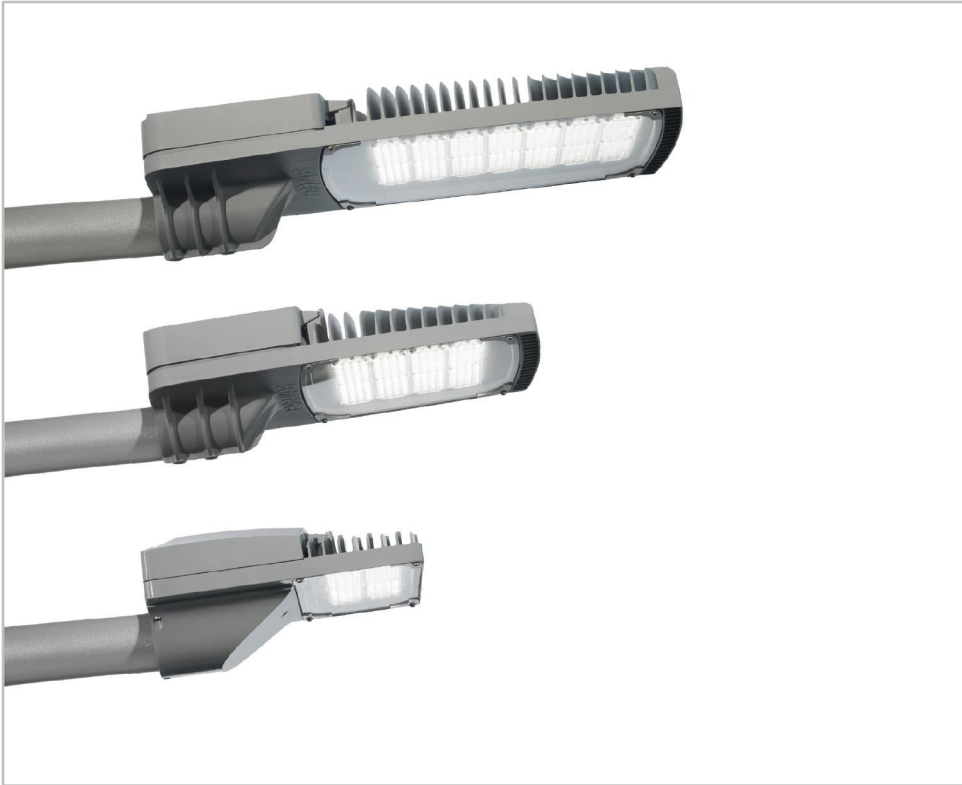


Avento



The budget-friendly high efficacy solution

Compact yet powerful, light yet robust, affordable yet highly efficient, the Avento provides the fastest return on investment for road and area lighting. The 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.

The Avento is available in three 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. The 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 10

IK 09



Concept

The Avento range combines the energy efficiency of LED technology with the photometric performance of the MidFlex™ concept developed by Schröder. 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 1 and Avento 2 are delivered with a covered mounting part while Avento S is available with an optional black polypropylene accessory to cover the mounting part.

The Avento is designed for side-entry mounting with a universal fixation for spigots from Ø42 to Ø60mm (1.5" to 2"). The Avento S can also be adjusted on-site in 5° angles (-10° to +5°). To ease maintenance operations, Avento 1 and Avento 2 offer a tool free access to the gear compartment.

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



Avento 1 and Avento 2 provide a tool free access to the gear compartment.



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

Types of application

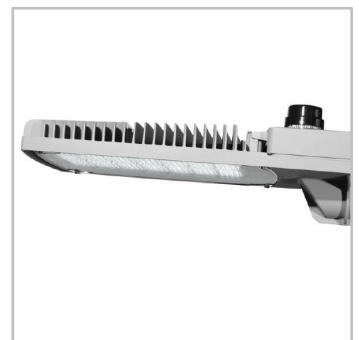
- URBAN & RESIDENTIAL STREETS
- BRIDGES
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- LARGE AREAS
- SQUARES & PEDESTRIAN AREAS
- ROADS & MOTORWAYS

Key advantages

- Cost-effective and efficient lighting solution
- Superior efficacy
- Accelerated return on investment
- 3 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.



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



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.

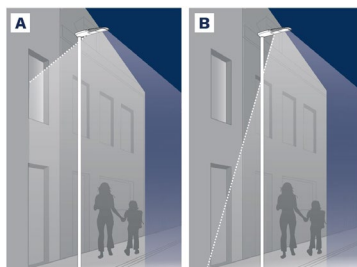
The glass protector guarantees an IP 66 tightness level for the optical compartment, providing long lasting performance. The main difference is the type of LEDs fitted in the luminaire.

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 maximize the LED density. This



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.

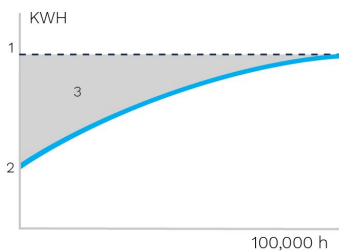


A. Without Back Light control | B. With Back Light control



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.

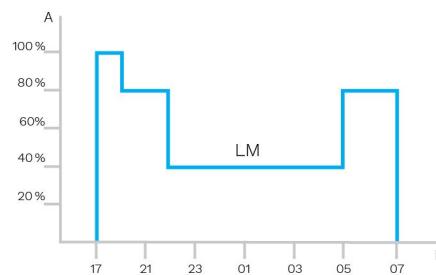


1. Standard lighting level | 2. LED lighting consumption with CLO | 3. Energy savings



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.

