Schréder
Experts in lightability™

ROAD

AVENTO

owlet® MID FLEX™ LENSO FLEX™ 2

The budget-friendly high efficacy solution

Compact yet powerful, light yet robust, affordable yet highly efficient, AVENTO provides the fastest return on investment for road and area lighting. AVENTO offers a superior lumen/watt ratio to deliver a high-performing, energy efficient, lighting solution at an affordable price for various landscapes including pedestrian areas, streets, roads, car parks and motorways.

AVENTO is available in four sizes to provide a consistent solution in terms of the right lumen package and light distribution for a broad range of environments. It ensures that the lighting meets the real needs of the place to be lit. AVENTO is the ideal tool to shorten the payback time of an LED lighting installation and to provide the best return on investment.

IP 66 | IK 09 | RoHS | PLUS 02 | CE

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

Concept

The AVENTO range combines the energy efficiency of LED technology with the photometric performance of the MidFlex™ concept developed by Schréder. This photometric engine provides the highest efficiency in a very compact optical compartment. It offers scalable lumen packages with modular quantities of LEDs and various driving currents.

The AVENTO luminaires are composed of two parts in painted die-cast aluminium. The luminaire is equipped with two silicone gaskets, one for the gear compartment and one for the optical unit, to ensure a high tightness level and maintain performance over time.

AVENTO is designed for side-entry mounting with a universal fixation for spigots from Ø42 to Ø60mm (1.5” to 2”). To ease maintenance operations, AVENTO offers a tool-free access to the gear compartment.

As an option, AVENTO can be equipped with a standard NEMA 7-pin receptacle or a standard low-voltage socket, enabling easy entry to the digital era of lighting with advanced lighting features that plan, monitor and control outdoor lighting networks.

AVENTO provides tool-free access to the gear compartment.

AVENTO includes a universal Ø42-60mm fixation part for side entry-mounting.

TYPES OF APPLICATION

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

KEY ADVANTAGES

- Cost-effective and efficient lighting solution
- Superior efficacy
- Accelerated return on investment
- 4 sizes for flexibility and consistency when lighting P1 to P6 and M1 to M6 applications in accordance with CIE 115
- Easy and fast installation
- Wide temperature operating range
- Dark sky compliant: ULOR = 0%, no up-light
- IoT ready: optional 7-pin NEMA socket

To ensure an optimal thermal management in hot conditions, AVENTO incorporates large cooling fins.

AVENTO can be delivered with a shorting cap to add IoT features at any time in the future.

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.

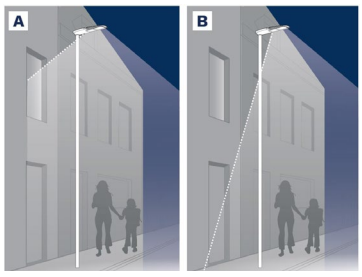
MidFlex™

The MidFlex™ photometric engine is based on the same principle as LensoFlex®2: each LED is associated with a specific lens that generates the complete photometric distribution of the luminaire. MidFlex™ takes advantage of the maturity of mid-power LEDs for professional applications. The MidFlex™ photometric engines are based on the combination of several modules of 48 mid-power LEDs tightly positioned to maximise the LED density. This concept provides high lumen packages with a limited product footprint. The MidFlex™ photometric engines offers excellent efficiency for a sustainable performance.

Back Light control

As an option, the LensoFlex®2 and LensoFlex®4 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.

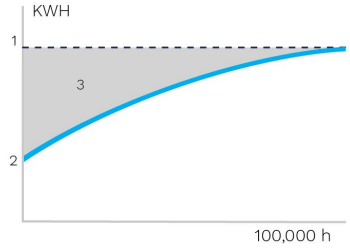


A. Without Back Light control | B. With Back Light control

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.

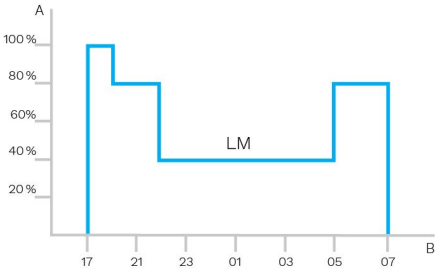


1. Standard lighting level | 2. LED lighting consumption with CLO | 3. Energy savings

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.

