

Friza



Design: Achilles Design



Modern classic design for cost-effective urban lighting

Adapted to various urban landscapes such as residential areas, parks, squares, bicycle paths and urban historical centres, the Friza luminaire combines a timeless design with the energy efficiency of LED technology.

The name Friza refers to Friesland, a Dutch province and one of the many regions where the original conical 'Kegel' luminaire remains very popular. This classical shape is now refreshed to provide an aesthetic continuity while generating massive energy savings.

Friza ensures photometric performance and comfort (low glare) to offer safety and well-being in the public space. The robust design of the Friza luminaire guarantees maintained performance over time.



IP 66

IK 08



10kV

CE



URBAN & RESIDENTIAL STREETS



BIKE & PEDESTRIAN PATHS



SQUARES & PEDESTRIAN AREAS



CAR PARKS



BRIDGES



RAILWAY STATIONS & METROS

Concept

The base section and gear plate of the Friza luminaire are made of high-pressure die-cast aluminium while the protector and canopy are made of polycarbonate.

The design of the Friza luminaire guarantees an IP 66 tightness level to maintain performance over time.

Friza is equipped with the LensoFlex®2 photometric engine. Thanks to modules of 8 LEDS (from 8 to 32) and numerous lighting distributions, Friza offers lighting solutions for various applications such as urban and residential streets, bike paths, squares, pedestrian areas or car parks. With its striated protector, it ensures photometric performance and comfort (low glare) to offer safety and well-being in the public space.

Reliable, efficient and robust, the Friza luminaire is supplied pre-cabled for an easy installation. There is no need to open the luminaire during the installation.

Friza is designed for post-top mounting on Ø60mm spigots.

The canopy can be opened for maintenance by unscrewing 4 captive screws. An integrated hinge retains the canopy and prevents it from falling when opened. It gives direct access to the gear plate.



Friza ensures performance and comfort with its striated protector.



The luminaire is supplied pre-cabled to facilitate the installation.



Friza offers a slip-over mounting onto Ø60mm spigots.



An integrated hinge retains the canopy and prevents it from falling when opened.

Types of application

- Urban and residential streets
- Bike and pedestrian paths
- Squares and pedestrian areas
- Car parks
- Bridges
- Railway stations and metros

Key advantages

- Cost effective lighting solution for creation of ambiance
- Right lighting through LensoFlex®2 offering high performance photometry, comfort and safety
- IP 66 tightness level for long lasting performance
- Supplied pre-cabled to facilitate the installation
- FutureProof: easy replacement of the photometric engine and electronic assembly
- Designed to incorporate the Owlet range of control solutions



LensoFlex®2

LensoFlex®2 is based upon the addition principle of photometric distribution. Each LED is associated with a specific PMMA lens that generates the complete photometric distribution of the luminaire. The number of LEDs in combination with the driving current determines the intensity level of the light distribution.

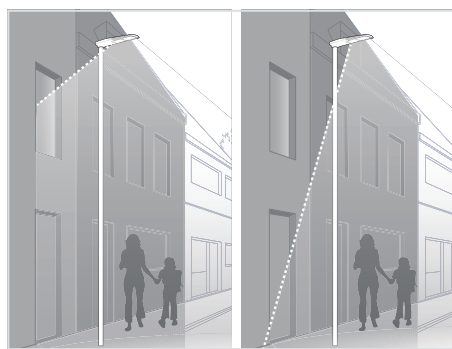
The proven LensoFlex®2 concept includes a glass protector to seal the LEDs and lenses into the luminaire body.



Back Light control

As an option, the LensoFlex®2 modules can be equipped with a Back Light control system.

This additional feature minimises light spill from the back of the luminaire to avoid intrusive light towards buildings.

