Schréder
Experts in lightability™

DECLARAȚIE DE CONFORMITATE

CE

SCHRÉDER ROMANIA S.R.L., cu sediul în Cluj - Napoca, str. Corneliu Coposu, nr. 167A, Jud. Cluj, România, înregistrată la Registrul Comerţului cu nr. J12/1759/1998, membră a SCHRÉDER GROUP, în calitate de furnizori de aparate de iluminat marca SCHRÉDER

Declarăm pe propria răspundere că aparatul de iluminat: **IZYLUM LT**

Versiune: IZYLUM LT

Cu condiția ca acesta să fie instalat, întreținut și utilizat în conformtate cu standardele de instalare și instrucțiunile producătorului, este în conformitate cu urmatoarele directive sau standarde:

- EN 60598-1:2015 + A1 2018
- EN 60598-2-3:2003+A1:2011
- EN 61000-3-2:2019 +A1:2020
- EN 61000-3-3:2013
- EN 61547:2009
- EN 62493:2015
- EN 62471:2008
  IEC TR 62778:2014
- EN 55015: 2019+A1:2020
- EN 63000:2018
- Directiva 2014/30/EU
- Directiva 2014/35/EU
- Directiva 2009/125/EC
- C.R. (EU) 1194/2012
- Directiva 2006/25/EC
- Directiva 2012/19/EU
- Directiva RoHS 2011/65/EU

SCHRÉDER ROMANIA S.R.L.
Director General,
Alexandru SIRCA

Eliberat,
Martie 2024, Cluj-Napoca

Digitally signed by Rotari Dmitrii
Date: 2024.03.24 11:25:31 EET
Reason: MoldSign Signature
Location: Moldova

Digitally signed by Guțanu Pavel
Date: 2024.03.25 09:10:33 EET
Reason: MoldSign Signature
Location: Moldova

Bureau Veritas Certification

Certification

Awarded to

SCHRÉDER SOCELEC SA

AVDA EL ROANNE 66 POL IND EL HENARES – 19180 – MARCHAMALO – GUADALAJARA – ESPAÑA

Bureau Veritas Certification certifies that the Management System has been audited and found to be in accordance with the requirements of standard:

STANDARD

ISO 9001:2015

Scope of certification:

PRODUCTION OF LIGHT FITTINGS (COLUMNS AND LUMINAIRES: HID, FLUORESCENT AND LED) FOR PUBLIC AND INDUSTRIAL LIGHTING.

Certificate Number:	ES118433-1
Original approval date:	10-10-2012
Effective date:	11-03-2021
Certificate expiration date:	10-03-2024

This certificate is valid, subject to the general and specific terms and conditions of certification services

Bureau Veritas Iberia S.L.
C/ Valportillo Primera 22-24, Edificio Caoba, 28108 Alcobendas - Madrid, España

ENAC CERTIFICACIÓN
Nº 04/C-SC004

Schréder
Experts in lightability™

ROAD

IZYLUM LT

LENSO FLEX™ 4

HI FLEX™ 1&2

HI FLEX™ 2

IP 66

IK 08

Lightweight, cost-effective solution for maximised energy savings in outdoor lighting

IZYLUM LT is an innovative street and road lighting solution that prioritises both energy efficiency and ease of use. It has been designed to offer the ultimate lighting solution for outdoor areas, providing high performance and functionality in a simple, user-friendly design.

With its three size options and various photometric technologies, it can be used for a wide range of applications, from city streets to public places, car parks, bike paths, bridges, roads, and motorways.

The IZYLUM LT universal fixation system allows easy, seamless switching between post-top and side-entry positions, eliminating the need for disconnection or additional effort. This feature ensures maximum flexibility and adaptability for any lighting application.

URBAN & RESIDENTIAL STREETS

BRIDGES

BIKE & PEDESTRIAN PATHS

RAILWAY STATIONS & METROS

CAR PARKS

SQUARES & PEDESTRIAN AREAS

ROADS & MOTORWAYS

Concept

The IZYLUM LT luminaire range exemplifies a lean design approach, featuring a compact and efficient concept that uses minimal raw materials. This results in a cost-effective, sustainable lighting solution.

This luminaire is made of recyclable materials such as aluminium and glass, and is designed to promote circular economy principles through its accessible and replaceable components. This makes it easy to maintain and prolongs the life-cycle of the product.

The IZYLUM LT luminaire is available in three sizes, making it a versatile and efficient lighting solution for a wide range of applications, whether for city streets, public places, car parks, bike paths, bridges, roads or motorways.

The IZYLUM LT luminaires rely on advanced photometric technologies to precisely meet the unique demands of lighting projects and comply with local regulations. The LensoFlex®4 and HiFlexTM platforms offer flexible, energy-efficient photometric solutions that can be tailored to meet the specific lighting needs of any project while maximising savings and providing a quick return on investment.

IZYLUM LT features the versatile IzyFix universal fixation system, which allows easy post-top and side-entry installation on a variety of spigot sizes (Ø32mm, Ø42-48mm, Ø60mm and Ø76mm). The IzyFix system enables IZYLUM LT to be easily repositioned without the need to remove it from the pole, offering unparalleled flexibility in pole and bracket configurations. Additionally, for added convenience during installation and maintenance, the luminaire offers tool-free access to the gear compartment.

IZYLUM LT is a connected-ready luminaire that can be equipped with optional NEMA or Zhaga sockets, enabling it to easily integrate with various connected lighting systems, and providing greater adjustability and control.

TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BRIDGES
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- SQUARES & PEDESTRIAN AREAS
- ROADS & MOTORWAYS

KEY ADVANTAGES

- Cost-effective and efficient to maximise energy and maintenance savings
- Robust and recyclable materials
- Tool free access
- On-site adjustment from post-top to side-entry without disconnecting the luminaire from the pole thanks to IzyFix
- Zhaga-D4i certified
- Connected-ready
- HiFlex™ photometric engine designed for optimised energy efficiency
- LensoFlex®4 versatile solutions for high-end photometries maximising comfort and safety

IZYLUM LT is a cost-effective, energy-efficient lighting solution that offers the most optimised total cost of ownership in a compact design.

IZYLUM LT meets the requirements of the circular economy.

Available in three sizes with various photometric technologies, IZYLUM LT provides a solution for a wide range of lighting applications.

The versatile IzyFix system allows easy switching between post-top and side-entry positions, simplifying the ordering and installation process.

IZYLUM LT | IZYLUM LT 1

IZYLUM LT | IZYLUM LT 2

IZYLUM LT | IZYLUM LT 3

LensoFlex®4

LensoFlex®4 maximises the heritage of the LensoFlex® concept with a very compact yet powerful photometric engine based upon the addition principle of photometric distribution. The number of LEDs in combination with the driving current determines the intensity level of the light distribution. With optimised light distributions and very high efficiency, this fourth generation enables the products to be downsized to meet application requirements with an optimised solution in terms of investment.

LensoFlex®4 optics can feature backlight control to prevent intrusive lighting, or a glare limiter for high visual comfort.

HiFlex™

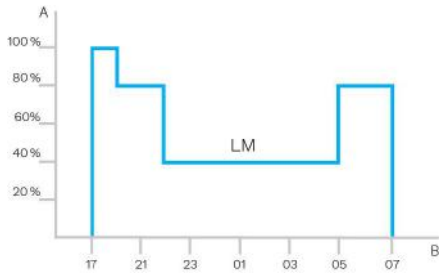
The HiFlex™ platform is expertly designed to optimise energy efficiency. Its photometric engines feature high-power LEDs that deliver exceptional performance while consuming minimal energy, resulting in unmatched efficacy (lm/W).

Ideal for projects that require a streamlined approach to maximising lighting efficacy and achieving swift ROI, HiFlex™ is available in two versions: HiFlex™1, boasting 24 LEDs and HiFlex™2, equipped with 36 LEDs. Both variants are designed with the priorities of compactness, cost-effectiveness and high performance in mind.

Custom dimming profile

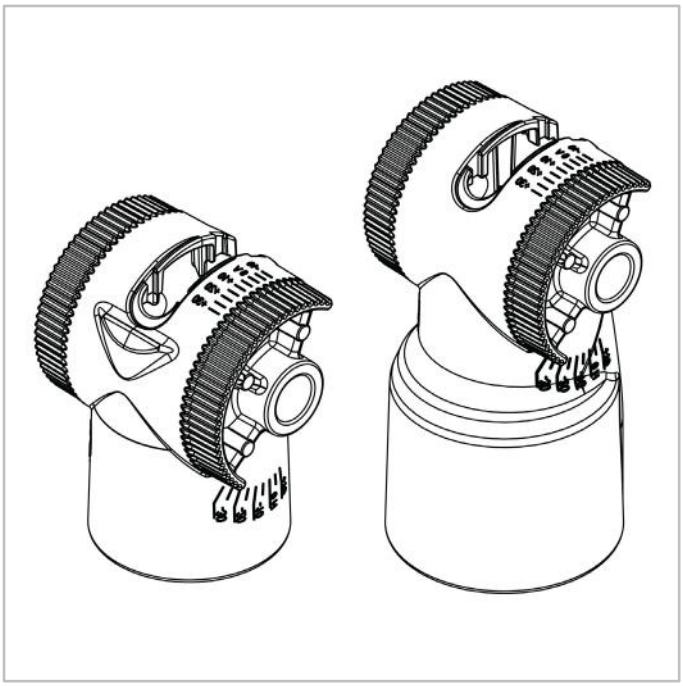
Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



A. Dimming level | B. Time

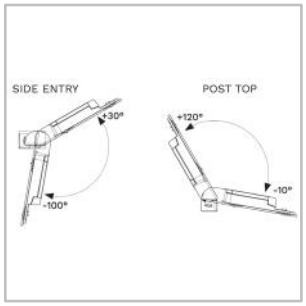
The Schréder IzyFix patented high-pressure die-casted aluminium universal fixation system is an integral part of the luminaire mounted in the factory. The IzyFix system aims to fit needs worldwide by meeting IEC and ANSI 3G testing requirements. It is intended to simplify life for customers and installers in the process of purchasing and installing luminaires for various applications.



From post-top to side-entry in one movement

The innovative design allows changing from a side-entry to a post-top position – even with luminaires ordered with factory pre-cabling – without any switching work on the fixation or disconnection from the pole. Therefore the type of mounting (horizontal or vertical) does not have to be considered when ordering. This unique feature also eases installation. After setting the correct position, an accessory is provided to cover the resulting space and ensure further protection of the luminaire.

Best-in-class tilting range



The IzyFix universal fixation system enables a best-in-class range of mounting angle of 130°*, to ensure maximum lighting performance for all kinds of road scenarios and offer the possibility of installing the luminaire in extreme situations as well. With a setting mark on the body and angles on the spigot, adjusting is carried out in 5° increments by loosening two screws. The wide tilting range enables more comfortable access to the gear compartment during field maintenance.

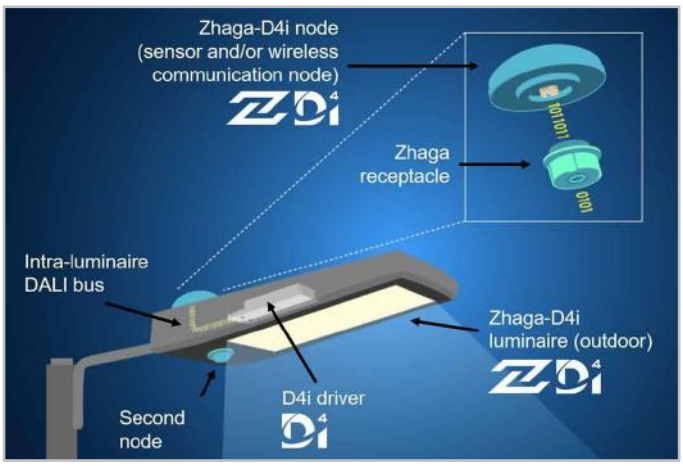
*Depending on the size and shape of the luminaire, the inclination angle may be reduced. For more accurate information, always consult the installation sheets.

Variation for all poles

Due to the many different applications used worldwide, Schréder has created a range of fixation systems and reducers to satisfy all needs that might come up on the market.

	IzyFix Ø60mm	IzyFix Ø76mm
Ø32mm spigot	✓ (with reducer)	✓ (with reducer)
Ø42-48mm spigot	✓	✓ (with reducer)
Ø60mm spigot	✓	✓
Ø76mm spigot	×	✓

The Zhaga consortium joined forces with the DiiA and produced a single Zhaga-D4i certification that combines the Zhaga Book 18 version 2 outdoor connectivity specifications with the DiiA's D4i specifications for intra-luminaire DALI.



Standardisation for interoperable ecosystems

As a founding member of the Zhaga consortium, Schréder has participated in the creation of, and therefore supports, the Zhaga-D4i certification program and the initiative of this group to standardise an interoperable ecosystem. The D4i specifications take the best of the standard DALI2 protocol and adapt it to an intra-luminaire environment but it has certain limitations. Only luminaire mounted control devices can be combined with a Zhaga-D4i luminaire. According to the specification, control devices are limited respectively to 2W and 1W average power consumption.

Certification program

The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.

Cost-effective solution

A Zhaga-D4i certified luminaire includes drivers offering features that had previously been in the control node, like energy metering, which has in turn simplified the control device therefore reducing the price of the control system.

Schréder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.

Standardisation for interoperable ecosystems

Schréder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schréder EXEDRA system relies on shared and open technologies. Schréder EXEDRA also relies on Microsoft™ Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.

Breaking the silos

With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- control devices (luminaires) from other brands
- manage controllers and to integrate sensors from other brands
- connect with third-party devices and platforms

A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface. OWLET IV luminaire controllers, optimised for Schréder EXEDRA, operate Schréder's luminaires and luminaires from third parties. They use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation.

Tailored experience

Schréder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

A powerful tool for efficiency, rationalisation and decision making

Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side

ISO 27001
BUREAU VERITAS
Certification

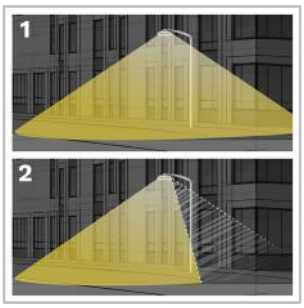
Schréder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schréder EXEDRA meets the requirements for establishing, implementing, maintaining and continually improving security management.

Mobile App: any time, any place, connect to your street lighting

The Schréder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

With the PureNight concept, Schréder offers the ultimate solution for restoring the night sky without switching off cities, while maintaining safety and well-being for people and preserving wildlife. The PureNight concept guarantees that your Schréder lighting solution satisfies environmental laws and requirements. Well-designed LED lighting has the potential to improve the environment in all respects.

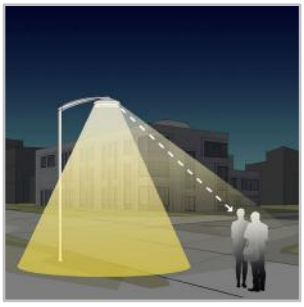
Direct the light only where it is wanted and needed



Schréder is renowned for its expertise in photometry. Our optics direct light only where it is wanted and needed. However, light trespass behind the luminaire might be a key concern when it comes to protecting a sensitive wildlife habitat or avoiding intrusive lighting towards buildings. Our fully integrated backlight solutions easily address this potential risk.

1. Without backlight
2. With backlight

Offer maximum visual comfort to people



Because of the lower installation height compared to road lighting, visual comfort is an essential aspect of urban lighting. Schréder designs lenses and accessories to minimise any type of glare (distracting, discomforting, disabling glare and blinding glare). Our design offices harness a range of possibilities to find the best solutions for each project and ensure that we provide a gentle light that delivers the best night-time experience.

Protect wildlife

If not well designed, artificial lighting can badly affect wildlife. Blue light and excessive intensity can have a damaging effect on all types of life. Blue light radiation has the ability to suppress the production of melatonin, the hormone that contributes to the regulation of the circadian rhythm. It can also alter the behavioural patterns of animals including bats and moths, as it can change their movements towards or away from light sources. Schréder favours warm white LEDs with minimal blue light, combined with advanced control systems including sensors. This enables permanent adaptation of the lighting to the real needs of the moment, minimising disturbance to the fauna and flora.

Get the starry sky back

The Upward Light Ratio (ULR) and Upward Light Output Ratio (ULOR), the latter taking the flux from the luminaire into account, provide information on the percentage of light emitted towards the sky. This Schréder range of luminaires minimises or eliminates (depending on the options) upward-directed light flux. It complies with strict international and local requirements.

IZYLUM LT | CHARACTERISTICS

Schréder

GENERAL INFORMATION

Recommended installation height	4m to 15m | 13' to 49'
Circle Light label	Score ≥90 - The product fully meets circular economy requirements
Driver included	Yes
CE mark	Yes
ENEC certified	Yes
ENEC+ certified	Yes
Zhaga-D4i certified	Yes
Testing standard	EN 60598-1 EN 60598-2-1 EN 62262

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 08
Vibration test	Compliant with ANSI C 136-31 standard, 3G load Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +55°C / -22°F up to 131°F with wind effect

· Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz
Surge protection options (kV)	10
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-3-3 / EN 61547
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schréder EXEDRA

OPTICAL INFORMATION

LED colour temperature	2200K (Warm White WW 722) 2700K (Warm White WW 727) 3000K (Warm White WW 730) 3000K (Warm White WW 830) 4000K (Neutral White NW 740)
Colour rendering index (CRI)	>70 (Warm White WW 722) >70 (Warm White WW 727) >70 (Warm White WW 730) >80 (Warm White WW 830) >70 (Neutral White NW 740)
ULOR	0%
ULR	0%

· ULOR may be different according to the configuration. Please consult us.
· ULR may be different according to the configuration. Please consult us.

LIFETIME OF THE LEDS @ TQ 25°C

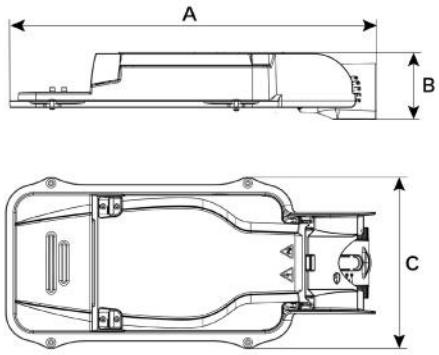
All configurations	100,000h - L95

· Lifetime may be different according to the size/configurations. Please consult us.

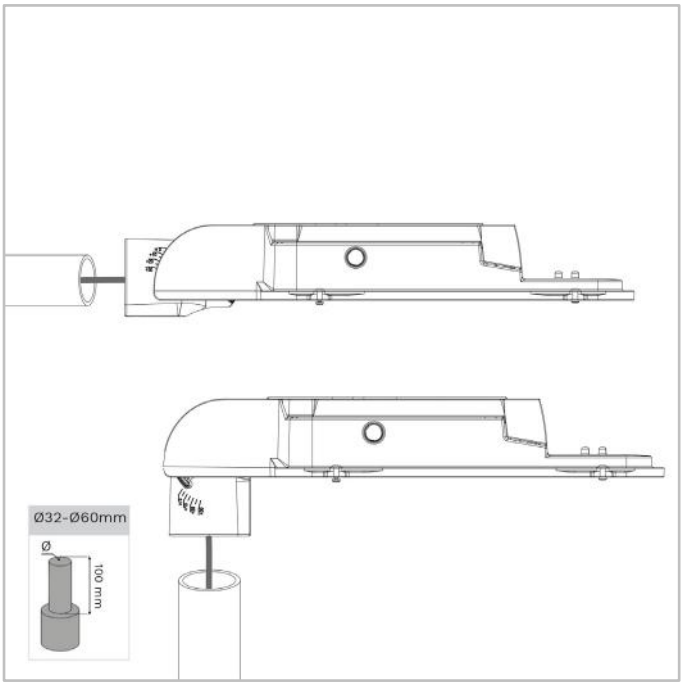
DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	IZYLUM LT 1 : 555x100x242 | 21.9x3.9x9.5 IZYLUM LT 2 : 646x100x242 | 25.4x3.9x9.5 IZYLUM LT 3 : 616x100x371 | 24.3x3.9x14.6
Weight (kg | lbs)	IZYLUM LT 1 : 3.5-5.1 | 7.7-11.2 IZYLUM LT 2 : 4.0-5.6 | 8.8-12.3 IZYLUM LT 3 : 6.3-8.7 | 13.9-19.1
Aerodynamic resistance (CxS)	IZYLUM LT 1 : 0.03 IZYLUM LT 2 : 0.03 IZYLUM LT 3 : 0.04
Mounting possibilities	Side-entry slip-over – Ø32mm Side-entry slip-over – Ø42mm Side-entry slip-over – Ø48mm Side-entry slip-over – Ø60mm Side-entry slip-over – Ø76mm Post-top slip-over – Ø32mm Post-top slip-over – Ø42mm Post-top slip-over – Ø48mm Post-top slip-over – Ø60mm Post-top slip-over – Ø76mm

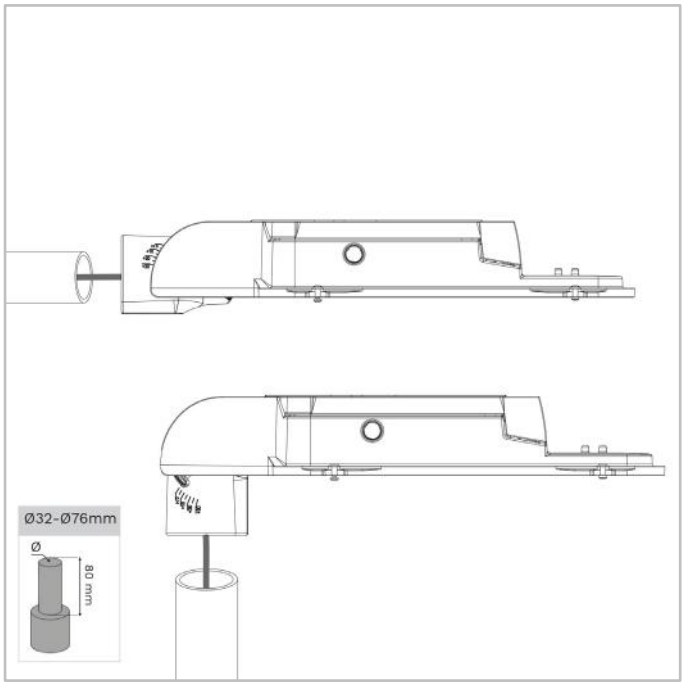
· For more information about mounting possibilities, please consult the installation sheet.
· Dimensions given with Ø60mm spigot (side-entry mounting)



IZYLUM LT | Slip-over mounting for Ø32-60mm spigot - 2xM10 screws



IZYLUM LT | Slip-over mounting for Ø32-76mm spigot - 2xM10 screws



IZYLUM LT 1

Photometry

HI FLEX™ 2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
36	1900	9500	2200	10800	2300	11200	2500	12000	15	76	172

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 1

Photometry

HI FLEX™ 2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
21	1100	5500	1200	6300	1300	6500	1400	7000	9	46	164
24	1200	6300	1400	7200	1400	7400	1600	8000	11	52	166

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 1

Photometry

LENSO FLEX™4

	Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
10	700	3400	700	3500	800	3900	700	3600	800	4100	7	36	152
20	2100	6800	2200	7100	2400	7800	2200	7300	2500	8200	20	68	157
25	2000	8000	2100	8400	2300	9200	2100	8600	2500	10000	16	87	168

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 2

Photometry

HI FLEX™2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
72	4000	15700	4500	17700	4600	18400	5000	19800	27	123	191

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 2

Photometry

HI FLEX™ 182

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
42	2200	11000	2500	12500	2600	13000	2800	14000	17	91	174
45	2400	11800	2700	13400	2800	13900	3000	15000	18	97	175
48	2500	12600	2900	14300	3000	14800	3200	16000	19	104	174

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 2

Photometry

LENSO FLEX™ 4

	Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
30	2200	8300	2300	8700	2500	9500	2300	8900	2600	10000	18	73	173
40	2900	11100	3100	11600	3300	12700	3100	11900	3500	13400	23	98	182
50	4000	11500	4200	12000	4600	13100	4300	12400	4800	14400	28	98	186

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 3

Photometry

HI FLEX™ 2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
108	6000	24500	6800	27700	7000	28800	7600	31000	43	192	180
144	8000	27400	9100	30900	9400	32100	10100	34600	54	202	189

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 3

Photometry

HI FLEX™ 1&2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
63	3400	15500	3800	17500	3900	18200	4300	19600	25	126	178
66	3500	16200	4000	18300	4100	19100	4500	20500	25	138	184
69	3700	17000	4200	19200	4300	19900	4700	21500	27	144	176
72	3800	17700	4300	20000	4500	20800	4900	22400	27	150	185
84	4500	20700	5100	23400	5300	24300	5700	26100	33	173	177
87	4700	21400	5300	24200	5500	25200	5900	27100	34	179	176
90	4800	23100	5400	26100	5700	27100	6100	29200	36	197	176
93	5000	23900	5600	27000	5900	28000	6300	30200	37	203	176
96	5100	24700	5800	27800	6000	29000	6500	31200	38	209	175

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM LT 3

Photometry

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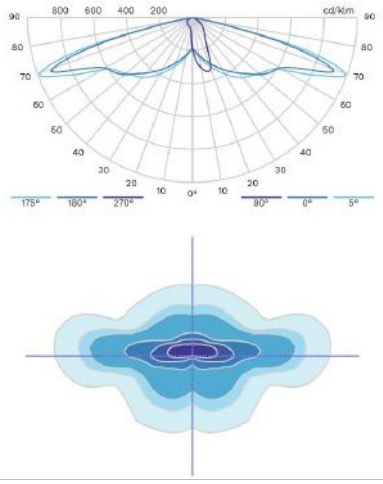
	Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
50	3700	14600	3800	15200	4200	16700	3900	15700	4400	17700	30	139	174
60	4400	17500	4600	18300	5000	20000	4700	18900	5300	21200	37	165	170
70	5100	17000	5400	17800	5900	19500	5500	18300	6200	20600	44	144	166
75	6200	17800	6400	18600	7100	20300	6600	19100	7500	22200	45	154	177
80	5900	19500	6100	20300	6700	22200	6300	20900	7100	23600	46	164	180
100	8200	19000	8600	19800	9400	21700	8800	20400	9900	23700	57	151	185

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

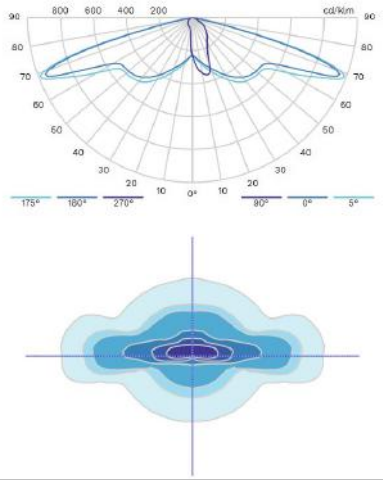
LENSO FLEX 4

5300



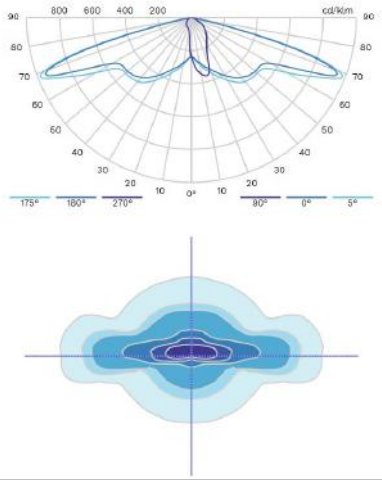
LENSO FLEX 4

5300 BL



LENSO FLEX 4

5300 BL LE



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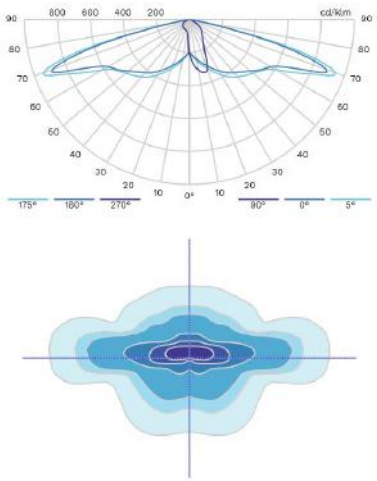
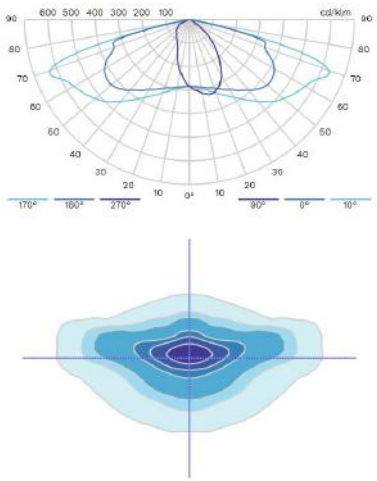


LENSO FLEX 4

5301



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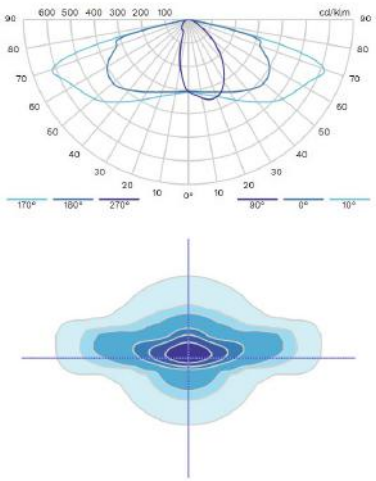
5301 BL



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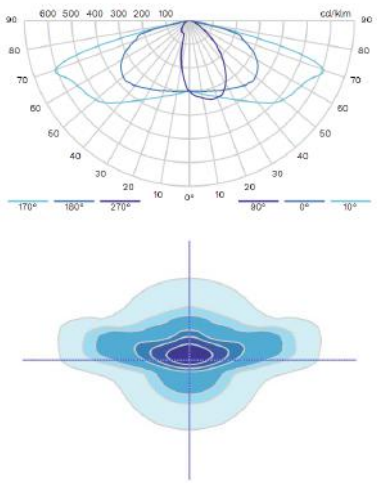

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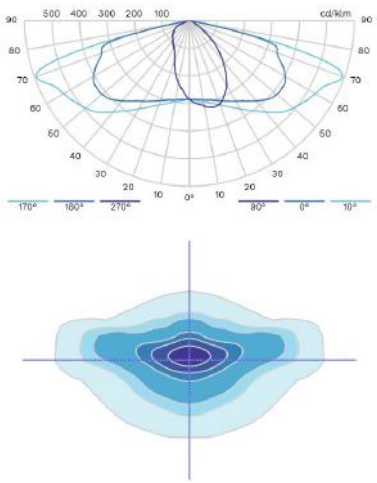
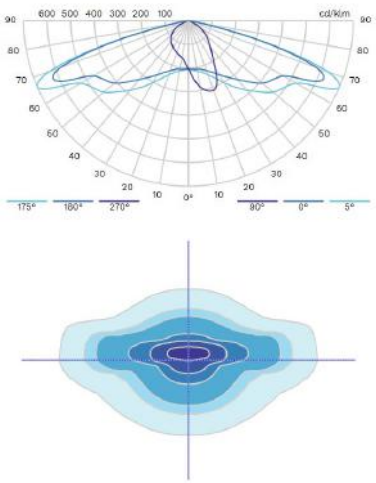


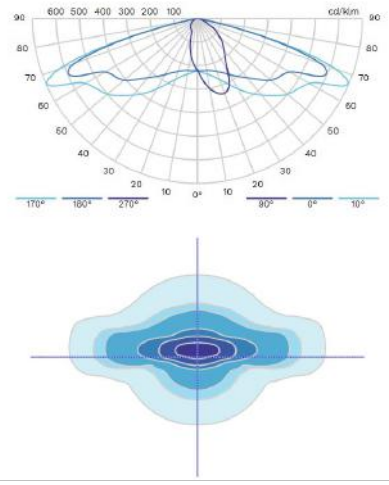
LENSO FLEX 4

5302



LENSO FLEX™4

5302 BL



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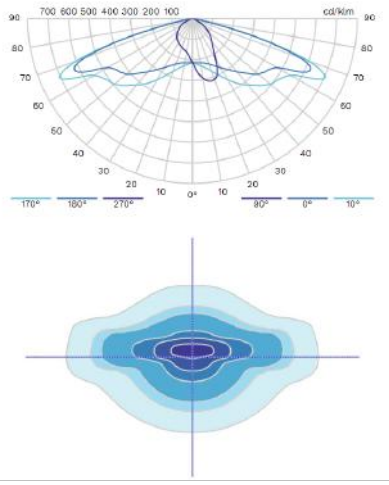

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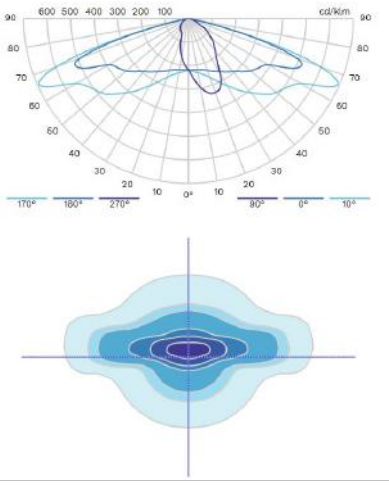

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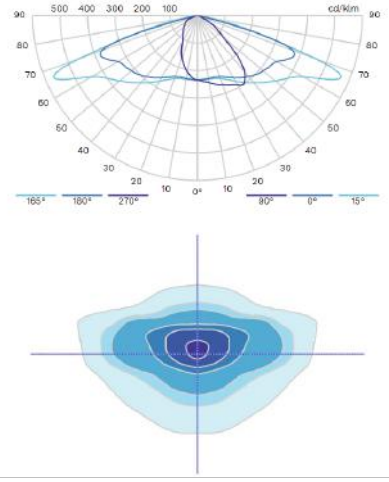

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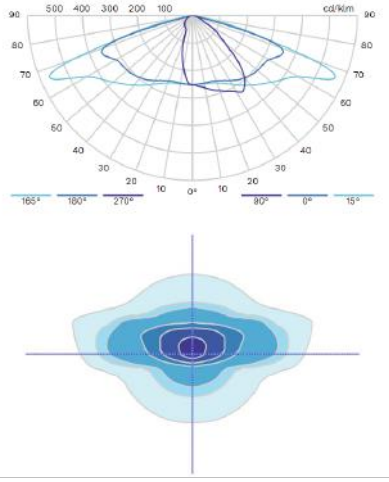

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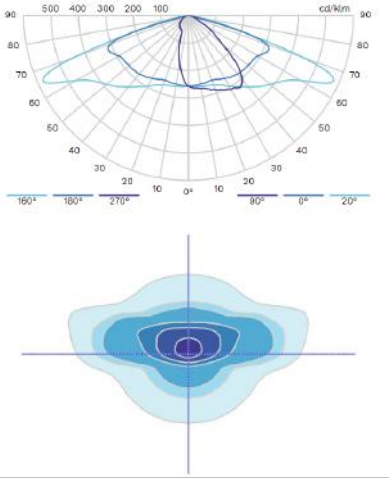

LENSO FLEX™4

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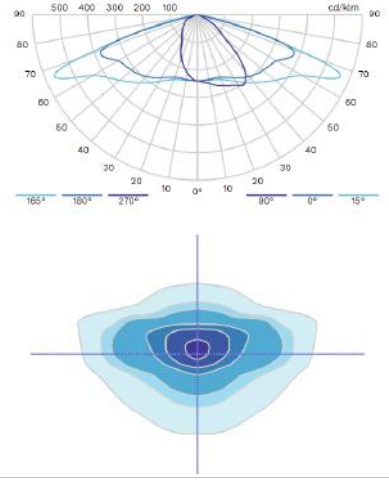

LENSO FLEX™4

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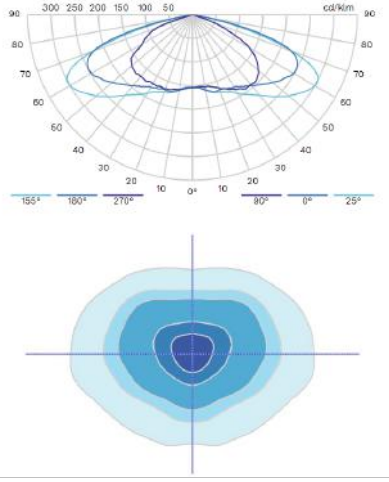

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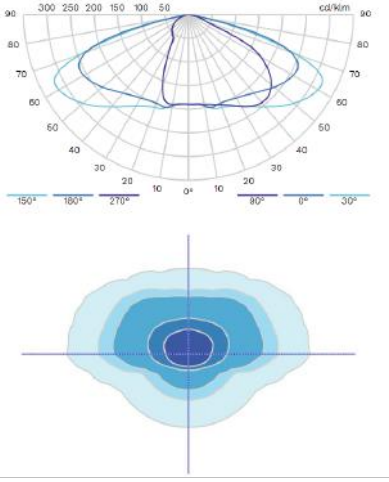

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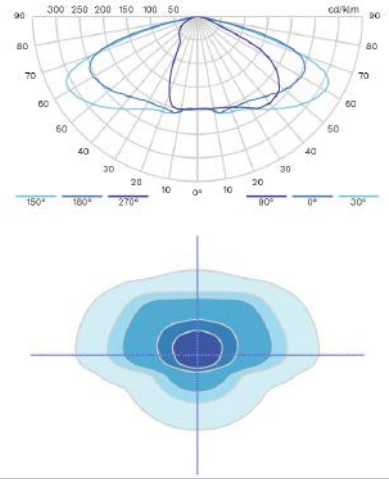

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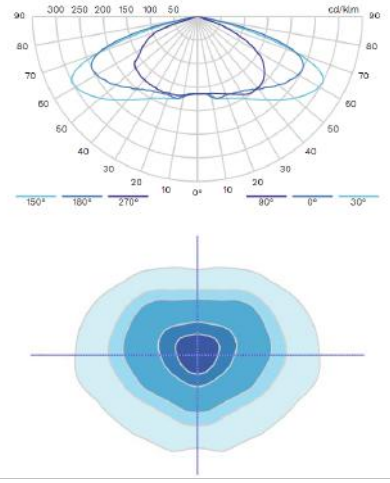

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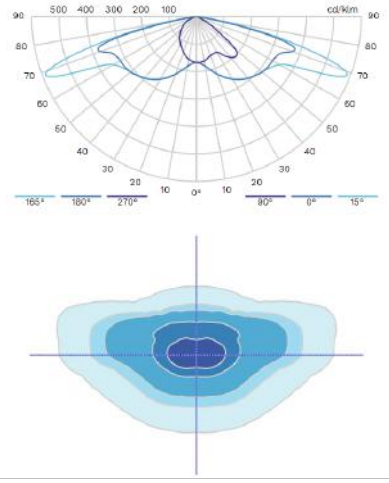

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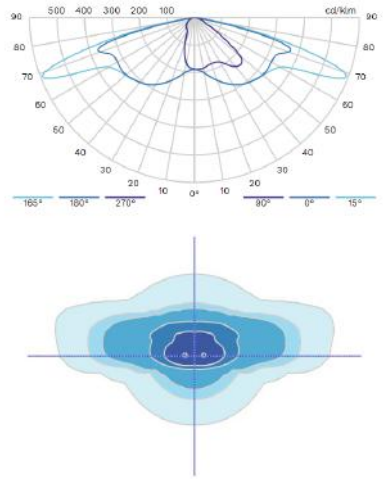

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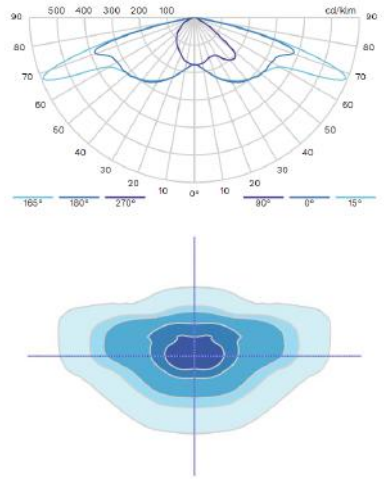

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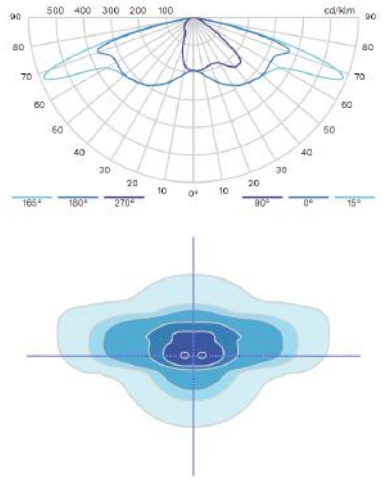

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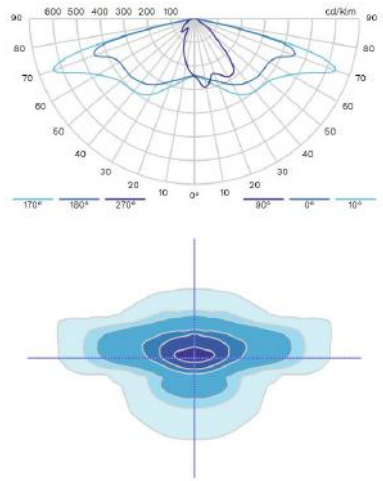

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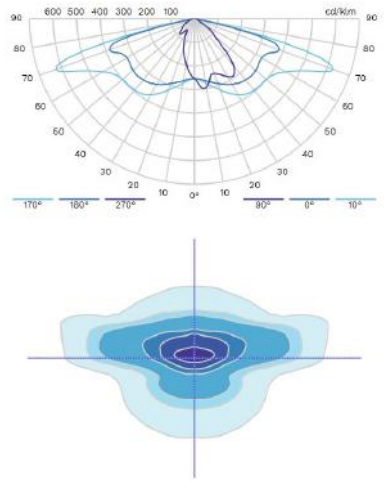

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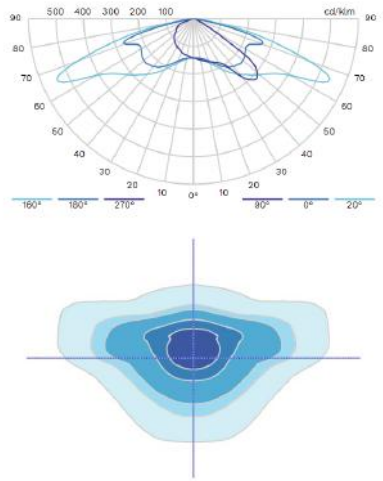

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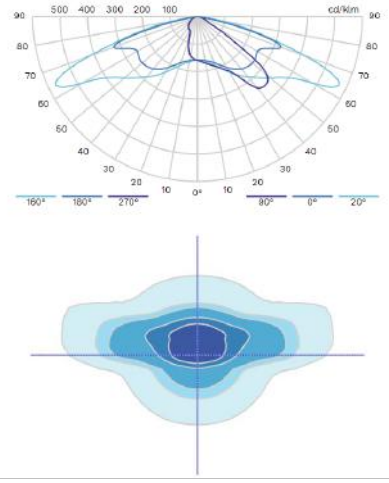

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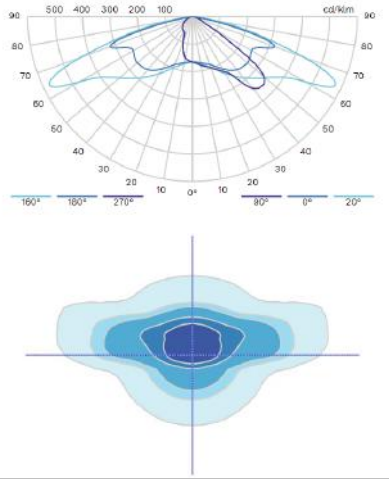

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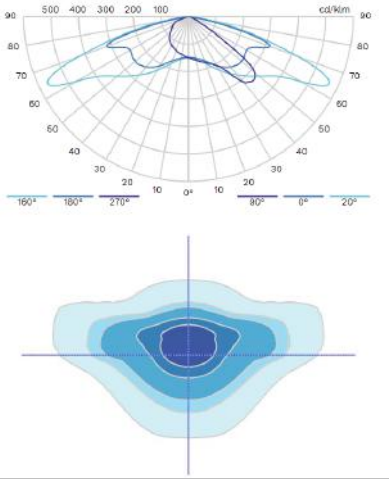

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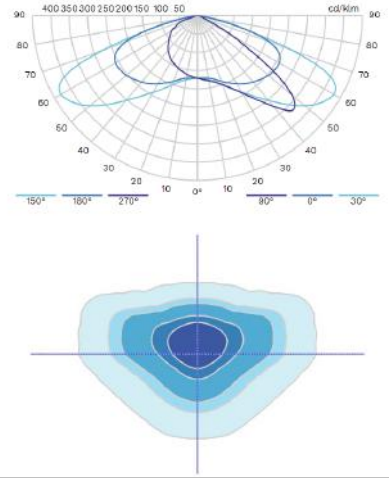

LENSO FLEX™4

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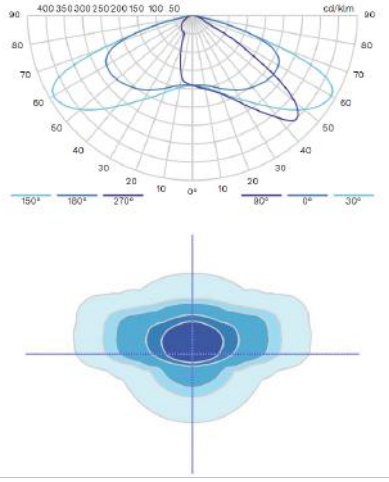

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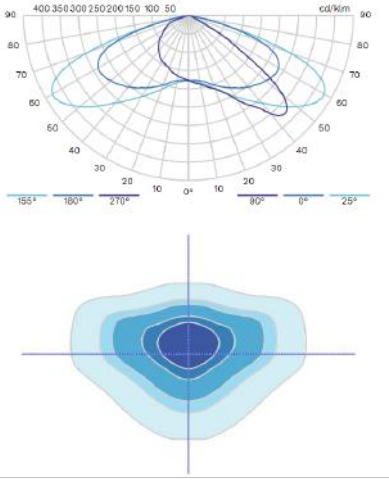

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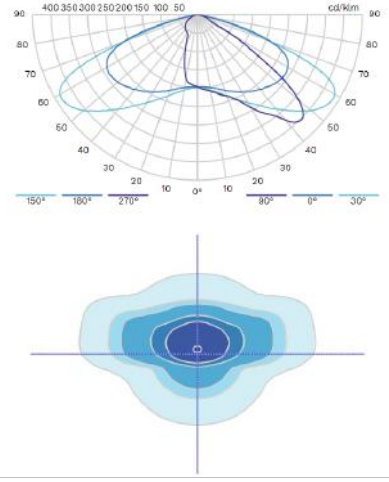