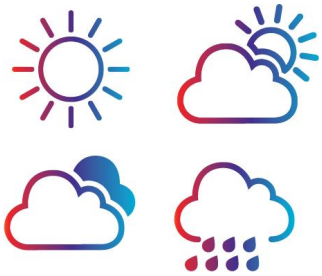
The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



A. Dimming level | B. Time

Daylight sensor / photocell

Photocell or daylight sensors switch the luminaire on as soon natural light falls to a certain level. It can be programmed to switch on during a storm, on a cloudy day (in critical areas) or only at nightfall so as to provide safety and comfort in public spaces.



Owlet IoT

Owlet IoT remotely controls luminaires in a lighting network, creating opportunities for improved efficiency, accurate real-time data and energy savings of up to 85%.

ALL-IN-ONE

The LUCO P7 CM controller includes the most advanced features for optimised asset management. It also provides an integrated photocell and operates with an astronomical clock for seasonal dimming profile adaptations.

EASY TO DEPLOY

Thanks to wireless communication, no cabling is needed. The network is not subject to physical constraints or limitations.

From a single control unit to an unlimited network, you can expand your lighting scheme at any time.

With real-time geolocation and automatic detection of luminaire features, commissioning is quick and easy.

USER-FRIENDLY

Once a controller is installed on a luminaire, the luminaire automatically appears with its GPS coordinates on a web-based map.

An easy-to-use dashboard enables each user to organise and customise screens, statistics and reports. Users can gain relevant, real-time insights.

The Owlet IoT web application can be accessed at all times from anywhere in the world with a device connected to the Internet. The application adapts to the device to offer an intuitive and user-friendly experience.

Real-time notifications can be pre-programmed to monitor the most important elements of the lighting scheme.

Plugging the LUCO P7 CM controller onto the 7-pin NEMA socket

SECURE

The Owlet IoT system uses a local wireless mesh communication networks to control the on-site luminaires combined with a remote control system utilising the cloud to ensure smooth data transfers to and from the central management system.

The system uses encrypted IP V6 communication to protect data transmission in both directions. Using a secure APN, Owlet IoT ensures a high level of protection.

In the exceptional case of a communication failure, the built-in astronomical clock and photocell will take over to switch the luminaires on and off, thus avoiding a complete blackout at night.

EFFICIENT

Thanks to sensors and/or pre-programmed settings, lighting scenarios can be easily adapted to cope with live events, providing the right lighting levels at the right time and in the right place.

The integrated utility grade meter offers the highest accuracy available on the market today, enabling decisions based on real figures.

Accurate real-time feedback and clear reporting ensures that the network operates efficiently and maintenance is optimised.

When LED luminaires are switched on, the inrush current can create problems for the electricity grid. Owlet IoT incorporates an algorithm to preserve the grid at all times.

OPEN

The LUCO P7 CM controller can be plugged onto the standard 7 pin NEMA socket and operates through either a DALI or 1-10V interface to control the luminaire.

Owlet IoT is based on the IPv6 protocol. This method for addressing devices can generate an almost unlimited number of unique combinations to connect non-traditional components to the Internet or computer network.

Through open APIs, Owlet IoT can be integrated into existing or future global management systems.

GENERAL INFORMATION

Recommended installation height	4m to 45m | 13' to 148'
Circle Light label	Score between 60 and 90 - The product meets most of circular economy requirements
Driver included	Yes
CE mark	Yes
CB mark	Yes
ENEC certified	Yes
ENEC+ certified	Yes
ETL/UL certified	Yes
ROHS compliant	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, c, d, e, f, g
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory) EN 60598-1:2015+A1:2018 EN 60598-2-3:2003/A1:2011

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass
Housing finish	Polyester powder coating
Standard colour(s)	RAL 7040 window grey
Tightness level	IP 66
Impact resistance	IK 09
Vibration test	Compliant with ANSI 1.5G and 3G and modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

· Any other RAL or AKZO colour upon request

OPERATING CONDITIONS

Operating temperature range (Ta)	-40 °C to +55 °C / -40 ° F to 131 °F

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

ELECTRICAL INFORMATION

Electrical class	Class 1US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz 347-480V – 50-60Hz
Power factor (at full load)	0.9
Surge protection options (kV)	6 8 10 20
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-3-3 / EN 61547 EN 61547 / EN 61000-4-2, -3, -4, -5, -6, -8, -11
Control protocol(s)	1-10V, DALI
Control options	Custom dimming profile, Remote management
Socket	NEMA 3-pin (optional) NEMA 7-pin (optional) Low voltage socket (optional)
Associated control system(s)	Owlet IoT

