminaire. These indications relate to the bill of materials at the time of communication and thus may be subject to changes due to technical developments and/or provisioning and production requirements; data should therefore be checked before proceeding with the order.

For use at low temperatures (down to -30°C) and/or high humidity environments, we recommend use of ICE series luminaires which provide protection against RH of up to 95% for the entire wiring system (driver + LED).

For applications in environments in which disturbances on the power network may be present and/or involve use at low temperatures, surge protection devices should be fitted on the power supply and any causes of undervoltages eliminated.

For further information on use in harsh conditions, for instance with the presence of corrosive chemicals, extreme temperatures, high humidity (e.g. composting systems, cold stores, mushroom beds, greenhouses, swimming pools, saunas, spas etc.), contact our Technical department.

Dimmable electronic wiring

Dimmable electronic drivers allow manually or automatically controlled “dynamic light systems” to be designed, in which the light level can be adapted to the visual task and/or to variation of natural light entering from the outside (see chapter on “Light Management”). In addition to the advantages of electronic wiring, dimmable drivers allow the light level to be adjusted over an extremely wide range, optimising the lighting system for energy savings and visual comfort.

The lamps are dimmed by a control signal carried by wires directly to the ballast from devices such as potentiometers, buttons, light and/or presence sensors, used individually or managed by control units.

Dimmable electronic wiring can be implemented with:

- Drivers with 1-10V interface, with dimming by means of an analogue signal ranging from 1V DC (minimum light) to 10V (maximum light).
- Drivers with DALI interface, with digital dimming according to the new standard Digital Addressable Lighting Interface protocol.

Dimmable electronic wiring, particularly DALI type, also allows creation of appropriate lighting systems for applications in plants managed by intelligent (Bus) systems.

For further information on use in harsh conditions, for instance with the presence of corrosive chemicals, extreme temperatures, high humidity (e.g. composting systems, cold stores, mushroom beds, greenhouses, swimming pools, saunas, spas etc.), contact our Technical department.

General information for luminaires with DALI drivers

Devices with DALI drivers can be used in systems without a control system (centralized and/or stand-alone) with provided that a "bridge" is made on the DA-DA terminals of the luminaire or on the DA-DA circuits of the supplied power cable, if present.

3F Filippi however recommends connecting DALI devices to control systems (centralized/stand-alone/DALI repeater).

3F Filippi shall therefore bear no responsibility for any "malfunctions" of DALI luminaires installed in systems without a regulation system, or with a poorly programmed one.

Assessing compatibility between regulation systems and drivers, as well as finding the technical data required for lighting design, are the sole responsibility of the designer of the electrical system.

To assist in this task, when requested 3F Filippi will provide the technical data sheets for the drivers used and specify the quantity for each luminaire. These indications relate to the bill of materials at the time of communication and thus may be subject to changes due to technical developments and/or provisioning and production requirements; data should therefore be checked before proceeding with the order.

Mechanics and Design

From the design to the finished product

For 3F Filippi, attention to detail, the quality of the light and the reliability of our products are the starting point on the path we travel alongside our customers. Efficiency is the culmination of our journey – we create a light that can show and give emotion, while hiding its technical soul, able to highlight what it illuminates.

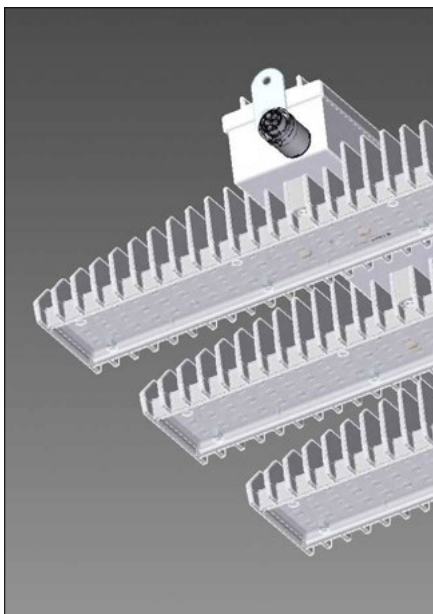
The right product starts first with a discussion, to gain an understanding of the customer's needs and expectations.



Our products are made with a craftsman's passion and constant innovation, research and attention to design and details: they combine aesthetics and functionality, elements of precision and new technologies, maintenance and reliability facilities, and are excellent value for money.

3F Filippi's entire production is performed inside the headquarters in Pian di Macina (province of Bologna, Italy), from moulding of plastics and metals to machining and soldering and painting, all totally automated.

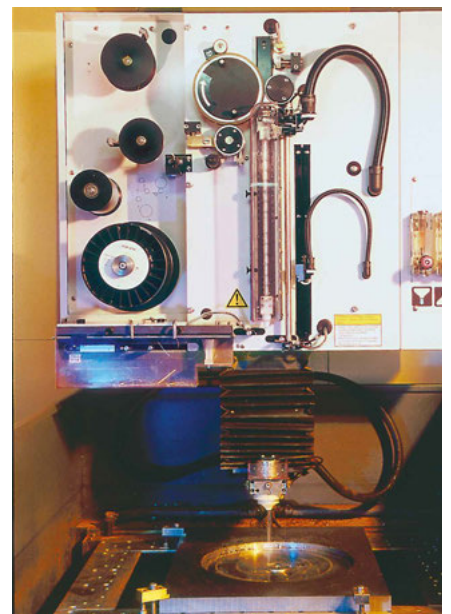
The thoroughness and precision of the checks throughout every phase of the company's processes guarantee constant quality of all our products over time.



3D modelling



Mould



EDM tool

Our care for the environment goes hand-in-hand with our 0-mile production, whereby all our products are assembled in the same Bologna plant where they are produced.

Ball throw resistance certification (DIN 18032-3)

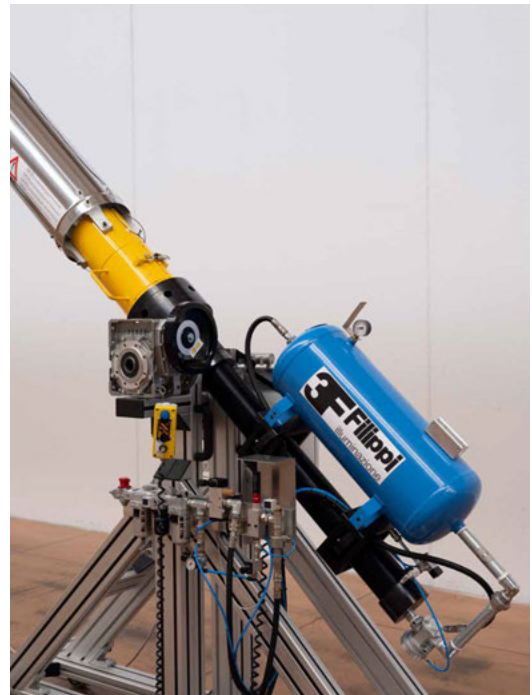
This certification ensures the suitability of the device in gyms, environments with gymnastic and sports activities.

3F LEM Sport luminaires (codes 59080 and 59081) are certified "Resistant to throwing the ball according to DIN 18032-3" CSI certification (IMQ group).

3F Filippi for the luminaires deriving from the standards issues an appropriate declaration of conformity and suitability following scrupulous tests laboratory.

The tests are performed in the 3F Filippi laboratories using a handball ball-gun.

The speed and launch angle of the gun is adjustable to meet the requirements of DIN 18032-3



Test for ceiling luminaires

The device is hit 36 times by a handball (almost half a kilo) at a speed of 16.5 ± 0.8 m/s (~ 60 km/h).

12 times the ball must be thrown perpendicularly against the device and 12 times from two different directions (transversal and longitudinal) at an angle of 60° .

Test for wall luminaires

The device is hit 54 times by a handball (almost half a kilo) at a speed of 23.5 ± 1.2 m/s (~ 85 km/h).

For 30 times the ball must be thrown at 90° perpendicularly against the device and for 12 times from two different directions (transverse and longitudinal) at an angle of 45° .

At the end of the tests, the luminaire must not show any alterations that limit its solidity, operation and safety.

Mechanics

Marks and standards



Luminaires with electronic wiring bearing this mark are versions with **limited surface temperature** (EN 60598-2-24), and therefore suitable for installation in environments with greater risk in case of fire as per variant V3 of IEC 64-8.



Flame and ignition resistance
650°C, 850°C, 960°C. The materials in luminaires bearing this mark have passed the glow-wire test at these temperatures in compliance with EN 60598-1 (IEC 34-21).

Temperature class

Standard 50014 defines the temperature classes as the maximum temperature of the external surface of the housing of the luminaire in the case of abnormal operation (EN 60598-1 Appendix C):
T1 max 450°C, T2 max 300°C, T3 max 200°C, T4 max 135°C, T5 max 100°C, T6 max 85°C.



Luminaires not suitable for direct installation on normally flammable surfaces (suitable only for installation on non-flammable surfaces).

Note: the symbol is present in edition 9 of IEC EN 60598-1. Unless otherwise indicated by the above symbol, luminaires are suitable for installation on normally flammable surfaces. A surface is considered normally flammable if its ignition temperature is at least 200°C and if it does not deform or soften at such a temperature.



Mechanical strength
Luminaires must have adequate mechanical strength and be built to sustain stress deriving from any unprotected treatment during normal use. Luminaires with a closing diffuser must pass a test with impact energy of 6.5J; impact is produced by letting a 50 mm diameter, 0.51 kg steel ball fall from a height of 1.3 metres, in compliance with IEC EN 60598-1 (CEI 34-21). The IK Code designates the level of protection of electrical equipment housings against mechanical impact (EN 62262 and IEC 70-4).



Ingress protection of housing (IP rating)
As per IEC 60598-1.

1st number: protection against penetration by solid objects and against contact with live parts.

0	No special protection.
1	Protected against solid objects larger than 50 mm. E.g. hands.
2	Protected against solid objects larger than 12 mm. E.g. fingers.
3	Protected against solid objects larger than 2.5 mm. E.g. tools.
4	Protected against solid objects larger than 1 mm. E.g. threads or tapes.
5	Protected against dust penetration that could damage the luminaire.
6	Fully protected against dust.

2nd number: protection against penetration by liquids.

0	No special protection.
1	Protected against vertical water drips.
2	Protected against vertical water drips when tilted up to 15°.
3	Protected against rain when tilted up to 60°.
4	Protected against splashes of water from any direction.
5	Protected against jets of water coming from any direction.
6	Totally protected against sea waves or powerful jets of water.
7	Protected against the effects of temporary submersion in water.
8 m	Protected against the effects of continuous submersion for long periods with indications of the maximum depth in metres.
9 (80°C)	Protected against the effects of high pressure and high temperature water.
9 (15°C)	Protected against the effects of high pressure cold water.
9K	Protected against the effects of cleaning with high pressure water or steam. The standard "ISO 20653 Road vehicles (IP code)" introduces code "K" that describes the special requirements for road vehicles not covered by "EN 60529 (IP code)".

Protection of housing from impacts (IK rating)

Requirements as per IEC 34-139.

Luminaires - application of code IEC 62262 IK

0.2 J	Resistance to a blow from an object weighing 200 g dropped from a height of 10 cm.	IK02
0.5 J	Resistance to a blow from an object weighing 250 g dropped from a height of 20 cm.	IK04
1 J	Resistance to a blow from an object weighing 500 g dropped from a height of 20 cm.	IK06
2 J	Resistance to a blow from an object weighing 500 g dropped from a height of 40 cm.	IK07
5 J	Resistance to a blow from an object weighing 1.7 kg dropped from a height of 30 cm.	IK08
10 J	Resistance to a blow from an object weighing 5 kg dropped from a height of 20 cm.	IK09
20 J	Resistance to a blow from an object weighing 5 kg dropped from a height of 40 cm.	IK10

Coating and standard colours

1. Polyester-based paint, **white** or **grey Ral 9006**, UV stabilised, on hot galvanised steel sheet. Salt spray resistance over 500hrs.
2. Epoxy-polyester powder-coated in **white Ral 9010**, or **grey Ral 9006**, UV stabilised, applied with triboelectric system for constant and uniform thickness, oven polymerised at 180°C, with phosphate degreasing pretreatment using heavy iron salts. Salt spray resistance of 500h.

Resistance to corrosive substances

Chemical substance	Methacrylate	Polycarbonate	Glass	Aluminium	Steel	Stainless steel
Acetone	–	–	•	•	•	•
Acetic acid up to 10%	–	Δ	•	–	Δ	•
Arsenic acid up to 20%	•	•	Δ	–	Δ	
Citric acid up to 10%	•	•	•	Δ	Δ	Δ
Hydrochloric acid up to 20%	•	•	Δ	–	–	–
Chromic acid	Δ	Δ	Δ	Δ	Δ	Δ
Formic acid up to 30%	Δ	–	–	–	Δ	Δ
Nitric acid up to 20%	Δ	Δ	Δ	–	–	Δ
Sulphuric acid up to 30%	•	•	Δ	–	–	–
Seawater	•	•	Δ	Δ	Δ	Δ
Ethyl alcohol	–	•	•	•	Δ	Δ
Isopropyl alcohol	Δ	–	•	Δ	Δ	Δ
Ammonia	•	–	Δ	•	Δ	•
Aniline	–	–	•	•	•	•
Petrol	•	Δ	•	•	•	•
Benzole	–	–	•	Δ	Δ	Δ
Bromine	–	Δ	•	Δ		
White lime	•	Δ		–	•	•
Diesel oils	•	Δ		•	•	•
Sea climate	•	•	Δ	Δ	Δ	Δ
Liquid chlorine (fumes)	–	–	–	•	–	–
Chloroform	–	–	•	•	•	Δ
Calcium chloride	•	•	•	•	Δ	Δ
Ferric chloride	•	Δ		Δ	Δ	
Hexane	•	Δ	•	•	Δ	Δ
Ether	–	–		•	•	•
Petroleum ether	•	Δ		•	•	•
Ethyl ether	•	–	•	•	•	
Phenols	–	–	•	Δ	•	•
Glycerine	•	Δ	•	•	•	•
Hydrocarbons	–	–	•	•	•	•
Methanol	–	–	•	Δ	•	•
Silicone oils	Δ	•	•	•	•	
Food oils and fats	•	Δ	•	•	•	
Mineral oils	•	–	•	•	•	•
Vegetable oils	Δ	•	•			•
Diesel oil - naphtha	–	–	•	•	•	•
Ozone	•	–	•	•	Δ	•
Potassium permanganate	•	•	•	Δ	•	•
PVC with plasticizers	–	–	•	•	•	
Soda	•	•	–	–	–	Δ
Caustic soda	•	–	–	–		•
Zinc sulphate	•	•		•	Δ	Δ
Aluminium sulphate	•	•	•	•	Δ	Δ
Copper sulphate	•	•	•	•	Δ	Δ
Carbon tetrachloride	–	–	•	•	•	•
Toluene	–	Δ		•	•	•
Trichloroethylene	–	–		•	Δ	Δ

The table only provides a rough indication of the maximum amount of various chemical agents in different compositions.

When using these data, bear in mind that they are the results of laboratory tests and are therefore only valid under the same conditions in which the tests were performed; the data should therefore be considered indicative, and it is advisable to perform tests in their actual usage conditions if practical experience is not available.

It is not possible to talk about "compatibility" in general terms, since this depends on:

- Concentration.
- Temperature.
- Contact type.
- Contact duration.
- Mechanical action during contact.
- Simultaneous presence of multiple chemical compounds.
- The function of the potentially attacked material, mechanical stress to which it is exposed and numerous other factors, which are highly variable, making the indications given in this table truthful but general, and therefore not exhaustive.

Some versions of 3F luminaires are also proposed with laminated glass which, in addition to being resistant to the substances listed above, allows for these to be used in environments with food products or with machines with moving parts, with sudden temperature changes and, in general, in all environments requiring total protection against falling fragments.

- = resistant
- Δ = relatively resistant, suitability to be evaluated on basis of application
- = not resistant

Get the best from 3F Filippi



How to use our products correctly

3F Filippi take the utmost care when designing and manufacturing our luminaires so that they stand the test of time. Below are some important indications on how to use our products correctly: following these will allow you to enjoy our products for as long as possible.

- 3F Filippi can only guarantee products exclusively when they are installed according to the installation instructions provided with the luminaires. We therefore recommend you do not install our products in any other way than those indicated. In the event that you have differing requirements, please contact our Sales Network or the 3F Filippi Headquarters to request a technical assessment.
- As with installation, maintenance of 3F Filippi products must also be performed according to the instructions: we therefore recommend keeping these safe so that you can consult them before performing any kind of work on the luminaire.
- 3F Filippi products must only be installed on supports which are not subject to vibrations and mechanical stress – this is critical for their correct operation. In the event that it is not possible to avoid this kind of installation, you are invited to contact our Sales Network or the 3F Filippi Headquarters to request a technical assessment.
- Turning on a luminaire leads to an environmental "load" which is often not justified. Despite 3F Filippi's commitment to offering our customers the best energy-saving systems, using lighting only when strictly necessary is still the best way to save money and respect the environment.
- Correct and sensible lighting design can help save more money than you might think: 3F Filippi recommends that lighting projects are carried out by professional, reliable designers who can recommend the best solutions both for you and the environment. Lighting should only be used when necessary.
- 3F Filippi strongly believe in reusing raw materials, and for this reason we are constantly optimising our products to make them more environmentally-friendly. For example, we use a high percentage of recycled board in our packaging, and our luminaires are all produced in a single plant powered by solar panels: these simple measures allow us to limit transport and optimise resources. 3F Filippi invites users to do the same by recycling packaging after installation and correctly disposing of luminaires at the end of their life-cycle.

Analytical guide



Price list October 2021

General conditions of sale

The acceptance of orders is always subject to the following conditions:

- The delivery terms are not binding and due to force majeure, they can be changed at any time without recognizing any damage or requests for penalties.
- Goods are delivered ex-works.
- Samples are always supplied carriage forward and invoiced.
- Goods travel at the customer's risk with any means of shipment, both carriage forward and carriage paid.
- The purchaser may not demand the partial or total cancellation of orders nor indemnification for delays and reductions of supply caused by force majeure.
- The prices in this price list can be changed without prior notice and obligation of prior communication.
- Payments will be valid if made directly to our headquarters.
- VAT is payable by the customer.
- The Court in whose district the seller has its headquarters will have exclusive jurisdiction in the event of any and all disputes.

Articles on request

Articles marked **On Request** are not normally in our warehouse. Where not specified, delivery dates and prices are to be arranged from time to time based on quantity, production availability, and material procurement times.

Because we are constantly improving our products, the luminaires supplied may differ in details, dimensions, equipment, and accessories from the dimensions and illustrations shown in this catalogue. Therefore, quantities, volumes, and indicated weights are not binding.

Sale through electrical distributors

Analytical guide

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
A0052	Wall-mounting brack	1	0.001	0.340	143, 158, 172, 187, 193, 348
A0090	Bracket/5-pole terminal block	1		0.100	195
A0160	Inox clips 3F Linda L660 -4pcs	1		0.050	435
A0161	Inox clips 3F Linda L1270 -8pcs	1		0.070	435
A0162	Inox clips 3F Linda L1570 -10pcs	1		0.095	435
A0170	15BS Brackets - L320-L400-L560	1		0.123	242, 266
A0173	15HI Brackets - L320-L350-L450	1		0.115	241, 256
A0174	15DP Brackets - L560	1	0.030	0.145	266
A0175	15GF Brackets - L560	1		0.150	266
A0176	15XB Brackets - L560	1		0.150	266
A0177	15ZH Brackets - L320-L350-L560	1		0.115	241, 256, 266
A0179	15LB Brackets - L320-350 met.pan.	1		0.090	242, 256
A0187	Anti-condensation cable gland	1		0.020	274, 411, 436, 490, 496
A0189	Reinf. brack. Lucequadro pan./plast.	1		0.480	306
A0202	False ceiling brack. for luminaire D.220	1	0.004	0.800	303
A0204	Grid adapter h40mm for luminaire D.220	1	0.008	0.750	303
A0210	Wireguard 3F Cub	1	0.146	5.445	508
A0213	Ceiling-mounted bracket	1	0.003	0.885	508
A0214	Metal pan. reinforcing bracket D.220	1	0.010	1.200	303
A0242	15SS galvanized steel cable coil 100m	1	0.011	2.570	469
A0243	15BF galvanized steel cable coil 500m	1	0.011	8.700	469
A0305	Pair of suspension brackets	1		0.130	400
A0324	Pair fixed brack. for ceiling Beta 235	1		0.255	490
A0325	Mounting kit on busbar - Beta 235	1		0.035	491
A0439	Pole mounting diameter 60mm	1	0.003	1.360	530
A0440	Pole mounting diameter 76mm	1	0.003	1.080	530
A0441	Reducer from 76 mm to 60 mm	1		1.500	530
A0447	3F Linda through-line L1570	1	0.001	0.175	435
A0449	15 GZI w/brack.+ hooks Linda L300	1		0.130	435
A0450	15 RIT w/bra.+hooks Linda L660-1270-1570	1		0.125	435
A0451	15 MBI w/brack.+ hooks Linda L300	1	0.001	0.246	435
A0452	15 FBR w/bra.+hooks Linda L660-1270-1570	1	0.001	0.245	435
A0455	Wireguard 180x1330 3F Linda	1		3.235	435
A0456	Wireguard 180x1330 3F Linda	1		3.535	435
A0457	Wireguard 280x1330 3F Linda/3F Beta	1		3.720	435, 490, 496
A0458	Wireguard 280x1630 3F Linda/3F Beta	1		4.125	435, 490, 496
A0462	13 GSI (pair of susp. hooks Linda L300)	1		0.060	435
A0463	13 TRM pair of susp.hooks Linda	1		0.061	435
A0464	26 CSG (pictogram P1 Linda L300)	1		0.025	436
A0465	26 MTH (pictogram P1 Linda L660)	1		0.025	436
A0466	26 DVI (pictogram P2 Linda L300)	1		0.015	436
A0467	26 MVL (pictogram P2 Linda L660)	1		0.030	436
A0468	26 GZM (pictogram P3 Linda L300)	1		0.010	436
A0469	26 PXN (pictogram P3 Linda L660)	1		0.025	436
A0471	Security screws - Beta 235 (100 pcs)	1		0.080	490
A0477	Safety wire	1		0.035	234, 241, 256, 296
A0490	Connection to the earth	1		0.005	353
A0500	13 DH pair susp.galv.steel hooks i3F	1		0.110	496
A0501	13 HC pair susp.stain.steel hooks A3F	1		0.110	496
A0503	15 CD pair of bracket/hooks A3F	1		0.290	496
A0508	20 TKA (casc. conn. line i3F/A3F 1265)	1	0.001	0.200	496
A0509	20 ZFE (casc. conn. line i3F/A3F 1565)	1	0.001	0.200	496

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
A0521	Reducing sealing ring diam.8mm	1	0.025	274, 411, 436, 469, 490, 496, 504, 508	
A0579	Safety wire with brackets	1	0.050	206, 253, 271	
A0620	Spool stain.ste.cab.diam. 1,25mm 100 m	1	0.011 1.015	159	
A0622	Clamp 1 hole suspension - 100 pcs	1	0.004 0.355	159	
A0632	Pair of brack. ceiling instal. 3F LEM	1	0.011 0.350	468	
A0651	Bracket rotation support 3F LEM	1	0.001 0.220	468	
A0652	Pair of brack. ceiling instal. 3F LEM	1	0.001 0.105	468	
A0653	Pair of fixing carab.for chain instal.	1	0.001 0.050	469, 490, 496	
A0654	Pair of wall brackets - 3F LEM	1	0.011 2.530	468	
A0659	Adjustable clamp 2 holes - 10 pcs	1	0.395	172, 262, 350	
A0660	Suspension with adjustment - 1m	1	0.100	143, 171, 400	
A0661	Suspension with adjustment - 2 m	1	0.070	143, 171, 400	
A0662	Suspension with adjustment - 3 m	1	0.100	143, 171, 400	
A0663	Suspension with adjustment - 4 m	1	0.135	143, 171, 400	
A0664	Suspension with adjustment - 5 m	1	0.140	143, 171, 400	
A0665	Suspension with adjustment - 6 m	1	0.145	143, 171, 400	
A0679	5 pole rectangular rose (no cable) WH	1	0.075	60, 115, 143, 159, 172	
A0686	596x596 Diagon frame ceiling instal.	1	0.016 3.170	234	
A0702	Suction cup for Diagon maintenance	1	0.100	234	
A0714	Clamp 2 holes susp.- 100 pcs	1	0.004 0.515	60, 171, 262, 349, 469	
A0716	Coil galv. cable diam. 1.5mm - 100m	1	0.011 1.175	60, 171, 262, 349	
A0717	Coil galv. cable diam. 1.5mm - 500m	1	0.011 7.340	60, 171, 262, 349	
A0718	Coil galv. cable diam. 1.5mm - 1000m	1	0.011 12.045	60, 171, 262, 349	
A0720	Wieland (white plug)	1	0.100	241, 256	
A0721	Wago (white plug)	1	0.100	241, 256	
A0722	Ensto white plug + adapter	1	0.100	241, 256	
A0725	Wieland (black plug)	1	0.100	241, 256	
A0726	Wago (black plug)	1	0.100	241, 256	
A0727	Ensto black plug + adapter	1	0.100	241, 256	
A0728	Cover for food appl. 3F LEM 1	1	0.011 0.900	468	
A0733	Cov.food appl.single mod.3F LEM(2-3-4-5)	1	0.011 0.940	468	
A0776	Horiz. rot. bracket 90° 3F LEM 1-2	1	0.008 1.000	468	
A0777	Horiz. rot. brack. 90° 3F LEM 3-2 Sensor	1	0.008 1.600	468	
A0778	Horizontal rotating bracket 90° 3F LEM 4	1	0.016 2.000	468	
A0798	621x621 frame + brackets	1	0.023 1.650	206, 241, 253, 256	
A0801	Electric ext. with plug 3F Linux DALI-EP	1	0.180	353	
A0802	Electric extension with plug 3F Linux	1	0.080	353	
A0804	SF 3F Reno 150	1	0.850	296	
A0805	SF 3F Reno 200	1	0.755	296	
A0806	SM 3F Reno 150	1	1.350	296	
A0807	SM 3F Reno 200	1	1.350	296	
A0811	Transparent glass with gasket (10pcs)	1	0.008 5.120	469	
A0812	Moulded glass with gasket (10pcs)	1	0.008 5.000	469	
A0820	Pair of sliding brack. + reg. susp. 3F Solo	1	0.130	115	
A0821	Pair of sliding brack. ceiling 3F Solo	1	0.290	115	
A0828	Trittico fixing metal panels 60x60	1	1.400	101	
A0829	Trittico fixing mineral fiber pan. 60x60	1	1.900	101	
A0830	Fixing Trittico plasterboard WH	1	1.070	101	
A0831	Fixing Trittico plasterboard BK	1	1.070	101	
A0835	Pair brack.+hooks for wall	1	0.260	400, 490	
A0836	Pair of galv.hooks for susp.- Beta 235	1	0.085	491	
A0837	Pair of stain.steel hooks susp.-Beta 235	1	0.100	491	