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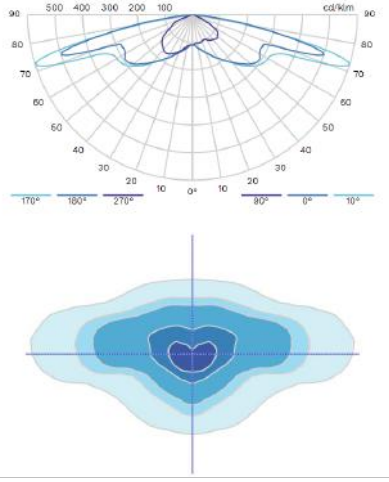

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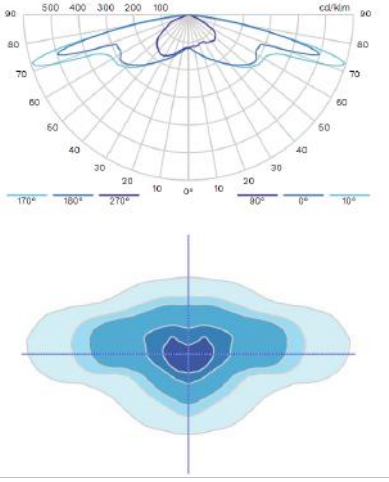

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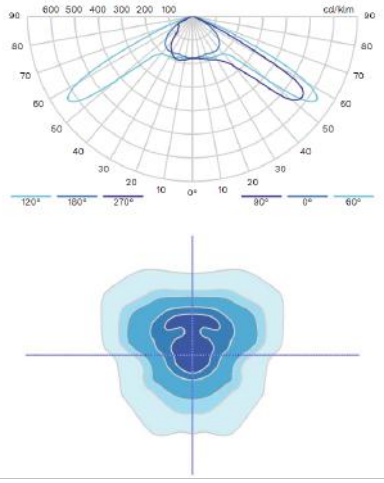

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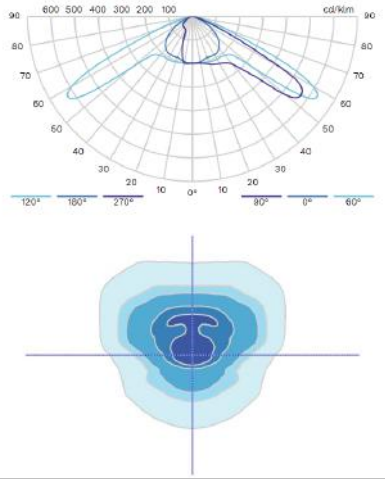

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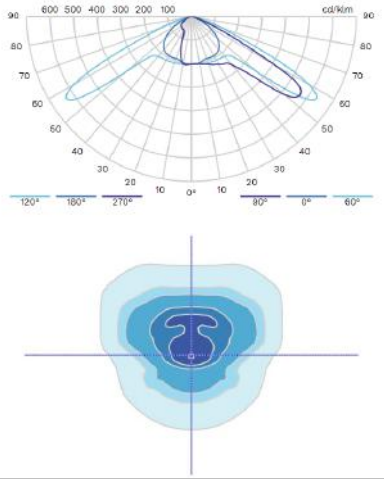

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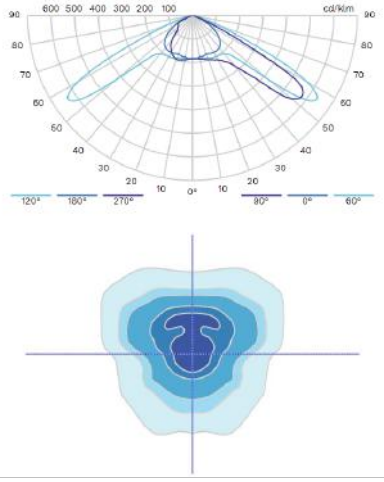

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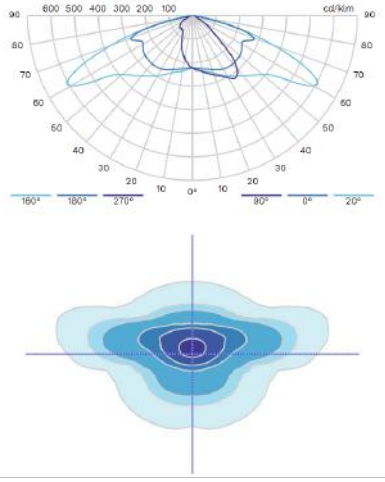

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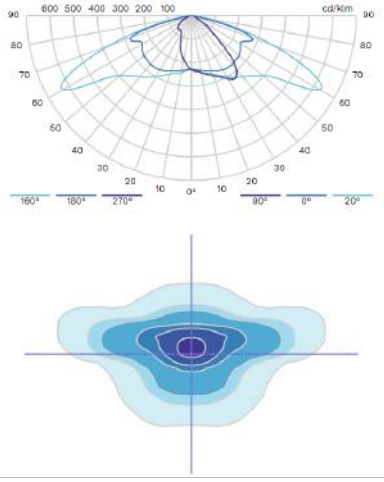

LENSO FLEX™4

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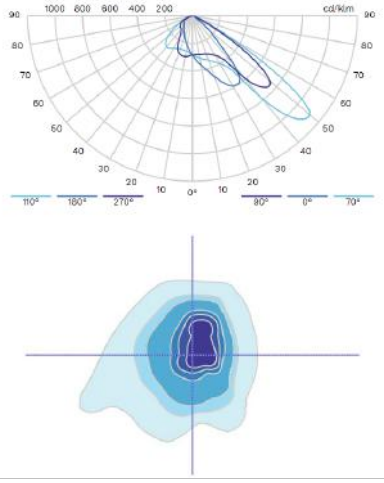
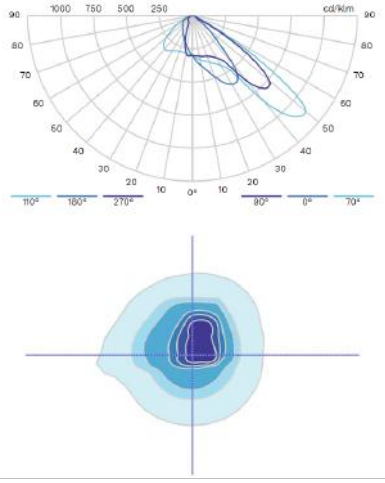


LENSO FLEX™4

5369 LE ZR BL



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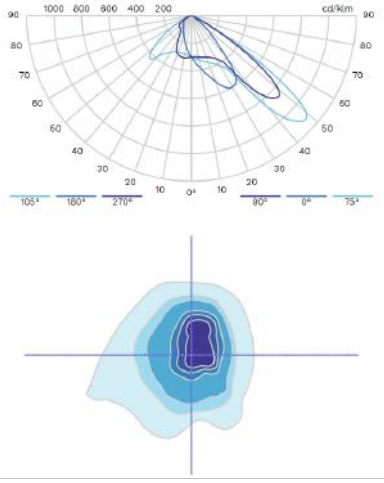

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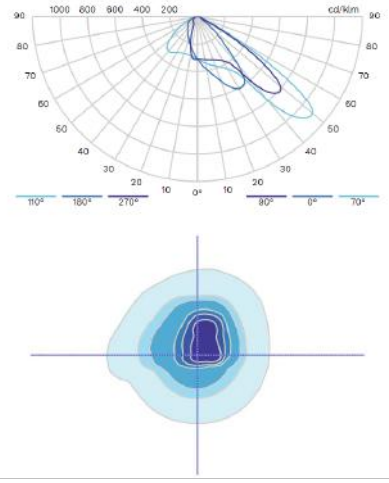
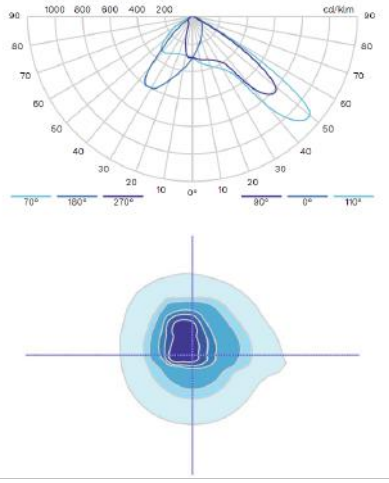


LENSO FLEX™4

5370 BL LE ZL



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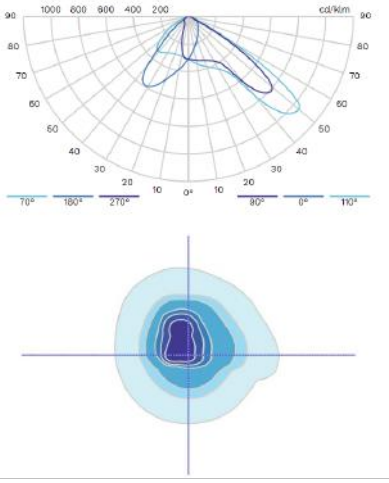

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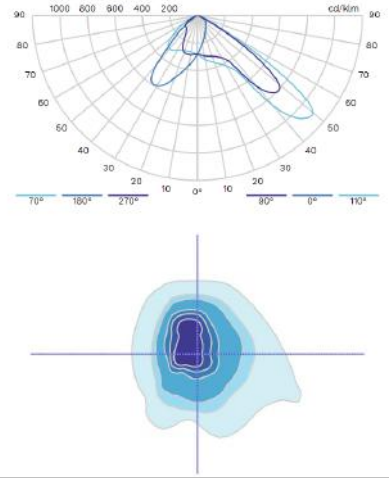

LENSO FLEX™4

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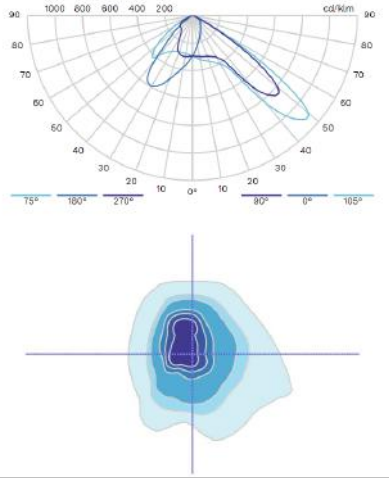
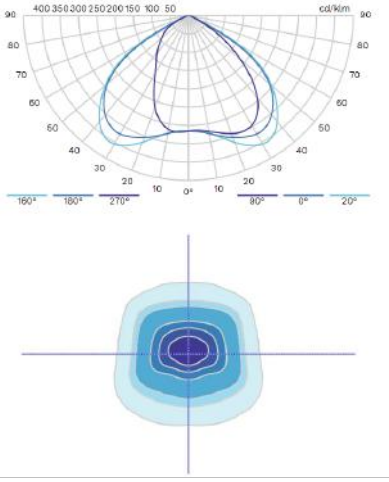


LENSO FLEX™4

5388



LENSO FLEX™4

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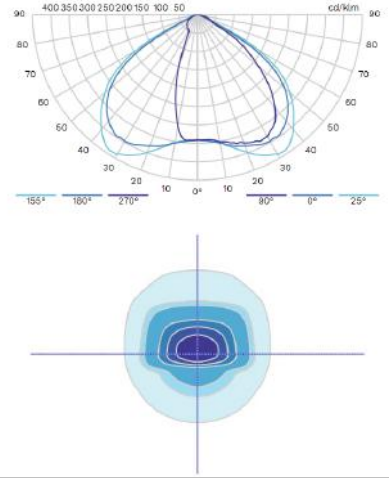

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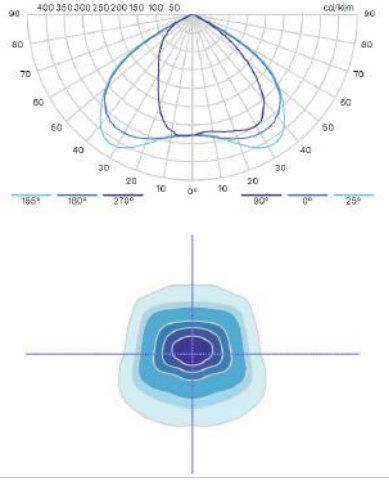

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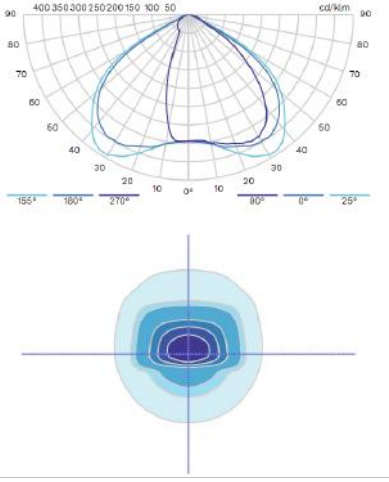

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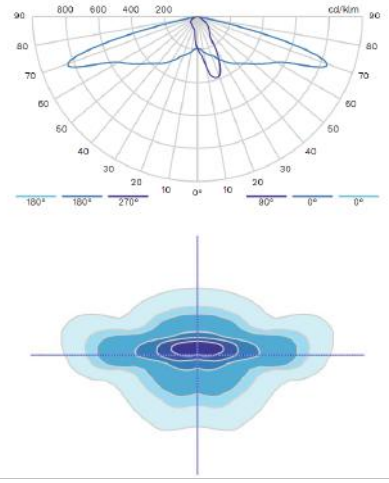
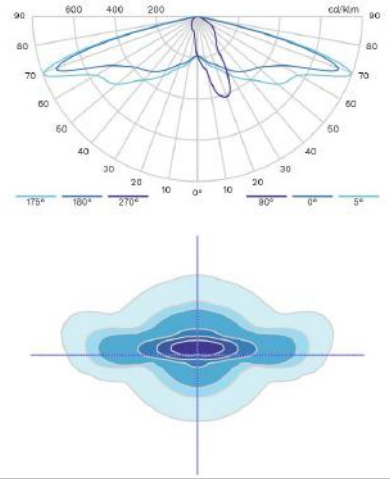


LENSO FLEX™4

5390 BL



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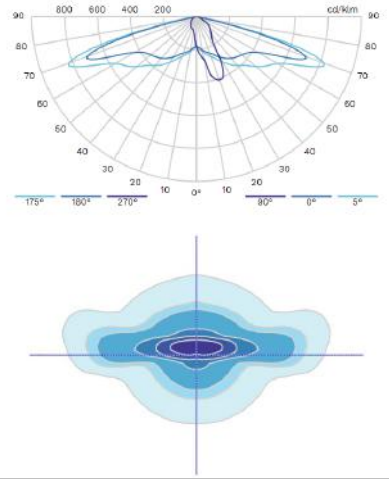

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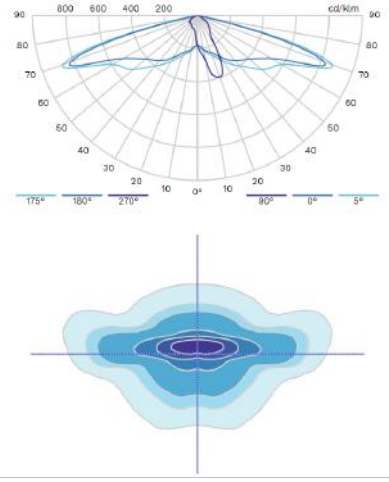

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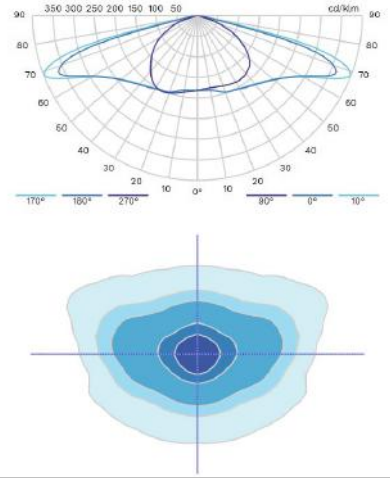

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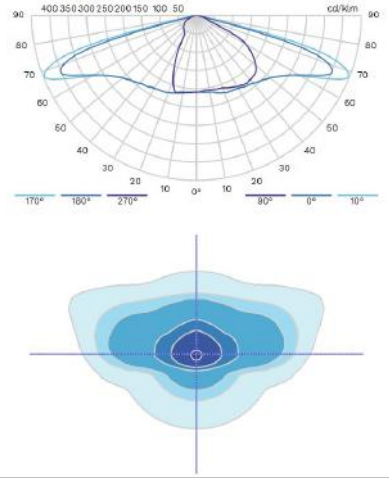

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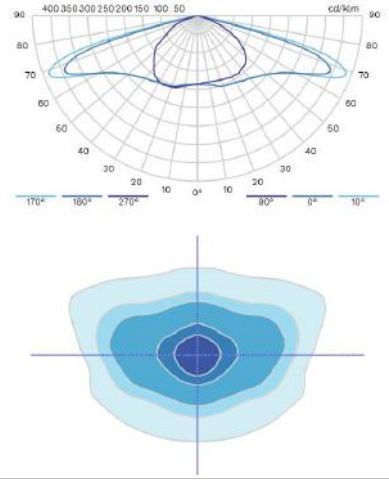

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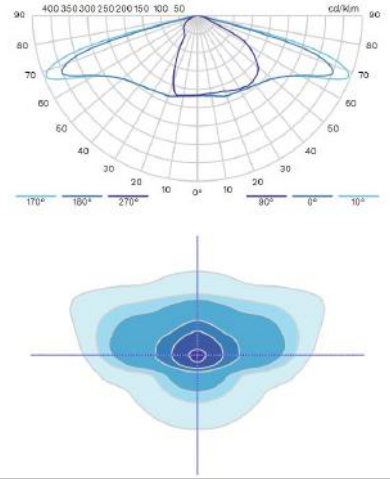

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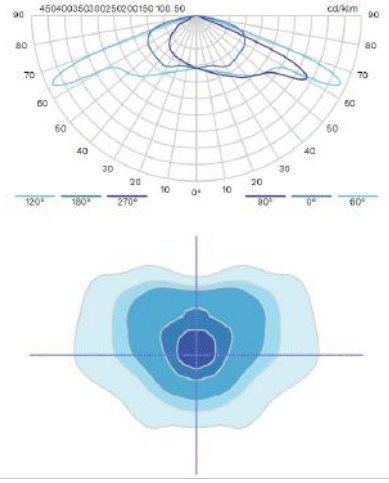

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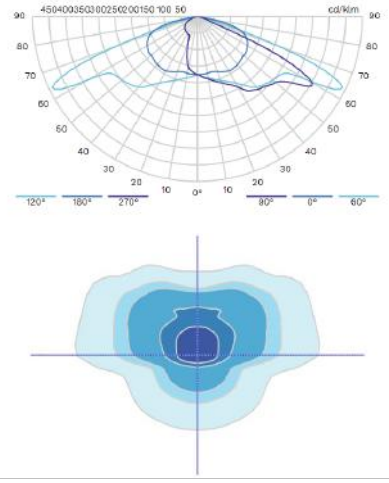

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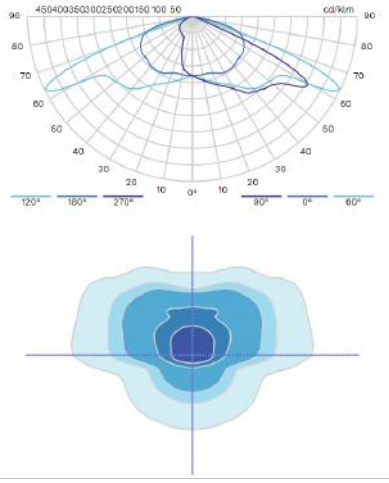

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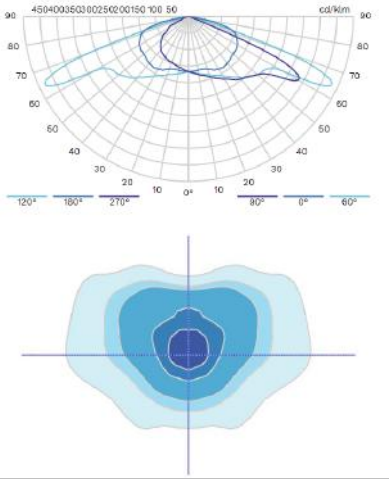

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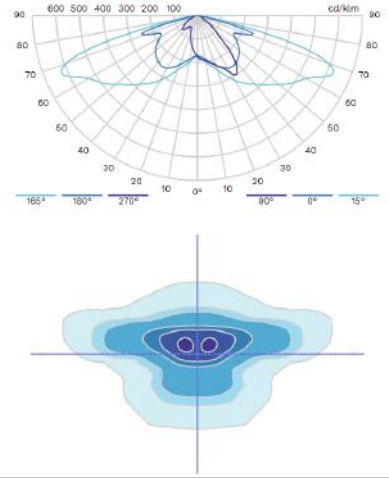

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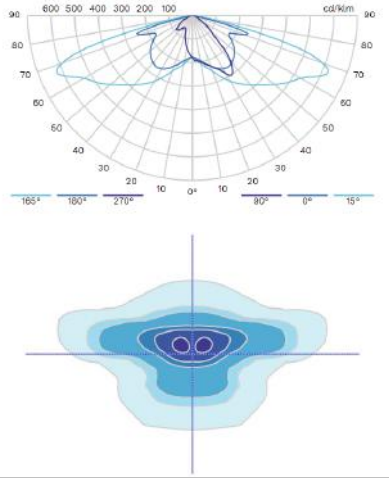

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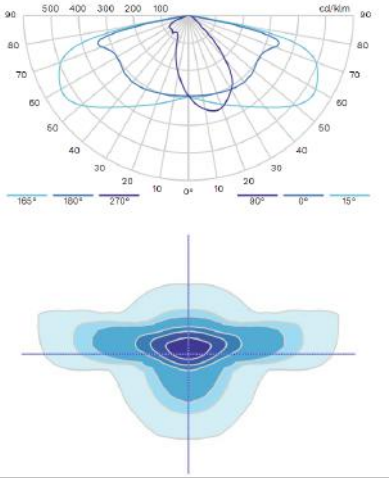

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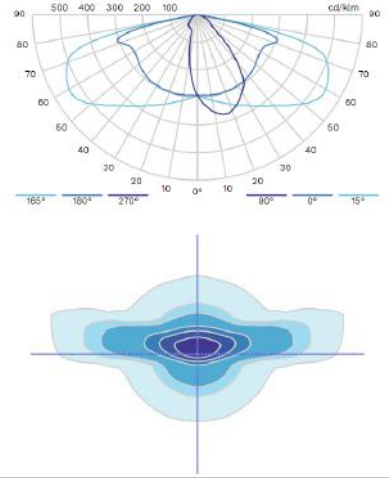

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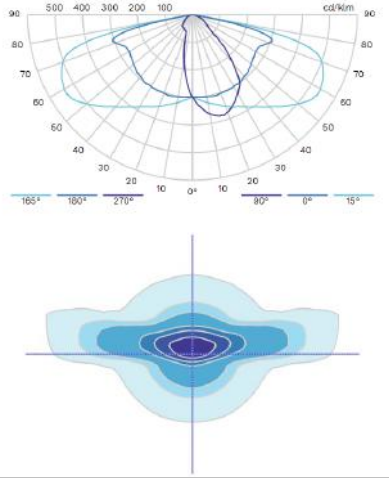

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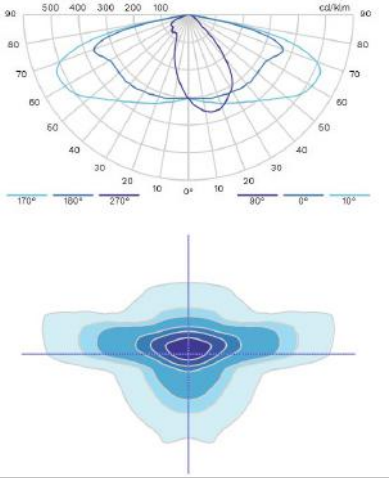

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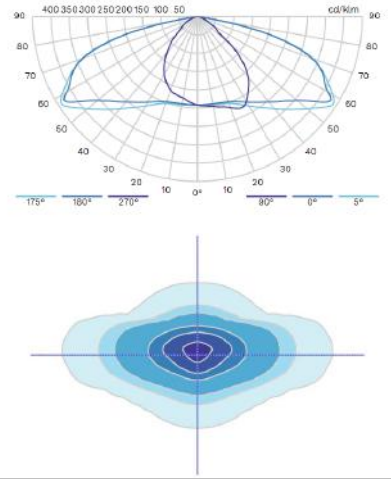

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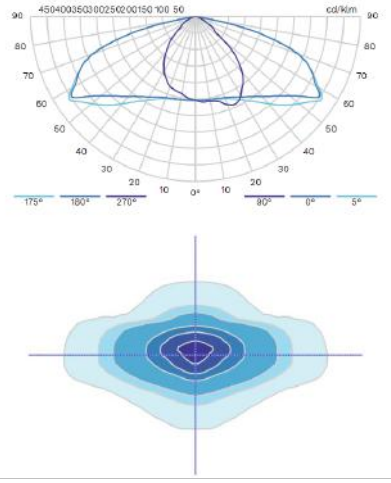

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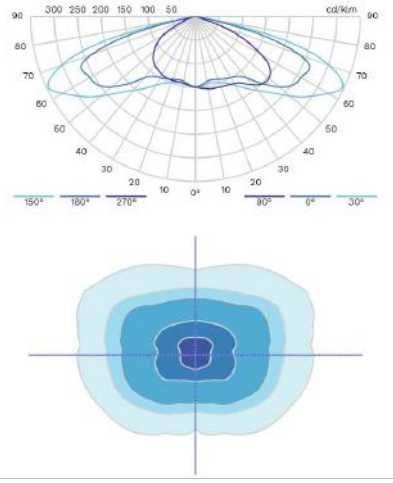

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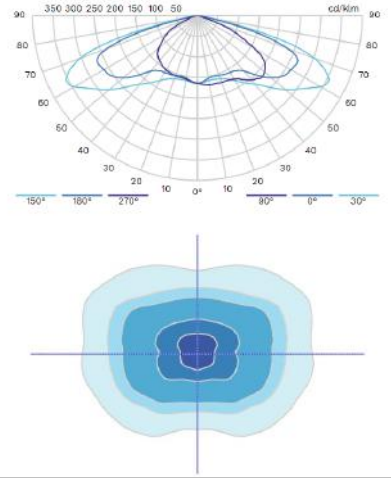

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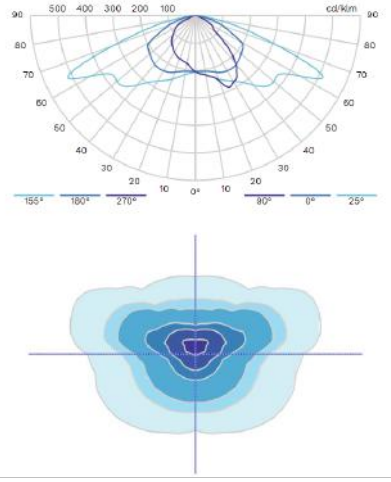

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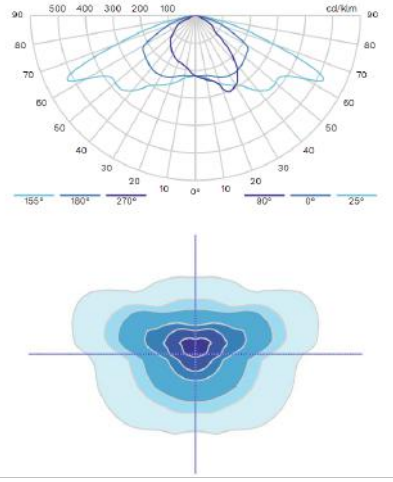

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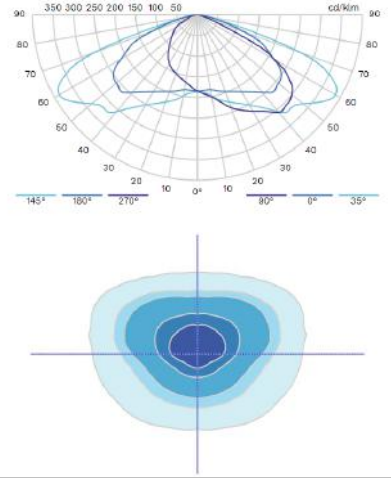

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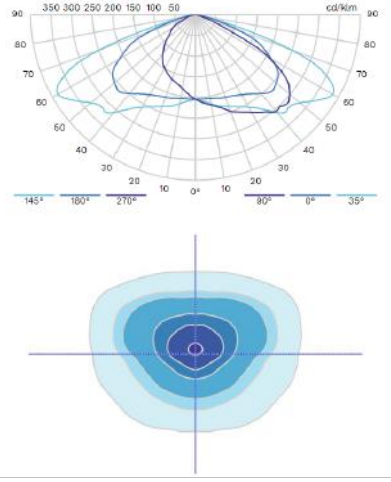

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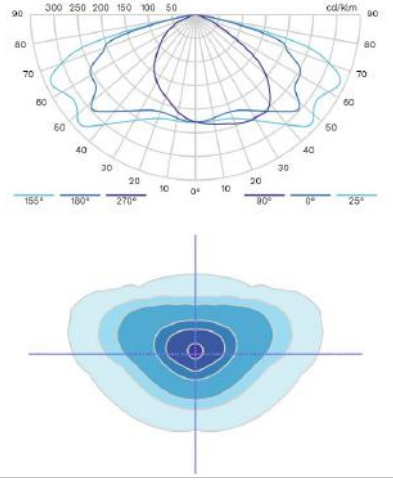

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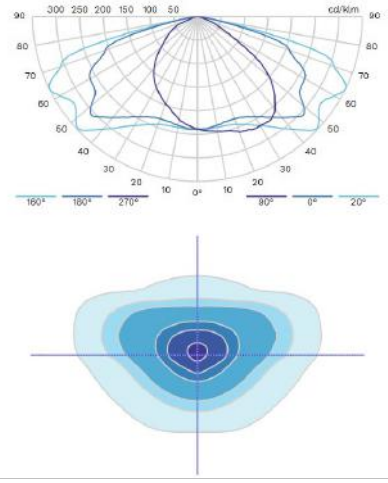

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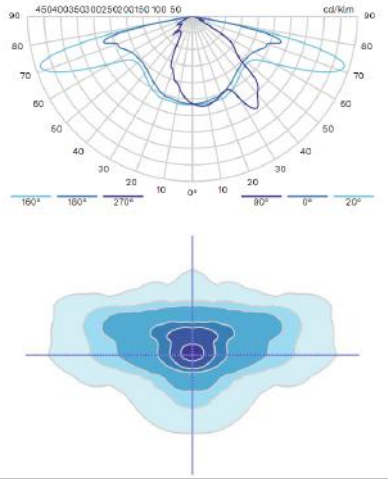

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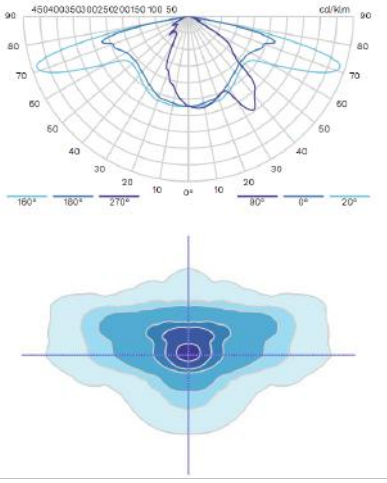

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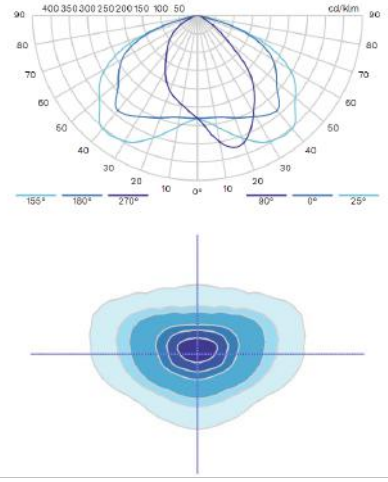

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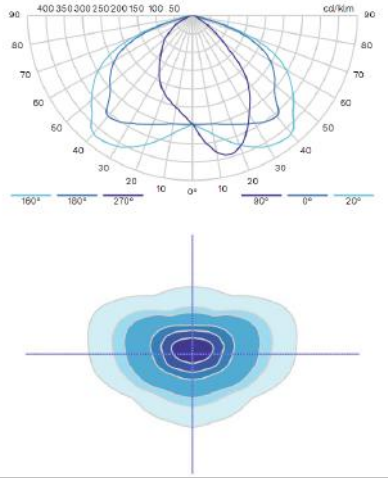

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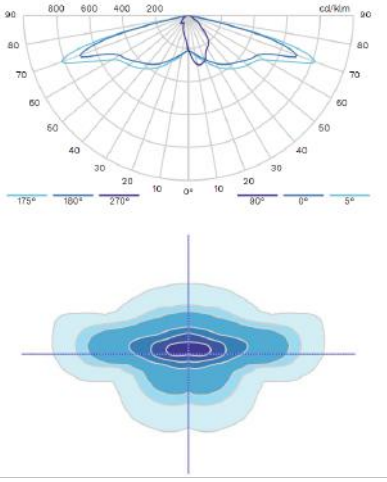

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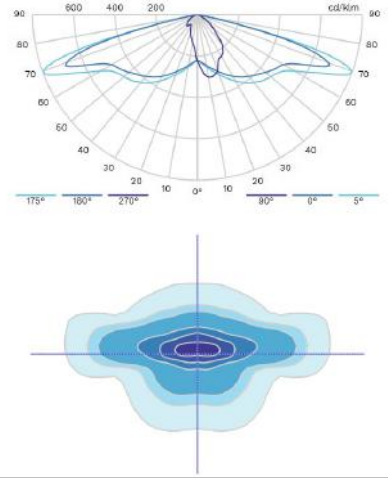

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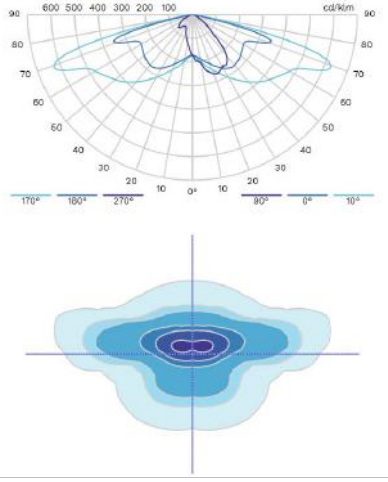

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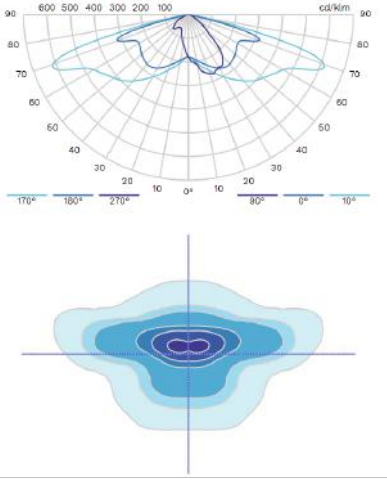

LENSO FLEX™4

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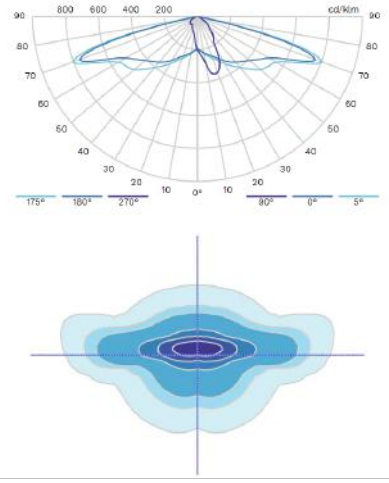

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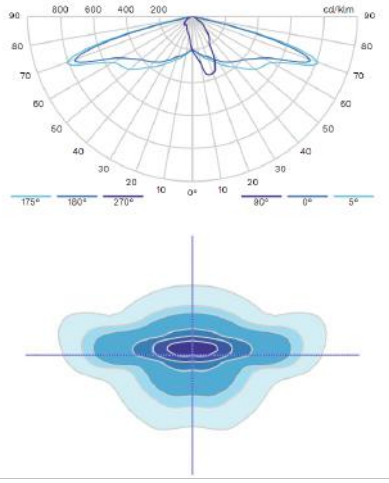

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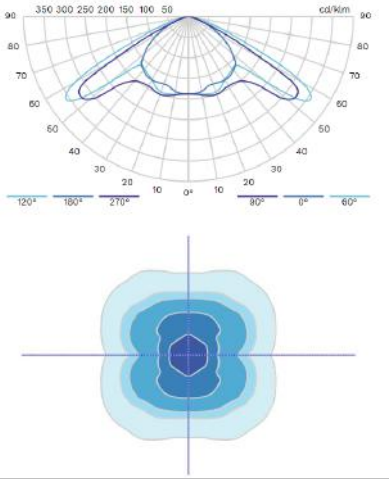

LENSO FLEX™4

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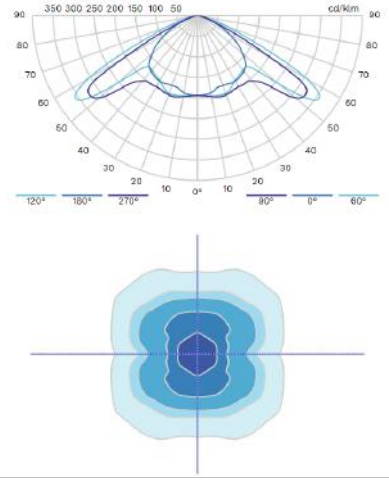

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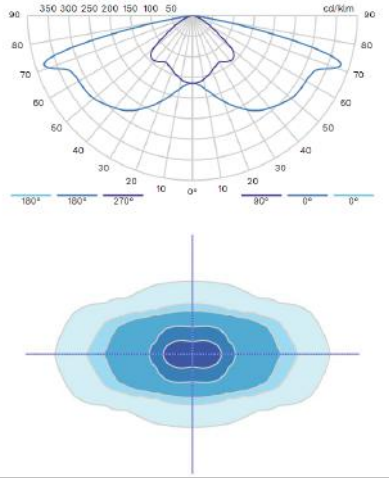

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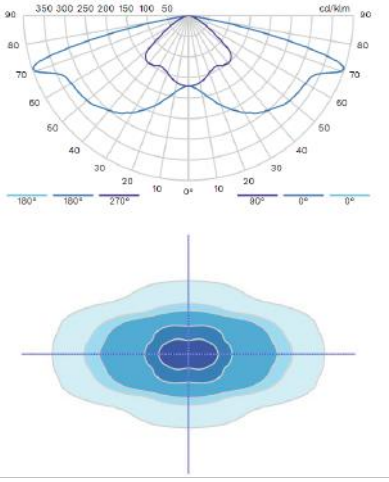

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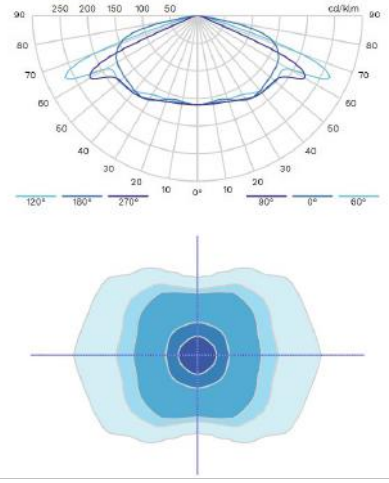

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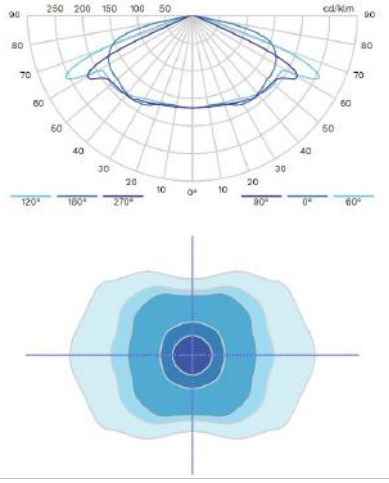

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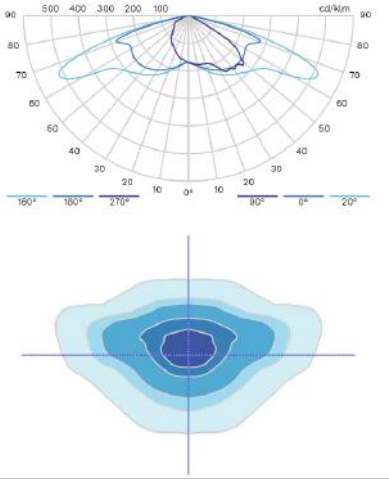

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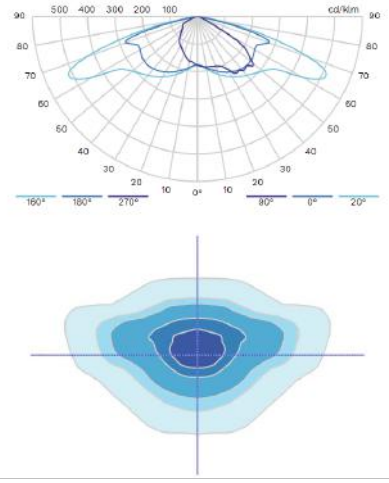

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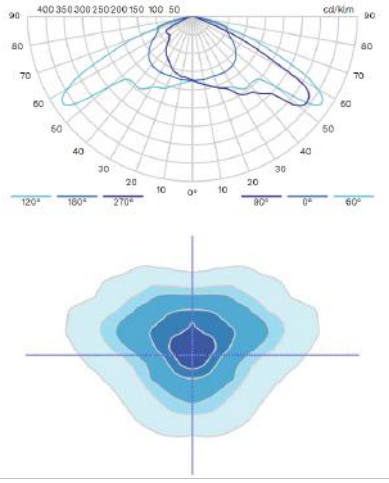

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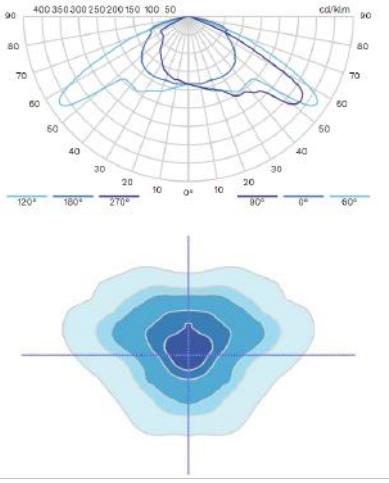

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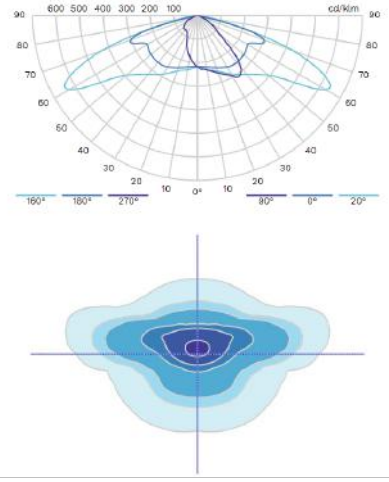

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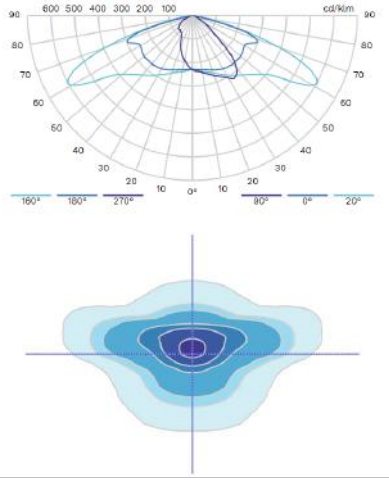

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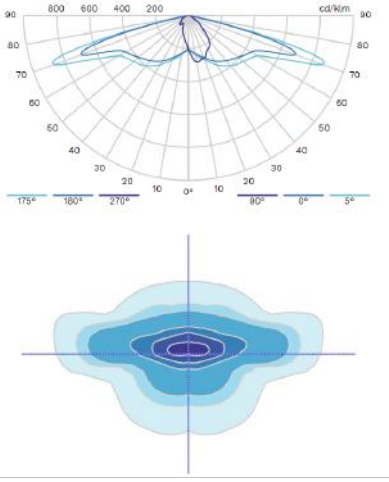

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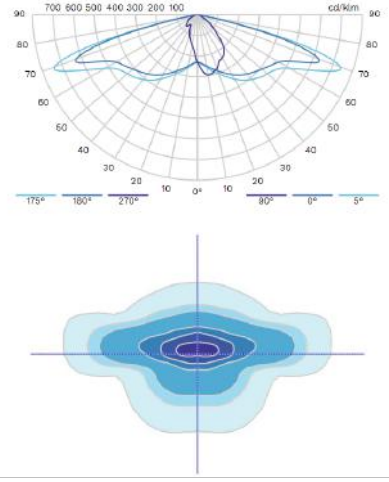

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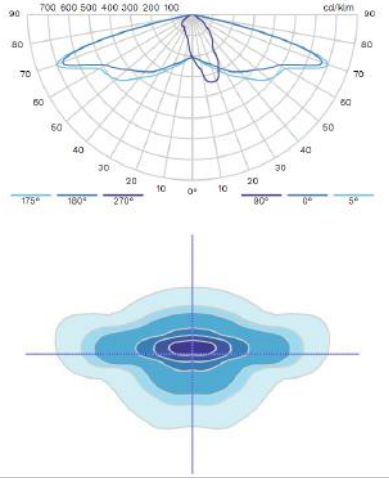

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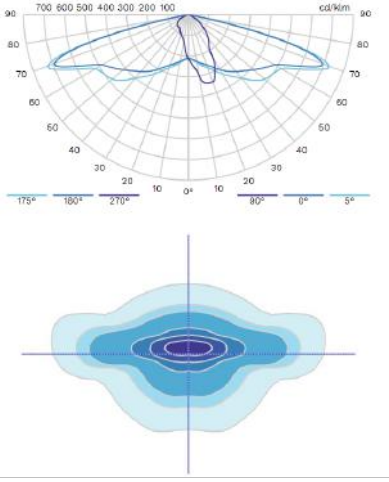
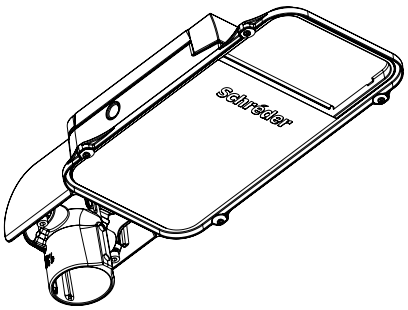




Schréder

Experts in lightability™

IZYLUM LT

ENG	**INSTALLATION INSTRUCTIONS**	**FRA**	**INSTRUCTIONS DE MONTAGE**	**DEU**	**INSTALLATIONSANLEITUNG**
NLD	**INSTALLATIE INSTRUCTIES**	**ITA**	**ISTRUZIONI DI INSTALLAZIONE**	**SPA**	**INSTRUCCIONES DE INSTALACIÓN**
DAN	**INSTALLATIONSVEJLEDNING**	**SWE**	**INSTALLATIONSANVISNING**	**POR**	**INSTRUÇÕES DE INSTALAÇÃO**
SRP	**UPUTSTVA ZA INSTALACIJU**	**UKR**	**Інструкції з монтажу**	**RUS**	**Инструкции по установке**
POL	**INSTRUKCJE MONTAŻU**	**HUN**	**TELEPÍTÉSI ÚTMUTATÓ**	**RON**	**INSTRUCŢIUNI DE INSTALARE**
CHI	安装说明	**AR**	تعليمات التركيب		

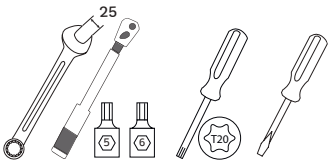
IEC EN60598

4-8m ✓
8-12m ✓
12-15m ✓
15m< ✓

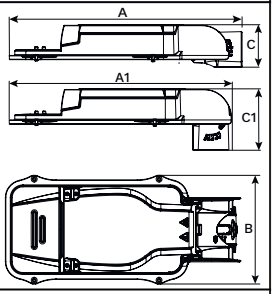
120-277V
220-240V
50/60Hz
44V DC
SELV

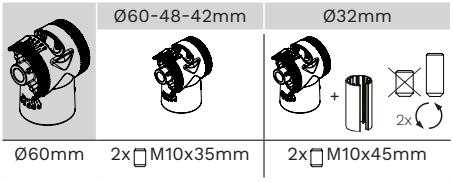
IP	IK
66	08

LED colour code	722	727	730	830	740	840	757	957
Light source energy efficiency class	E	D	C	D	C	D	C	E



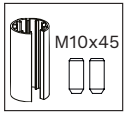
	Size 1	Size 2	Size 3
A (mm)	555	646	616
A1 (mm)	523	615	585
B (mm)	242	242	371
C (mm)	100	100	100
C1 (mm)	145	145	145
CxS (m²)	0.033	0.030	0.039
kg	3.5-5.1	4-5.6	6.3-8.7

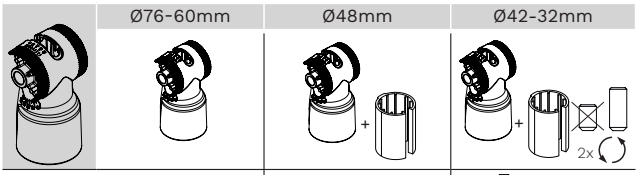




Ø60mm	2x M10x35mm	2x M10x45mm

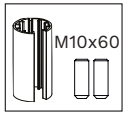
REDUCER KIT



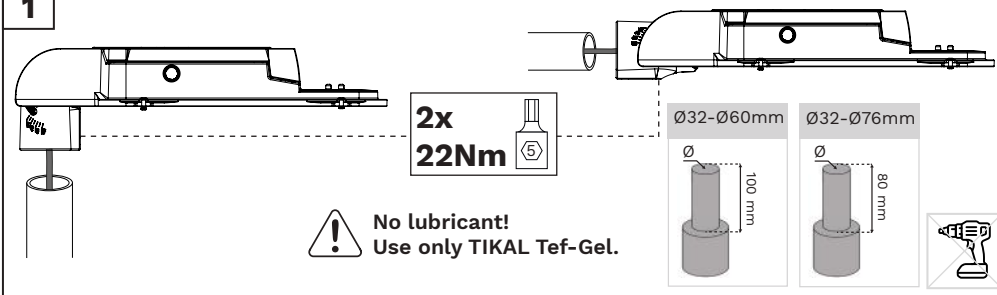


Ø76mm	2x M10x35mm	2x M10x35mm	2x M10x60mm

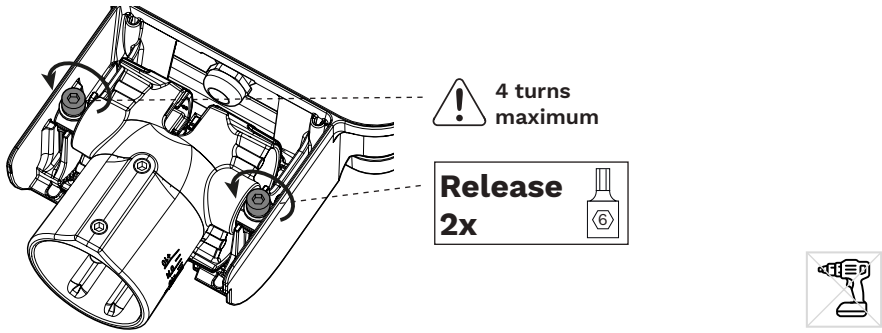
REDUCER KIT



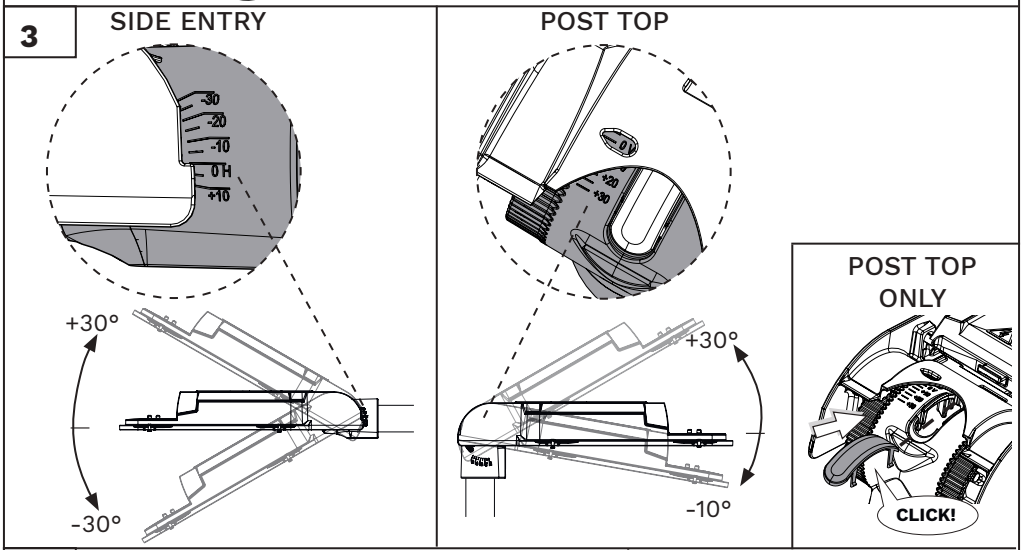
1


2x
22Nm
5
Ø32-Ø60mm
Ø
100 mm
Ø32-Ø76mm
Ø
80 mm
No lubricant!
Use only TIKAL Tef-Gel.