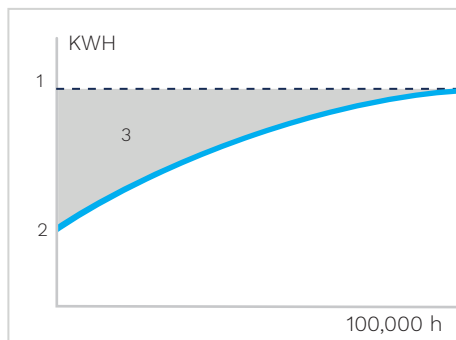


A. Without Back Light control | B. With Back Light control



Constant Light Output (CLO)

This system compensates for the depreciation of luminous flux to avoid excess lighting at the beginning of the installation's service life. Luminous depreciation over time must be taken into account to ensure a predefined lighting level during the luminaire's useful life. Without a CLO feature, this simply means increasing the initial power upon installation in order to make up for luminous depreciation. By precisely controlling the luminous flux, the energy needed to reach the required level can be maintained throughout the luminaire's life.

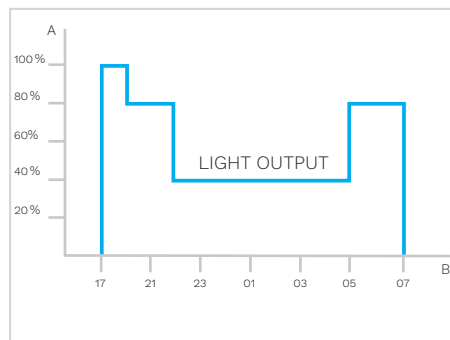


1. Standard lighting level
2. LED lighting consumption with CLO
3. Energy savings



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. Performance
- B. Time

GENERAL INFORMATION

Recommended installation height	3.5m to 5m 10' to 16'
Driver included	Yes
CE mark	Yes
ENEC+ certified	Yes
ROHS compliant	Yes
Testing standard	LM 79-80 (all measurements in ISO17025 accredited laboratory)

HOUSING AND FINISH

Base and gear plate	High-pressure die-cast aluminium
Optic	PMMA
Canopy	Polycarbonate
Protector	Polycarbonate anti-UV
Housing finish	Polyester powder coating
Colour	AKZO grey 900 sanded Any other RAL or AKZO colour upon request
Tightness level	IP 66
Impact resistance	IK 08
Vibration standard	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	By unscrewing 4 screws on the canopy

DIMENSIONS AND MOUNTING

AxBxC (mm inch)	564x462x564 22.2x18.2x22.2
Weight (kg lbs)	9 20
Aerodynamic resistance (CxS)	0.08
Standard mounting	Post-top on a Ø60mm (2") with 100mm (3.9") long spigot. Fixation with 2 M8 screws.

ELECTRICAL INFORMATION

Electrical class	EU class I
Nominal voltage	220-240V – 50-60Hz
Power factor	> 90% at full load
Surge protection	10kV
Electromagnetic compatibility (EMC)	IEC 55015 / 61000-3-2 / 61000-3-3 / 61547
Control options	No dimming, Bi-Power, custom dimming, CLO, DALI, 1-10V, remote management
City Management System	Owlet Nightshift (optional)

OPTICAL INFORMATION

LED colour temperature	3000K (Warm white) 4000K (Neutral white)
Colour rendering index (CRI)	> 80 (Warm white) > 70 (Neutral white)
Upward Light Output Ratio (ULOR)	<5%

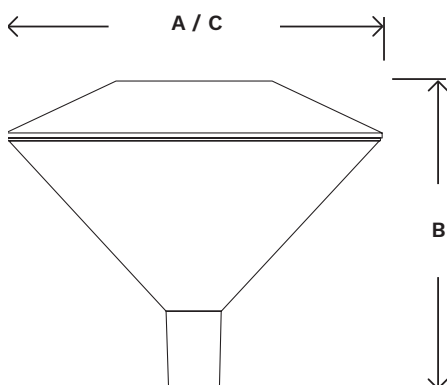
OPERATING CONDITIONS

Operating temperature range (Ta)	-30 °C up to +40 °C (*) -22 °F up to 104 °F (*)
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(*) Depending on the luminaire configuration. For more details, please contact us.