OPTICAL INFORMATION

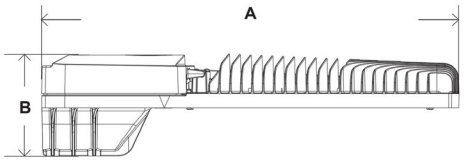
LED colour temperature	3000K 4000K
Colour rendering index (CRI)	>70 >80
Upward Light Output Ratio (ULOR)	0%

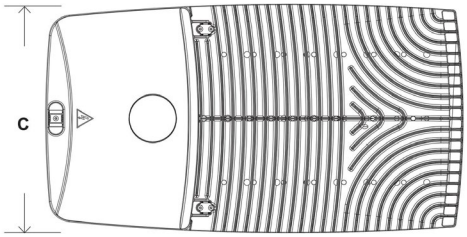
LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90

DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	AVENTO S - 335x85x308 | 13.2x3.3x12.1 AVENTO 1 - 485x114x310 | 19.1x4.5x12.2 AVENTO 2 - 655x159x359 | 25.8x6.3x14.1 AVENTO 3 - 655x158x578 | 25.8x6.2x22.8
Weight (kg | lbs)	AVENTO S - 5.8 | 12.8 AVENTO 1 - 8.1 | 17.8 AVENTO 2 - 11.7 | 25.7 AVENTO 3 - 18.6 | 40.9
Aerodynamic resistance (CxS)	AVENTO S - 0.04 AVENTO 1 - 0.04 AVENTO 2 - 0.06 AVENTO 3 - 0.06
Mounting possibilities	Side-entry slip-over – Ø42mm Side-entry slip-over – Ø48mm Side-entry slip-over – Ø60mm





			Luminaire output flux (lm) 3000K		Luminaire output flux (lm) 4000K		Power consumption (W)	Luminaire efficacy (lm/W)
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max		Up to
AVENTO S	48	350	2400	2500	2400	2600	18.2	143
	48	500	3300	3500	3400	3600	26.4	137
	48	700	4400	4700	4600	4800	37.1	127
	96	350	4800	5100	5000	5300	34.6	153
	96	500	6700	7100	6900	7300	50	145
	96	700	8900	9500	9200	9700	72	131

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

			Luminaire output flux (lm) 3000K		Luminaire output flux (lm) 4000K		Power consumption (W)	Luminaire efficacy (lm/W)
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max		Up to
AVENTO 1	96	700	9000	9400	9300	9600	71	135
	144	700	13600	14100	14000	14400	108	136
	192	700	18100	18800	18600	19300	142	137

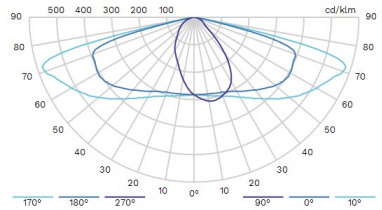
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

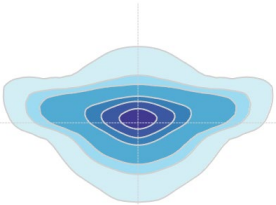
			Luminaire output flux (lm) 3000K		Luminaire output flux (lm) 4000K		Power consumption (W)	Luminaire efficacy (lm/W)
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max		Up to
AVENTO 2	240	700	22400	23500	22900	24100	179	139
	288	700	26800	28200	27500	29000	213	134
	336	700	32100	32900	33000	33800	249	135

