



**Smart lighting**

**Anne**

Product sheet



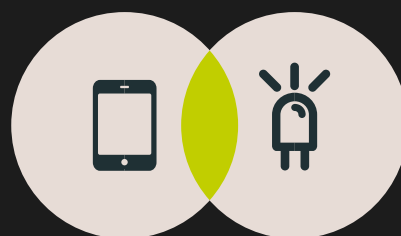
Sustainer 

# Sustainer

## The smartest public lighting for a better world

Sustainer is an innovative Dutch company at the forefront of the development of smart public lighting and smart city solutions. Our roots lie in the combined expertise of the former Philips/Industria luminaire factory and Dazzletek, specialized in intelligent control systems for public lighting.

At Sustainer, we understand how to design a smart city with solutions that go beyond lighting. Our vision is a future where public lighting goes beyond "just light. Within 20 years, our smart lighting solutions will positively transform city life and provide greater comfort, safety and quality of life for citizens. In this, the street lamp will serve as the central focal point and the environment as the defining factor.



### 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 CO<sub>2</sub> emissions are also reduced.

### Luminaire description

Anne 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



# Ready for the future, today

## Standard functionality



GPS



Mesh RF



Temp IN



Power Meter



Accelerometer



AMB Light

## Optional functionality\*



Humidity



Camera



Counter



Sound



Gas



Movement



Temp OUT



CO<sub>2</sub>



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<sub>2</sub> emissions.
- Dimmable – including independent dimming of each LED unit (4 in total).
- 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

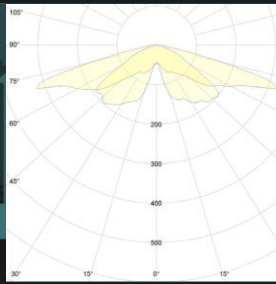
- Urban areas: city centres, squares, parks and car parks.
- Roads: through roads, roundabouts and cycle paths.
- Residential areas: streets, shopping centres, cycle paths, footpaths, playgrounds and car parks.
- Large sites: industrial parks, ports, airports and stations.

## Quality marks

The luminaire is CE, ENEC, RoHS and DEKRA LED Performance certified.

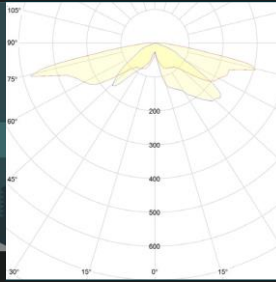


## Street symmetrical



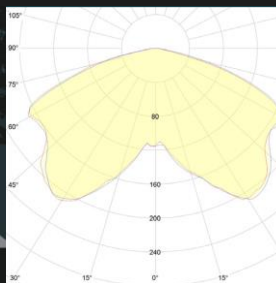
stan 1

## Street asymmetrical



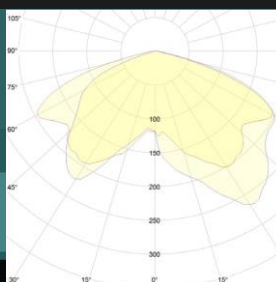
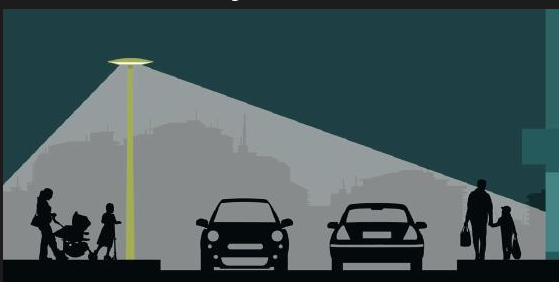
stan 2

## Area



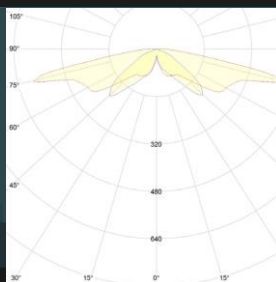
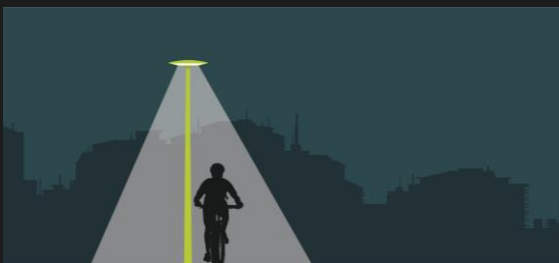
stan 3

## Wide street asymmetrical / Area



stan 4

## Bike path



stan 5

# Sustainer Anne

## Technical specifications

### Lumen/power with 20 LEDs, standard sensors and RF-module

Typical luminaire output (lm) – Excl. CLO<sup>1</sup>

Optic	Driver	Power	2200K	2700K	3000K	4000K	5700K
STAN 1	25W	7 – 23W	800 – 2.700	900 – 3.100	1.000 – 3.300	1.000 – 3.400	1.000 – 3.400
	60W	24 – 47W	2.800 – 5.400	3.200 – 6.400	3.400 – 6.700	3.500 – 6.900	3.500 – 6.900
STAN 2	25W	7 – 16W	800 – 1.800	900 – 2.200	1.000 – 2.300	1.000 – 2.400	1.000 – 2.400
	60W	17 – 33W	1.900 – 3.800	2.300 – 4.500	2.400 – 4.700	2.500 – 4.900	2.500 – 4.900
STAN 3	25W	7 – 23W	800 – 2.700	900 – 3.100	1.000 – 3.300	1.000 – 3.400	1.000 – 3.400
	60W	24 – 47W	2.800 – 5.400	3.200 – 6.400	3.400 – 6.700	3.500 – 6.900	3.500 – 6.900
STAN 4	25W	7 – 16W	800 – 1.800	900 – 2.200	1.000 – 2.300	1.000 – 2.400	1.000 – 2.400
	60W	17 – 33W	1.900 – 3.800	2.300 – 4.500	2.400 – 4.700	2.500 – 4.900	2.500 – 4.900
STAN 5	25W	7 – 12W	800 – 1.400	800 – 1.600	1.000 – 1.700	1.000 – 1.800	1.000 – 1.800
	60W	13 – 25W	1.500 – 2.900	1.700 – 3.400	1.800 – 3.500	1.900 – 3.700	1.900 – 3.700

### Maintenance

LED	100.000 hrs L95 @ Ta = 25°C
Driver	100.000 hrs

### Lighting Classes (EN 13201)

Residential areas	P1 – P7
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### Color Rendering Index

CRI	>70, >80 on request
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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	5 .. 100% of maximum
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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 + Cassette	PC
Color	Standard: NOIR2100 or GRIS2150 / Optional: any RAL color

<sup>1</sup>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.sustainer.com](http://www.sustainer.com).

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

# Sustainer Anne

## Technical specifications

### Environmental

Operating temperature	-40 .. +55°C
IP rating	IP66
IK rating Housing	IK10

### Installation

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

### Cable

Cable gland	M20
Cable Clamping Range	6 .. 11 mm

### Dimensions

Length (excl. Spigot)	590 mm
Width	590 mm
Height	200 mm
Weight	11 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

### Ambient Light

Measurement range	1 .. 100k lux
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### GNSS (Location – Position on map)

Signals	GPS, Beidou
Accuracy	CEP50 ≤ 2.5m

### Motion sensor

Optional integrated in spigot

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

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