LIFETIME OF THE LEDS @ TQ 25°C

For all configurations	100,000h – L90
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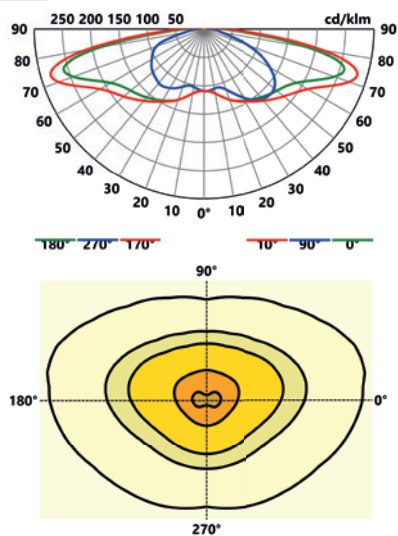


			Luminaire output flux (lm) Warm White (3000K) - CRI 80		Luminaire output flux (lm) Neutral White (4000K) - CRI 70		Power consumption (W)	Luminaire efficacy (lm/W)	
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Up to	Photometry
Friza	8	350	900	1000	1000	1200	9.7	126	
	8	500	1200	1400	1400	1600	13.6	119	
	8	700	1500	1700	1700	2000	19.1	105	
	16	250	1400	1600	1600	1800	14	132	
	16	350	1800	2100	2100	2400	18.2	135	
	16	500	2400	2800	2800	3200	25.7	126	
	16	700	3000	3400	3500	4000	36.2	111	
	32	350	3700	4200	4300	4800	35.1	139	
	32	500	4900	5600	5700	6400	49	132	

Tolerance on LED flux is $\pm 7\%$ and on total luminaire power $\pm 5\%$

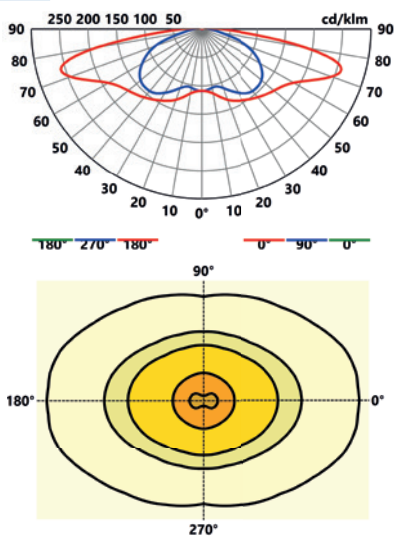
LENZO
FLEX® 2

5068 ASY



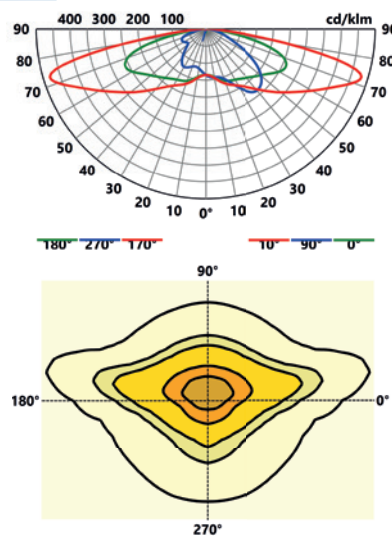
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5068 SYM



