COOLON

AELITA

60W Smart LED Conveyor/Area Light

BRILLIANT • CONNECTED

A revolutionary breakthrough in industrial site lighting is here

Aelita is a natural-born smart light. Purpose designed to push the boundaries of what was ever expected from a conventional light.

In a true evolutionary form Aelita has inherited all of the resilience and performance excellence of all Coolon lights that came before it. Aelita is here and ready to take your site to a new era of safety and operational efficiency.

Designed for use in:

- Conveyors
- Walkways
- Stairwells
- Stacker / Reclaimers
- Pedestrian Access Ways
- Campsite Area Lighting
- General Area Lighting
- Mining Processing Plant
- Material Washing and Crushing

Wirepas

DESIGNED & MANUFACTURED IN AUSTRALIA

Lightning IMMINENT <16KM
All personnel to remain in cover until threat has passed

Lightning NEARBY 16KM – 30KM

Lightning MAY EXIST 30KM – 60KM

Increased situational awareness

Ensure no one is caught unaware by propagating emergency alerts visually through Aelita's built-in RGBW indicator.
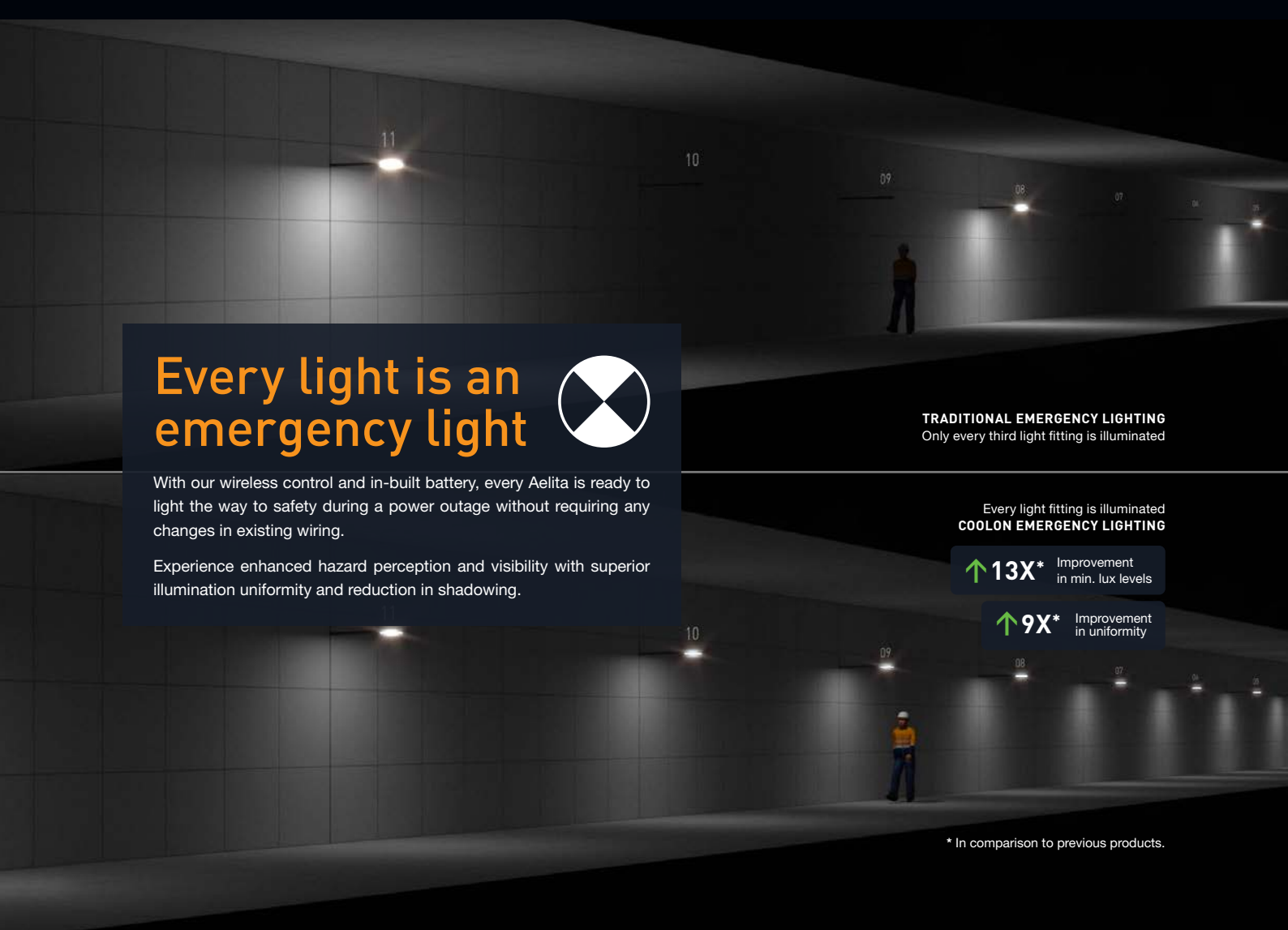
Every light is an emergency light

