Smart lighting

Aspira

Product sheet

2021: good industrial design

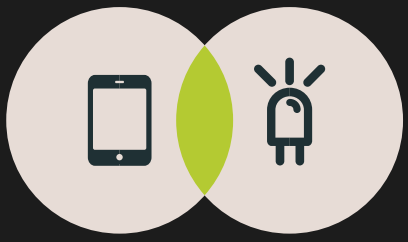
Dutch Design Week 2021

Sustainder

Sustainder
An innovative company with experience

Sustainder 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.

Sustainder 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

Sustainder 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 Sustainder luminaires is minimized, whilst CO_2 emissions are also reduced.

Luminaire description

Aspira by Sustainder 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 Sustainder 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

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
CO_2
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 CO_2 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.

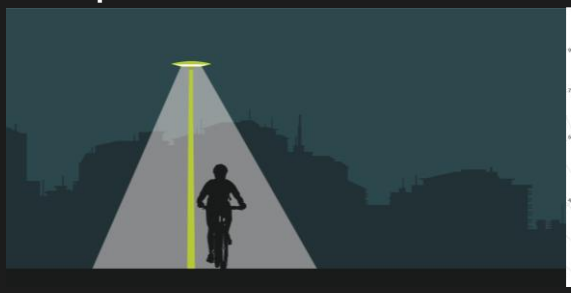
Applications

- 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.

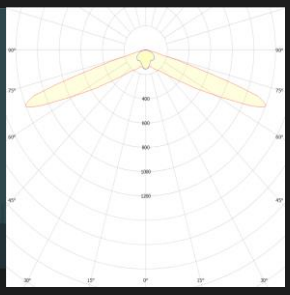
Quality marks

The luminaire is CE, ENEC and RoHS certified.

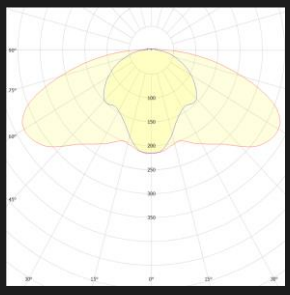
Bike path



Without LED covers

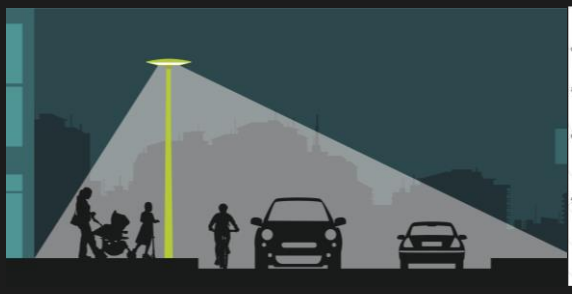


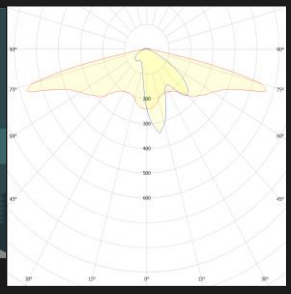
With LED covers[1]

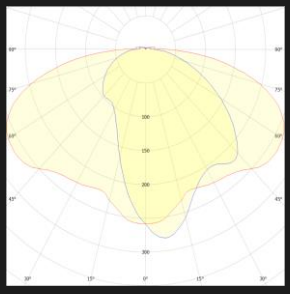


stas 1

Street

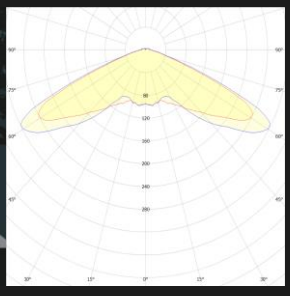


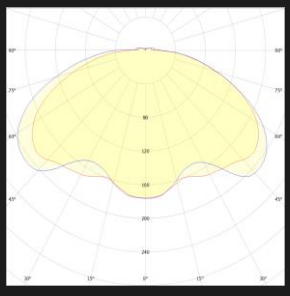




stas 2

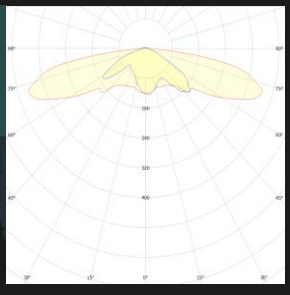
Area symmetrical

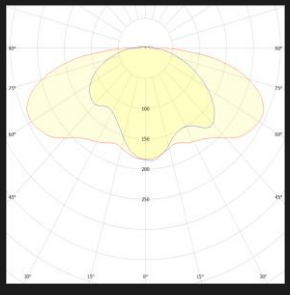




stas 3

Area asymmetrical





stas 4

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

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

Sustainder Aspira

Technical specifications

Lumen/power without LED covers and with standard sensors and RF-module						
			Typical luminaire output (lm) – Excl. CLO[1]			
#LEDs	**Driver**	**Power**	**2200K**	**3000K**	**4000K**	**5700K**
24 LED	25W	7 – 23W	800 – 2.700	900 – 2.900	900 – 2.900	1.000 – 3.000
	40W	24 – 37W	2.800 – 4.300	3.000 – 4.700	3.000 – 4.700	3.100 – 4.800
	60W	38 – 54W	4.400 – 6.300	4.800 – 6.900	4.800 – 6.900	4.900 – 7.000

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

Color Rendering Index	
CRI	>70

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%

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

[1]Communicated 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.sustainder.com.

Specifications may change and should be treated as an indication only. You are welcome to contact us about your needs.

Sustainder Aspira

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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