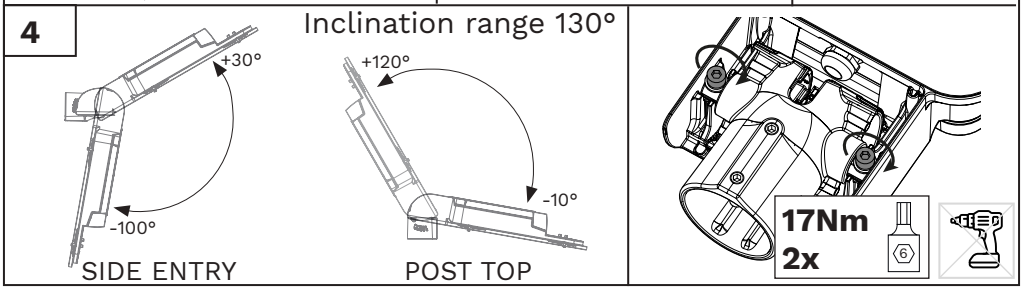
2


4 turns
maximum
Release
2x
6

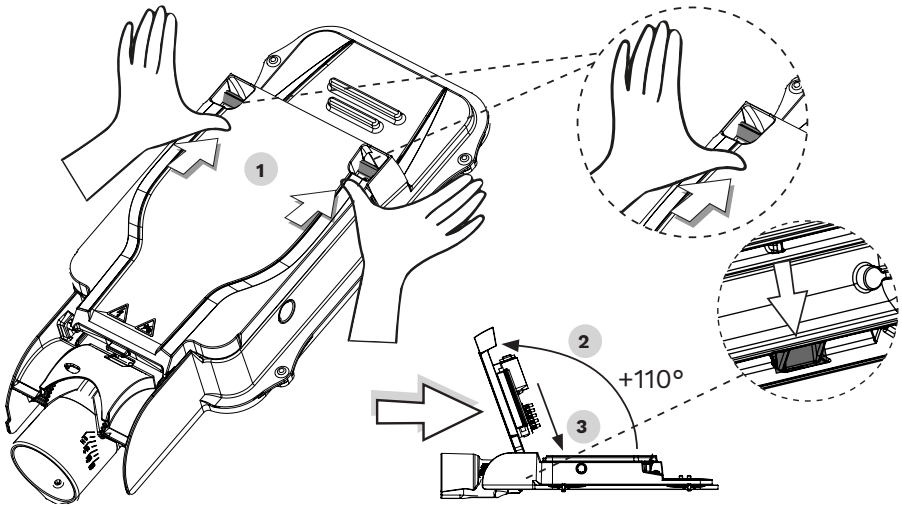
3


SIDE ENTRY
-30
-20
-10
0 H
+10
+30°
-30°
POST TOP
0 V
+20
+30
+30°
-10°
POST TOP
ONLY
CLICK!

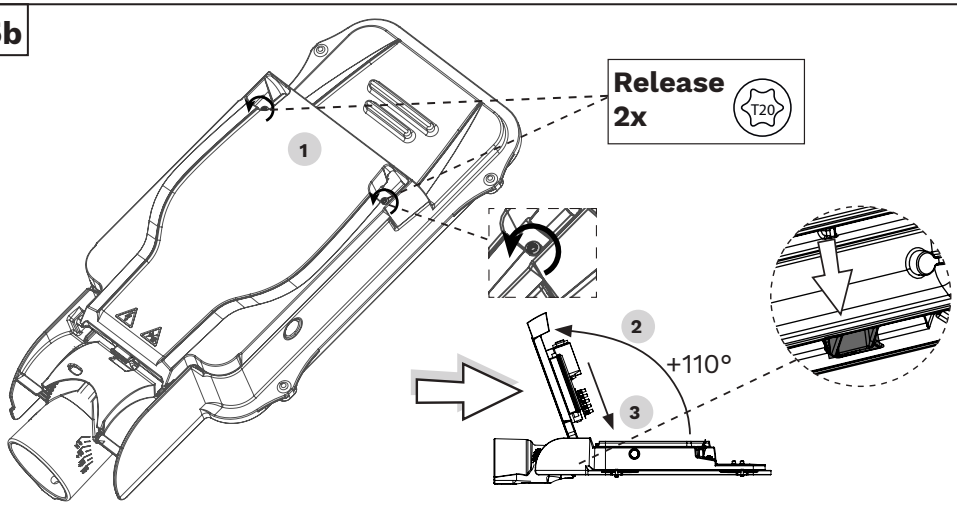
4


Inclination range 130°
+30°
-100°
SIDE ENTRY
+120°
-10°
POST TOP
17Nm
2x
6

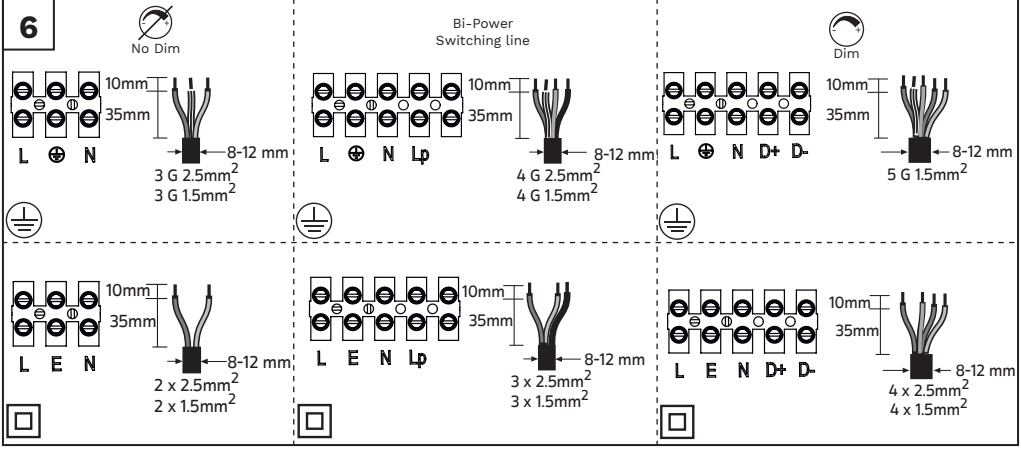
5a

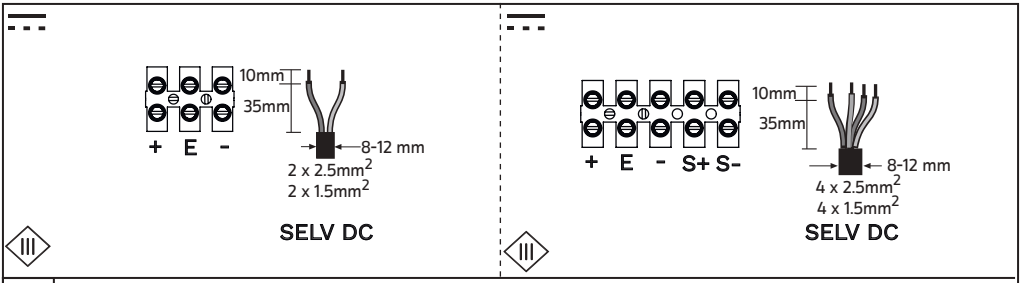

1
2
+110°
3

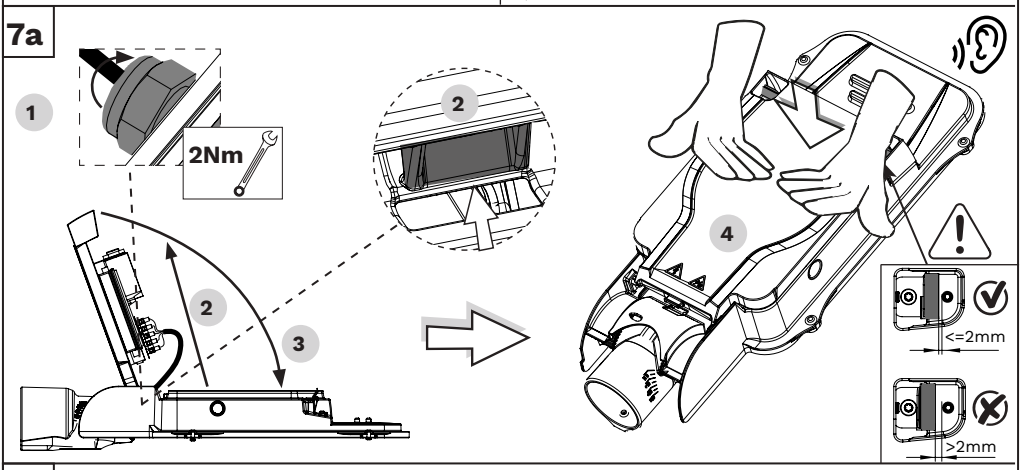
5b

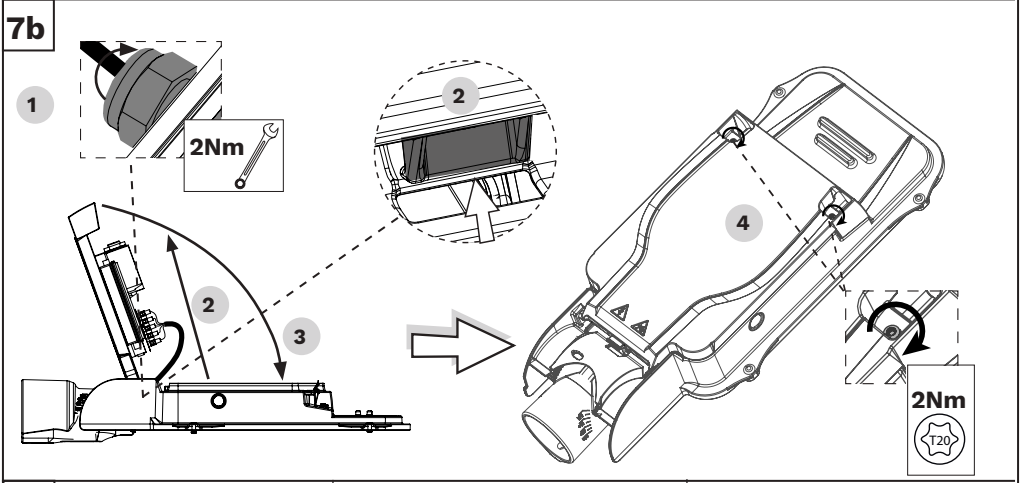

Release
2x
T20
1
2
+110°
3

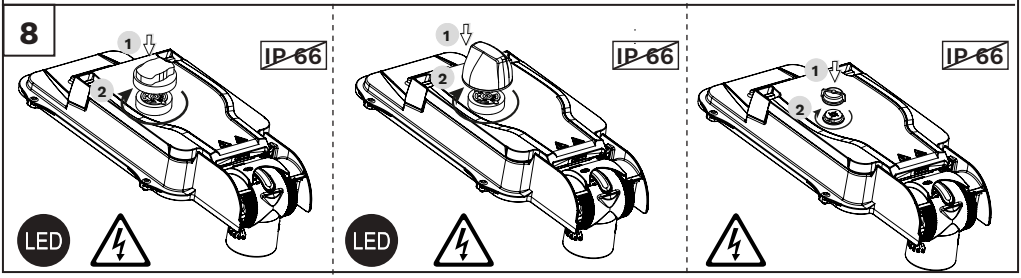
6

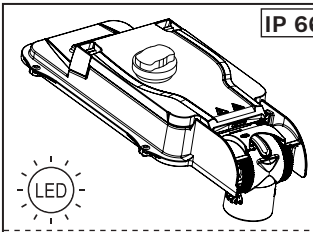

No Dim
10mm
35mm
L ⊕ N
8-12 mm
3 G 2.5mm²
3 G 1.5mm²
Bi-Power
Switching line
L ⊕ N Lp
4 G 2.5mm²
4 G 1.5mm²
Dim
L ⊕ N D+ D-
5 G 1.5mm²
L E N
2 x 2.5mm²
2 x 1.5mm²
L E N Lp
3 x 2.5mm²
3 x 1.5mm²
L E N D+ D-
4 x 2.5mm²
4 x 1.5mm²

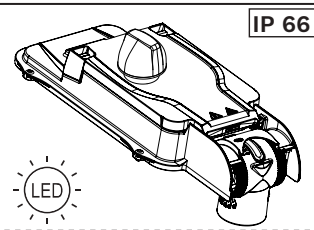

10mm
35mm
+ E -
8-12 mm
2 x 2.5mm²
2 x 1.5mm²
SELV DC
10mm
35mm
+ E - S+ S-
8-12 mm
4 x 2.5mm²
4 x 1.5mm²
SELV DC

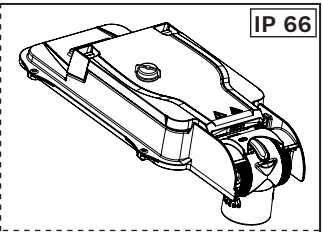

7a
1
2Nm
2
3
4
<=2mm
>2mm


7b
1
2Nm
2
3
4
2Nm
T20


8
IP 66
IP 66
IP 66
LED
LED







ENG

SAFETY INSTRUCTIONS
The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.

Always switch off the power prior to installation, maintenance or repair activities.

RISK GROUP 2 - CAUTION! Hazardous optical radiation may be emitted from this product. Do not stare at the luminaire when operating as it may be harmful to the eyes. The luminaire should be positioned so that prolonged staring at the luminaire at a distance of less than 0.94m is not expected.

This product contains a light source of an energy efficiency class ... - see table.

In case of PVC insulated mains cable, the installer MUST ensure that the WHOLE cable is protected against climatic conditions, especially UV rays and rain, by making sure that the cable is contained inside the luminaire and pole

Y-connection: In case of damage to the wire, it has to be replaced only by the manufacturer, distributor or by an expert, to avoid risks.

SPA

INSTRUCCIONES DE SEGURIDAD
Solo el fabricante, un agente del servicio técnico o persona con cualificación similar puede sustituir la fuente de luz de este sistema de iluminación.

Apague siempre el interruptor de alimentación antes de realizar tareas de instalación, mantenimiento o reparación.

GRUPO DE RIESGO 2 - ¡PRECAUCIÓN! radiación óptica posiblemente peligrosa emitida por este producto. No mire a la lámpara en funcionamiento. Puede ser dañino para los ojos. El sistema de iluminación debe instalarse de modo que la mirada fija prolongada a la luminaria, a una distancia menor de 0.94m no se espere.
Este producto contiene una fuente de luz de clase de eficiencia energética ... -ver tabla.

En el caso de un cable aislado de PVC, el instalador DEBE asegurarse de que todo el cable esté protegido contra las condiciones climáticas, especialmente los rayos UV y la lluvia, asegurándose de que el cable esté dentro de la luminaria y el poste

Conexión en Y: si el cable se daña, solo debe reemplazarlo el fabricante, un distribuidor o un experto para evitar riesgos.

NLD

VEILIGHEIDSINSTRUCTIES
De lichtbron in deze armatuur dient uitsluitend door de fabrikant, diens onderhoudsvertegenwoordiger of een persoon met vergelijkbare kwalificaties te worden vervangen.

Schakel altijd de stroom uit voordat u aan installatie, onderhoud of reparaties begint.

RISICOGROEP 2 - LET OP! Bij dit product kan eventueel gevaarlijke optische straling voorkomen. Staar niet in de brandende lamp. Dit kan schadelijk zijn voor de ogen. Het armatuur moet worden geplaatst zodat staren in het armatuur op een afstand kleiner dan 0.94meter niet verwacht wordt.
Dit product bevat een lichtbron van energie-efficiëntieklasse ... -zie tabel.

In het geval van PVC-geïsoleerde voedingskabels MOET de installateur ervoor zorgen dat de GEHELE kabel wordt beschermd tegen klimaatomstandigheden, met name UV-stralen en regen, door ervoor te zorgen dat de kabel zich in het armatuur en de paal bevindt

Y-verbinding: in geval van schade aan de draad dient deze te worden vervangen door de fabrikant, de distributeur of door een expert, om risico's te vermijden.

DEU

SICHERHEITSHINWEISE
Die Lichtquelle in dieser Leuchte darf nur vom Hersteller bzw. von dessen
Kundendienst oder einer ähnlich qualifizierten Person ausgetauscht werden.

Schalten Sie die Stromversorgung vor Installations-, Wartungs- und Reparaturarbeiten stets ab.

Risikogruppe 2 - VORSICHT! Von diesem Produkt kann möglicherweise gefährliche optische Strahlung ausgehen. Es ist darauf zu achten, dass man im eingeschaltetem Zustand der Leuchte nicht innerhalb einer Distanz von 0.94m direkt in die Leuchte schaut. Dies könnte schädlich für Ihre Augen sein.

Dieses Produkt enthält eine Lichtquelle der Energieeffizienzklasse ... -siehe Tabelle.

Bei Verwendung eines PVC-isolierten Netzkabels muss der Installateur sicherstellen, dass das gesamte Kabel vor klimatischen Bedingungen -insbesondere vor UV-Strahlen und Regen- geschützt ist, indem sichergestellt wird, dass das Kabel in der Leuchte und dem Mast verschlossen ist

Y-Verbindung: Falls die Leitung beschädigt ist, darf diese nur vom Hersteller, dem Händler oder einem Experten ersetzt werden, um Risiken zu vermeiden.

POL

INSTRUKCJA BEZPIECZEŃSTWA
źródło światła zamontowane w tej oprawie może być wymieniane wyłącznie przez producenta, pracownika serwisu lub inną wykwalifikowaną osobę.

Przed rozpoczęciem instalacji, konserwacji lub naprawy należy bezwzględnie odłączyć zasilanie elektryczne.

GRUPA RYZYKA 2 - OSTRZEŻENIE Produkt może emitować niebezpieczne
promieniowanie optyczne szkodliwe dla oczu. Nie należy patrzeć bezpośrednio na pracujące źródło światła. Oprawa powinna być tak zamontowana, aby jej długotrwała obserwacja była możliwa z odległości nie mniejszej niż 0.94m.

Produkt zawiera źródło światła o klasie efektywności energetycznej ... -patrz tabela.

W przypadku kabla sieciowego izolowanego PCV instalator MUSI upewnić się, że kabel CAŁY jest chroniony przed warunkami klimatycznymi, w szczególności przed promieniowaniem UV i deszczem, upewniając się, że kabel znajduje się wewnątrz oprawy i słupa.

Połączenie Y: ze względów bezpieczeństwa uszkodzony przewód powinien zostać wymieniony wyłącznie przez producenta, dystrybutora lub wykwalifikowanego elektryka.

RUS

инструкция безопасности
замену источника света для этого светильника должен выполнять только произ водитель, сервисный агент производителя или специалист с аналогичной квалификацией.

Перед проведением установки, сервисного обслуживания или ремонта всегда отключайте питание устройства.

ГРУППА РИСКА 2 - ВНИМАНИЕ! Возможно опасное оптическое излучение от этого изделия. Не смотрите на источник света. Может быть вредно для глаз. Светильник должен быть расположен таким образом, чтобы было невозможно смотреть на него с расстояния менее 0.94м.

Этот продукт содержит источник света с классом энергоэффективности ... -см. таблицу.

В случае кабеля питания с ПВХ изоляцией, монтажник ДОЛЖЕН обеспечить защиту ВСЕГО кабеля от воздействия климатических условий, особенно от ультрафиолетовых лучей и дождя, убедившись, что кабель находится внутри светильника и опоры.

Подключение Y: в случае повреждения кабеля его замена производится только производителем, дистрибьютором или экспертом.

FRA

INSTRUCTIONS DE SECURITE
La source lumineuse contenue dans ce luminaire doit être uniquement remplacée par le fabricant, son agent de maintenance ou une autre personne disposant des qualifications appropriées.

Mettez toujours l'appareil hors tension avant toute opération d'installation, d'entretien ou de réparation.

RISQUE GROUPE 2 - ATTENTION ! Ce produit émet potentiellement des rayons dangereux pour la vue. Regarder directement la source lumineuse et de manière continue pourrait causer des lésions aux yeux. Le luminaire doit être installé de façon à ne pas pouvoir regarder la source lumineuse directement de manière continue à moins de 0.94m.
Ce produit contient une source lumineuse de classe d'efficacité énergétique... -voir tableau.

Dans le cas d'un câble secteur isolé en PVC, l'installateur doit s'assurer que le câble entier est protégé contre les conditions climatiques, en particulier les rayons UV et la pluie, en s'assurant que le câble est contenu à l'intérieur du luminaire et du poteau

Connexion Y : si le câble est endommagé, il ne peut être remplacé que par le fabricant, par le distributeur ou par un expert, afin d'éviter tout risque.

ITA

ISTRUZIONI DI SICUREZZA
La sorgente di luce contenuta in questo sistema di illuminazione dovrà essere sostituita solo dal produttore, dal suo agente di servizio o da una persona con qualifica similare.

Staccare sempre il filo della corrente prima di iniziare operazioni di installazione, manutenzione o riparazione.

GRUPPO DI RISCHIO 2 - ATTENZIONE! Questo prodotto può emettere radiazioni ottiche potenzialmente pericolose. Non fissare la sorgente accesa. Potrebbe essere dannoso per gli occhi. L'apparecchio dovrebbe essere posizionato in modo da non permettere di fissare a lungo l'apparecchio a una distanza inferiore di 0.94m.
Questo prodotto contiene una sorgente luminosa di classe di efficienza energetica ... -vedi tabella.

In caso di cavo di alimentazione isolato in PVC, l'installatore DEVE garantire che il cavo INTERO sia protetto dalle condizioni climatiche, in particolare dai raggi UV e dalla pioggia, assicurandosi che il cavo sia contenuto all'interno del corpo illuminante e del palo

Collegamento Y: in caso di danneggiamento, il cavo deve essere sostituito esclusivamente dal costruttore, dal distributore o da un tecnico esperto per evitare rischi.

POR

INSTRUÇÕES DE SEGURANÇA
A fonte de luz no interior deste candeeiro deve ser substituída apenas pelo
fabricante, pelo seu técnico de assistência ou por uma pessoa com qualificação equivalente.

Desligue sempre a alimentação antes de proceder a actividades de instalação, manutenção ou reparação.

GRUPO DE RISCO 2 - ATENÇÃO! Possível risco ótico por radiação emitida a partir deste produto. Não olhar para a luz em funcionamento. Pode ser prejudicial para os olhos. A luminária deve ser posicionada de modo a que não seja expectável um olhar prolongado para a luminária em funcionamento a uma distância inferior a 0.94m.

Este produto contém uma fonte de luz da classe de eficiência energética ... -ver tabela.

No caso de cabo de alimentação com isolamento em PVC, o instalador DEVE assegurar que TODO o cabo é protegido das condições climáticas, especialmente raios UV e chuva, certificando-se que o cabo está contido dentro da luminária e da coluna.

Ligação Y: em caso de danos no fio, este tem de ser substituído apenas pelo fabricante, distribuidor ou por um técnico especializado, para evitar riscos.

DAN

SIKKERHEDSINSTRUKTIONER
Lyskilden i dette armatur må kun udskiftes af producenten, af en vedligeholdelsesvirksomhed udpeget af producenten eller af en tilsvarende kvalificeret virksomhed.

Sluk altid for strømmen inden påbegyndelse af installation, vedligeholdelse eller reparation.

Risikogruppe 2 - ADVARSEL! Produktet kan muligvis udsende farlig optisk stråling. Kig ikke direkte ind i armaturet under drift, det kan være skadeligt for øjnene. Armaturet skal placeres således så langvarig stirren ind i armaturet, på en afstand der er tættere end 0.94m, undgås.
Dette produkt indeholder en lyskilde i energieffektivitetsklasse ... -se tabel.

I tilfælde af PVC-isoleret ledning SKAL elektrikeren sikre, at HELE kablet er beskyttet mod klimatiske forhold, dette gælder især UV-stråler og regn. Elektrikeren skal derfor sørge for, at kablet forbliver inde i armaturet og masten.

Type Y montering: Hvis det eksterne kabel eller ledning på dette armatur er beskadiget, må det kun udskiftes af producenten
eller af en servicepartner til producenten eller tilsvarende kvalificeret person, for at undgå skader.

HUN

BIZTONSÁGI ÚTMUTATÓ
A lámpatestben található fényforrást kizárólag a gyártó, szervizképviselője vagy hivatalos szakszerviz szakembere cserélheti ki.

A szerelés, karbantartás és javítás előtt minden esetben végezzen áramtalanítást.

KOCKÁZATI CSOPORT 2 - VIGYÁZAT! A berendezés veszélyes optikai sugárzást bocsáthat ki! Ne nézzen bele a bekapcsolt lámpatestbe! Szemet károsító hatás léphet fel. A lámpatestet úgy ajánlott pozícionálni, hogy rálátás esetén a lámpatest ne legyen 0.94m-nél közelebb!

Ez a termék ... energiahatékonysági osztályba tartozó fényforrást tartalmaz - lsd táblázat.

PVC szigetelésű tápkábel esetén a telepítőnek biztosítania KELL, hogy a TELJES kábel védett legyen az éghajlati viszonyoktól, különösen az UV sugárzástól és az esőtől, ügyelve arra, hogy a kábel a lámpatest és az oszlop belsejében legyen.

Y-csatlakozó: A sérült vezetéket kizárólag a gyártó, forgalmazó vagy szakember cserélheti ki a kockázatok elkerülése végett.

RON

INSTRUCȚIUNI DE EXPLOATARE
Sursa de lumină din acest corp de iluminat trebuie înlocuită numai de producător sau de reprezentantul său de service sau o persoană ce deține calificări similare.

Opriți întotdeauna alimentarea electrică înainte de lucrările de instalare, întreținere sau reparații.

GRUP DE RISC 2 - ATENȚIE! Este posibil ca acest produs să emită radiații optice periculoase. Nu priviți direct înspre lampa aflată în stare de funcționare. Acest lucru poate fi dăunător ochilor. Aparatul de iluminat trebuie să fie poziționat astfel încât să nu fie posibil, în mod normal, privitul direct înspre lampă, la o distanță mai mică de 0.94m.
Acest produs conține o sursă de lumină din clasa de eficiență energetică.....-conform tabel

În cazul cablului de alimentare cu izolație din PVC, instalatorul TREBUIE să se asigure că TOT cablul este protejat împotriva condițiilor climatice, mai ales împotriva razelor UV și a ploii, asigurându-se că acest cablu este plasat în interiorul aparatului de iluminat și al stâlpului

Conexiune Y: În caz de deteriorare a firului, acesta trebuie înlocuit numai de către producător, distribuitor sau un expert, pentru evitarea riscurilor.

SRP

UPUTSTVA
Izvor svetla u ovom rasvetnom telu može da
zameni samo proizvođač, njegov servisni agent ili na sličan način kvalifikovana osoba.

Uvek isključite napajanje pre instalacije, održavanja ili popravke.

GRUPA RIZIKA 2 - PAŽNJA! Proizvod može emitovati štetno optičko zračenje.
Izbegavati vizuelni kontakt sa svetlosnim izvorom dok je u radu. Moguće oštećenje vida. Svetiljku treba pozicionirati tako da se ne očekuje duži vizuelni kontakt sa izvorom sa razdaljine manje od 0.94m.

Ovaj proizvod sadrži izvor svetlosti klase energetske efikasnosti ... -pogledajte tabelu.

U slučaju napojnog kabla sa PVC izolacijom, izvođač MORA obezbediti zaštitu CELOG kabla od klimatskih uslova, posebno UV zračenja i kiše, tako što će osigurati da se kabal nalazi unutar svetiljke i stuba.

Y-veza: U slučaju oštećenja žice zamenu mora da obavi isključivo proizvođač, distributer ili stručnjak kako bi se izbegao rizik.

SWE

SÄKERHETSINSTRUKTIONER
Ljuskällan som monteras i denna armatur får endast ersättas av en Schréder-anställd eller annan kvalificerad person.

Stäng alltid av strömmen före installation, underhåll eller reparation.

Riskgrupp 2 - VARNING! Eventuellt farlig optisk strålning från denna produkt. Stirra ej på driftlampan. Kan vara skadligt för ögonen. Armaturen bör placeras så att långvarigt stirrande in i armaturen på ett avstånd som är närmare än 0.94m ej är möjligt.

Denna produkt innehåller en ljuskälla av energieffektivitetsklass ... -se tabell.

Vid PVC-isolerad kabel måste installatören se till att hela kabeln är skyddad mot klimatförhållanden, särskilt UV-strålar och regn, genom att se till att kabeln monteras inuti armaturen och stolpen

Typ Y-anslutning:
Om den externa kabeln eller ledningen på denna armatur är skadad, får den endast bytas ut av tillverkaren eller av en servicepartner till tillverkaren eller motsvarande kvalificerad person, för att undvika skador

UKR

інструкція безпеці
Джерело світла, що міститься у цьому світильнику, повинен заміняти лише виробник, його сервісний агент або кваліфікована особа.

Завжди вимикайте живлення перед встановленням, доглядом або ремонтом.

ГРУПА РИЗИКУ 2 - УВАГА! Можливість небезпечного оптичного випромінювання від цього продукту. Уникайте прямого погляду на ввімкнене джерело світла. Може бути шкідливо для очей. Світильник має бути розташований так, щоб уникнути його тривалого споглядання з відстані ближче, ніж 0.94м.

Цей продукт містить джерело світла класу енергоефективності ... -див. табл.

У випадку кабелю живлення із ПВХ ізоляцією, монтажник ПОВИНЕН забезпечити захист ВСЬОГО кабелю від впливу кліматичних умов, особливо від ультрафіолетових променів та дощу, переконавшись, що кабель знаходиться всередині світильника та опори

У-з'єднання: у разі пошкодження дроту його має замінити лише виробник, дистриб'ютор чи експерт, щоб запобігти ризикам.

CHI

安全守则

该灯具内的光源仅可由施莱德员工、指定代理商或具备类似资质的人员进行更换。

在安装、维护和维修灯具之前必须首先切断电源。

风险群体 2 - 注意！有害的光学射线有可能从产品中发出，不要凝视正在工作的光源，有可能对眼睛产生危害。灯具应当选择合理位置安装，尽可能避免长时间在0.94米以内凝视。

本产品包含一个能效等级的光源.....见表。

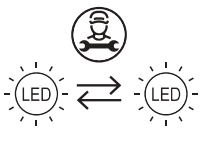
如果选择PVC主电缆，必须确保整个电缆被很好的保护以抵御恶略气候状况，尤其是紫外线和雨水，而且要确保电缆被灯具和灯杆完全覆盖。

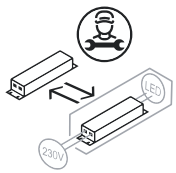
Y类附件：
如果灯具外部电缆被破坏，电缆必须被制造商或服务代理商或者有资质的人员及时更换从而避免伤害。

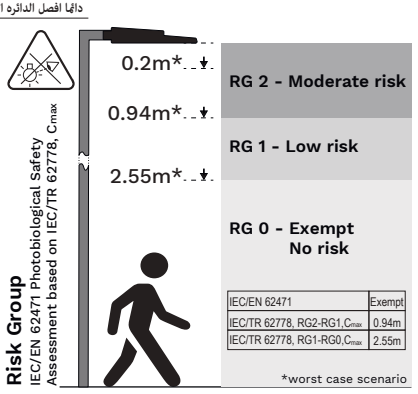
AR

تعليمات السلامه:
في حاله الحاجه لتغير مصدر الضوء، يتم ذلك من خلال الشركه. المصنعه او الوكيل المخول لعمل ذلك او شخص موهل لذلك دائما افصل الدائره الكهربائيه قبل تركيب او صيانه الجهاز.
تحذير: هذا المنتج مصنف ضمن مجموعه المخاطر 2
خطر انبعاث اشعاع ضوئي , لا تنظر مباشره الى الجهاز او هو مضاء لان ذلك مؤذي للعين. الجهاز يجب ان يركب بشكل يضمن ان التحديق بمصدر.

الضوء من مسافه اقل من 0.94 م غير متوقعه.
يحتوي هذا المنتج على مصدر ضوء من فئة كفاءة الطاقة ... انظر الجدول.
يجب على الشخص الذي يوصل الجهاز بالدائره الكهربائيه التاكد من ان محمي من التاثيرات المناخيه و خاصه الاشعه فوق البنفسجيه و المطر من خلال التاكد ان الكابل محمي بداخل العمود و الجهاز
في حاله الحاجه لتغير الاسلاك الداخليه , يتم ذلك من خلال الشركه. المصنعه او الوكيل المخول لعمل ذلك او شخص مخول لذلك دائما افصل الدائره الكهربائيه قبل تركيب او صيانه الجهاز.







22
PAP

LICENCE

No. 22869 replaces No.22725/1

Issued to:
Applicant:
Schréder S.A.
Rue de Mons, 3
4000 Liège
Belgium

Licensee:
Schréder SA
Rue de Lusambo, 67
1190 BRUXELLES
Belgium

Product	:	road, square and street lighting
Trade name(s)	:	SCHREDER
Type(s)/model(s)	:	IZYLUM LT 1 (IZYLLT11), IZYLUM LT 2 (IZYLLT12), IZYLUM LT 3 (IZYLLT13)

The product and any acceptable variation thereto is specified in the annex to this licence and the documents therein referred to.

SGS CEBEC hereby declares that the above-mentioned product has been certified on the basis of:
- a type test according to the standard specified in annex
- an inspection of the production location
- a certification agreement with the number 1173

SGS CEBEC hereby grants the right to use the CEBEC certification mark
The ENEC/CEBEC certification mark may be applied to the product as specified in this licence for the duration of the ENEC/CEBEC certification agreement and under the conditions of the ENEC/CEBEC certification agreement.

This licence is issued on : 10/08/2023

Etienne Thibaut,
Certification Manager

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bld Internationalelaan 55 Build. A
B-1070 Brussels
Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product	:	road, square and street lighting
Trade name(s)	:	SCHREDER
Type(s)/Model(s)	:	IZYLUM LT 1 (IZYLLT11), IZYLUM LT 2 (IZYLLT12), IZYLUM LT 3 (IZYLLT13)
description	:	Street lighting
rated voltage (Un)	:	220-240 V
nature of supply	:	ac
rated frequency	:	50-60 Hz
class	:	class II
degree of protection	:	IP66
resistance to impact (IK)	:	IK08

Product data - type IZYLUM LT 1 (IZYLLT11)

rated power	:	max. 88 W
rated ambient temperature (ta)	:	max. 55°C
rated current (In)	:	max. 1050 mA
lamp(s)	:	max. 36 LEDs (5050) max. 25 LEDs (Z5M4, LH351C)

Product data - type IZYLUM LT 2 (IZYLLT12)

rated power	:	max. 124 W
rated ambient temperature (ta)	:	max. 55°C
rated current (In)	:	max. 1050 mA
lamp(s)	:	max. 72 LEDs (5050) max. 50 LEDs (Z5M4, LH351C)

Product data - type IZYLUM LT 3 (IZYLLT13)

rated power	:	max. 203 W
rated ambient temperature (ta)	:	max. 55°C
rated current (In)	:	max. 1050 mA
lamp(s)	:	max. 144 LEDs (5050) max. 100 LEDs (LH351C)

TESTS

Test requirements

EN 60598-2-3:2003 + A1:2011
EN IEC 60598-1:2021 + A11:2022

Test results

The test results are laid down in certfication file 633264/06.

Remarks

This certificate is based on test report No. P1613-14-IIb.

Conclusion

The examination proved that all certification requirements were met.

Reviewed by, project leader : Christian Maes - 10/08/2023

Certification Manager : Etienne Thibaut - 2023-10-08

FACTORY LOCATION(S)

Schreder TOV
Vul. Mykulynetska 46B
46000 TERNOPIL
Ukraine

Schreder (China) Lighting Industrial Co., Ltd
No.40 Xinye 2 Street
Tianjin Economic Technological Development Zone West Zone
300462 Tianjin City, P.R.China
China

Comatelec Schréder
ZAC de l'échangeur 11 rue Louis BECHEREAU
18000 Bourges
France

Socelec S.A.
Av. de Roanne, 66
Poligono Industrial "EL HENARES"
19180 MARCHAMALO (GUADALAJARA)
Spain

Schréder Iluminação S.A.
Rua da Fraternidade Operária, n° 3
2794-089 CARNAXIDE, OEIRAS
Portugal

Schréder Hungary Plc.
Tópart 2
2084 PILISSZENTIVAN
Hungary

ENEC Certification Body registered under ID # 02. Validity of ENEC and ENEC+ licences can be checked at www.enec.com

LICENCE

to use the ENEC+ Mark

02

ENEC+ License No.: 22753/1

Under the conditions given in the "Rules concerning the use of the CEBEC mark" complemented by the ENEC+ Agreement under contract 1173/2, the license to use the ENEC+ Mark with suffix 02, as shown above, has been issued to:

Schreder S.A.
Rue de Lusambo, 67
1190 BRUXELLES, Belgium

For the product:

Street lighting luminaire

Trade name(s):

SCHREDER

Type(s)/Model(s):

IZYLUM LT 1 (IZYLLT11), IZYLUM LT 2 (IZYLLT12), IZYLUM LT 3 (IZYLLT13)

Complying with the following EPRS for performance:

EPRS 003:2018, IEC 62722-1:2014, IEC 62722-2-1:2014

EN 62722-1:2016, EN 62722-2-1:2016

Based on test report No. P1613-14_62722-2-1_002

This licence is conditional to the validity of the ENEC License No.: 22869

Date: 2023-10-17

Signature:

Name: Calogero Lana
Position: Certification Manager

This licence has been issued under the presumption and conditional on the fact that the licensee holds all necessary legal rights with regard to the product presented for testing and certification.

SGS Belgium NV – Division SGS CEBEC, Riverside Business Park, Avenue Internationalelaan 55, Building A, BE-1070 Brussels
Tel. +32 2 556 00 20 – cebec.info@sgs.com

Characteristics:

Description	:	Street lighting luminaire
Rated voltage (Un)	:	220-240 Vac
Rated frequency	:	50 Hz
Class	:	class II
Colour temperature (CCT)	:	2200K, 2700K, 3000K, 4000K
Colour rendering index (CRI)	:	70, 80

Type IZYLUM LT 1 (IZYLLT11):

Rated power	:	max. 88 W
Rated current	:	max. 1050 mA (LH351C, Z5M4) max. 350 mA (5050)
Lamps	:	max. 36 LEDs (5050) max. 25 LEDs (Z5M4, LH351C)
Luminous flux	:	max. 12453 lm
Efficacy (lm/W)	:	max. 169 lm/W

Type IZYLUM LT 2 (IZYLLT12):

Rated power	:	max. 124 W
Rated current	:	max. 780 mA (LH351C, Z5M4) max. 350 mA (5050)
Lamps	:	max. 72 LEDs (5050) max. 50 LEDs (LH315C, Z5M4)
Luminous flux	:	max. 20483 lm
Efficacy (lm/W)	:	max. 176 lm/W

Type IZYLUM LT 3 (IZYLLT13):

Rated power	:	max. 203 W
Rated current	:	max. 880 mA (LH351C, Z5M4) max. 350 mA (5050)
Lamps	:	max. 144 LEDs (5050) max. 100 LEDs (LH315C, Z5M4)
Luminous flux	:	max. 35700 lm
Efficacy (lm/W)	:	max. 182 lm/W

Laboratory
Test report

226-TEST

NBN EN ISO/IEC 17025 :2017

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 04 – Date : 21/04/2021

Tightness test

General information

Subject : IZYLUM LT 1 - 25 LH351C - 900mA 75W driver - Zhaga socket - Before endurance

Asked by : CSIKÓS Balázs

Created on : 23/11/2022

Started on : 24/11/2022

Test number : D221043

Reference norm : IEC/EN 60598-1 Ed9 (2021) +A11 (2022)

Sample(s) : E220618

Folder : P-F22050

Test conditions

Luminaire : IZYLUM LT 1

Number of LED : 25

LED : Samsung LH351C

Driver current (mA) : 900

Protector Material : Glass Extra Clear wide serigraphy

Protector Shape : Flat

Additional info :

Test realized before endurance D221045

Testing Facility : BER - R-Tech

Operator : KOY Fiston

IMG_9316

Conclusion

Success

Conclusion :

Statement of conformity according to section 9.2 of IEC/EN 60598-1 Ed9 (2021) + A11 (2022):

IPx6 passed.