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
A0838	Pair of S-hooks for chain - Beta 235	1	0.045		491
A0861	Pair of brack. ceiling instal. Beta500	1	0.006	0.800	411
A0870	White conn. elem. with boss for lum.	1	0.002	0.420	158
A0872	White conn.elem. to wall w/boss for lum.	1	0.002	0.340	158
A0875	Connecting bracket Travetta	1	0.090		158
A0877	Bracket for T-branch for 3F Travetta	1	0.110		158
A0878	Bracket for X-branch for 3F Travetta	1	0.110		158
A0892	White connect.elem.190x190 3F Travetta	1	0.003	0.900	158
A0894	White connect.elem.190x210 3F Travetta	1	0.003	0.715	158
A0895	White connect.elem.190x510 3F Travetta	1	0.010	1.850	158
A0896	White connect.elem.190x810 3F Travetta	1	0.016	2.505	158
A0897	White connect.elem.190x1110 3F Travetta	1	0.016	3.380	158
A0941	White con.elem.lum/wall 810 3F Travetta	1	0.014	2.850	158
A0942	Wh.conn.elem.lum/wall 1110 3F Travetta	1	0.014	3.950	158
A0951	White branch elem. 190x310 3F Travetta	1	0.005	1.100	158
A0952	White branches elem. 190x460 3F Travetta	1	0.010	1.650	158
A3007	DALI PCU - push button interface	1	0.070		540
A3008	DALI ext - Repeater	1	0.105		540
A3009	DALI DIN - Repeater	1	0.190		540
A3010	DALI - Box for repeater	1	0.130		540
A3011	A DALI - Sensor	1	0.290		554
A3012	A DALI-ext - Sensor	1	0.250		554
A3013	A on/off - Sensor	1	0.250		554
A3014	A on/off-ext - Sensor	1	0.250		554
A3015	B Dual-DALI - Sensor	1	0.280		555
A3016	B DALI ext - Sensor	1	0.290		556
A3017	B DALI - Sensor	1	0.265		555
A3018	B on/off - Sensor	1	0.280		555
A3019	B on/off-ext - Sensor	1	0.280		556
A3020	IR DALI - Programmer	1	0.135		470, 558
A3021	IR DALI - Remote controller	1	0.180		469, 558
A3022	IR - Adapter for Smartphone	1	0.080		470, 558, 563
A3023	IR on/off - Programmer	1	0.100		558
A3024	IP54 White fixing	1	0.200		559
A3025	A SLAVE - Sensor	1	0.325		554
A3026	A SLAVE-ext - Sensor	1	0.300		555
A3027	B SLAVE - Sensor	1	0.300		555
A3028	B SLAVE-ext - Sensor	1	0.350		556
A3029	Corridor on/off - Sensor	1	0.300		557
A3030	Corridor on/off-ext - Sensor	1	0.350		557
A3031	Corridor DALI - Sensor	1	0.415		557
A3032	Corridor DALI-ext - Sensor	1	0.350		557
A3033	Corridor SLAVE - Sensor	1	0.300		557
A3034	Corridor SLAVE-ext - Sensor	1	0.350		558
A3035	Sensore HCL DT8	1	0.450		563
A3036	Sensore HCL DT8-ext	1	0.490		563
A3037	DALI Sensor - Type B - GH	1	0.350		556
A3038	IR DALI GH - Programmer	1	0.350		556
A3052	Gateway RF BLE	1	0.250		572
A3055	RFxNODE IP54 Module	1	0.405		572
A3056	RFxSENSOR IP54 Sensor	1	0.250		572
A3057	DALI-SENSE-HB IP54 Sensor	1	0.250		572

Code	Item	Pack		Page
		Pcs	m ³ Gross weight in kg	
A3058	RFxDRIIVER IP20 Module	1	0.030	572
A3059	IP66 Box for wireless module	1	0.150	573
A3060	DALI-SENSE-BMS Sensor	1	0.060	573
A3062	ZQxSERVER Server	1	0.250	573
A3063	RFxETH Gateway	1	0.250	573
A3090	BLE DALI Radio Module	1	0.250	565
A3091	BLE DALI Radio push-button panel	1	0.315	565
A3095	IP20 1T5352 EXTENDER	1	0.215	565
A3096	IP67 BLE 1E3048 Radio Module	1	0.150	565
A3097	IP67 1E3049 EXTENDER	1	0.400	565
A3099	BLE Radio control	1	0.030	566
A3100	Kit ArkE support buttons plate for A3099	1	0.060	566
A4144	Binario 3F - L1000 - BK	1	1.100	381
A4145	Binario 3F - L2000 - BK	1	2.200	381
A4146	Binario 3F - L3000 - BK	1	3.300	381
A4147	Binario 3F - L4000 - BK	1	4.400	381
A4151	Binario 3F - L1000 - WH	1	1.100	381
A4152	Binario 3F - L2000 - WH	1	2.200	381
A4153	Binario 3F - L3000 - WH	1	3.020	381
A4154	Binario 3F - L4000 - WH	1	4.175	381
A4158	Binario 3F - L1000 - GR	1	1.100	381
A4159	Binario 3F - L2000 - GR	1	2.200	381
A4160	Binario 3F - L3000 - GR	1	3.300	381
A4161	Binario 3F - L4000 - GR	1	4.400	381
A4166	Power-supply head DX - GR	1	0.105	382
A4167	Central power-supply - GR	1	0.200	382
A4168	Flexible connecting element - GR	1	0.210	382
A4169	L-joint - EXT - GR	1	0.200	383
A4170	T-joint - EXT + SX - GR	1	0.290	383
A4171	Cross joint - GR	1	0.390	383
A4172	End cap - GR	1	0.010	382
A4173	PVC closing top - L1000 - GR	1	0.120	383
A4174	Power-supply head DX - WH	1	0.105	382
A4175	Central power-supply - WH	1	0.445	382
A4176	Flexible connecting element - WH	1	0.395	382
A4177	L-joint - EXT - WH	1	0.330	383
A4178	T-joint - EXT + SX - WH	1	0.330	383
A4179	Cross joint - WH	1	0.390	383
A4180	End cap - WH	1	0.025	382
A4181	PVC closing top - L1000 - WH	1	0.095	383
A4182	Linear connecting element - GR	1	0.050	382
A4183	Steel bracket for ceiling installation	1	0.020	384
A4188	Linear connecting element - WH	1	0.050	382
A4190	Power-supply head SX - GR	1	0.265	382
A4191	L-joint - INT - GR	1	0.200	383
A4192	T-joint - EXT + DX - GR	1	0.290	383
A4193	T-joint - INT + SX - GR	1	0.290	383
A4194	T-joint - INT + DX - GR	1	0.290	383
A4196	Power-supply head SX - WH	1	0.105	382
A4197	L-joint - INT - WH	1	0.335	383
A4198	T-joint - EXT + DX - WH	1	0.330	383
A4199	T-joint - INT + SX - WH	1	0.465	383

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
A4200	T-joint - INT + DX - WH	1	0.200		383
A4204	Adj. susp. boss + 1.5m bracket	1	0.065		384
A4205	Adj. susp. boss + 3m bracket	1	0.075		384
A4206	Adj. susp. boss + 5m bracket	1	0.160		384
A4209	Power-supply head DX - BK	1	0.255		382
A4210	Central power-supply - BK	1	0.200		382
A4211	Flexible connecting element - BK	1	0.210		382
A4212	L-joint - EXT - BK	1	0.255		383
A4213	T-joint - EXT + SX - BK	1	0.290		383
A4214	Cross joint - BK	1	0.390		383
A4215	End cap - BK	1	0.090		382
A4216	PVC closing top - L1000 - BK	1	0.070		383
A4217	Linear connecting element - BK	1	0.130		382
A4218	Power-supply head SX - BK	1	0.120		382
A4219	L-joint - INT - BK	1	0.200		383
A4220	T-joint - EXT + DX - BK	1	0.290		383
A4221	T-joint - INT + SX - BK	1	0.350		383
A4222	T-joint - INT + DX - BK	1	0.350		383
A5013	Kit LED i3F75,A3F 90,A3F 92-L1565-2X22W CONC+PC	1	0.039	3.000	499
A5026	KIT LED i3F 75, A3F 90-L1565 - 2x30W+PC	1	0.020	3.225	499
A5027	Kit LED i3F 75, A3F 90, A3F 92-L1565 - 2X22W+PC	1	0.020	3.190	499
A5057	Kit LED i3F 75,A3F 90-92 L1265 2x18W +PC	1	0.017	2.680	499
A5104	Kit LED i3F 76, A3F 91, A3F 93-L1565-2X22W CONC	1	0.039	2.630	500
A5117	KIT LED i3F 76, A3F 91 - L1565-2x30W	1	0.006	2.035	500
A5118	Kit LED i3F 76, A3F 91, A3F 93 - L1565-2X22W	1	0.006	1.840	500
A5148	KIT LED i3F 76,A3F 91,A3F 93-L1265-2x18W	1	0.009	1.650	500
A5184	Moulded glass Beta 2x i3F 76 - L1565	1	0.014	4.690	500
A5185	Moulded glass Beta 2x i3F 76 - L1265	1	0.011	3.985	500
A5210	Kit LED i3F 76,A3F 91 - L1565 - L 2x40W AMPIO	1	0.013	3.720	500
A5212	Kit LED i3F 76,A3F 91 - L1565 - L 2x40W CONC	1	0.006	3.200	500
A5215	Kit LED i3F 75,A3F 90 - L1565 - L 2x40W AMPIO + PC	1	0.039	5.155	499
A5217	Kit LED i3F 75,A3F 90 - L1565 - L 2x40W CONC + PC	1	0.039	4.795	499
A5308	Kit LED Beta 430 - L1551- 2X65W AMPIO	1	0.073	6.300	503
A5309	Kit LED Beta 430 - L1551- 2X65W CONC	1	0.067	5.500	503
A5311	Kit LED Beta 430 - L1551- 3X65W AMPIO	1	0.073	7.245	503
A5312	Kit LED Beta 430 - L1551- 3X65W CONC	1	0.073	7.060	503
A5322	Moulded glass with frame Beta 430-L1551	1	0.025	7.900	504
A01023	VT 3F RENO WH 150	1	0.210		295
A01024	VT 3F RENO BK 150	1	0.160		295
A01025	VT 3F RENO WH 200	1	0.300		295
A01026	VT 3F RENO BK 200	1	0.300		295
A01035	VS 3F RENO WH 150	1	0.002	0.200	295
A01036	VS 3F RENO BK 150	1	0.002	0.165	295
A01037	VS 3F RENO WH 200	1	0.002	0.395	295
A01038	VS 3F RENO BK 200	1	0.002	0.370	295
A01046	SMP 3F RENO WH 150	1	0.002	0.100	295
A01047	SMP 3F RENO BK 150	1	0.002	0.100	296
A01048	SMP 3F RENO WH 200	1	0.002	0.240	295
A01049	SMP 3F RENO BK 200	1	0.002	0.240	296
A01090	WH adapter ring for 220 mm hole	1	0.310		296
A01091	WH adapter ring for 255 mm hole	1	0.280		296
A01092	WH adapter ring for hole 300 mm <9 mm	1	1.390		296

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
A01093	WH adapter ring for hole 300 mm >9 mm	1	1.148		296
A01314	White rectangular case fixed susp. 0,3m	1	0.001	0.110	159
A01315	White rectangular case fixed susp. 0,5m	1	0.001	0.105	159
A01317	White rectangular case fixed susp. 1m	1	0.001	0.115	159
A01318	White rectangular case adj. susp. 1 m	1	0.001	0.135	159
A01321	Wired fixed susp. 5P wh.rect.case 0,3m	1	0.002	0.285	159
A01322	Wired fixed susp. 5P wh.rect.case 0,5m	1	0.002	0.410	159
A01324	Wired fixed susp. 5P wh.rect.case 1m	1	0.002	0.530	159
A01325	Wired adj. susp. 5P wh.rect.case 1 m	1	0.002	0.450	159
A01368	Travetta B joint closing cap	1		0.090	159
A01479	Wall bracket 15° diam 60mm	1		2.865	530
A01480	Fixed position wall bracket	1		2.755	530
A01481	Corner wall bracket 15° diam 60mm	1		3.125	530
A01485	ZK700-900EL DRIVER ON-OFF DIP-SWITCH	1		0.110	211
A01486	DELT40C-MEL DRIVER DALI DIP-SWITCH	1		0.218	211
A01490	3FLPLAFO603 - 60x60 ceiling frame kit	1		0.580	212
A01491	3FLPLAFO1203 - 30x120 ceiling frame kit	1		0.900	212
A01492	3FKTLP-SPU - Suspension with adjustment - 1,5m	1		0.110	212
A01493	3FKTLPW1-MS - Built-in springs	1		0.110	212
A01494	3FKTEMPR03 - Kit EP 3h	1		0.580	212
A01495	600x600 carter for metal panels	1	0.030	1.750	212
A01523	Grid adapter h50mm - for luminaire D.220	1	0.008	0.800	303
A01528	Slid.brack.w/reg.susp.instal. 3F HD100DI	1		0.060	59
A01530	Ceiling/recessed sliding brack. 3F HD50	1		0.020	59
A01531	Ceiling/recessed sliding brack. 3F HD100	1		0.045	59
A01532	Slid.brack.w/reg.susp.instal. 3F HD50DI	1		0.035	59
A01536	Channels diffusers 3F HD50 - FDP - 6m	1		1.100	58, 75
A01537	Channels diffusers 3F HD50 - FDP - 9m	1		1.345	58, 75
A01538	Channels diffusers 3F HD50 - FDP - 15m	1		1.600	58, 75
A01540	Channels diffusers 3F HD50 - FDO - 6m	1		0.750	58, 75
A01541	Channels diffusers 3F HD50 - FDO - 9m	1		1.000	58, 75
A01542	Channels diffusers 3F HD50 - FDO - 15m	1		1.500	58, 75
A01544	Channels diffusers 3F HD100 - FDP - 6m	1	0.056	2.120	58, 75
A01545	Channels diffusers 3F HD100 - FDP - 9m	1		2.815	58, 75
A01546	Channels diffusers 3F HD100 - FDP - 15m	1		4.100	58, 75
A01548	Channels diffusers 3F HD100 - FDO - 6m	1		1.600	58, 75
A01549	Channels diffusers 3F HD100 - FDO - 9m	1		2.300	58, 75
A01550	Channels diffusers 3F HD100 - FDO - 15m	1		3.900	58, 75
A01552	Pair of end caps for 3F HD50 WH channel FD	1		0.240	59
A01553	Pair of end caps for 3F HD50 BK channel FD	1		0.145	59
A01554	Pair of end caps for 3F HD50 AL channel FD	1		0.110	59
A01555	Pair of end caps for 3F HD100 WH channel FD	1		0.265	59
A01556	Pair of end caps for 3F HD100 BK channel FD	1		0.140	59
A01557	Pair of end caps for 3F HD100 AL channel FD	1		0.140	59
A01558	Pair end caps for 3F HD50 WH channel OC	1		0.110	58
A01559	Pair end caps for 3F HD50 BK channel OC	1		0.250	58
A01560	Pair end caps for 3F HD50 AL channel OC	1		0.110	58
A01561	Pair end caps 3F HD50R WH chan. FD	1		0.075	75
A01562	Pair end caps 3F HD100R WH chan. FD	1		0.160	75
A01563	Dilator joint FD channels>15m - HD50 WH	1		0.090	58, 75
A01564	Dilator joint FD channels>15m - HD100 WH	1		0.130	58, 75
A01565	Pair fixing brack. plasterboard 3F HD50R	1		0.145	75

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		Pcs	m³	Gross weight in kg	
A01566	Pair fixing brack.plasterboard 3F HD100R	1	0.950		75
A01567	3F HD - 5P socket/plug terminal block	1	0.035		60, 76
A01568	Dilator joint FD channels>15m - HD50 BK	1	0.090		58, 75
A01569	Dilator joint FD channels>15m - HD100 BK	1	0.130		58, 75
A01570	Dilator joint FD channels>15m - HD50 AL	1	0.090		58, 75
A01571	Pair of end caps 3F HD50R WH channel GSP	1	0.130		58, 75
A01572	Dilator joint FD channels>15m - HD100 AL	1	0.080		75
A01573	Pair of end caps 3F HD100R WH chann GSP	1	0.170		75
A01574	Pair of end caps 3F HD50R WH channel OCW	1	0.080		75
A01578	Pair of end caps for 3F HD50 WH channel GSP	1	0.110		59
A01579	Pair of end caps for 3F HD50 BK channel GSP	1	0.110		59
A01580	Pair of end caps for 3F HD50 AL channel GSP	1	0.110		59
A01581	Pair of end caps for 3F HD100 WH channel GSP	1	0.140		59
A01582	Pair of end caps for 3F HD100 BK channel GSP	1	0.225		59
A01583	Pair of end caps for 3F HD100 AL channel GSP	1	0.140		59
A02562	Caddy for exposed profiles of 24 mm	1	0.025		171, 349
A20011	3F Linux S NL L3556	1	0.011	3.580	327
A20012	3F Linux S NL L1778	1	0.011	1.735	327
A20017	3F Linux S 5P L3556	1	0.011	4.235	327
A20019	3F Linux S 5P L1778	1	0.011	2.020	327
A20024	3F Linux S 7P L3556	1	0.011	4.420	327
A20026	3F Linux S 7P L1778	1	0.011	2.155	327
A20083	3F Linux L 60 LED BAT L1778	1	0.009	2.700	335
A20084	3F Linux L 50 LED BAT L1778	1	0.009	2.650	335
A20085	3F Linux L 40 LED BAT L1778	1	0.009	2.650	335
A20097	3F Linux L 60 LED DALI BAT L1778	1	0.009	2.700	335
A20098	3F Linux L 50 LED DALI BAT L1778	1	0.009	2.700	335
A20099	3F Linux L 40 LED DALI BAT L1778	1	0.009	2.700	335
A20124	3F Linux L 85 LED AMPIO L1778	1	0.009	2.700	331
A20125	3F Linux L 60 LED AMPIO L1778	1	0.009	2.640	331
A20126	3F Linux L 50 LED AMPIO L1778	1	0.009	2.665	331
A20127	3F Linux L 40 LED AMPIO L1778	1	0.009	2.670	331
A20138	3F Linux L 85 LED DALI AMPIO L1778	1	0.009	2.705	331
A20139	3F Linux L 60 LED DALI AMPIO L1778	1	0.009	2.700	331
A20140	3F Linux L 50 LED DALI AMPIO L1778	1	0.009	2.700	331
A20141	3F Linux L 40 LED DALI AMPIO L1778	1	0.009	2.700	331
A20166	3F Linux L 85 LED CONC L1778	1	0.009	2.650	336
A20167	3F Linux L 60 LED CONC L1778	1	0.009	2.650	336
A20180	3F Linux L 85 LED DALI CONC L1778	1	0.009	2.630	336
A20181	3F Linux L 60 LED DALI CONC L1778	1	0.009	2.700	336
A20335	3F Linux D 2x30 LED L1778	1	0.018	2.870	341
A20336	3F Linux D 2x22 LED L1778	1	0.018	2.780	341
A20349	3F Linux D 2x30 LED DALI L1778	1	0.018	2.795	341
A20350	3F Linux D 2x22 LED DALI L1778	1	0.018	3.000	341
A20424	3F Linux TK L1778	1	0.018	2.800	347
A20428	Closing Top LOW - L1778	1	0.295		351
A20433	Linear connecting element	1	0.001	0.170	171, 350
A20434	T-Connecting element 3F Linux	1	0.006	0.640	350
A20436	L-Connecting element 3F L Linux	1	0.006	0.365	350
A20442	Closing Top HIGH - L1778	1	0.003	0.585	351
A20448	Pair of closing end 3F Linux	1	0.035		350
A20450	Slid.invis.brack.w/adj.for susp.3F Linux	1	0.048		348

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		Pcs	m³	Gross weight in kg	
A20451	Slid.invis.brack.ceiling instal.3F Linux	1	0.030		348
A20452	Stainless steel hook for chain	1	0.015		171, 348
A20453	S-shaped chain hook w/slid.bra. 3F Linux	1	0.001	0.060	348
A20454	5-pole socket-plug term.block 3F Linux S	1		0.065	352
A20455	7-pole socket-plug term.block 3F Linux S	1		0.090	352
A20459	5-pole socket-plug L-branch 3F Linux S	1	0.002	0.090	352
A20460	7-pole socket-plug L-branch 3F Linux S	1	0.002	0.200	352
A20464	5-pole socket-plug T-branch 3F Linux S	1	0.002	0.250	352
A20465	7-pole socket-plug T-branch 3F Linux S	1	0.002	0.300	352
A20470	Pair of mounting brack. lum. 3F Linux S	1		0.050	351
A20474	Safety screw locking slid.bra.3F Linux S	1		0.007	348
A20475	3F Linux Cable Support (10 pcs)	1	0.001	0.100	351
A20476	Contact pin for 3F Linux plug (50 pcs.)	1	0.004	0.175	353
A20478	Anti-slip term. incli. 3F Linux	1		0.060	172, 350
A20479	Power cable for luminaires 3P-3F Linux	1		0.060	353
A20480	Power cable for luminaires 5P-3F Linux	1		0.180	353
A20485	Suspension without adjustment - 0.5 m	1		0.030	60, 115, 262, 349
A20486	Suspension without adjustment - 1 m	1		0.035	60, 115, 262, 349
A20487	Suspension without adjustment - 2 m	1		0.045	60, 115, 262, 349
A20488	Suspension without adjustment - 3 m	1		0.060	60, 262, 349
A20489	Suspension without adjustment - 4 m	1		0.225	60, 262, 349
A20490	Suspension without adjustment - 5 m	1		0.090	60, 262, 349
A20491	Suspension without adjustment - 6 m	1		0.085	60, 262, 349
A20498	Pair brack.3F Linda instal.in 3F Linux S	1		0.100	351
A20500	Cen.pow-sup.soc-plug ter-blo.3FLinuxS 5P	1		0.100	353
A20501	Cen.pow-sup.soc-plug ter-blo.3FLinuxS 7P	1		0.150	353
A20511	3F Linux DR 2x30 LED L1778	1	0.018	2.885	343
A20512	3F Linux DR 2x22 LED L1778	1	0.018	2.795	343
A20525	3F Linux DR 2x30 LED DALI L1778	1	0.018	3.000	343
A20526	3F Linux DR 2x22 LED DALI L1778	1	0.018	2.860	343
A20595	3F Linux DR 1x30 LED UGR L1778	1	0.018	3.290	343
A20596	3F Linux DR 2x22 LED UGR L1778	1	0.018	3.350	343
A20599	3F Linux DR 1x30 LED DALI UGR L1778	1	0.018	3.320	343
A20600	3F Linux DR 2x22 LED DALI UGR L1778	1	0.018	3.335	343
A20608	3F Linux L 60 LED BAT WD L1778	1	0.009	2.745	335
A20609	3F Linux L 50 LED BAT WD L1778	1	0.009	2.650	335
A20610	3F Linux L 40 LED BAT WD L1778	1	0.009	2.650	335
A20622	3F Linux L 60 LED DALI BAT WD L1778	1	0.009	2.700	335
A20623	3F Linux L 50 LED DALI BAT WD L1778	1	0.009	2.700	335
A20624	3F Linux L 40 LED DALI BAT WD L1778	1	0.009	2.700	335
A20661	3F Linux L 50 LED UGR L1778	1	0.009	2.725	333
A20662	3F Linux L 40 LED UGR L1778	1	0.009	2.650	333
A20664	3F Linux L 50/940 LED UGR L1778	1	0.009	2.725	333
A20665	3F Linux L 40/940 LED UGR L1778	1	0.009	2.650	333
A20667	3F Linux L 50 LED DALI UGR L1778	1	0.009	2.750	333
A20668	3F Linux L 40 LED DALI UGR L1778	1	0.009	2.700	333
A20670	3F Linux L 50/940 LED DALI UGR L1778	1	0.009	2.700	333
A20671	3F Linux L 40/940 LED DALI UGR L1778	1	0.009	2.700	333
A20674	3F Linux DR 2x30 LED AS L1778	1	0.018	3.580	344
A20679	3F Linux DR 2x30 LED DALI AS L1778	1	0.018	3.200	344
A20684	3F Linux L 85 LED IPERCONC L1778	1	0.009	2.650	336
A20685	3F Linux L 60 LED IPERCONC L1778	1	0.009	2.650	336

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		Pcs	m³	Gross weight in kg	
A20698	3F Linux L 85 LED DALI IPERCONC L1778	1	0.009	2.650	336
A20699	3F Linux L 60 LED DALI IPERCONC L1778	1	0.009	2.650	336
A20723	3F Linux 7P IP54 L3556 System	1	0.021	6.190	329
A20724	3F Linux 7P IP54 L1778 System	1		3.070	329
A20725	3F Linux 5P IP54 L3556 System	1		5.600	329
A20726	3F Linux 5P IP54 L1778 System	1		2.800	329
A20740	IP54 3F Linux End terminal	1		0.055	352
A20741	IP54 3F Linux End terminal with 1 hole	1		0.065	352
A20742	IP54 3F Linux End terminal with 2 holes	1		0.180	352
A20743	IP54 - L1778 Closing Top	1		0.720	351
A20744	3F Linux L 85 LED AS L1778	1	0.009	2.650	334
A20745	3F Linux L 60 LED AS L1778	1	0.009	2.665	334
A20746	3F Linux L 50 LED AS L1778	1	0.009	2.650	334
A20747	3F Linux L 40 LED AS L1778	1	0.009	2.650	334
A20749	3F Linux L 85 LED DALI AS L1778	1	0.009	2.700	334
A20750	3F Linux L 60 LED DALI AS L1778	1	0.009	2.700	334
A20751	3F Linux L 50 LED DALI AS L1778	1	0.009	2.700	334
A20752	3F Linux L 40 LED DALI AS L1778	1	0.009	2.700	334
A20754	3F Linux L 85 LED MEDIO L1778	1	0.009	2.550	332
A20755	3F Linux L 60 LED MEDIO L1778	1	0.009	2.650	332
A20756	3F Linux L 50 LED MEDIO L1778	1	0.009	2.650	332
A20757	3F Linux L 40 LED MEDIO L1778	1	0.009	2.650	332
A20759	3F Linux L 85 LED DALI MEDIO L1778	1	0.009	2.700	332
A20760	3F Linux L 60 LED DALI MEDIO L1778	1	0.009	2.700	332
A20761	3F Linux L 50 LED DALI MEDIO L1778	1	0.009	2.700	332
A20762	3F Linux L 40 LED DALI MEDIO L1778	1	0.009	2.565	332
1855	03F 14W/840 L620	1	0.006	1.550	141
1856	03F 28W/840 L1204	1	0.010	2.570	141
1857	03F 35W/840 L1506	1	0.012	3.100	141
1858	03F 42W/840 L1787	1	0.014	3.665	141
1859	03F 18W/940 L620	1	0.006	1.525	141
1860	03F 35W/940 L1204	1	0.010	2.575	141
1861	03F 44W/940 L1506	1	0.012	4.700	141
1862	03F 53W/940 L1787	1	0.014	5.800	141
1863	03F 14W/840 DALI L620	1	0.006	1.480	141
1864	03F 28W/840 DALI L1204	1	0.010	2.560	141
1865	03F 35W/840 DALI L1506	1	0.012	3.195	141
1866	03F 42W/840 DALI L1787	1	0.014	5.800	141
1867	03F 18W/940 DALI L620	1	0.006	2.000	141
1868	03F 35W/940 DALI L1204	1	0.010	2.610	141
1869	03F 44W/940 DALI L1506	1	0.012	3.095	141
1870	03F 53W/940 DALI L1787	1	0.014	5.800	141
1871	03F 28W/840 EP L1204	1	0.010	4.600	141
1872	03F 35W/840 EP L1506	1	0.012	5.500	141
1873	03F 42W/840 EP L1787	1	0.014	6.600	141
1874	03F 35W/940 EP L1204	1	0.010	4.600	141
1875	03F 44W/940 EP L1506	1	0.012	5.500	141
1876	03F 53W/940 EP L1787	1	0.014	6.600	141
1877	03F 28W/840 DALI EP L1204	1	0.010	4.600	141
1878	03F 35W/840 DALI EP L1506	1	0.012	5.500	141
1879	03F 42W/840 DALI EP L1787	1	0.014	6.600	141
1880	03F 35W/940 DALI EP L1204	1	0.010	4.600	141