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

LENSO FLEX 2

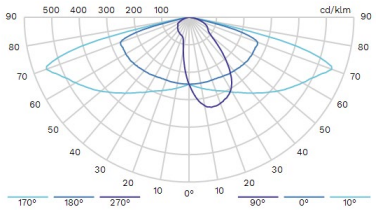
5102

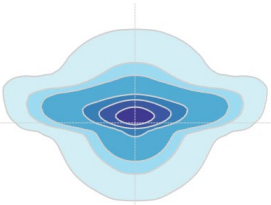




LENSO FLEX 2

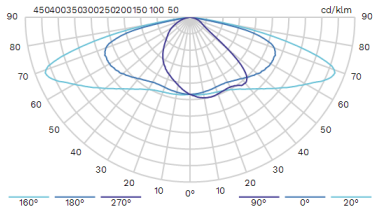
5102 - BL

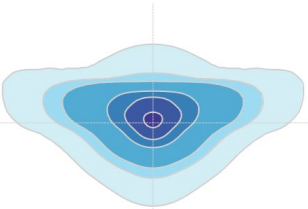




LENSO FLEX 2

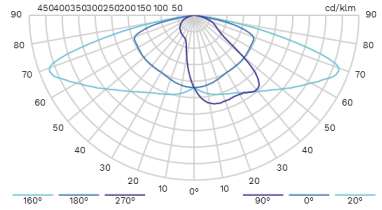
5103

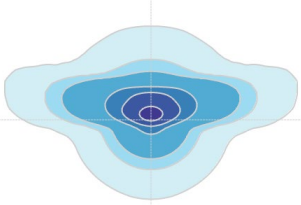




LENSO FLEX 2

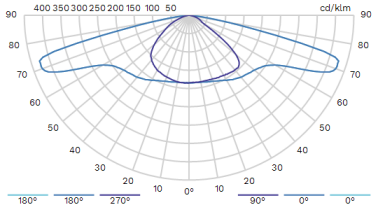
5103 - BL

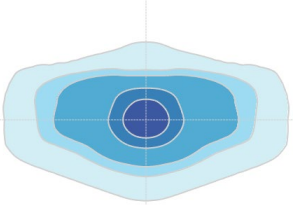




LENSO FLEX 2

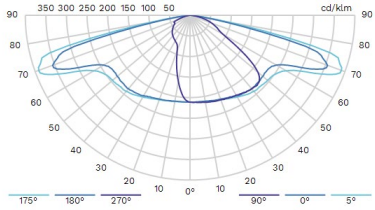
5112

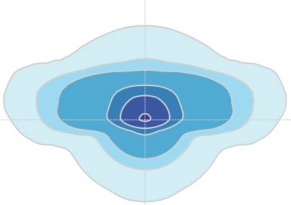




LENSO FLEX 2