Validated by :

LERHO Xavier

Duplicate to : PELSŐCZI Zoltán, GÖRGÉNYI Emese, HORVÁTH Balázs, SZÜGYI János Péter, LÁMFALUSI Ferenc, CSIKÓS Balázs, CSENKI Máté

LAB : 28/11/2022

Test(s) details

Test(s)

Name	Description	Verdict
IPx6	- Luminaire switched ON until stable T° - Luminaire switched OFF and immediately sprayed with water jet - Hose diam. 12,5 mm - Water flow: 100 l/min - Spraying distance: 3 m - Duration of test: 3 minutes	Success

IPx6

Verdict(s)

Pre-conditioning time :

- 110 minutes

Test result :

- Passed : No water entry in the enclosure of the luminaire

IMG_9319

IMG_E9347

Test room temperature (°C) :

21.5

Measurement equipment :

Rotating table (A001/2)
Chronometer (A043/4)
Thermometer (A039/1)
Flowmeter (A001/10)
Lance (A001/12/1)
IPx6 nozzle (A001/12/3)

Quantities measured :

Verification of water/dust ingress within a luminaire enclosure according to
For IP2X: PT-S-14
For IP3X/4X: PT-S-15
For IP5X/6X: PT-S-06
For IPX3/X4: PT-S-01
For IPX5/X6: PT-S-08
For IPX7/X8: PT-S-09
For IPX9(15°C)/X9(80°C) : PT-S-10

Uncertainties :

Statement of uncertainties (K=2, 95% of confidence level):
Time: 0,35 seconds per 10 minutes
Temperature: 0,6 K
Calipers: 0,005 mm
Measuring tape: ± 1,13 mm
Dynamometric key :
From 0.5 to 2.5 Nm : 0,15 Nm
From 2.5 to 5 Nm : 0,22 Nm
From 5 to 25 Nm : 0,83 Nm
From 25 to 60 Nm : 2,73 Nm
From 60 to 100 Nm : 3,55 Nm

For solid ingress test:
IP2X:
Probe dimensions: ± 0,6 mm
Applied force: ± 0,4 N
IP3X:
Probe dimensions: ± 0,3 mm
Applied force:± 0,13 N
IP4X:
Probe dimensions: ± 0,1 mm
Applied force: :± 0,11 N

IP5X/6X
Test duration (talcum suspension time): ± 3 seconds
Talcum mass: 0,02 %

For liquid ingress test:
IPX3/X4
Table rotation: ± 6 sec/rotation
Arms Rotation angle: ± 3°
Water flow: ± 4,5 %
IPX5/X6
Table rotation: ± 6 sec/rotation
Water flow: ± 4 %
Test Distance: +0 / -50 cm

IPX7/X8
Test depth: +10 cm / -0 cm
IPX9
Water temperature: 1.25 K
Test distance: 1.59 mm (for 175mm)
Test duration: 2.49 s (for 3min)
Water pressure: 0.37 N

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict):
For solid ingress test:
IP2X:
If contact possible with live parts: fail
Otherwise: success
IP3X/4X:
For luminaires without draining holes, nor ventilation slots for forced cooling, penetration of the test probe in the enclosure: fail
For luminaires with draining holes, or ventilation slots for forced cooling, if contact possible with live part: fail
Otherwise: success
IP5X/6X
By visual inspection:
If possible hazard due to presence of conductive dust: fail
For IP5X: If no possible hazard due to the presence of conductive dust: success
For IP6X: No presence of talcum: success
For liquid ingress test:
IPX3/X4/X5/X6/IPX9(15°C)/X9(80°C):
By visual inspection:
If possible hazard due to presence of water: fail
If no possible hazard due to the presence of water and no efficient way to evacuate the water: fail
If no possible hazard due to the presence of water and an efficient way to evacuate the water: success
No presence of water: success
IPX7/X8:
By visual inspection:
Presence of water: fail
No presence of water: success

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is failed: failed

Otherwise: success

End of accredited report :

Laboratory
Test report

713-TEST

NBN EN ISO/IEC 17025 :2017

FORM L-54 V2

Schréder
Experts in lightability™
Laboratoire Schréder
Rue de Mons 3 - B-4000 Liège - BELGIUM
Tél. : +32.4.224.75.40

Mechanical impact resistance test

General information

Subject : IZYLUM LT 1 - 4mm glass protector

Asked by : CSIKÓS Balázs

Created on : 07/06/2023

Started on : 07/06/2023

Test number : D230673

Reference norm : IEC/EN 60598-1 Ed9 (2021) + A11 (2022) & 62696 Ed1 (2011)

Sample(s) : E220634

Test conditions

Luminaire : IZYLUM LT 1

Quantity of sample under test : 1

Protector Material : Glass Extra Clear wide serigraphy

Protector Shape : Flat

Serigraphy : organic

Protector Thickness (mm) : 4

Protector supplier : External - Delasan Vidres

Remark :

This report cancels and replaces test report D221124
Modification from original: protector thickness

Testing facility : BER - SCHREDER

Operator : KOY Fiston

IMG_9596

Conclusion

Success

Conclusion :

Statement of conformity according to TR 62696 Ed1 (2011) and section 4.13 of IEC/EN 60598-1 Ed9 (2021) +A11 (2022):

IK08 passed.

Validated by :

LERHO Xavier

Duplicate to : PELSŐCZI Zoltán, GÖRGÉNYI Emese, HORVÁTH Balázs, SZÜGYI János Péter, LÁMFALUSI Ferenc, CSIKÓS Balázs, CSENKI Máté

LAB : 07/06/2023

Test(s) details

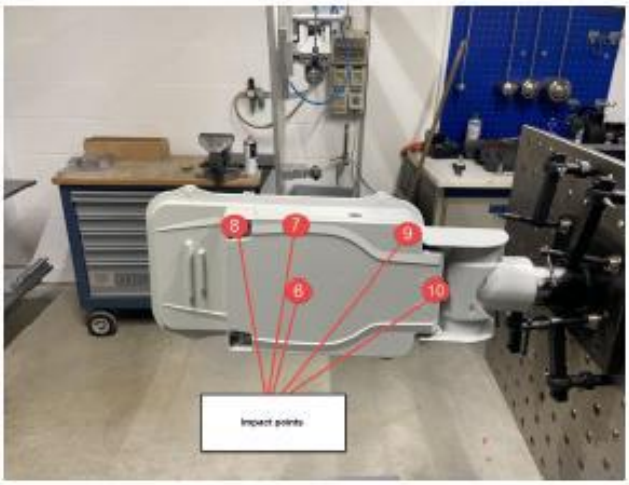
Test(s)

Name	Description	Verdict
Impact points	At pendulum hammer 5 impact points distributed on protector surface One impact on each point 2 supplementary impacts on the most fragile point	Informative
IK08	Impact energy : 5 joules Hammer weight : 1.7 Kg Height of fall : 30 Cm	Success

Impact points

Detail(s)

IMG_9598



IMG_9600

Verdict(s)

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3
Sample 1	PASS	-	-	PASS	-	-	PASS	PASS	PASS	PASS	-	-	PASS	-	-
Sample 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Point 6			Point 7			Point 8			Point 9			Point 10		
	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3	Impact 1	Impact 2	Impact 3
Sample 1	PASS	PASS	PASS	PASS	-	-	PASS	-	-	PASS	-	-	PASS	-	-
Sample 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Test room temperature (°C) :

22.2

Measurement equipment :

Pendulum hammer with chariot (M062)
Thermometer (A039/3)
Electronic scale 120kg (M057)
Dynamometric key (M015)

Quantities measured :

For IK 04/05/06: Verification of the mechanical strength of a luminaire according to PT-S-13
For IK07/08/09/10/10+: Verification of the mechanical strength of a luminaire according to PT-S-05

Uncertainties :

Temperature: 0,6 °K
Mass: 0,25 %
Dynamometric key :
- **From 0.5 to 2.5 Nm : 0,15 Nm**
- **From 2.5 to 5 Nm : 0,22 Nm**
- **From 5 to 25 Nm : 0,83 Nm**
- **From 25 to 60 Nm : 2,73 Nm**
- **From 60 to 100 Nm : 3,55 Nm**

For IK 04/05/06, Impact energy: ± 10%
For IK07/08/09/10/10+, Impact energy: ± 1%

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict) according to GDE-GUI-003:

By visual inspection (or other means if necessary):
Luminaire shows dangerous behavior: fail
Luminaire shows no dangerous behavior: success
When several luminaires are tested, 4 out of 5 samples need to show positive result for compliance of the batch

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is successful: success, the highest achieved IK is reported

Otherwise: fail

End of accredited report :

Laboratory
test report

Schréder
Experts in lightability™
Schréder Hungary Plc.
2084 Pilisszentiván, Tópart 2

Electrical measurement

General information

Subject:	IZYLUM LT 1
Initiator:	Zsolt VINCZE
Created on:	21/02/2024
Test number:	EL0124
Sample:	S0921
Reference norm:	IEC 61000-3-2 Standard

Test conditions

Luminaire:	IZYLUM LT 1	*Operator:*	Ferenc Novák
Class type:	Class II		
Class, power rating:	Class C; ≤ 25W		
Type of LED modules:	03-52-266; Seoul 5050		
Total number of LEDs:	24 pcs		
Type of driver:	00-53-398; OT 75/170-240/1A0 4DIMLT2 G2 CE		
Tested current(s):	1000 mA		
Control system:	None		

Used devices:

Power supply: APT 320XAC (E001)
Setting: 230V - 50Hz

Measurement device(s):

Primer side measurements: Tektronix PA3000 (E055)

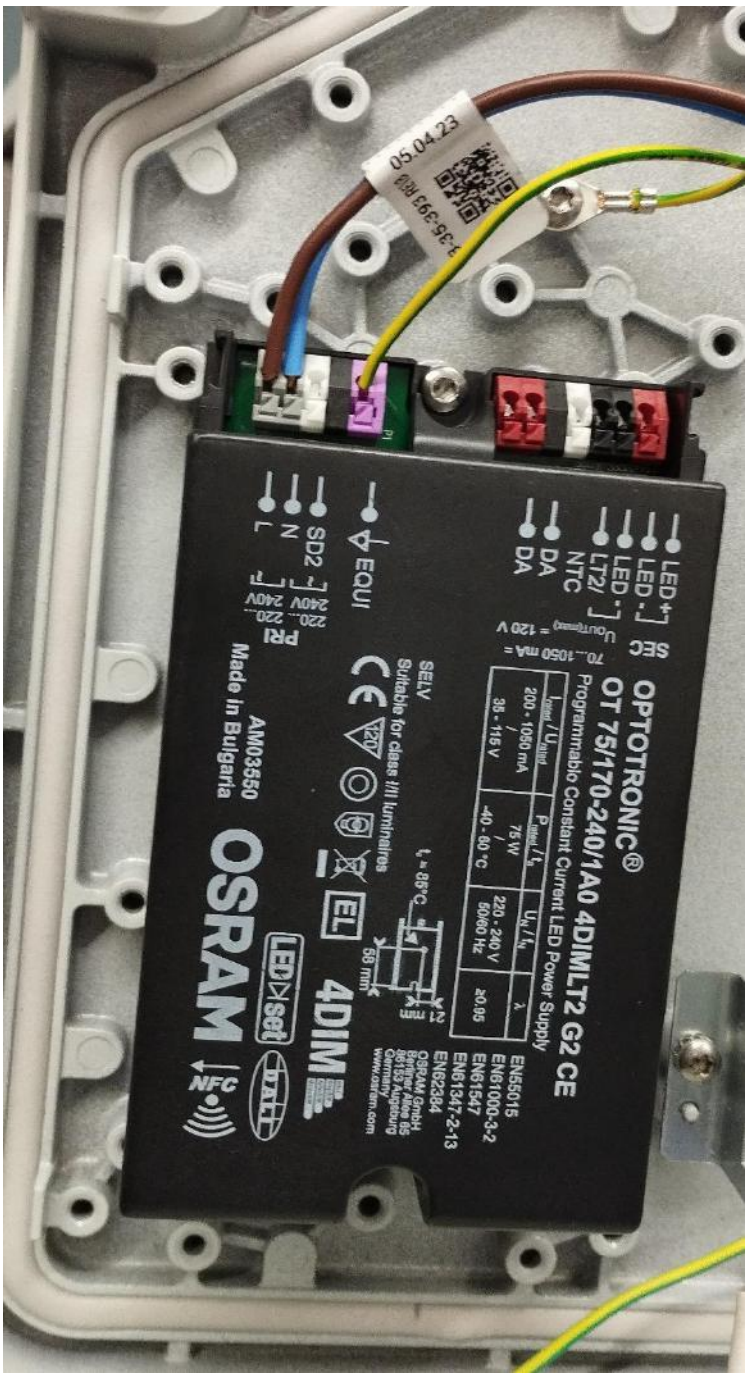
Conclusion

Informative

PF: 0,961
Thd I: 7,58%

Elerical measurement at 1000 - 230V - 50Hz

	Primary
U_{rms} [V]	229,1
I_{rms} [A]	0,223
P [W]	49,1
S [VA]	51,1
Q [VAr]	14,2
CF	2,0
PF	0,961
thd I [%]	7,6



Laboratory
Test report

226-TEST

NBN EN ISO/IEC 17025 :2017

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 04 – Date : 21/04/2021

Thermal Test LED

General information

Subject : IZYLUM LT 1 - 36 SEOUL 5050 - 730mA - PHILIPS FP_75W - Zhaga socket - SPD - Cl II

Asked by : CSIKÓS Balázs

Created on : 10/11/2022

Started on : 23/11/2022

Test number : D220994

Reference norm : IEC/EN 60598-1 Ed9 (2021) + A11 (2022); 60598-2-3 Ed3 (2002) +A1 (2011); 60598-2-5 Ed3 (2015)

Sample(s) : E220641, E220667

Folder : P-F22050

Test conditions

Luminaire : IZYLUM LT 1

Number of LED : 36

LED : Seoul 5050

Driver : DRIVER_SIGNIFY_FP_75W_300.00-1050.00mA_220-240V_DALI_C133_. / 02-58-000

Number of driver(s) : 1

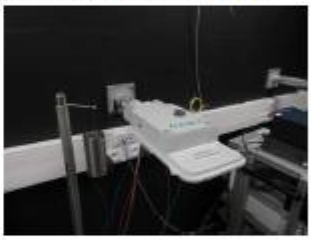
Driver current (mA) : 730

SPD : CPT-Cirprotec-NSS-10-230-C2-WD

Additional components : Zhaga socket

Testing facility : BER - R-Tech

Operator : MESPOUILLE Loic



IMG_3978

Conclusion

Informative

Conclusion :

ΔTs < 80°C no risk of solder crack

Ta: 55°C limited by driver according IEC 60598-2-3 and IEC 60598-2-5 (outdoor use only)
Ta: 50°C limited by driver indoor use and UL standard
Tq: 40°C limited by driver according IEC 62722-2-1

Tq given for 100 khrs of lifetime

Validated by :

LERHO Xavier

Duplicate to : SZÜGYI János Péter, CSIKÓS Balázs, BEDŐ Péter

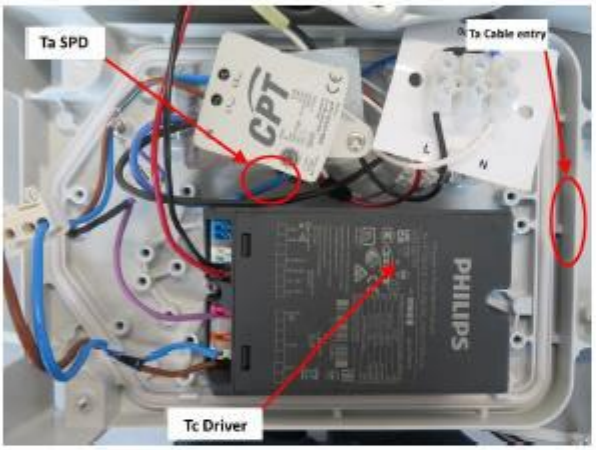
LAB : 28/11/2022

Test(s) details

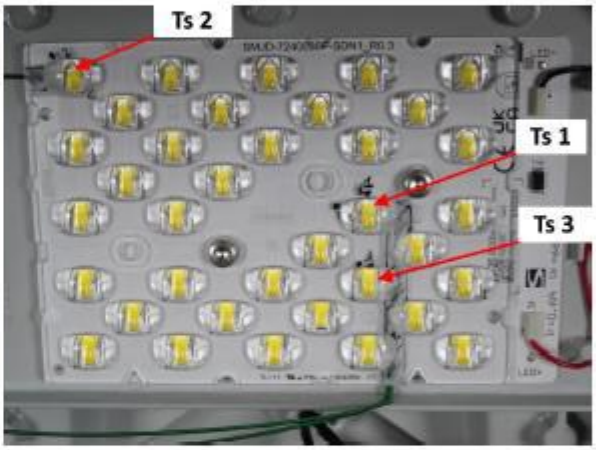
Test(s)

Name	Description	Verdict
Sensors positions	Disposition of the thermocouples on the DUT.	Informative
Test @ 730mA	Test according section 12.4 of IEC 60598-1. The DUT is driven until all thermocouples reach thermal stabilization (i.e. variation = 1K/h). Evaluation of the harmonics behaviour according IEC 61000-3-2 - Not covered by the laboratory's accreditation.	Informative

Sensors positions



IMG_Body



IMG_Led

Test @ 730mA

Verdict(s)

	Ts1	Ts2	Ts3	Driver1	Ta SPD1	Ta Cable entry1
Limit Ta	99.0 °C	99.0 °C	99.0 °C	80.0 °C	80.0 °C	90.0 °C
Limit Tq	85.0 °C	85.0 °C	85.0 °C	70.0 °C	80.0 °C	90.0 °C
Thermocouple T°	57.3 °C	58.7 °C	57.9 °C	50.9 °C	36.4 °C	31.2 °C
Room	24.8 °C	24.8 °C	24.8 °C	24.8 °C	24.8 °C	24.8 °C
E Led	5.5 V	5.5 V	5.5 V			
I Led	0.243 A	0.243 A	0.243 A			
P Led	1.3 W	1.3 W	1.3 W			
Heating	32.5 °C	33.9 °C	33.1 °C	26.1 °C	11.6 °C	6.4 °C
Ta Indoor	66.5 °C	65.1 °C	65.9 °C	53.9 °C	68.4 °C	83.6 °C
Tq	52.5 °C	51.1 °C	51.9 °C	43.9 °C	68.4 °C	83.6 °C
Solder point temperature used as the image of the lens temperature						
Primary EM		Secondary Em Dr1				
U	229.9 V	U	66.5 V			
I	0.239 A	I	0.730 A			
P	53.6 W	P	48.5 W			
PF	0.973					
Efficiency	90.5%					
THD	8.8%					
Harmonics - 100%	PASS					

Test room temperature (°C) *:*

24.8

Measurement equipment *:*

Keithley with thermocouples type K (E101)
Norma 4000 (E165)
APT (E108)

Quantities measured *:*

Qualification of the thermal limits and measurement of the electrical behavior of a luminaire according to PT-S-07

Uncertainties *:*

Statement of uncertainties (K=2, 95% of confidence level):
Temperature: 1,26 K
Voltage (AC): 0,33%
Current (AC): 0,33 %
Power (AC): 0,27%
Voltage (DC): 0,3 %
Current (DC): 0,3%
Power (DC): 0,23%
Anemometer: ± 0,27 m/s

Decision rules *:*

Pass/fail criteria for individual test statement of conformity (Verdict):

No pass/fail criteria applied on electrical measurements, except on harmonics where the criteria of IEC 61000-3-2 are applied (the harmonics are not covered by the laboratory's accreditation).

No pass/fail criteria applied on thermal measurements when performed at 25°C (+/- 5°C), the Ta/Tq values are calculated according GDE-POL-001.

Pass/fail criteria on thermal qualification (test performed at announced Ta or Tq)
At the announced Ta, no component is above its maximum limit of operation : success
At the announced Ta, at least 1 component is above its maximum limit of operation : fail

According to IEC 60598-2-3 and IEC 60598-2-5 Standards, the maximum limit of every component can be augmented by 10 K provided that the luminaire is intended for outdoor use only.

At the announced Tq, no component is above its selected performance limit of operation: success
At the announced Tq, at least 1 component is above its selected performance limit of operation : fail

According to IEC 62722-2-1, the selected performance limit cannot be augmented by 10 K even if the luminaire is intended for outdoor use.

Any Ta/Tq defined value will be rounded down to the nearest multiple of 5.

In any case, test at 25°C or test at Ta or Tq, if delta Ts is above the recommended value of the GDE-POL-001, the test is failed.

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is successful: success, the highest achieved Ta/Tq is reported

Otherwise: fail

End of accredited report *:*

Laboratory
Test report

226-TEST

NBN EN ISO/IEC 17025 :2017

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Member of Schréder Group

FORM L-54 Edition 01 – Revision 04 – Date : 21/04/2021

Tightness test

General information

Subject : IZYLUM LT 2 - 48 SEOUL 5050 - 1050mA - Zhaga socket - Before endurance

Asked by : CSIKÓS Balázs

Created on : 10/11/2022

Started on : 10/11/2022

Test number : D220996

Reference norm : IEC/EN 60598-1 Ed9 (2021) +A11 (2022)

Sample(s) : E220631

Folder : P-F22049

Test conditions

Luminaire : IZYLUM LT 2

Number of LED : 48

LED : Seoul 5050

Driver current (mA) : 1050

Protector Material : Glass Extra Clear wide serigraphy

Protector Shape : Flat

Additional info :

Test realized before endurance D220998.

Sample no toolless.

Testing Facility : BER - R-Tech

Operator : KOY Fiston

IMG_3947

Conclusion

Success

Conclusion :

Statement of conformity according to section 9.2 of IEC/EN 60598-1 Ed9 (2021) + A11 (2022):

IPx6 passed.

Validated by :

LERHO Xavier

Duplicate to : SZÜGYI János Péter, CSIKÓS Balázs, BEDŐ Péter

LAB : 21/11/2022

Test(s) details

Test(s)

Name	Description	Verdict
IPx6	- Luminaire switched ON until stable T° - Luminaire switched OFF and immediately sprayed with water jet - Hose diam. 12,5 mm - Water flow: 100 l/min - Spraying distance: 3 m - Duration of test: 3 minutes	Success

IPx6

Verdict(s)

Pre-conditioning time :

- 68 minutes

Test result :

- Passed : No water entry in the enclosure of the luminaire

IMG_3962

IMG_3953

IMG_3950

Test room temperature (°C) :

23.2

Measurement equipment :

Rotating table (A001/2)
Chronometer (A043/4)
Thermometer (A039/1)
Flowmeter (A001/10)
Lance (A001/12/1)
IPx6 nozzle (A001/12/3)

Quantities measured :

Verification of water/dust ingress within a luminaire enclosure according to
For IP2X: PT-S-14
For IP3X/4X: PT-S-15
For IP5X/6X: PT-S-06
For IPX3/X4: PT-S-01
For IPX5/X6: PT-S-08
For IPX7/X8: PT-S-09
For IPX9(15°C)/X9(80°C) : PT-S-10

Uncertainties :

Statement of uncertainties (K=2, 95% of confidence level):
Time: 0,35 seconds per 10 minutes
Temperature: 0,6 K
Calipers: 0,005 mm
Measuring tape: ± 1,13 mm
Dynamometric key :
From 0.5 to 2.5 Nm : 0,15 Nm
From 2.5 to 5 Nm : 0,22 Nm
From 5 to 25 Nm : 0,83 Nm
From 25 to 60 Nm : 2,73 Nm
From 60 to 100 Nm : 3,55 Nm

For solid ingress test:
IP2X:
Probe dimensions: ± 0,6 mm
Applied force: ± 0,4 N
IP3X:
Probe dimensions: ± 0,3 mm
Applied force:± 0,13 N
IP4X:
Probe dimensions: ± 0,1 mm
Applied force: :± 0,11 N

IP5X/6X
Test duration (talcum suspension time): ± 3 seconds
Talcum mass: 0,02 %

For liquid ingress test:
IPX3/X4
Table rotation: ± 6 sec/rotation
Arms Rotation angle: ± 3°
Water flow: ± 4,5 %
IPX5/X6
Table rotation: ± 6 sec/rotation
Water flow: ± 4 %
Test Distance: +0 / -50 cm

IPX7/X8

Test depth: +10 cm / -0 cm

IPX9

Water temperature: 1.25 K

Test distance: 1.59 mm (for 175mm)

Test duration: 2.49 s (for 3min)

Water pressure: 0.37 N

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict):

For solid ingress test:

IP2X:

If contact possible with live parts: fail

Otherwise: success

IP3X/4X:

For luminaires without draining holes, nor ventilation slots for forced cooling, penetration of the test probe in the enclosure: fail

For luminaires with draining holes, or ventilation slots for forced cooling, if contact possible with live part: fail

Otherwise: success

IP5X/6X

By visual inspection:

If possible hazard due to presence of conductive dust: fail

For IP5X: If no possible hazard due to the presence of conductive dust: success

For IP6X: No presence of talcum: success

For liquid ingress test:

IPX3/X4/X5/X6/IPX9(15°C)/X9(80°C):

By visual inspection:

If possible hazard due to presence of water: fail

If no possible hazard due to the presence of water and no efficient way to evacuate the water: fail

If no possible hazard due to the presence of water and an efficient way to evacuate the water: success

No presence of water: success

IPX7/X8:

By visual inspection:

Presence of water: fail

No presence of water: success

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is failed: failed

Otherwise: success

End of accredited report :

Laboratory
Test report

713-TEST

NBN EN ISO/IEC 17025 :2017

FORM L-54 V2

Schréder
Experts in lightability™
Laboratoire Schréder
Rue de Mons 3 - B-4000 Liège - BELGIUM
TEL.: +32.4.224.71.40

Mechanical impact resistance test

General information

Subject : IZYLUM LT 2 - 4mm flat glass - Zhaga socket

Asked by : CSIKÓS Balázs

Created on : 12/10/2023

Started on : 12/10/2023

Test number : D231241

Reference norm : 62696 Ed1 (2011); IEC/EN 60598-1 Ed9 (2021) + A11 (2022)

Sample(s) : E220611, E220619, E220626, E220632, E220633

Test conditions

Luminaire : IZYLUM LT 2

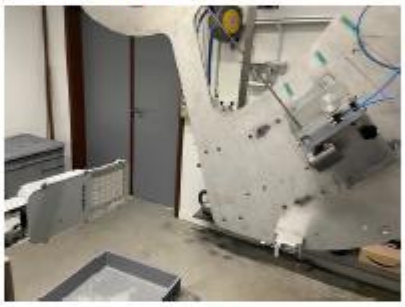
Protector Material : Glass Extra Clear wide serigraphy

Protector Shape : Flat

Protector Thickness (mm) : 4

Testing facility : BER – SCHREDER

Operator : KOY Fiston



IMG_9481

Conclusion

Success

Conclusion :

Statement of conformity according to TR 62696 Ed1 (2011) and section 4.13 of IEC/EN 60598-1 Ed9 (2021) +A11 (2022):
IK08 passed.

Validated by :
Maghe Laurent

Duplicate to : PELSŐCZI Zoltán, GÖRGÉNYI Emese, HORVÁTH Balázs, SZÜGYI János Péter, LÁMFALUSI Ferenc, CSIKÓS Balázs, CSENKI Máté

LAB : 12/10/2023

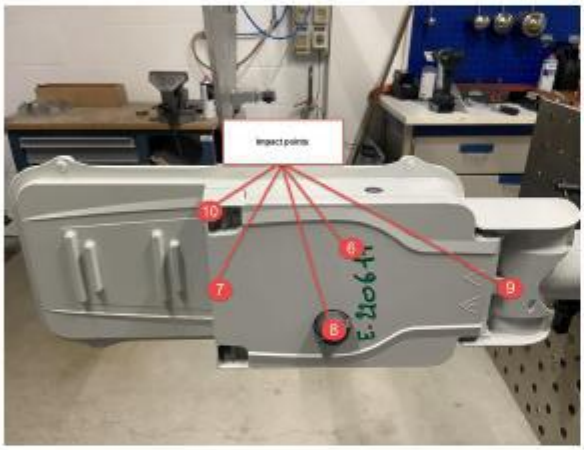
Test(s) details

Test(s)

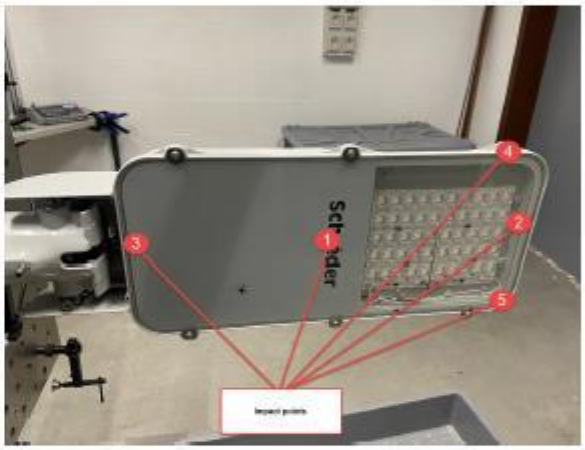
Name	Description	Verdict
Impact points	At pendulum hammer 10 impact points distributed on luminaire surface One impact on each point 2 supplementary impacts on the most fragile point	Success
IK08 on Zhaga	Impact energy : 5 joules Hammer weight : 1.7 Kg Height of fall : 30 Cm	Success
IK08	Impact energy : 5 joules Hammer weight : 1.7 Kg Height of fall : 30 Cm	Success

Impact points

Detail(s)



IMG_9485



IMG_9484

IK08 on Zhaga

Verdict(s)

Result: PASS

IK08

Verdict(s)

Result: PASS

Test room temperature (°C) :

23.1

Measurement equipment :

Pendulum hammer with chariot (M062)
Thermometer (A039/3)
Electronic scale 120kg (M057)
Dynamometric key (M075)

Quantities measured :

For IK 04/05/06: Verification of the mechanical strength of a luminaire according to PT-S-13
For IK07/08/09/10/10+: Verification of the mechanical strength of a luminaire according to PT-S-05

Uncertainties :

Temperature: 0,6 °K
Mass: 0,25 %
Dynamometric key :
- **From 0.5 to 2.5 Nm : 0,15 Nm**
- **From 2.5 to 5 Nm : 0,22 Nm**
- **From 5 to 25 Nm : 0,83 Nm**
- **From 25 to 60 Nm : 2,73 Nm**
- **From 60 to 100 Nm : 3,55 Nm**

For IK 04/05/06, Impact energy: ± 10%
For IK07/08/09/10/10+, Impact energy: ± 1%

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict) according to GDE-GUI-003:

By visual inspection (or other means if necessary):
Luminaire shows dangerous behavior: fail
Luminaire shows no dangerous behavior: success
When several luminaires are tested, 4 out of 5 samples need to show positive result for compliance of the batch

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is successful: success, the highest achieved IK is reported

Otherwise: fail

End of accredited report :

Laboratory
Test report

FORM L-54 V2

Schréder
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Laboratoire Schréder
Rue de Mons 3 - B-4000 Liège - BELGIUM
Tél.: +32.4.224.71.40

EMC test

General information

Subject : IZYLUM LT2
Asked by : LERHO Xavier
Created on : 01/06/2023
Started on : 01/06/2023
Test number : D230620
Reference norm : EN 55015 (2019) +A11 (2020) - IEC/EN 61547 Ed3 (2020) + IEC/EN 61000-3-2 Ed5 (2018) +A1 (2020)

Test conditions

Luminaire : IZYLUM LT 2
Operator : LERHO Xavier
Description :

This report covers the tested drivers below in Cl. I & Cl II:
- SIGNIFY FP 110W (02-58-002)
- SIGNIFY SR 110W (01-42-097)
- OSRAM 4DIM 110W (00-53-404)
- OSRAM DX 110W (00-98-794)
- OSRAM ICUTRONIC (02-53-576)
- MOSO U6 120W (02-04-917)
- MOSO XCP 105W (03-50-424)
- INVENTRONICS EBS 120W (03-49-073)
- INVENTRONICS EUM 100W (02-43-632 Cl. II & 03-45-517 Cl. I)

Number of LEDs : 48
LED Type : Seoul 5050
Number of driver(s) : 1
Current setting (mA) : 1050
Dimming minimum value : 20
Dimming protocol : DALI/0-10V
Control system : NEMA or Zhaga socket in function of the configuration.
Overvoltage protection : SP3/230/10K/i for Cl. I and MOV for Cl. II
Testing facility : HUS - Schréder Magyarország Zrt.

Conclusion

Success

Conclusion :

IZYLUM LT2 Cl. I & II with drivers as in description above complies in "Conducted emissions" & "CDNE method" tests (EN55015) + Harmonics (EN61000-3-2) in internal lab.

Validated by :
LERHO Xavier

Duplicate to : SZÜGYI János Péter, Dorflinger Tamas, VINCZE Zsolt
LAB : 05/06/2023

Test(s) details

Test(s)

Name	Description	Verdict
IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY FP 110W (02-58-002) - 1050mA - NEMA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY FP 110W (02-58-002) - 1050mA - NEMA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY SR 110W (01-42-097) - 1050mA - ZHAGA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY SR 110W (01-42-097) - 1050mA - ZHAGA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM 4DIM 110W (00-53-404) - 1050mA - NEMA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM 4DIM 110W (00-53-404) - 1050mA - NEMA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM DX 110W (00-98-794) - 1050mA - ZHAGA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM DX 110W (00-98-794) - 1050mA - ZHAGA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM ICUTONIC 110W (02-53-576) - 1050mA - NEMA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM ICUTONIC 110W (02-53-576) - 1050mA - NEMA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO U6 120W (02-04-917) - 1050mA - NEMA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO U6 120W (02-04-917) - 1050mA - NEMA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success

IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO XCP 105W (03-50-424) - 1050mA - NEMA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO XCP 105W (03-50-424) - 1050mA - NEMA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EBS 120W (03-49-073) - 1050mA - ZHAGA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EBS 120W (03-49-073) - 1050mA - ZHAGA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EUM 100W (03-45-517) - 1050mA - ZHAGA socket - Cl. I	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success
IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EUM 100W (02-43-632) - 1050mA - ZHAGA socket - Cl. II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success

IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY FP 110W (02-58-002) - 1050mA - NEMA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230214 to 218.

IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY FP 110W (02-58-002) - 1050mA - NEMA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230133 to 137.

IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY SR 110W (01-42-097) - 1050mA - ZHAGA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230219 to 223.

IZYLUM LT 2 - 48LEDs SEOUL5050 - SIGNIFY SR 110W (01-42-097) - 1050mA - ZHAGA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230128 to 132.

IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM 4DIM 110W (00-53-404) - 1050mA - NEMA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230138 to 142.

IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM 4DIM 110W (00-53-404) - 1050mA - NEMA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230143 to 147.

IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM DX 110W (00-98-794) - 1050mA - ZHAGA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230148 to 152.

IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM DX 110W (00-98-794) - 1050mA - ZHAGA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230153 to 157.

IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM ICUTONIC 110W (02-53-576) - 1050mA - NEMA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230158 to 162.

IZYLUM LT 2 - 48LEDs SEOUL5050 - OSRAM ICUTONIC 110W (02-53-576) - 1050mA - NEMA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230163 to 167.

IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO U6 120W (02-04-917) - 1050mA - NEMA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230178 to 182.

IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO U6 120W (02-04-917) - 1050mA - NEMA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230183 to 187.

IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO XCP 105W (03-50-424) - 1050mA - NEMA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230188 to 192.

IZYLUM LT 2 - 48LEDs SEOUL5050 - MOSO XCP 105W (03-50-424) - 1050mA - NEMA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230234 to 238.

IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EBS 120W (03-49-073) - 1050mA - ZHAGA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230244 to 248.

IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EBS 120W (03-49-073) - 1050mA - ZHAGA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230195 to 198.

IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EUM 100W (03-45-517) - 1050mA - ZHAGA socket - Cl. I

Verdict(s)

Internal reports (EMC Database): HUS230199 to 203.

IZYLUM LT 2 - 48LEDs SEOUL5050 - INVENTRONICS EUM 100W (02-43-632) - 1050mA - ZHAGA socket - Cl. II

Verdict(s)

Internal reports (EMC Database): HUS230239 to 243.

Number of appendix pages : **280**

End of test report :

Laboratory
Test report

226-TEST

NBN EN ISO/IEC 17025 :2017

FORM L-54 Edition 01 – Revision 04 – Date : 21/04/2021

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

Thermal Test LED

General information

Subject : IZYLUM LT 2 - 72 SEOUL 5050 - 850mA - Philips FP 165W - Zhaga socket

Asked by : CSIKÓS Balázs
Created on : 15/12/2022
Started on : 19/12/2022
Test number : D221139
Reference norm : IEC/EN 60598-1 Ed9 (2021) + A11 (2022); 60598-2-3 Ed3 (2002) +A1 (2011); 60598-2-5 Ed3 (2015)
Sample(s) : E220612
Folder : P-F22049

Test conditions

Luminaire : IZYLUM LT 2

Number of LED : 72

LED : Seoul 5050

Driver : DRIVER_SIGNIFY_FP_165W_300.00-1050.00mA_220-240V_DALI_C170_. / 02-58-004

Number of driver(s) : 1

Driver current (mA) : 850

Control system : Zagha

Operator : CLOSSET Frédérick

lum

Conclusion

Informative

Conclusion :

ΔTs < 80°C no risk of solder crack

Ta: 55°C limited by lenses according IEC 60598-2-3 and IEC 60598-2-5 (outdoor use only)
Ta: 45°C limited by lenses indoor use and UL standard
Tq: 30°C limited by lenses according IEC 62722-2-1

Tq given for 100 khrs of lifetime

Validated by :

LERHO Xavier

Duplicate to : PELSŐCZI Zoltán, GÖRGÉNYI Emese, HORVÁTH Balázs, SZÜGYI János Péter, LÁMFALUSI Ferenc, CSIKÓS Balázs, CSENKI Máté

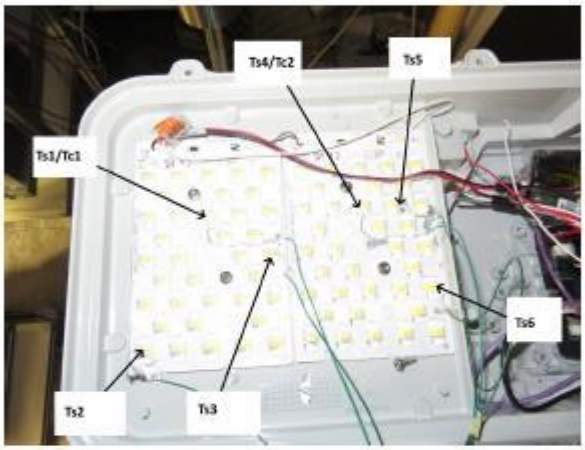
LAB : 20/12/2022

Test(s) details

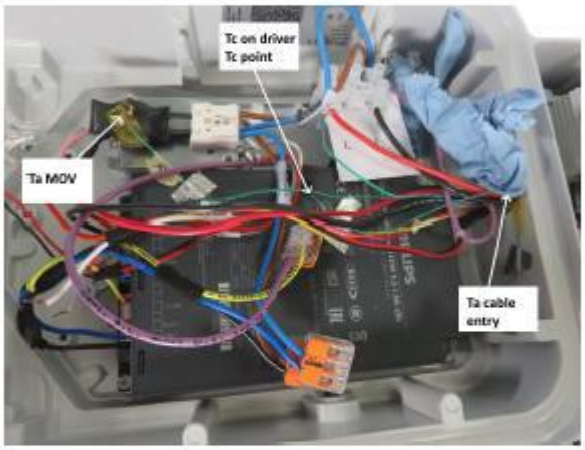
Test(s)

Name	Description	Verdict
Sensors positions	Disposition of the thermocouples on the DUT.	Informative
Test @ 850mA	Test according section 12.4 of IEC 60598-1. The DUT is driven until all thermocouples reach thermal stabilization (i.e. variation = 1K/h). Evaluation of the harmonics behaviour according IEC 61000-3-2 - Not covered by the laboratory's accreditation.	Informative

Sensors positions



pos_thermo1



pos_thermo2

Test @ 850mA

Verdict(s)

	Ts1	Ts2	Ts3	Ts4	Ts5	Ts6	Driver	MOV	Ta Cable entry
Limit Ta	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	90.0 °C	90.0 °C	90.0 °C
Limit Tq	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	80.0 °C	90.0 °C	90.0 °C
Thermocouple T°	71.2 °C	74.7 °C	73.6 °C	68.0 °C	68.4 °C	68.1 °C	57.4 °C	38.1 °C	31.2 °C
Room	22.5 °C	22.5 °C	22.5 °C	22.5 °C	22.5 °C	22.5 °C	22.5 °C	22.5 °C	22.5 °C
E Led	5.6 V	5.6 V	5.6 V	5.6 V	5.6 V	5.6 V			
I Led	0.281 A	0.281 A	0.281 A	0.281 A	0.281 A	0.281 A			
P Led	1.6 W	1.6 W	1.6 W	1.6 W	1.6 W	1.6 W			
Heating	48.7 °C	52.2 °C	51.1 °C	45.5 °C	45.9 °C	45.6 °C	34.9 °C	15.6 °C	8.7 °C
Ta Indoor	50.3 °C	46.8 °C	47.9 °C	53.5 °C	53.1 °C	53.4 °C	55.1 °C	74.4 °C	81.3 °C
Tq	36.3 °C	32.8 °C	33.9 °C	39.5 °C	39.1 °C	39.4 °C	45.1 °C	74.4 °C	81.3 °C
Solder point temperature used as the image of the lens temperature									
Primary EM		Secondary Em Dr1							
U	230.0 V	U	133.6 V						
I	0.544 A	I	0.844 A						
P	122.5 W	P	112.8 W						
PF	0.979								
Efficiency	92.1%								
THD	5.0%								
Harmonics - 100%	PASS								

Test room temperature (°C) :

22.5

Measurement equipment :

Keithley with thermocouples type K (E097)
Norma 4000 (E110)
APT (E102)

Quantities measured :

Qualification of the thermal limits and measurement of the electrical behavior of a luminaire according to PT-S-07

Uncertainties :

Statement of uncertainties (K=2, 95% of confidence level):
Temperature: 1,26 K
Voltage (AC): 0,33%
Current (AC): 0,33 %
Power (AC): 0,27%
Voltage (DC): 0,3 %
Current (DC): 0,3%
Power (DC): 0,23%
Anemometer: ± 0,27 m/s

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict):

No pass/fail criteria applied on electrical measurements, except on harmonics where the criteria of IEC 61000-3-2 are applied (the harmonics are not covered by the laboratory's accreditation).

No pass/fail criteria applied on thermal measurements when performed at 25°C (+/- 5°C), the Ta/Tq values are calculated according GDE-POL-001.

Pass/fail criteria on thermal qualification (test performed at announced Ta or Tq)
At the announced Ta, no component is above its maximum limit of operation : success
At the announced Ta, at least 1 component is above its maximum limit of operation : fail

According to IEC 60598-2-3 and IEC 60598-2-5 Standards, the maximum limit of every component can be augmented by 10 K provided that the luminaire is intended for outdoor use only.

At the announced Tq, no component is above its selected performance limit of operation: success
At the announced Tq, at least 1 component is above its selected performance limit of operation : fail

According to IEC 62722-2-1, the selected performance limit cannot be augmented by 10 K even if the luminaire is intended for outdoor use.

Any Ta/Tq defined value will be rounded down to the nearest multiple of 5.

In any case, test at 25°C or test at Ta or Tq, if delta Ts is above the recommended value of the GDE-POL-001, the test is failed.

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is successful: success, the highest achieved Ta/Tq is reported

Otherwise: fail

End of accredited report :

Laboratory
Test report

713-TEST
NBN EN ISO/IEC 17025 :2017

FORM L-54 V2

Schréder
Experts in lightability™

Laboratoire Schréder
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Tightness test

General information

Subject : IZYLUM LT 3 - 108 Seoul 5050 - MOSO 200W - 960mA GLASS - Nema socket - Before endurance
Asked by : NAGY Ádám
Created on : 17/05/2023
Started on : 17/05/2023
Test number : D230567
Reference norm : IEC/EN 60598-1 Ed9 (2021) +A11 (2022)
Sample(s) : E230365

Test conditions

Luminaire : IZYLUM LT 3
Number of LED : 108
LED : Seoul 5050
Driver current (mA) : 960
Protector Material : Glass Extra Clear
Protector Shape : Flat
Additional info :
Test realized before endurance D230569
Testing Facility : BER - SCHREDER

Operator : Abry Marc

Conclusion

Success

Conclusion :
Statement of conformity according to section 9.2 of IEC/EN 60598-1 Ed9 (2021) + A11 (2022):
IPx6 passed.

Note: based on the tests IPX5/IPX6 the product is considered to pass the rain test according to §17.5.2 of UL 1598:2021*
* not covered by BELAC accreditation

Test(s) details

Test(s)

Name	Description	Verdict
IPx6	- Luminaire switched ON until stable T° - Luminaire switched OFF and immediately sprayed with water jet - Hose diam. 12,5 mm - Water flow: 100 l/min - Spraying distance: 3 m - Duration of test: 3 minutes	Success

IPx6

Verdict(s)

Pre-conditioning time :

- 70 minutes

Test result :

- Passed : No water entry in the enclosure of the luminaire

Detail(s)

IP x6

Result-1

Result-2

Result-3

Result-4

Result-5

Test room temperature (°C) :

23.8

Measurement equipment :

Rotating table (A001/2)
Chronometer (A068)
Thermometer (A039)
Flowmeter (A001/9)
Lance (A001/12/1)
IPx6 nozzle (A001/12/5)

Quantities measured :

Verification of water/dust ingress within a luminaire enclosure according to
- **For IP2X: PT-S-14**
- **For IP3X/4X: PT-S-15**
- **For IP5X/6X: PT-S-06**
- **For IPX3/X4: PT-S-01**
- **For IPX5/X6: PT-S-08**
- **For IPX7/X8: PT-S-09**
- **For IPX9(15°C)/X9(80°C) : PT-S-10**

Uncertainties :

Statement of uncertainties (K=2, 95% of confidence level):
Time: 0,35 seconds per 10 minutes
Temperature: 0,6 K
Calipers: 0,005 mm
Measuring tape: ± 1,13 mm
Dynamometric key :
- **From 0.5 to 2.5 Nm : 0,15 Nm**
- **From 2.5 to 5 Nm : 0,22 Nm**
- **From 5 to 25 Nm : 0,83 Nm**
- **From 25 to 60 Nm : 2,73 Nm**
- **From 60 to 100 Nm : 3,55 Nm**

For solid ingress test:
IP2X:
- **Probe dimensions: ± 0,6 mm**
- **Applied force: ± 0,4 N**

IP3X:
- **Probe dimensions: ± 0,3 mm**
- **Applied force:± 0,13 N**

IP4X:
- **Probe dimensions: ± 0,1 mm**
- **Applied force: :± 0,11 N**

IP5X/6X
- **Test duration (talcum suspension time): ± 3 seconds**
- **Talcum mass: 0,02 %**

For liquid ingress test:
IPX3/X4
- **Table rotation: ± 6 sec/rotation**
- **Arms Rotation angle: ± 3°**
- **Water flow: ± 4,5 %**

IPX5/X6
- **Table rotation: ± 6 sec/rotation**
- **Water flow: ± 4 %**
- **Test Distance: +0 / -50 cm**

IPX7/X8
- **Test depth: +10 cm / -0 cm**

IPX9
- **Water temperature: 1.25 K**

Test distance: 1.59 mm (for 175mm)
Test duration: 2.49 s (for 3min)
Water pressure: 0.37 N

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict):
For solid ingress test:
IP2X:
If contact possible with live parts: fail
Otherwise: success
IP3X/4X:
For luminaires without draining holes, nor ventilation slots for forced cooling, penetration of the test probe in the enclosure: fail
For luminaires with draining holes, or ventilation slots for forced cooling, if contact possible with live part: fail
Otherwise: success
IP5X/6X
By visual inspection:
If possible hazard due to presence of conductive dust: fail
For IP5X: If no possible hazard due to the presence of conductive dust: success
For IP6X: No presence of talcum: success
For liquid ingress test:
IPX3/X4/X5/X6/IPX9(15°C)/X9(80°C):
By visual inspection:
If possible hazard due to presence of water: fail
If no possible hazard due to the presence of water and no efficient way to evacuate the water: fail
If no possible hazard due to the presence of water and an efficient way to evacuate the water: success
No presence of water: success
IPX7/X8:
By visual inspection:
Presence of water: fail
No presence of water: success

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is failed: failed

Otherwise: success

End of accredited report :

Laboratory
Test report

713-TEST
NBN EN ISO/IEC 17025 :2017

FORM L-54 V2

Schréder
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Laboratoire Schréder
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Mechanical impact resistance test

General information

Subject : IZYLUM LT 3 - GLASS 4mm - Side-Entry60
Asked by : NAGY Ádám
Created on : 29/08/2023
Started on : 11/09/2023
Test number : D230996
Reference norm : IEC 62696 Ed1 (2011); IEC/EN 60598-1 Ed9 (2021) + A11 (2022)
Sample(s) : E230624, E230625

Test conditions

Luminaire : IZYLUM LT 3
Quantity of sample under test : 5
Protector Material : Glass Extra Clear wide serigraphy
Protector Shape : Flat
Serigraphy : Organic
Protector Thickness (mm) : 4
Protector supplier : External - Delasan Vidres
Testing facility : BER - SCHREDER

Operator : Philippe Léonard

IMG_6435

Conclusion

Success

Conclusion :
Statement of conformity according to TR 62696 Ed1 (2011) and section 4.13 of IEC/EN 60598-1 Ed9 (2021) +A11 (2022):
IK08 passed.