With our wireless control and in-built battery, every Aelita is ready to light the way to safety during a power outage without requiring any changes in existing wiring.

Experience enhanced hazard perception and visibility with superior illumination uniformity and reduction in shadowing.

TRADITIONAL EMERGENCY LIGHTING
Only every third light fitting is illuminated

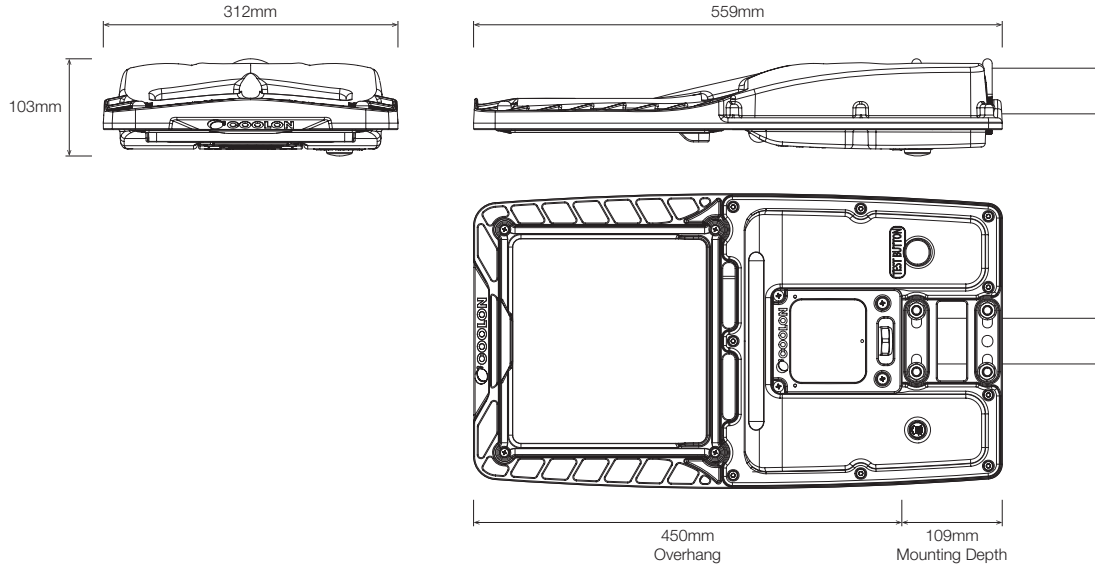Every light fitting is illuminated
COOLON EMERGENCY LIGHTING

↑ **13X*** Improvement in min. lux levels

↑ **9X*** Improvement in uniformity

* In comparison to previous products.