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
1881	03F 44W/940 DALI EP L1506	1	0.012	5.500	141
1882	03F 53W/940 DALI EP L1787	1	0.014	6.600	141
1883	03F 14W/840 AS L620	1	0.005	1.770	142
1884	03F 28W/840 AS L1204	1	0.009	4.000	142
1885	03F 35W/840 AS L1506	1	0.012	4.900	142
1886	03F 42W/840 AS L1787	1	0.014	6.000	142
1887	03F 18W/940 AS L620	1	0.005	2.200	142
1888	03F 35W/940 AS L1204	1	0.009	4.000	142
1889	03F 44W/940 AS L1506	1	0.012	4.900	142
1890	03F 53W/940 AS L1787	1	0.014	6.000	142
1959	MIRA PAR LED 4x12W IND L675	1	0.014	3.480	195
1961	MIRA PAR LED DE 4x12W L675	1	0.014	3.415	195
5790	3F Linda Compatta LED 1x5W 100x300	1	0.004	0.695	424
5791	3F Linda Compatta LED 1x5W 160x300	1	0.006	0.975	424
5794	3F Linda Compatta LED 1x5W EP 160x300	1	0.006	1.395	424
6063	3F Filoluce WH 16+23W/830 Touch DALI	1	0.260	19.715	123
6064	3F Filoluce BK 16+23W/830 Touch DALI	1	0.260	19.715	123
6065	3F Filoluce AN 16+23W/830 Touch DALI	1	0.260	19.715	123
6066	3F Filoluce RD 16+23W/830 Touch DALI	1	0.260	19.715	123
6090	3F Emilio Table WH 1000/930 PCD	1	0.035	5.134	129
6098	3F Filoluce WH 16+23W/840 Touch DALI	1	0.260	19.715	123
6099	3F Filoluce BK 16+23W/840 Touch DALI	1	0.260	19.715	123
6100	3F Filoluce AN 16+23W/840 Touch DALI	1	0.260	19.715	123
6101	3F Filoluce RD 16+23W/840 Touch DALI	1	0.260	19.715	123
6128	3F C8 WH 30/840 DALI GSP L1480	1	0.015	4.500	145
6130	3F C8 WH DI 30+8/840 DALI GSP L1480	1	0.015	4.800	147
6136	3F C8 BK 30/840 DALI GSP L1480	1	0.015	4.500	145
6138	3F C8 BK DI 30+8/840 DALI GSP L1480	1	0.015	3.645	147
6140	3F C8 WH HO 44/840 DALI GSP L1480	1	0.015	4.500	145
6142	3F C8 WH DI HO 44+8/840 DALI GSP L1480	1	0.015	4.800	147
6148	3F C8 BK HO 44/840 DALI GSP L1480	1	0.015	4.500	145
6150	3F C8 BK DI HO 44+8/840 DALI GSP L1480	1	0.015	3.650	147
6157	3F Trittico WH 12+12+15/830 DALI H300	1	0.038	3.400	101
6158	3F Trittico BK 12+12+15/830 DALI H300	1	0.038	3.400	101
6160	3F Trittico WH 12+12+15/830 DALI H500	1	0.038	3.700	101
6161	3F Trittico BK 12+12+15/830 DALI H500	1	0.038	3.700	101
6163	3F Trittico WH 12+12+15/830 DALI H800	1	0.038	4.000	101
6164	3F Trittico BK 12+12+15/830 DALI H800	1	0.038	4.000	101
6200	3F HD50 WH 13/840 DALI FDP L1214	1	0.006	4.000	40
6201	3F HD50 WH 16/840 DALI FDP L1508	1	0.008	4.500	40
6202	3F HD50 WH 32/840 DALI FDP L2975	1	0.015	10.200	40
6204	3F HD50 WH 13/840 DALI FDO L1214	1	0.006	4.000	42
6205	3F HD50 WH 16/840 DALI FDO L1508	1	0.008	4.500	42
6206	3F HD50 WH 32/840 DALI FDO L2975	1	0.015	10.200	42
6208	3F HD50 WH 13/840 DALI GSP L1214	1	0.006	2.940	38
6209	3F HD50 WH 16/840 DALI GSP L1508	1	0.008	3.260	38
6210	3F HD50 WH 32/840 DALI GSP L2975	1	0.015	10.200	38
6215	3F HD50 WH 12/830 DALI OCW L1214	1	0.006	3.800	37
6216	3F HD50 WH 15/830 DALI OCW L1508	1	0.008	4.200	37
6217	3F HD50 WH 30/830 DALI OCW L2975	1	0.015	8.400	37
6219	3F HD100 WH 22/840 DALI FDP L1214	1	0.011	3.875	40
6220	3F HD100 WH 26/840 DALI FDP L1508	1	0.013	4.675	40

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		Pcs	m³	Gross weight in kg	
6221	3F HD100 WH 52/840 DALI FDP L2975	1	0.027	8.000	40
6223	3F HD100 WH 22/840 DALI FDO L1214	1	0.011	3.875	42
6224	3F HD100 WH 26/840 DALI FDO L1508	1	0.013	5.300	42
6225	3F HD100 WH 52/840 DALI FDO L2975	1	0.027	8.000	42
6227	3F HD100 WH 22/840 DALI GSP L1214	1	0.011	3.875	38
6228	3F HD100 WH 26/840 DALI GSP L1508	1	0.013	5.300	38
6229	3F HD100 WH 52/840 DALI GSP L2975	1	0.027	8.000	38
6236	3F HD50 WH 13/840 DALI 5P FD L1174	1	0.006	3.580	47
6237	3F HD50 WH 16/840 DALI 5P FD L1468	1	0.008	3.635	47
6241	3F HD50 WH 32/840 DALI 5P FD L2935	1	0.015	6.725	47
6245	3F HD50 WH 13/840 DALI 5P GSP L1174	1	0.006	3.600	46
6246	3F HD50 WH 16/840 DALI 5P GSP L1468	1	0.008	3.900	46
6250	3F HD50 WH 32/840 DALI 5P GSP L2935	1	0.015	10.800	46
6260	3F HD50 WH 12/830 DALI 5P OCW L1174	1	0.006	4.000	45
6261	3F HD50 WH 15/830 DALI 5P OCW L1468	1	0.008	4.400	45
6262	3F HD50 WH 30/830 DALI 5P OCW L2935	1	0.015	8.800	45
6266	3F HD100 WH 22/840 DALI 5P FD L1174	1	0.011	4.000	47
6267	3F HD100 WH 26/840 DALI 5P FD L1468	1	0.013	4.585	47
6271	3F HD100 WH 52/840 DALI 5P FD L2935	1	0.027	8.475	47
6275	3F HD100 WH 22/840 DALI 5P GSP L1174	1	0.011	3.875	46
6276	3F HD100 WH 26/840 DALI 5P GSP L1468	1	0.013	5.300	46
6280	3F HD100 WH 52/840 DALI 5P GSP L2935	1	0.027	8.000	46
6285	3F HD50 BK 13/840 DALI FDP L1214	1	0.006	4.000	40
6286	3F HD50 BK 16/840 DALI FDP L1508	1	0.008	4.500	40
6287	3F HD50 BK 32/840 DALI FDP L2975	1	0.015	10.200	40
6289	3F HD50 BK 13/840 DALI FDO L1214	1	0.006	4.000	42
6290	3F HD50 BK 16/840 DALI FDO L1508	1	0.008	3.380	42
6291	3F HD50 BK 32/840 DALI FDO L2975	1	0.015	10.200	42
6293	3F HD50 BK 13/840 DALI GSP L1214	1	0.006	2.940	38
6294	3F HD50 BK 16/840 DALI GSP L1508	1	0.008	3.260	38
6295	3F HD50 BK 32/840 DALI GSP L2975	1	0.015	10.200	38
6300	3F HD50 BK 12/830 DALI OCB L1214	1	0.006	3.490	37
6301	3F HD50 BK 15/830 DALI OCB L1508	1	0.008	4.080	37
6302	3F HD50 BK 30/830 DALI OCB L2975	1	0.015	7.570	37
6304	3F HD100 BK 22/840 DALI FDP L1214	1	0.011	3.875	40
6305	3F HD100 BK 26/840 DALI FDP L1508	1	0.013	4.675	40
6306	3F HD100 BK 52/840 DALI FDP L2975	1	0.027	8.000	40
6308	3F HD100 BK 22/840 DALI FDO L1214	1	0.011	3.875	42
6309	3F HD100 BK 26/840 DALI FDO L1508	1	0.013	5.300	42
6310	3F HD100 BK 52/840 DALI FDO L2975	1	0.027	8.000	42
6312	3F HD100 BK 22/840 DALI GSP L1214	1	0.011	3.875	38
6313	3F HD100 BK 26/840 DALI GSP L1508	1	0.013	5.300	38
6314	3F HD100 BK 52/840 DALI GSP L2975	1	0.027	8.000	38
6321	3F HD50 BK 13/840 DALI 5P FD L1174	1	0.006	3.580	47
6322	3F HD50 BK 16/840 DALI 5P FD L1468	1	0.008	3.635	47
6326	3F HD50 BK 32/840 DALI 5P FD L2935	1	0.015	6.725	47
6330	3F HD50 BK 13/840 DALI 5P GSP L1174	1	0.006	3.600	46
6331	3F HD50 BK 16/840 DALI 5P GSP L1468	1	0.008	3.900	46
6335	3F HD50 BK 32/840 DALI 5P GSP L2935	1	0.015	10.800	46
6345	3F HD50 BK 12/830 DALI 5P OCB L1174	1	0.006	4.000	45
6346	3F HD50 BK 15/830 DALI 5P OCB L1468	1	0.008	4.400	45
6347	3F HD50 BK 30/830 DALI 5P OCB L2935	1	0.015	8.150	45

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
6351	3F HD100 BK 22/840 DALI 5P FD L1174	1	0.011	4.000	47
6352	3F HD100 BK 26/840 DALI 5P FD L1468	1	0.013	4.585	47
6356	3F HD100 BK 52/840 DALI 5P FD L2935	1	0.027	8.475	47
6360	3F HD100 BK 22/840 DALI 5P GSP L1174	1	0.011	3.875	46
6361	3F HD100 BK 26/840 DALI 5P GSP L1468	1	0.013	5.300	46
6365	3F HD100 BK 52/840 DALI 5P GSP L2935	1	0.027	8.000	46
6370	3F HD50 AL 13/840 DALI FDP L1214	1	0.006	4.000	40
6371	3F HD50 AL 16/840 DALI FDP L1508	1	0.008	4.500	40
6372	3F HD50 AL 32/840 DALI FDP L2975	1	0.015	10.200	40
6374	3F HD50 AL 13/840 DALI FDO L1214	1	0.006	4.000	42
6375	3F HD50 AL 16/840 DALI FDO L1508	1	0.008	4.500	42
6376	3F HD50 AL 32/840 DALI FDO L2975	1	0.015	10.200	42
6378	3F HD50 AL 13/840 DALI GSP L1214	1	0.006	2.940	38
6379	3F HD50 AL 16/840 DALI GSP L1508	1	0.008	3.260	38
6380	3F HD50 AL 32/840 DALI GSP L2975	1	0.015	10.200	38
6385	3F HD50 AL 12/830 DALI OCB L1214	1	0.006	3.490	37
6386	3F HD50 AL 15/830 DALI OCB L1508	1	0.008	4.080	37
6387	3F HD50 AL 30/830 DALI OCB L2975	1	0.015	7.570	37
6389	3F HD100 AL 22/840 DALI FDP L1214	1	0.011	3.875	40
6390	3F HD100 AL 26/840 DALI FDP L1508	1	0.013	4.675	40
6391	3F HD100 AL 52/840 DALI FDP L2975	1	0.027	8.000	40
6393	3F HD100 AL 22/840 DALI FDO L1214	1	0.011	3.875	42
6394	3F HD100 AL 26/840 DALI FDO L1508	1	0.013	5.300	42
6395	3F HD100 AL 52/840 DALI FDO L2975	1	0.027	8.000	42
6397	3F HD100 AL 22/840 DALI GSP L1214	1	0.011	3.875	38
6398	3F HD100 AL 26/840 DALI GSP L1508	1	0.013	5.300	38
6399	3F HD100 AL 52/840 DALI GSP L2975	1	0.027	8.000	38
6406	3F HD50 AL 13/840 DALI 5P FD L1174	1	0.006	3.580	47
6407	3F HD50 AL 16/840 DALI 5P FD L1468	1	0.008	3.635	47
6411	3F HD50 AL 32/840 DALI 5P FD L2935	1	0.015	6.725	47
6415	3F HD50 AL 13/840 DALI 5P GSP L1174	1	0.006	3.600	46
6416	3F HD50 AL 16/840 DALI 5P GSP L1468	1	0.008	3.900	46
6420	3F HD50 AL 32/840 DALI 5P GSP L2935	1	0.015	10.800	46
6430	3F HD50 AL 12/830 DALI 5P OCB L1174	1	0.006	4.000	45
6431	3F HD50 AL 15/830 DALI 5P OCB L1468	1	0.008	4.400	45
6432	3F HD50 AL 30/830 DALI 5P OCB L2935	1	0.015	8.150	45
6436	3F HD100 AL 22/840 DALI 5P FD L1174	1	0.011	4.000	47
6437	3F HD100 AL 26/840 DALI 5P FD L1468	1	0.013	4.585	47
6441	3F HD100 AL 52/840 DALI 5P FD L2935	1	0.027	8.475	47
6445	3F HD100 AL 22/840 DALI 5P GSP L1174	1	0.011	6.200	46
6446	3F HD100 AL 26/840 DALI 5P GSP L1468	1	0.013	6.700	46
6450	3F HD100 AL 52/840 DALI 5P GSP L2935	1	0.027	11.600	46
6455	3F HD50DI WH 13+20/840 DALI FDP L1214	1	0.006	5.200	51
6456	3F HD50DI WH 16+26/840 DALI FDP L1508	1	0.008	5.800	51
6457	3F HD50DI WH 32+52/840 DALI FDP L2975	1	0.015	10.700	51
6459	3F HD50DI WH 13+20/840 DALI FDO L1214	1	0.006	5.200	52
6460	3F HD50DI WH 16+26/840 DALI FDO L1508	1	0.008	5.800	52
6461	3F HD50DI WH 32+52/840 DALI FDO L2975	1	0.015	10.700	52
6463	3F HD50DI WH 13+20/840 DALI GSP L1214	1	0.006	3.300	50
6464	3F HD50DI WH 16+26/840 DALI GSP L1508	1	0.008	3.600	50
6465	3F HD50DI WH 32+52/840 DALI GSP L2975	1	0.015	10.700	50
6470	3F HD50DI WH 12+20/830 DALI OCV L1214	1	0.006	3.855	49

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		Pcs	m³	Gross weight in kg	
6471	3F HD50DI WH 15+26/830 DALI OCW L1508	1	0.008	4.565	49
6472	3F HD50DI WH 30+52/830 DALI OCW L2975	1	0.015	8.900	49
6474	3F HD100DI WH 22+20/840 DALI FDP L1214	1	0.011	4.200	51
6475	3F HD100DI WH 26+26/840 DALI FDP L1508	1	0.013	4.890	51
6476	3F HD100DI WH 52+52/840 DALI FDP L2975	1	0.027	11.500	51
6478	3F HD100DI WH 22+20/840 DALI FDO L1214	1	0.011	6.000	52
6479	3F HD100DI WH 26+26/840 DALI FDO L1508	1	0.013	6.600	52
6480	3F HD100DI WH 52+52/840 DALI FDO L2975	1	0.027	11.500	52
6482	3F HD100DI WH 22+20/840 DALI GSP L1214	1	0.011	6.000	50
6483	3F HD100DI WH 26+26/840 DALI GSP L1508	1	0.013	6.600	50
6484	3F HD100DI WH 52+52/840 DALI GSP L2975	1	0.027	11.500	50
6491	3F HD50DI WH 13+20/840 DALI 5P FD L1174	1	0.006	3.210	57
6492	3F HD50DI WH 16+26/840 DALI 5P FD L1468	1	0.008	3.900	57
6496	3F HD50DI WH 32+52/840 DALI 5P FD L2935	1	0.015	7.300	57
6500	3F HD50DI WH 13+20/840 DALI 5P GSP L1174	1	0.006	5.600	56
6501	3F HD50DI WH 16+26/840 DALI 5P GSP L1468	1	0.008	6.200	56
6505	3F HD50DI WH 32+52/840 DALI 5P GSP L2935	1	0.015	11.300	56
6515	3F HD50DI WH 12+20/830 DALI 5P OCW L1174	1	0.006	4.200	55
6516	3F HD50DI WH 15+26/830 DALI 5P OCW L1468	1	0.008	4.895	55
6517	3F HD50DI WH 30+52/830 DALI 5P OCW L2935	1	0.015	9.300	55
6521	3F HD100DI WH 22+20/840 DALI 5P FD L1174	1	0.011	6.200	57
6522	3F HD100DI WH 26+26/840 DALI 5P FD L1468	1	0.013	6.800	57
6526	3F HD100DI WH 52+52/840 DALI 5P FD L2935	1	0.027	11.700	57
6530	3F HD100DI WH 22+20/840 DALI 5P GSP L1174	1	0.011	6.400	56
6531	3F HD100DI WH 26+26/840 DALI 5P GSP L1468	1	0.013	7.000	56
6535	3F HD100DI WH 52+52/840 DALI 5P GSP L2935	1	0.027	12.100	56
6540	3F HD50DI BK 13+20/840 DALI FDP L1214	1	0.006	5.200	51
6541	3F HD50DI BK 16+26/840 DALI FDP L1508	1	0.008	5.800	51
6542	3F HD50DI BK 32+52/840 DALI FDP L2975	1	0.015	10.700	51
6544	3F HD50DI BK 13+20/840 DALI FDO L1214	1	0.006	5.200	52
6545	3F HD50DI BK 16+26/840 DALI FDO L1508	1	0.008	5.800	52
6546	3F HD50DI BK 32+52/840 DALI FDO L2975	1	0.015	10.700	52
6548	3F HD50DI BK 13+20/840 DALI GSP L1214	1	0.006	3.300	50
6549	3F HD50DI BK 16+26/840 DALI GSP L1508	1	0.008	3.600	50
6550	3F HD50DI BK 32+52/840 DALI GSP L2975	1	0.015	10.700	50
6555	3F HD50DI BK 12+20/830 DALI OCB L1214	1	0.006	3.800	49
6556	3F HD50DI BK 15+26/830 DALI OCB L1508	1	0.008	4.560	49
6557	3F HD50DI BK 30+52/830 DALI OCB L2975	1	0.015	8.900	49
6559	3F HD100DI BK 22+20/840 DALI FDP L1214	1	0.011	4.200	51
6560	3F HD100DI BK 26+26/840 DALI FDP L1508	1	0.013	4.890	51
6561	3F HD100DI BK 52+52/840 DALI FDP L2975	1	0.027	11.500	51
6563	3F HD100DI BK 22+20/840 DALI FDO L1214	1	0.011	6.000	52
6564	3F HD100DI BK 26+26/840 DALI FDO L1508	1	0.013	6.600	52
6565	3F HD100DI BK 52+52/840 DALI FDO L2975	1	0.027	11.500	52
6567	3F HD100DI BK 22+20/840 DALI GSP L1214	1	0.011	6.000	50
6568	3F HD100DI BK 26+26/840 DALI GSP L1508	1	0.013	6.600	50
6569	3F HD100DI BK 52+52/840 DALI GSP L2975	1	0.027	11.500	50
6576	3F HD50DI BK 13+20/840 DALI 5P FD L1174	1	0.006	3.210	57
6577	3F HD50DI BK 16+26/840 DALI 5P FD L1468	1	0.008	3.900	57
6581	3F HD50DI BK 32+52/840 DALI 5P FD L2935	1	0.015	7.300	57
6585	3F HD50DI BK 13+20/840 DALI 5P GSP L1174	1	0.006	5.600	56
6586	3F HD50DI BK 16+26/840 DALI 5P GSP L1468	1	0.008	6.200	56

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
6590	3F HD50DI BK 32+52/840 DALI 5P GSP L2935	1	0.015	11.300	56
6600	3F HD50DI BK 12+20/830 DALI 5P OCB L1174	1	0.006	4.200	55
6601	3F HD50DI BK 15+26/830 DALI 5P OCB L1468	1	0.008	4.695	55
6602	3F HD50DI BK 30+52/830 DALI 5P OCB L2935	1	0.015	8.600	55
6606	3F HD100DI BK 22+20/840 DALI 5P FD L1174	1	0.011	6.200	57
6607	3F HD100DI BK 26+26/840 DALI 5P FD L1468	1	0.013	6.800	57
6611	3F HD100DI BK 52+52/840 DALI 5P FD L2935	1	0.027	11.700	57
6615	3F HD100DI BK 22+20/840 DALI 5P GSP L1174	1	0.011	6.400	56
6616	3F HD100DI BK 26+26/840 DALI 5P GSP L1468	1	0.013	7.000	56
6620	3F HD100DI BK 52+52/840 DALI 5P GSP L2935	1	0.027	12.100	56
6625	3F HD50DI AL 13+20/840 DALI FDP L1214	1	0.006	5.200	51
6626	3F HD50DI AL 16+26/840 DALI FDP L1508	1	0.008	5.800	51
6627	3F HD50DI AL 32+52/840 DALI FDP L2975	1	0.015	10.700	51
6629	3F HD50DI AL 13+20/840 DALI FDO L1214	1	0.006	5.200	52
6630	3F HD50DI AL 16+26/840 DALI FDO L1508	1	0.008	5.800	52
6631	3F HD50DI AL 32+52/840 DALI FDO L2975	1	0.015	10.700	52
6633	3F HD50DI AL 13+20/840 DALI GSP L1214	1	0.006	3.300	50
6634	3F HD50DI AL 16+26/840 DALI GSP L1508	1	0.008	3.600	50
6635	3F HD50DI AL 32+52/840 DALI GSP L2975	1	0.015	10.700	50
6640	3F HD50DI AL 12+20/830 DALI OCB L1214	1	0.006	3.800	49
6641	3F HD50DI AL 15+26/830 DALI OCB L1508	1	0.008	4.560	49
6642	3F HD50DI AL 30+52/830 DALI OCB L2975	1	0.015	8.900	49
6644	3F HD100DI AL 22+20/840 DALI FDP L1214	1	0.011	4.200	51
6645	3F HD100DI AL 26+26/840 DALI FDP L1508	1	0.013	4.890	51
6646	3F HD100DI AL 52+52/840 DALI FDP L2975	1	0.027	11.500	51
6648	3F HD100DI AL 22+20/840 DALI FDO L1214	1	0.011	6.000	52
6649	3F HD100DI AL 26+26/840 DALI FDO L1508	1	0.013	6.600	52
6650	3F HD100DI AL 52+52/840 DALI FDO L2975	1	0.027	11.500	52
6652	3F HD100DI AL 22+20/840 DALI GSP L1214	1	0.011	6.000	50
6653	3F HD100DI AL 26+26/840 DALI GSP L1508	1	0.013	6.600	50
6654	3F HD100DI AL 52+52/840 DALI GSP L2975	1	0.027	11.500	50
6661	3F HD50DI AL 13+20/840 DALI 5P FD L1174	1	0.006	3.210	57
6662	3F HD50DI AL 16+26/840 DALI 5P FD L1468	1	0.008	3.900	57
6666	3F HD50DI AL 32+52/840 DALI 5P FD L2935	1	0.015	7.300	57
6670	3F HD50DI AL 13+20/840 DALI 5P GSP L1174	1	0.006	5.600	56
6671	3F HD50DI AL 16+26/840 DALI 5P GSP L1468	1	0.008	6.200	56
6675	3F HD50DI AL 32+52/840 DALI 5P GSP L2935	1	0.015	11.300	56
6685	3F HD50DI AL 12+20/830 DALI 5P OCB L1174	1	0.006	4.200	55
6686	3F HD50DI AL 15+26/830 DALI 5P OCB L1468	1	0.008	4.695	55
6687	3F HD50DI AL 30+52/830 DALI 5P OCB L2935	1	0.015	8.600	55
6691	3F HD100DI AL 22+20/840 DALI 5P FD L1174	1	0.011	6.200	57
6692	3F HD100DI AL 26+26/840 DALI 5P FD L1468	1	0.013	6.800	57
6696	3F HD100DI AL 52+52/840 DALI 5P FD L2935	1	0.027	11.700	57
6700	3F HD100DI AL 22+20/840 DALI 5P GSP L1174	1	0.011	6.400	56
6701	3F HD100DI AL 26+26/840 DALI 5P GSP L1468	1	0.013	7.000	56
6705	3F HD100DI AL 52+52/840 DALI 5P GSP L2935	1	0.027	12.100	56
6710	3F HD50R WH 13/840 DALI FDP L1188	1	0.006	4.700	68
6711	3F HD50R WH 16/840 DALI FDP L1482	1	0.007	5.100	68
6712	3F HD50R WH 32/840 DALI FDP L2949	1	0.015	9.400	68
6714	3F HD50R WH 13/840 DALI FDO L1188	1	0.006	4.700	69
6715	3F HD50R WH 16/840 DALI FDO L1482	1	0.007	5.100	69
6716	3F HD50R WH 32/840 DALI FDO L2949	1	0.015	9.400	69

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		Pcs	m³	Gross weight in kg	
6718	3F HD50R WH 13/840 DALI GSP L1188	1	0.006	4.700	67
6719	3F HD50R WH 16/840 DALI GSP L1482	1	0.007	5.100	67
6720	3F HD50R WH 32/840 DALI GSP L2949	1	0.015	9.400	67
6725	3F HD50R WH 12/830 DALI OCW L1188	1	0.006	3.500	67
6726	3F HD50R WH 15/830 DALI OCW L1482	1	0.007	3.800	67
6727	3F HD50R WH 30/830 DALI OCW L2949	1	0.015	7.600	67
6729	3F HD100R WH 22/840 DALI FDP L1188	1	0.010	4.500	68
6730	3F HD100R WH 26/840 DALI FDP L1482	1	0.012	4.975	68
6731	3F HD100R WH 52/840 DALI FDP L2949	1	0.024	8.000	68
6733	3F HD100R WH 22/840 DALI FDO L1188	1	0.010	4.500	69
6734	3F HD100R WH 26/840 DALI FDO L1482	1	0.012	4.975	69
6735	3F HD100R WH 52/840 DALI FDO L2949	1	0.024	8.000	69
6737	3F HD100R WH 22/840 DALI GSP L1188	1	0.010	4.500	67
6738	3F HD100R WH 26/840 DALI GSP L1482	1	0.012	4.975	67
6739	3F HD100R WH 52/840 DALI GSP L2949	1	0.024	8.000	67
6746	3F HD50R WH 13/840 DALI 5P FD L1174	1	0.006	4.500	74
6747	3F HD50R WH 16/840 DALI 5P FD L1468	1	0.007	4.900	74
6751	3F HD50R WH 32/840 DALI 5P FD L2935	1	0.015	9.000	74
6755	3F HD50R WH 13/840 DALI 5P GSP L1174	1	0.006	4.500	73
6756	3F HD50R WH 16/840 DALI 5P GSP L1468	1	0.007	4.975	73
6760	3F HD50R WH 32/840 DALI 5P GSP L2935	1	0.015	8.000	73
6770	3F HD50R WH 12/830 DALI 5P OCW L1174	1	0.006	3.700	73
6771	3F HD50R WH 15/830 DALI 5P OCW L1468	1	0.007	4.335	73
6772	3F HD50R WH 30/830 DALI 5P OCW L2935	1	0.015	8.000	73
6776	3F HD100R WH 22/840 DALI 5P FD L1174	1	0.010	4.500	74
6777	3F HD100R WH 26/840 DALI 5P FD L1468	1	0.012	4.585	74
6781	3F HD100R WH 52/840 DALI 5P FD L2935	1	0.024	8.000	74
6785	3F HD100R WH 22/840 DALI 5P GSP L1174	1	0.010	4.500	73
6786	3F HD100R WH 26/840 DALI 5P GSP L1468	1	0.012	4.945	73
6790	3F HD100R WH 52/840 DALI 5P GSP L2935	1	0.024	8.000	73
6793	3F HD50 WH HO 22/840 DALI GSP L1214	1	0.006	2.940	39
6794	3F HD50 WH HO 26/840 DALI GSP L1508	1	0.008	3.260	39
6795	3F HD50 WH HO 52/840 DALI GSP L2975	1	0.015	10.200	39
6796	3F HD100 WH HO 36/840 DALI GSP L1214	1	0.011	5.000	39
6797	3F HD100 WH HO 44/840 DALI GSP L1508	1	0.013	5.500	39
6798	3F HD100 WH HO 88/840 DALI GSP L2975	1	0.027	11.200	39
6799	3F HD50 BK HO 22/840 DALI GSP L1214	1	0.006	2.940	39
6800	3F HD50 BK HO 26/840 DALI GSP L1508	1	0.008	3.260	39
6801	3F HD50 BK HO 52/840 DALI GSP L2975	1	0.015	10.200	39
6802	3F HD100 BK HO 36/840 DALI GSP L1214	1	0.011	5.000	39
6803	3F HD100 BK HO 44/840 DALI GSP L1508	1	0.013	5.500	39
6804	3F HD100 BK HO 88/840 DALI GSP L2975	1	0.027	11.200	39
6805	3F HD50 AL HO 22/840 DALI GSP L1214	1	0.006	2.940	39
6806	3F HD50 AL HO 26/840 DALI GSP L1508	1	0.008	3.260	39
6807	3F HD50 AL HO 52/840 DALI GSP L2975	1	0.015	10.200	39
6808	3F HD100 AL HO 36/840 DALI GSP L1214	1	0.011	5.000	39
6809	3F HD100 AL HO 44/840 DALI GSP L1508	1	0.013	5.500	39
6810	3F HD100 AL HO 88/840 DALI GSP L2975	1	0.027	11.200	39
6811	3F HD50 WH HO 22/840 DALI FDP L1214	1	0.006	5.000	41
6812	3F HD50 WH HO 26/840 DALI FDP L1508	1	0.008	5.500	41
6813	3F HD50 WH HO 52/840 DALI FDP L2975	1	0.015	10.200	41
6814	3F HD100 WH HO 36/840 DALI FDP L1214	1	0.011	3.875	41