Test(s) details

Test(s)

Name	Description	Verdict
Impact points		Informative
IK08	Impact energy : 5 joules Hammer weight : 1.7 Kg Height of fall : 30 Cm	Success

Impact points

Detail(s)

IMG_6435(a)

IK08

Verdict(s)

- NOT TESTED																
IK 08	Impact	1			2			3			4			5		
Sample	Shot	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1		Pass	-	-	Pass	Pass	Pass	Pass	-	-	Pass	-	-	Pass	-	-
2		Pass	-	-	Pass	Pass	Pass	Pass	-	-	Pass	-	-	Pass	-	-
3		Pass	-	-	Pass	Pass	Pass	Pass	-	-	Pass	-	-	Pass	-	-
4		Pass	-	-	Pass	**Fail**	-	Pass	-	-	Pass	-	-	Pass	-	-
5		Pass	-	-	Pass	Pass	Pass	Pass	-	-	Pass	-	-	Pass	-	-

Detail(s)

IMG_6436

IMG_6437

Test room temperature (°C) :

24.5

Measurement equipment :

Pendulum hammer with chariot (M062)
Thermometer (A056)

Quantities measured :

For IK 04/05/06: Verification of the mechanical strength of a luminaire according to PT-S-13
For IK07/08/09/10/10+: Verification of the mechanical strength of a luminaire according to PT-S-05

Uncertainties :

Temperature: 0,6 °K
Mass: 0,25 %
Dynamometric key :
- **From 0.5 to 2.5 Nm : 0,15 Nm**
- **From 2.5 to 5 Nm : 0,22 Nm**
- **From 5 to 25 Nm : 0,83 Nm**
- **From 25 to 60 Nm : 2,73 Nm**
- **From 60 to 100 Nm : 3,55 Nm**

For IK 04/05/06, Impact energy: ± 10%
For IK07/08/09/10/10+, Impact energy: ± 1%

Decision rules :

Pass/fail criteria for individual test statement of conformity (Verdict) according to GDE-GUI-003:

By visual inspection (or other means if necessary):
Luminaire shows dangerous behavior: fail
Luminaire shows no dangerous behavior: success
When several luminaires are tested, 4 out of 5 samples need to show positive result for compliance of the batch

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is successful: success, the highest achieved IK is reported

Otherwise: fail

End of accredited report :

Laboratory
Test report

FORM L-54 V2

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EMC test

General information

Subject : IZYLUM LT 3 - 87 Seoul 5050 - 1000mA - SIGNIFY SR 165W 300-1,050mA 220-240V D4i C170 . - Zhaga socket - Cl II
Asked by : SZÜGYI János Péter
Created on : 06/12/2023
Started on : 07/12/2023
Test number : D231461
Reference norm : IEC/EN 61000-3-2 Ed5 (2018) +A1 (2020); EN 55015 (2019) +A11 (2020)
Sample(s) : E230852, E230854

Test conditions

Luminaire : IZYLUM LT 3
Electrical class : Class II EU
Number of LEDs : 87
LED Type : Seoul 5050
Driver : DRIVER_SIGNIFY_SR_165W_300-1,050mA_220-240V_D4i_C170_.
/ 01-31-423
Number of driver(s) : 1
Current setting (mA) : 1000
Dimming minimum value : 20
Dimming protocol : DALI
Control system : LVS
Overvoltage protection : Varistance Littelfuse TMOV20RP275EX3486
Testing facility : BER – SCHREDER

Operator : LUCIANI Samuel

Conclusion

Success

Conclusion :

IZYLUM LT3 Cl. II with SIGNIFY SR 165W driver complies with "Conducted emissions" & "CDNE method" tests (EN55015) + Harmonics (EN61000-3-2) in internal lab.

Remark: the results in CDNE (100%) are very closed of the limits.

Test(s) details

Test(s)

Name	Description	Verdict
EMC compliance in R-Tech lab - Class II	Emission measurements (EN 55015): - Radiated emissions - Conducted emissions Harmonics (IEC/EN 61000-3-2)	Success

EMC compliance in R-Tech lab - Class II

Verdict(s)

Internal reports (EMC Database):BER231801 to 1805.

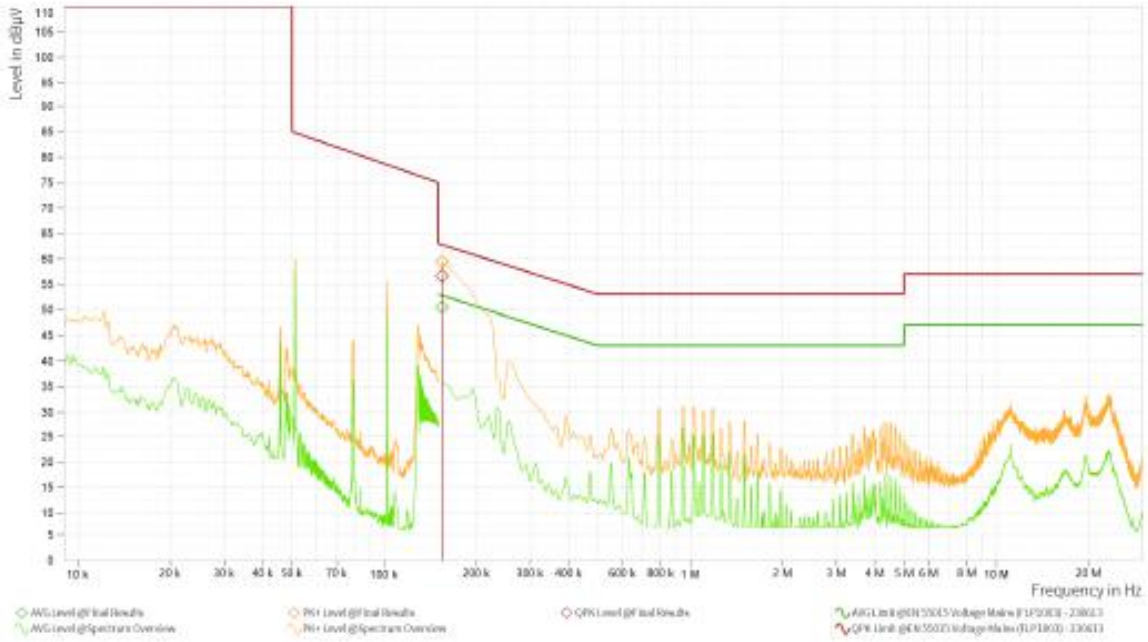
Number of appendix pages : **13**

End of test report :

Schreder SA - EMC Test Report

Test Information

Product	IZYLUM LT3
Sample reference	E230852
LED number & type	87 SEOUL 5050
Class	II
Current	1000mA
Dimming	20%
Driver name	SIGNIFY SR 165W 300-1,050mA
Driver PLM	01-31-423
Socket	LVS
Test	Conducted emission - EN55015
Operator	SLI
Comments	



EMI Final Results (1/2)

Rg	Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	PK+ Level [dBµV]	PK+: QPK Limit [dBµV]	PK+ Margin [dB]	AVG Level [dBµV]	AVG Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [ms]	Time of Meas.
2	0.154				59.44	62.76	3.32				8.53	L1	9.000	50.000	09:47:08
2	0.154	56.58	62.76	6.18				50.44	52.76	2.32	8.53	L1	9.000	1,000.000	09:49:01

EMI Final Results (2/2)

Rg	Frequency [MHz]	Source	Comment
2	0.154	Critical Points	
2	0.154	Critical Points	

EUT Picture


PHILIPS

Schreder SA - EMC Test Report

Test Information

Product	IZYLUM LT3
Sample reference	E230852
LED number & type	87 SEOUL 5050
Class	II
Current	1000mA
Dimming	100%
Driver name	SIGNIFY SR 165W 300-1,050mA
Driver PLM	01-31-423
Socket	LVS
Test	Conducted emission - EN55015
Operator	SLI
Comments	

EMI Final Results

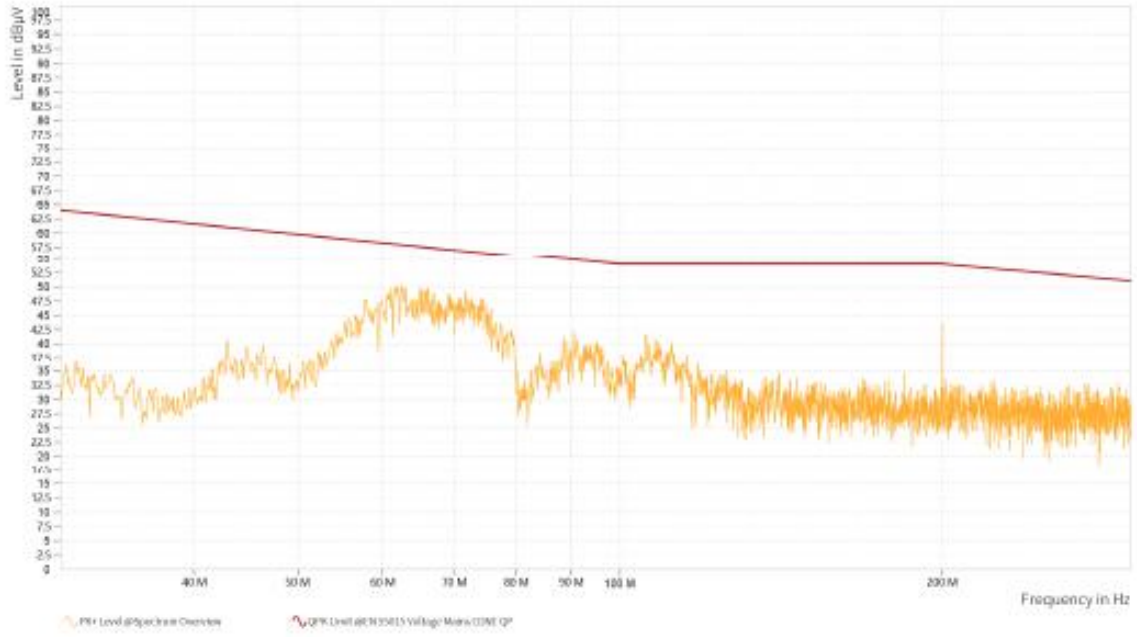
Rg	Frequency [MHz]	PK+ Level [dBµV]	PK+: QPK Limit [dBµV]	PK+ Margin [dB]	AVG Level [dBµV]	AVG Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [ms]	Time of Meas.	Source	Comment

EUT Picture

Schreder SA - EMC Test Report

Test Information

Product	IZYLUM LT3
Sample reference	E230852
LED number & type	87 SEOUL 5050
Class	II
Current	1000mA
Dimming	20%
Driver Name	SIGNIFY SR 165W 300-1,050mA
Driver PLM	01-31-423
Socket	LVS
Test standard	Radiated emissions (CDNE) - EN55015
Operator	SLI
Comments	



EMI Final Results

Rg	Frequency [MHz]	PK+ Level [dBµV]	PK+: QPK Limit [dBµV]	PK+ Margin [dB]	Correction [dB]	Meas. BW [kHz]	Meas. Time [ms]	Time of Meas.	Source	Comment

EUT Picture

Schreder SA - EMC Test Report

Test Information

Product	IZYLUM LT3
Sample reference	E230852
LED number & type	87 SEOUL 5050
Class	II
Current	1000mA
Dimming	100%
Driver Name	SIGNIFY SR 165W 300-1,050mA
Driver PLM	01-31-423
Socket	LVS
Test standard	Radiated emissions (CDNE) - EN55015
Operator	SLI
Comments	

EMI Final Results

Rg	Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	PK+ Level [dBµV]	PK+: QPK Limit [dBµV]	PK+ Margin [dB]	Correction [dB]	Meas. BW [kHz]	Meas. Time [ms]	Time of Meas.	Source	Comment
1	67.800				56.34	57.23	0.89	19.82	120.000	20.000	10:12:32	Critical Points	
1	67.800	57.07	57.23	0.16				19.82	120.000	1,000.000	10:13:02	Critical Points	
1	68.857	56.81	57.10	0.29				19.81	120.000	1,000.000	10:13:00	Critical Points	
1	68.857				55.99	57.10	1.11	19.81	120.000	20.000	10:12:32	Critical Points	
1	70.030				55.57	56.96	1.38	19.80	120.000	20.000	10:12:32	Critical Points	
1	70.030	56.10	56.96	0.86				19.80	120.000	1,000.000	10:12:57	Critical Points	
1	71.146	55.15	56.83	1.68				19.81	120.000	1,000.000	10:12:55	Critical Points	
1	71.146				53.80	56.83	3.02	19.81	120.000	20.000	10:12:32	Critical Points	
1	71.791				55.81	56.75	0.94	19.82	120.000	20.000	10:12:32	Critical Points	
1	71.791	54.65	56.75	2.10				19.82	120.000	1,000.000	10:12:52	Critical Points	
1	72.320	53.99	56.69	2.70				19.82	120.000	1,000.000	10:12:50	Critical Points	
1	72.320				54.93	56.69	1.77	19.82	120.000	20.000	10:12:32	Critical Points	
1	72.730				53.88	56.64	2.76	19.83	120.000	20.000	10:12:32	Critical Points	
1	72.730	53.52	56.64	3.13				19.83	120.000	1,000.000	10:12:47	Critical Points	
1	73.259				53.16	56.58	3.43	19.83	120.000	20.000	10:12:32	Critical Points	
1	73.259	52.80	56.58	3.78				19.83	120.000	1,000.000	10:12:45	Critical Points	
1	73.787	52.09	56.52	4.43				19.84	120.000	1,000.000	10:12:42	Critical Points	
1	73.787				51.91	56.52	4.61	19.84	120.000	20.000	10:12:32	Critical Points	

EUT Picture

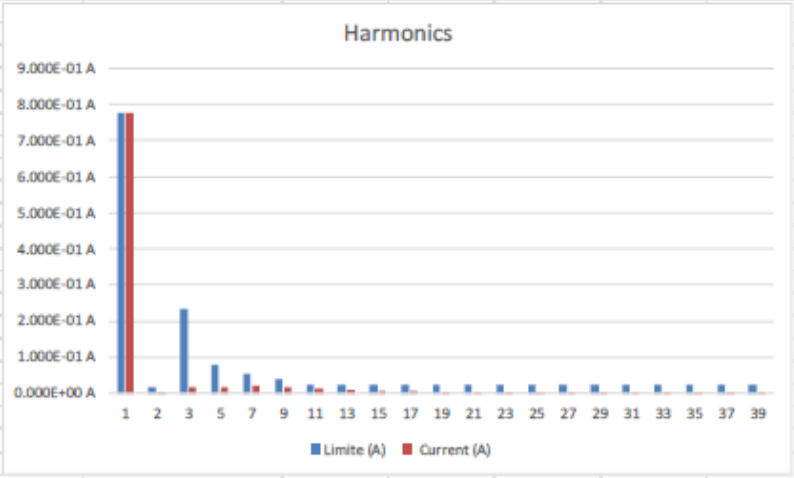

PHILIPS

Harmonic current emissions (IEC 61000-3-2, Class C, > 25W)

E230852 - IZYLUM LT3 - Cl.II - 87LEDS
1000mA - Dimming 100%
PHILIPS SR 165W
01-31-423

Date	07/12/2023		Operator	sluciani	Norma AQ number	E068
			Power Factor	0.9922	Cos $\varphi_{(H01)}$	0.9937

Harmonic	Current (A)	Limite (A)
1	**7.786E-01 A**	7.786E-01 A
2	1.839E-03 A	1.557E-02 A
3	1.559E-02 A	2.318E-01 A
5	1.597E-02 A	7.786E-02 A
7	1.916E-02 A	5.450E-02 A
9	1.616E-02 A	3.893E-02 A
11	1.262E-02 A	2.336E-02 A
13	9.460E-03 A	2.336E-02 A
15	6.834E-03 A	2.336E-02 A
17	5.150E-03 A	2.336E-02 A
19	3.502E-03 A	2.336E-02 A
21	1.694E-03 A	2.336E-02 A
23	1.272E-03 A	2.336E-02 A
25	2.905E-04 A	2.336E-02 A
27	7.044E-04 A	2.336E-02 A
29	6.113E-04 A	2.336E-02 A
31	1.190E-03 A	2.336E-02 A
33	7.208E-04 A	2.336E-02 A
35	8.318E-04 A	2.336E-02 A
37	8.789E-04 A	2.336E-02 A
39	4.090E-04 A	2.336E-02 A



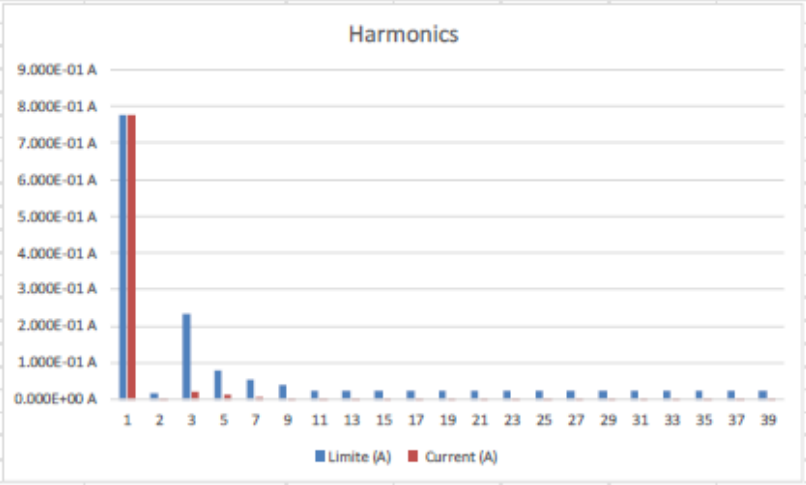
input	
Urms	229.6 V
Irms	0.780 A
Prms	177.7 W
S	179.1 VA
Q	-22.3 VAR
PF	0.9922
$I_{(H01)}$	0.779 A
Cos $\varphi_{(H01)}$	0.9937
THD	5.5%

Harmonic current emissions (IEC 61000-3-2, Class C, > 25W)

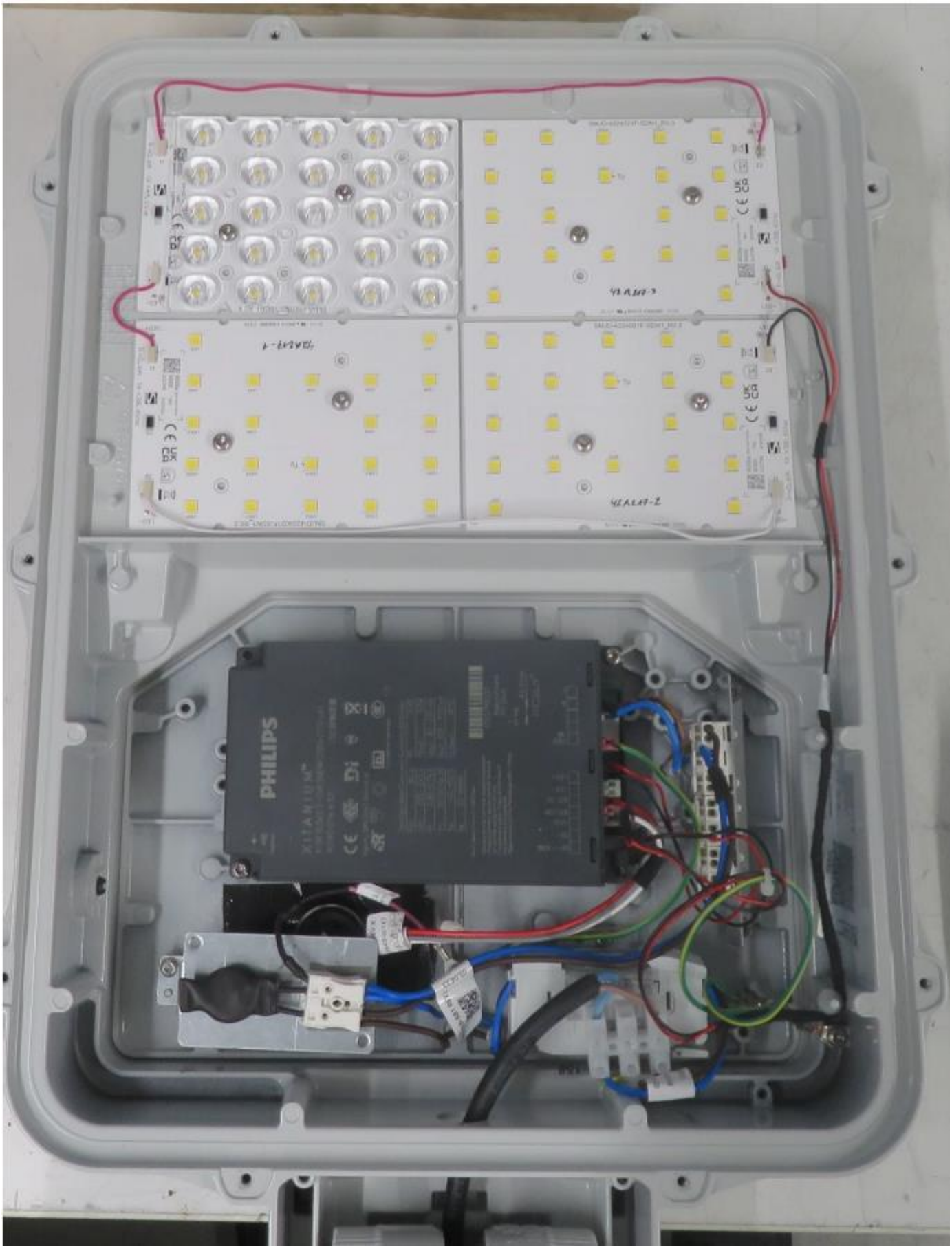
E230852 - IZYLUM LT3 - Cl.II - 87LEDS
1000mA - Dimming 20%
PHILIPS SR 165W
01-31-423

Date	07/12/2023		Operator	sluciani	Norma AQ number	E068
			Power Factor	0.9922	Cos $\varphi_{(H01)}$	0.9307

Harmonic	Current (A)	Limite (A)
1	**7.786E-01 A**	7.786E-01 A
2	3.603E-04 A	1.557E-02 A
3	2.034E-02 A	2.318E-01 A
5	1.195E-02 A	7.786E-02 A
7	7.195E-03 A	5.450E-02 A
9	3.143E-03 A	3.893E-02 A
11	1.388E-03 A	2.336E-02 A
13	1.056E-03 A	2.336E-02 A
15	7.830E-04 A	2.336E-02 A
17	8.005E-04 A	2.336E-02 A
19	1.048E-03 A	2.336E-02 A
21	1.253E-03 A	2.336E-02 A
23	7.471E-04 A	2.336E-02 A
25	3.948E-04 A	2.336E-02 A
27	5.901E-04 A	2.336E-02 A
29	8.923E-04 A	2.336E-02 A
31	8.525E-04 A	2.336E-02 A
33	7.471E-04 A	2.336E-02 A
35	5.799E-04 A	2.336E-02 A
37	3.871E-04 A	2.336E-02 A
39	6.630E-04 A	2.336E-02 A



input	
Urms	230.0 V
Irms	0.168 A
Prms	35.6 W
S	38.7 VA
Q	-15.2 VAR
PF	0.9198
$I_{(H01)}$	0.166 A
Cos $\varphi_{(H01)}$	0.9307
THD	15.5%


PHILIPS

Laboratory
Test report

FORM L-54 V2

713-TEST

NBN EN ISO/IEC 17025 :2017

Schréder
Experts in lightability™

Laboratoire Schréder
Rue de Mons 3 - B-4000 Liège - BELGIUM
Tél. : +32.4.224.71.40

Thermal Test LED

General information

Subject : IZYLUM LT 3 - 100 Samsung LH351C - 500mA - Philips FP 165W - Zhaga socket

Asked by : NAGY Ádám

Created on : 06/06/2023

Started on : 04/07/2023

Test number : D230655

Reference norm : IEC/EN 60598-1 Ed9 (2021) + A11 (2022); 60598-2-3 Ed3 (2002) +A1 (2011); 60598-2-5 Ed3 (2015)

Sample(s) : E230365, E230481

Test conditions

Luminaire : IZYLUM LT 3

Number of LED : 100

LED : Samsung LH351C

Driver : DRIVER_SIGNIFY_FP_165W_200-700mA_220-240V_DALI_C170_. / 02-58-003

Number of driver(s) : 1

Driver info : Tc (max 90°C)

Driver current (mA) : 500

SPD : vossloh Lighting Solutions SP3/230/10K/i

Testing facility : BER - SCHREDER

Operator : KOY Fiston

Conclusion

Informative

Conclusion :

ΔTs < 80°C no risk of solder crack

Ta (@500mA): 55°C limited by driver according IEC 60598-2-3 and IEC 60598-2-5 (outdoor use only)
Ta (@500mA): 50°C limited by driver indoor use and UL standard
Tq (@500mA): 35°C limited by driver and lenses according IEC 62722-2-1

Tq given for 100 khrs of lifetime

Validated by :
LERHO Xavier

Duplicate to : RACANELLI Frank, SZÜGYI János Péter, ESPEJON Erwin, NAGY Ádám

LAB : 27/07/2023

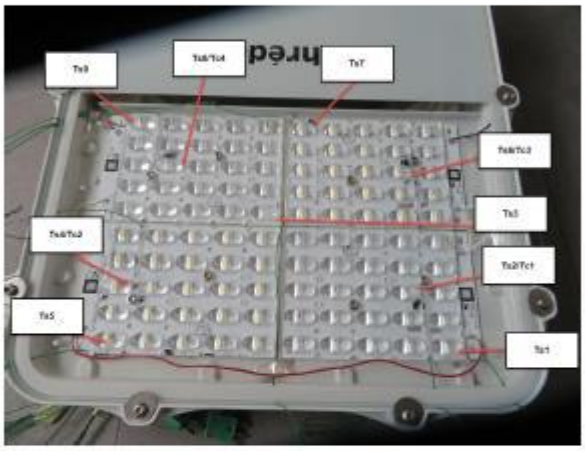
Test(s) details

Test(s)

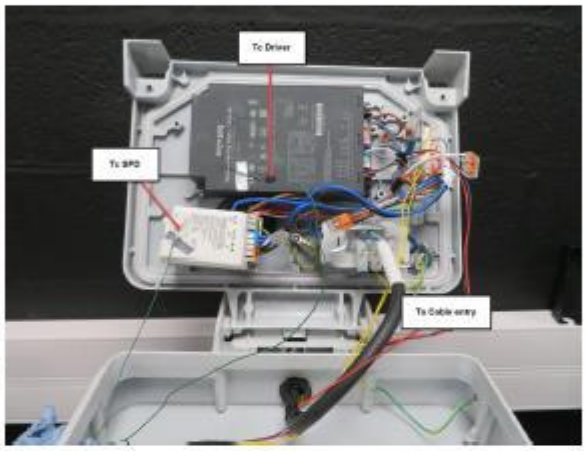
Name	Description	Verdict
Sensors positions	Disposition of the thermocouples on the DUT.	Informative
Test @ 500mA	Test according section 12.4 of IEC 60598-1. The DUT is driven until all thermocouples reach thermal stabilization (i.e. variation = 1K/h). Evaluation of the harmonics behaviour according IEC 61000-3-2 - Not covered by the laboratory's accreditation.	Informative

Sensors positions

Detail(s)



pos_thermo1



pos_thermo2

Test @ 500mA

Verdict(s)

	Ts1	Ts2	Ts3	Ts4	Ts5	Ts6	Ts7	Ts8	Ts9	Driver	SPD	Ta Cable entry
Limit Ta	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	99.0 °C	90.0 °C	80.0 °C	90.0 °C
Limit Tq	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	85.0 °C	80.0 °C	80.0 °C	90.0 °C
Thermocouple T°	62.9 °C	64.5 °C	65.8 °C	65.2 °C	62.4 °C	62.3 °C	63.8 °C	63.5 °C	61.5 °C	63.5 °C	33.8 °C	33.7 °C
Room	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C	25.2 °C
E Led	2.8 V	2.8 V	2.8 V	2.8 V	2.8 V	2.8 V	2.8 V	2.8 V	2.8 V			
I Led	0.497 A	0.497 A	0.497 A	0.497 A	0.497 A	0.497 A	0.497 A	0.497 A	0.497 A			
P Led	1.4 W	1.4 W	1.4 W	1.4 W	1.4 W	1.4 W	1.4 W	1.4 W	1.4 W			
Heating	37.7 °C	39.3 °C	40.6 °C	40.0 °C	37.2 °C	37.1 °C	38.6 °C	38.3 °C	36.3 °C	38.3 °C	8.6 °C	8.5 °C
Ta Indoor	61.3 °C	59.7 °C	58.4 °C	59.0 °C	61.8 °C	61.9 °C	60.4 °C	60.7 °C	62.7 °C	51.7 °C	71.4 °C	81.5 °C
Tq	47.3 °C	45.7 °C	44.4 °C	45.0 °C	47.8 °C	47.9 °C	46.4 °C	46.7 °C	48.7 °C	41.7 °C	71.4 °C	81.5 °C
Solder point temperature used as the image of the lens temperature												
Primary EM		Secondary Em Dr1										
U	229.8 V	U	279.7 V									
I	0.661 A	I	0.497 A									
P	149.2 W	P	139.0 W									
PF	0.983											
Efficiency	93.2%											
THD	6.2%											
Harmonics - 100%	PASS											

Test room temperature (°C) *:*

25.2

Measurement equipment *:*

Keithley with thermocouples type K (E127)
Norma 4000 (E176)
APT (E135)

Quantities measured *:*

Qualification of the thermal limits and measurement of the electrical behavior of a luminaire according to PT-S-07

Uncertainties *:*

Statement of uncertainties (K=2, 95% of confidence level):
Temperature: 1,26 K
Voltage (AC): 0,33%
Current (AC): 0,33 %
Power (AC): 0,27%
Voltage (DC): 0,3 %
Current (DC): 0,3%
Power (DC): 0,23%
Anemometer: ± 0,27 m/s

Decision rules *:*

Pass/fail criteria for individual test statement of conformity (Verdict):

No pass/fail criteria applied on electrical measurements, except on harmonics where the criteria of IEC 61000-3-2 are applied (the harmonics are not covered by the laboratory's accreditation).

No pass/fail criteria applied on thermal measurements when performed at 25°C (+/- 5°C), the Ta/Tq values are calculated according GDE-POL-001.

Pass/fail criteria on thermal qualification (test performed at announced Ta or Tq)
At the announced Ta, no component is above its maximum limit of operation : success
At the announced Ta, at least 1 component is above its maximum limit of operation : fail

According to IEC 60598-2-3 and IEC 60598-2-5 Standards, the maximum limit of every component can be augmented by 10 K provided that the luminaire is intended for outdoor use only.

At the announced Tq, no component is above its selected performance limit of operation: success
At the announced Tq, at least 1 component is above its selected performance limit of operation : fail

According to IEC 62722-2-1, the selected performance limit cannot be augmented by 10 K even if the luminaire is intended for outdoor use.

Any Ta/Tq defined value will be rounded down to the nearest multiple of 5.

In any case, test at 25°C or test at Ta or Tq, if delta Ts is above the recommended value of the GDE-POL-001, the test is failed.

Pass/fail criteria for the test report statement of conformity (Conclusion):

At least one of the individual test statements of conformity (Verdict) is successful: success, the highest achieved Ta/Tq is reported

Otherwise: fail

End of accredited report *:*

Schréder
Experts in lightability™

DECLARAȚIE DE CONFORMITATE

CE

SCHRÉDER ROMANIA S.R.L., cu sediul în Cluj - Napoca, str. Corneliu Coposu, nr. 167A, Jud. Cluj, România, înregistrată la Registrul Comerţului cu nr. J12/1759/1998, membră a SCHRÉDER GROUP, în calitate de furnizori de aparate de iluminat marca SCHRÉDER

Declarăm pe propria răspundere că aparatul de iluminat: **IZYLUM**

Versiune: IZYLUM 1, IZYLUM 2, IZYLUM 3, IZYLUM 4, IZYLUM 5
Echipare: IZYLUM 1: Max. 40 LED-uri, IZYLUM 2 Max. 80 LED-uri, IZYLUM 3 Max. 160 LED-uri, IZYLUM 4 Max. 240 LED-uri, IZYLUM 5 Max. 240 LED-uri
Clasa electrică: I sau II
Caracteristici: Max. 750mA
Etanşeitate compartiment optic: IP 66, IP67
Etanşeitate compartiment aparataj: IP 66, IP67
Tensiune nominală: 230 V – 50 Hz

Cu condiția ca acesta să fie instalat, întreținut și utilizat în conformtate cu standardele de instalare și instrucțiunile producătorului. Este în conformitate cu urmatoarele directive sau standarde:

- EN 60598-1 (2021)
- EN 60598-2-3 (2003 + A1 2011)
- EN 61547 (2009)
- EN 61347 (2015)
- EN 55015 (2013+A11:2020)
- EN 61000-3-2 (2019+A12020) & 3-3 (2013)
- EN 62471 (2008)
- EN 62493 (2015)
- EN 63000 (2018)
- EN 62696 (2018)
- EN 62031 (2018)
- IEC 62722-1 (2016)
- IEC 62722-2-1 (2016)
- Directiva 2014/30/EU
- Directiva 2014/35/EU
- Directiva 2009/125/EC
- Diectiva 2012/19/EU
- Directiva RoHS 2011/65/EU (RoHS 2)

SCHRÉDER ROMANIA S.R.L.
Director General,

Alexandru SIRCA

SCHREDER ROMANIA SRL 3 CLUJ-NAPOCA

Eliberat,
Ianuarie 2023, Cluj-Napoca

Schréder
Experts in lightability™

ROAD

IZYLUM

Designer : Indio da Costa

MID FLEX™ 2 LENSO FLEX™ 4

O soluție stradală, urbană, versatilă și performantă, cu timp de montaj si de mentenanță reduse.

Bazat pe experiența Schréder și pe competența dovedită în iluminatul LED stradal și urban, aparatul de iluminat IZYLUM beneficiază de numeroase inovații pentru a oferi experiența decisivă oricărei părți interesate în proiect - municipalității, care caută recuperarea rapidă a investiției cu o soluție de iluminat ușor de utilizat și prietenoasă cu mediul înconjurător, contractanților care doresc să economisească timp și să evite greșelile în timpul instalării și cetățenilor care doresc medii confortabile și sigure.

Această gamă de aparate de iluminat inter-conectate nu numai că este o adevărată platformă pentru orașele inteligente dar designul său optimizat, ușor și compact minimizează amprenta de carbon în fiecare etapă a ciclului de viață al produsului. IZYLUM iese în evidență drept cel mai bun din clasa sa pentru economia circulară.

IP 66/67 | IP 66 | IK 09

RoHS | UK CA | CE | 005 certification

UL 1598
CSA C22.2
No. 250.0

CĂI DE CIRCULAȚIE URBANĂ ȘI STRĂZI | PODURI | PISTE DE BICICLETE ȘI PIETONALE | STAȚII DE TREN ȘI METROU | ZONE EXTINSE | PIEȚE ȘI ZONE PIETONALE | CĂI DE CIRCULAȚIE ȘI AUTOSTRĂZI

Descriere

IZYLUM este un aparat de iluminat robust, dar compact, conceput cu accent pe ușurința de instalare și mentenanță, care permite clienților să-i prelungească durata de viață cu viitoarele upgrade-uri. Compus din două părți separate din aluminiu turnat sub presiune înaltă, corpul aparatului este sigilat cu sticlă plană, oferind un grad ridicat de etanșeitate și rezistență la șocuri.

Disponibil în cinci dimensiuni, cu 10 până la 240 de LED-uri, IZYLUM oferă o soluție de iluminat eficientă, bine dimensionată, care variază de la diverse aplicații pentru înălțime redusă de montaj, precum parcuri, piste pentru biciclete sau străzi rezidențiale, până la drumurile principale și bulevarde.

Gama IZYLUM profită de cele mai noi inovații fotometrice. Utilizează noile module optice LensoFlex®4 și MidFlexTM2, care au fost dezvoltate în jurul ideilor de performanță, compactitate, versatilitate și standardizare. Amândoua au aceeași amprentă și geometrie tehnică, deci au același design, indiferent de conceptul fotometric.

Pentru a simplifică operațiunile de instalare și mentenanță, IZYLUM introduce tehnologii brevetate, cum ar fi noul sistem de fixare universal IzyFix, care permite montaj lateral sau în vârf de stâlp. Aparatul de iluminat oferă acces fără unelte la compartimentul de accesorii electrice. Capacul inferioar se deschide în jos și este prevăzut cu o balama. Închiderea aparatului de iluminat este confirmată de un zgomot clar, puternic, care poate fi auzit chiar și într-un mediu urban zgomotos. Livrat pre-cablat (opțional), IZYLUM este disponibil cu un sistem de fixare universal IzyFix adaptat la montaj lateral și în vârf de stâlp pe orice braț cu diametrul de Ø32mm, Ø42-48mm, Ø60mm și Ø76mm. Sistemul IzyFix permite trecerea de la o poziție la alta în orice moment, fără a demonta aparatul de iluminat de pe stâlp. Această caracteristică unică ușurează instalarea și oferă o versatilitate completă în ceea ce privește configurațiile de brațe și stâlpi. Sistemul IzyFix permite înclinarea într-un interval de 130 ° și respectă pe deplin standardele de vibrații IEC și ANSI 3G.

IZYLUM introduce două noi platforme fotometrice extrem de eficiente.

Sistemul universal de fixare IzyFix permite trecerea de la montaj în vârf de stâlp la montaj lateral și facilitează procesul de comandă și instalare a aparatelor de iluminat.

TIPURI DE APLICAȚII

- CĂI DE CIRCULAȚIE URBANĂ ŞI STRĂZI
- PODURI
- PISTE DE BICICLETE ȘI PIETONALE
- STAȚII DE TREN ȘI METROU
- ZONE EXTINSE
- PIEŢE ŞI ZONE PIETONALE
- CĂI DE CIRCULAȚIE ŞI AUTOSTRĂZI

AVANTAJE CHEIE

- Maximizează economiile de energie și de costuri de mentenanță
- Noua generație de module fotometrice ProFlex ™ și MidFlex™2, care oferă iluminat de înaltă eficiență, confort și siguranță ridicate
- 5 dimensiuni pentru a oferi cea mai precisă soluție pentru numeroase aplicații de iluminat rutiere și urbane
- Acces fără unelte la compartimentul de accesorii electrice cu confirmarea închiderii dată de un zgomor clar, puternic.
- Reglare la fața locului, trecerea de la o poziție la alta în orice moment, fără fără deconectarea aparatului de iluminat de pe stâlp.
- Gamă largă de temperaturi de funcționare
- Certificat Zhaga-D4i
- Pregătit pentru interconectare
- Variante alimentate cu energie solară

IZYLUM este compatibil cu aplicația Circle Light, un instrument simplu, rapid și eficient din punct de vedere al costurilor pentru a interacționa cu aparatul de iluminat, pentru a capta datele acestuia și pentru a gestiona setările.

IZYLUM este interconectat și poate funcționa cu diverși senzori și sisteme de control

LensoFlex®4

LensoFlex®4 optimizează moștenirea conceptului LensoFlex cu un modul fotometric compact și puternic, bazat pe principiul adăugării distribuției fotometrice. Numărul de LED-uri în combinație cu curentul de alimentare determină nivelul de intensitatii distribuției luminoase.

Cu distribuții luminoase optimizate și eficiență ridicată, această a patra generație permite ca produsele să fie mai reduse în dimensiune pentru a satisface cerințele aplicației cu această soluție optimizată și din punct de vedere al investițiilor. Modulul LensoFlex®4 poate dispune de un sistem de controlul al luminii reziduale pentru a preveni poluarea luminoasă de vecinătate sau de un limitator de strălucire pentru un confort vizual ridicat.

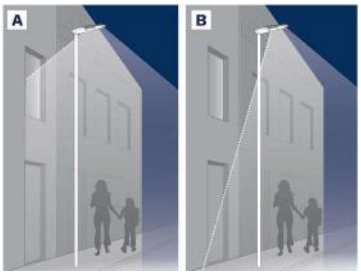
MidFlex™2

A doua generație de modul fotometric MidFlex ™ 2 beneficiază de cea mai nouă generație de LED-uri de putere medie și fotometrie dedicată pentru aplicații profesionale.

Conceput pentru a avea aceeași tipodimensiune și puncte de fixare ca LensoFlex®4, platforma MidFlex ™ 2 reprezinta o soluție alternativă pentru cei care caută un iluminat rentabil si eficient, păstrând același design al aparatului de iluminat.

Controlul luminii reziduale

Opținal, modulele LensoFlex®2 pot fi echipate cu un sistem de control Back Light. Această caracteristică suplimentară minimizează poluarea luminoasă din vecinătate în special asupra clăd irilor.



A. Fără controlul luminii reziduale | B. Cu controlul luminii reziduale

Accesoriu decorativ

Acest accesoriu oferă nu numai o soluție estetică, deoarece acoperă acoperă cablurile de alimentare ale plăcii LED ci și crește fluxul luminos util al aparatului datorită suprafeței sale strălucitoare care reflectă lumina produsă de blocul optic. În funcție de configurație, placa crește fluxul luminos util cu 2 până la 3%.

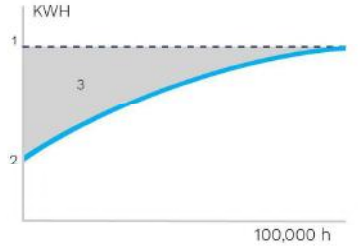
Blocuri de răcire în formă de diamant

IZYLUM 5 este echipat cu noile blocuri de răcire în formă de diamant pe partea superioară a blocului optic. Forma de diamant a blocurilor de răcire a fost proiectată pentru a reduce acumularea de praf și apă și pentru a asigura managementul termic optim pentru păstrarea performanțelor în timp.

Flux luminos constant (CLO)

Acest sistem ajută la compensarea deprecierii fluxului luminos şi la evitarea iluminării excesive la începutul vieţii sistemului de iluminat. Deprecierea luminii în timp trebuie luată în considerare pentru a asigura un nivel de iluminare predefinit pe perioada duratei de viață economică a aparatului de iluminat.

Fără funcția CLO, înseamnă pur și simplu creșterea puterii inițiale pentru a compensa deprecierea fluxului luminoas. Prin controlul precis al fluxului luminos, energia necesară pentru atingerea nivelului necesar poate fi menținută pe toată durata vieții corpului de iluminat.

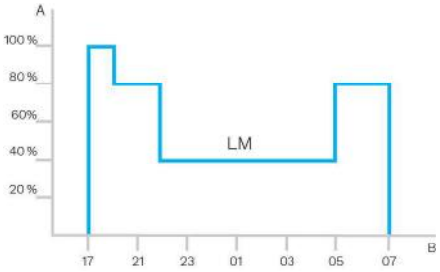


1. Nivel de iluminare standard | 2. Consum de energie electrică cu CLO | 3. Eficiență energetică

Profil personalizat de reducere a fluxului luminos

Driverele inteligente pot fi programate cu profile complexe de reducere a fluxului luminos. Sunt posibile până la cinci combinații de intervale de timp și niveluri de lumină . Această caracteristică nu necesită cablare suplimentară.

Perioada dintre pornire și oprire este utilizată pentru a activă profilul de reducere a fluxului luminos presetat. Sistemul personalizat de reducere a fluxului luminos generează economii mari de energie electrică , asigurând în același timp nivelul de luminanță optim și uniformitatea pe timpul nopții.



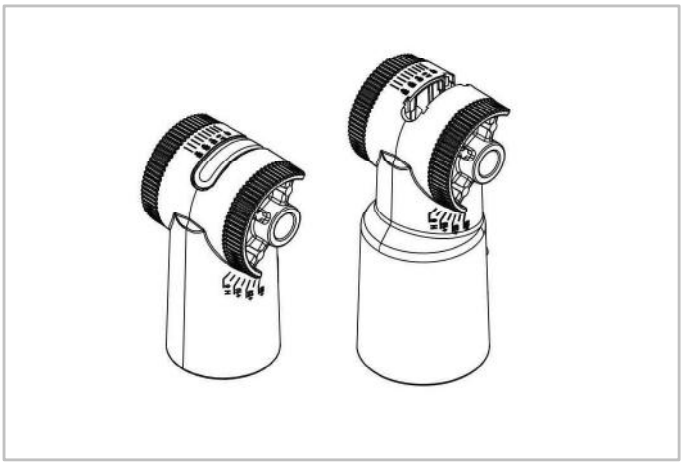
A. Nivel de reducere a fluxului luminos | B. Timp

Senzor PIR pentru detectarea mișcarii

În locurile cu activitate nocturnă scăzută, iluminarea poate fi redusă la minimum, de cele mai multe ori. Prin utilizarea senzorilor PIR, nivelul luminii poate fi ridicat imediat ce un vehicul sau pieton este detectat în zonă.

Fiecare aparat de iluminat poate fi configurat individual cu mai mulți parametri, cum flux luminos mnim și maxim, durata de întârziere și durata de pornire / oprire. Senzorii PIR pot fi folosiți într-o rețea autonomă sau interoperabilă.

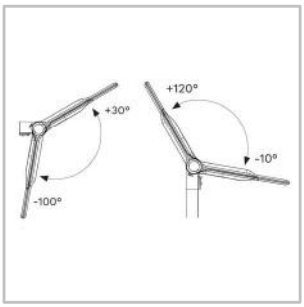
Sistemul de fixare universal din aluminiu turnat sub presiune Schréder IzyFix este montat în fabrică și este o parte integrantă a aparatului de iluminat. Sistemul IzyFix își propune să răspundă nevoilor la nivel mondial, îndeplinind cerințele de testare IEC și ANSI 3G. Acesta este conceput pentru a simplifica viață utilizatorilor și a instalatorilor în procesul de achiziție și instalare a aparatelor de iluminat pentru diverse aplicații.



