

we-ef

AFL100 SERIES

The new generation street and area lighting

SEE THE STARS

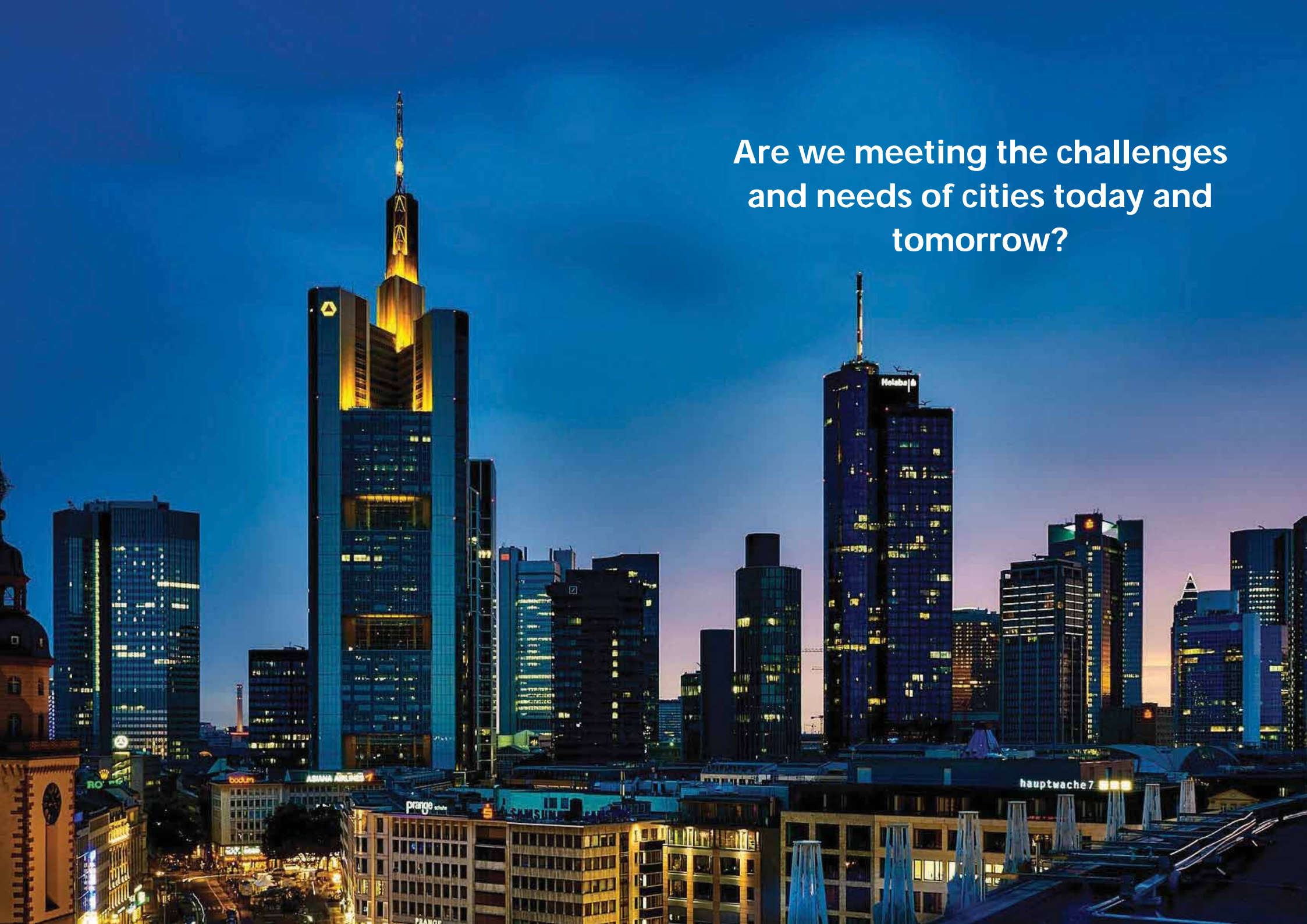




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Are we meeting the challenges
and needs of cities today and
tomorrow?



CHALLENGE

Cities and communities all must adapt and do more with less, and yet still meet the need for safety and ambience, in designing exciting night-time environments.

This means:

- Less energy
- Less waste
- Improved light control
- Additional colour temperatures
- Greater sustainability

Many cities have converted streetlights to LEDs, and some monitor and manage their light points using a smart lighting management system.