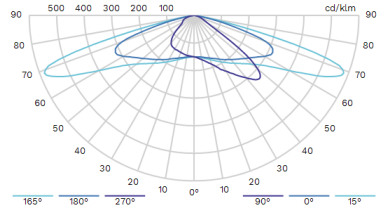
5112 - BL

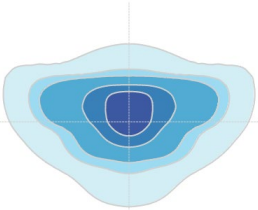




LENSO FLEX 2

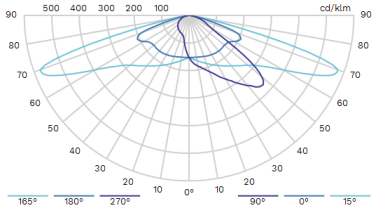
5117

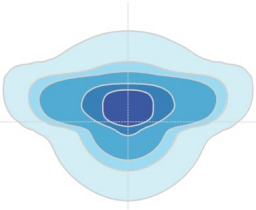




LENSO FLEX 2

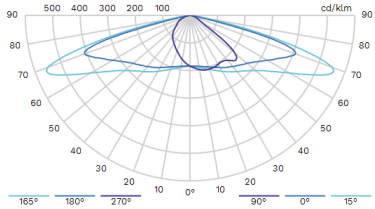
5117 - BL

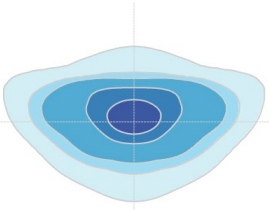




LENSO FLEX 2

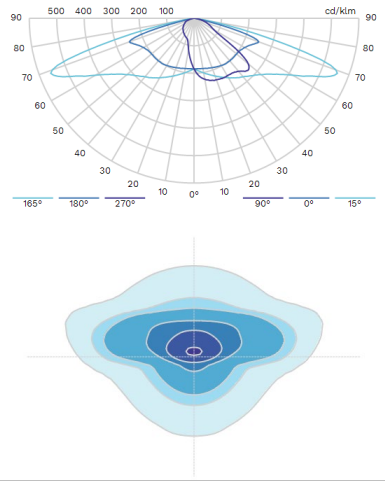
5118





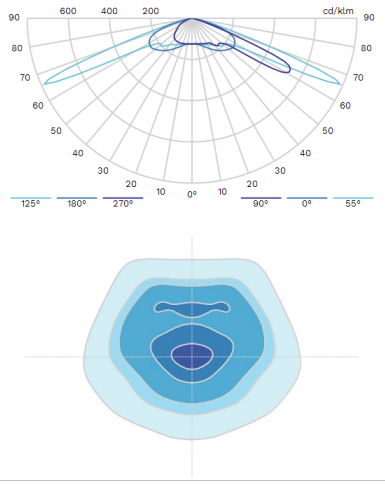
LENSO FLEX 2

5118 - BL



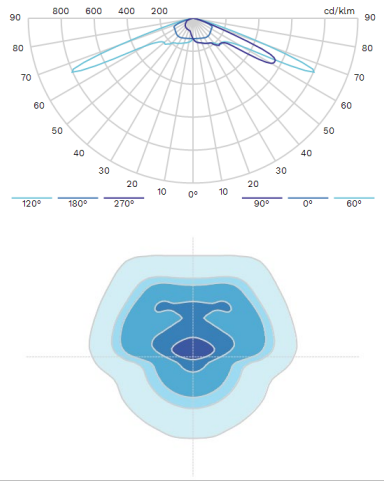
LENSO FLEX 2

5119



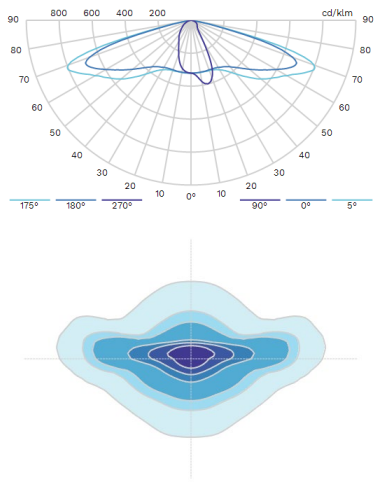
LENSO FLEX 2

5119 - BL



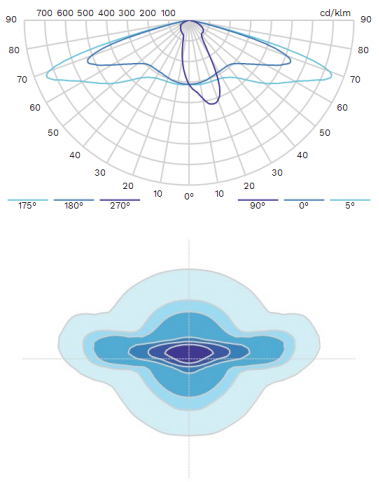
LENSO FLEX 2