De la montaj în vârf de stâlp la montaj lateral dintr-o singură mișcare

Designul inovator permite trecerea de la montaj lateral la montaj în vârf de stâlp - chiar și pentru aparatele de iluminat comandate din fabrică pre-cablate - fără să fie necesară nicio manevră la fixarea sau deconectarea de pe stâlp. Prin urmare, tipul de montaj (orizontal sau vertical) nu este necesar a fi luat în considerare la efectuarea comenzii. Această caracteristică unică ușurează de asemenea instalarea. După setarea poziției corecte, un accesoriu este prevăzut pentru a acoperi spațiul rezultat și pentru a asigura o protecție suplimentară aparatului de iluminat.

Cel mai bun unghi de înclinare din piață



Sistemul de fixare universal IzyFix beneficiază de cel mai bun unghi de înclinare din piață, de peste 130 °, pentru a asigura performanțe maxime în diferite scenarii rutiere și pentru a oferi posibilitatea instalării aparatului de iluminat chiar si în cele mai neprielnice conditii. Cu un marcaj de referinta pe aparat și unghiurile de inclinare pe știut, reglarea se realizează în trepte de 5 ° prin slăbirea a două șuruburi. Gama largă de înclinare permite accesul ușor la compartimentul de accesorii electrice în timpul mentenanței.

*În funcție de dimensiunea și forma aparatului de iluminat, unghiul de înclinare poate fi redus. Pentru informații exacte, consultați întotdeauna fișele de instalare.

Diversitate pentru toate tipurile de stâlpi

Diversitate pentru toate tipurile de stâlpi

Datorită numeroaselor aplicații utilizate la nivel mondial, Schréder a creat o serie de sisteme de fixare și adaptoare pentru a satisface toate nevoile care pot apărea pe piață.

IzyFix Ø76mm:
- știut Ø32mm (cu adaptor)
- știut Ø42-48mm (cu adaptor)
- știut Ø60mm
- știut Ø76mm

IzyFix Ø60mm:
- știut Ø32mm (cu adaptor)
- știut Ø42-48mm
- știut Ø60mm

Schréder EXEDRA este cel mai avansat sistem de gestionare a iluminatului de pe piață pentru controlul, monitorizarea și analiza iluminatului stradal într-un mod ușor de utilizat.

Standardizarea ecosistemelor interoperabile

Schréder joacă un rol cheie în promovarea standardizării cu alianțe și parteneri precum uCIFI, TALQ sau Zhaga. Angajamentul nostru comun este de a oferi soluții concepute pentru integrarea verticală și orizontală a IoT. De la corp (hardware), la limbaj (model de date) și inteligență (algoritmi), întregul sistem Schréder EXEDRA se bazează pe tehnologii comune și deschise. Schréder EXEDRA se bazează, de asemenea, pe Microsoft™ Azure pentru serviciile cloud, furnizate cu cel mai ridicat nivel de încredere, transparență, conformitate cu standardele și reglementările în vigoare.

Depășirea barierelor

Cu EXEDRA, Schréder a adoptat o abordare tehnologică-agnostică, bazându-se pe standarde și protocoale deschise pentru a proiecta o arhitectură care să poată interacționa perfect cu soluții software și hardware de la terți. Schréder EXEDRA este conceput pentru a debloca interoperabilitatea complet, deoarece oferă posibilitatea de :

- controlare a dispozitivelor (aparate de iluminat) de la alte mărci
- gestionarea controlerelor și integrarea de senzori de la alte mărci
- conectarea cu dispozitive și platforme de la terți

O soluție de tip "plug-and-play"

Fiind un sistem concentrator de date care utilizează rețeaua celulară, un proces inteligent de punere în funcțiune automată recunoaște, verifică și extrage datele despre aparate de iluminat în interfața cu utilizatorul. Rețeaua de autoreglare dintre controlerele de aparate de iluminat permite configurarea în timp real a iluminatului adaptiv direct prin intermediul interfeței cu utilizatorul.

Experiență personalizată

Schréder EXEDRA include toate funcțiile avansate necesare pentru gestionarea dispozitivelor inteligente, controlul în timp real și programat, scenarii de iluminat dinamice și automatizate, planificarea operațiunilor de mentenanță și de exploatare pe teren, gestionarea consumului de energie și integrarea hardware-ului conectat de la terți. Acesta este complet configurabil și include instrumente pentru gestionarea utilizatorilor și o politică multi-tenant care permite antreprenorilor, utilităților de producție sau orașelor mari să segmenteze proiectele.

Un instrument puternic pentru eficiență, optimizare și pentru luarea deciziilor

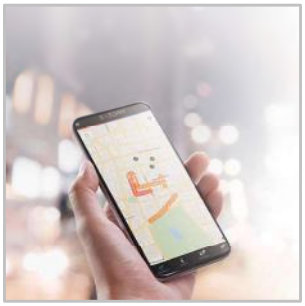
Datele sunt o mare valoare. Schréder EXEDRA le conferă managerilor toată claritatea de care au nevoie pentru a lua decizii. Platforma colectează cantități masive de date de la dispozitivele finale și, le cumulează, le analizează și le afișează intuitiv pentru a ajuta utilizatorii finali să ia cele mai bune decizii.

Protejat pe toate laturile

ISO 27001
BUREAU VERITAS
Certification

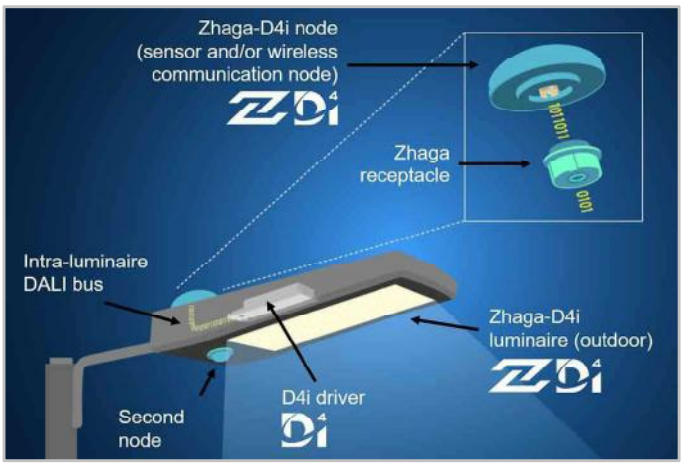
Schréder EXEDRA oferă tehnologie de ultimă generație cu criptare, analiză, clasificare și practici cheie de gestionare care protejează datele în întregul sistem și în serviciile asociate.

Mobile App: any time, any place, connect to your street lighting



The Schréder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

Consorțiul Zhaga și-a unit forțele cu DiiA și a produs o singură certificare Zhaga-D4i care îmbină specificațiile de conectivitate exterioară Zhaga Book 18 versiunea 2 cu specificațiile D4i ale DiiA pentru telegestiune prin protocol DALI.



Standardizarea ecosistemelor interoperabile

Ca membru fondator al consorțiului Zhaga, Schréder a participat la crearea și, prin urmare, sprijină programul de certificare Zhaga-D4i și inițiativa acestui grup de a standardiza un ecosistem interoperabil. Specificațiile standardului D4i au preluat caracteristicile protocolului DALI2 și le-au adaptat pentru echipamentele din interiorul aparatului de iluminat, dar cu anumite limitări. Doar module de control montate pe aparatul de iluminat pot fi conectate cu un aparat de iluminat Zhaga-D4i. Conform specificațiilor modulele de control au puterea electrică limitată la 1W sau 2W.

Program de certificare

Certificarea Zhaga-D4i, îndeplinește toate criteriile, inclusiv potrivirea mecanică, comunicarea digitală, raportarea datelor și cerințele de putere într-un singur aparat de iluminat, asigurând interoperabilitatea plug-and-play a aparatelor de iluminat și a sistemelor secundare, cum ar fi modulele de telegestiune.

Soluție rentabilă

Un aparat de iluminat certificat Zhaga-D4i include drivere care oferă funcții care au fost anterior în modulul de telegestiune, cum ar fi măsurarea energiei electrice, care la rândul său a simplificat dispozitivul de control, reducând astfel prețul sistemului de control

2 prize: sus și jos

Priza Zhaga are dimensiuni mai mici și mai potrivită aplicațiilor în care estetica este esențială. Arhitectura Zhaga-D4i prevede, de asemenea, posibilitatea de a pune două prize pe un aparat de iluminat care să permită, de exemplu, combinarea unui senzor de prezență și a unui modul de telegestiune. Acest aspect are, de asemenea, avantajul de a standardiza anumite comunicații ale senzorilor de detecție cu protocolul D4i.

Schréder EKINOX dezvoltat împreună cu Sunna Design este o soluție de iluminat solar ecologică care combină producerea de energie electrică regenerabilă cu renumitele distribuții fotometrice Schréder, pentru a obține un nivel optim de iluminare, reducând în același timp emisiile de carbon și protejând mediul înconjurător. Această soluție de sine stătătoare constă în trei kituri solare (cu două opțiuni de încărcare a bateriilor) asociate cu aparate de iluminat Schréder personalizate care sunt echipate cu 20 până la 80 de LED-uri de mare putere.

Schréder EKINOX POWERED BY Sunna DESIGN

Ansamblu de iluminat inteligent

Schréder EKINOX dezvoltat împreună cu Sunna Design revoluționează implementarea soluțiilor de iluminat cu energie regenerabilă prin designul său inovator. Acesta dispune de panouri solare fără ramă, tehnologie avansată a bateriilor, sisteme electronice inteligente încorporate și aparate de iluminat echipate cu module fotometrice LensoFlex®4 pentru a optimiza complet iluminatul solar. Cu trei variante personalizabile disponibile, această soluție stabilește un nou standard de ușurință și eficiență.

SE1	SE2	SE4
20 LED-uri	20 sau 40 LED-uri	40 sau 80 LED-uri
1,800lm	3,500/3,700lm	7,100/7,500lm
Până la 180lm/W	Până la 180lm/W	Până la 180lm/W

Instalare simplă

Schréder EKINOX dezvoltat împreună cu Sunna Design simplifică instalarea la fața locului și asigură o performanță optimă prin designul său ușor de utilizat. Kiturile solare SE oferă montaj în vârf de stâlp pentru stuț cu diametrul de Ø60 mm (SE1 și SE2) sau Ø76 mm (SE4). Cu ajutorul partenerilor săi, Schréder oferă soluții complete care includ stâlpi și brațe ranforsate, care respectă standardele de calcul EN40 și au marcajul CE.

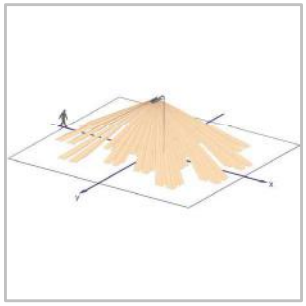
Setări de înclinare separate

Optimizarea captării energiei solare și a distribuției luminoase pe un amplasament necesită setări diferite. Acest lucru poate fi realizat numai dacă panoul solar și aparatul de iluminat sunt separate. Schréder EKINOX permite această flexibilitate în cadrul designului său, deoarece panourile solare pot fi înclinate la unghiul optim, variind de la 0 la 50° (în funcție de kitul SE selectat). Conexiunea dintre panourile solare și aparatul de iluminat se realizează cu ajutorul unui cablu cu conectori codificați, eliminând riscul de erori de instalare și asigurând o instalare ușoară și eficientă.

Setări specifice de reducere a intensității luminoase

Capacitatea energetică a unui aparat de iluminat alimentat cu energie solară este limitată și trebuie gestionată cu atenție. Pentru a se asigura că se alege dimensiunea corectă a panoului și a bateriei în funcție de cerințele locale specifice, cum ar fi nivelul de iluminare, numărul de zile de autonomie și densitatea traficului, la momentul comenzii sunt disponibile mai multe profiluri preconfigurate. Scenariul de reducere a intensității luminoase ales poate fi, de asemenea, modificat la fața locului de către echipa locală de servicii pentru clienți a Schréder pentru a răspunde nevoilor specifice ale locului.

Funcție de detectare a mișcării



Ca o caracteristică suplimentară, aparatul de iluminat poate fi echipat cu un senzor de mișcare (PIR) pentru a spori siguranța și experiența utilizatorului. La detectarea mișcării (vehicule, biciclete sau pietoni), se poate anula scenariul de reducere a intensității luminoase, ceea ce are ca rezultat creșterea nivelului de iluminare la 100% pentru o perioadă scurtă de timp, maximizând vizibilitatea și asigurând siguranța utilizatorilor.

Gestionare inteligentă pentru a preveni întreruperile de curent electric

Gestionarea inteligentă a consumului de energie este crucială, deoarece nivelul de încărcare a bateriei la pornirea aparatului de iluminat poate varia în funcție de energia acumulată pe parcursul zilei. Sistemul electronic de la bordul Schréder EKINOX împarte în mod inteligent noaptea în trei părți și reglează nivelul de iluminare în consecință, pentru a preveni situațiile de pană de curent și a asigura o funcționare fără întreruperi.

INFORMAȚII GENERALE

Înălțimea de instalare recomandată	4m to 15m | 13' to 49'
Eticheta Circle Light	Scor> 90 - Produsul îndeplinește pe deplin cerințele privind economia circulară
Driver inclus	Da
Marca CE	Da
Certificat ENEC	Da
Certificat ENEC+	Da
UL certified	Da
Conform ROHS	Da
Certificat Zhaga-D4i	Da
Certificat BE 005	Da
Marca UKCA	Da
Standard de testare	EN 60598-1 EN 60598-2-3 IEC TR 62778 EN 62262 LM 79-08 (toate măsurătorile efectuate în laborator acreditat ISO17025) LM 80 (toate măsurătorile în laborator acreditat ISO17025)

CARCASĂ AND FINISAJ

Carcasă	Aluminiu
Distribuție luminoasă	PMMA
Difuzor	Sticlă securizată
Carcasă finisaj	Vopsire în câmp electrostatic
Culoare	AKZO gri 900 sablat
Nivel de etanşeitate	IP 66, IP66/IP67
Rezistență la impact	IK 09
Test de vibrație	Conform cu standardul ANSI C 136-31, 3G si IEC 68-2-6 (0.5G) modificat
Acces pentru mentenanță	Acces fără unelte la compartimentul accesorii electrice

· La cerere, orice altă culoare RAL sau AKZO

CONDIȚII DE FUNCȚIONARE

Temperatura de functionare(Ta)	-40 °C până la +55 °C / -40 °F până la 131 °F ținând cont de efectul vântului

· În funcție de configurația aparatului de iluminat. Pentru mai multe detalii, vă rugăm să ne contactați.

INFORMAȚII ELECTRICE

Clasa electrică	Class 1 US, Class I EU, Class II EU
Tensiune nominală	120-277V – 50-60Hz 220-240V – 50-60Hz 347V - 50-60Hz
Protecţie la supratensiuni (kV)	6 8 10
Compatibilitate electromagnetică (EMC)	EN 55015:2013/A1:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61547:2009, EN 62493:2015
Protocol de control	1-10V, DALI
Opțiuni de control	AmpDim, Bi-power, Profil personalizat de reducere a fluxului luminos, Fotocelulă, Telegestiune
Priză	Zhaga (optional) Optional priză NEMA 7 pini
Sistem(e) de control asociate	Schréder EXEDRA
Senzor	PIR (opțional)

INFORMAȚII FOTOMETRICE

Temperatura de culoare LED	2200K (WW 722) 2700K (WW 727) 3000K (WW 730) 3000K (WW 830) 4000K (NW 740) 5700K (CW 757)
Indicele de redare a culorilor (CRI)	>70 (WW 722) >70 (WW 727) >70 (WW 730) >80 (WW 830) >70 (NW 740) >70 (CW 757)
Procent flux luminous in emisfera superioară (ULOR)	0%
ULR	0%

· ULOR poate fi diferit în funcție de configurație. Vă rugăm să ne consultați.
· ULR poate fi diferit în funcție de configurație. Vă rugăm să ne consultați.

DURATA DE VIAȚA A LED-urilor @ TQ 25 ° C

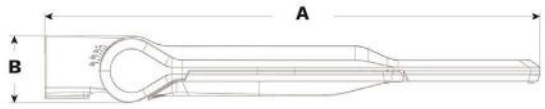
Toate configurațiile	60,000h - L80 (mid-power LEDs) 100,000h - L95 (high-power LEDs)

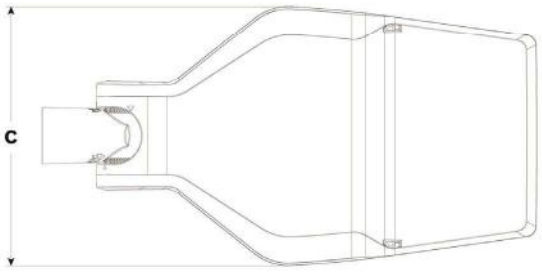
· Durata de viață poate fi diferită în funcție de dimensiune / configurații. Vă rugăm să ne consultați.

DIMENSIUNI ȘI MONTAJ

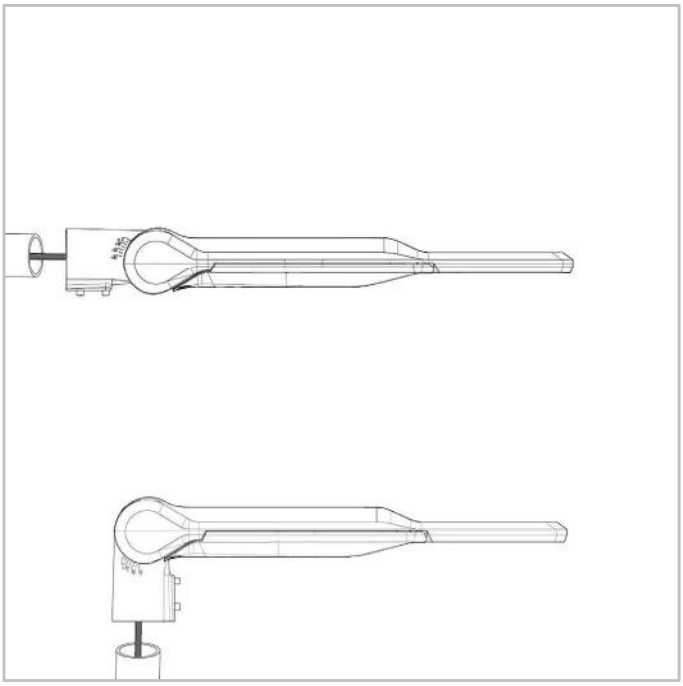
AxBxC (mm | inch)	IZYLUM 1 : 587x94x294 | 23.1x3.7x11.6 IZYLUM 2 : 604x94x352 | 23.8x3.7x13.9 IZYLUM 3 : 715x94x368 | 28.1x3.7x14.5 IZYLUM 4 : 873x94x390 | 34.4x3.7x15.4 IZYLUM 5 : 873x94x390 | 34.4x3.7x15.4
Greutate (kg | lbs)	IZYLUM 1 : 4.9-5.9 | 10.8-13.0 IZYLUM 2 : 6.3-7.3 | 13.9-16.1 IZYLUM 3 : 7.0-8.3 | 15.4-18.3 IZYLUM 4 : 9.9-12.1 | 21.8-26.6 IZYLUM 5 : 10.3-12.6 | 22.7-27.7
Rezistență aerodinamică (CxS)	IZYLUM 1 : 0.03 IZYLUM 2 : 0.03 IZYLUM 3 : 0.03 IZYLUM 4 : 0.03 IZYLUM 5 : 0.03
Posibilități de montaj	Montaj lateral – Ø32mm Montaj lateral - Ø42mm Montaj lateral – Ø48mm Montaj lateral – Ø60mm Montaj lateral piesă de fixare - Ø60mm În vârf de stâlp prin alunecare – Ø32mm În vârf de stâlp prin alunecare – Ø42mm În vârf de stâlp prin alunecare – Ø48mm În vârf de stâlp prin alunecare - Ø60mm În vârf de stâlp prin alunecare - Ø76mm În vârf de stâlp montaj penetrant – Ø60mm

· Dimensiuni indicate pentru IZYLUM cu stuț cu dimensiunea de Ø60mm (montaj lateral)
· Dimensiunile și greutatea variază în funcție de configurație. Va rugăm să ne consultați pentru mai multe informații.

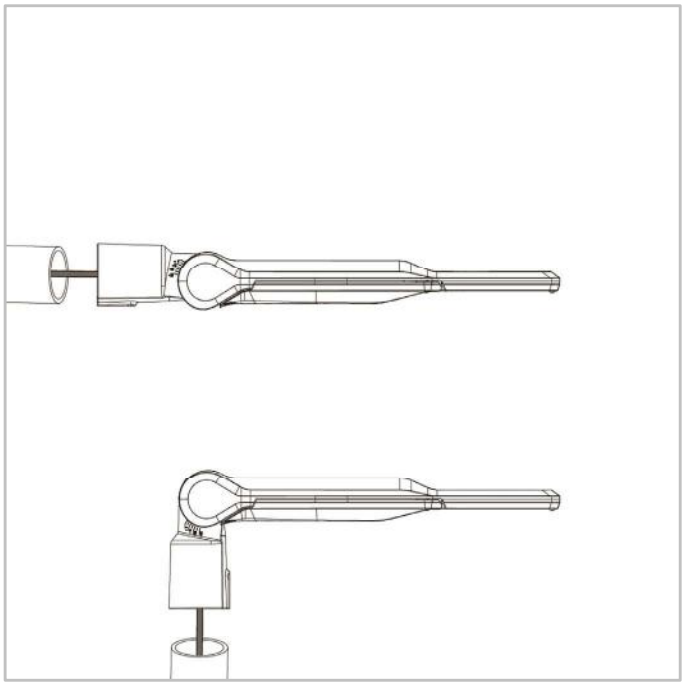




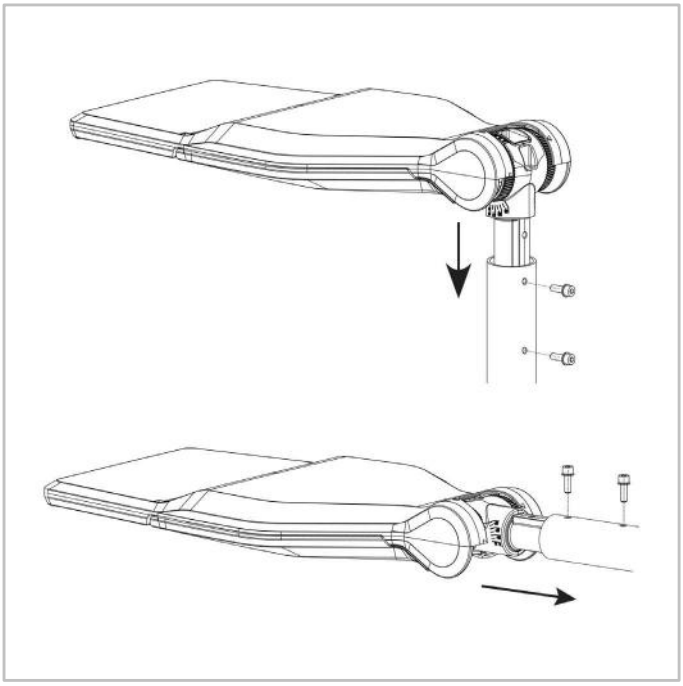
IZYLUM | Montaj prin alunecare știft Ø32-60mm - 2x șuruburi M10

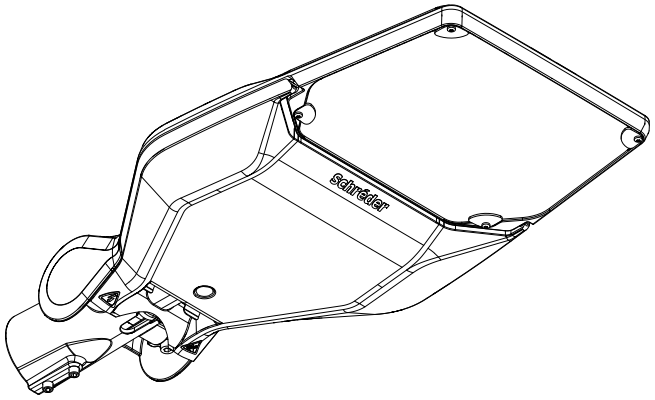


IZYLUM | Montaj prin alunecare știft Ø32-76mm - 2x șuruburi M10



IZYLUM | Montaj penetrant știft Ø60mm - 2x șuruburi M8



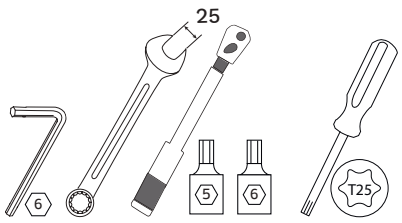


Schréder

IZYLUM

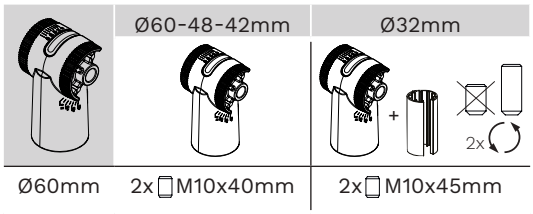
Installation instructions

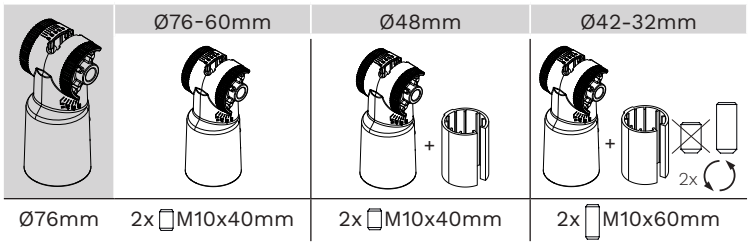
		IEC EN60598				4-8m ✓ 8-12m ✓ 12-15m ✓ 15m< ✓	120-277V 220-240V 347-480V 50/60Hz	IP 66	IP 67	IK 09

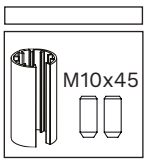


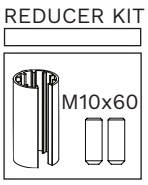
	Izylum 1	Izylum 2	Izylum 3	Izylum 4	Izylum 5
CxS	0.030m²	0.028m²	0.028m²	0.027m²	0.027m²
kg*	4.9-5.9	6.3-7.3	7.0-8.3	9.9-12.1	10.3-12.6

* weight depends on configuration









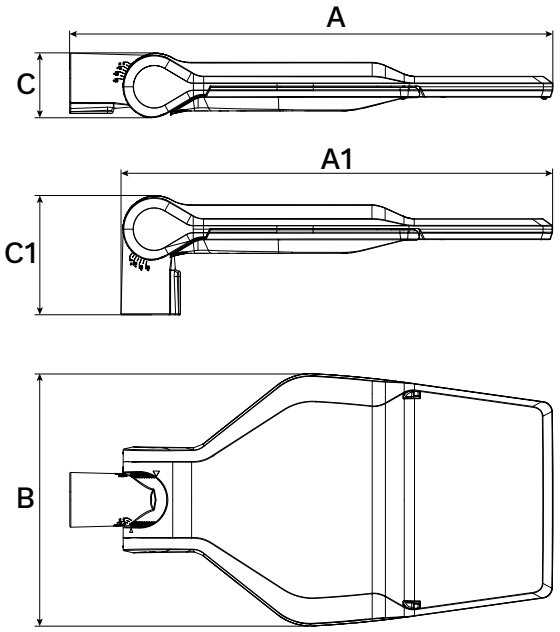
A

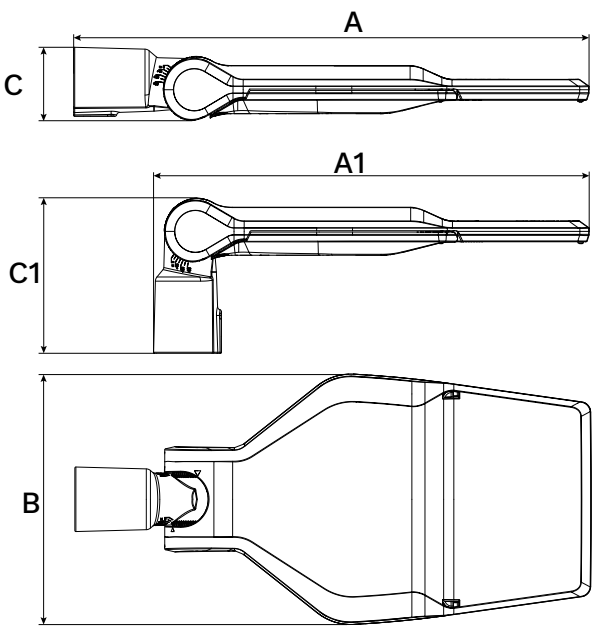
With adaptor for 60mm pole/arm

	Izylum 1	Izylum 2	Izylum 3	Izylum 4/5
A [mm]	587	604	715	873
A1 [mm]	511	528	639	797
B [mm]	294	352	368	390
C [mm]	94	94	94	94
C1 [mm]	173	173	173	173

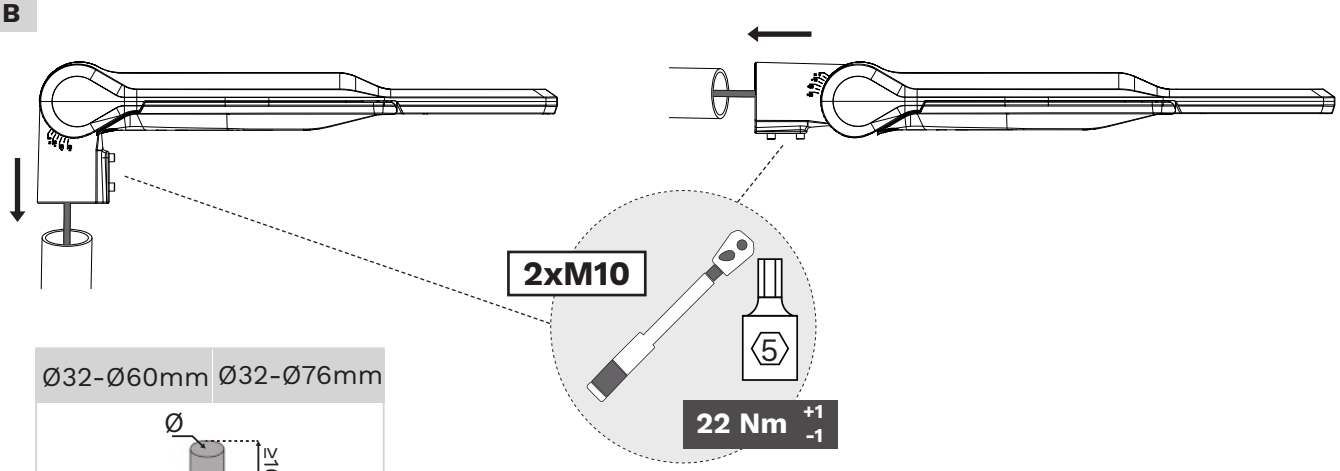
With adaptor for 76mm pole/arm

	Izylum 1	Izylum 2	Izylum 3	Izylum 4/5
A [mm]	642	659	770	928
A1 [mm]	525	542	652	811
B [mm]	294	352	368	390
C [mm]	107	107	107	107
C1 [mm]	228	228	228	228

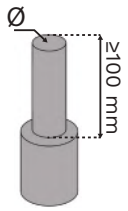




B

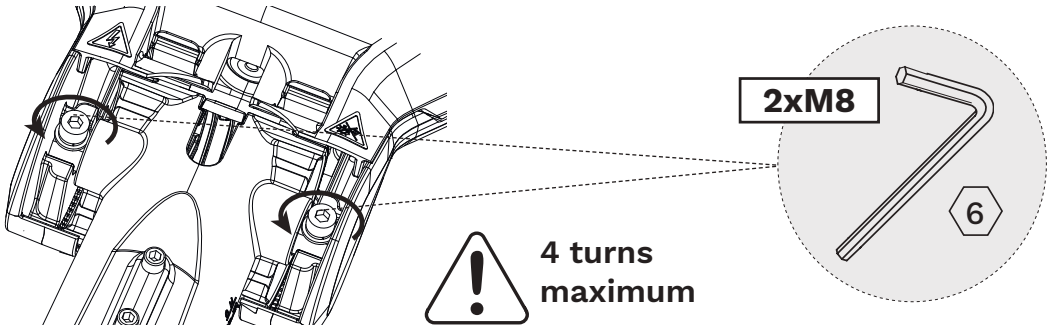


Ø32-Ø60mm	Ø32-Ø76mm

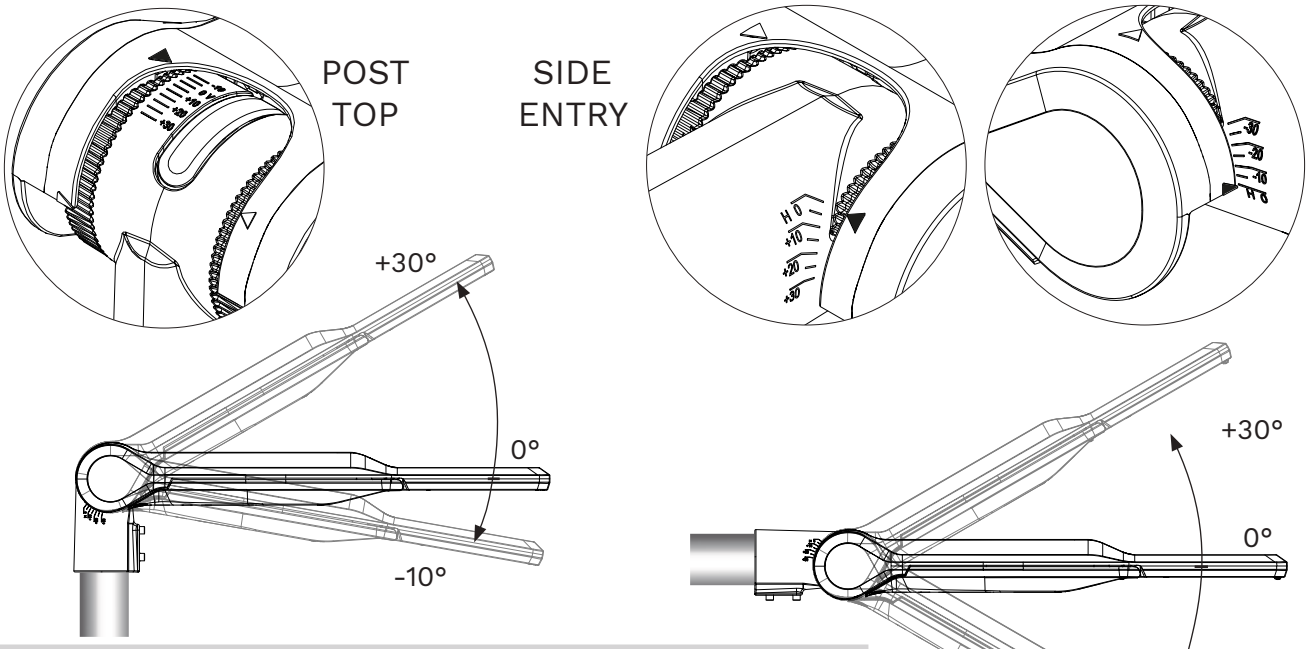


No lubricant or TIKAL Tef-Gel only

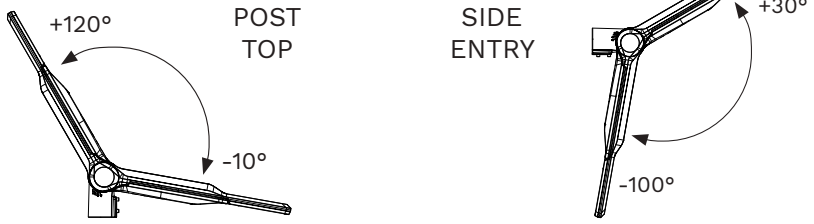
C 1



2



Operating range 130°



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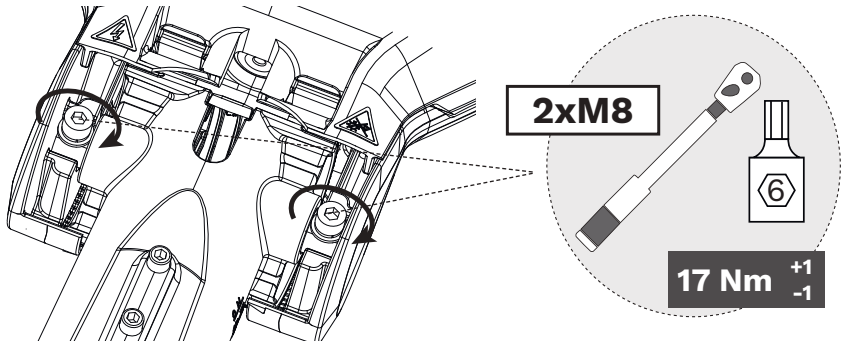
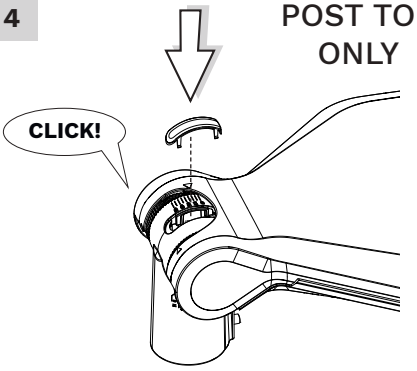


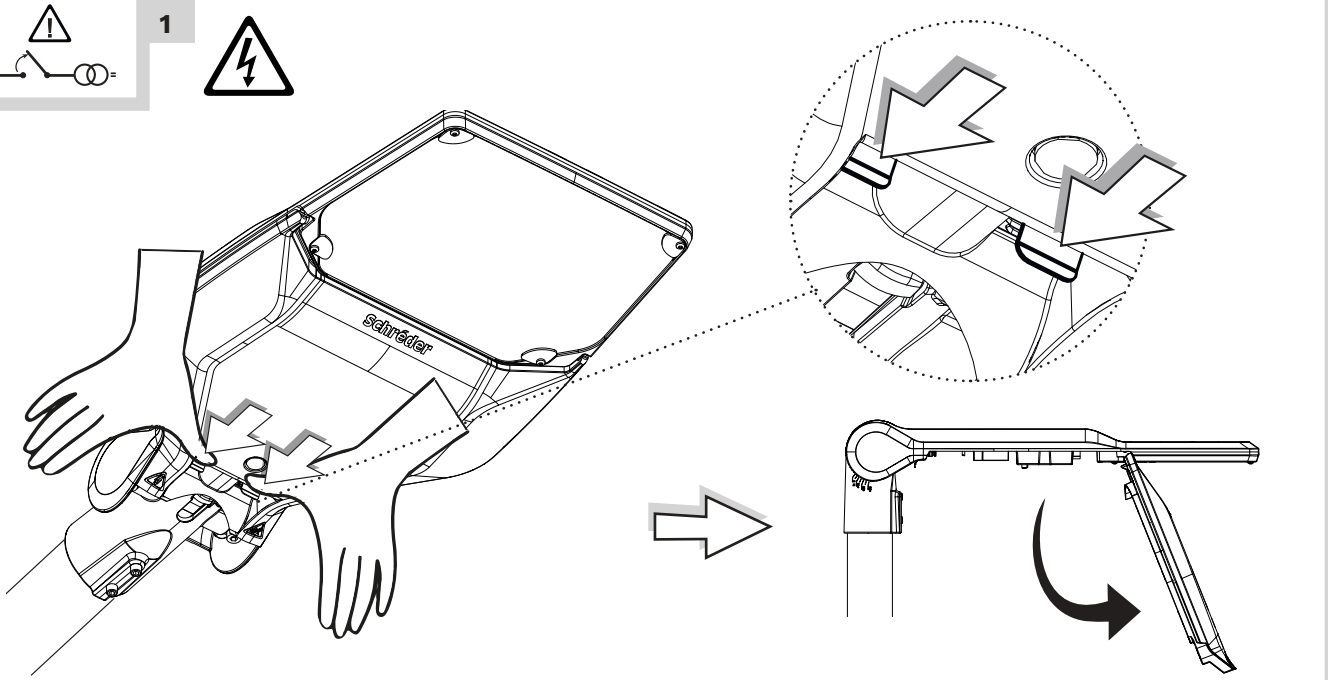
4

POST TOP ONLY



D

1



2

IEC

	Dim	Bi-Power Switching line	No Dim
	10mm, 35mm, 8-12 mm 5 G 1.5mm²	10mm, 35mm, 8-12 mm 4 G 2.5mm² 4 G 1.5mm²	10mm, 35mm, 8-12 mm 3 G 2.5mm² 3 G 1.5mm²
	D-,D+,PE,N,L	L,Lp,PE,N	L,PE,N
	10mm, 35mm, 8-12 mm 4 x 2.5mm² 4 x 1.5mm²	10mm, 35mm, 8-12 mm 3 x 2.5mm² 3 x 1.5mm²	10mm, 35mm, 8-12 mm 2 x 2.5mm² 2 x 1.5mm²
	D-,D+,N,L	L,Lp,N	L,N

UL

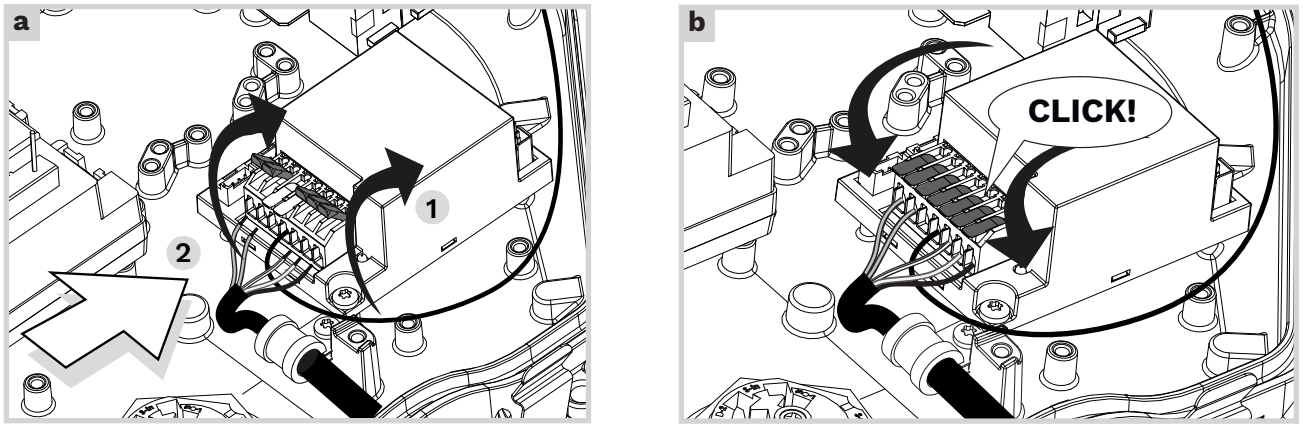
No Dim

10mm, 35mm, 8-12 mm
3 x 14 AWG
3 x 16 AWG
L,GND,N

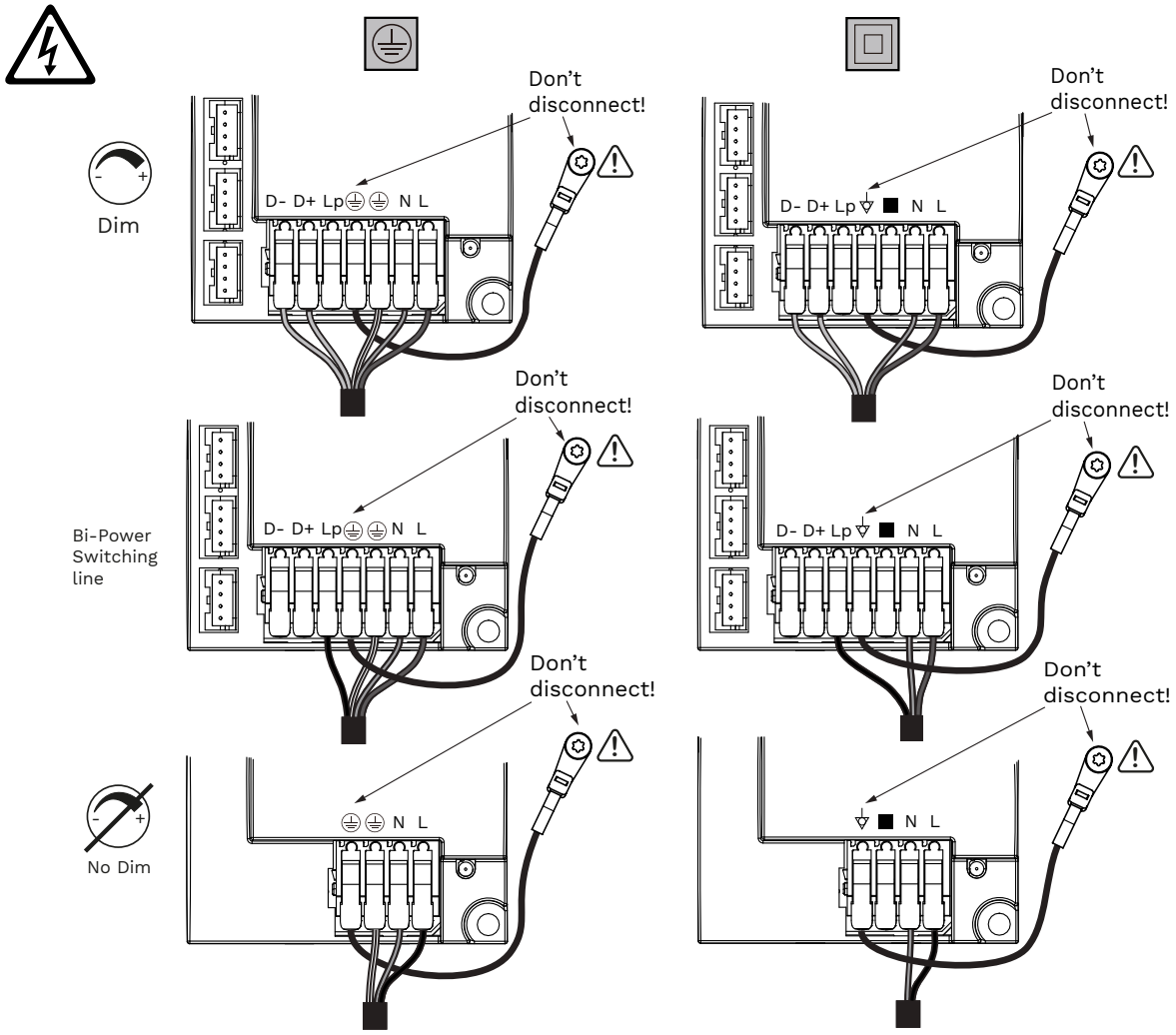
FUSE

10x38		8x32		5x20	
Ceramic		Ceramic		Glass	
500V	4A	500V	4A	250V	4A
				250V	5A
500V	6A	500V	6A	250V	6.3A