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		Pcs	m³	Gross weight in kg	
6815	3F HD100 WH HO 44/840 DALI FDP L1508	1	0.013	3.875	41
6816	3F HD100 WH HO 88/840 DALI FDP L2975	1	0.027	11.200	41
6817	3F HD50 BK HO 22/840 DALI FDP L1214	1	0.006	5.000	41
6818	3F HD50 BK HO 26/840 DALI FDP L1508	1	0.008	5.500	41
6819	3F HD50 BK HO 52/840 DALI FDP L2975	1	0.015	10.200	41
6820	3F HD100 BK HO 36/840 DALI FDP L1214	1	0.011	3.875	41
6821	3F HD100 BK HO 44/840 DALI FDP L1508	1	0.013	4.675	41
6822	3F HD100 BK HO 88/840 DALI FDP L2975	1	0.027	11.200	41
6823	3F HD50 AL HO 22/840 DALI FDP L1214	1	0.006	5.000	41
6824	3F HD50 AL HO 26/840 DALI FDP L1508	1	0.008	5.500	41
6825	3F HD50 AL HO 52/840 DALI FDP L2975	1	0.015	10.200	41
6826	3F HD100 AL HO 36/840 DALI FDP L1214	1	0.011	3.875	41
6827	3F HD100 AL HO 44/840 DALI FDP L1508	1	0.013	4.675	41
6828	3F HD100 AL HO 88/840 DALI FDP L2975	1	0.027	11.200	41
6829	3F HD50 WH HO 22/840 DALI FDO L1214	1	0.006	5.000	43
6830	3F HD50 WH HO 26/840 DALI FDO L1508	1	0.008	5.500	43
6831	3F HD50 WH HO 52/840 DALI FDO L2975	1	0.015	10.200	43
6832	3F HD100 WH HO 36/840 DALI FDO L1214	1	0.011	5.000	43
6833	3F HD100 WH HO 44/840 DALI FDO L1508	1	0.013	5.500	43
6834	3F HD100 WH HO 88/840 DALI FDO L2975	1	0.027	11.200	43
6835	3F HD50 BK HO 22/840 DALI FDO L1214	1	0.006	5.000	43
6836	3F HD50 BK HO 26/840 DALI FDO L1508	1	0.008	3.380	43
6837	3F HD50 BK HO 52/840 DALI FDO L2975	1	0.015	10.200	43
6838	3F HD100 BK HO 36/840 DALI FDO L1214	1	0.011	5.000	43
6839	3F HD100 BK HO 44/840 DALI FDO L1508	1	0.013	5.500	43
6840	3F HD100 BK HO 88/840 DALI FDO L2975	1	0.027	11.200	43
6841	3F HD50 AL HO 22/840 DALI FDO L1214	1	0.006	5.000	43
6842	3F HD50 AL HO 26/840 DALI FDO L1508	1	0.008	5.500	43
6843	3F HD50 AL HO 52/840 DALI FDO L2975	1	0.015	10.200	43
6844	3F HD100 AL HO 36/840 DALI FDO L1214	1	0.011	5.000	43
6845	3F HD100 AL HO 44/840 DALI FDO L1508	1	0.013	5.500	43
6846	3F HD100 AL HO 88/840 DALI FDO L2975	1	0.027	11.200	43
6847	3F HD50R WH HO 22/840 DALI GSP L1188	1	0.006	4.700	68
6848	3F HD50R WH HO 26/840 DALI GSP L1482	1	0.007	5.100	68
6849	3F HD50R WH HO 52/840 DALI GSP L2949	1	0.015	9.400	68
6850	3F HD100R WH HO 36/840 DALI GSP L1188	1	0.010	4.700	68
6851	3F HD100R WH HO 44/840 DALI GSP L1482	1	0.012	5.100	68
6852	3F HD100R WH HO 88/840 DALI GSP L2949	1	0.024	10.200	68
6853	3F HD50R WH HO 22/840 DALI FDP L1188	1	0.006	4.700	69
6854	3F HD50R WH HO 26/840 DALI FDP L1482	1	0.007	5.100	69
6855	3F HD50R WH HO 52/840 DALI FDP L2949	1	0.015	9.400	69
6856	3F HD100R WH HO 36/840 DALI FDP L1188	1	0.010	4.700	69
6857	3F HD100R WH HO 44/840 DALI FDP L1482	1	0.012	5.100	69
6858	3F HD100R WH HO 88/840 DALI FDP L2949	1	0.024	10.200	69
6859	3F HD50R WH HO 22/840 DALI FDO L1188	1	0.006	4.700	70
6860	3F HD50R WH HO 26/840 DALI FDO L1482	1	0.007	5.100	70
6861	3F HD50R WH HO 52/840 DALI FDO L2949	1	0.015	9.400	70
6862	3F HD100R WH HO 36/840 DALI FDO L1188	1	0.010	4.700	70
6863	3F HD100R WH HO 44/840 DALI FDO L1482	1	0.012	5.100	70
6864	3F HD100R WH HO 88/840 DALI FDO L2949	1	0.024	10.200	70
7001	3F Manta AN 50/730 WIDE	1	0.048	11.670	527
7002	3F Manta AN 75/730 WIDE	1	0.048	12.190	527

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		Pcs	m³	Gross weight in kg	
7003	3F Manta AN 100/730 WIDE	1	0.048	12.180	527
7004	3F Manta AN 135/730 WIDE	1	0.048	12.800	527
7009	3F Manta AN 50/730 MEDIUM	1	0.048	11.660	528
7010	3F Manta AN 75/730 MEDIUM	1	0.048	12.800	528
7011	3F Manta AN 100/730 MEDIUM	1	0.048	12.230	528
7012	3F Manta AN 135/730 MEDIUM	1	0.048	12.800	528
7020	3F Manta AN 185/730 MEDIUM	1	0.048	12.415	528
7022	3F Manta AN 50/830 WIDE	1	0.048	12.800	527
7023	3F Manta AN 75/830 WIDE	1	0.048	12.800	527
7024	3F Manta AN 100/830 WIDE	1	0.048	12.800	527
7025	3F Manta AN 135/830 WIDE	1	0.048	12.800	527
7026	3F Manta AN 50/730 II WIDE	1	0.048	12.800	527
7027	3F Manta AN 75/730 II WIDE	1	0.048	12.800	527
7028	3F Manta AN 100/730 II WIDE	1	0.048	12.800	527
7029	3F Manta AN 135/730 II WIDE	1	0.048	12.800	527
7030	3F Manta AN 50/830 II WIDE	1	0.048	11.670	527
7031	3F Manta AN 75/830 II WIDE	1	0.048	12.800	527
7032	3F Manta AN 100/830 II WIDE	1	0.048	12.800	527
7033	3F Manta AN 135/830 II WIDE	1	0.048	12.800	527
7035	3F Manta AN 50/830 MEDIUM	1	0.048	12.800	528
7036	3F Manta AN 75/830 MEDIUM	1	0.048	12.800	528
7037	3F Manta AN 100/830 MEDIUM	1	0.048	12.800	528
7038	3F Manta AN 135/830 MEDIUM	1	0.048	12.800	528
7039	3F Manta AN 185/830 MEDIUM	1	0.048	12.800	528
7040	3F Manta AN 50/730 II MEDIUM	1	0.048	12.800	528
7041	3F Manta AN 75/730 II MEDIUM	1	0.048	12.800	528
7042	3F Manta AN 100/730 II MEDIUM	1	0.048	12.800	528
7043	3F Manta AN 135/730 II MEDIUM	1	0.048	12.800	528
7044	3F Manta AN 185/730 II MEDIUM	1	0.048	12.800	528
7045	3F Manta AN 50/830 II MEDIUM	1	0.048	12.800	528
7046	3F Manta AN 75/830 II MEDIUM	1	0.048	12.800	528
7047	3F Manta AN 100/830 II MEDIUM	1	0.048	12.800	528
7048	3F Manta AN 135/830 II MEDIUM	1	0.048	12.800	528
7049	3F Manta AN 185/830 II MEDIUM	1	0.048	12.800	528
7051	3F Manta AN 50/730 FRONT	1	0.048	12.800	529
7052	3F Manta AN 75/730 FRONT	1	0.048	12.800	529
7053	3F Manta AN 100/730 FRONT	1	0.048	12.800	529
7054	3F Manta AN 135/730 FRONT	1	0.048	12.800	529
7055	3F Manta AN 50/830 FRONT	1	0.048	12.800	529
7056	3F Manta AN 75/830 FRONT	1	0.048	12.800	529
7057	3F Manta AN 100/830 FRONT	1	0.048	12.800	529
7058	3F Manta AN 135/830 FRONT	1	0.048	12.800	529
7059	3F Manta AN 50/730 II FRONT	1	0.048	12.800	529
7060	3F Manta AN 75/730 II FRONT	1	0.048	12.800	529
7061	3F Manta AN 100/730 II FRONT	1	0.048	12.800	529
7062	3F Manta AN 135/730 II FRONT	1	0.048	12.800	529
7063	3F Manta AN 50/830 II FRONT	1	0.048	12.800	529
7064	3F Manta AN 75/830 II FRONT	1	0.048	12.800	529
7065	3F Manta AN 100/830 II FRONT	1	0.048	12.800	529
7066	3F Manta AN 135/830 II FRONT	1	0.048	12.800	529
8357	3F 66 1 LED 6 II	1	0.017	2.350	533
8358	3F 66 2 LED 12 II	1	0.017	2.425	533

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
10591	3F Zeta DR UGR 2x18 LED L1194	1	0.008	3.500	170
10592	3F Zeta DR UGR 1x24 LED L1194	1	0.008	3.435	170
10593	3F Zeta DR UGR 2x18 LED DALI L1194	1	0.008	3.565	170
10594	3F Zeta DR UGR 1x24 LED DALI L1194	1	0.008	3.500	170
10598	3F Zeta DR UGR 2x9 LED L605	1	0.004	3.000	170
10599	3F Zeta DR UGR 1x12 LED L605	1	0.004	1.830	170
10600	3F Zeta DR UGR 2x9 LED DALI L605	1	0.004	3.000	170
10601	3F Zeta DR UGR 1x12 LED DALI L605	1	0.004	2.800	170
10605	3F Zeta L AS 40 LED L1489	1	0.010	3.595	164
10606	3F Zeta L AS 40 LED DALI L1489	1	0.010	4.000	164
10607	3F Zeta L AS 40 LED EP L1489	1	0.010	4.800	164
10731	3F Travetta LED 1x18W OP L1290	1	0.018	4.485	150
10732	3F Travetta LED 1x22W OP L1590	1	0.022	5.555	150
10734	3F Travetta LED 2x18W OP L1290	1	0.018	4.685	150
10735	3F Travetta LED 2x22W OP L1590	1	0.022	5.660	150
10747	3F Travetta LED DI 2x15W 2MG L1590	1	0.022	5.480	153
10748	3F Travetta LED DI 2x22W 2MG L1590	1	0.022	5.410	153
10758	3F Travetta LED DI 2x15W/940 2MG L1590	1	0.022	5.200	153
10759	3F Travetta LED DI 2x22W/940 2MG L1590	1	0.022	5.410	153
10763	3F TRAV. LED 2X22W DALI DT8 TW 2MG L1590	1	0.022	6.500	157
10775	3F Travetta LED 1x40W OP L2200	1	0.028	7.000	150
10777	3F Travetta LED 2x40W OP L2200	1	0.028	7.500	150
10839	3F Zeta L UGR 40/940 LED L1489	1	0.010	4.000	164
10840	3F Zeta L UGR 30/940 LED L1194	1	0.008	3.040	164
10841	3F Zeta L UGR 40/940 LED DALI L1489	1	0.010	4.000	164
10842	3F Zeta L UGR 30/940 LED DALI L1194	1	0.008	3.500	164
10843	3F Zeta L UGR 40 LED EP L1489	1	0.010	4.800	164
10844	3F Zeta L UGR 30 LED EP L1194	1	0.008	4.300	164
10845	3F Zeta L UGR 40/940 LED EP L1489	1	0.010	4.800	164
10846	3F Zeta L UGR 30/940 LED EP L1194	1	0.008	4.300	164
10848	P 202x24W LED VS IP54 196x1231	1	0.022	6.200	187
10851	P 203x10W LED VS IP54 596x596	1	0.032	7.450	187
10852	P 204x10W LED VS IP54 596x596	1	0.032	7.800	187
10856	P 202x24W LED SP IP54 196x1231	1	0.022	5.060	187
10859	P 203x10W LED SP IP54 596x596	1	0.032	5.865	187
10860	P 204x10W LED SP IP54 596x596	1	0.032	6.115	187
10863	3F Zeta L UGR 40 LED L1489	1	0.010	4.000	164
10864	3F Zeta L UGR 30 LED L1194	1	0.008	3.005	164
10866	3F Zeta L UGR 40 LED DALI L1489	1	0.010	4.000	164
10867	3F Zeta L UGR 30 LED DALI L1194	1	0.008	3.145	164
10870	3F Zeta D 1x22 LED L1489	1	0.010	3.600	167
10871	3F Zeta D 1x18 LED L1194	1	0.008	3.010	167
10872	3F Zeta D 1x9 LED L605	1	0.004	1.650	167
10873	3F Zeta D 2x22 LED L1489	1	0.010	3.725	167
10874	3F Zeta D 2x18 LED L1194	1	0.008	3.020	167
10875	3F Zeta D 2x9 LED L605	1	0.004	1.635	167
10877	3F Zeta DR 1x22 LED L1489	1	0.010	3.615	169
10878	3F Zeta DR 1x18 LED L1194	1	0.008	3.055	169
10879	3F Zeta DR 1x9 LED L605	1	0.004	2.800	169
10880	3F Zeta DR 2x22 LED L1489	1	0.010	3.710	169
10881	3F Zeta DR 2x18 LED L1194	1	0.008	3.070	169
10882	3F Zeta DR 2x9 LED L605	1	0.004	3.000	169

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		Pcs	m³	Gross weight in kg	
10886	3F Zeta DR AS 1x30 LED L1489	1	0.010	4.255	169
10887	3F Zeta DR AS 2x22 LED L1489	1	0.010	4.280	169
10892	3F Zeta L 40 LED L1489	1	0.010	3.590	163
10893	3F Zeta L 30 LED L1194	1	0.008	3.040	163
10894	3F Zeta L 15 LED L605	1	0.004	4.110	163
10898	3F Mirella BK 40 SP L1480	1	0.027	6.100	83
10899	3F Mirella BK 60 SP L2200	1	0.039	8.700	83
10900	3F Mirella BK 40 DALI SP L1480	1	0.027	6.270	83
10901	3F Mirella BK 60 DALI SP L2200	1	0.039	8.980	83
10902	3F Mirella BK DI 40+8 SP L1480	1	0.027	6.400	87
10903	3F Mirella BK DI 60+14 SP L2200	1	0.039	9.100	87
10904	3F Mirella BK DI 40+8 DALI SP L1480	1	0.027	6.500	87
10905	3F Mirella BK DI 60+14 DALI SP L2200	1	0.039	9.200	87
10909	3F Mirella BK 40 OP L1480	1	0.027	6.100	84
10910	3F Mirella BK 60 OP L2200	1	0.039	8.700	84
10911	3F Mirella BK 40 DALI OP L1480	1	0.027	6.200	84
10912	3F Mirella BK 60 DALI OP L2200	1	0.039	8.800	84
10913	3F Mirella BK DI 40+8 OP L1480	1	0.027	6.400	88
10914	3F Mirella BK DI 60+14 OP L2200	1	0.039	9.100	88
10915	3F Mirella BK DI 40+8 DALI OP L1480	1	0.027	6.500	88
10916	3F Mirella BK DI 60+14 DALI OP L2200	1	0.039	9.200	88
10920	3F Mirella WH 40 SP L1480	1	0.027	6.100	83
10921	3F Mirella WH 60 SP L2200	1	0.039	8.700	83
10922	3F Mirella WH 40 DALI SP L1480	1	0.027	6.200	83
10923	3F Mirella WH 60 DALI SP L2200	1	0.039	8.800	83
10924	3F Mirella WH DI 40+8 SP L1480	1	0.027	6.400	87
10925	3F Mirella WH DI 60+14 SP L2200	1	0.039	9.100	87
10926	3F Mirella WH DI 40+8 DALI SP L1480	1	0.027	6.630	87
10927	3F Mirella WH DI 60+14 DALI SP L2200	1	0.039	9.200	87
10931	3F Mirella WH 40 OP L1480	1	0.027	6.100	84
10932	3F Mirella WH 60 OP L2200	1	0.039	8.700	84
10933	3F Mirella WH 40 DALI OP L1480	1	0.027	6.200	84
10934	3F Mirella WH 60 DALI OP L2200	1	0.039	8.800	84
10935	3F Mirella WH DI 40+8 OP L1480	1	0.027	6.400	88
10936	3F Mirella WH DI 60+14 OP L2200	1	0.039	9.100	88
10937	3F Mirella WH DI 40+8 DALI OP L1480	1	0.027	6.500	88
10938	3F Mirella WH DI 60+14 DALI OP L2200	1	0.039	9.200	88
10942	3F Mirella AL 40 SP L1480	1	0.027	6.100	83
10943	3F Mirella AL 60 SP L2200	1	0.039	8.700	83
10944	3F Mirella AL 40 DALI SP L1480	1	0.027	6.200	83
10945	3F Mirella AL 60 DALI SP L2200	1	0.039	8.800	83
10946	3F Mirella AL DI 40+8 SP L1480	1	0.027	6.400	87
10947	3F Mirella AL DI 60+14 SP L2200	1	0.039	9.100	87
10948	3F Mirella AL DI 40+8 DALI SP L1480	1	0.027	6.500	87
10949	3F Mirella AL DI 60+14 DALI SP L2200	1	0.039	9.200	87
10953	3F Mirella AL 40 OP L1480	1	0.027	6.100	84
10954	3F Mirella AL 60 OP L2200	1	0.039	8.700	84
10955	3F Mirella AL 40 DALI OP L1480	1	0.027	6.200	84
10956	3F Mirella AL 60 DALI OP L2200	1	0.039	8.800	84
10957	3F Mirella AL DI 40+8 OP L1480	1	0.027	6.400	88
10958	3F Mirella AL DI 60+14 OP L2200	1	0.039	9.100	88
10959	3F Mirella AL DI 40+8 DALI OP L1480	1	0.027	6.500	88

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		Pcs	m³	Gross weight in kg	
10960	3F Mirella AL DI 60+14 DALI OP L2200	1	0.039	9.200	88
10961	3F Zeta D 1x22 LED DALI L1489	1	0.010	4.000	167
10962	3F Zeta D 1x18 LED DALI L1194	1	0.008	3.500	167
10964	3F Zeta D 2x22 LED DALI L1489	1	0.010	3.725	167
10965	3F Zeta D 2x18 LED DALI L1194	1	0.008	3.700	167
10967	3F Zeta DR 1x22 LED DALI L1489	1	0.010	4.000	169
10968	3F Zeta DR 1x18 LED DALI L1194	1	0.008	3.500	169
10970	3F Zeta DR 2x22 LED DALI L1489	1	0.010	3.760	169
10971	3F Zeta DR 2x18 LED DALI L1194	1	0.008	3.700	169
10973	3F Zeta DR AS 1x30 LED DALI L1489	1	0.010	4.500	169
10974	3F Zeta DR AS 2x22 LED DALI L1489	1	0.010	4.325	169
10976	3F Zeta L 40 LED DALI L1489	1	0.010	3.695	163
10977	3F Zeta L 30 LED DALI L1194	1	0.008	3.025	163
10980	3F Zeta D 1x22 LED EP L1489	1	0.010	4.800	167
10982	3F Zeta D 2x22 LED EP L1489	1	0.010	5.000	167
10984	3F Zeta DR 1x22 LED EP L1489	1	0.010	4.800	169
10986	3F Zeta DR 2x22 LED EP L1489	1	0.010	5.000	169
10988	3F Zeta L 40 LED EP L1489	1	0.010	4.800	163
10997	3F Zeta DR UGR 2x22 LED L1783	1	0.012	4.800	170
10998	3F Zeta DR UGR 1x30 LED L1783	1	0.012	5.400	170
10999	3F Zeta DR UGR 2x22 LED DALI L1783	1	0.012	4.935	170
11000	3F Zeta DR UGR 1x30 LED DALI L1783	1	0.012	4.840	170
11001	3F Zeta DR UGR 2x22 LED EP L1783	1	0.012	6.100	170
11002	3F Zeta DR UGR 1x30 LED EP L1783	1	0.012	6.000	170
11003	3F Zeta DR UGR 2x22/940 LED L1783	1	0.012	5.500	170
11004	3F Zeta DR UGR 2x22/940 LED DALI L1783	1	0.012	5.500	170
11481	3F Travetta LED 1x22W DALI 2MG L1590	1	0.022	5.510	149
11484	3F Travetta LED 2x22W DALI 2MG L1590	1	0.022	5.670	149
11494	3F Travetta LED 1x18W DALI OP L1290	1	0.018	3.800	150
11495	3F Travetta LED 1x22W DALI OP L1590	1	0.022	4.800	150
11497	3F Travetta LED 2x18W DALI OP L1290	1	0.018	4.000	150
11498	3F Travetta LED 2x22W DALI OP L1590	1	0.022	5.000	150
11503	3F Travetta LED DI 2x15W DALI 2MG L1590	1	0.022	5.495	153
11504	3F Travetta LED DI 2x22W DALI 2MG L1590	1	0.022	5.465	153
11511	3F Travetta LED 1x40W DALI OP L2200	1	0.028	7.000	150
11513	3F Travetta LED 2x40W DALI OP L2200	1	0.028	7.500	150
11515	3F Travetta LED 1x30W/940 DALI 2MG L1590	1	0.022	5.510	149
11516	3F Travetta LED 2x22W/940 DALI 2MG L1590	1	0.022	5.670	149
11522	3F Trav. LED DI 2x15W DALI LS 2MG L1590	1	0.022	5.300	155
11523	3F Trav. LED DI 2x22W DALI LS 2MG L1590	1	0.022	5.300	155
11528	3F Travetta LED 1x24W LGS L1290	1	0.018	4.610	149
11530	3F Travetta LED 1x30W LGS L1590	1	0.022	5.570	149
11531	3F Travetta LED 2x18W LGS L1290	1	0.018	4.670	149
11533	3F Travetta LED 2x22W LGS L1590	1	0.022	5.675	149
11537	3F Travetta LED 1x24W DALI LGS L1290	1	0.018	4.585	149
11539	3F Travetta LED 1x30W DALI LGS L1590	1	0.022	5.560	149
11540	3F Travetta LED 2x18W DALI LGS L1290	1	0.018	4.710	149
11542	3F Travetta LED 2x22W DALI LGS L1590	1	0.022	5.740	149
11566	3F Travetta LED 1x24W/940 LGS L1290	1	0.018	3.800	149
11567	3F Travetta LED 1x30W/940 LGS L1590	1	0.022	5.570	149
11568	3F Travetta LED 2x18W/940 LGS L1290	1	0.018	4.000	149
11569	3F Travetta LED 2x22W/940 LGS L1590	1	0.022	5.675	149

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
11570	3F Travetta LED 1x24W/940 DALI LGS L1290	1	0.018	3.800	149
11571	3F Travetta LED 1x30W/940 DALI LGS L1590	1	0.022	4.800	149
11572	3F Travetta LED 2x18W/940 DALI LGS L1290	1	0.018	4.000	149
11573	3F Travetta LED 2x22W/940 DALI LGS L1590	1	0.022	5.740	149
11596	3F Trav. LED DI 2x15W/940 DALI 2MG L1590	1	0.022	5.495	153
11597	3F Trav. LED DI 2x22W/940 DALI 2MG L1590	1	0.022	5.465	153
11599	3F Travetta LED DI 2x22W LGS L1590	1	0.022	6.000	154
11600	3F Travetta LED DI 2x30W LGS L1590	1	0.022	6.000	154
11602	3F Travetta LED DI 2x22W/940 LGS L1590	1	0.022	6.000	154
11603	3F Travetta LED DI 2x30W/940 LGS L1590	1	0.022	6.000	154
11629	3F Travetta LED DI 2x22W DALI LGS L1590	1	0.022	6.000	154
11630	3F Travetta LED DI 2x30W DALI LGS L1590	1	0.022	6.000	154
11632	3F Trav. LED DI 2x22W/940 DALI LGS L1590	1	0.022	6.000	154
11633	3F Trav. LED DI 2x30W/940 DALI LGS L1590	1	0.022	6.000	154
11656	3F Travetta LED DI 2x18W LGS L1290	1	0.018	4.400	154
11657	3F Travetta LED DI 2x24W LGS L1290	1	0.018	4.400	154
11658	3F Travetta LED DI 2x18W/940 LGS L1290	1	0.018	4.400	154
11659	3F Travetta LED DI 2x24W/940 LGS L1290	1	0.018	4.400	154
11660	3F Travetta LED DI 2x18W DALI LGS L1290	1	0.018	4.400	154
11661	3F Travetta LED DI 2x24W DALI LGS L1290	1	0.018	4.400	154
11662	3F Trav. LED DI 2x18W/940 DALI LGS L1290	1	0.018	4.400	154
11663	3F Trav. LED DI 2x24W/940 DALI LGS L1290	1	0.018	4.400	154
11672	P 250 32W LED OP 596x596	1	0.023	5.535	193
11674	P 250 32W LED DALI OP 596x596	1	0.023	5.200	193
11686	P 250 32W LED LGS 596x596	1	0.023	5.915	193
11688	P 250 32W LED DALI LGS 596x596	1	0.023	5.200	193
12126	3F Diagon P 25W/830 SOFT UGR 596x596	1	0.016	6.875	175
12127	3F Diagon P 25W/830 DALI SOFT UGR 596x596	1	0.016	6.600	175
12128	3F Diagon P 25W/830 EP SOFT UGR 596x596	1	0.016	7.200	175
12130	3F Diagon P 25W/840 SOFT UGR 596x596	1	0.016	6.970	175
12131	3F Diagon P 25W/840 DALI SOFT UGR 596x596	1	0.016	6.950	175
12132	3F Diagon P 25W/840 EP SOFT UGR 596x596	1	0.016	7.200	175
12134	3F Diagon P 39W/930 SOFT UGR 596x596	1	0.016	6.900	175
12135	3F Diagon P 39W/930 DALI SOFT UGR 596x596	1	0.016	6.600	175
12136	3F Diagon P 39W/930 EP SOFT UGR 596x596	1	0.016	7.795	175
12138	3F Diagon P 39W/940 SOFT UGR 596x596	1	0.016	6.865	175
12139	3F Diagon P 39W/940 DALI SOFT UGR 596x596	1	0.016	6.600	175
12140	3F Diagon P 39W/940 EP SOFT UGR 596x596	1	0.016	7.200	175
12142	3F Diagon P 25W DT8 TW SOFT UGR 596x596	1	0.016	6.400	177
12675	P 201x30W LED 2US 156x1531	1	0.022	5.165	185
12680	P 202x24W LED 2US 196x1231	1	0.022	4.870	185
12682	P 202x30W LED 2US 196x1531	1	0.028	6.055	185
12687	P 202x24W LED 2US 270x1231	1	0.030	5.780	185
12689	P 202x30W LED 2US 270x1531	1	0.040	6.700	185
12692	P 203x10W LED 2US 596x596	1	0.032	5.530	185
12815	P 251x30W LED SP 156x1531	1	0.015	4.685	189
12820	P 252x24W LED SP 196x1231	1	0.015	4.745	189
12822	P 252x30W LED SP 196x1531	1	0.019	5.545	189
12824	P 253x10W LED SP 596x596	1	0.023	5.135	189
12826	P 254x10W LED SP 596x596	1	0.023	5.390	189
12835	P 251x30W LED OP 156x1531	1	0.015	5.035	189
12840	P 252x24W LED OP 196x1231	1	0.015	4.400	189