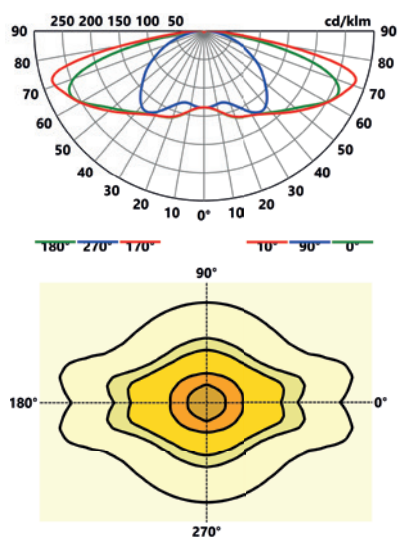
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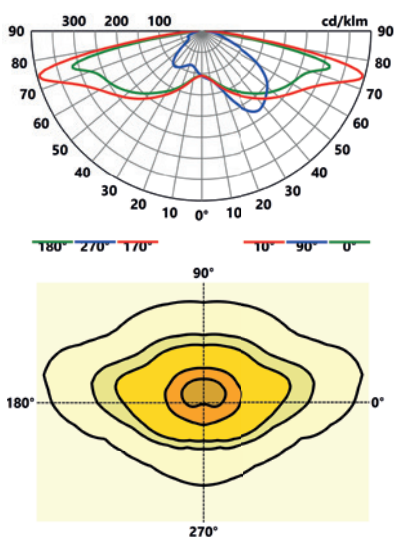
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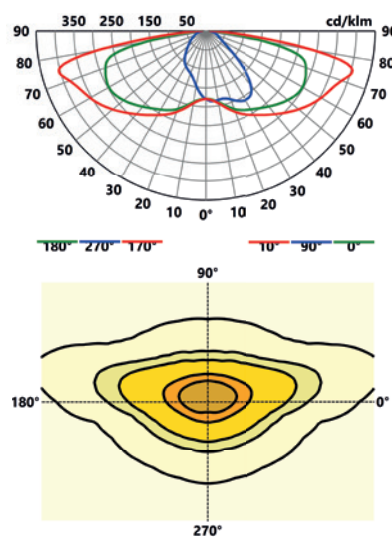
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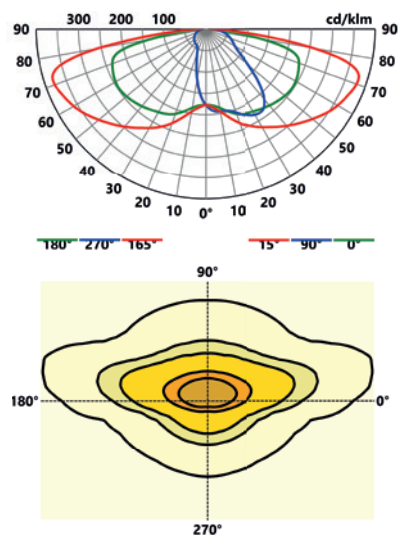
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FLEX® 2

5102 ASY



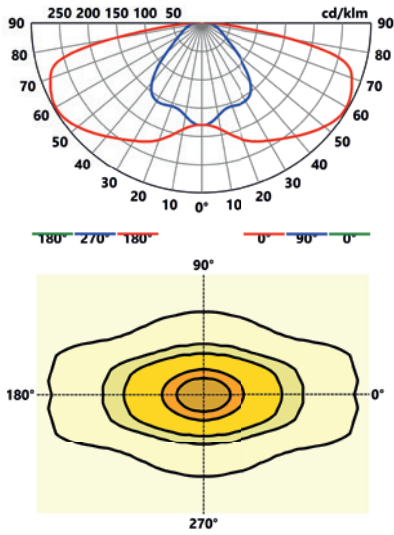
LENZO
FLEX® 2

5102 ASY | BACKLIGHT



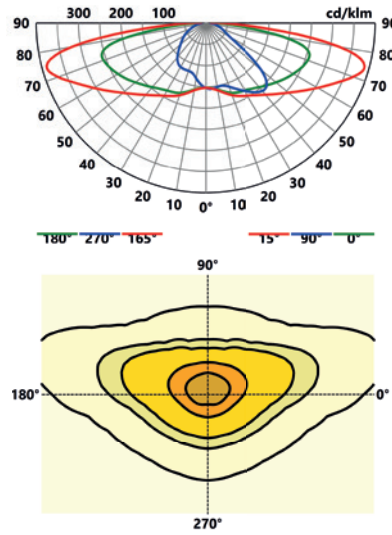
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5102 SYM