DIMENSIONS

Aelita Luminaire

312mm

103mm

559mm

450mm
Overhang

109mm
Mounting Depth

TECHNICAL SPECIFICATIONS

Product	Aelita LED Conveyor / Area Light	
Mode	Mains Powered (MP)	Emergency (EM)

Optical Characteristics [1]

Luminous Flux (Photometered)	NWT 7,240 lm / AMB 5,310 lm	900 lm
CCT	NWT / AMB (switchable upon motion or wirelessly selectable)	NWT
CRI	NWT 70 / AMB 57	

Electrical Characteristics [1]

Power Consumption	60W Max
Nominal Voltage	230VAC 50/60Hz
Voltage Range [2]	90 – 305VAC, 127 – 431VDC
Frequency Range	47 – 63Hz
Power Factor	>0.95 / 230VAC
Leakage Current	<0.75mA / 277VAC
Charge Time	≤16 hours
Battery Type	LiFePO$_4$
Battery Lifetime	2,000 cycles to 70% SOC
EM Discharge Time	120 minutes initial / 90 minutes in service

Lighting Control [3]

Dimming	10 – 100%
Motion Detection Behaviour	Colour, dimming level
RGBW Indicator Mode	Colour, frequency
Control Modes	Grouping, scenes, scheduling

Wireless Communication

Protocol	Wirepas
Operating Band	2.4 GHz, 40 Channels
Typical Range [4]	15 – 30 metres line of sight
Data Encryption	AES-128
Network Standby Time	> 24 hours during power outage

Sail Area

Horizontal Orientation	S$_{FRONT}$ 0.028m^2	S$_{SIDE}$ 0.051m^2

Environmental

IP Rating	IP66
Impact Rating	IK09
Salt Spray Tested	Yes
Operating Temp. Range	0 to +50°C
Thermal Management Type	Active / Continuous
Expected Lifespan	50,000 Hours to 70% Brightness
Material Composition (Body)	ADC12 Aluminium Alloy, Polyester Powder Coated
Material Composition (Optical Cover)	Tempered Glass
Material Composition (Electronics Lid)	Polycarbonate
Mounting/Bracket Type	U-Bolt Spigot Mount OD 32 – 44 mm (NB25 - NB32)
Cable Gland	M25 x 1.5 SS316
Cable Ø Entry Range	7 – 13mm

Storage

Temperature	0 to +45°C
Shelf Life [5]	Up to 12 months @ 20±5°C

Weight/Packaging

Luminaire Weight	7.0kg
Packaging Dimensions	600 x 400 x 150mm
Packaged Weight	8.0kg

Compliance (Safety Standards)

AS/NZS 60598.1	Luminaires - General Requirements and Tests
AS/NZS 60598.2.3	Luminaires - Particular requirements - For road and street lighting
AS/NZS 2293	Emergency lighting and exit signs for buildings

Compliance (EMC)

AS/NZS CISPR15	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
AS/NZS 4268	Radio equipment and systems - Short range devices - Limits and methods of measurement

Warranty

Warranty	5 years warranty as standard

[1] Reading taken while test unit operating in steady state. Ambient temperature during testing is typically 25°C. Individual unit behaviour may differ due to electronic component tolerance and ambient conditions. Product parameters and application suitability shall be checked by the user prior to commissioning.

[2] Certified voltage range : 100 – 240VAC @ 50/60Hz.

[3] Lighting Control via BitCortex.

[4] Wireless range might significantly vary depending on the type of antennas used, elevation above the ground, presence of metal obstacles and environmental conditions. Wireless coverage could be optimised with increased amount of devices forming mesh network.

[5] Shelf life time with Battery Switch in OFF position is defined as time since product dispatch from Coolon, or since last charge cycle.

COOLON
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All documentation is subject to change without notice. Refer to our website for the latest information.