3



4



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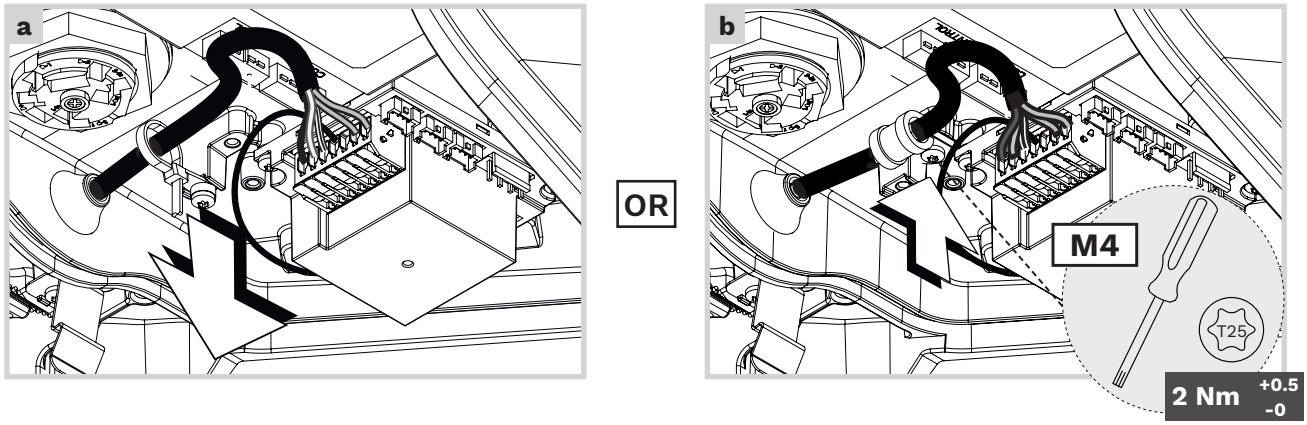
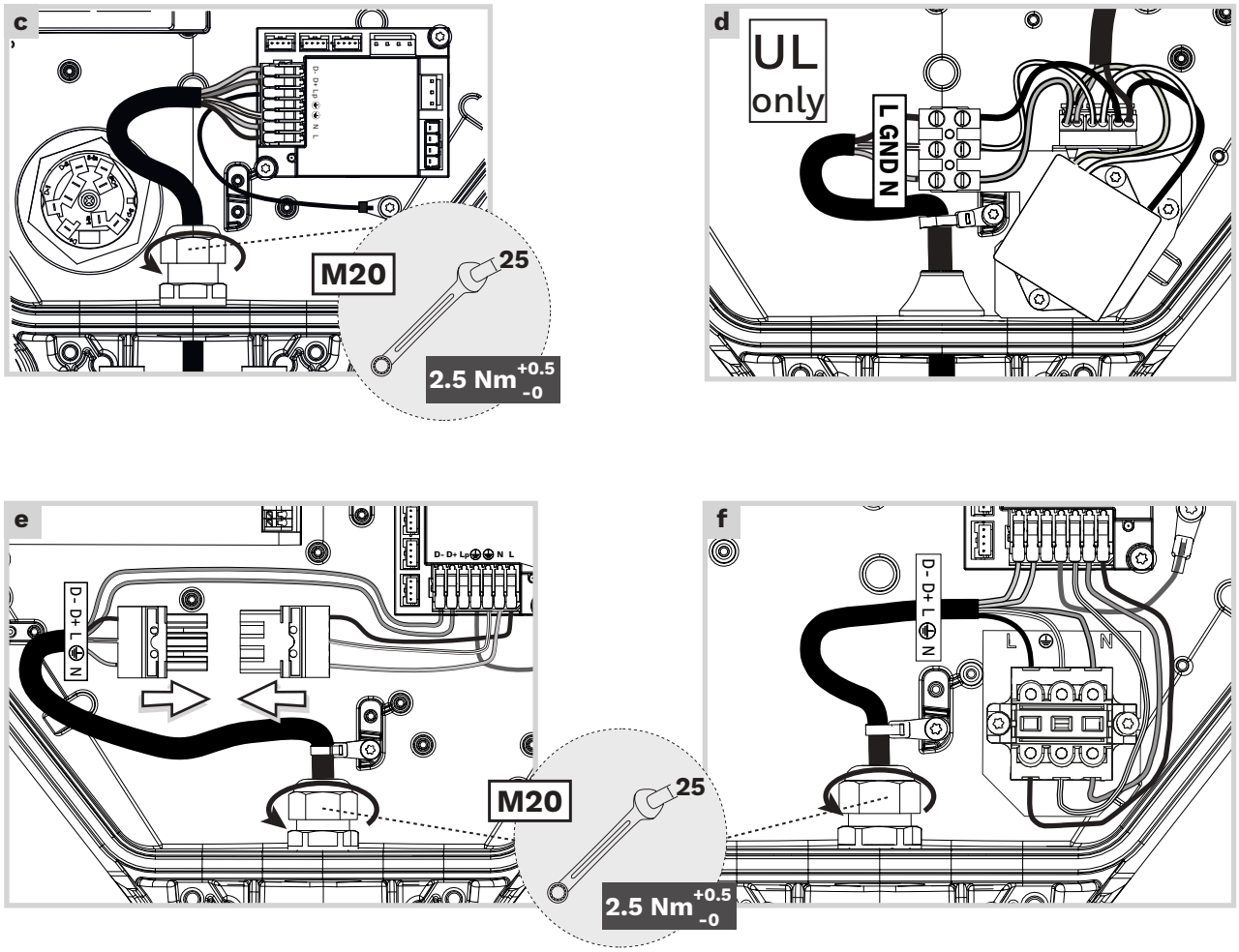
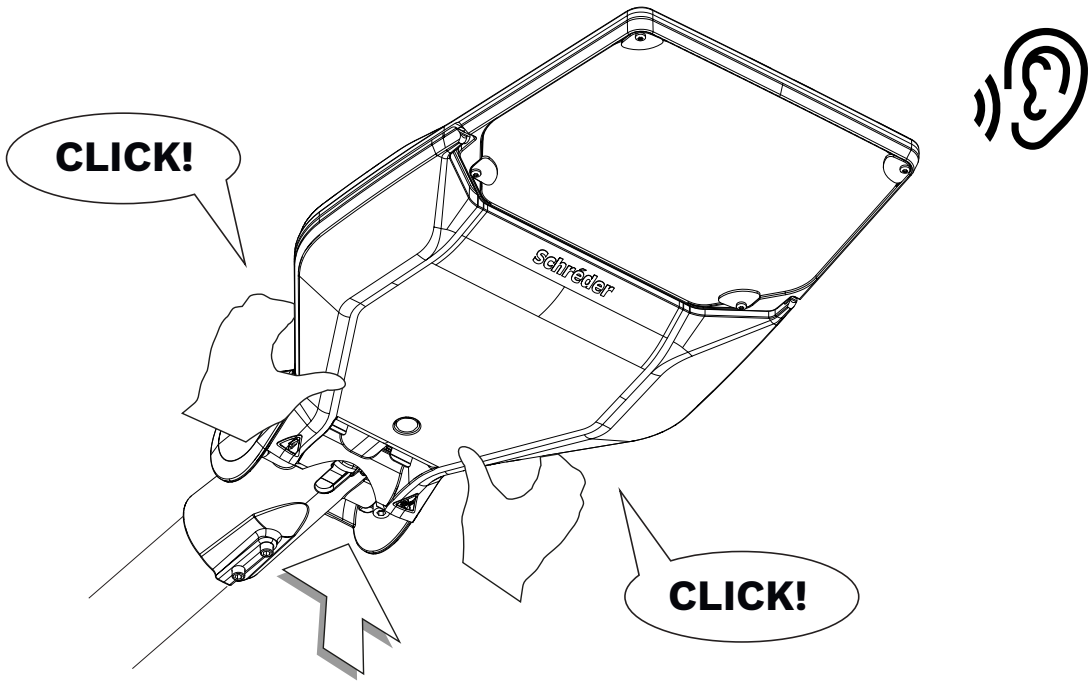


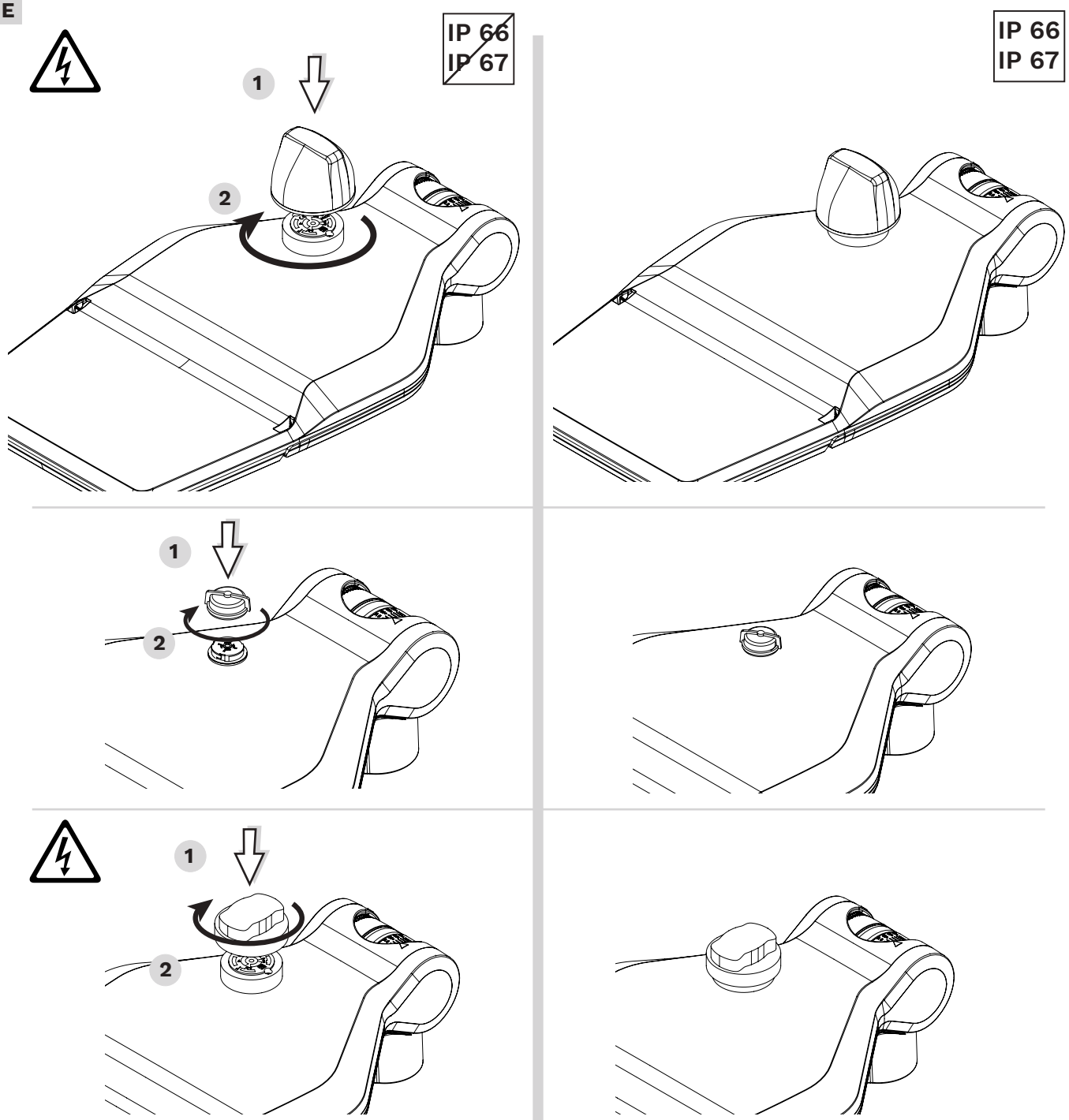
5 continued



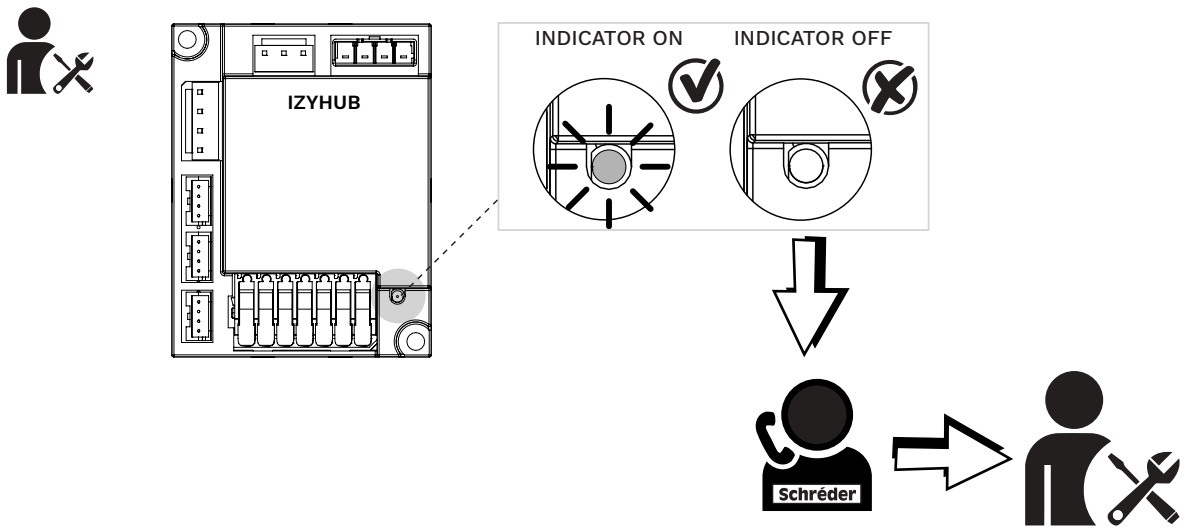
6

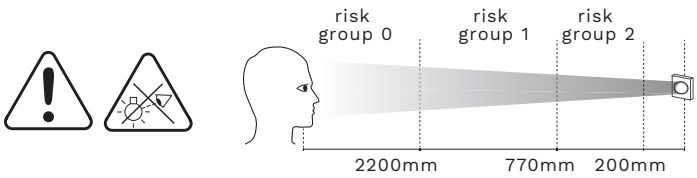


E



F





ENG

SAFETY INSTRUCTIONS
The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person. Always switch off the power prior to installation, maintenance or repair activities.

RISK GROUP 2 - CAUTION! Hazardous optical radiation may be emitted from this product. Do not stare at the luminaire when operating as it may be harmful to the eyes. The luminaire should be positioned so that prolonged staring at the luminaire at a distance of less than 0.6m is not expected.

In case of PVC insulated mains cable, the installer MUST ensure that the WHOLE cable is protected against climatic conditions, especially UV rays and rain, by making sure that the cable is contained inside the luminaire and pole

Y-connection: In case of damage to the wire, it has to be replaced only by the manufacturer, distributor or by an expert, to avoid risks.

ITA

ISTRUZIONI DI SICUREZZA
La sorgente di luce contenuta in questo sistema di illuminazione dovrà essere sostituita solo dal produttore, dal suo agente di servizio o da una persona con qualifica similare.

Staccare sempre il filo della corrente prima di iniziare operazioni di installazione, manutenzione o riparazione.

GRUPPO DI RISCHIO 2 - ATTENZIONE! Questo prodotto può emettere radiazioni ottiche potenzialmente pericolose. Non fissare la sorgente accesa. Potrebbe essere dannoso per gli occhi. L'apparecchio dovrebbe essere posizionato in modo da non permettere di fissare a lungo l'apparecchio a una distanza inferiore di 0.6m.

In caso di cavo di alimentazione isolato in PVC, l'installatore DEVE garantire che il cavo INTERO sia protetto dalle condizioni climatiche, in particolare dai raggi UV e dalla pioggia, assicurandosi che il cavo sia contenuto all'interno del corpo illuminante e del palo

Collegamento Y: in caso di danneggiamento, il cavo deve essere sostituito esclusivamente dal costruttore, dal distributore o da un tecnico esperto per evitare rischi.

NLD

VEILIGHEIDSINSTRUCTIES
De lichtbron in deze armatuur dient uitsluitend door de fabrikant, diens onderhoudsvertegenwoordiger of een persoon met vergelijkbare kwalificaties te worden vervangen.

Schakel altijd de stroom uit voordat u aan installatie, onderhoud of reparaties begint.

RISICOGROEP 2 - LET OP! Bij dit product kan eventueel gevaarlijke optische straling voorkomen. Staar niet in de brandende lamp. Dit kan schadelijk zijn voor de ogen. Het armatuur moet worden geplaatst zodat staren in het armatuur op een afstand kleiner dan 0.6meter niet verwacht wordt.

In het geval van PVC-geïsoleerde voedingskabels MOET de installateur ervoor zorgen dat de GEHELE kabel wordt beschermd tegen klimaatomstandigheden, met name UV-stralen en regen, door ervoor te zorgen dat de kabel zich in het armatuur en de paal bevindt

Y-verbinding: in geval van schade aan de draad dient deze te worden vervangen door de fabrikant, de distributeur of door een expert, om risico's te vermijden.

DAN

SIKKERHEDSINSTRUKTIONER
Lyskilden i dette armatur må kun udskiftes af producenten, af en vedligeholdelsesvirksomhed udpeget af producenten eller af en tilsvarende kvalificeret virksomhed.

Sluk altid for strømmen inden påbegyndelse af installation, vedligeholdelse eller reparation.

Risikogruppe 2 - ADVARSEL! Produktet kan muligvis udsende farlig optisk stråling. Kig ikke direkte ind i armaturet under drift, det kan være skadeligt for øjnene. Armaturet skal placeres således så langvarig stirren ind i armaturet, på en afstand der er tættere end 0.6m, undgås.

I tilfælde af PVC-isoleret ledning SKAL elektrikeren sikre, at HELE kablet er beskyttet mod klimatiske forhold, dette gælder især UV-stråler og regn. Elektrikeren skal derfor sørge for, at kablet forbliver inde i armaturet og masten.

Type Y montering: Hvis det eksterne kabel eller ledning på dette armatur er beskadiget, må det kun udskiftes af producenten
eller af en servicepartner til producenten eller tilsvarende kvalificeret person, for at undgå skader.

DEU

SICHERHEITSHINWEISE
Die Lichtquelle in dieser Leuchte darf nur vom Hersteller bzw. von dessen
Kundendienst oder einer ähnlich qualifizierten Person ausgetauscht werden.

Schalten Sie die Stromversorgung vor Installations-, Wartungs- und
Reparaturarbeiten stets ab.

Risikogruppe 2 - VORSICHT! Von diesem Produkt kann möglicherweise gefährliche optische Strahlung ausgehen. Es ist darauf zu achten, dass man im eingeschaltetem Zustand der Leuchte nicht innerhalb einer Distanz von 0.6m direkt in die Leuchte schaut. Dies könnte schädlich für Ihre Augen sein.

Bei Verwendung eines PVC-isolierten Netzkabels MUSS der Installateur sicherstellen, dass das GESAMTE Kabel vor klimatischen Bedingungen -insbesondere vor UV-Strahlen und Regen- geschützt ist, indem sichergestellt wird, dass das Kabel in der Leuchte und dem Mast verschlossen ist

Y-Verbindung: Falls die Leitung beschädigt ist, darf diese nur vom Hersteller, dem Händler oder einem Experten ersetzt werden, um Risiken zu vermeiden.

POL

INSTRUKCJA BEZPIECZEŃSTWA
źródło światła zamontowane w tej oprawie może być wymieniane wyłącznie przez producenta, pracownika serwisu lub inną wykwalifikowaną osobę.

Przed rozpoczęciem instalacji, konserwacji lub naprawy należy bezwzględnie odłączyć zasilanie elektryczne.

GRUPA RYZYKA 2 - OSTRZEŻENIE Produkt może emitować niebezpieczne promieniowanie optyczne szkodliwe dla oczu. Nie należy patrzeć bezpośrednio na pracujące źródło światła. Oprawa powinna być tak zamontowana, aby jej długotrwała obserwacja była możliwa z odległości nie mniejszej niż 0.6m.

W przypadku kabla sieciowego izolowanego PCV instalator MUSI upewnić się, że kabel CAŁY jest chroniony przed warunkami klimatycznymi, w szczególności przed promieniowaniem UV i deszczem, upewniając się, że kabel znajduje się wewnątrz oprawy i słupa.

Połączenie Y: ze względów bezpieczeństwa uszkodzony przewód powinien zostać wymieniony wyłącznie przez producenta, dystrybutora lub wykwalifikowanego elektryka.

RUS

инструкция безопасности
замену источника света для этого светильника должен выполнять только произ водитель, сервисный агент производителя или специалист с аналогичной квалификацией.

Перед проведением установки, сервисного обслуживания или ремонта всегда отключайте питание устройства.

ГРУППА РИСКА 2 - ВНИМАНИЕ! Возможно опасное оптическое излучение от этого изделия. Не смотрите на источник света. Может быть вредно для глаз. Светильник должен быть расположен таким образом, чтобы было невозможно смотреть на него с расстояния менее 0.6м.

В случае кабеля питания с ПВХ изоляцией, монтажник ДОЛЖЕН обеспечить защиту ВСЕГО кабеля от воздействия климатических условий, особенно от ультрафиолетовых лучей и дождя, убедившись, что кабель находится внутри светильника и опоры.

Подключение Y: в случае повреждения кабеля его замена производится только производителем, дистрибьютором или экспертом.

RON

INSTRUCŢIUNI DE EXPLOATARE
Sursa de lumină din acest corp de iluminat trebuie înlocuită numai de producător sau de reprezentantul său de service sau o persoană ce deţine calificări similare.

Opriţi întotdeauna alimentarea electrică înainte de lucrările de instalare, întreţinere sau reparaţii.

GRUP DE RISC 2 - ATENŢIE! Este posibil ca acest produs să emită radiaţii optice periculoase. Nu priviţi direct înspre lampa aflată în stare de funcţionare. Acest lucru poate fi dăunător ochilor. Aparatul de iluminat trebuie să fie poziţionat astfel încât să nu fie posibil, în mod normal, privitul directă înspre lampă, la o distanţă mai mică de 0.6m.

În cazul cablului de alimentare cu izolaţie din PVC, instalatorul TREBUIE să se asigure că TOT cablul este protejat împotriva condiţiilor climatice, mai ales împotriva razelor UV şi a ploii, asigurându-se că acest cablu este plasat în interiorul aparatului de iluminat şi al stâlpului

Conexiune Y: În caz de deteriorare a firului, acesta trebuie înlocuit numai de către producător, distribuitor sau un expert, pentru evitarea riscurilor.

FRA

INSTRUCTIONS DE SECURITE
La source lumineuse contenue dans ce luminaire doit être uniquement remplacée par le fabricant, son agent de maintenance ou une autre personne disposant des qualifications appropriées.

Mettez toujours l'appareil hors tension avant toute opération d'installation, d'entretien ou de réparation.

RISQUE GROUPE 2 - ATTENTION ! Ce produit émet potentiellement des rayons dangereux pour la vue. Regarder directement la source lumineuse et de manière continue pourrait causer des lésions aux yeux. Le luminaire doit être installé de façon à ne pas pouvoir regarder la source lumineuse directement de manière continue à moins de 0.6m.

Dans le cas d'un câble secteur isolé en PVC, l'installateur DOIT s'assurer que le câble ENTIER est protégé contre les conditions climatiques, en particulier les rayons UV et la pluie, en s'assurant que le câble est contenu à l'intérieur du luminaire et du poteau

Connexion Y : si le câble est endommagé, il ne peut être remplacé que par le fabricant, par le distributeur ou par un expert, afin d'éviter tout risque.

SPA

INSTRUCCIONES DE SEGURIDAD
Solo el fabricante, un agente del servicio técnico o persona con cualificación similar puede sustituir la fuente de luz de este sistema de iluminación.

Apague siempre el interruptor de alimentación antes de realizar tareas de instalación, mantenimiento o reparación.

GRUPO DE RIESGO 2 - ¡PRECAUCIÓN! radiación óptica posiblemente peligrosa emitida por este producto. No mire a la lámpara en funcionamiento. Puede ser dañino para los ojos. El sistema de iluminación debe instalarse de modo que la mirada fija prolongada a la luminaria, a una distancia menor de 0.6m no se espere.

En el caso de un cable aislado de PVC, el instalador DEBE asegurarse de que todo el cable esté protegido contra las condiciones climáticas, especialmente los rayos UV y la lluvia, asegurándose de que el cable esté dentro de la luminaria y el poste

Conexión en Y: si el cable se daña, solo debe reemplazarlo el fabricante, un distribuidor o un experto para evitar riesgos.

POR

INSTRUÇÕES DE SEGURANÇA
A fonte de luz no interior deste candeeiro deve ser substituída apenas pelo
fabricante, pelo seu técnico de assistência ou por uma pessoa com qualificação equivalente.

Desligue sempre a alimentação antes de proceder a actividades de instalação, manutenção ou reparação.

GRUPO DE RISCO 2 - ATENÇÃO! Possível risco ótico por radiação emitida a partir deste produto. Não olhar para a luz em funcionamento. Pode ser prejudicial para os olhos. A luminária deve ser posicionada de modo a que não seja expectável um olhar prolongado para a luminária em funcionamento a uma distância inferior a 0.6m.

No caso de cabo de alimentação com isolamento em PVC, o instalador DEVE assegurar que TODO o cabo é protegido das condições climáticas, especialmente raios UV e chuva, certificando-se que o cabo está contido dentro da luminária e da coluna.

Ligação Y: em caso de danos no fio, este tem de ser substituído apenas pelo fabricante, distribuidor ou por um técnico especializado, para evitar riscos.

SWE

SÄKERHETSINSTRUKTIONER
Ljuskällan som monteras i denna armatur får endast ersättas av en Schréder-anställd eller annan kvalificerad person.

Stäng alltid av strömmen före installation, underhåll eller reparation.

Riskgrupp 2 - VARNING! Eventuellt farlig optisk strålning från denna produkt. Stirra ej på driftlampan. Kan vara skadligt för ögonen. Armaturen bör placeras så att långvarigt stirrande in i armaturen på ett avstånd som är närmare än 0.6m ej är möjligt.

Vid PVC-isolerad kabel måste installatören se till att hela kabeln är skyddad mot klimatförhållanden, särskilt UV-strålar och regn, genom att se till att kabeln monteras inuti armaturen och stolpen

Typ Y-anslutning:
Om den externa kabeln eller ledningen på denna armatur är skadad, får den endast bytas ut av tillverkaren eller av en servicepartner till tillverkaren eller motsvarande kvalificerad person, för att undvika skador

HUN

BIZTONSÁGI ÚTMUTATÓ
A lámpatestben található fényforrást kizárólag a gyártó, szervizképviselője vagy hivatalos szakszerviz szakembere cserélheti ki.

A szerelés, karbantartás és javítás előtt minden esetben végezzen áramtalanítást.

KOCKÁZATI CSOPORT 2 - VIGYÁZAT! A berendezés veszélyes optikai sugárzást bocsáthat ki! Ne nézzen bele a bekapcsolt lámpatestbe! Szemet károsító hatás léphet fel. A lámpatestet úgy ajánlott pozícionálni, hogy rálátás esetén a lámpatest ne legyen 0.6m-nél közelebb!

PVC szigetelésű tápkábel esetén a telepítőnek biztosítania KELL, hogy a TELJES kábel védett legyen az éghajlati viszonyoktól, különösen az UV sugárzástól és az esőtől, ügyelve arra, hogy a kábel a lámpatest és az oszlop belsejében legyen.

Y-csatlakozó: A sérült vezetéket kizárólag a gyártó, forgalmazó vagy szakember cserélheti ki a kockázatok elkerülése végett.

CHI

安全守则

该灯具内的光源仅可由施莱德员工、指定代理商或具备类似资质的人员进行更换。

在安装、维护和维修灯具之前必须首先切断电源。

风险群体 2 - 注意！有害的光学射线有可能从产品中发出。不要凝视正在工作的光源。有可能对眼睛产生危害。灯具应当选择合理位置安装，尽可能避免长时间在0.6米以内凝视。

如果选择PVC主电缆，必须确保整个电缆被很好的保护以抵御恶略气候状况，尤其是紫外线和雨水，而且要确保电缆被灯具和灯杆完全覆盖。

Y类附件：
如果灯具外部电缆被破坏，电缆必须被制造商或服务代理商或者有资质的人员及时更换从而避免伤害。

UKR

інструкція безпеки
Джерело світла, що міститься у цьому світильнику, повинен замінятн лише виробник, його сервісний агент або кваліфікована особа.

Завжди вимикайте живлення перед встановленням, доглядом або ремонтом.

ГРУПА РИЗИКУ 2 - УВАГА! Можливість небезпечного оптичного випромінювання від цього продукту. Уникайте прямого погляду на ввімкнене джерело світла. Може бути шкідливо для очей. Світильник має бути розташований так, щоб уникнути його тривалого споглядання з відстані ближче, ніж 0.6м.

У випадку кабелю живлення із ПВХ ізоляцією, монтажник ПОВИНЕН забезпечити захист ВСЬОГО кабелю від впливу кліматичних умов, особливо від ультрафіолетових променів та дощу, переконавшись, що кабель знаходиться всередині світильника та опори

Y-з'єднання: у разі пошкодження дроту його має замінити лише виробник, дистриб ютор чи експерт, щоб запобігти ризикам.

SRP

UPUTSTVA
Izvor svetla u ovom rasvetnom telu može da zameni samo proizvođač, njegov servisni agent ili na sličan način kvalifikovana osoba.

Uvek isključite napajanje pre instalacije, održavanja ili popravke.

GRUPA RIZIKA 2 - PAŽNJA! Proizvod može emitovati štetno optičko zračenje.
Izbegavati vizuelni kontakt sa svetlosnim izvorom dok je u radu. Moguće oštećenje vida. Svetiljku treba pozicionirati tako da se ne očekuje duži vizuelni kontakt sa izvorom sa razdaljine manje od 0.6m.

U slučaju napojnog kabla sa PVC izolacijom, izvođač MORA obezbediti zaštitu CELOG kabla od klimatskih uslova, posebno UV zračenja i kiše, tako što će osigurati da se kabal nalazi unutar svetiljke i stuba.

Y-veza: U slučaju oštećenja žice zamenu mora da obavi isključivo proizvođač, distributer ili stručnjak kako bi se izbegao rizik.

AR

تعليمات السلامه:
في حاله الحاجه لتغير مصدر الضوء, يتم ذلك من خلال الشركه المصنعه او الوكيل المخول لعمل ذلك او شخص موهل لذلك.
دائما افصل الدائره الكهربائيه قبل تركيب او صيانه الجهاز.
تحذير: هذا المنتج مصنف ضمن مجموعه المخاطر 2
.خطر انبعاث اشعاع ضوئي , لا تنظر مباشره الى الجهاز و هو مضاء لان ذلك مؤذي للعين. الجهاز يجب ان يركب بشكل يضمن ان التحديق بمصدر الضوء من مسافه اقل من 0.6 م غير متوقعه.
يجب على الشخص الذي يوصل الجهاز بالدائره الكهربائيه التاكد من ان محمي من التاثيرات المناخيه و خاصه الاشعه فوق البنفسجيه و المطر من خلال التاكد ان الكابل محوي بداخل العمود و الجهاز
في حاله الحاجه لتغير الاسلاك الداخليه , يتم ذلك من خلال الشركه المصنعه او الوكيل المخول لعمل ذلك او شخص مخول لذلك.
دائما افصل الدائره الكهربائيه قبل تركيب او صيانه الجهاز.

LICENCE

No. 22050 replaces No.21629, 21793

Issued to:
Applicant:
R-Tech
Rue de Mons, 3
4000 LIEGE
Belgium

Licensee:
Schreder S.A.
Rue de Lusambo, 67
1190 BRUXELLES
Belgium

Product	:	road, square and street lighting
Trade name(s)	:	SCHREDER
Type(s)/model(s)	:	IZYLUM 1, IZYLUM 2, IZYLUM 3, IZYLUM 4, IZYLUM 5

The product and any acceptable variation thereto is specified in the annex to this licence and the documents therein referred to.

SGS CEBEC hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard specified in annex
- an inspection of the production location
- a certification agreement with the number 1173

SGS CEBEC hereby grants the right to use the CEBEC certification mark

The ENEC/CEBEC certification mark may be applied to the product as specified in this licence for the duration of the ENEC/CEBEC certification agreement and under the conditions of the ENEC/CEBEC certification agreement.

This licence is issued on: 18/01/2021

ir. C. Lana,
Certification Manager

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bld Internationalelaan 55 Build. K
B-1070 Brussels
Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product	:	road, square and street lighting
Trade name(s)	:	SCHREDER
Type(s)/Model(s)	:	IZYLUM 1, IZYLUM 2, IZYLUM 3, IZYLUM 4, IZYLUM 5
description	:	Street lighting
rated voltage (Un)	:	220-240 V
nature of supply	:	ac
rated frequency	:	50-60 Hz
class	:	class II
degree of protection	:	IP66, IP67
resistance to impact (IK)	:	IK09

Additional information

- IZYLUM 1 with 20 leds Lensoflex 4 LH351C @ 700mA: ta 50°C with Control gear LG PISE-A075X and PISE-A075Y.
- IZYLUM 4 with max 120 leds Lensoflex 4 LH351C @ max 500mA: ta 55°C with Control gear Philips LP/FP 150W 0.2-0.7 230V S240.
- IZYLUM 5 with max 240 leds Midflex2 OSCONIQ @ max 700mA & IZYLUM 5 with max 120 leds Lensoflex 4 LH351C @ max 500mA: ta 55°C with Control gear Philips SR 110W 0.2-0.7A SNEMP 230V C150 sXt, PISE-A165X or PISEA165Y.

Product data - type IZYLUM 1

rated power	:	max. 65 W
lamp(s)	:	max. 20 leds (Lensoflex 4: LH351C) max. 40 leds (Midflex 2 : Osconiq 3030)
rated ambient temperature (ta)	:	max. 55°C

Product data - type IZYLUM 2

rated power	:	max. 110 W
lamp(s)	:	max. 40 leds (Lensoflex 4: LH351C) max.80 leds (Midflex 2 : Osconiq 3030)
rated ambient temperature (ta)	:	max. 55°C

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
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B-1070 Brussels
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Product data - type IZYLUM 3

rated power	:	max. 167 W
lamp(s)	:	max. 80 leds (Lensoflex 4: LH351C) max. 160 leds (Midflex 2 :Osconiq 3030)
rated ambient temperature (ta)	:	max. 55°C

Product data - type IZYLUM 4

rated power	:	max. 218 W
lamp(s)	:	max. 120 leds (Lensoflex 4: LH351C) max. 240 leds (Midflex 2 : Osconiq 3030)
rated ambient temperature (ta)	:	max. 50°C

Product data - type IZYLUM 5

rated power	:	max. 280 W
lamp(s)	:	max. 120 leds (Lensoflex 4: LH351C) max.240 leds (Midflex 2 : Osconiq 3030)
rated ambient temperature (ta)	:	max. 50°C

TESTS

Test requirements

EN 60598-1:2015 + A1:2018
EN 60598-2-3:2003 + A1:2011

Test results

The test results are laid down in certification file 630733/15.

Remarks

This certificate is based on test report No. P1580-82-IId.

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bld Internationalelaan 55 Build. K
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Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

Conclusion

The examination proved that all certification requirements were met.

Reviewed by, project leader : Christian Maes - 18/01/2021

Certification Manager :

2021-01-18

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bld Internationalelaan 55 Build. K
B-1070 Brussels
Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

FACTORY LOCATION(S)

Schreder TOV
Vul. Mykulynetska 46B
46000 TERNOPIL
Ukraine

Schreder (China) Lighting Industrial Co., Ltd
No.40 Xinye 2 Street
Tianjin Economic Technological Development Zone West Zone
300462 Tianjin City, P.R.China
China

Socelec S.A.
Av. de Roanne, 66
Poligono Industrial "EL HENARES"
19180 MARCHAMALO (GUADALAJARA)
Spain

Schréder Iluminação S.A.
Rua da Fraternidade Operária, n° 3
2795-491 CARNAXIDE, OEIRAS
Portugal

Schréder Hungary Plc.
Tópart 2
2084 PILISSZENTIVAN
Hungary

LICENŢĂ

Nr. 22050 inlocuieste nr. 21683, 21793

Eliberat pentru:
Aplicant:
R-Tech
Rue de Mons, 3
4000 LIEGE
Belgia

Posesor licenţă:
Schreder S.A.
Rue de Lusambo, 67
B-1190 BRUXELLES
Belgia

Produs	: aparate de iluminat căi de circulație, piețe, stradal
Nume de înregistrare	: SCHREDER
Tipul modelului	: IZYLUM 1, IZYLUM 2 , IZYLUM 3, IZYLUM 4, IZYLUM 5

Produsul şi orice versiune este menţionat în Anexa la această licenţă precum şi documentele la care se referă.

SGS CEBEC, prin prezenta, declară că produsul mai sus menţionat a fost certificat în baza:
- testelor tip conforme standardului specificat în anexă
- inspecţiei la locul de producţie
- documentului de certificare cu nr. 1173

SGS CEBEC, marcă de calitate înregistrată, garantează prin prezenta dreptul de a folosi marca de certificare CEBEC
Marca de certificare ENEC/CEBEC poate fi aplicată pe produsul specificat în această licenţă pe durata valabilităţii documentului de certificare ENEC/CEBEC, şi conform condiţiilor documentului de certificare ENEC/CEBEC.

Licenţa a fost eliberată la 18/01/2021
Semnătură indescifrabilă

ir. C. Lana,
Director Certificare

Este permisă numai publicarea integrală a acestei certificări, inclusiv anexa.
Acest certificat este valid doar impreuna cu cu publicarea adresei: www.sgs.com/ee

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bid internationaielaan 55 Bulid. D
B-1070 Brussels
Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

ANEXĂ LA LICENŢA ENEC/CEBEC Nr. 22050

DATELE TEHNICE ALE PRODUSULUI CERTIFICAT

Date produs

Produs	: Căi de circulație, piețe, stradal
Nume de marcă	: SCHREDER
Tipul(uri)	: IZYLUM 1, IZYLUM 2 , IZYLUM 3, IZYLUM 4, IZYLUM 5
Descriere	: Iluminat stradal
Tensiune nominală	: 220-240 V
Tip alimentare	: current alternativ
Frecvenţa nominală	: 50-60 Hz
Clasa	: clasa II
Grad de etanșeitate	: IP 66, IP67
Rezistenta la impact	: IK09

Informatii suplimentare:

- IZYLUM 1 cu 20 LED-uri Lensoflex 4 LH351C @700mA ta 50°C cu echipament de control LG PISE-A075X si PISE-A075Y
- IZYLUM 4 cu max 120 LED-uri Lensoflex 4 LH351C @ max 500mA ta 55°C cu echipament de control Philips LP/FP 150W 0.2-0.7 230V S240
- IZYLUM 5 cu max 240 LED-uri Midflex2 OSCONIQ @ max 700mA & IZYLUM 5 cu max 120 LED-uri Lensoflex 4 LH351C @ max 500mA ta 55°C cu echipament de control Philips SR 110W 0.2-0.7A SNEMP 230V C150 sXt, PISE-A165X sau PISEA165Y

Informatii produs- tip IZYLUM 1

Putere nominală	: max. 65W
Lampă(i)	: max 20 led-uri (Lensoflex4: LH351C) max 40 led-uri (midflex 2 Osconiq 3030)
Temperatura nominala ambientala	: max. 55°C

Informatii produs- tip IZYLUM 2

Putere nominală	: max. 110W
Lampă(i)	: max 40 led-uri (Lensoflex4: LH351C) max 80 led-uri (midflex 2 Osconiq 3030)
Temperatura nominala ambientala	: max. 55°C

SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bid internationaielaan 55 Bulid. D
B-1070 Brussels
Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

Informatii produs- tip IZYLUM 3

Putere nominală : max. 167 W
Lampă(i) : max 80 led-uri (Lensoflex4: LH351C)
max 160 led-uri (midflex 2 Osconiq 3030)
Temperatura nominala ambientala : max. 55°C

Informatii produs- tip IZYLUM 4

Putere nominală : max. 218 W
Lampă(i) : max 120 led-uri (Lensoflex4: LH351C)
max 240 led-uri (midflex 2 Osconiq 3030)
Temperatura nominala ambientala : max. 50°C

Informatii produs- tip IZYLUM 5

Putere nominală : max. 280 W
Lampă(i) : max 120 led-uri (Lensoflex4: LH351C)
max 240 led-uri (midflex 2 Osconiq 3030)
Temperatura nominala ambientala : max. 50°C

Cerinte teste

EN 60598-1:2015 + A1:2018
EN 60598-2-3:2003+A1:2011

Rezultate teste
Rezultatele testelor se gasesc in certificatul cu numarul 630733/15

Observaţii

Acest certificat are la bază raportul testului Nr. P1580-82-lld.

Concluzie :

Verificarea a demonstrat că toate cerințele au fost îndeplinite.

Verificat de către, coordonator proiect	Christian Maes –18/01/2021
Manager Certificare	*semnătură indescifrabilă, data*

ANEXĂ LA LICENŢA ENEC/CEBEC Nr. 21792
pagina 4 din 4

Adresa fabricilor

Schreder TOV
Vul. Mykulynetska 46 B
46000 TERNOPIL
Ukraine

Schreder (China) Lighting Industrial Co, Ltd
No 40 Xinye 2 Street, Tianjin Economic Technological Developement Zone West Zone,
300462 Tianjin City , P.R. China
China

Socelec S.A
Av de Roanne, 66
Poligono Industrial EL HENARES
19180 MARCHAMALO (GUADALAJARA)
Spain

Schreder Iluminacao S A
Rua da Fraternidade Operaria n' 3
2795-491 CARNAXIDE OEIRAS
Portugal

Schreder Hungary Plc.
Topart 2
2084 PILISSZENTIVAN
Hungary

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

ENEC Certification Body registered under ID # 02. Validity of ENEC and ENEC+ licences can be checked at www.enec.com

LICENCE

to use the ENEC+ Mark

02

ENEC+ License No.: 22137

Under the conditions given in the "Rules concerning the use of the CEBEC mark" complemented by the ENEC+ Agreement under contract 1173/2, the license to use the ENEC+ Mark with suffix 02, as shown above, has been issued to:

Schreder S.A.
Rue de Lusambo, 67
1190 Bruxelles
Belgium

For the product:

Street lighting luminaire

Trade name(s):

SCHREDER

Type(s)/Model(s):

IZYLUM 1 (led LH351C), IZYLUM 2 (led LH351C), IZYLUM 3 (led LH351C),
IZYLUM 4 (led LH351C), IZYLUM 5 (led LH351C), IZYLUM 1 (OSCONIQ 3030S),
IZYLUM 2 (OSCONIQ 3030S), IZYLUM 3 (OSCONIQ 3030S),
IZYLUM 4 (OSCONIQ 3030S), IZYLUM 5 (OSCONIQ 3030S)

Complying with the following EPRS for performance:

EPRS 003:2018, IEC 62722-1:2014, IEC 62722-2-1:2014
EN 62722-1:2016, EN 62722-2-1:2016

Based on test report No. P1580-82_LH351C-OSCONIQ_012021

This licence is conditional to the validity of the ENEC License No.: 22050.

Date: 2021-03-30

Signature:

Name:Calogero LANA
Position:Certification Manager

SGS Belgium NV – Division SGS CEBEC, Riverside Business Park, Avenue Internationalelaan 55, Building K, BE-1070 Brussels
Tel. +32 2 556 00 20 – cebec.info@sgs.com

Characteristics :

Description	:	Street lighting luminaire
Rated voltage (Un)	:	220-240 V
Rated frequency	:	50-60 Hz
Colour rendering index (CRI)	:	70, 80 (LH351C) 70 (OSCONIQ 3030S)
Colour temperature (CCT)	:	2200K, 2700K, 3000K, 4000K (LH351C) 3000K, 4000K (OSCONIQ 3030S)
Class	:	class II

IZYLUM 1 (led LH351C):

Rated power	:	max. 65 W
Lamp(s)	:	max. 20 (Lensoflex4 : LH351C)
Luminous flux	:	max. 7700 lm (max. 1000 mA)
Efficacy (lm/W)	:	max. 153 lm/W
Rated current	:	max. 1000 mA (Tq 15°C) / max. 700 mA (Tq 25°C)

IZYLUM 2 (led LH351C):

Rated power	:	max. 110 W
Lamp(s)	:	max. 40 (Lensoflex4 : LH351C)
Luminous flux	:	max. 14004 lm (max. 870 mA)
Efficacy (lm/W)	:	max. 166 lm/W
Rated current	:	max. 870 mA (Tq 15°C) / max. 700 mA (Tq 25°C)

IZYLUM 3 (led LH351C):

Rated power	:	max. 162 W
Lamp(s)	:	max. 80 (Lensoflex4 : LH351C)
Luminous flux	:	max. 22556 lm (max. 700 mA)
Efficacy (lm/W)	:	max. 171 lm/W
Rated current	:	max. 700 mA (Tq 25°C)

IZYLUM 4 (led LH351C):

Rated power	:	max. 218 W
Lamp(s)	:	max. 120 (Lensoflex4 : LH351C)
Luminous flux	:	max. 30019 lm (max. 600 mA)
Efficacy (lm/W)	:	max. 170 lm/W
Rated current	:	max. 600 mA (Tq 15°C) / max. 500 mA (Tq 25°C)

IZYLUM 5 (led LH351C):

Rated power	:	max. 280 W
Lamp(s)	:	max. 120 (Lensoflex4 : LH351C)
Luminous flux	:	max. 35328 lm (max. 750 mA)
Efficacy (lm/W)	:	max. 171 lm/W
Rated current	:	max. 750 mA (Tq 15°C) / max. 500 mA (Tq 25°C)

IZYLUM 1 (OSCONIQ 3030S):

Rated power	:	max. 56 W
Lamp(s)	:	max. 40 (OSCONIQ 3030S)
Luminous flux	:	max. 6621 lm
Efficacy (lm/W)	:	max. 149 lm/W
Rated current	:	max. 200 mA (Tq 25°C)

IZYLUM 2 (OSCONIQ 3030S):

Rated power	:	max. 109 W
Lamp(s)	:	max. 80 (OSCONIQ 3030S)
Luminous flux	:	max. 12878 lm
Efficacy (lm/W)	:	max. 164 lm/W
Rated current	:	max. 200 mA (Tq 25°C)

IZYLUM 3 (OSCONIQ 3030S):

Rated power	:	max. 167 W
Lamp(s)	:	max. 160 (OSCONIQ 3030S)
Luminous flux	:	max. 22368 lm
Efficacy (lm/W)	:	max. 171 lm/W
Rated current	:	max. 162 mA (Tq 25°C)

IZYLUM 4 (OSCONIQ 3030S):

Rated power	:	max. 214 W
Lamp(s)	:	max. 240 (OSCONIQ 3030S)
Luminous flux	:	max. 28630 lm
Efficacy (lm/W)	:	max. 172 lm/W
Rated current	:	max. 140 mA (Tq 25°C)

IZYLUM 5 (OSCONIQ 3030S):

Rated power	:	max. 275 W
Lamp(s)	:	max. 240 (OSCONIQ 3030S)
Luminous flux	:	max. 33531 lm
Efficacy (lm/W)	:	max. 172 lm/W
Rated current	:	max. 170 mA (Tq 25°C)

Traducere din limba engleză, Limbășan Daniela, traducător autorizat MJ nr.14531/2005

SGS CEBEC

Organismul de certificare ENEC inregistrat sub ID # 02. Valabilitatea ENEC+ licente ENEC pot fi verificate pe www.enec.com

LICENTA

Pentru folosirea ENEC+ Marca inregistrata

Licenta Nr.: 22137

In conditiile prevazute de directiva "Reguli privind folosirea marcii inregistrate CEBEC" completata de Acordul ENEC+ in temeiul contractului 1173/2, licenta de a folosi ENEC+ marca intregistata cu sufixul 02, dupa cum se arata mai jos, a fost eliberata catre:

Schréder S.A
Rue de Lusambo, 67
1190 Brussels
Belgium

Pentru produsul:

Aparate de iluminat stradal

Nume de inregistrare:

SCHREDER

Tipul modelului:

IZYLUM 1(led LH351C), IZYLUM 2(led LH351C), IZYLUM 3(led LH351C), IZYLUM 4(led LH351C), IZYLUM 5(led LH351C), IZYLUM 1(OSCONIQ 3030S), IZYLUM 2(OSCONIQ 3030S), IZYLUM 3(OSCONIQ 3030S), IZYLUM 4(OSCONIQ 3030S), IZYLUM 5(OSCONIQ 3030S),

In conformitate cu EPRS pentru performanta:

EPRS 003 2018, EN 62722-1:2014, EN 62722-2-1:2014

EN 62722-1:2016, EN 62722-2-1:2016

In conformitate cu raportul de testare nr. P1580-82_LH351C-OSCONIQ_012021

Aceasta Licenta este conditionata de valabiliatea Licentei ENEC nr: 22050

Data: 2021-03-30 **Semnatura:**

Nume: Calogero LANA
Pozitie: Manager Certificari

Această licență a fost eliberată în condițiile prezumției și condiționată de faptul că titularul licenței deține toate drepturile legale necesare cu privire la produsul prezentat pentru testare și certificare.