5136



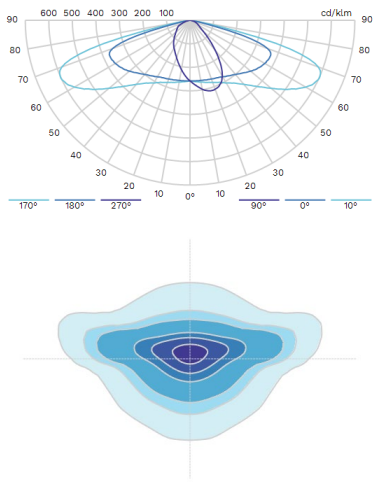
LENSO FLEX 2

5136 - BL



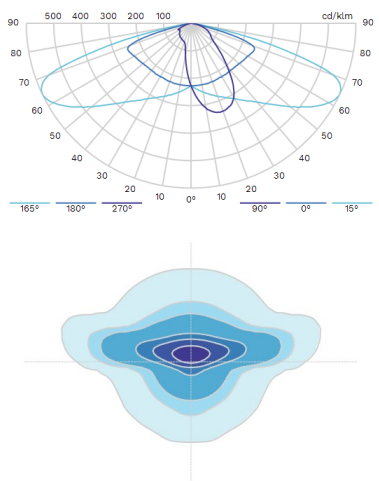
LENSO FLEX 2

5137



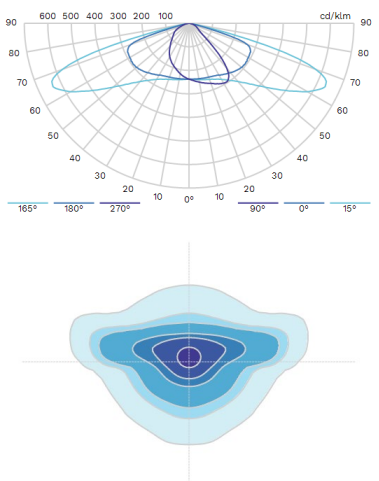
LENSO FLEX 2

5137 - BL



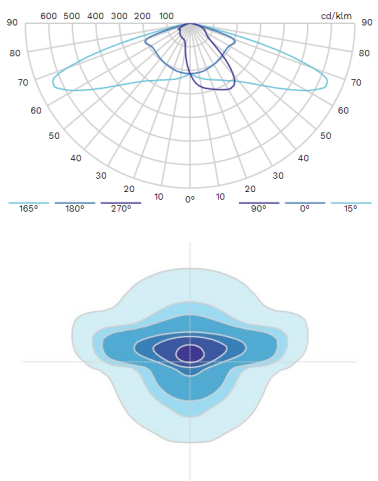
LENSO FLEX 2

5138



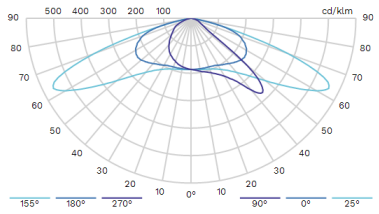
LENSO FLEX 2

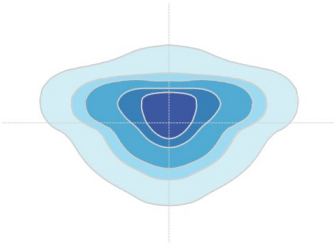
5138 - BL



LENSO FLEX™2

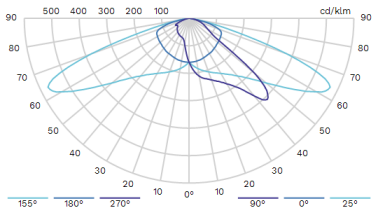
5139

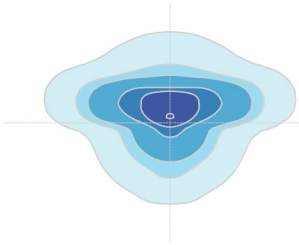




LENSO FLEX™2

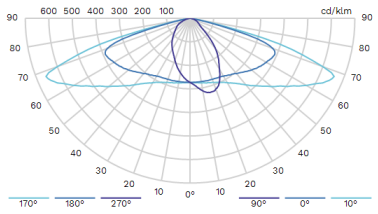
5139 - BL

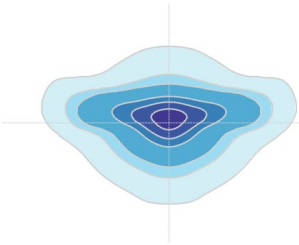




LENSO FLEX™2