Aelita Industrial LED Luminaire
Version 1.03

Quick & easy to install

Aelita is so easy to install it can be done in minutes, without the need of any specialized tools. Simply open the hatch, connect the cable, tighten the gland, close the hatch.
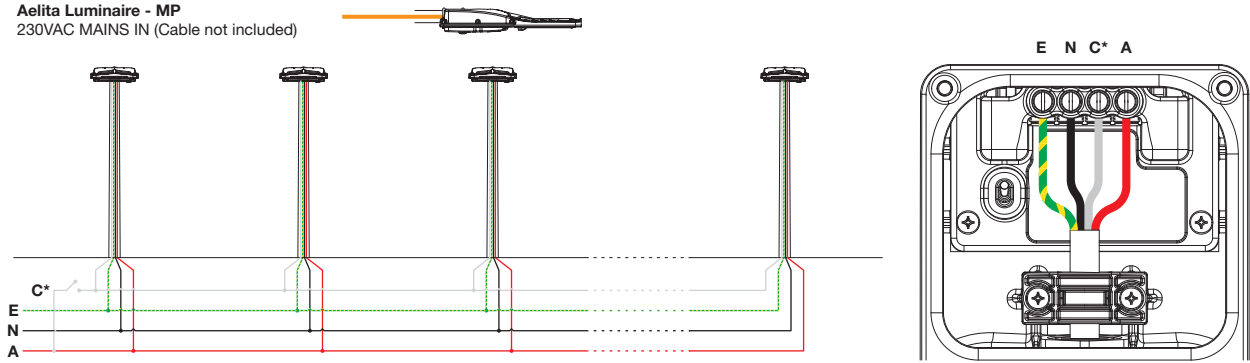
Enables digitisation

Lights automatically mesh together forming a site-wide wireless network enabling the effortless deployment of a wide range of IoT based sensors and services from third-party providers:

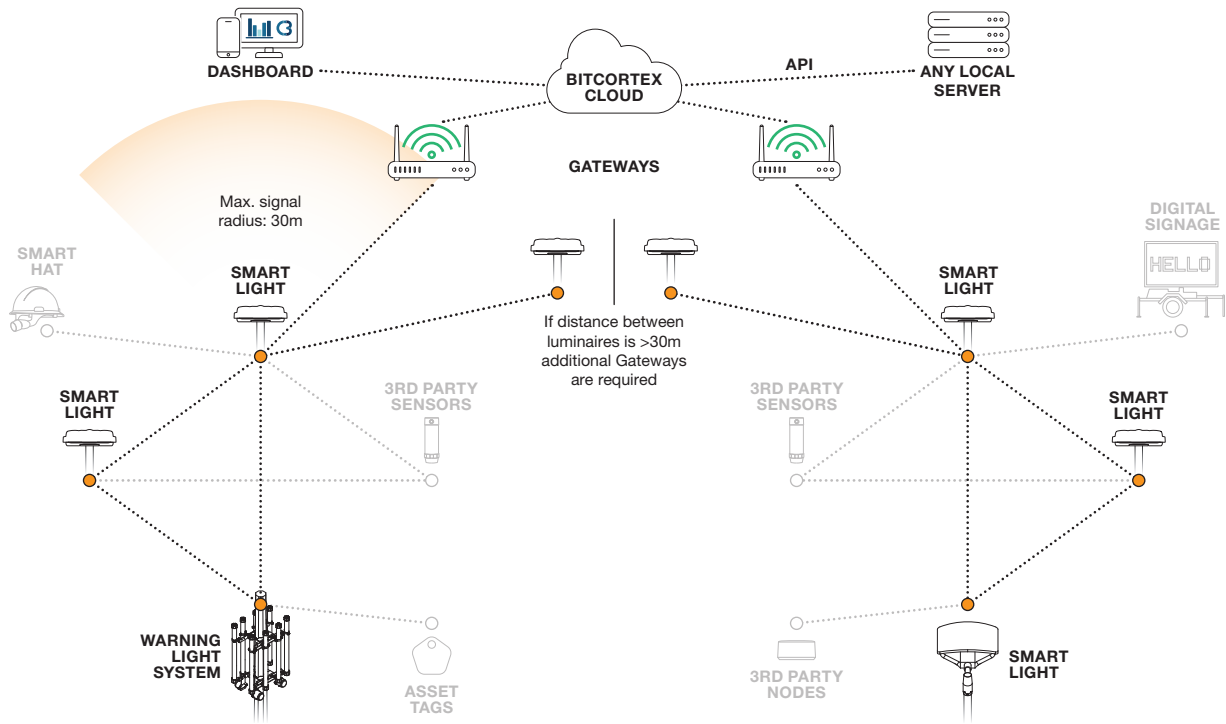- Asset Tracking
- Personnel Locating
- Machine Condition Monitoring