SGS Belgium NV – Division SGS CEBEC, Riverside Business Park, Bld Internationalelaan 55, Building K, BE-1070 Brussels
Tel. +32 2 556 00 20 – cebec.info@sgs.com

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

Characteristics

Descriere	:	Iluminat stradal, piete
Tensiune nominala (Un)	:	220-240 V
Frecventa nominala	:	50-60 Hz
Indice de redare al culorilor (CRI)	:	70; 80(LH351C) 70 (OSCONIQ 3030S)
Temperatura culoare (CCT)	:	2200K, 2700 K, 3000 K, 4000K (LH351C) 3000 K, 4000K (OSCONIQ 3030S)
Clasa	:	clasa II

Tip IZYLUM 1 (led LH351C) :

Putere nominala	:	Max. 65W
Sursa(e)	:	Max. 20 (Lensoflex 4: LH351C)
Flux luminos	:	Max. 7700 lm (Max 1000 mA)
Eficacitate (lm/W)	:	Max. 153 lm/W
Curent nominal	:	Max 1000 mA (Tq 15°C) / Max 700 mA (Tq 25°C)

Tip IZYLUM 2 (led LH351C):

Putere nominala	:	Max. 110W
Sursa(e)	:	Max. 40 (Lensoflex 4: LH351C)
Flux luminos	:	Max. 14004 lm (Max 870 mA)
Eficacitate (lm/W)	:	Max. 166 lm/W
Curent nominal	:	Max 870 mA (Tq 15°C) / Max 700 mA (Tq 25°C)

Tip IZYLUM 3 (led LH351C) :

Putere nominala	:	Max. 162W
Sursa(e)	:	Max. 80 (Lensoflex 4: LH351C)
Flux luminos	:	Max. 22556 lm
Eficacitate (lm/W)	:	Max. 171 lm/W
Curent nominal	:	Max 700 mA(Tq 25°C)

Tip IZYLUM 4 (led LH351C):

Putere nominala	:	Max. 218W
Sursa(e)	:	Max. 120 (Lensoflex 4: LH351C)
Flux luminos	:	Max. 30019 lm (Max 600 mA)
Eficacitate (lm/W)	:	Max. 170 lm/W
Curent nominal	:	Max 600 mA (Tq 15°C) / Max 500 mA (Tq 25°C)

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Tip IZYLUM 5 (led LH351C):

Putere nominala	:	Max. 280W
Sursa(e)	:	Max. 120 (Lensoflex 4: LH351C)
Flux luminos	:	Max. 35328 lm(Max 750 mA)
Eficacitate (lm/W)	:	Max. 171 lm/W
Curent nominal	:	Max 750 mA (Tq 15°C) / Max 500 mA (Tq 25°C)

Tip IZYLUM 1 (OSCONIQ 3030S) :

Putere nominala	:	Max. 56W
Sursa(e)	:	Max. 40 (OSCONIQ 3030S)
Flux luminos	:	Max. 6621 lm
Eficacitate (lm/W)	:	Max. 149 lm/W
Curent nominal	:	Max 200 mA (Tq 25°C)

Tip IZYLUM 2 (OSCONIQ 3030S):

Putere nominala	:	Max. 109W
Sursa(e)	:	Max. 80 (OSCONIQ 3030S)
Flux luminos	:	Max. 12878 lm
Eficacitate (lm/W)	:	Max. 164 lm/W
Curent nominal	:	Max 200 mA (Tq 25°C)

Tip IZYLUM 3 (OSCONIQ 3030S) :

Putere nominala	:	Max. 167W
Sursa(e)	:	Max. 160 (OSCONIQ 3030S)
Flux luminos	:	Max. 22368 lm
Eficacitate (lm/W)	:	Max. 171 lm/W
Curent nominal	:	Max 162 mA(Tq 25°C)

Tip IZYLUM 4 (OSCONIQ 3030S):

Putere nominala	:	Max. 214W
Sursa(e)	:	Max. 240 (OSCONIQ 3030S)
Flux luminos	:	Max. 28630 lm
Eficacitate (lm/W)	:	Max. 172 lm/W
Curent nominal	:	Max 140 mA (Tq 25°C)

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Tip IZYLUM 5 (OSCONIQ 3030S):

Putere nominala	:	Max. 275W
Sursa(e)	:	Max. 240 (OSCONIQ 3030S)
Flux luminos	:	Max. 33531 lm
Eficacitate (lm/W)	:	Max. 171 lm/W
Curent nominal	:	Max 750 mA (Tq 15°C) / Max 500 mA (Tq 25°C)

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut. M.J. Nr. 14531/2005
Engleză, Franceză

Laboratory
Test report

FORM L-54 Edition 01 – Revision 01 - Date: 10/09/2019

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

Tightness test

General information

Subject : IZYLUM 3 - 60 LH351C - Philips SR 150W - 700mA - Lumawise - CL I

Asked by : SZÜGYI János Péter

Created on : 25/10/2019

Validated on : 06/11/2019

Test number : D190994

Reference norm : IEC/EN 60598-1 Standard

Sample(s) : E190753

Folder : P-F19086

Test conditions

Luminaire : IZYLUM 3

Number of LED : 60

LED : Samsung LH351C

Driver current (mA) : 700

Protector Material : Glass Extra Clear

Protector Shape : Flat

External accessories :

Lumawise

Preconditionning time (minutes) : 60

Operator : Philippe Léonard

IMG_5364

Conclusion

Success

Conclusion :

IP66 granted.

Validated by :

GHYSENS Gilles

Duplicate to : SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ Péter, BOS Peter

LAB : 06/11/2019

Test(s) details

Test(s)

Name	Description	Result
IP6X	- Luminaire switched ON until stable T° - Talcum in suspension (blowing ON) - After 1', luminaire OFF - Talcum for 3 hours	Success
IPX6	- Luminaire switched ON until stable T° - Luminaire switched OFF and immediately sprayed with water jet - Hose diam. 12,5 mm - Water flow: 100 l/min - Spraying distance: 3 m - Duration of test: 3 minutes	Success

IP6X

Result(s)

✓ Test succeeded no dust entry in the optical and auxiliary part.

IPX6

Result(s)

✓ Test succeeded no water ingress in the optical and auxiliary part.

Test room temperature (°C) : 24

Measurement equipment :

IP6X

Talcum chamber (A003)
Thermometer (A039/2)
Chronometer (A043/6)
Caliper (M054/M055)

IPX6

Rotating table (A001/2)
Chronometer (A043/6)
Thermometer (A039/1)
Flowmeter (A001/9)
IPx6 nozzle (A001/5)

Quantities measured:

Verification of water/dust ingress within a luminaire enclosure according to

For IP2X: PT-S-14
For IP3X/4X: PT-S-15
For IP5X/6X: PT-S-06
For IPX3/X4: PT-S-01
For IPX5/X6: PT-S-08
For IPX7/X8: PT-S-09

Uncertainties:

Statement of uncertainties (K=2, 95% of confidence level):

Time: 0,35 seconds per 10 minutes

Temperature: 0,6 °K

Calipers: 0,005 mm

Measuring tape: ± 1,13 mm

Dynamometric key :

From 0.5 to 2.5 Nm : 0,15 Nm
From 2.5 to 5 Nm : 0,22 Nm
From 5 to 25 Nm : 0,83 Nm
From 25 to 60 Nm : 2,73 Nm
From 60 to 100 Nm : 3,55 Nm

For solid ingress test:

IP2X:

Probe dimensions: ± 0,6 mm
Applied force: ± 0,4 N

IP3X:

Probe dimensions: ± 0,3 mm
Applied force:± 0,13 N

IP4X:

Probe dimensions: ± 0,1 mm
Applied force: :± 0,11 N

IP5X/6X

Test duration (talcum suspension time): ± 3 seconds
Talcum mass: 0,02 %

For liquid ingress test:

IPX3/X4

Table rotation: ± 6 sec/rotation
Arms Rotation angle: ± 3°
Water flow: ± 4 %

IPX5/X6

Table rotation: ± 6 sec/rotation
Water flow: ± 4 %
Test Distance: +0 / -50 cm

IPX7/X8

Test depth: +10 cm / -0 cm

Decision rules:

Pass/fail criteria

For solid ingress test:

IP2X:

If contact possible with live parts: fail
Otherwise: pass

IP3X/4X:

For luminaires without draining holes, nor ventilation slots for forced cooling, penetration of the test probe in the enclosure: fail
For luminaires with draining holes, or ventilation slots for forced cooling, if contact possible with live part: fail
Otherwise: pass

IP5X/6X

By visual inspection:
If possible hazard due to presence of conductive dust: fail
If no possible hazard due to the presence of conductive dust: IP5X granted
No presence of talcum: IP6X granted

For liquid ingress test:

IPX3/X4/X5/X6:

By visual inspection:
If possible hazard due to presence of water: fail
If no possible hazard due to the presence of water and no efficient way to evacuate the water: fail
If no possible hazard due to the presence of water and an efficient way to evacuate the water: pass
No presence of water: pass

IPX7/X8:

By visual inspection:
Presence of water: fail
No presence of water: pass

End of test report ----------

Laborator teste
RAPORT DE TEST FIZIC

R-Tech
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Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORMULAR L-54 Editia 01 – Revizia 01 - Data: 10/09/2019

Test etanșeitate

Informații generale

Subiect : IZYLUM 3 - 60 LH351C - Philips SR 150W - 700mA - Lumawise - CL I

Solicitat de: SZÜGYI János Péter

Creat la: 25/10/2019

Validat la: 06/11/2019

Număr test: D190994

Standard referință:: IEC/EN 60598-1 Standard

Mostră(e): E190753

Dosar : P-F19086

Condiții testare

Aparat : IZYLUM 3

Număr LED-uri : 60

LED : Samsung LH351C

Curent driver (mA) : 700

Materia difuzor: Sticlă Extra Clară

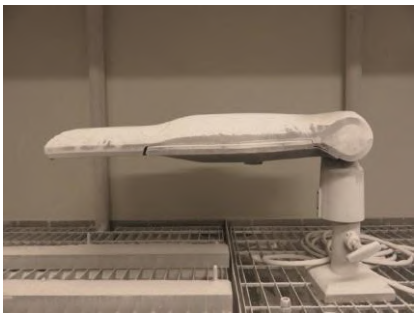
Formă difuzor: Plat

Accesorii exterioare:

Lumawise

Timp de precondiționare (minute): 60

Operator : Philippe Léonard



IMG_5364

Concluzii

Succes

Concluzii :

IP66 garantat.

Validat de:

GHYSENS Gilles

(Semnătura indescifrabilă)

Duplicat pentru: SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ Péter, BOS Peter

LAB : 06/11/2019

D190994

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut. M.J. Nr. 14531/2005
Engleză, Franceză

Detalii test(e)

Test(e)

Nume	Descriere	Rezultat
IP6X	- Aparatul de iluminat pornit până la T° stabil - Talc în suspensie (suflantă pornită) - După 1', aparatul este închis - Talc 3 ore	Succes
IPX6	- Aparatul de iluminat pornit până la T° stabil - Aparatul de iluminat închis și pus imediat sub jet de apă - Φ tub 12,5 mm - Debit apă: 100 l/min - Distanța de pulverizare: 3 m - Durata testului: 3 minutes	Succes

IP6X

Rezultat(e)

✓ Testul a reușit să nu permită pătrunderea de Talc în partea optică și auxiliare.

IPX6

Rezultat(e)

✓ Test Testul a reușit să nu permită pătrunderea de Talc în partea optică și auxiliare.

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Temperatura camerei de test(°C): **24**

Echipamente de măsurare:

IP6X
Cameră de talc (A003)
Termometru (A039/2)
Cronometru (A043/4)
Șubler (M054/M055)

IPX6
Masă rotativă (A001/2)
Cronometru (A043/4)
Termometru (A039/1)
Debitmetru (A001/9)
IPx6 duză (A001/5)

Cantități măsurate:

Verificarea intrării apei / prafului în incinta unui corp de iluminat conform
Pentru IP2X: PT-S-14
Pentru IP3X/4X: PT-S-15
Pentru IP5X/6X: PT-S-06
Pentru IPX3/X4: PT-S-01
Pentru IPX5/X6: PT-S-08
Pentru IPX7/X8: PT-S-09

Incertitudini:

Declarația de incertitudini (K=2, 95% din nivelul de încredere):
Timp: 0,35 secunde per 10 minute
Temperatură: 0,6 °K
Șubler: 0,005 mm
Bandă de măsură: ± 1,13 mm
Cheia dinamometrică :
- **De la 0.5 la 2.5 Nm : 0,15 Nm**
- **De la 2.5 la 5 Nm : 0,22 Nm**
- **De la 5 la 25 Nm : 0,83 Nm**
- **De la 25 la 60 Nm : 2,73 Nm**
- **De la 60 la 100 Nm : 3,55 Nm**

Pentru test de intrare solidă:

IP2X:
Dimensiunile sondei: ± 0,6 mm
Forța aplicată:± 0,4 N

IP3X:
Dimensiunile sondei: ± 0,3 mm
Forța aplicată:± 0,13 N

IP4X:
Dimensiunile sondei: ± 0,1 mm
Forța aplicată: ± 0,11 N

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Engleză, Franceză

IP5X/6X:

Durata testului (timpul de suspendare a talcului): ± 3 seconds
Masa de talc: 0,02 %

Pentru test de intrare lichidă:

IPX3/X4

Rotirea tabelului: ± 6 rotații/sec
Unghiul de rotație brate: ± 3°
Debitul apei: ± 4 %

IPX5/X6

Rotirea mesei: ± 6 rotații/sec
Debitul apei: ± 4 %
Distanța testului: +0 / -50 cm

IPX7/X8

Adâncimea testului: +10 cm / -0 cm

Reguli de decizie:
Criterii de trecere / eșec

IP2X:
Dacă este posibil contactul cu piese sub tensiune: eșuează
În caz contrar: trece

IP3X/4X:
Pentru corpurile de iluminat fără găuri de scurgere și nici fante de vetilație pentru răcirea forțată, pătrunderea sondei de testare în incintă: eșuat
Pentru corpurile de iluminat cu găuri de scurgere sau fante de ventilație pentru răcirea forțată, dacă este posibil contactul cu o piesă sub tensiune: esuat
În caz contrar: trece

IP5X/6X
Prin inspecție vizuală:
Dacă este posibil pericol din cauza prezenței prafului conductor: esuat
Dacă nu există pericol posibil din cauza prezenței prafului conductor: IP5X este acordat
Fără prezență de talc: IP6X este acorda
Pentru test de pătrundere a lichidului:

IPX3/X4/X5/X6:

Prin inspecție vizuală:
Dacă este posibil pericol din cauza prezenței apei: eșuat
Dacă nu există niciun pericol posibil din cauza prezenței apei și nici o modalitate eficientă de evacuare a apei: esuat
Dacă nu există niciun pericol posibil din cauza prezenței apei și nici o modalitate eficientă de evacuare a apei: trece
Fără prezență de apă: trece

IPX7/X8:

Prin inspecție vizuală:

Prezența apei: eșuat

Fără prezență de apă: trece

End of test report

Traducător și Interpret Autorizat
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Laboratory
Test report

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 01 - Date: 10/09/2019

Mechanical impact resistance test

General information

Subject : IZYLUM 3 - 60 led's LH351C - Philips FP 150W driver 700mA - CL II

Asked by : SZÜGYI János Péter

Created on : 25/10/2019

Validated on : 30/10/2019

Test number : D190995

Reference norm : IEC/EN 60598-1 & 62696 Standards

Sample(s) : E190754

Folder : P-F19086

Test conditions

Luminaire : IZYLUM 3

Quantity of sample under test : 5

Protector Material : Glass Extra Clear

Protector Shape : Flat

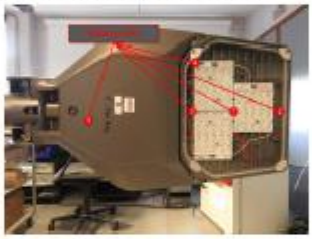
Serigraphy : None

Protector Thickness (mm) : 5

Method of test :

At pendulum hammer
5 impact points distributed on luminaire
One impact on each point
2 supplementary impacts on the most fragile point

Operator : Philippe Léonard



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Conclusion

Success

Conclusion :

IK09 passed.

Validated by :

GHYSENS Gilles

Duplicate to : SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ Péter, BOS Peter

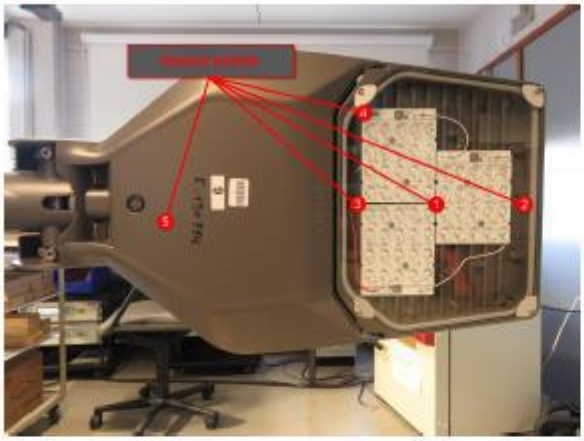
LAB : 05/11/2019

Test(s) details

Test(s)

Name	Description	Result
IK09	Impact energy: 10 joules Hammer weight: 5 kg Height of fall: 20 cm	Success

Impact points



IK09

Annex(es)

TESTED
NOT TESTED

IK 09	Impact	1			2			3			4			5		
Sample	Shot	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1		✓			✓			✓			✓			✓	✓	✓
2		✓			✓			✓			✓			✓	✓	✓
3		✓			✓			✓			✓			✓	✓	✓
4		✓			✓			✓			✓			✓	✓	✓
5		✓			✓			✓			✓			✓	✓	✓

IK09_Izylum_3

Test room temperature (°C) : 25

Measurement equipment :

Pendulum hammer with chariot (M062)
Thermometer (A039/3)
Electronic scale 120kg (M057)
Dynamometric key (M059)

Quantities measured:
For IK 04/05/06: Verification of the mechanical strength of a luminaire according to PT-S-13
For IK07/08/09/10/10+: Verification of the mechanical strength of a luminaire according to PT-S-05

Uncertainties:
Statement of uncertainties (K=2, 95% of confidence level):
Temperature: 0,6 °K
Mass: 0,25 %
Dynamometric key :
- From 0.5 to 2.5 Nm : 0,15 Nm
- From 2.5 to 5 Nm : 0,22 Nm
- From 5 to 25 Nm : 0,83 Nm
- From 25 to 60 Nm : 2,73 Nm
- From 60 to 100 Nm : 3,55 Nm

For IK 04/05/06, Impact energy: ± 10%
For IK07/08/09/10/10+, Impact energy: ± 1%

Decision rules
Pass/fail criteria according to GDE-GUI-003

By visual inspection (or other means if necessary):
Luminaire shows dangerous behavior: fail
Luminaire shows no dangerous behavior: pass
When several luminaires are tested, 4 out of 5 samples need to show positive result for compliance of the batch

End of test report----------

Laboratory
Test report

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Editia 01 – Revizia 01 - Data: 10/09/2019

Test de rezistenţă la impact

Informații generale

Subiect : IZYLUM 3 - 60 led-uri LH351C - Philips FP 150W driver 700mA - CL II

*Solicitant :*SZÜGYI János Péter

Creat la : 25/10/2019

Validat la : 30/10/2019

Număr test: D190995

Standard referință:Standardele: IEC/EN 60598-1 & 62696

Mostră(e)) : E190754

Dosar : P-F19086

Condiții testare

Aparat : IZYLUM 3

Cantitate eșantioane testare: 5

Material Difuzor: Sticlă extra clară

Formă difuzor: Plat

Serigrafie : Fără

Grosime difuzor (mm): 5

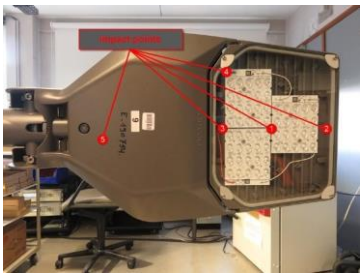
Metodă de testare :

La ciocanul cu pendul

5 puncte de impact distribuite pe suprafața protectorului

Un impact asupra fiecărui punct
2 impacturi suplimentare asupra punctului cel mai fragil

Operator : Philippe Léonard



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Conclusion

Success

Concluzii :

IK09 garantat

Validat de:

GHYSENS Gilles

(semnatura indescifrabila)

Duplicat pentru : SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ Péter, BOS Peter

LAB : 05/11/2019

//CR190995

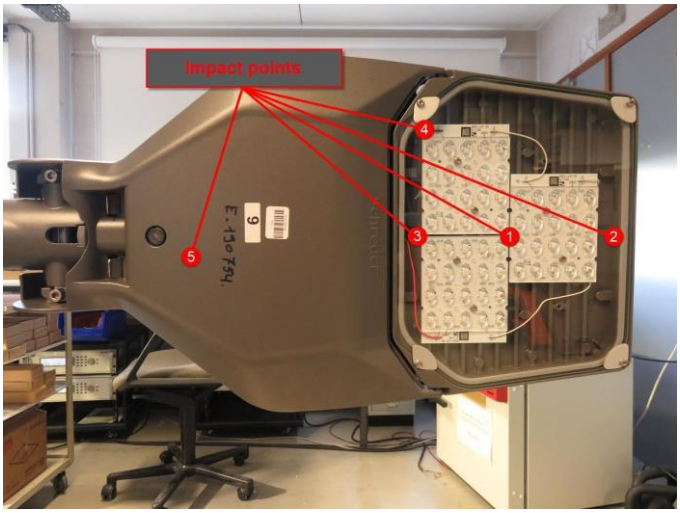
Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut. M.J. Nr. 14531/2005
Engleză, Franceză

Detalii test(e)

Test(s)

Nume	Descriere	Rezultat
IK09	Energia de impact: 10 joules Greutate ciocan: 5 kg Înălțimea de cădere: 20 cm	Succes

Puncte impact



IK09

Anexă(e)

TESTED
NOT TESTED

IK 09	Impact	1			2			3			4			5		
Sample	Shot	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1		✓			✓			✓			✓			✓	✓	✓
2		✓			✓			✓			✓			✓	✓	✓
3		✓			✓			✓			✓			✓	✓	✓
4		✓			✓			✓			✓			✓	✓	✓
5		✓			✓			✓			✓			✓	✓	✓

IK09_Izylum_3

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

Temperatura camerei de test (°C) : **25**

Echipamente de măsurare:
Ciocan cu pendul cu carru (M062)
Termometru (A039 / 3)
Scara electronică 120kg (M057) Cheie diamometrică (M059)
Cantități măsurate:

Pentru IK 04/05/06: Verificarea rezistenței mecanice a unui corp de iluminat conform PT-S-13
Pentru IK07/08/09/10/10+: Verificarea rezistenței mecanice a unui corp de iluminat conform PT-S-05
Incertitudini :

Temperature: 0,6 °K

Temperatură: 0,6 °K

Masa: 0,25 %

Cheia dinamometrică:

De la 0.5 la 2.5 Nm : 0,15 Nm

De la 2.5 la 5 Nm : 0,22 Nm

De la 5 la 25 Nm : 0,83 Nm

De la 25 la 60 Nm : 2,73 Nm

De la 60 la 100 Nm : 3,55 Nm

Pentru IK 04/05/06, energie de impact: ± 10%

Pentru IK07/08/09/10/10+, energie de impact: ± 1%

Reguli de decizie:

Criterii de trecere / eșec conform GDE-GUI-003

Prin inspecție vizuală (sau alte mijloace, dacă este necesar):

Aparatul arată un comportament periculos: eșuat

Aparatul nu arată un comportament periculos: trece

Când sunt testate mai multe corpuri de iluminat, 4 din 5 eșantioane trebuie să arate un rezultat pozitiv pentru conformitatea lotului

Sfârșitul testului:

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

Laboratory
Test report

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 02 - Date: 14/11/2019

Electrical measurements

General information

Subject : IZYLUM Size 3 - 60 LH351C - Philips FP 150W - 700mA - Nema - CL II

Asked by : SZÜGYI János Péter

Created on : 25/10/2019

Test number : D190997

Sample(s) : E190755

Folder : P-F19086

Test conditions

Luminaire : IZYLUM 3

Number of LED : 60

LED : Samsung LH351C

Driver : Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt / 00-60-314

Number of driver(s) : 1

Driver current (mA) : 700

Driver info : Tc (max) 90 °C

SPD : Izyhub full control fuse CLII 01-01-810

Operator : KOY Fiston

IMG_5373

Conclusion

Informative

Conclusion :

PF : 0,99
Efficiency : 91,8%
THD : 6,5%
Harmonics : OK according to IEC 61000-3-2, Class C, > 25 W

Validated by :

GHYSENS Gilles

Duplicate to : SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ Péter, BOS Peter

LAB : 19/11/2019

Test(s) details

Test(s)

Name	Description	Result
Test @ 700mA		Success

Test @ 700mA

Annex(es)

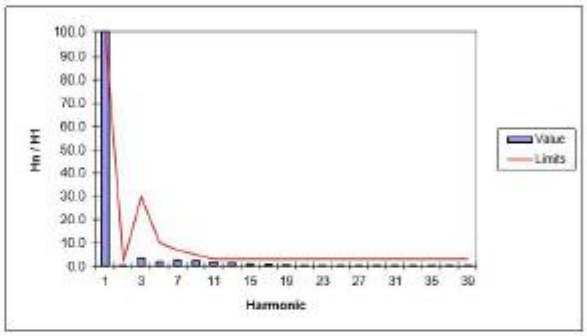
Harmonic current emissions (IEC 61000-3-2, Class C, > 25W)

Driver : XI FP 150W 0.2-0.7A SNLDAE 230V S240 sXI / 00-60-314 — Tc (max) 90°C

Date 31/10/2019 — Operator FKY — Norma AQ number E110

Power Factor 0.9939 — Cos φ (EE) 0.9960

Harmonic	Taux (%)	Limite (% H1)
1	100.0	100.0
2	0.2	2.0
3	3.3	29.8
5	2.0	10.0
7	2.7	7.0
9	2.5	5.0
11	1.9	3.0
13	1.4	3.0
15	0.8	3.0
17	0.6	3.0
19	0.4	3.0
21	0.2	3.0
23	0.3	3.0
25	0.3	3.0
27	0.2	3.0
29	0.2	3.0
31	0.2	3.0
33	0.1	3.0
35	0.1	3.0
37	0.1	3.0
39	0.1	3.0



input		output 1	
Urms	229.9 V	Urms	171.1 V
Irms	0.574 A	Irms	0.703 A
Prms	131.2 W	Prms	120.4 W
S	132.0 VA		
Q	-14.6 VAR		
PF	0.9939		
I(avg)	0.573 A	Uavg	171.1 V
Cos φ (EE)	0.9960	Iavg	0.703 A
I² rms	91.8%	Pavg	120.4 W
I² avg	91.8%		
THD	6.5%		

IZYLUM Size 3 - 60 LH351C - Philips FP 150W

Test room temperature (°C) **: 23.8**

Measurement equipment **:**

Norma 4000 (E097)
APT (E102)

Quantities measured **:**

Qualification of the thermal limits and measurement of the electrical behavior of a luminaire according to PT-S-07

Uncertainties **:**

Statement of uncertainties (K=2, 95% of confidence level):
Temperature: 0,6 °K
Voltage (AC): 0,33%
Current (AC): 0,33 %
Power (AC): 0,27%
Voltage (DC): 0,3 %
Current (DC): 0,3%
Power (DC): 0,23%
Anemometer: ± 0,27 m/s

Decision rules **:**

No pass/fail criteria applied on electrical measurements

End of test report **:**

Laboratory
Test report

R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 02 - Date: 14/11/2019

Thermal Test LED

General information

Subject : IZYLUM 3 - 60 led's LH351C - OSRAM 100W driver 550mA - Nema - CL II

Asked by : SZÜGYI János Péter
Created on : 15/11/2019
Started on : 19/11/2019
Test number : D191063
Reference norm : IEC/EN 60598-1; 60598-2-3; 60598-2-5 Standards
Sample(s) : E190757
Folder : P-F19086

Test conditions

Luminaire : IZYLUM 3

Number of LED : 60
LED : Samsung LH351C
Driver : Optotronic OT100/120-277/800 2DIM LT2 P / 00-14-566
Number of driver(s) : 1
Driver info : Tc (max) 85°C
Driver current (mA) : 550
SPD : Izyhub full control Fuse CLII 01-01-810
Junction Temperature measurement method : Junction temperature measurement by base temperature measurement and electrical measurement.T°j =T°b + Rjb x Pled

Operator : KOY Fiston

IMG_5455

Conclusion

Informative

Conclusion :

ΔTs < 80°C no risk of solder crack

Ta: 55°C limited by driver; according IEC 60598-2-3 and IEC 60598-2-5 (outdoor use only)
Ta: 45°C limited by driver; indoor use and UL standard
Tq: 30°C limited by driver; according IEC 62722-2-1

Tq given for 100 khrs of lifetime

Validated by :

GHYSENS Gilles

Duplicate to : SZÜGYI János Péter, HORVÁTH Csaba, BEDŐ Péter, BOS Peter

LAB : 27/11/2019

Test(s) details

Test(s)

Name	Description	Result
Test @ 550mA		Informative

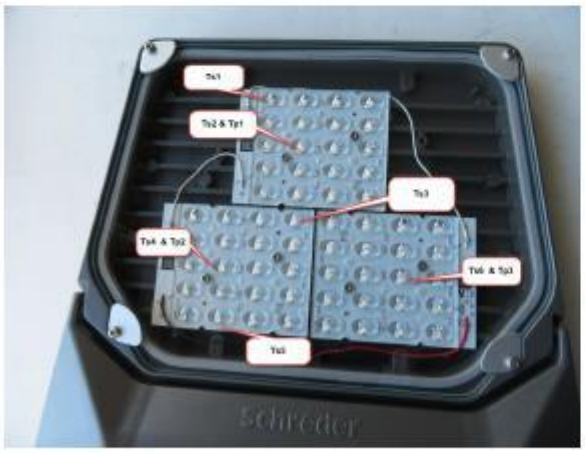
Test @ 550mA

Result(s)

	Ts1	Ts2 & Tp1	Ts3	Ts4 & Tp2	Ts5	Ts6 & Tp3	Tc driver	Ta SPD	Ta Body
T° limite							85 °C	70 °C	90 °C
Junction T°	71.8 °C	72.2 °C	72.9 °C	72.0 °C	71.5 °C	72.9 °C			
Thermocouple T°	67.2 °C	67.6 °C	68.2 °C	67.3 °C	66.9 °C	68.3 °C	64.2 °C	37.1 °C	38.1 °C
Room	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C
E led	2.82V	2.82V	2.82V	2.82V	2.82V	2.82V			
I led	0.553A	0.553A	0.553A	0.553A	0.553A	0.553A			
P led	1.56W	1.56W	1.56W	1.56W	1.56W	1.56W			
Rth jonction-base	3.0 °C	3.0 °C	3.0 °C	3.0 °C	3.0 °C	3.0 °C			
Heating							39.5 K	12.4 K	13.4 K
Δ Ts	42.5 K	42.9 K	43.5 K	42.6 K	42.2 K	43.6 K			

Primary EM		Secondary EM dr1	
U	230.0V	U	169.3V
I	0.460A	I	0.553A
P	103.6 W	P	93.6 W
PF	0.979		
Efficiency	90%		

Annex(es)



IMG_5341

IMG_5368

Test room temperature (°C) **: 24.7**

Measurement equipment *:*

Keithley with thermocouples type K (E097)
Norma 4000 (E110)
APT (E102)

Quantities measured *:*

Qualification of the thermal limits and measurement of the electrical behavior of a luminaire according to PT-S-07

Uncertainties *:*

Statement of uncertainties (K=2, 95% of confidence level):
Temperature: 0,6 °K
Voltage (AC): 0,33%
Current (AC): 0,33 %
Power (AC): 0,27%
Voltage (DC): 0,3 %
Current (DC): 0,3%
Power (DC): 0,23%
Anemometer: ± 0,27 m/s

Decision rules *:*

No pass/fail criteria applied on electrical measurements

Pass/fail criteria on thermal qualification

At the announced Ta, no component is above its maximum limit of operation reduced by the uncertainty on the temperature measurement: pass

At the announced Ta, at least 1 component is above its maximum limit of operation augmented by the uncertainty on the temperature measurement: fail

At the announced Ta, at least 1 component is at its maximum limit of operation ± the uncertainty on the temperature measurement and no other component is above its maximum limit of operation augmented by the uncertainty on the temperature measurement: pass with remark

According to IEC 60598-2-3 and IEC 60598-2-5 Standards, the maximum limit of every component can be augmented by 10 K provided that the luminaire is intended for outdoor use only.

At the announced Tq, no component is above its selected performance limit of operation reduced by the uncertainty on the temperature measurement: pass

At the announced Tq, at least 1 component is above its selected performance limit of operation augmented by the uncertainty on the temperature measurement: fail

At the announced Tq, at least 1 component is at its selected performance limit of operation ± the uncertainty on the temperature measurement and no other component is above its selected performance limit of operation augmented by the uncertainty on the temperature measurement: pass with remark

According to IEC 62722-2-1, the selected performance limit cannot be augmented by 10 K even if the luminaire is intended for outdoor use.

Any Ta/Tq defined value will be rounded down to the nearest multiple of 5.

End of test report *:*

Laborator teste
RAPORT DE
TEST FIZIC

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Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 02 - Date: 14/11/2019

Test termic LED

Informații generale

Subiect : IZYLUM 3 - 60 led's LH351C - OSRAM 100W driver 550mA - Nema - CL II

Solicitat de:: SZÜGYI János Péter
Creat la:: 15/11/2019
Data:: 19/11/2019
Număr test:: D191063
*Standard referință:*EC/EN 60598-1; 60598-2-3; 60598-2-5 Standards
Eșantion(e): E190757
Folder : P-F19086

Condiții testare

Aparat : IZYLUM 3

Numar de LED-uri: 60
LED : Samsung LH351C
Driver : Optotronic OT100/120-277/800 2DIM LT2 P / 00-14-566
Numar de driver(e): 1
Driver info : Tc (max) 85°C
Driver current (mA) : 550
SPD : Izyhub full control Fuse CLII 01-01-810
Metoda de masurare temperature joncțiune: Măsurarea temperaturii de joncțiune prin măsurarea temperaturii de bază și măsurări electrice.T°j =T°b + Rjb x Pled

Operator : KOY Fiston

IMG_5455

Concluzii

Informativ

Concluzii :

ΔTs < 80°C fără risc de crăpaturi de sudură

Ta: 55°C limitat de driver; conform IEC 60598-2-3 si IEC 60598-2-5 (uz exterior)
Ta: 45°C limitat de driver; uz interior conform UL standard
Tq: 30°C limitat de driver; conform IEC 62722-2-1

Tq dat pentru 100 khrs durata de viata

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut. M.J. Nr. 14531/2005
Engleză, Franceză

Detalii teste

Test(e)

Nume	Descriere	Rezultat
Test @ 550mA		Informativ

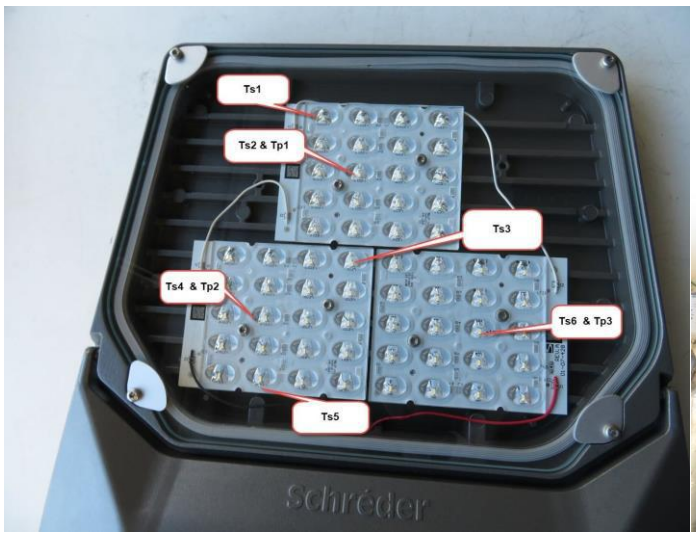
Test @ 550mA

Rezultat(e)

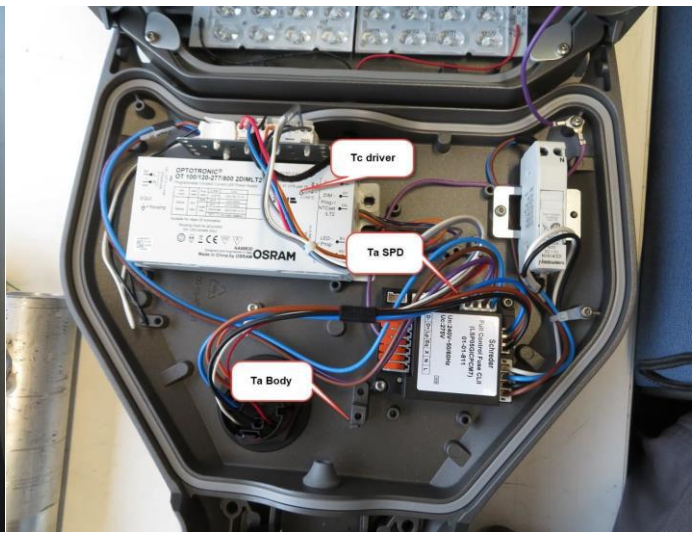
	Ts1	Ts2 & Tp1	Ts3	Ts4 & Tp2	Ts5	Ts6 & Tp3	Tc driver	Ta SPD	Ta Body
T° limite							**85 °C**	**70 °C**	**90 °C**
Junction T°	71.8 °C	72.2 °C	72.9 °C	72.0 °C	71.5 °C	72.9 °C			
Thermocouple T°	67.2 °C	67.6 °C	68.2 °C	67.3 °C	66.9 °C	68.3 °C	64.2 °C	37.1 °C	38.1 °C
Room	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C	24.7 °C
E led	2.82V	2.82V	2.82V	2.82V	2.82V	2.82V			
I led	0.553A	0.553A	0.553A	0.553A	0.553A	0.553A			
P led	1.56W	1.56W	1.56W	1.56W	1.56W	1.56W			
Rth jonction-base	3.0 °C	3.0 °C	3.0 °C	3.0 °C	3.0 °C	3.0 °C			
Heating							39.5 K	12.4 K	13.4 K
Δ Ts	42.5 K	42.9 K	43.5 K	42.6 K	42.2 K	43.6 K			

Primary EM		Secondary EM dr1	
U	230.0V	U	169.3V
I	0.460A	I	0.553A
P	103.6 W	P	93.6 W
PF	0.979		
Efficiency	90%		

Anexă(e)



IMG_5341



IMG_5368

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut. M.J. Nr. 14531/2005
Engleză, Franceză

Temperatura camerei de test (°C) : **24.7**

Echipamente de măsurare:

Keithley with thermocouples type K (E097)
Norma 4000 (E110)
APT (E102)

Cantitati masurate :

Calificarea limitelor termice și măsurarea comportamentului electric al unui corp de iluminat conform PT-S-07

Incertitudini :
Declarație de incertitudini (K=2, 95% of confidence level):
Temperatura: 0,6 °K
Tensiune (AC): 0,33%
Curent (AC): 0,33 %
Putere (AC): 0,27%
Tensiune (DC): 0,3 %
Curent (DC): 0,3%
Putere (DC): 0,23%
Anemometeru: ± 0,27 m/ss

Reguli de decizie:
Nu se aplică criterii de trecere / defecțiune la măsurători electrice

Criterii de trecere / eșec privind calificarea termică

La Ta anunțat, nicio componentă nu depășește limita maximă de funcționare, redusă de incertitudinea cu privire la măsurarea temperaturii: trece

La Ta anunțat, cel puțin o componentă este peste limita maximă de funcționare crescută de incertitudinea cu privire la măsurarea temperaturii: eșuează

La Ta anunțat, cel puțin o componentă se află la limita maximă de funcționare ± incertitudinea măsurătorii de temperatură și nicio altă componentă nu depășește limita maximă de funcționare, mărită de incertitudinea cu privire la măsurarea temperaturii: trece cu remarcă

Conform standardelor IEC 60598-2-3 și IEC 60598-2-5, limita maximă a fiecărei componente poate fi mărită cu 10 K cu condiția ca corpul de iluminat să fie destinat exclusiv utilizării în aer liber.

La Tq anunțat, nicio componentă nu depășește limita de funcționare aleasă, redusă de incertitudinea cu privire la măsurarea temperaturii: trece

La Tq anunțat, cel puțin o componentă este peste limita de funcționare aleasă, crescută de incertitudinea cu privire la măsurarea temperaturii: eșuează

La Tq anunțat, cel puțin o componentă se află la limita de funcționare selectată a acesteia ± incertitudinea pe măsurarea temperaturii și nici o altă componentă nu depășește limita de funcționare selectată a acesteia, mărită de incertitudinea cu privire la măsurarea temperaturii: trece cu remarcă

Conform IEC 62722-2-1, limita de performanță selectată nu poate fi mărită cu 10 K, chiar dacă corpul de iluminat este destinat utilizării exterioare.

Orice valoare definită Ta / Tq va fi rotunjită la cel mai apropiat multiplu de 5.

Sfârșitul testului:

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

Laboratory
Test report

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Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schréder Group

FORM L-54 Edition 01 – Revision 02 - Date: 14/11/2019

EMC test

General information

Subject : IZYLUM 3 Class II - 60LED - 550mA - OSRAM 100W

Asked by : LERHO Xavier

Created on : 08/01/2020

Started on : 08/01/2020

Test number : D200024

Reference norm : EN 55015 Standard

Folder : P-F19086

Test conditions

Luminaire : IZYLUM 3

Operator : LERHO Xavier

Electrical class : Class II EU

Driver : Optotronic OT100/120-277/800 2DIM LT2 P / 00-14-566

Number of driver(s) : 1

Current setting (mA) : 550

Dimming minimum value : 30 (SC)

Dimming protocol : 0-10V

Control system : NEMA Socket

Overvoltage protection : IZYHUB Full Control Fuse Cl. II (01-01-811)

Testing facility : BER - R-Tech

Conclusion

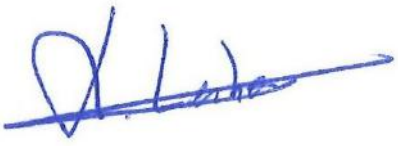
Success

Conclusion :

IZYLUM 3 Class II with OSRAM 100W driver complies with "Conducted emissions" & "CDNE method" tests (EN55015) in internal lab.

Validated by :
LERHO Xavier

Duplicate to : SZÜGYI János Péter, Dorflinger Tamas
LAB : 09/01/2020



Test(s) details

Test(s)

Name	Description	Result
Internal compliance	Emission measurements (EN 55015): - Radiated emissions (CDNE method) - Conducted emissions	Success

Internal compliance

Result(s)

Internal report (SPOT database): 190375, 190376, 190377 & 190378

Traducere din limba engleză, Limbășan Daniela, traducător autorizat MJ nr.14531/2005

RAPORT DE TEST FIZIC

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Rue de Mons 3 – B-4000 Liège – Belgium
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Member of Schréder Group

FORM L-54 Edition 01 – Revision 02 - Date: 14/11/2019

Test EMC

Informatii Generale

Subiect: IZYLUM 3 Clasa II - 60LED - 550mA - OSRAM 100W

Solicitat de: LERHO Xavier

Creat la: 08/01/2020

Data: 08/01/2020

Număr test: D200024

Standard referință: EN 55015 Standard

Dosar : P-F19086

Condiții test

Aparat: IZYLUM 3

Operator : LERHO Xavier

Clasa electrica: Clasa II EU

Driver : Optotronic OT100/120-277/800 2DIM LT2 P / 00-14-566

Număr de driver(e) : 1

Setare curent (mA): 550

Valoare minima dimare: 30 (SC)

Protocol dimare: 0-10V

Sistem de control: NEMA Socket

Protectie la supratensiune: IZYHUB Full Control Fuse Cl. II (01-01-811)

Facilitate de testare: BER - R-Tech

Concluzii

Succes

Concluzii :

IZYLUM 3 Clasa II cu driver OSRAM 100W satisface testele „Emisiile conduse” și „Metoda CDNE” (EN55015) din laboratorul intern.

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut.M.J. Nr. 14531/2005
Engleză, Franceză

Detalii test(e)

Test(e)

Nume	Descriere	Rezultat
Conformitate internă	Măsurători ale emisiilor (EN 55015): - Emisii radiate (metoda CDNE) - Emisiile efectuate	Succes

Conformitate internă

Rezultat(e)

Raport intern (baza de date SPOT): 190375, 190376, 190377 & 190378

Traducător și Interpret Autorizat
LIMBĂȘAN DANIELA
Aut. M.J. Nr. 14531/2005
Engleză, Franceză