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
12842	P 252x30W LED OP 196x1531	1	0.019	5.705	189
12844	P 253x10W LED OP 596x596	1	0.023	5.440	189
12846	P 254x10W LED OP 596x596	1	0.023	5.595	189
12855	P 251x30W LED LGS 156x1531	1	0.015	5.025	190
12860	P 252x24W LED LGS 196x1231	1	0.015	4.400	190
12862	P 252x30W LED LGS 196x1531	1	0.019	5.600	190
12864	P 253x10W LED LGS 596x596	1	0.023	5.500	190
12866	P 254x10W LED LGS 596x596	1	0.023	5.695	190
12960	3F Mirella Floor SF BK 23+23	1	0.012	15.310	93
12961	3F Mirella Floor SF WH 23+23	1	0.012	15.310	93
12964	3F Mirella Floor SF BK 23+23 Touch DALI	1	0.012	15.310	93
12965	3F Mirella Floor SF WH 23+23 Touch DALI	1	0.012	15.310	93
21244	L 323x10W LED SP 596x596	1	0.031	4.840	239
21245	L 324x10W LED SP 596x596	1	0.031	4.865	239
21256	L 323x10W LED DALI SP 596x596	1	0.031	5.015	239
21257	L 324x10W LED DALI SP 596x596	1	0.031	4.965	239
21262	L 323x10W LED EP SP 596x596	1	0.031	5.415	239
21263	L 324x10W LED EP SP 596x596	1	0.031	5.020	239
21287	L 322x18W LED SP 296x1196	1	0.039	5.400	239
21290	L 322x18W LED DALI SP 296x1196	1	0.039	5.510	239
21293	L 322x18W LED EP SP 296x1196	1	0.039	5.835	239
21522	L 594x10W LED RVS 599x599	1	0.041	11.040	273
21524	L 596x10W LED RVS 599x599	1	0.041	12.000	273
21529	L 594x10W/940 LED RVS 599x599	1	0.041	10.720	273
21531	L 596x10W/940 LED RVS 599x599	1	0.041	11.050	273
21536	L 594x10W LED DALI RVS 599x599	1	0.041	11.500	273
21538	L 596x10W LED DALI RVS 599x599	1	0.041	12.000	273
21543	L 594x10W/940 LED DALI RVS 599x599	1	0.041	10.915	273
21545	L 596x10W/940 LED DALI RVS 599x599	1	0.041	12.000	273
21557	L 594x10W/940 LED RVSS 599x599	1	0.041	13.620	273
21559	L 596x10W/940 LED RVSS 599x599	1	0.041	13.045	273
21571	L 594x10W/940 LED DALI RVSS 599x599	1	0.041	13.500	273
21573	L 596x10W/940 LED DALI RVSS 599x599	1	0.041	14.000	273
21580	L 323x10W LED LGS 596x596	1	0.031	5.190	240
21581	L 324x10W LED LGS 596x596	1	0.031	5.215	240
21586	L 323x10W LED DALI LGS 596x596	1	0.031	5.000	240
21587	L 324x10W LED DALI LGS 596x596	1	0.031	5.230	240
21589	L 323x10W LED EP LGS 596x596	1	0.031	5.900	240
21590	L 324x10W LED EP LGS 596x596	1	0.031	5.795	240
21600	L 322x18W LED LGS 296x1196	1	0.039	5.400	240
21603	L 322x18W LED DALI LGS 296x1196	1	0.039	5.770	240
21606	L 322x18W LED EP LGS 296x1196	1	0.039	5.900	240
21720	3F Emilio R LED 2000/840 SPOT	1	0.007	1.600	309
21721	3F Emilio R LED 2000/930 SPOT	1	0.007	1.375	309
21728	3F Emilio R LED 2000/840 ELL	1	0.007	1.385	309
21729	3F Emilio R LED 2000/930 ELL	1	0.007	1.400	309
21736	3F Emilio R LED 2000/840 IPER	1	0.007	1.600	309
21737	3F Emilio R LED 2000/930 IPER	1	0.007	1.600	309
21744	3F Emilio R LED 3000/840 IPER	1	0.007	1.600	309
21801	L 583x10W LED SP IP54 596x596	1	0.037	5.205	270
21802	L 584x10W LED SP IP54 596x596	1	0.037	5.295	270
21808	L 583x10W LED SP IP54 621x621	1	0.041	5.600	270

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		Pcs	m³	Gross weight in kg	
21809	L 584x10W LED SP IP54 621x621	1	0.041	5.575	270
21815	L 583x10W LED VS IP54 596x596	1	0.037	7.120	269
21816	L 584x10W LED VS IP54 596x596	1	0.037	7.170	269
21822	L 583x10W LED VS IP54 621x621	1	0.041	7.495	269
21823	L 584x10W LED VS IP54 621x621	1	0.041	7.430	269
21829	L 583x10W LED DALI SP IP54 596x596	1	0.037	5.285	270
21830	L 584x10W LED DALI SP IP54 596x596	1	0.037	5.315	270
21836	L 583x10W LED DALI SP IP54 621x621	1	0.041	5.600	270
21837	L 584x10W LED DALI SP IP54 621x621	1	0.041	5.900	270
21843	L 583x10W LED DALI VS IP54 596x596	1	0.037	7.105	269
21844	L 584x10W LED DALI VS IP54 596x596	1	0.037	7.120	269
21850	L 583x10W LED DALI VS IP54 621x621	1	0.041	7.100	269
21851	L 584x10W LED DALI VS IP54 621x621	1	0.041	7.400	269
22230	3F Six R 85/840 WIDE 596x596	1	0.039	5.150	205
22231	3F Six R 70/840 WIDE 596x596	1	0.039	5.150	205
22232	3F Six R 60/840 WIDE 596x596	1	0.039	5.150	205
22233	3F Six R 85/840 DALI WIDE 596x596	1	0.039	5.150	205
22234	3F Six R 70/840 DALI WIDE 596x596	1	0.039	5.150	205
22235	3F Six R 60/840 DALI WIDE 596x596	1	0.039	5.150	205
22237	3F Six R 85/840 MEDIUM 596x596	1	0.039	5.150	205
22238	3F Six R 70/840 MEDIUM 596x596	1	0.039	5.150	205
22239	3F Six R 60/840 MEDIUM 596x596	1	0.039	5.150	205
22240	3F Six R 85/840 DALI MEDIUM 596x596	1	0.039	5.150	205
22241	3F Six R 70/840 DALI MEDIUM 596x596	1	0.039	5.150	205
22242	3F Six R 60/840 DALI MEDIUM 596x596	1	0.039	5.150	205
22244	3F Six R 40/840 UGR 596x596	1	0.039	5.150	206
22245	3F Six R 40/840 DALI UGR 596x596	1	0.039	5.150	206
22701	L 323x10W/940 LED SP 596x596	1	0.031	4.870	239
22702	L 324x10W/940 LED SP 596x596	1	0.031	4.930	239
22703	L 323x10W/940 LED DALI SP 596x596	1	0.031	4.905	239
22704	L 324x10W/940 LED DALI SP 596x596	1	0.031	4.545	239
22705	L 323x10W/940 LED EP SP 596x596	1	0.031	5.900	239
22706	L 324x10W/940 LED EP SP 596x596	1	0.031	6.100	239
22709	L 324x10W/940 LED LGS 596x596	1	0.031	5.320	240
22710	L 324x10W/940 LED DALI LGS 596x596	1	0.031	4.765	240
22711	L 324x10W/940 LED EP LGS 596x596	1	0.031	6.100	240
22716	L 323x10W/940 LED 2S 596x596	1	0.031	4.850	238
22717	L 323x10W/940 LED EP 2S 596x596	1	0.031	5.150	238
22718	L 323x10W/940 LED DALI 2S 596x596	1	0.031	4.725	238
22722	L 323x10W/940 LED 2MG 596x596	1	0.031	4.610	237
22723	L 323x10W/940 LED EP 2MG 596x596	1	0.031	5.150	237
22724	L 323x10W/940 LED DALI 2MG 596x596	1	0.031	4.185	237
22754	L 592x24W/940 LED RVS 299x1199	1	0.043	11.000	273
22755	L 592x24W/940 LED RVSS 299x1199	1	0.043	13.950	273
22757	L 592x24W/940 LED DALI RVS 299x1199	1	0.043	11.000	273
22758	L 592x24W/940 LED DALI RVSS 299x1199	1	0.043	16.000	273
22767	L 480 24W LED GSP 80x1210	1	0.009	2.900	261
22768	L 480 30W LED GSP 80x1510	1	0.011	3.700	261
22770	L 480 24W LED DALI GSP 80x1210	1	0.009	3.000	261
22771	L 480 30W LED DALI GSP 80x1510	1	0.011	3.800	261
22773	L 480 24W LED OP 80x1210	1	0.009	2.900	261
22774	L 480 30W LED OP 80x1510	1	0.011	3.700	261

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
22776	L 480 24W LED DALI OP 80x1210	1	0.009	3.000	261
22777	L 480 30W LED DALI OP 80x1510	1	0.011	3.800	261
22782	L 362x12W LED OCW 296x1196	1	0.014	5.530	259
22783	L 362x12W LED DALI OCW 296x1196	1	0.014	6.700	259
22786	L 362x12W LED OCW 308x1246	1	0.015	6.800	259
22787	L 362x12W LED DALI OCW 308x1246	1	0.015	7.000	259
22790	3FLP6060UGR-830	1	0.014	2.640	211
22791	3FLP6060UGR-840	1	0.014	2.640	211
22792	3FLP6060UGR-930	1	0.014	2.640	211
22793	3FLP6060UGR-940	1	0.014	2.640	211
22794	3FLP30120UGR-940	1	0.015	2.640	211
23002	3F Diagon 25W/830 596x596	1	0.012	4.100	223
23006	3F Diagon 25W/830 DALI 596x596	1	0.012	4.070	223
23010	3F Diagon 25W/830 EP 596x596	1	0.012	4.900	223
23024	3F Diagon 19W/840 596x596	1	0.012	4.080	223
23025	3F Diagon 15W/840 596x596	1	0.012	4.075	223
23026	3F Diagon 25W/840 596x596	1	0.012	4.085	223
23027	3F Diagon 39W/840 596x596	1	0.012	4.045	223
23028	3F Diagon 19W/840 DALI 596x596	1	0.012	3.995	223
23029	3F Diagon 15W/840 DALI 596x596	1	0.012	4.040	223
23030	3F Diagon 25W/840 DALI 596x596	1	0.012	4.060	223
23031	3F Diagon 39W/840 DALI 596x596	1	0.012	4.075	223
23032	3F Diagon 19W/840 EP 596x596	1	0.012	4.900	223
23033	3F Diagon 15W/840 EP 596x596	1	0.012	4.760	223
23034	3F Diagon 25W/840 EP 596x596	1	0.012	4.900	223
23035	3F Diagon 39W/840 EP 596x596	1	0.012	4.900	223
23098	3F Diagon 25W/930 596x596	1	0.012	4.100	223
23102	3F Diagon 25W/930 DALI 596x596	1	0.012	3.975	223
23106	3F Diagon 25W/930 EP 596x596	1	0.012	4.865	223
23122	3F Diagon 25W/940 596x596	1	0.012	3.980	223
23126	3F Diagon 25W/940 DALI 596x596	1	0.012	3.955	223
23130	3F Diagon 25W/940 EP 596x596	1	0.012	4.835	223
23386	3F Diagon 25W/830 621x621	1	0.013	4.150	223
23390	3F Diagon 25W/830 DALI 621x621	1	0.013	4.300	224
23394	3F Diagon 25W/830 EP 621x621	1	0.013	5.100	224
23408	3F Diagon 19W/840 621x621	1	0.013	4.300	223
23409	3F Diagon 15W/840 621x621	1	0.013	4.300	223
23410	3F Diagon 25W/840 621x621	1	0.013	4.300	223
23411	3F Diagon 39W/840 621x621	1	0.013	4.300	223
23412	3F Diagon 19W/840 DALI 621x621	1	0.013	4.300	224
23413	3F Diagon 15W/840 DALI 621x621	1	0.013	4.300	224
23414	3F Diagon 25W/840 DALI 621x621	1	0.013	4.300	224
23415	3F Diagon 39W/840 DALI 621x621	1	0.013	4.300	224
23416	3F Diagon 19W/840 EP 621x621	1	0.013	5.100	224
23417	3F Diagon 15W/840 EP 621x621	1	0.013	5.100	224
23418	3F Diagon 25W/840 EP 621x621	1	0.013	5.100	224
23419	3F Diagon 39W/840 EP 621x621	1	0.013	5.100	224
23482	3F Diagon 25W/930 621x621	1	0.013	4.230	223
23486	3F Diagon 25W/930 DALI 621x621	1	0.013	4.300	224
23490	3F Diagon 25W/930 EP 621x621	1	0.013	5.100	224
23506	3F Diagon 25W/940 621x621	1	0.013	4.300	223
23510	3F Diagon 25W/940 DALI 621x621	1	0.013	4.300	224

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
23514	3F Diagon 25W/940 EP 621x621	1	0.013	5.100	224
23785	3F Diagon FCL 19W/840 599x599	1	0.037	4.685	231
23786	3F Diagon FCL 25W/840 599x599	1	0.037	4.545	231
23787	3F Diagon FCL 19W/840 DALI 599x599	1	0.037	4.685	231
23788	3F Diagon FCL 25W/840 DALI 599x599	1	0.037	4.550	231
23789	3F Diagon FCL 19W/840 EP 599x599	1	0.037	5.300	231
23790	3F Diagon FCL 25W/840 EP 599x599	1	0.037	5.300	231
23795	3F Diagon FCH 19W/840 599x599	1	0.037	4.555	231
23796	3F Diagon FCH 25W/840 599x599	1	0.037	4.500	231
23797	3F Diagon FCH 19W/840 DALI 599x599	1	0.037	4.500	231
23798	3F Diagon FCH 25W/840 DALI 599x599	1	0.037	4.500	231
23799	3F Diagon FCH 19W/840 EP 599x599	1	0.037	5.300	231
23800	3F Diagon FCH 25W/840 EP 599x599	1	0.037	5.300	231
23812	3F Diagon 25W/840 SOFT UGR 596x596	1	0.012	4.085	225
23813	3F Diagon 25W/840 EP SOFT UGR 596x596	1	0.012	4.900	225
23814	3F Diagon 25W/840 DALI SOFT UGR 596x596	1	0.012	4.100	225
23816	3F Diagon 25W DT8 TW SOFT UGR 596x596	1	0.012	4.105	227
23819	3F Diagon 25W/840 SOFT UGR 621x621	1	0.013	4.300	225
23820	3F Diagon 25W/840 EP SOFT UGR 621x621	1	0.013	5.100	225
23821	3F Diagon 25W/840 DALI SOFT UGR 621x621	1	0.013	4.300	225
23823	3F Diagon 25W DT8 TW SOFT UGR 621x621	1	0.013	4.300	227
23826	3F Diagon 25W/830 SOFT UGR 596x596	1	0.012	3.980	225
23827	3F Diagon 25W/830 EP SOFT UGR 596x596	1	0.012	4.655	225
23828	3F Diagon 25W/830 DALI SOFT UGR 596x596	1	0.012	4.105	225
23830	3F Diagon 25W/830 SOFT UGR 621x621	1	0.013	4.300	225
23831	3F Diagon 25W/830 EP SOFT UGR 621x621	1	0.013	5.100	225
23832	3F Diagon 25W/830 DALI SOFT UGR 621x621	1	0.013	4.300	225
23834	3F Diagon 39W/940 SOFT UGR 596x596	1	0.012	4.090	225
23835	3F Diagon 39W/940 EP SOFT UGR 596x596	1	0.012	4.855	225
23836	3F Diagon 39W/940 DALI SOFT UGR 596x596	1	0.012	4.030	225
23838	3F Diagon 39W/940 SOFT UGR 621x621	1	0.013	4.300	225
23839	3F Diagon 39W/940 EP SOFT UGR 621x621	1	0.013	5.100	225
23840	3F Diagon 39W/940 DALI SOFT UGR 621x621	1	0.013	4.300	225
23842	3F Diagon 39W/930 SOFT UGR 596x596	1	0.012	4.100	225
23843	3F Diagon 39W/930 EP SOFT UGR 596x596	1	0.012	4.900	225
23844	3F Diagon 39W/930 DALI SOFT UGR 596x596	1	0.012	3.960	225
23846	3F Diagon 39W/930 SOFT UGR 621x621	1	0.013	4.300	225
23847	3F Diagon 39W/930 EP SOFT UGR 621x621	1	0.013	5.100	225
23848	3F Diagon 39W/930 DALI SOFT UGR 621x621	1	0.013	4.300	225
23853	3F Diagon FP 25W/840 SOFT UGR 599x599	1	0.037	4.500	232
23854	3F Diagon FP 25W/840 EP SOFT UGR 599x599	1	0.037	5.300	232
23855	3F Diagon FP 25W/840 DALI SOFT UGR 599x599	1	0.037	4.500	232
23857	L 340 25W/840 LGS 596x596	1	0.032	4.950	247
23858	L 340 38W/840 LGS 596x596	1	0.032	4.950	247
23859	L 340 45W/840 LGS 596x596	1	0.032	4.950	247
23860	L 340 25W/840 LGS 621x621	1	0.038	5.100	247
23861	L 340 38W/840 LGS 621x621	1	0.038	5.100	247
23862	L 340 45W/840 LGS 621x621	1	0.038	5.100	247
23863	L 340 25W/840 DALI LGS 596x596	1	0.032	4.950	247
23864	L 340 38W/840 DALI LGS 596x596	1	0.032	4.950	247
23865	L 340 45W/840 DALI LGS 596x596	1	0.032	4.950	247
23866	L 340 25W/840 DALI LGS 621x621	1	0.038	5.100	247

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
23867	L 340 38W/840 DALI LGS 621x621	1	0.038	5.100	247
23868	L 340 45W/840 DALI LGS 621x621	1	0.038	5.100	247
23869	L 340 25W/840 EP LGS 596x596	1	0.032	5.750	247
23870	L 340 38W/840 EP LGS 596x596	1	0.032	5.750	247
23871	L 340 45W/840 EP LGS 596x596	1	0.032	5.750	247
23872	L 340 25W/840 EP LGS 621x621	1	0.038	5.900	247
23873	L 340 38W/840 EP LGS 621x621	1	0.038	5.900	247
23874	L 340 45W/840 EP LGS 621x621	1	0.038	5.900	247
23881	L 340 29W/940 LGS 596x596	1	0.032	4.950	247
23882	L 340 45W/940 LGS 596x596	1	0.032	4.950	247
23883	L 340 29W/940 LGS 621x621	1	0.038	5.100	247
23884	L 340 45W/940 LGS 621x621	1	0.038	5.100	247
23885	L 340 29W/940 DALI LGS 596x596	1	0.032	4.950	247
23886	L 340 45W/940 DALI LGS 596x596	1	0.032	4.950	247
23887	L 340 29W/940 DALI LGS 621x621	1	0.038	5.100	247
23888	L 340 45W/940 DALI LGS 621x621	1	0.038	5.100	247
23889	L 340 29W/940 EP LGS 596x596	1	0.032	5.750	247
23890	L 340 45W/940 EP LGS 596x596	1	0.032	5.750	247
23891	L 340 29W/940 EP LGS 621x621	1	0.038	5.900	247
23892	L 340 45W/940 EP LGS 621x621	1	0.038	5.900	247
23897	L 340 25W/840 VS IP65V 596x596	1	0.032	6.950	249
23898	L 340 38W/840 VS IP65V 596x596	1	0.032	6.950	249
23899	L 340 45W/840 VS IP65V 596x596	1	0.032	6.950	249
23900	L 340 25W/840 VS IP65V 621x621	1	0.038	7.100	249
23901	L 340 38W/840 VS IP65V 621x621	1	0.038	7.100	249
23902	L 340 45W/840 VS IP65V 621x621	1	0.038	7.100	249
23903	L 340 25W/840 DALI VS IP65V 596x596	1	0.032	6.950	249
23904	L 340 38W/840 DALI VS IP65V 596x596	1	0.032	6.950	249
23905	L 340 45W/840 DALI VS IP65V 596x596	1	0.032	6.950	249
23906	L 340 25W/840 DALI VS IP65V 621x621	1	0.038	7.100	249
23907	L 340 38W/840 DALI VS IP65V 621x621	1	0.038	7.100	249
23908	L 340 45W/840 DALI VS IP65V 621x621	1	0.038	7.100	249
23909	L 340 25W/840 EP VS IP65V 596x596	1	0.032	7.750	249
23910	L 340 38W/840 EP VS IP65V 596x596	1	0.032	7.750	249
23911	L 340 45W/840 EP VS IP65V 596x596	1	0.032	7.750	249
23912	L 340 25W/840 EP VS IP65V 621x621	1	0.038	7.900	249
23913	L 340 38W/840 EP VS IP65V 621x621	1	0.038	7.900	249
23914	L 340 45W/840 EP VS IP65V 621x621	1	0.038	7.900	249
23921	L 340 29W/940 VS IP65V 596x596	1	0.032	6.950	249
23922	L 340 45W/940 VS IP65V 596x596	1	0.032	6.950	249
23923	L 340 29W/940 VS IP65V 621x621	1	0.038	7.100	249
23924	L 340 45W/940 VS IP65V 621x621	1	0.038	7.100	249
23925	L 340 29W/940 DALI VS IP65V 596x596	1	0.032	6.950	249
23926	L 340 45W/940 DALI VS IP65V 596x596	1	0.032	6.950	249
23927	L 340 29W/940 DALI VS IP65V 621x621	1	0.038	7.100	249
23928	L 340 45W/940 DALI VS IP65V 621x621	1	0.038	7.100	249
23929	L 340 29W/940 EP VS IP65V 596x596	1	0.032	7.750	249
23930	L 340 45W/940 EP VS IP65V 596x596	1	0.032	7.750	249
23931	L 340 29W/940 EP VS IP65V 621x621	1	0.038	7.900	249
23932	L 340 45W/940 EP VS IP65V 621x621	1	0.038	7.900	249
23937	L 343x10W/840 SP 596x596	1	0.032	4.900	251
23938	L 343x10W/840 DALI SP 596x596	1	0.032	4.900	251

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
23939	L 343x10W/840 EP SP 596x596	1	0.032	5.700	251
23940	L 343x12W/940 SP 596x596	1	0.032	4.900	251
23941	L 343x12W/940 DALI SP 596x596	1	0.032	4.900	251
23942	L 343x12W/940 EP SP 596x596	1	0.032	5.700	251
23953	L 340 25W DALI DT8 TW LGS 596x596	1	0.032	4.950	253
23954	L 340 25W DALI DT8 TW LGS 621x621	1	0.038	5.100	253
23957	L 343x10W/840 SP 621x621	1	0.038	5.050	251
23958	L 343x10W/840 DALI SP 621x621	1	0.038	5.050	251
23959	L 343x10W/840 EP SP 621x621	1	0.038	5.650	251
23960	L 343x12W/940 SP 621x621	1	0.038	5.050	251
23961	L 343x12W/940 DALI SP 621x621	1	0.038	5.050	251
23962	L 343x12W/940 EP SP 621x621	1	0.038	5.650	251
23972	L 340 25W/840 LGS IP65V 596x596	1	0.032	5.000	248
23973	L 340 38W/840 LGS IP65V 596x596	1	0.032	5.000	248
23974	L 340 45W/840 LGS IP65V 596x596	1	0.032	5.000	248
23975	L 340 25W/840 LGS IP65V 621x621	1	0.038	5.100	248
23976	L 340 38W/840 LGS IP65V 621x621	1	0.038	5.100	248
23977	L 340 45W/840 LGS IP65V 621x621	1	0.038	5.100	248
23978	L 340 25W/840 DALI LGS IP65V 596x596	1	0.032	5.000	248
23979	L 340 38W/840 DALI LGS IP65V 596x596	1	0.032	5.000	248
23980	L 340 45W/840 DALI LGS IP65V 596x596	1	0.032	5.000	248
23981	L 340 25W/840 DALI LGS IP65V 621x621	1	0.038	5.100	248
23982	L 340 38W/840 DALI LGS IP65V 621x621	1	0.038	5.100	248
23983	L 340 45W/840 DALI LGS IP65V 621x621	1	0.038	5.100	248
23984	L 340 25W/840 EP LGS IP65V 596x596	1	0.032	5.800	248
23985	L 340 38W/840 EP LGS IP65V 596x596	1	0.032	5.800	248
23986	L 340 45W/840 EP LGS IP65V 596x596	1	0.032	5.800	248
23987	L 340 25W/840 EP LGS IP65V 621x621	1	0.038	5.900	248
23988	L 340 38W/840 EP LGS IP65V 621x621	1	0.038	5.900	248
23989	L 340 45W/840 EP LGS IP65V 621x621	1	0.038	5.900	248
23996	L 340 29W/940 LGS IP65V 596x596	1	0.032	5.000	248
23997	L 340 45W/940 LGS IP65V 596x596	1	0.032	5.000	248
23998	L 340 29W/940 LGS IP65V 621x621	1	0.038	5.100	248
23999	L 340 45W/940 LGS IP65V 621x621	1	0.038	5.100	248
24000	L 340 29W/940 DALI LGS IP65V 596x596	1	0.032	5.000	248
24001	L 340 45W/940 DALI LGS IP65V 596x596	1	0.032	5.000	248
24002	L 340 29W/940 DALI LGS IP65V 621x621	1	0.038	5.100	248
24003	L 340 45W/940 DALI LGS IP65V 621x621	1	0.038	5.100	248
24004	L 340 29W/940 EP LGS IP65V 596x596	1	0.032	5.800	248
24005	L 340 45W/940 EP LGS IP65V 596x596	1	0.032	5.800	248
24006	L 340 29W/940 EP LGS IP65V 621x621	1	0.038	5.900	248
24007	L 340 45W/940 EP LGS IP65V 621x621	1	0.038	5.900	248
24048	3F Diagon FP 19W/840 599x599	1	0.037	4.500	232
24049	3F Diagon FP 25W/840 599x599	1	0.037	4.620	232
24050	3F Diagon FP 19W/840 DALI 599x599	1	0.037	4.500	232
24051	3F Diagon FP 25W/840 DALI 599x599	1	0.037	4.615	232
24052	3F Diagon FP 19W/840 EP 599x599	1	0.037	5.300	232
24053	3F Diagon FP 25W/840 EP 599x599	1	0.037	5.300	232
28826	L 323x10W LED 2S 596x596	1	0.031	4.730	238
28828	L 322x18W LED 2S 296x1196	1	0.039	5.200	238
28829	L 323x10W LED EP 2S 596x596	1	0.031	5.250	238
28831	L 322x18W LED EP 2S 296x1196	1	0.039	6.000	238