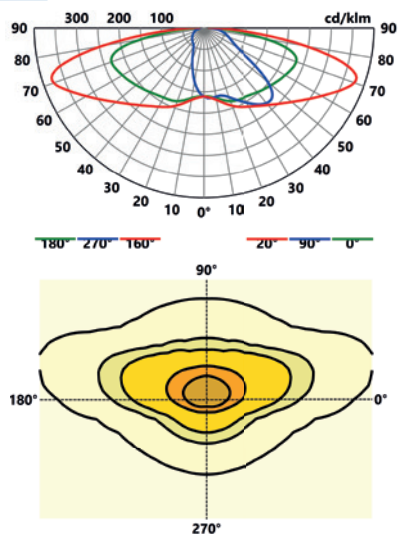
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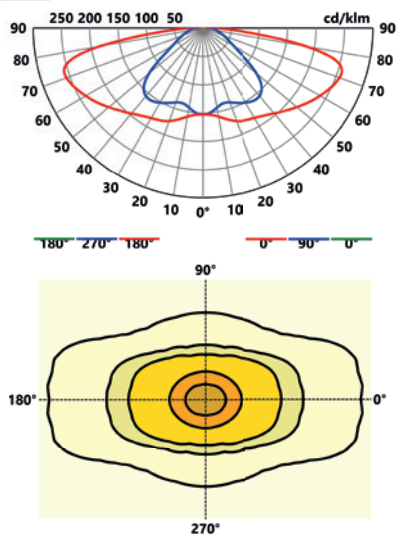
LENZO
FLEX® 2

5103 ASY | BACKLIGHT



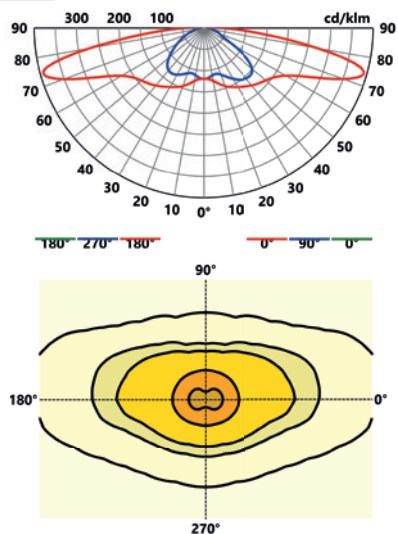
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5103 SYM



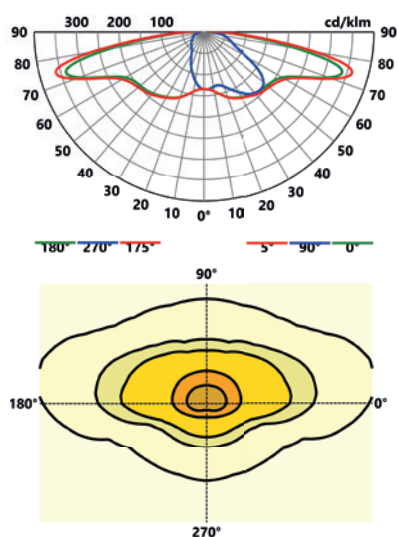
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5112 ASY



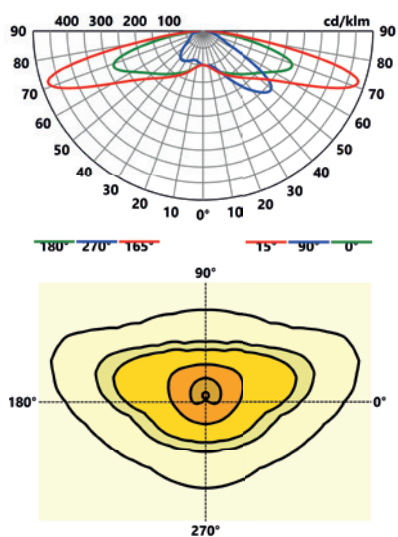
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5112 ASY | BACKLIGHT



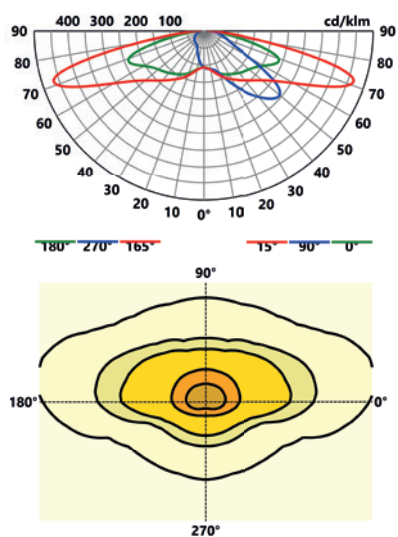
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5117 ASY