Such initiatives have proven to **reduce energy usage for streetlighting by around 63 percent** and saving the cities millions in annual operational and maintenance costs.



The new generation street and area lighting

For urban lighting applications

AFL100 SERIES



AFL110

AFL120

AFL130

PRODUCT OVERVIEW

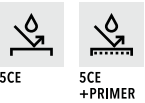
Built for the future - be it sustainability connectivity and serviceability



1 Lens
Non-reflective safety glass lens for improved light output ratio (LOR)

2 Body
Marine-grade, die-cast aluminium alloy

Corrosion protection



Designed for serviceability

- Easy disassembly
- Quicker and more cost-effective repair & maintenance
- Ready for upgrades in the future

3 CCG® Controlled Compression Gasket

- Weatherproof, non-ageing, high temperature rated silicone
- Provides long-term, maintained, high IP rating

4 Fasteners
Poly Coated Stainless Steel
Hardware protect against galvanic corrosion and ensures longevity

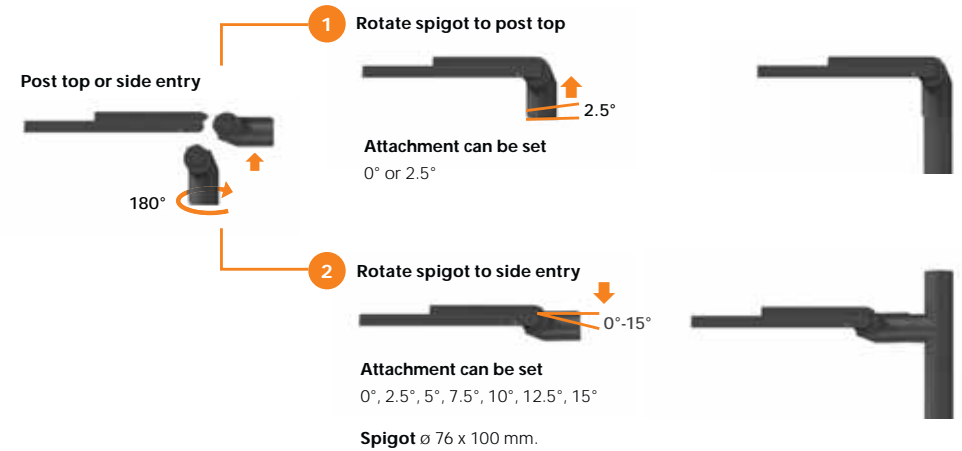
5 Spigot
Design flexibility, combined functionality – Post top or side entry

6 Driver
DALI, Internal EC electronic converter in thermal compartment
220-240 V / 50-60 Hz

PRODUCT FEATURES

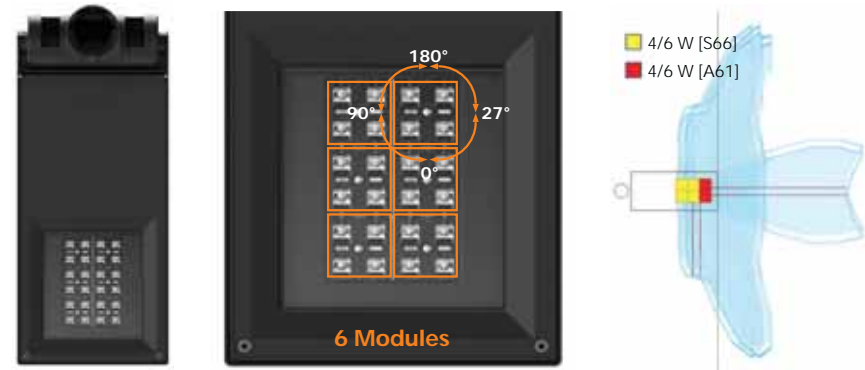
Quick, safe and easy installation.

A sustainable cost effective solution that enable repurposing of the luminaires in the future fit for any application – a choice between post top or side entry.



Modularity

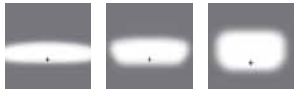
When existing infrastructure changed, the lighting is in need of an upgrade. WE-EF hybrid optics can optimise lighting scenarios by simply switching to LED boards to a different beam or easily rotate existing LED module in 4 directions . All of this can be done on-site.