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
28838	L 323x10W LED DALI 2S 596x596	1	0.031	4.770	238
28840	L 322x18W LED DALI 2S 296x1196	1	0.039	5.200	238
28844	L 323x10W LED 2MG 596x596	1	0.031	4.710	237
28846	L 322x18W LED 2MG 296x1196	1	0.039	5.485	237
28847	L 323x10W LED EP 2MG 596x596	1	0.031	5.245	237
28849	L 322x18W LED EP 2MG 296x1196	1	0.039	6.000	237
28856	L 323x10W LED DALI 2MG 596x596	1	0.031	4.775	237
28858	L 322x18W LED DALI 2MG 296x1196	1	0.039	5.200	237
30001	3F Reno 100 WH 1000/840 SPOT	1	0.004	0.720	288
30005	3F Reno 100 WH 1000/930 SPOT	1	0.004	0.735	288
30009	3F Reno 100 WH 2000/840 SPOT	1	0.004	0.730	288
30013	3F Reno 100 WH 2000/930 SPOT	1	0.004	0.700	288
30018	3F Reno 100 WH 1000/840 EP SPOT	1	0.004	1.500	288
30022	3F Reno 100 WH 1000/930 EP SPOT	1	0.004	1.500	288
30026	3F Reno 100 WH 2000/840 EP SPOT	1	0.004	1.500	288
30030	3F Reno 100 WH 2000/930 EP SPOT	1	0.004	1.500	288
30035	3F Reno 100 WH 1000/840 DALI SPOT	1	0.004	0.700	288
30039	3F Reno 100 WH 1000/930 DALI SPOT	1	0.004	0.740	288
30043	3F Reno 100 WH 2000/840 DALI SPOT	1	0.004	0.775	288
30047	3F Reno 100 WH 2000/930 DALI SPOT	1	0.004	0.700	288
30069	3F Reno 100 WH 1000/840 WIDE	1	0.004	0.720	284
30073	3F Reno 100 WH 1000/930 WIDE	1	0.004	0.720	284
30077	3F Reno 100 WH 2000/840 WIDE	1	0.004	0.715	284
30081	3F Reno 100 WH 2000/930 WIDE	1	0.004	0.725	284
30086	3F Reno 100 WH 1000/840 EP WIDE	1	0.004	1.500	284
30090	3F Reno 100 WH 1000/930 EP WIDE	1	0.004	1.500	284
30094	3F Reno 100 WH 2000/840 EP WIDE	1	0.004	1.270	284
30098	3F Reno 100 WH 2000/930 EP WIDE	1	0.004	1.500	284
30103	3F Reno 100 WH 1000/840 DALI WIDE	1	0.004	0.720	284
30107	3F Reno 100 WH 1000/930 DALI WIDE	1	0.004	0.700	284
30111	3F Reno 100 WH 2000/840 DALI WIDE	1	0.004	0.765	284
30115	3F Reno 100 WH 2000/930 DALI WIDE	1	0.004	0.775	284
30205	3F Reno 100 WH 1000/840 ELL	1	0.004	0.730	286
30209	3F Reno 100 WH 1000/930 ELL	1	0.004	0.740	286
30213	3F Reno 100 WH 2000/840 ELL	1	0.004	0.700	286
30217	3F Reno 100 WH 2000/930 ELL	1	0.004	0.750	286
30222	3F Reno 100 WH 1000/840 EP ELL	1	0.004	1.500	286
30226	3F Reno 100 WH 1000/930 EP ELL	1	0.004	1.285	286
30230	3F Reno 100 WH 2000/840 EP ELL	1	0.004	1.500	286
30234	3F Reno 100 WH 2000/930 EP ELL	1	0.004	1.500	286
30239	3F Reno 100 WH 1000/840 DALI ELL	1	0.004	0.700	286
30243	3F Reno 100 WH 1000/930 DALI ELL	1	0.004	0.700	286
30247	3F Reno 100 WH 2000/840 DALI ELL	1	0.004	0.770	286
30251	3F Reno 100 WH 2000/930 DALI ELL	1	0.004	0.790	286
30273	3F Reno 150 WH 2000/840 SPOT	1	0.008	0.815	288
30277	3F Reno 150 WH 2000/930 SPOT	1	0.008	0.800	288
30281	3F Reno 150 WH 3000/840 SPOT	1	0.008	1.300	288
30285	3F Reno 150 WH 3000/930 SPOT	1	0.008	1.300	288
30290	3F Reno 150 WH 2000/840 EP SPOT	1	0.008	1.600	288
30294	3F Reno 150 WH 2000/930 EP SPOT	1	0.008	1.600	288
30298	3F Reno 150 WH 3000/840 EP SPOT	1	0.008	2.100	288
30302	3F Reno 150 WH 3000/930 EP SPOT	1	0.008	2.100	288

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
30307	3F Reno 150 WH 2000/840 DALI SPOT	1	0.008	0.800	288
30311	3F Reno 150 WH 2000/930 DALI SPOT	1	0.008	0.870	288
30315	3F Reno 150 WH 3000/840 DALI SPOT	1	0.008	1.300	288
30319	3F Reno 150 WH 3000/930 DALI SPOT	1	0.008	1.300	288
30341	3F Reno 150 WH 2000/840 WIDE	1	0.008	0.800	284
30345	3F Reno 150 WH 2000/930 WIDE	1	0.008	0.810	284
30349	3F Reno 150 WH 3000/840 WIDE	1	0.008	1.450	284
30353	3F Reno 150 WH 3000/930 WIDE	1	0.008	1.455	284
30358	3F Reno 150 WH 2000/840 EP WIDE	1	0.008	1.600	284
30362	3F Reno 150 WH 2000/930 EP WIDE	1	0.008	1.600	284
30366	3F Reno 150 WH 3000/840 EP WIDE	1	0.008	2.000	284
30370	3F Reno 150 WH 3000/930 EP WIDE	1	0.008	2.100	284
30375	3F Reno 150 WH 2000/840 DALI WIDE	1	0.008	0.840	284
30379	3F Reno 150 WH 2000/930 DALI WIDE	1	0.008	0.850	284
30383	3F Reno 150 WH 3000/840 DALI WIDE	1	0.008	1.500	284
30387	3F Reno 150 WH 3000/930 DALI WIDE	1	0.008	1.510	284
30408	3F Reno 150 WH 1500/840 UGR	1	0.006	0.825	283
30409	3F Reno 150 WH 2000/840 UGR	1	0.008	0.895	283
30419	3F Reno 150 WH 1500/840 EP UGR	1	0.006	1.375	283
30420	3F Reno 150 WH 2000/840 EP UGR	1	0.008	1.600	283
30430	3F Reno 150 WH 1500/840 DALI UGR	1	0.006	0.830	283
30431	3F Reno 150 WH 2000/840 DALI UGR	1	0.008	0.865	283
30453	3F Reno 150 WH 2000/840 ELL	1	0.008	0.810	286
30457	3F Reno 150 WH 2000/930 ELL	1	0.008	0.800	286
30461	3F Reno 150 WH 3000/840 ELL	1	0.008	1.460	286
30465	3F Reno 150 WH 3000/930 ELL	1	0.008	1.300	286
30470	3F Reno 150 WH 2000/840 EP ELL	1	0.008	1.370	286
30474	3F Reno 150 WH 2000/930 EP ELL	1	0.008	1.600	286
30478	3F Reno 150 WH 3000/840 EP ELL	1	0.008	2.100	286
30482	3F Reno 150 WH 3000/930 EP ELL	1	0.008	2.100	286
30487	3F Reno 150 WH 2000/840 DALI ELL	1	0.008	0.800	286
30491	3F Reno 150 WH 2000/930 DALI ELL	1	0.008	0.800	286
30495	3F Reno 150 WH 3000/840 DALI ELL	1	0.008	1.520	286
30499	3F Reno 150 WH 3000/930 DALI ELL	1	0.008	1.530	286
30521	3F Reno 200 WH 2000/840 SPOT	1	0.011	0.975	289
30525	3F Reno 200 WH 2000/930 SPOT	1	0.011	1.100	289
30529	3F Reno 200 WH 3000/840 SPOT	1	0.011	1.500	289
30533	3F Reno 200 WH 3000/930 SPOT	1	0.011	1.500	289
30537	3F Reno 200 WH 4000/840 SPOT	1	0.011	1.630	289
30541	3F Reno 200 WH 4000/930 SPOT	1	0.011	1.635	289
30546	3F Reno 200 WH 2000/840 EP SPOT	1	0.011	1.900	289
30550	3F Reno 200 WH 2000/930 EP SPOT	1	0.011	1.900	289
30554	3F Reno 200 WH 3000/840 EP SPOT	1	0.011	2.300	289
30558	3F Reno 200 WH 3000/930 EP SPOT	1	0.011	2.300	289
30562	3F Reno 200 WH 4000/840 EP SPOT	1	0.011	2.300	289
30566	3F Reno 200 WH 4000/930 EP SPOT	1	0.011	2.300	289
30571	3F Reno 200 WH 2000/840 DALI SPOT	1	0.011	1.000	289
30575	3F Reno 200 WH 2000/930 DALI SPOT	1	0.011	1.100	289
30579	3F Reno 200 WH 3000/840 DALI SPOT	1	0.011	1.500	289
30583	3F Reno 200 WH 3000/930 DALI SPOT	1	0.011	1.500	289
30587	3F Reno 200 WH 4000/840 DALI SPOT	1	0.011	1.500	289
30591	3F Reno 200 WH 4000/930 DALI SPOT	1	0.011	1.500	289

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
30621	3F Reno 200 WH 2000/840 WIDE	1	0.011	0.960	285
30625	3F Reno 200 WH 2000/930 WIDE	1	0.011	0.970	285
30629	3F Reno 200 WH 3000/840 WIDE	1	0.011	1.590	285
30633	3F Reno 200 WH 3000/930 WIDE	1	0.011	1.500	285
30637	3F Reno 200 WH 4000/840 WIDE	1	0.011	1.615	285
30641	3F Reno 200 WH 4000/930 WIDE	1	0.011	1.605	285
30646	3F Reno 200 WH 2000/840 EP WIDE	1	0.011	1.900	285
30650	3F Reno 200 WH 2000/930 EP WIDE	1	0.011	1.515	285
30654	3F Reno 200 WH 3000/840 EP WIDE	1	0.011	2.150	285
30658	3F Reno 200 WH 3000/930 EP WIDE	1	0.011	2.300	285
30662	3F Reno 200 WH 4000/840 EP WIDE	1	0.011	2.130	285
30666	3F Reno 200 WH 4000/930 EP WIDE	1	0.011	2.300	285
30671	3F Reno 200 WH 2000/840 DALI WIDE	1	0.011	1.100	285
30675	3F Reno 200 WH 2000/930 DALI WIDE	1	0.011	1.100	285
30679	3F Reno 200 WH 3000/840 DALI WIDE	1	0.011	1.655	285
30683	3F Reno 200 WH 3000/930 DALI WIDE	1	0.011	1.655	285
30687	3F Reno 200 WH 4000/840 DALI WIDE	1	0.011	1.670	285
30691	3F Reno 200 WH 4000/930 DALI WIDE	1	0.011	1.685	285
30721	3F Reno 200 WH 2000/840 UGR	1	0.011	0.970	283
30725	3F Reno 200 WH 2000/930 UGR	1	0.011	0.980	283
30726	3F Reno 200 WH 3000/840 UGR	1	0.011	1.620	283
30730	3F Reno 200 WH 2500/930 UGR	1	0.011	1.625	283
30737	3F Reno 200 WH 2000/840 EP UGR	1	0.011	1.900	283
30741	3F Reno 200 WH 2000/930 EP UGR	1	0.011	1.520	283
30742	3F Reno 200 WH 3000/840 EP UGR	1	0.011	2.300	283
30746	3F Reno 200 WH 2500/930 EP UGR	1	0.011	2.300	283
30753	3F Reno 200 WH 2000/840 DALI UGR	1	0.011	1.010	283
30757	3F Reno 200 WH 2000/930 DALI UGR	1	0.011	1.085	283
30758	3F Reno 200 WH 3000/840 DALI UGR	1	0.011	1.670	283
30762	3F Reno 200 WH 2500/930 DALI UGR	1	0.011	1.500	283
30785	3F Reno 200 WH 2000/840 ELL	1	0.011	0.970	287
30789	3F Reno 200 WH 2000/930 ELL	1	0.011	1.100	287
30793	3F Reno 200 WH 3000/840 ELL	1	0.011	1.500	287
30797	3F Reno 200 WH 3000/930 ELL	1	0.011	1.500	287
30801	3F Reno 200 WH 4000/840 ELL	1	0.011	1.500	287
30805	3F Reno 200 WH 4000/930 ELL	1	0.011	1.630	287
30810	3F Reno 200 WH 2000/840 EP ELL	1	0.011	1.900	287
30814	3F Reno 200 WH 2000/930 EP ELL	1	0.011	1.900	287
30818	3F Reno 200 WH 3000/840 EP ELL	1	0.011	2.300	287
30822	3F Reno 200 WH 3000/930 EP ELL	1	0.011	2.300	287
30826	3F Reno 200 WH 4000/840 EP ELL	1	0.011	2.300	287
30830	3F Reno 200 WH 4000/930 EP ELL	1	0.011	2.300	287
30835	3F Reno 200 WH 2000/840 DALI ELL	1	0.011	1.010	287
30839	3F Reno 200 WH 2000/930 DALI ELL	1	0.011	1.100	287
30843	3F Reno 200 WH 3000/840 DALI ELL	1	0.011	1.500	287
30847	3F Reno 200 WH 3000/930 DALI ELL	1	0.011	1.500	287
30851	3F Reno 200 WH 4000/840 DALI ELL	1	0.011	1.500	287
30855	3F Reno 200 WH 4000/930 DALI ELL	1	0.011	1.500	287
30893	3F Reno 100 BK 2000/840 SPOT	1	0.004	0.700	294
30897	3F Reno 100 BK 2000/930 SPOT	1	0.004	0.750	294
30927	3F Reno 100 BK 2000/840 DALI SPOT	1	0.004	0.700	294
30931	3F Reno 100 BK 2000/930 DALI SPOT	1	0.004	0.840	294

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
30961	3F Reno 100 BK 2000/840 WIDE	1	0.004	0.725	292
30965	3F Reno 100 BK 2000/930 WIDE	1	0.004	0.730	292
30995	3F Reno 100 BK 2000/840 DALI WIDE	1	0.004	0.765	292
30999	3F Reno 100 BK 2000/930 DALI WIDE	1	0.004	0.775	292
31097	3F Reno 100 BK 2000/840 ELL	1	0.004	0.730	293
31101	3F Reno 100 BK 2000/930 ELL	1	0.004	0.700	293
31131	3F Reno 100 BK 2000/840 DALI ELL	1	0.004	0.700	293
31135	3F Reno 100 BK 2000/930 DALI ELL	1	0.004	0.700	293
31165	3F Reno 150 BK 3000/840 SPOT	1	0.008	1.300	294
31169	3F Reno 150 BK 3000/930 SPOT	1	0.008	1.300	294
31199	3F Reno 150 BK 3000/840 DALI SPOT	1	0.008	1.300	294
31203	3F Reno 150 BK 3000/930 DALI SPOT	1	0.008	1.300	294
31233	3F Reno 150 BK 3000/840 WIDE	1	0.008	1.300	292
31237	3F Reno 150 BK 3000/930 WIDE	1	0.008	1.475	292
31267	3F Reno 150 BK 3000/840 DALI WIDE	1	0.008	1.500	292
31271	3F Reno 150 BK 3000/930 DALI WIDE	1	0.008	1.510	292
31293	3F Reno 150 BK 2000/840 UGR	1	0.008	0.810	291
31315	3F Reno 150 BK 2000/840 DALI UGR	1	0.008	0.860	291
31345	3F Reno 150 BK 3000/840 ELL	1	0.008	1.300	293
31349	3F Reno 150 BK 3000/930 ELL	1	0.008	1.485	293
31379	3F Reno 150 BK 3000/840 DALI ELL	1	0.008	1.300	293
31383	3F Reno 150 BK 3000/930 DALI ELL	1	0.008	1.300	293
31421	3F Reno 200 BK 4000/840 SPOT	1	0.011	1.300	294
31425	3F Reno 200 BK 4000/930 SPOT	1	0.011	1.300	294
31471	3F Reno 200 BK 4000/840 DALI SPOT	1	0.011	1.675	294
31475	3F Reno 200 BK 4000/930 DALI SPOT	1	0.011	1.300	294
31521	3F Reno 200 BK 4000/840 WIDE	1	0.011	1.620	292
31525	3F Reno 200 BK 4000/930 WIDE	1	0.011	1.615	292
31571	3F Reno 200 BK 4000/840 DALI WIDE	1	0.011	1.705	292
31575	3F Reno 200 BK 4000/930 DALI WIDE	1	0.011	1.715	292
31610	3F Reno 200 BK 3000/840 UGR	1	0.011	1.605	291
31614	3F Reno 200 BK 2500/930 UGR	1	0.011	1.615	291
31642	3F Reno 200 BK 3000/840 DALI UGR	1	0.011	1.680	291
31646	3F Reno 200 BK 2500/930 DALI UGR	1	0.011	1.500	291
31685	3F Reno 200 BK 4000/840 ELL	1	0.011	1.500	293
31689	3F Reno 200 BK 4000/930 ELL	1	0.011	1.610	293
31735	3F Reno 200 BK 4000/840 DALI ELL	1	0.011	1.665	293
31739	3F Reno 200 BK 4000/930 DALI ELL	1	0.011	1.500	293
34229	3F Petra OP 300 12W LED	1	0.013	1.105	179
34230	3F Petra OP 300 12W LED DALI	1	0.013	1.105	179
34231	3F Petra OP 300 12W LED EP	1	0.013	1.510	179
34233	3F Petra OP 300 12W LED Sensor	1	0.013	1.185	181
34234	3F Petra OP 300 12W/940 LED	1	0.013	1.105	179
34235	3F Petra OP 300 12W/940 LED DALI	1	0.013	1.105	179
34236	3F Petra OP 300 12W/940 LED EP	1	0.020	1.500	179
34330	3F Petra OP 380 22W LED	1	0.020	1.770	179
34331	3F Petra OP 380 22W LED DALI	1	0.020	1.770	179
34332	3F Petra OP 380 22W LED EP	1	0.020	2.245	179
34334	3F Petra OP 380 22W LED Sensor	1	0.020	1.875	181
34335	3F Petra OP 380 22W/940 LED	1	0.020	1.770	179
34336	3F Petra OP 380 22W/940 LED DALI	1	0.020	1.770	179
34337	3F Petra OP 380 22W/940 LED EP	1	0.020	2.245	179

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
34407	3F Petra OP 620 50W LED	1	0.058	4.790	179
34408	3F Petra OP 620 50W LED DALI	1	0.058	4.790	179
34409	3F Petra OP 620 50W LED EP	1	0.058	6.500	179
34411	3F Petra OP 620 50W LED SO	1	0.090	5.855	183
36575	Lucequadro LED 2000 VS	1	0.008	2.310	305
36576	Lucequadro LED 2000 EP VS	1	0.016	3.400	305
36578	Lucequadro LED 3000 VS	1	0.008	2.335	305
36579	Lucequadro LED 3000 EP VS	1	0.016	3.400	305
36581	Lucequadro LED 2000 VOP	1	0.008	2.320	305
36582	Lucequadro LED 2000 EP VOP	1	0.016	3.400	305
36584	Lucequadro LED 3000 VOP	1	0.008	2.350	305
36585	Lucequadro LED 3000 EP VOP	1	0.016	3.400	305
36587	Lucequadro LED 2000 SOP	1	0.008	2.015	306
36588	Lucequadro LED 2000 EP SOP	1	0.016	3.200	306
36590	Lucequadro LED 3000 SOP	1	0.008	2.040	306
36591	Lucequadro LED 3000 EP SOP	1	0.016	3.200	306
37542	Galassia 220 LED AB 2000 VOP	1	0.008	1.780	303
37543	Galassia 220 LED AB 2000 DALI VOP	1	0.008	2.500	303
37544	Galassia 220 LED AB 2000 EP VOP	1	0.014	3.500	303
37551	Galassia 220 LED AB 2000 VS	1	0.008	1.760	302
37552	Galassia 220 LED AB 2000 DALI VS	1	0.008	2.500	302
37553	Galassia 220 LED AB 2000 EP VS	1	0.014	3.500	302
37578	Galassia 220 LED AB 3000 VOP	1	0.008	1.800	303
37579	Galassia 220 LED AB 3000 DALI VOP	1	0.008	2.500	303
37580	Galassia 220 LED AB 3000 EP VOP	1	0.014	3.500	303
37587	Galassia 220 LED AB 3000 VS	1	0.008	2.500	302
37588	Galassia 220 LED AB 3000 DALI VS	1	0.008	2.500	302
37589	Galassia 220 LED AB 3000 EP VS	1	0.014	3.500	302
37604	Galassia 220 LED AB 4000 VS	1	0.012	2.465	302
37606	Galassia 220 LED AB 4000 DALI VS	1	0.012	3.000	302
37608	Galassia 220 LED AB 4000 VOP	1	0.012	3.000	303
37610	Galassia 220 LED AB 4000 DALI VOP	1	0.012	3.000	303
37759	Galassia 220 LED 2000 VT	1	0.008	1.800	299
37760	Galassia 220 LED 2000 DALI VT	1	0.008	1.920	299
37761	Galassia 220 LED 2000 EP VT	1	0.014	2.425	299
37768	Galassia 220 LED 2000 VOP	1	0.008	1.875	301
37769	Galassia 220 LED 2000 DALI VOP	1	0.008	2.500	301
37770	Galassia 220 LED 2000 EP VOP	1	0.014	2.675	301
37777	Galassia 220 LED 2000 VS	1	0.008	1.915	300
37778	Galassia 220 LED 2000 DALI VS	1	0.008	2.500	300
37779	Galassia 220 LED 2000 EP VS	1	0.014	3.500	300
37802	Galassia 220 LED 3000 VT	1	0.008	2.500	299
37803	Galassia 220 LED 3000 DALI VT	1	0.008	2.500	299
37804	Galassia 220 LED 3000 EP VT	1	0.014	3.500	299
37811	Galassia 220 LED 3000 VOP	1	0.008	1.900	301
37812	Galassia 220 LED 3000 DALI VOP	1	0.008	2.500	301
37813	Galassia 220 LED 3000 EP VOP	1	0.014	2.690	301
37820	Galassia 220 LED 3000 VS	1	0.008	1.915	300
37821	Galassia 220 LED 3000 DALI VS	1	0.008	2.500	300
37822	Galassia 220 LED 3000 EP VS	1	0.014	2.600	300
37834	Galassia 220 LED 4000 VT	1	0.012	3.000	299
37836	Galassia 220 LED 4000 DALI VT	1	0.012	2.600	299

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
37838	Galassia 220 LED 4000 VS	1	0.012	2.565	300
37840	Galassia 220 LED 4000 DALI VS	1	0.012	3.000	300
37842	Galassia 220 LED 4000 VOP	1	0.012	2.565	301
37844	Galassia 220 LED 4000 DALI VOP	1	0.012	2.725	301
45573	03F TK 18W/940 DALI L620	1	0.006	2.300	313
45574	03F TK 35W/940 DALI L1204	1	0.012	4.100	313
45575	03F TK 44W/940 DALI L1506	1	0.015	5.000	313
45576	03F TK 53W/940 DALI L1787	1	0.018	6.100	313
47124	3F Zeta TK L 50 AMPIO L1783	1	0.018	4.335	315
47132	3F Zeta TK L 30 AMPIO L1194	1	0.012	3.165	315
47136	3F Zeta TK L 15 AMPIO L605	1	0.007	1.890	315
47140	3F Zeta TK L 50 DALI AMPIO L1783	1	0.018	6.100	315
47148	3F Zeta TK L 30 DALI AMPIO L1194	1	0.012	3.095	315
47152	3F Zeta TK L 15 DALI AMPIO L605	1	0.007	2.900	315
47167	3F Zeta TK DR UGR 1x24/940 L1194	1	0.012	3.730	317
47168	3F Zeta TK DR UGR 1x30/940 L1783	1	0.018	5.060	317
47169	3F Zeta TK DR UGR 1x24/940 DALI L1194	1	0.012	3.730	317
47170	3F Zeta TK DR UGR 1x30/940 DALI L1783	1	0.018	5.060	317
47509	3F Emilio P LED 3000/840	1	0.004	1.255	197
47534	3F Emilio TK LED 3000/840 DALI	1	0.004	0.900	373
47535	3F Emilio TK LED 3000/830 DALI	1	0.004	0.900	373
47536	3F Emilio TK LED 2000/930 DALI	1	0.004	0.930	373
47551	3F Emilio TK LED 3000/840	1	0.004	0.900	373
47552	3F Emilio TK LED 4000/840	1	0.004	0.910	373
47555	3F Emilio TK LED 3000/830	1	0.004	0.925	373
47556	3F Emilio TK LED 2000/MEAT	1	0.004	0.900	374
47559	3F Emilio TK LED 3000/827	1	0.004	0.900	373
47561	3F Emilio TK LED 3000/940	1	0.004	0.900	373
47562	3F Emilio TK LED 2000/930	1	0.004	0.900	373
47563	3F Emilio TK LED 3000/930	1	0.004	0.900	373
47566	3F Emilio TK LED 4000/830	1	0.004	0.925	373
47572	3F Emilio TK LED 2000/BREAD	1	0.004	0.920	374
47574	3F Emilio TK LED 2500/CRISP	1	0.004	0.900	374
47576	3F Emilio TK BK LED 3000/840	1	0.004	0.900	373
47577	3F Emilio TK BK LED 4000/840	1	0.004	0.900	373
47580	3F Emilio TK BK LED 3000/830	1	0.004	0.900	373
47581	3F Emilio TK BK LED 2000/MEAT	1	0.004	0.930	374
47584	3F Emilio TK BK LED 3000/827	1	0.004	0.900	373
47586	3F Emilio TK BK LED 3000/940	1	0.004	0.900	373
47587	3F Emilio TK BK LED 2000/930	1	0.004	0.945	373
47588	3F Emilio TK BK LED 3000/930	1	0.004	0.925	373
47591	3F Emilio TK BK LED 4000/830	1	0.004	0.900	373
47597	3F Emilio TK BK LED 2000/BREAD	1	0.004	0.900	374
47599	3F Emilio TK BK LED 2500/CRISP	1	0.004	0.900	374
47607	3F Emilio TK LED 3000/840 ELL	1	0.004	0.900	374
47608	3F Emilio TK LED 4000/840 ELL	1	0.004	0.935	374
47611	3F Emilio TK LED 3000/830 ELL	1	0.004	0.900	374
47612	3F Emilio TK LED 2000/MEAT ELL	1	0.004	0.935	375
47615	3F Emilio TK LED 3000/827 ELL	1	0.004	0.900	374
47617	3F Emilio TK LED 3000/940 ELL	1	0.004	0.900	374
47618	3F Emilio TK LED 2000/930 ELL	1	0.004	0.925	374
47619	3F Emilio TK LED 3000/930 ELL	1	0.004	0.935	374