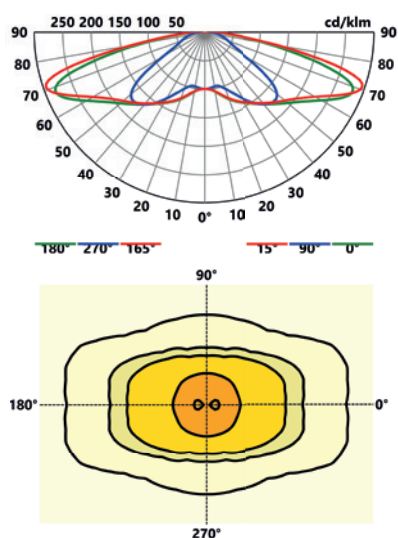
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5117 ASY | BACKLIGHT



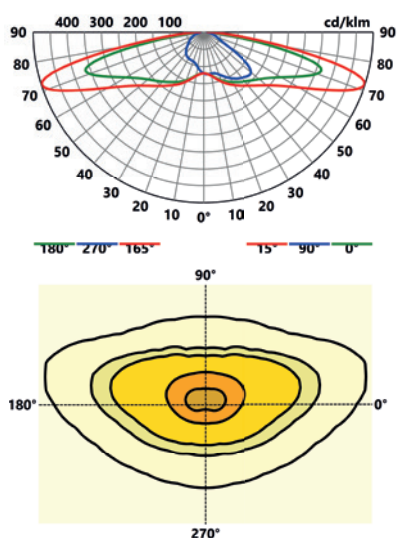
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5117 SYM



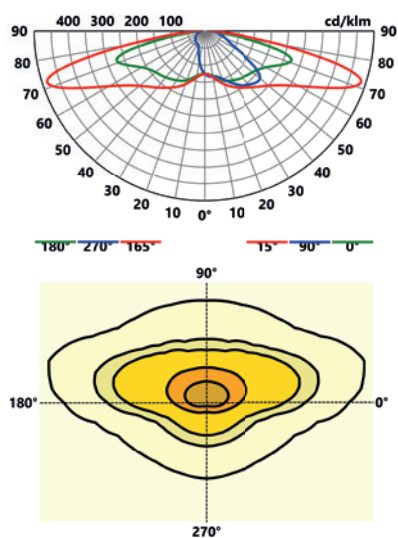
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5118 ASY



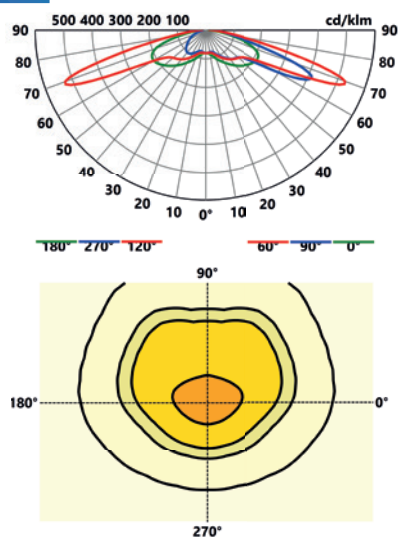
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FLEX® 2

5118 ASY | BACKLIGHT



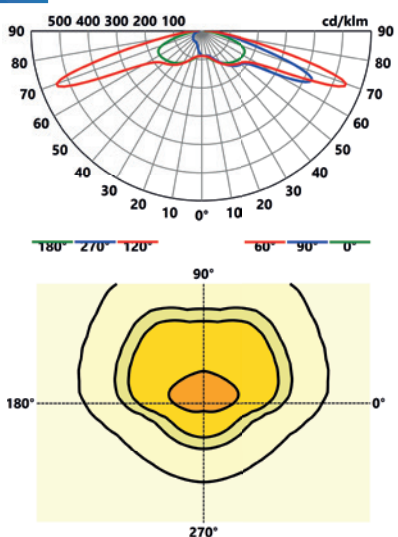
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5119 ASY



