

Smart lighting

Aspira Bi-color

Product sheet



Dutch
Design
Week
2021



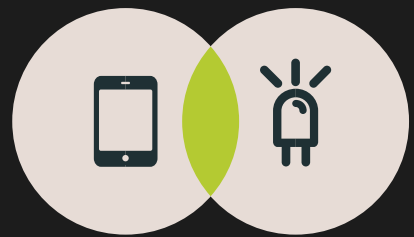
Sustainer 

Sustainer

An innovative company with experience

Sustainer is an innovative Dutch company that develops, manufactures and supplies intelligent public lighting and smart-city solutions to local authorities, businesses and other clients across Europe. Our company combines the production expertise of a former Philips luminaire factory, with intelligent public lighting systems from Dazzletek.

Sustainer LED luminaires are designed with the future in mind. We understand what you need to create a smart city, and we offer solutions that will last for years. Treating each lamppost as a central hub, and the area around it as the defining criteria, we can help you to create a sustainable, safe and healthy society.



A new generation of LED luminaires

Sustainer is introducing a new generation of advanced LED lighting and luminaires. Developed from our vision of the future, their modular concept and open architecture make them ready now for whatever developments tomorrow will bring. By using LED-technology, sensors and smart software, the energy consumption of Sustainer luminaires is minimized, whilst CO₂ emissions are also reduced.

Luminaire description

Aspira by Sustainer is an all-round, future-proof luminaire. Choosing this luminaire gives you all the current smart-lighting possibilities – and ensures you are prepared for future developments and opportunities. Via an API, this energy-saving LED luminaire can be connected online to any back-office or other system for remote control and monitoring. The luminaire comes equipped with various sensors which make installation easier, reduce maintenance costs and extend service life. And thanks to a unique cassette system, it is also possible to easily extend the luminaire's capabilities in the future. Just add new sensors to the cassette and turn the luminaire into an advanced smart city hub.

Advantages

- Energy efficient LED.
- Standard remote control and monitoring through built-in connectivity.
- Easy to expand with sensors and smart applications by simply replacing the cassette.
- No tooling required for cassette replacement, minimizing replacement times and traffic hindrance.
- Smart applications are inconspicuous by design, preventing any unrest from the public.



The Sustainer **concept**

Our mission is to transform the public lighting network into a sustainable, future-proof and smart infrastructure.



Our **modular cassette** system makes it possible to use the public lighting infrastructure as locations for **sensors** and communication.

We believe in fully **open** technology to enable the city of the future:

- Open hardware (24V / 230V)
- Open API
- Open standards



The cassette, including electronics, makes **maintenance** and **installation** very easy:

- No tooling required
- Quick cassette replacements
- Automatic error reporting and configuration

Sustainer

Bi-color

The "Bi-color" service allows you to switch between color temperatures. By default, Sustainer luminaires are equipped with the most energy-efficient and efficient LEDs (in color temperature ranging from 2200K to 5700K). With the service 'Bi-color' you get the possibility to make combinations between two color temperatures. This change of color temperature is possible time-controlled but can also be used in combination with motion sensors where a color change occurs when motion is detected.



How does it work?

You are given the option at Sustainer to order three different Aspira Bi-color luminaires: 2200K with 3000K, 4000K or 5700K. The luminaires are designed so that half of the available power is reserved for 2200K and the other half for the complementary color temperature. This means that in theory both color temperatures can also be turned on simultaneously to increase luminous flux. When programming the luminaires, however, Sustainer ensures that only 1 color temperature is on at a time.

To configure the product, you simply specify which color temperatures you want, which lumen output you need, at what times the colors are desired, and optionally what dimming scheme you want to apply. Sustainer takes care of the rest.