... and many more!

WIRING CONFIGURATION

Aelita Luminaire - MP
230VAC MAINS IN (Cable not included)

E N C* A

C*
E
N
A

* Optional Control Wire - luminaire can digitally switched via BitCortex

MESH NETWORK

DASHBOARD

BITCORTEX CLOUD

API

ANY LOCAL SERVER

GATEWAYS

Max. signal radius: 30m

If distance between luminaires is >30m additional Gateways are required

SMART HAT

SMART LIGHT

SMART LIGHT

3RD PARTY SENSORS

3RD PARTY SENSORS

DIGITAL SIGNAGE

HELLO

SMART LIGHT

SMART LIGHT

WARNING LIGHT SYSTEM

ASSET TAGS

3RD PARTY NODES

SMART LIGHT

BitCortex

A web based platform to manage and control smart wireless devices.
Accessible anywhere through an internet connected browser.

For more information on Coolon smart lighting range please visit: www.bitcortex.net

WIREPAS MASSIVE ENABLED

Wirepas is a leading IoT company on mission to democratise enterprise IoT. The Wirepas Massive self-healing network optimises itself by local decision-making to reach unlimited scalability, coverage and density while using the available radio spectrum as efficiently as possible.

Wirepas

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Aelita Industrial LED Luminaire
Version 1.03

Optimal for wildlife & humans

Aelita autonomously switches between wildlife friendly Amber and White for maximum alertness when a person is detected.

TURTLE FRIENDLY

In many coastal areas white light may not be permitted for use, as it is believed to be disrupting breeding cycles of certain species of sea turtles.