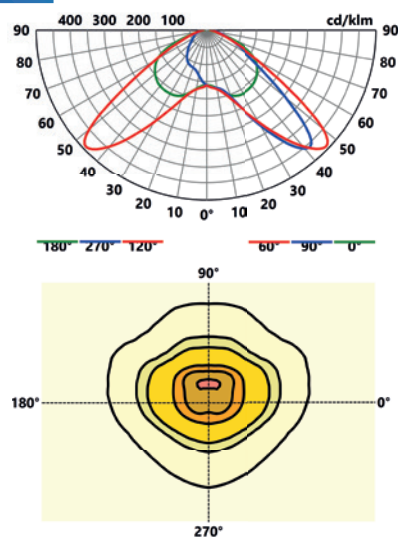
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5119 ASY | BACKLIGHT



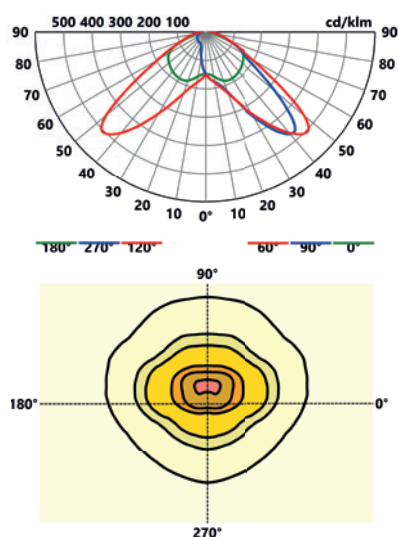
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5120 ASY



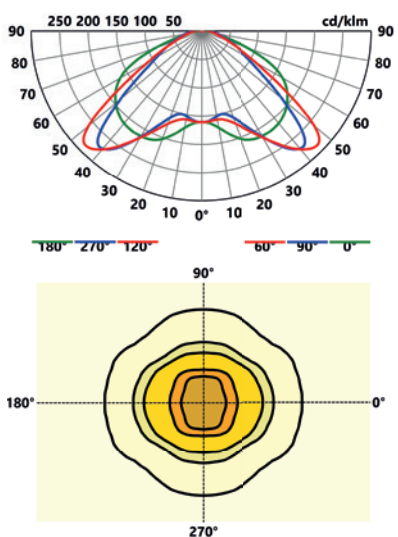
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5120 ASY | BACKLIGHT



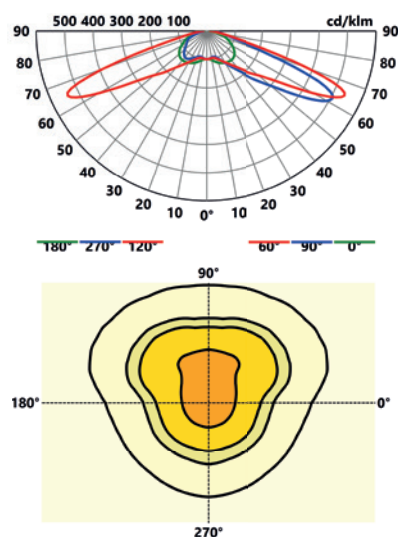
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5120 SYM



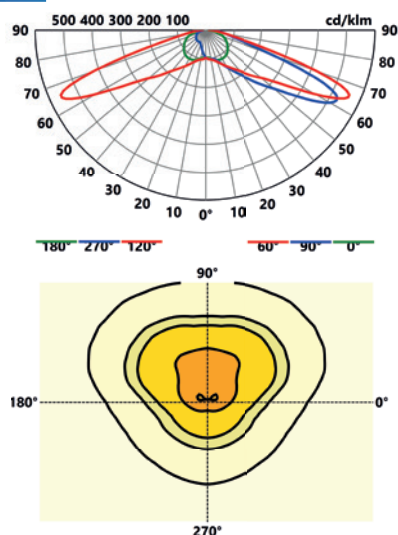
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FLEX® 2

5121 ASY



LENZO
FLEX® 2

5121 ASY | BACKLIGHT



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FLEX® 2

5121 SYM