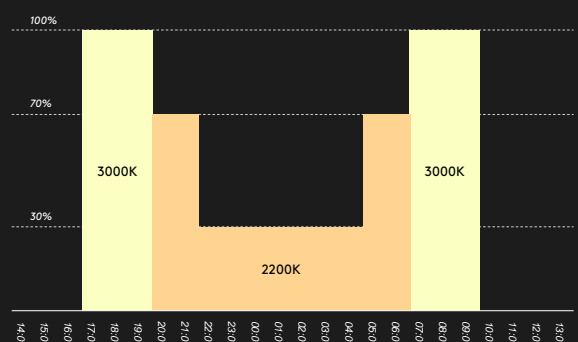
Example:

- You require 2.000 lm, 2200K + 3000K
- You want to switch colors as follows:

On to 20:00:	3000K
20:00 to 5:00:	2200K
5:00 to Off:	3000K

- You apply this dimming scheme:

On to 20:00:	100%
20:00 to 22:00:	70%
22:00 to 5:00:	30%
5:00 to 7:00:	70%
7:00 to Off:	100%



Ready for the future, today



Standard functionality



GPS



Mesh RF



Temp IN



Power Meter



Accelerometer

Optional functionality*



Humidity



Camera



Counter



Sound



Gas



Movement



Temp OUT



CO₂



Wifi



Ethernet



2G/3G/4G



NB-IoT



Fiber

**Optional functionalities are custom developed with our clients.*

Back-office connectivity

The luminaire is exceptionally easy to control and manage via any back-office system for public lighting. Use an API to hook it up to your platform for immediate and optimum control.

Luminaire features

- Energy-saving LED technology reduces CO₂ emissions.
- Dimmable.
- Constant light output (CLO) throughout full life of the LEDs (100,000 hours).
- Cassette system supports addition of further sensors in the future.

Luminaire management and maintenance

Thanks to its open architecture, the luminaire can be connected to all back-office systems, using an API. This in turn supports remote monitoring and control that enables you to:

- Configure each luminaire remotely after installation.
- Change configurations remotely.
- Map and monitor your installed base using GPS positioning.
- Monitor the performance of each luminaire remotely.
- Measure the actual energy use of each luminaire.
- Receive errors and defects on luminaire level.

Applications

- Urban areas: city centres, squares, parks and car parks.
- Roads: through roads, roundabouts and cycle paths.
- Residential areas: streets, shopping centres, cycle paths, footpaths, playgrounds and car parks.
- Large sites: industrial parks, ports, airports and stations.

Quality marks

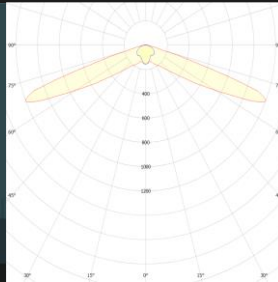
The luminaire is CE, ENEC and RoHS certified.



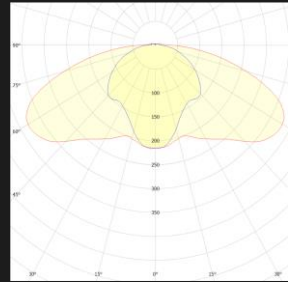
Bike path



Without LED covers

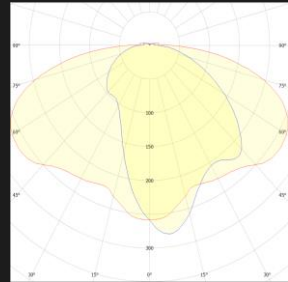
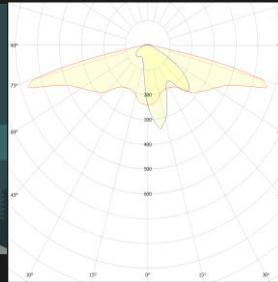


With LED covers¹



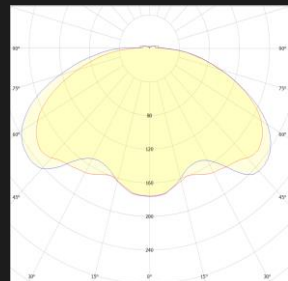
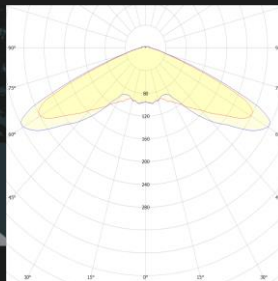
stas 1