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
47622	3F Emilio TK LED 4000/830 ELL	1	0.004	0.935	374
47628	3F Emilio TK LED 2000/BREAD ELL	1	0.004	0.935	375
47630	3F Emilio TK LED 2500/CRISP ELL	1	0.004	0.900	375
47640	3F Emilio TK LED 3000/840 IPER	1	0.004	0.900	375
47641	3F Emilio TK LED 4000/840 IPER	1	0.004	0.900	375
47644	3F Emilio TK LED 3000/830 IPER	1	0.004	0.900	375
47645	3F Emilio TK LED 4000/830 IPER	1	0.004	0.900	375
47648	3F Emilio TK LED 3000/827 IPER	1	0.004	0.900	375
47652	3F Emilio TK LED 3000/940 IPER	1	0.004	0.900	375
47654	3F Emilio TK LED 2000/930 IPER	1	0.004	0.900	375
47655	3F Emilio TK LED 3000/930 IPER	1	0.004	0.900	375
47657	3F Emilio TK LED 2000/MEAT IPER	1	0.004	0.900	376
47660	3F Emilio TK LED 2000/BREAD IPER	1	0.004	0.900	376
47664	3F Emilio TK LED 2500/CRISP IPER	1	0.004	0.900	376
47668	3F Emilio TK BK LED 3000/840 IPER	1	0.004	0.900	375
47669	3F Emilio TK BK LED 4000/840 IPER	1	0.004	0.900	375
47672	3F Emilio TK BK LED 3000/830 IPER	1	0.004	0.900	375
47673	3F Emilio TK BK LED 4000/830 IPER	1	0.004	0.900	375
47676	3F Emilio TK BK LED 3000/827 IPER	1	0.004	0.900	375
47680	3F Emilio TK BK LED 3000/940 IPER	1	0.004	0.900	375
47682	3F Emilio TK BK LED 2000/930 IPER	1	0.004	0.900	375
47683	3F Emilio TK BK LED 3000/930 IPER	1	0.004	0.900	375
47685	3F Emilio TK BK LED 2000/MEAT IPER	1	0.004	0.900	376
47688	3F Emilio TK BK LED 2000/BREAD IPER	1	0.004	0.900	376
47692	3F Emilio TK BK LED 2500/CRISP IPER	1	0.004	0.900	376
47698	3F Six WH 85/840 WIDE 307x378	1	0.017	3.585	363
47699	3F Six WH 70/840 WIDE 307x378	1	0.017	3.535	363
47700	3F Six WH 60/840 WIDE 307x378	1	0.017	3.400	363
47701	3F Six WH 85/840 DALI WIDE 307x378	1	0.017	3.400	363
47702	3F Six WH 70/840 DALI WIDE 307x378	1	0.017	3.400	363
47703	3F Six WH 60/840 DALI WIDE 307x378	1	0.017	3.400	363
47705	3F Six WH 85/840 MEDIUM 307x378	1	0.017	3.400	363
47706	3F Six WH 70/840 MEDIUM 307x378	1	0.017	3.400	363
47707	3F Six WH 60/840 MEDIUM 307x378	1	0.017	3.400	363
47708	3F Six WH 85/840 DALI MEDIUM 307x378	1	0.017	3.400	363
47709	3F Six WH 70/840 DALI MEDIUM 307x378	1	0.017	3.400	363
47710	3F Six WH 60/840 DALI MEDIUM 307x378	1	0.017	3.400	363
47712	3F Six WH 40/840 UGR 307x378	1	0.017	3.400	364
47713	3F Six WH 40/840 DALI UGR 307x378	1	0.017	3.470	364
47720	3F Six TK WH 60/840 WIDE 307x378	1	0.017	3.600	359
47721	3F Six TK WH 50/840 WIDE 307x378	1	0.017	3.600	359
47722	3F Six TK WH 40/840 WIDE 307x378	1	0.017	3.600	359
47723	3F Six TK WH 60/840 DALI WIDE 307x378	1	0.017	3.600	359
47724	3F Six TK WH 50/840 DALI WIDE 307x378	1	0.017	3.600	359
47725	3F Six TK WH 40/840 DALI WIDE 307x378	1	0.017	3.615	359
47727	3F Six TK WH 60/840 MEDIUM 307x378	1	0.017	3.600	359
47728	3F Six TK WH 50/840 MEDIUM 307x378	1	0.017	3.600	359
47729	3F Six TK WH 40/840 MEDIUM 307x378	1	0.017	3.600	359
47730	3F Six TK WH 60/840 DALI MEDIUM 307x378	1	0.017	3.600	359
47731	3F Six TK WH 50/840 DALI MEDIUM 307x378	1	0.017	3.600	359
47732	3F Six TK WH 40/840 DALI MEDIUM 307x378	1	0.017	3.600	359
47734	3F Six TK WH 40/840 UGR 307x378	1	0.017	3.600	361

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		Pcs	m³	Gross weight in kg	
47735	3F Six TK WH 40/840 DALI UGR 307x378	1	0.017	3.600	361
47740	3F Six TK WH 60/840 WIDE 190x602	1	0.017	3.600	359
47741	3F Six TK WH 50/840 WIDE 190x602	1	0.017	3.600	359
47742	3F Six TK WH 40/840 WIDE 190x602	1	0.017	3.600	359
47743	3F Six TK WH 60/840 DALI WIDE 190x602	1	0.017	3.600	359
47744	3F Six TK WH 50/840 DALI WIDE 190x602	1	0.017	3.600	359
47745	3F Six TK WH 40/840 DALI WIDE 190x602	1	0.017	3.600	359
47747	3F Six TK WH 60/840 BAT 190x602	1	0.017	3.600	360
47748	3F Six TK WH 50/840 BAT 190x602	1	0.017	3.600	360
47749	3F Six TK WH 40/840 BAT 190x602	1	0.017	3.600	360
47750	3F Six TK WH 60/840 DALI BAT 190x602	1	0.017	3.600	360
47751	3F Six TK WH 50/840 DALI BAT 190x602	1	0.017	3.600	360
47752	3F Six TK WH 40/840 DALI BAT 190x602	1	0.017	3.600	360
47754	3F Six TK WH 60/840 BAT WD 190x602	1	0.017	3.600	360
47755	3F Six TK WH 50/840 BAT WD 190x602	1	0.017	3.600	360
47756	3F Six TK WH 40/840 BAT WD 190x602	1	0.017	3.600	360
47757	3F Six TK WH 60/840 DALI BAT WD 190x602	1	0.017	3.600	360
47758	3F Six TK WH 50/840 DALI BAT WD 190x602	1	0.017	3.600	360
47759	3F Six TK WH 40/840 DALI BAT WD 190x602	1	0.017	3.600	360
47761	3F Six TK WH 40/840 UGR 190x602	1	0.017	3.600	361
47762	3F Six TK WH 40/840 DALI UGR 190x602	1	0.017	3.600	361
52001	Beta 500 3x45W/840 SP L870	1	0.050	9.400	407
52002	Beta 500 4x50W/840 SP L870	1	0.050	9.600	407
52003	Beta 500 3x100W/840 SP L1230	1	0.080	11.500	407
52004	Beta 500 3x45W/840 DALI SP L870	1	0.050	9.400	407
52005	Beta 500 4x50W/840 DALI SP L870	1	0.050	9.600	407
52006	Beta 500 3x100W/840 DALI SP L1230	1	0.080	11.500	407
52007	Beta 500 3x45W/865 SP L870	1	0.050	9.400	407
52008	Beta 500 4x50W/865 SP L870	1	0.050	9.600	407
52009	Beta 500 3x100W/865 SP L1230	1	0.080	11.500	407
52010	Beta 500 3x45W/865 DALI SP L870	1	0.050	9.400	407
52011	Beta 500 4x50W/865 DALI SP L870	1	0.050	9.600	407
52012	Beta 500 3x100W/865 DALI SP L1230	1	0.080	11.500	407
52013	Beta 500 3x45W/840 VA L870	1	0.050	12.300	408
52014	Beta 500 4x50W/840 VA L870	1	0.050	12.500	408
52015	Beta 500 3x100W/840 VA L1230	1	0.080	16.300	408
52016	Beta 500 3x45W/840 DALI VA L870	1	0.050	12.300	408
52017	Beta 500 4x50W/840 DALI VA L870	1	0.050	12.500	408
52018	Beta 500 3x100W/840 DALI VA L1230	1	0.080	16.300	408
52019	Beta 500 3x45W/865 VA L870	1	0.050	12.300	408
52020	Beta 500 4x50W/865 VA L870	1	0.050	12.500	408
52021	Beta 500 3x100W/865 VA L1230	1	0.080	16.300	408
52022	Beta 500 3x45W/865 DALI VA L870	1	0.050	12.300	408
52023	Beta 500 4x50W/865 DALI VA L870	1	0.050	12.500	408
52024	Beta 500 3x100W/865 DALI VA L1230	1	0.080	16.300	408
52025	Beta 500 3x45W/840 CONC SL L870	1	0.050	9.600	409
52026	Beta 500 4x50W/840 CONC SL L870	1	0.050	9.800	409
52027	Beta 500 3x100W/840 CONC SL L1230	1	0.080	11.700	409
52028	Beta 500 3x45W/840 DALI CONC SL L870	1	0.050	9.600	409
52029	Beta 500 4x50W/840 DALI CONC SL L870	1	0.050	9.800	409
52030	Beta 500 3x100W/840 DALI CONC SL L1230	1	0.080	11.700	409
52031	Beta 500 3x45W/865 CONC SL L870	1	0.050	9.600	409

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
52032	Beta 500 4x50W/865 CONC SL L870	1	0.050	9.800	409
52033	Beta 500 3x100W/865 CONC SL L1230	1	0.080	11.700	409
52034	Beta 500 3x45W/865 DALI CONC SL L870	1	0.050	9.600	409
52035	Beta 500 4x50W/865 DALI CONC SL L870	1	0.050	9.800	409
52036	Beta 500 3x100W/865 DALI CONC SL L1230	1	0.080	11.700	409
52037	Beta 500 3x45W/840 CONC VT L870	1	0.050	12.500	410
52038	Beta 500 4x50W/840 CONC VT L870	1	0.050	12.700	410
52039	Beta 500 3x100W/840 CONC VT L1230	1	0.080	16.500	410
52040	Beta 500 3x45W/840 DALI CONC VT L870	1	0.050	12.500	410
52041	Beta 500 4x50W/840 DALI CONC VT L870	1	0.050	12.700	410
52042	Beta 500 3x100W/840 DALI CONC VT L1230	1	0.080	16.500	410
52043	Beta 500 3x45W/865 CONC VT L870	1	0.050	12.500	410
52044	Beta 500 4x50W/865 CONC VT L870	1	0.050	12.700	410
52045	Beta 500 3x100W/865 CONC VT L1230	1	0.080	16.500	410
52046	Beta 500 3x45W/865 DALI CONC VT L870	1	0.050	12.500	410
52047	Beta 500 4x50W/865 DALI CONC VT L870	1	0.050	12.700	410
52048	Beta 500 3x100W/865 DALI CONC VT L1230	1	0.080	16.500	410
52049	Beta 500 HO 3x45W/840 VA L870	1	0.050	12.300	408
52050	Beta 500 HO 4x50W/840 VA L870	1	0.050	12.500	408
52051	Beta 500 HO 3x100W/840 VA L1230	1	0.080	16.300	408
52052	Beta 500 HO 3x45W/840 DALI VA L870	1	0.050	12.300	408
52053	Beta 500 HO 4x50W/840 DALI VA L870	1	0.050	12.500	408
52054	Beta 500 HO 3x100W/840 DALI VA L1230	1	0.080	16.300	408
52510	Beta 235 LED 752x55 CONC L1565	1	0.041	9.750	480
52511	Beta 235 LED 751x60 CONC L1565	1	0.041	8.490	480
52512	Beta 235 LED 762x55 CONC VT L1565	1	0.041	12.640	484
52513	Beta 235 LED 761x60 CONC VT L1565	1	0.041	12.000	484
52514	Beta 235 LED 762x55 CONC VS L1565	1	0.041	12.900	482
52515	Beta 235 LED 761x60 CONC VS L1565	1	0.041	11.410	482
52517	Beta 235 LED 752x55 DALI CONC L1565	1	0.041	9.200	480
52518	Beta 235 LED 751x60 DALI CONC L1565	1	0.041	8.875	480
52519	Beta 235 LED 762x55 DALI CONC VT L1565	1	0.041	12.900	484
52520	Beta 235 LED 761x60 DALI CONC VT L1565	1	0.041	12.000	484
52521	Beta 235 LED 762x55 DALI CONC VS L1565	1	0.041	12.900	482
52522	Beta 235 LED 761x60 DALI CONC VS L1565	1	0.041	11.195	482
52524	Beta 235 LED 752x45 CONC L1265	1	0.041	7.975	480
52526	Beta 235 LED 762x45 CONC VT L1265	1	0.033	10.500	484
52528	Beta 235 LED 762x45 CONC VS L1265	1	0.033	10.500	482
52531	Beta 235 LED 752x45 DALI CONC L1265	1	0.041	7.900	480
52533	Beta 235 LED 762x45 DALI CONC VT L1265	1	0.033	10.275	484
52535	Beta 235 LED 762x45 DALI CONC VS L1265	1	0.033	10.500	482
52552	Beta 235 LED 752x55 MEDIO L1565	1	0.041	9.625	479
52553	Beta 235 LED 751x60 MEDIO L1565	1	0.041	8.300	479
52554	Beta 235 LED 762x55 MEDIO VT L1565	1	0.041	12.495	483
52555	Beta 235 LED 761x60 MEDIO VT L1565	1	0.041	12.000	483
52556	Beta 235 LED 762x55 MEDIO VS L1565	1	0.041	12.900	481
52557	Beta 235 LED 761x60 MEDIO VS L1565	1	0.041	12.000	481
52559	Beta 235 LED 752x55 DALI MEDIO L1565	1	0.041	9.570	479
52560	Beta 235 LED 751x60 DALI MEDIO L1565	1	0.041	8.300	479
52561	Beta 235 LED 762x55 DALI MEDIO VT L1565	1	0.041	12.900	483
52562	Beta 235 LED 761x60 DALI MEDIO VT L1565	1	0.041	12.000	483
52563	Beta 235 LED 762x55 DALI MEDIO VS L1565	1	0.041	12.900	481

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		Pcs	m³	Gross weight in kg	
52564	Beta 235 LED 761x60 DALI MEDIO VS L1565	1	0.041	12.000	481
52566	Beta 235 LED 752x45 MEDIO L1265	1	0.041	7.960	479
52567	Beta 235 LED 751x50 MEDIO L1265	1	0.041	7.200	479
52568	Beta 235 LED 762x45 MEDIO VT L1265	1	0.033	10.500	483
52569	Beta 235 LED 761x50 MEDIO VT L1265	1	0.033	9.500	483
52570	Beta 235 LED 762x45 MEDIO VS L1265	1	0.033	10.500	481
52571	Beta 235 LED 761x50 MEDIO VS L1265	1	0.033	9.800	481
52573	Beta 235 LED 752x45 DALI MEDIO L1265	1	0.041	7.900	479
52574	Beta 235 LED 751x50 DALI MEDIO L1265	1	0.041	7.200	479
52575	Beta 235 LED 762x45 DALI MEDIO VT L1265	1	0.033	10.500	483
52576	Beta 235 LED 761x50 DALI MEDIO VT L1265	1	0.033	9.800	483
52577	Beta 235 LED 762x45 DALI MEDIO VS L1265	1	0.033	10.500	481
52578	Beta 235 LED 761x50 DALI MEDIO VS L1265	1	0.033	9.800	481
52762	Beta 235 LED 752x55 AMPIO L1565	1	0.041	9.815	479
52764	Beta 235 LED 752x55 IPERCONC L1565	1	0.041	9.200	480
52765	Beta 235 LED 751x60 AMPIO L1565	1	0.041	8.870	479
52769	Beta 235 LED 762x55 AMPIO VT L1565	1	0.041	12.725	483
52771	Beta 235 LED 762x55 IPERCONC VT L1565	1	0.041	12.900	484
52772	Beta 235 LED 761x60 AMPIO VT L1565	1	0.041	11.805	483
52776	Beta 235 LED 762x55 AMPIO VS L1565	1	0.041	12.865	481
52778	Beta 235 LED 762x55 IPERCONC VS L1565	1	0.041	12.900	482
52779	Beta 235 LED 761x60 AMPIO VS L1565	1	0.041	11.225	481
52783	Beta 235 LED 922x50 AMPIO L1565	1	0.054	8.855	487
52785	Beta 235 LED 922x50 IPERCONC L1565	1	0.054	9.200	487
52786	Beta 235 LED 921x60 AMPIO L1565	1	0.054	8.000	487
52790	Beta 235 LED 932x50 AMPIO VT L1565	1	0.041	11.905	489
52792	Beta 235 LED 932x50 IPERCONC VT L1565	1	0.041	12.900	489
52793	Beta 235 LED 931x60 AMPIO VT L1565	1	0.041	11.085	489
52797	Beta 235 LED 932x50 AMPIO VS L1565	1	0.041	11.795	488
52799	Beta 235 LED 932x50 IPERCONC VS L1565	1	0.041	12.900	488
52800	Beta 235 LED 931x60 AMPIO VS L1565	1	0.041	10.540	488
52804	Beta 235 LED 752x55 DALI AMPIO L1565	1	0.041	9.730	479
52806	Beta 235 LED 752x55 DALI IPERCONC L1565	1	0.041	9.200	480
52807	Beta 235 LED 751x60 DALI AMPIO L1565	1	0.041	8.860	479
52811	Beta 235 LED 762x55 DALI AMPIO VT L1565	1	0.041	12.900	483
52813	Beta 235 LED 762x55 DALI IPERCONC VT L1565	1	0.041	12.900	484
52814	Beta 235 LED 761x60 DALI AMPIO VT L1565	1	0.041	12.000	483
52818	Beta 235 LED 762x55 DALI AMPIO VS L1565	1	0.041	12.770	481
52820	Beta 235 LED 762x55 DALI IPERCONC VS L1565	1	0.041	12.900	482
52821	Beta 235 LED 761x60 DALI AMPIO VS L1565	1	0.041	11.370	481
52825	Beta 235 LED 922x50 DALI AMPIO L1565	1	0.054	9.200	487
52827	Beta 235 LED 922x50 DALI IPERCONC L1565	1	0.054	9.200	487
52828	Beta 235 LED 921x60 DALI AMPIO L1565	1	0.054	8.300	487
52832	Beta 235 LED 932x50 DALI AMPIO VT L1565	1	0.041	12.900	489
52834	Beta 235 LED 932x50 DALI IPERCONC VT L1565	1	0.041	12.900	489
52835	Beta 235 LED 931x60 DALI AMPIO VT L1565	1	0.041	12.000	489
52839	Beta 235 LED 932x50 DALI AMPIO VS L1565	1	0.041	12.900	488
52841	Beta 235 LED 932x50 DALI IPERCONC VS L1565	1	0.041	12.900	488
52842	Beta 235 LED 931x60 DALI AMPIO VS L1565	1	0.041	12.000	488
52846	Beta 235 LED 752x45 AMPIO L1265	1	0.041	8.125	479
52848	Beta 235 LED 752x45 IPERCONC L1265	1	0.041	8.075	480
52849	Beta 235 LED 751x50 AMPIO L1265	1	0.041	7.405	479

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		Pcs	m³	Gross weight in kg	
52853	Beta 235 LED 762x45 AMPIO VT L1265	1	0.033	10.430	483
52855	Beta 235 LED 762x45 IPERCONC VT L1265	1	0.033	10.500	484
52856	Beta 235 LED 761x50 AMPIO VT L1265	1	0.033	9.590	483
52860	Beta 235 LED 762x45 AMPIO VS L1265	1	0.033	10.465	481
52862	Beta 235 LED 762x45 IPERCONC VS L1265	1	0.033	10.500	482
52863	Beta 235 LED 761x50 AMPIO VS L1265	1	0.033	9.710	481
52867	Beta 235 LED 922x40 AMPIO L1265	1	0.041	7.900	487
52869	Beta 235 LED 922x40 IPERCONC L1265	1	0.041	7.545	487
52870	Beta 235 LED 921x50 AMPIO L1265	1	0.041	6.840	487
52874	Beta 235 LED 932x40 AMPIO VT L1265	1	0.033	9.870	489
52876	Beta 235 LED 932x40 IPERCONC VT L1265	1	0.033	10.500	489
52877	Beta 235 LED 931x50 AMPIO VT L1265	1	0.033	9.120	489
52881	Beta 235 LED 932x40 AMPIO VS L1265	1	0.033	9.825	488
52883	Beta 235 LED 932x40 IPERCONC VS L1265	1	0.033	10.500	488
52884	Beta 235 LED 931x50 AMPIO VS L1265	1	0.033	9.080	488
52888	Beta 235 LED 752x45 DALI AMPIO L1265	1	0.041	8.125	479
52890	Beta 235 LED 752x45 DALI IPERCONC L1265	1	0.041	7.900	480
52895	Beta 235 LED 762x45 DALI AMPIO VT L1265	1	0.033	10.500	483
52897	Beta 235 LED 762x45 DALI IPERCONC VT L1265	1	0.033	10.500	484
52902	Beta 235 LED 762x45 DALI AMPIO VS L1265	1	0.033	10.500	481
52904	Beta 235 LED 762x45 DALI IPERCONC VS L1265	1	0.033	10.500	482
52909	Beta 235 LED 922x40 DALI AMPIO L1265	1	0.041	7.900	487
52911	Beta 235 LED 922x40 DALI IPERCONC L1265	1	0.041	7.900	487
52916	Beta 235 LED 932x40 DALI AMPIO VT L1265	1	0.033	10.500	489
52918	Beta 235 LED 932x40 DALI IPERCONC VT L1265	1	0.033	10.500	489
52923	Beta 235 LED 932x40 DALI AMPIO VS L1265	1	0.033	10.500	488
52925	Beta 235 LED 932x40 DALI IPERCONC VS L1265	1	0.033	10.500	488
52930	Beta 235 LED 752x20 AMPIO L655	1	0.021	4.610	479
52931	Beta 235 LED 751x25 AMPIO L655	1	0.021	4.210	479
52936	Beta 235 LED 762x20 AMPIO VS L655	1	0.019	5.915	481
52937	Beta 235 LED 761x25 AMPIO VS L655	1	0.019	5.410	481
52939	Beta 235 LED 922x15 AMPIO L655	1	0.021	5.400	487
52940	Beta 235 LED 921x25 AMPIO L655	1	0.021	3.955	487
52945	Beta 235 LED 932x15 AMPIO VS L655	1	0.019	5.615	488
52946	Beta 235 LED 931x25 AMPIO VS L655	1	0.019	5.240	488
55006	i3F LED 752x30W CONC L1565	1	0.054	7.585	493
55017	i3F LED 752x30W EP CONC L1565	1	0.054	8.500	493
55072	i3F LED 762x30W AMPIO VT L1565	1	0.041	10.370	494
55083	i3F LED 762x30W EP AMPIO VT L1565	1	0.041	11.115	494
55134	i3F LED 762x12W AMPIO VS L655	1	0.019	4.775	494
55136	i3F LED 762x24W AMPIO VS L1265	1	0.033	8.450	494
55138	i3F LED 762x30W AMPIO VS L1565	1	0.041	10.300	494
55145	i3F LED 762x12W EP AMPIO VS L655	1	0.019	6.100	494
55147	i3F LED 762x24W EP AMPIO VS L1265	1	0.033	9.450	494
55149	i3F LED 762x30W EP AMPIO VS L1565	1	0.041	10.865	494
55596	i3F LED 752x12W AMPIO L655	1	0.019	3.470	493
55598	i3F LED 752x24W AMPIO L1265	1	0.041	6.250	493
55600	i3F LED 752x30W AMPIO L1565	1	0.054	7.360	493
55607	i3F LED 752x12W EP AMPIO L655	1	0.019	4.700	493
55609	i3F LED 752x24W EP AMPIO L1265	1	0.041	7.200	493
55611	i3F LED 752x30W EP AMPIO L1565	1	0.054	7.890	493
55666	i3F LED 762x30W CONC VT L1565	1	0.041	10.435	495

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		Pcs	m³	Gross weight in kg	
5677	i3F LED 762x30W EP CONC VT L1565	1	0.041	11.500	495
56330	3F CUB LED 100W CR VT	1	0.098	12.010	507
56332	3F CUB LED 100W DALI CR VT	1	0.098	12.365	507
56333	3F CUB LED 150W CR VT	1	0.098	12.370	507
56335	3F CUB LED 150W DALI CR VT	1	0.098	12.555	507
56337	3F CUB LED 100W CR VS	1	0.098	12.010	508
56339	3F CUB LED 100W DALI CR VS	1	0.098	12.150	508
56340	3F CUB LED 150W CR VS	1	0.098	12.060	508
56342	3F CUB LED 150W DALI CR VS	1	0.098	12.165	508
56344	3F CUB LED 100W CR SP	1	0.098	10.060	507
56346	3F CUB LED 100W DALI CR SP	1	0.098	9.800	507
56347	3F CUB LED 150W CR SP	1	0.098	10.120	507
56349	3F CUB LED 150W DALI CR SP	1	0.098	10.000	507
56660	3F Tank Lite 2x9W/840 L675	1	0.007	2.545	395
56661	3F Tank Lite 2x18W/840 L1265	1	0.012	3.495	395
56662	3F Tank Lite 2x22W/840 L1560	1	0.014	4.700	395
56664	3F Tank Lite 2x9W/840 DALI L675	1	0.007	2.610	395
56665	3F Tank Lite 2x18W/840 DALI L1265	1	0.012	3.900	395
56666	3F Tank Lite 2x22W/840 DALI L1560	1	0.014	4.800	395
56668	3F Tank Lite 2x9W/865 L675	1	0.007	2.300	395
56669	3F Tank Lite 2x18W/865 L1265	1	0.012	3.800	395
56670	3F Tank Lite 2x22W/865 L1560	1	0.014	4.700	395
56672	3F Tank Lite 2x9W/865 DALI L675	1	0.007	2.400	395
56673	3F Tank Lite 2x18W/865 DALI L1265	1	0.012	3.900	395
56674	3F Tank Lite 2x22W/865 DALI L1560	1	0.014	4.800	395
56676	3F Tank 13W/840 WIDE L675	1	0.007	2.815	396
56677	3F Tank 45W/840 WIDE L1265	1	0.012	4.205	396
56678	3F Tank 55W/840 WIDE L1560	1	0.014	4.900	396
56679	3F Tank 70W/840 WIDE L1850	1	0.016	5.800	396
56680	3F Tank 13W/840 DALI WIDE L675	1	0.007	2.935	396
56681	3F Tank 45W/840 DALI WIDE L1265	1	0.012	4.380	396
56682	3F Tank 55W/840 DALI WIDE L1560	1	0.014	5.000	396
56683	3F Tank 70W/840 DALI WIDE L1850	1	0.016	5.900	396
56684	3F Tank 13W/865 WIDE L675	1	0.007	2.500	396
56685	3F Tank 45W/865 WIDE L1265	1	0.012	4.000	396
56686	3F Tank 55W/865 WIDE L1560	1	0.014	4.795	396
56687	3F Tank 70W/865 WIDE L1850	1	0.016	5.800	396
56688	3F Tank 13W/865 DALI WIDE L675	1	0.007	2.600	396
56689	3F Tank 45W/865 DALI WIDE L1265	1	0.012	4.100	396
56690	3F Tank 55W/865 DALI WIDE L1560	1	0.014	5.000	396
56691	3F Tank 70W/865 DALI WIDE L1850	1	0.016	5.900	396
56692	3F Tank 13W/840 MEDIUM L675	1	0.007	2.660	397
56693	3F Tank 45W/840 MEDIUM L1265	1	0.012	4.100	397
56694	3F Tank 55W/840 MEDIUM L1560	1	0.014	4.675	397
56695	3F Tank 70W/840 MEDIUM L1850	1	0.016	5.235	397
56696	3F Tank 13W/840 DALI MEDIUM L675	1	0.007	2.600	397
56697	3F Tank 45W/840 DALI MEDIUM L1265	1	0.012	4.100	397
56698	3F Tank 55W/840 DALI MEDIUM L1560	1	0.014	5.000	397
56699	3F Tank 70W/840 DALI MEDIUM L1850	1	0.016	5.900	397
56700	3F Tank 13W/865 MEDIUM L675	1	0.007	2.500	397
56701	3F Tank 45W/865 MEDIUM L1265	1	0.012	4.000	397
56702	3F Tank 55W/865 MEDIUM L1560	1	0.014	4.900	397