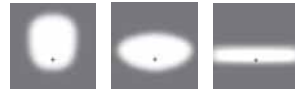
Shown above is AFL120
Each module can be turned in 4 directions: **0°, 90°, 180° and 270°**

FAMILY RANGE

AFL110 | AFL120 | AFL130



[S71] Asymmetric, side throw
 [S66] Asymmetric, side throw
 [R60] [R61] Rectangular, side throw

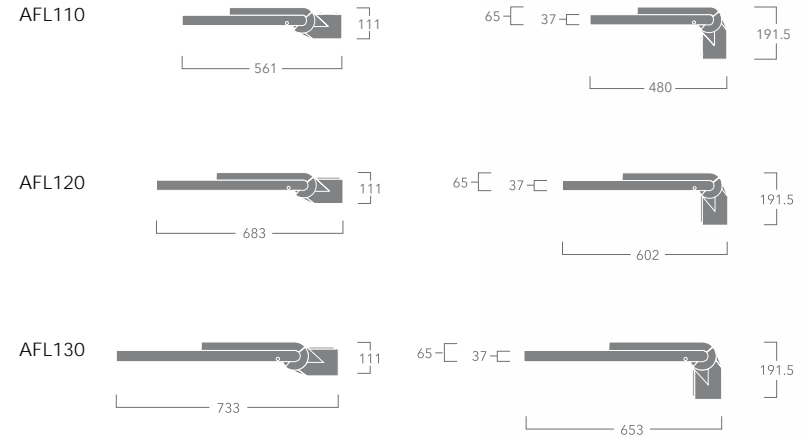


[A61] Asymmetric, forward throw
 [S61] Asymmetric, side throw
 [P66] Pedestrian/bicycle lane

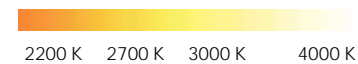


[Q66] Square distribution
 [P46L] Pedestrian crossing, left-hand traffic
 [P46R] Pedestrian crossing, right-hand traffic

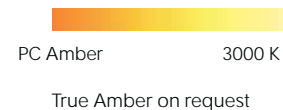
AFL100	LED	Wattage	Light distributions	Nominal lumens
AFL110	8	8 – 24 W	[S71] [S66] [R60] [R61] [A61] [S61] [P66]	1240 – 3240 lm
	16	16 – 48 W	[Q66] [P46L] [P46R]	2480 – 6480 lm
AFL120	24	24 – 48 W	[S71] [S66] [R60] [R61] [A61] [S61] [P66] [Q66] [P46L] [P46R]	3720 – 6960 lm
AFL130	48	48 – 96 W	[S71] [S66] [R60] [R61] [A61] [S61] [P66] [Q66] [P46L] [P46R]	7440 – 13920 lm



Standard options



Wild-Light standard option – Available for AFL120 and AFL130

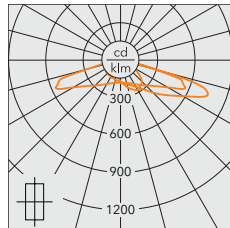


Tailored for application challenges

University campus



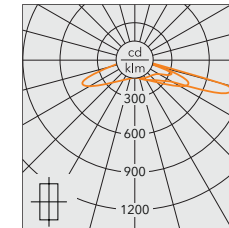
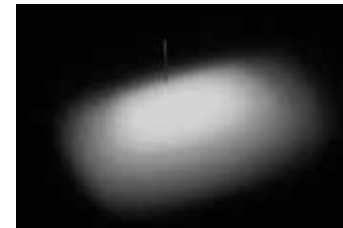
AFL130
3000 K, 72 W
[S70] Asymmetric, side throw



Residential area



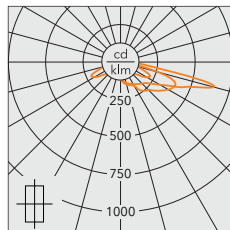
AFL120
3000 K, 48 W
[R60] Rectangular, side throw



Highway bridge



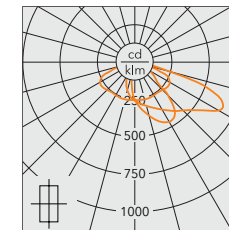
AFL130
3000 K, 72 W
[A61] Asymmetric, forward throw



Foreshore



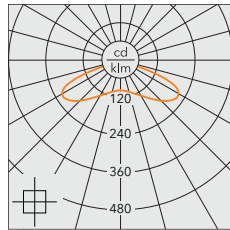
AFL130
2700 K, 48 W
[S61] Asymmetric, side throw