Street



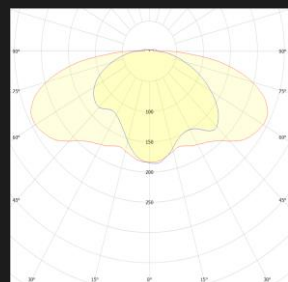
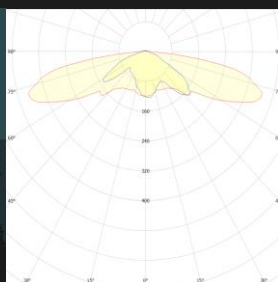
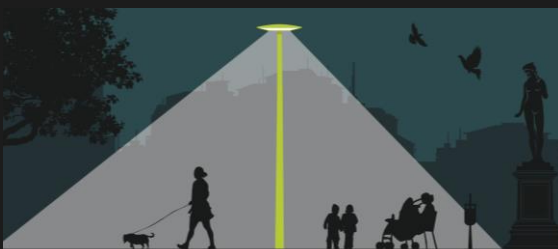
stas 2

Area symmetrical



stas 3

Area asymmetrical



stas 4

The Aspira can be supplied with optional comfort LED covers for improved vertical illuminance and reduced glare (G1 class).

¹Use of the LED covers reduces the efficiency of the luminaire. Please consult the LDT files for the correct values.

Sustainer Aspira Bi-color

Technical specifications

Lumen/power without LED covers and with standard sensors and RF-module

#LEDs	Driver	Power	Typical luminaire output (lm) – Excl. CLO ¹		
			2200K + 3000K	2200K + 3000K	2200K + 5700K
24 LED	60W	7 – 33W	800 – 3.800	800 – 3.800	800 – 3.800

Maintenance

LED	L90 B10 up to 100.000 hrs @ Ta = 25°C
Driver	up to 100.000 hrs @ Tc = 70°C

Lighting Classes (EN 13201)

Residential area	P1 – P7
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Color Rendering Index

CRI	>70
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Mains Voltage

AC	90 .. 305 V ac
Net Frequency	47 .. 63 Hz
Safety Class	I or II

Surge Protection

10 kV

LED Driver

Dimmable	30 .. 100%
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Wireless Mesh Communication

Frequency	869.525 MHz +/-30 ppm
Output power	16 dBm
Sensitivity	-105 dBm
Baudrate	130 kb/s
RF Range	121 dB

Material

Housing	Die-cast aluminum LM6-quality non-corrosive
Guard	PC
Lid	ABS
Color	Standard: NOIR2100 or GRIS2150 / Optional: any RAL color

¹Communicated values are subject to tolerances in technology. For example, the initial flux and power consumption of the luminaire are indicative values and valid for 25°C ambient temperature. The real flux output depends on environmental conditions (such as temperature) and may vary with specific configurations. For more information please check www.sustainer.com.

Sustainer Aspira Bi-color

Technical specifications

Environmental

Operating temperature	-40 .. +50°C
IP rating	IP66
IK rating Housing / Guard	IK10 / IK08

Installation

Spigot diameter	60 or 76 mm
Height	4 .. 6 m

Cable

Cable gland	M20
Cable Clamping Range	6 .. 11 mm

Dimensions

Diameter	470 mm
Height	602 mm
Weight	6.5 kg

Sensors

Power meter

Resolution	0.5 W
Accuracy 1 .. 5 W	0.5W
Accuracy 5 .. 90W	±5.0%

Temperature (for internal temperature)

Measurement range	-25 .. 100°C
Accuracy	±1.0°C

Accelerometer (tilt detection)

Resolution	0.22 degrees
Accuracy	±0.5 degrees

GNSS (Location – Position on map)

Signals	GPS, Beidou
Accuracy	CEP50 ≤2.5m

Motion sensor

Optional integrated in spigot

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