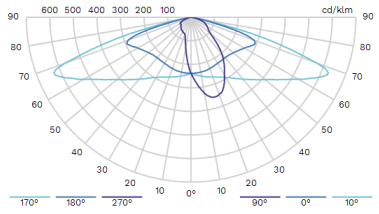
5140

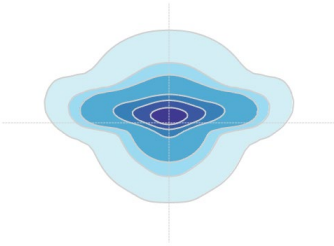




LENSO FLEX™2

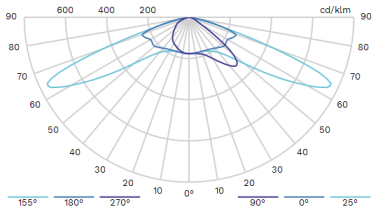
5140 - BL

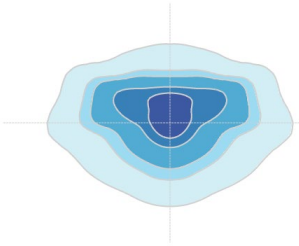




LENSO FLEX™2

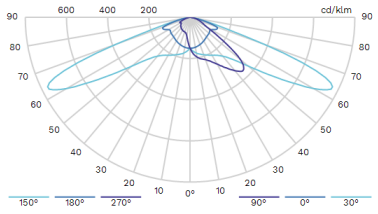
5141

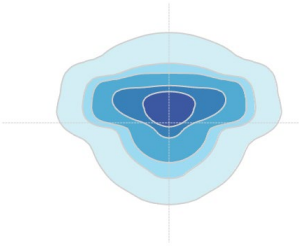




LENSO FLEX™2

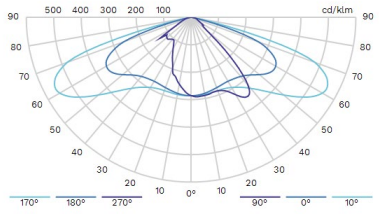
5141 - BL

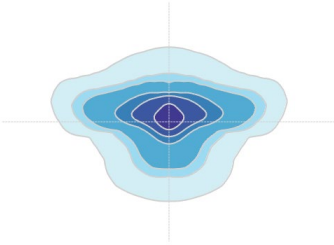




MID FLEX™

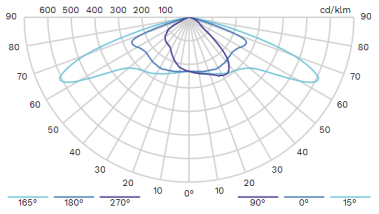
5195

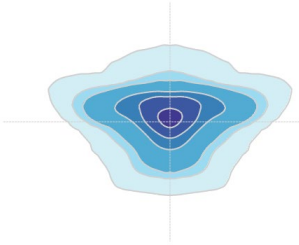




MID FLEX™

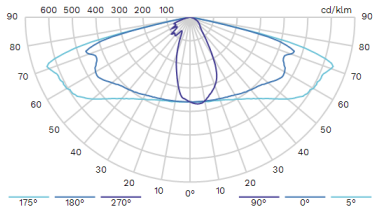
5196 Light Exhauster

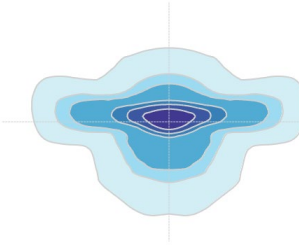