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		Pcs	m³	Gross weight in kg	
56703	3F Tank 70W/865 MEDIUM L1850	1	0.016	5.800	397
56704	3F Tank 13W/865 DALI MEDIUM L675	1	0.007	2.600	397
56705	3F Tank 45W/865 DALI MEDIUM L1265	1	0.012	4.100	397
56706	3F Tank 55W/865 DALI MEDIUM L1560	1	0.014	5.000	397
56707	3F Tank 70W/865 DALI MEDIUM L1850	1	0.016	5.900	397
56708	3F Tank 35W/840 UGR L1560	1	0.014	4.900	398
56709	3F Tank 40W/840 UGR L1850	1	0.016	5.800	398
56710	3F Tank 35W/840 DALI UGR L1560	1	0.014	5.055	398
56711	3F Tank 40W/840 DALI UGR L1850	1	0.016	5.900	398
56712	3F Tank 35W/865 UGR L1560	1	0.014	4.900	398
56713	3F Tank 40W/865 UGR L1850	1	0.016	5.800	398
56714	3F Tank 35W/865 DALI UGR L1560	1	0.014	5.000	398
56715	3F Tank 40W/865 DALI UGR L1850	1	0.016	5.900	398
56716	3F Tank 13W/840 CONC L675	1	0.007	2.500	399
56717	3F Tank 45W/840 CONC L1265	1	0.012	4.000	399
56718	3F Tank 55W/840 CONC L1560	1	0.014	4.900	399
56719	3F Tank 70W/840 CONC L1850	1	0.016	5.380	399
56720	3F Tank 13W/840 DALI CONC L675	1	0.007	2.600	399
56721	3F Tank 45W/840 DALI CONC L1265	1	0.012	4.100	399
56722	3F Tank 55W/840 DALI CONC L1560	1	0.014	5.000	399
56723	3F Tank 70W/840 DALI CONC L1850	1	0.016	5.900	399
56724	3F Tank 13W/865 CONC L675	1	0.007	2.500	399
56725	3F Tank 45W/865 CONC L1265	1	0.012	4.000	399
56726	3F Tank 55W/865 CONC L1560	1	0.014	4.900	399
56727	3F Tank 70W/865 CONC L1850	1	0.016	5.800	399
56728	3F Tank 13W/865 DALI CONC L675	1	0.007	2.600	399
56729	3F Tank 45W/865 DALI CONC L1265	1	0.012	4.100	399
56730	3F Tank 55W/865 DALI CONC L1560	1	0.014	5.000	399
56731	3F Tank 70W/865 DALI CONC L1850	1	0.016	5.900	399
58457	3F Linda LED Ice 1x24W UR95 L1270	1	0.016	2.560	431
58459	3F Linda LED Ice 2x24W UR95 L1270	1	0.024	3.225	431
58461	3F Linda LED Ice 1x30W UR95 L1570	1	0.019	2.975	431
58463	3F Linda LED Ice 2x30W UR95 L1570	1	0.028	3.830	431
58549	3F Linda LED 1x12W DALI L660	1	0.008	1.280	419
58550	3F Linda LED 2x12W DALI L660	1	0.013	1.820	419
58551	3F Linda LED 1x24W DALI L1270	1	0.016	2.355	419
58552	3F Linda LED 2x24W DALI L1270	1	0.024	3.110	419
58553	3F Linda LED 1x30W DALI L1570	1	0.019	2.890	419
58554	3F Linda LED 2x30W DALI L1570	1	0.028	3.660	419
58561	3F Linda LED 1x12W L660	1	0.008	1.265	419
58563	3F Linda LED 1x6W L660	1	0.008	1.285	419
58567	3F Linda LED 1x12W EP LA L660	1	0.013	2.160	420
58569	3F Linda LED 1x6W EP LA L660	1	0.013	2.225	420
58572	3F Linda LED 2x12W L660	1	0.013	1.845	419
58583	3F Linda LED 1x24W L1270	1	0.016	2.330	419
58584	3F Linda LED 1x24W/865 L1270	1	0.016	2.320	419
58585	3F Linda LED 1x24W/830 L1270	1	0.016	2.365	419
58589	3F Linda LED 1x24W EP L1270	1	0.016	2.705	420
58590	3F Linda LED 1x24W/865 EP L1270	1	0.016	2.755	420
58591	3F Linda LED 1x24W/830 EP L1270	1	0.016	2.760	420
58594	3F Linda LED 2x24W L1270	1	0.024	3.050	419
58595	3F Linda LED 2x24W/865 L1270	1	0.024	3.025	419

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		Pcs	m³	Gross weight in kg	
58596	3F Linda LED 2x24W/830 L1270	1	0.024	3.050	419
58600	3F Linda LED 2x24W EP L1270	1	0.024	3.645	420
58601	3F Linda LED 2x24W/865 EP L1270	1	0.024	3.530	420
58602	3F Linda LED 2x24W/830 EP L1270	1	0.024	3.440	420
58605	3F Linda LED 1x30W L1570	1	0.019	2.765	419
58606	3F Linda LED 1x30W/865 L1570	1	0.019	2.740	419
58607	3F Linda LED 1x30W/830 L1570	1	0.019	2.775	419
58611	3F Linda LED 1x30W EP L1570	1	0.019	3.200	420
58612	3F Linda LED 1x30W/865 EP L1570	1	0.019	3.310	420
58613	3F Linda LED 1x30W/830 EP L1570	1	0.019	3.210	420
58616	3F Linda LED 2x30W L1570	1	0.028	3.760	419
58617	3F Linda LED 2x30W/865 L1570	1	0.028	3.685	419
58618	3F Linda LED 2x30W/830 L1570	1	0.028	3.670	419
58623	3F Linda LED 2x30W EP L1570	1	0.028	4.315	420
58624	3F Linda LED 2x30W/865 EP L1570	1	0.028	4.205	420
58625	3F Linda LED 2x30W/830 EP L1570	1	0.028	4.305	420
58630	3F Linda LED 2x24W CONC L1270	1	0.024	3.335	422
58632	3F Linda LED 2x30W CONC L1570	1	0.028	4.065	422
58638	3F Linda LED 1x30W Sensor L1570	1	0.019	2.845	433
58642	3F Linda LED 2x30W Sensor L1570	1	0.028	3.810	433
58645	3F Linda LED 1x30W Sensor CF L1570	1	0.019	2.840	433
58649	3F Linda LED 2x30W Sensor CF L1570	1	0.028	3.725	433
58659	3F Linda LED 2x24W AMPIO L1270	1	0.024	3.335	421
58661	3F Linda LED 2x30W AMPIO L1570	1	0.028	4.025	421
58705	3F Linda LED 1x12W ENP LA L660	1	0.013	2.105	420
58713	3F Linda LED 1x24W ENP L1270	1	0.016	2.465	420
58722	3F Linda LED HS 1x24W L1270	1	0.016	2.350	427
58724	3F Linda LED HS 1x30W L1570	1	0.019	2.795	427
58728	3F Linda LED HS 2x24W L1270	1	0.024	3.100	427
58730	3F Linda LED HS 2x30W L1570	1	0.028	3.660	427
58731	3F Linda LED Soft 1x12W L660	1	0.008	1.260	423
58732	3F Linda LED Soft 2x12W L660	1	0.013	1.770	423
58733	3F Linda LED Soft 1x24W L1270	1	0.016	2.345	423
58734	3F Linda LED Soft 1x30W L1570	1	0.019	2.800	423
58735	3F Linda LED Soft 1x24W DALI L1270	1	0.016	2.320	423
58736	3F Linda LED Soft 1x30W DALI L1570	1	0.019	2.840	423
58737	3F Linda LED Soft 2x24W L1270	1	0.024	2.920	423
58738	3F Linda LED Soft 2x24W DALI L1270	1	0.024	3.100	423
58751	3F Linda LED Soft 2x22W L1570	1	0.028	3.670	423
58752	3F Linda LED Soft 2x30W L1570	1	0.028	3.770	423
58753	3F Linda LED Soft 2x22W DALI L1570	1	0.028	3.595	423
58754	3F Linda LED Soft 2x30W DALI L1570	1	0.028	3.765	423
58762	3F Linda LED Basic 1x19W L1270	1	0.016	2.350	422
58763	3F Linda LED Basic 2x19W L1270	1	0.024	3.010	422
58764	3F Linda LED Basic 1x23W L1570	1	0.019	2.650	422
58765	3F Linda LED Basic 2x23W L1570	1	0.028	3.655	422
58766	3F Linda LED Basic ST 2x16W L1270	1	0.016	2.255	422
58767	3F Linda LED Basic ST 2x20W L1570	1	0.019	2.790	422
58786	3F Linda LED 1x24W Sensor DALI-BLE L1270	1	0.016	2.320	434
58787	3F Linda LED 1x30W Sensor DALI-BLE L1570	1	0.019	3.000	434
58788	3F Linda LED 2x24W Sensor DALI-BLE L1270	1	0.024	3.320	434
58789	3F Linda LED 2x30W Sensor DALI-BLE L1570	1	0.028	4.000	434

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
58852	3F Linda LED Lite TR 1x12W L660	1	0.008	1.420	429
58853	3F Linda LED Lite TR 1x19W L1270	1	0.016	2.310	429
58854	3F Linda LED Lite TR 1x23W L1570	1	0.019	2.800	429
58855	3F Linda LED Lite TR 2x16W L1270	1	0.024	3.060	429
58856	3F Linda LED Lite TR 2x20W L1570	1	0.028	3.710	429
58867	3F Linda LED 1x12W/940 L660	1	0.008	1.265	421
58868	3F Linda LED 2x12W/940 L660	1	0.013	1.845	421
58869	3F Linda LED 1x24W/940 L1270	1	0.016	2.365	421
58870	3F Linda LED 2x24W/940 L1270	1	0.024	3.050	421
58871	3F Linda LED 1x30W/940 L1570	1	0.019	2.765	421
58872	3F Linda LED 2x30W/940 L1570	1	0.028	3.760	421
58873	3F Linda LED 1x12W/940 DALI L660	1	0.008	1.420	421
58874	3F Linda LED 2x12W/940 DALI L660	1	0.013	1.920	421
58875	3F Linda LED 1x24W/940 DALI L1270	1	0.016	2.355	421
58876	3F Linda LED 2x24W/940 DALI L1270	1	0.024	3.110	421
58877	3F Linda LED 1x30W/940 DALI L1570	1	0.019	2.890	421
58878	3F Linda LED 2x30W/940 DALI L1570	1	0.028	3.660	421
58881	3F LEM 1 LED 50 CR AMPIO	1	0.011	6.150	449
58882	3F LEM 2 LED 100 CR AMPIO	1	0.044	10.075	449
58883	3F LEM 3 LED 150 CR AMPIO	1	0.059	14.895	449
58884	3F LEM 4 LED 200 CR AMPIO	1	0.067	18.665	449
58885	3F LEM 1+1 LED 100 CR AMPIO	1	0.021	11.080	449
58886	3F LEM 5 LED 250 CR AMPIO	1	0.081	22.400	449
58887	3F LEM 1 LED 50 CR CONC	1	0.011	6.160	451
58888	3F LEM 2 LED 100 CR CONC	1	0.044	10.040	451
58889	3F LEM 3 LED 150 CR CONC	1	0.059	14.580	451
58890	3F LEM 4 LED 200 CR CONC	1	0.067	18.000	451
58893	3F LEM 2 LED 100 CR MEDIO	1	0.044	10.070	450
58894	3F LEM 3 LED 150 CR MEDIO	1	0.059	14.575	450
58895	3F LEM 4 LED 200 CR MEDIO	1	0.067	18.000	450
58896	3F LEM 1+1 LED 100 CR MEDIO	1	0.021	10.960	450
58897	3F LEM 5 LED 250 CR MEDIO	1	0.081	23.145	450
58899	3F LEM 1 LED 50 DALI CR AMPIO	1	0.011	7.000	449
58900	3F LEM 2 LED 100 DALI CR AMPIO	1	0.044	10.160	449
58901	3F LEM 3 LED 150 DALI CR AMPIO	1	0.059	14.885	449
58902	3F LEM 4 LED 200 DALI CR AMPIO	1	0.067	18.745	449
58903	3F LEM 1+1 LED 100 DALI CR AMPIO	1	0.021	10.800	449
58904	3F LEM 5 LED 250 DALI CR AMPIO	1	0.081	22.400	449
58905	3F LEM 1 LED 50 DALI CR CONC	1	0.011	7.000	451
58906	3F LEM 2 LED 100 DALI CR CONC	1	0.044	10.085	451
58907	3F LEM 3 LED 150 DALI CR CONC	1	0.059	15.600	451
58908	3F LEM 4 LED 200 DALI CR CONC	1	0.067	18.000	451
58911	3F LEM 2 LED 100 DALI CR MEDIO	1	0.044	10.110	450
58912	3F LEM 3 LED 150 DALI CR MEDIO	1	0.059	15.205	450
58913	3F LEM 4 LED 200 DALI CR MEDIO	1	0.067	18.290	450
58914	3F LEM 1+1 LED 100 DALI CR MEDIO	1	0.021	10.800	450
58915	3F LEM 5 LED 250 DALI CR MEDIO	1	0.081	22.400	450
58953	3F LEM 1 HO LED 70 CR AMPIO	1	0.011	7.000	453
58954	3F LEM 2 HO LED 140 CR AMPIO	1	0.044	10.115	453
58955	3F LEM 3 HO LED 210 CR AMPIO	1	0.059	14.870	453
58956	3F LEM 4 HO LED 280 CR AMPIO	1	0.067	18.685	453
58957	3F LEM 1+1 HO LED 140 CR AMPIO	1	0.021	11.100	453

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
58958	3F LEM 5 HO LED 350 CR AMPIO	1	0.081	23.445	453
58959	3F LEM 1 HO LED 70 CR CONC	1	0.011	7.000	454
58960	3F LEM 2 HO LED 140 CR CONC	1	0.044	10.010	454
58961	3F LEM 3 HO LED 210 CR CONC	1	0.059	14.690	454
58965	3F LEM 2 HO LED 140 CR MEDIO	1	0.044	10.040	454
58966	3F LEM 3 HO LED 210 CR MEDIO	1	0.059	14.720	454
58967	3F LEM 4 HO LED 280 CR MEDIO	1	0.067	18.600	454
58968	3F LEM 1+1 HO LED 140 CR MEDIO	1	0.021	11.005	454
58969	3F LEM 5 HO LED 350 CR MEDIO	1	0.081	23.155	454
58971	3F LEM 1 HO LED 70 DALI CR AMPIO	1	0.011	7.000	453
58972	3F LEM 2 HO LED 140 DALI CR AMPIO	1	0.044	10.190	453
58973	3F LEM 3 HO LED 210 DALI CR AMPIO	1	0.059	14.925	453
58974	3F LEM 4 HO LED 280 DALI CR AMPIO	1	0.067	18.590	453
58975	3F LEM 1+1 HO LED 140 DALI CR AMPIO	1	0.021	11.100	453
58976	3F LEM 5 HO LED 350 DALI CR AMPIO	1	0.081	23.000	453
58977	3F LEM 1 HO LED 70 DALI CR CONC	1	0.011	6.480	454
58978	3F LEM 2 HO LED 140 DALI CR CONC	1	0.044	10.410	454
58979	3F LEM 3 HO LED 210 DALI CR CONC	1	0.059	15.530	454
58983	3F LEM 2 HO LED 140 DALI CR MEDIO	1	0.044	10.800	454
58984	3F LEM 3 HO LED 210 DALI CR MEDIO	1	0.059	15.165	454
58985	3F LEM 4 HO LED 280 DALI CR MEDIO	1	0.067	19.100	454
58986	3F LEM 1+1 HO LED 140 DALI CR MEDIO	1	0.021	11.100	454
58987	3F LEM 5 HO LED 350 DALI CR MEDIO	1	0.081	23.310	454
59026	3F LEM 2 HT LED 60 CR AMPIO	1	0.044	9.945	461
59027	3F LEM 3 HT LED 90 CR AMPIO	1	0.059	14.365	461
59028	3F LEM 4 HT LED 120 CR AMPIO	1	0.067	18.585	461
59030	3F LEM 5 HT LED 150 CR AMPIO	1	0.081	22.855	461
59032	3F LEM 2 HT LED 60 CR CONC	1	0.044	12.000	462
59033	3F LEM 3 HT LED 90 CR CONC	1	0.059	14.800	462
59034	3F LEM 4 HT LED 120 CR CONC	1	0.067	17.500	462
59039	3F LEM 4 HT LED 120 CR MEDIO	1	0.067	17.500	461
59041	3F LEM 5 HT LED 150 CR MEDIO	1	0.081	22.815	461
59080	3F LEM 2 SPORT LED 100 CR AMPIO	1	0.044	10.270	465
59081	3F LEM 3 SPORT LED 150 CR AMPIO	1	0.059	14.900	465
59082	3F LEM 4 SPORT LED 200 CR AMPIO	1	0.067	18.665	465
59093	3F LEM 2 SPORT LED 100 DALI CR AMPIO	1	0.044	10.205	465
59094	3F LEM 3 SPORT LED 150 DALI CR AMPIO	1	0.059	15.700	465
59095	3F LEM 4 SPORT LED 200 DALI CR AMPIO	1	0.067	18.665	465
59119	3F LEM 2 HO SPORT LED 140 CR AMPIO	1	0.044	10.600	467
59120	3F LEM 3 HO SPORT LED 210 CR AMPIO	1	0.059	15.700	467
59132	3F LEM 2 HO SPORT LED 140 DALI CR AMPIO	1	0.044	10.600	467
59133	3F LEM 3 HO SPORT LED 210 DALI CR AMPIO	1	0.059	15.700	467
59157	3F LEM 1 LED 50/865 CR AMPIO	1	0.011	7.000	449
59158	3F LEM 2 LED 100/865 CR AMPIO	1	0.044	10.100	449
59159	3F LEM 3 LED 150/865 CR AMPIO	1	0.059	14.795	449
59160	3F LEM 4 LED 200/865 CR AMPIO	1	0.067	18.000	449
59161	3F LEM 1+1 LED 100/865 CR AMPIO	1	0.021	11.090	449
59164	3F LEM 2 LED 100/865 CR CONC	1	0.044	10.500	451
59165	3F LEM 3 LED 150/865 CR CONC	1	0.059	15.600	451
59166	3F LEM 4 LED 200/865 CR CONC	1	0.067	18.470	451
59253	3F LEM 2 LED 100 DALI Sensor CR AMPIO	1	0.059	13.000	457
59254	3F LEM 3 LED 150 DALI Sensor CR AMPIO	1	0.081	17.100	457

Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
59255	3F LEM 4 LED 200 DALI Sensor CR AMPIO	1	0.081	19.500	457
59259	3F LEM 2 LED 100 DALI Sensor CR CONC	1	0.059	13.000	458
59260	3F LEM 3 LED 150 DALI Sensor CR CONC	1	0.081	17.000	458
59261	3F LEM 4 LED 200 DALI Sensor CR CONC	1	0.081	19.500	458
59265	3F LEM 2 LED 100 DALI Sensor CR MEDIO	1	0.059	13.000	457
59266	3F LEM 3 LED 150 DALI Sensor CR MEDIO	1	0.081	17.000	457
59267	3F LEM 4 LED 200 DALI Sensor CR MEDIO	1	0.081	19.500	457
59275	3F LEM 2 SPORT LED 100/940 CR AMPIO	1	0.044	10.270	465
59276	3F LEM 3 SPORT LED 150/940 CR AMPIO	1	0.059	15.700	465
59277	3F LEM 4 SPORT LED 200/940 CR AMPIO	1	0.067	18.665	465
59281	3F LEM 2 SPORT LED 100/940 DALI CR AMPIO	1	0.044	10.600	465
59282	3F LEM 3 SPORT LED 150/940 DALI CR AMPIO	1	0.059	15.700	465
59283	3F LEM 4 SPORT LED 200/940 DALI CR AMPIO	1	0.067	18.665	465
59287	3F LEM 2 HO SPORT LED 140/940 CR AMPIO	1	0.044	10.600	467
59288	3F LEM 3 HO SPORT LED 210/940 CR AMPIO	1	0.059	15.700	467
59293	3F LEM 2 HO SPORT LED 140/940 DALI CR AMPIO	1	0.044	10.600	467
59294	3F LEM 3 HO SPORT LED 210/940 DALI CR AMPIO	1	0.059	15.700	467
60010	3F Solo L WH 14/830 DALI L1475	1	0.007	2.300	109
60011	3F Solo L BK 14/830 DALI L1475	1	0.007	2.665	109
60013	3F Solo L WH 21/830 DALI L2205	1	0.010	3.250	109
60014	3F Solo L BK 21/830 DALI L2205	1	0.010	3.250	109
60016	3F Solo L WH 28/830 DALI L2935	1	0.013	4.650	109
60017	3F Solo L BK 28/830 DALI L2935	1	0.013	4.650	109
60019	3F Solo L WH HO 28/830 DALI L1475	1	0.007	2.695	109
60020	3F Solo L BK HO 28/830 DALI L1475	1	0.007	2.675	109
60022	3F Solo L WH HO 41/830 DALI L2205	1	0.010	3.250	109
60023	3F Solo L BK HO 41/830 DALI L2205	1	0.010	3.250	109
60025	3F Solo L WH HO 54/830 DALI L2935	1	0.013	4.650	109
60026	3F Solo L BK HO 54/830 DALI L2935	1	0.013	4.650	109
60031	3F Solo L WH DI 14+38/830 DALI L1475	1	0.007	2.800	113
60032	3F Solo L BK DI 14+38/830 DALI L1475	1	0.007	3.170	113
60034	3F Solo L WH DI 21+58/830 DALI L2205	1	0.010	4.050	113
60035	3F Solo L BK DI 21+58/830 DALI L2205	1	0.010	4.450	113
60037	3F Solo L WH DI 28+67/830 DALI L2935	1	0.013	5.450	113
60038	3F Solo L BK DI 28+67/830 DALI L2935	1	0.013	5.525	113
60040	3F Solo L WH DI HO 28+38/830 DALI L1475	1	0.007	2.800	113
60041	3F Solo L BK DI HO 28+38/830 DALI L1475	1	0.007	2.800	113
60043	3F Solo L WH DI HO 41+58/830 DALI L2205	1	0.010	4.050	113
60044	3F Solo L BK DI HO 41+58/830 DALI L2205	1	0.010	4.050	113
60046	3F Solo L WH DI HO 54+67/830 DALI L2935	1	0.013	5.450	113
60047	3F Solo L BK DI HO 54+67/830 DALI L2935	1	0.013	5.450	113
60052	3F Solo WH HO 28/830 DALI SP L1475	1	0.007	2.665	110
60053	3F Solo BK HO 28/830 DALI SP L1475	1	0.007	1.900	110
60055	3F Solo WH HO 41/830 DALI SP L2205	1	0.010	2.750	110
60056	3F Solo BK HO 41/830 DALI SP L2205	1	0.010	2.750	110
60058	3F Solo WH HO 54/830 DALI SP L2935	1	0.013	4.100	110
60059	3F Solo BK HO 54/830 DALI SP L2935	1	0.013	4.100	110
60064	3F Solo WH DI HO 28+38/830 DALI SP L1475	1	0.007	2.400	114
60065	3F Solo BK DI HO 28+38/830 DALI SP L1475	1	0.007	2.400	114
60067	3F Solo WH DI HO 41+58/830 DALI SP L2205	1	0.010	3.550	114
60068	3F Solo BK DI HO 41+58/830 DALI SP L2205	1	0.010	3.550	114
60070	3F Solo WH DI HO 54+67/830 DALI SP L2935	1	0.013	4.850	114

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Code	Item	Pack			Page
		Pcs	m³	Gross weight in kg	
60071	3F Solo BK DI HO 54+67/830 DALI SP L2935	1	0.013	4.850	114
260078	L 353x25W LED 3AO 596x596	1	0.031	3.855	255
260080	L 353x25W LED DALI 3AO 596x596	1	0.031	4.500	255
260092	L 353x14W LED SP 54V 596x596	1	0.031	5.025	255
260094	L 353x14W LED DALI SP 54V 596x596	1	0.031	5.000	255
270931	L 561x12W LED 2S 221x647	1	0.017	2.725	265
270933	L 561x24W LED 2S 221x1256	1	0.032	5.000	265
270935	L 561x30W LED 2S 221x1556	1	0.042	6.270	265
270937	L 562x12W LED 2S 221x647	1	0.017	2.885	265
270939	L 562x24W LED 2S 221x1256	1	0.032	5.310	265
270941	L 562x30W LED 2S 221x1556	1	0.042	6.160	265
270957	L 561x12W LED SP 221x647	1	0.017	3.015	265
270959	L 561x24W LED SP 221x1256	1	0.032	5.490	265
270961	L 561x30W LED SP 221x1556	1	0.042	7.050	265
270963	L 562x12W LED SP 221x647	1	0.017	3.195	265
270965	L 562x24W LED SP 221x1256	1	0.032	5.670	265
270967	L 562x30W LED SP 221x1556	1	0.042	6.600	265



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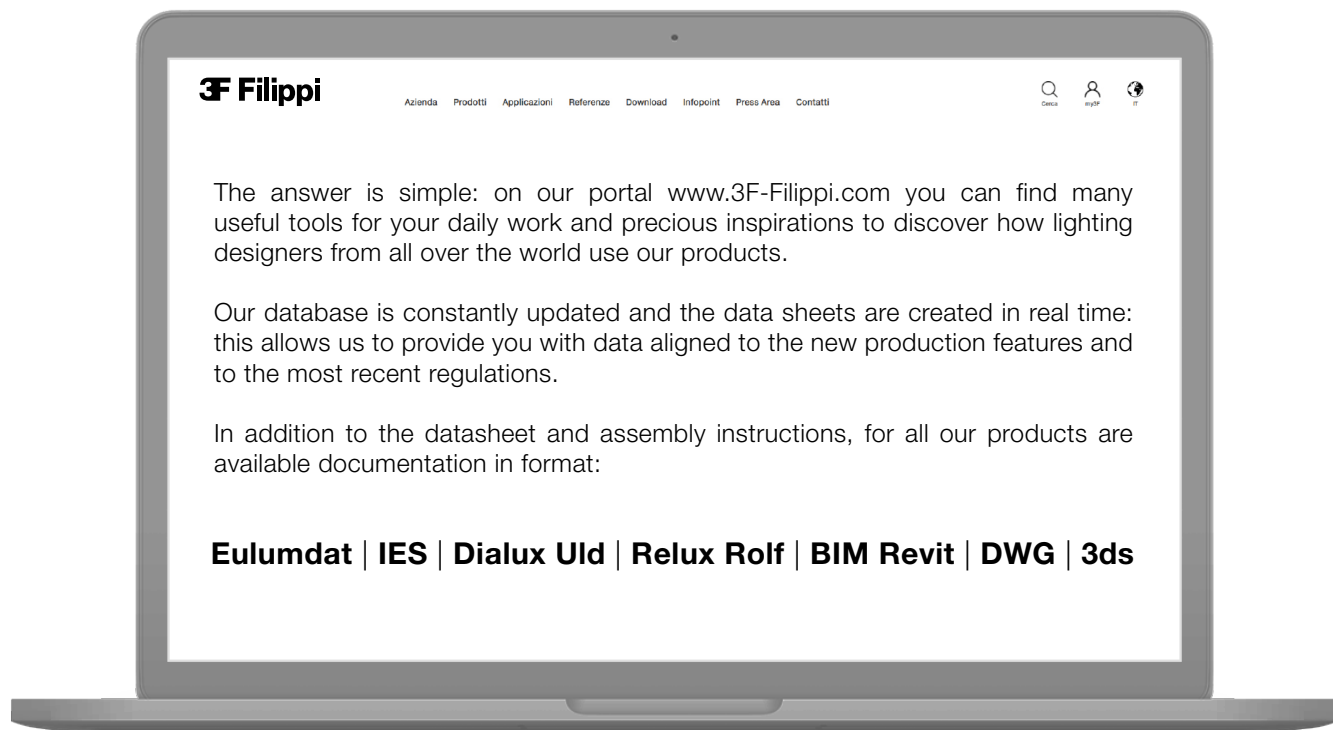
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