Train station



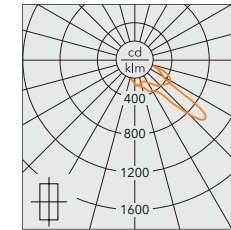
AFL130
3000 K, 48 W
[Q66] Square distribution



Pedestrian crossing



AFL130
3000 K, 72 W
[P46R] Pedestrian crossing, right-hand traffic



**Protect the
beauty of our
night skies**





Sustainable solution for the night

Guided by 'five principles for responsible outdoor lighting'



Useful - All light should have a clear purpose

- Application oriented
- Dark sky optics and meaningful connectivity options



Targeted - Light should be directed only to where needed

- Optimized standard-compliant illumination of wider road cross-sections



Low light levels - Light should not be brighter than necessary

- Designed to be dimmable, providing only the required level of brightness



Controlled - Light should be used only when it is useful

- Designed to be ready to connect - Zhaga or NEMA connection with 2 sensors



Light colour - As warm as possible

- Offering a wide range of colour temperatures, with reduced blue components in the light spectrum
- Mixed-colour LED applications, called "Wild-Light", with special attention to light-sensitive creatures



End-of-life

Luminaire components are recyclable



Energy efficient and dark sky compliant solution

With Wild-Light, you can balance the human activity while preserving the 'night'

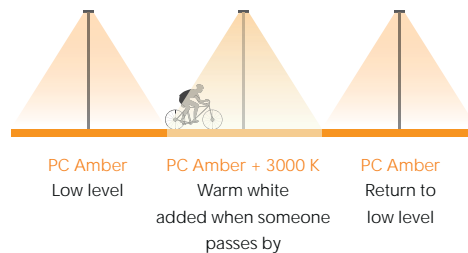


Available for AFL120 and AFL130



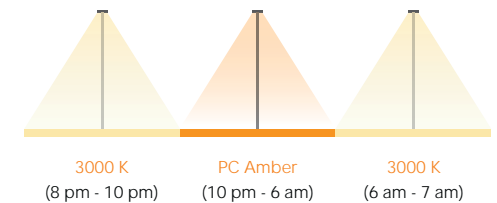
1 Wild-Light Motion

Example: The biodiversity-friendly PC Amber light shines all night at a low level to limit the impact on wildlife and save energy. In the presence of human traffic, colour temperature is immediately increased to 3000 K. When no one is in the vicinity, it then returns to PC Amber.