LENSO FLEX™2

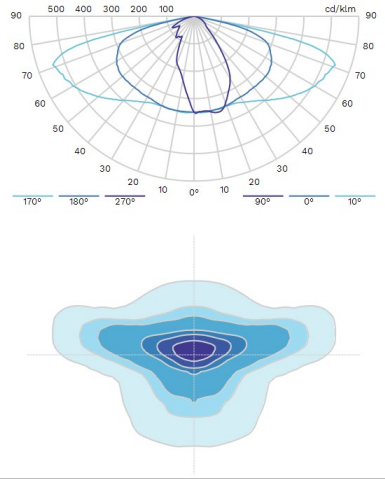
5234





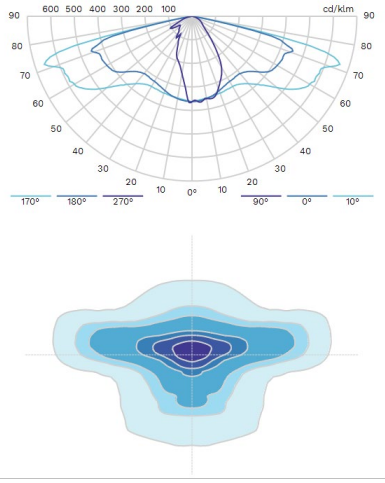
LENSO FLEX™2

5235



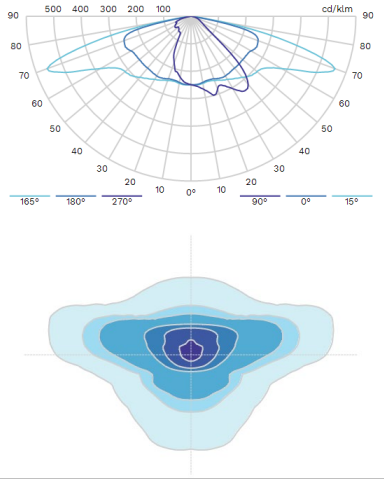
LENSO FLEX™2

5236



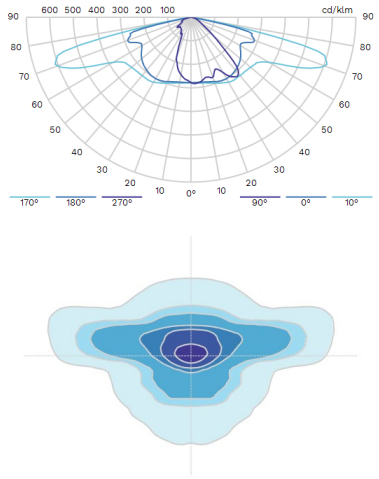
LENSO FLEX™2

5237



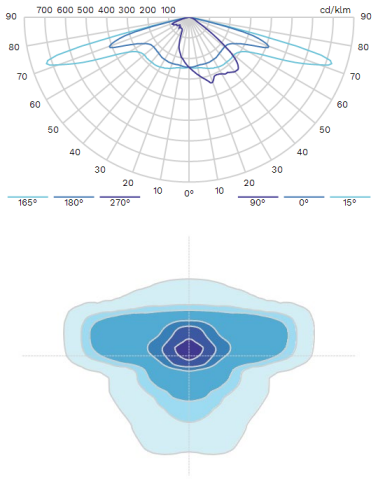
LENSO FLEX™2

5238



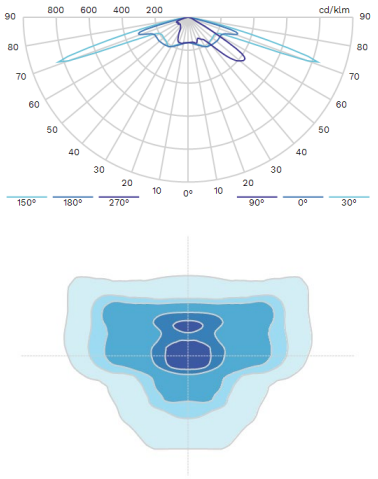
LENSO FLEX™2

5239



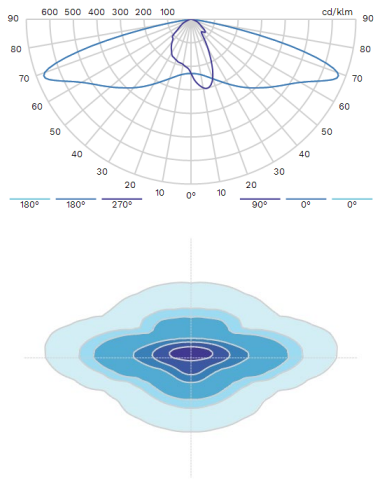
LENSO FLEX™2

5240



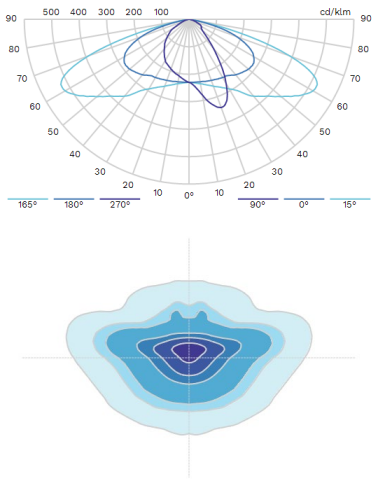
MID FLEX™

5256



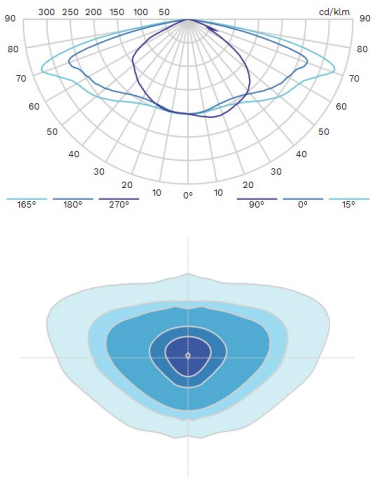
MID FLEX™

5259



MID FLEX™

5261



MID FLEX™

5325