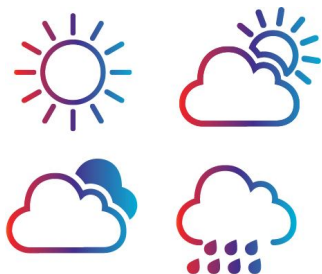


A. Performance | B. Time



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 night fall 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 12m 13' to 39'
Driver included	Yes
CE Mark	Yes
ENEC+ certified	Yes
ROHS compliant	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass
Housing finish	Polyester powder coating
Standard colour(s)	RAL 7040 light grey
Tightness level	IP 66
Impact resistance	IK 09, IK 10
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	Toolless access to gear compartment

- Any other RAL or AKZO colour upon request
- Avento S: access to the gear compartment by unscrewing 2 screws
- IK may be different according to the size/configurations. Please consult us.

OPERATING CONDITIONS

Operating temperature range (Ta)	-40 °C up to +55 °C / -40 ° F up to 131 °F
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- Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class I EU, Class II EU
Nominal voltage	220-240V – 50-60Hz
Power factor (at full load)	0.9
Surge protection options (kV)	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 option(s)	NEMA 3-pin (optional) NEMA 7-pin (optional)
Associated control system(s)	Owlet IoT

OPTICAL INFORMATION

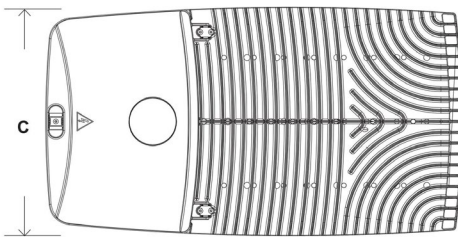
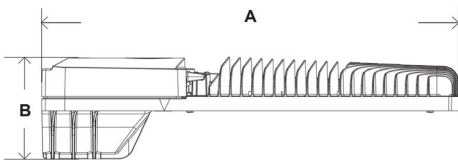
LED colour temperature	3000K (Warm White) 4000K (Neutral White)
Colour rendering index (CRI)	>70 (Warm White) >80 (Warm White) >70 (Neutral White)
Upward Light Output Ratio (ULOR)	0%

LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L85
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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
Weight (kg lbs)	AVENTO S - 5 11.0 AVENTO 1 - 8.1 17.8 AVENTO 2 - 11.7 25.7
Aerodynamic resistance (CxS)	AVENTO S - 0.06 AVENTO 1 - 0.04 AVENTO 2 - 0.06
Mounting possibilities	Side-entry slip-over - \varnothing 42mm Side-entry slip-over - \varnothing 48mm Side-entry slip-over - \varnothing 60mm





Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Min	Max		
AVENTO S	16	500	2700	3200	2700	3200	2300	2700	26.3	26.3	129	LENSO FLEX ²
	16	600	3200	3800	3200	3800	2700	3200	31.2	31.2	125	LENSO FLEX ²
	16	700	3600	4300	3600	4300	3100	3600	36.4	36.4	124	LENSO FLEX ²
	16	800	4000	4800	4000	4800	3400	4100	41.5	41.5	120	LENSO FLEX ²
	16	900	4400	5300	4400	5300	3800	4400	47	47	117	LENSO FLEX ²
	16	1000	4800	5700	4800	5700	4100	4800	52	52	115	LENSO FLEX ²
	24	350	3000	3500	3000	3500	2500	3000	26.5	26.5	140	LENSO FLEX ²
	24	400	3400	4000	3400	4000	2800	3400	30.3	30.3	139	LENSO FLEX ²
	24	500	4100	4900	4100	4900	3500	4100	38.1	38.1	134	LENSO FLEX ²
	24	600	4800	5700	4800	5700	4100	4800	45.5	45.5	130	LENSO FLEX ²
	24	700	5500	6500	5500	6500	4600	5500	53.5	53.5	127	LENSO FLEX ²
	24	800	6100	7200	6100	7200	5200	6100	61.5	61.5	122	LENSO FLEX ²
	24	900	6700	7900	6700	7900	5700	6700	69.5	69.5	119	LENSO FLEX ²
	24	1000	7200	8600	7200	8600	6100	7200	78	78	115	LENSO FLEX ²
	48	83	3200	3300	3100	3200	-	-	26.5	26.5	125	MID FLEX ⁺
	48	100	3800	3900	3600	3700	-	-	31.7	31.7	123	MID FLEX ⁺
	48	117	4300	4400	4100	4200	-	-	37	37	119	MID FLEX ⁺
	48	133	4700	4900	4500	4700	-	-	42.5	42.5	115	MID FLEX ⁺
	48	143	5000	5200	4800	4900	-	-	44.5	44.5	117	MID FLEX ⁺
	48	150	5200	5300	4900	5100	-	-	48	48	110	MID FLEX ⁺
	96	83	6500	6700	6200	6400	-	-	50	50	134	MID FLEX ⁺
96	100	7600	7800	7200	7500	-	-	61	61	128	MID FLEX ⁺	
96	117	8600	8900	8200	8500	-	-	71	71	125	MID FLEX ⁺	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W) Up to	Photometry
			Min	Max	Min	Max	Min	Max	Min	Max		
AVENTO 1	96	116	8700	9000	8300	8600	-	-	71	71	127	
	144	116	13100	13700	12500	13100	-	-	108	108	127	
	192	116	17500	18200	16700	17400	-	-	142	142	128	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W) Up to	Photometry
			Min	Max	Min	Max	Min	Max	Min	Max		
AVENTO 2	240	116	21800	23100	20900	22000	-	-	170	178	136	
	288	116	26200	27600	25100	26400	-	-	211	211	131	
	336	116	30600	32000	29200	30600	-	-	244	244	131	

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