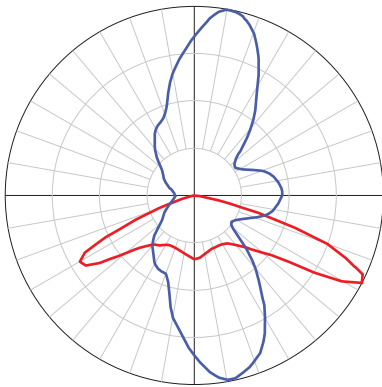Coolon has specifically designed the Aelita to have the ability to switch in 595nm (nanometers) Amber that is in the region of their lowest visual sensitivity.
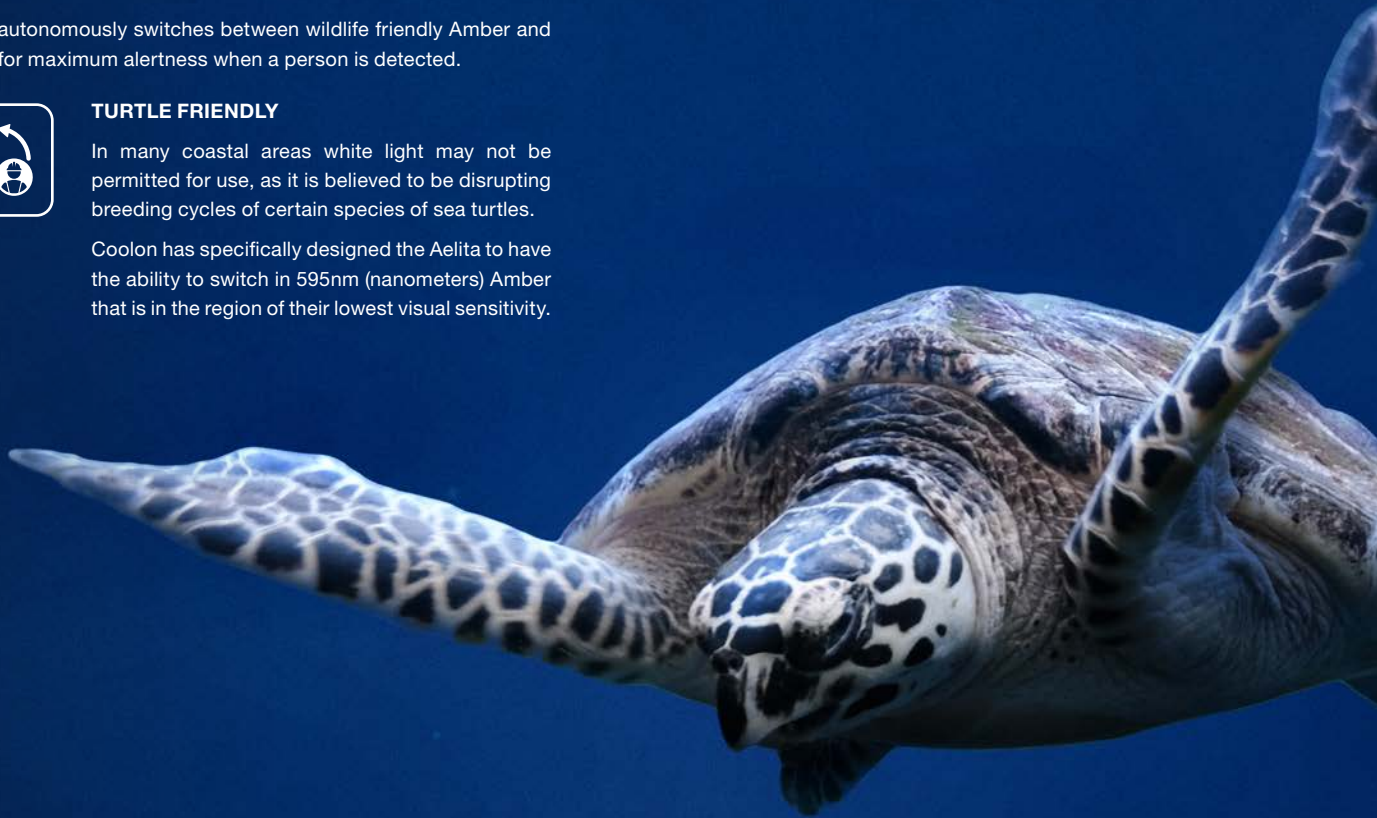
Better over time