2 Wild-Light Advanced

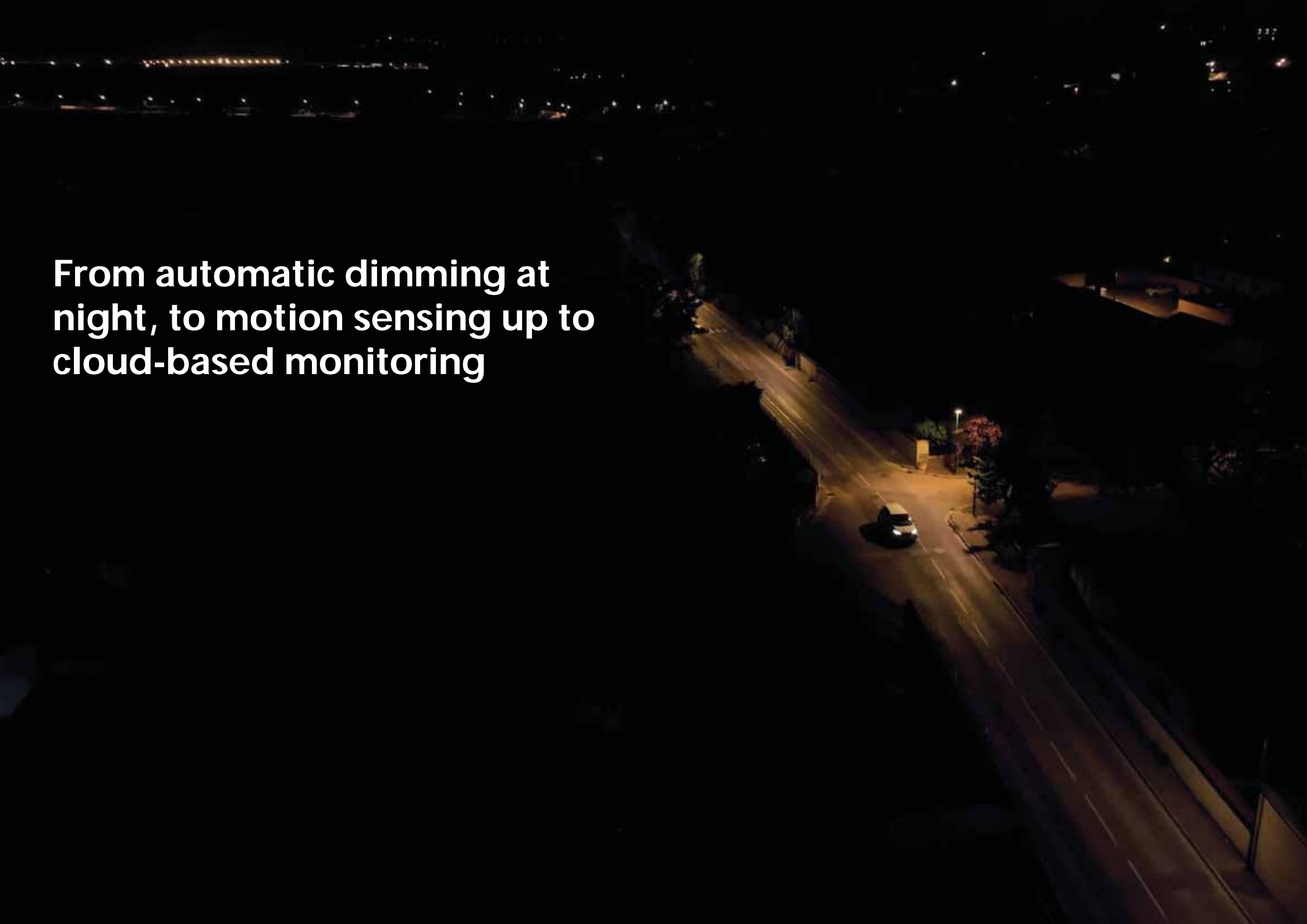
Example: Fully automatic dimming preset that starts the night with warm white (3000 K from 8 pm to 10 pm), reduces to biodiversity-friendly light in the middle of the night (PC Amber from 10 pm to 6 am) and returns to warm white in the early morning (3000 K from 6 am to 7 am): a particularly simple and economical solution.





Why go smart?

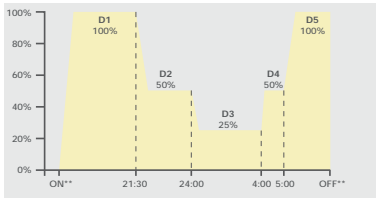
From automatic dimming at night, to motion sensing up to cloud-based monitoring





Key uses and benefits

1. Scheduled dimming - for energy reduction



Application: Streets and pathways

Challenge: How to reduce energy bill while keeping the streets safe?

Solution: Eco Step Dim® allows precise scheduled dimming throughout the night

Result: Reduced energy consumption



Easy to implement, but does not allow for later adjustments

2. Wireless control - for precise control



Application: City centre or residential area

Challenge: How to implement lighting within the existing infrastructure or increase flexibility of the lighting system when required?

Solution: Connectivity (Zhaga Book 18 controller) offers wireless control that is scalable

Result: Exact lighting level that can easily be adjusted at your convenience without the worry of rewiring



Faster installation that is customisable and cost-effective

3. Motion sensor - for comfort and safety



Application: Streets, parks and pathways

Challenge: How to keep streets and paths comfortable and safe while dimming?

Solution: Eco Step Dim Motion® controls the dimming level based on pre-programmed motion sensor

Result: Feeling of safety combined with visible energy reduction



A standalone package with a flexibility to expand to a local mesh network or to a complete wireless network controlled and monitored with a dashboard

4. Dashboard - for reporting, configuration and asset management



Application: City centre or residential area

Challenge: How to control and monitor lighting fixtures in the city?

Solution: Connectivity combined with cloud service enable extensive dashboard to control all parameters

Result: Exact status and historical view of all lighting assets, reporting functions and email alerts in case of malfunctioning



Key data (streetlight performance) is accessible through the Cloud solution



Environmentally sustainable lighting solution

Light dim down from 3000 K to PC Amber when motion are not detected



Smart lighting made easy

Extend to Smart City when needed for future proofing with full suite options.

Connectivity packages

Control the light in a simple and extremely efficient way with modern connectivity solutions
All systems compatible with **Standard** and **Wild-Light**.


1 — **DALI ready package** —

Ready to integrate with any DALI control system - be it

- DALI dimmer
- DALI sensors
- DALI light management system

and so on...

For AFL120 and AFL130

 **Wild-Light**
Standard configuration:
1 channel control


2 — **Eco Step Dim package** —

Option 1 (Eco Step Dim Advanced)
Pre-programmed timer

Option 2 (Eco Step Dim Motion)
Pre-programmed motion sensor

Standard configuration for option 2
25% dim level without motion
100% dim level with motion
3 min holding time

For AFL120 and AFL130

 **Wild-Light**
Standard configuration:

- Option 1 only
- 2 channels control


3 — **R2C (Ready to Connect) package** —

Option 1
TOP - Zhaga Book 18 socket
e.g. Photocell

Option 2
BOTTOM - Zhaga Book 18 socket
e.g. Motion sensor


Option 3
TOP and BOTTOM - Zhaga Book 18 socket
3rd party control supplier

For AFL120 and AFL130


 **Wild-Light**
Standard configuration:
1 channel control




Benefit for users


 **Energy savings**
Save up to 85% through smart dimming

 **Comfort**
Configure to application through dimming protocols

 **Flexibility**
Future-proof, upgradable system

 **Protection and Preservation of nature**
Environmental friendly lighting through warmer colour temperature - Wild-Light

 **Safety**
Offering 'Light on Demand' for footpaths and cycle lane

 **Maintenance cost**
Reduce up to 40%



Optics and lighting performance

Three key lenses

Dark sky optics, biodiversity preservation with strict limited rear light characteristics for reducing light wastage and no light above 90°. More lumens per Watt and Kg allow for better spacing in return reducing CO₂ level.



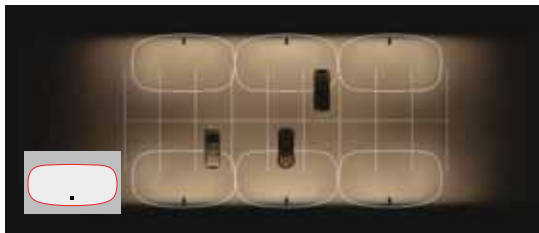
Tailored for reduced infrastructure along pathways and narrow
[S71] Asymmetric, side throw



For greater forward for roadways and wider spaces
[S66] Asymmetric, side throw



NEW non-reflective flat glass
Reduces back spill. 20 %



Tailored for parking areas
[R61] Rectangular, side throw



AFL110, 8 LED, 3000 K
[R61] Rectangular, side throw



AFL110, 8 LED, 4000 K
[P66] Pedestrian/bicycle lane



AFL110, 8 LED, 3000 K
[S71] Asymmetric, side throw
[P66] Pedestrian/bicycle lane



AFL110, 16 LED, 4000 K
[S71] Asymmetric, side throw

Tailor the light

Modularity

Combines the advantage of two precision optics - maximise and control the direction of light distribution to meet the application needs

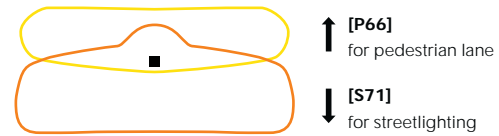
Scenario 1

Challenge:

Tailored for narrow pathway and pedestrian lane

Solution:

A combination of two light distributions for two-sided arrangements:



Luminaire: AFL110, 16 W, 700 mA

Pole height: 4 m

Spacing: 10 m

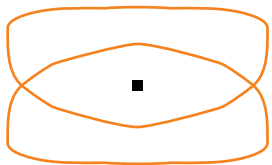
Scenario 2

Challenge:

Tailored for streetlighting and pedestrian lane

Solution:

A combination of identical light distribution for two-sided arrangements



↑ [S66]
for streetlighting

↓ [S66]
for streetlighting



Luminaire: AFL110, 24 W, 1050 mA
Pole height: 6 m
Spacing: 19 m

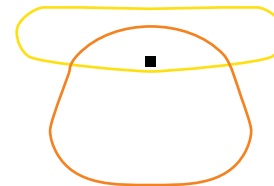
Scenario 3

Challenge:

Tailored for carpark area and pedestrian lane

Solution:

A combination of two light distributions for two-sided arrangements:



↑ [P66]
for pedestrian lane

↓ [A61]
for forward throw



Luminaire: AFL110, 24 W, 500 mA
Pole height: 6 m
Spacing: 10 m



AFL110, 16 LED, 3000 K
[S66] Asymmetric, side throw
[P66] Pedestrian/bicycle lane

SEE THE STARS

we-ef

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