Over-the-air updates add functionality, enhancing the utility of lighting and the network. The only light that gets better over time.
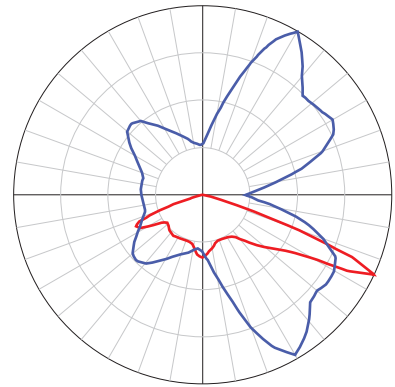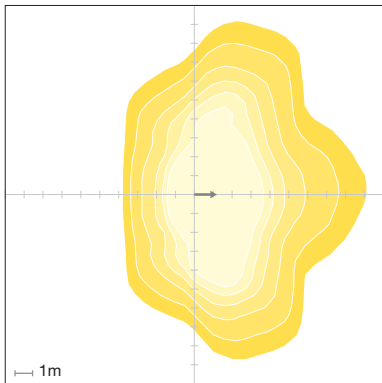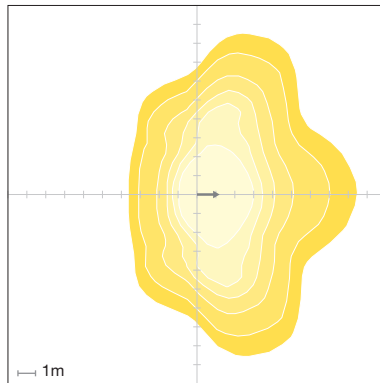
Neutral White - MP
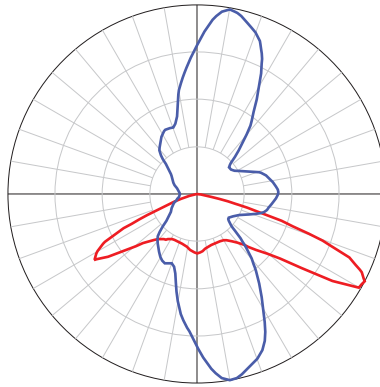
Amber - MP

Emergency

Max Vertical Plane ——— Max Horizontal Cone
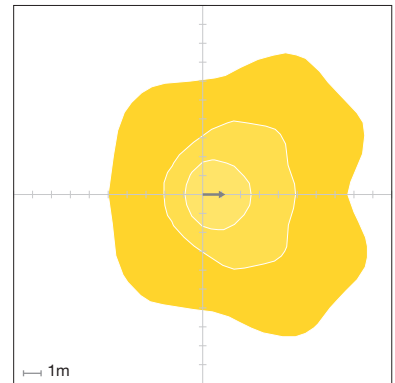

Neutral White - MP

Amber - MP

Emergency

1m

1m

1m

Lux	1	5	10	20	30	40	50
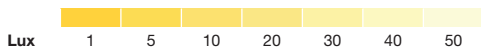
Mounting Height= 2.7m   **Arm Length=** 0.2m   **Tilt=** 5°   **LLF=** 0.75

AELITA - NWTAMB - T2 - MP - WP

PRODUCT   COLOUR TEMP   OPTICS   SUPPLY OPTION   CONNECTIVITY

PRODUCT		COLOUR TEMP		OPTICS		SUPPLY OPTION		CONNECTIVITY	
Aelita		NWTAMB	Neutral White / Amber	T2	Type 2 Optics	MP	Mains Powered	WP	Wirepass

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Dark Sky Compliant

Lighting pollution is a negative of today's technology, disturbing nocturnal animals, affecting human circadian rhythms and severely impacting astronomy observatories.

The Aelita is Dark Sky compliant in a bid to reduce light pollution.

CITY SKY **SUBURBAN SKY** **RURAL SKY** **DARK SKY**

COMPARISON TABLE

		DLK2	EMDLK2	DLK2S	DLK3	AELITA
		Conventional Light	Conventional Light with App	Hybrid Smart Light	True Smart Light	Ultimate Smart Light
NETWORK	Mesh Networking	⊗	⊗	⊘	⊘	⊘
	Network Standby 24hrs	⊗	⊗	⊘	⊘	⊘
EMERGENCY	Emergency Light	⊗	⊘	⊗	⊘	⊘
	Emergency Reporting	⊗	📱 Via App	⊗	⊘	⊘
LIGHT CONTROL	Remote Dimming	⊗	⊗	⊘	⊘	⊘
	Digital Switch Off	⊗	⊗	⊗	⊘	⊘
	Motion Switching	⊗	⊗	⊗	⊗	⊘
ENHANCED FUNCTIONALITY	Amber/White Switching	⊗	⊗	⊗	⊘	⊘
	Warning Indicator Light	⊗	⊗	⊗	⊘	⊘
	Motion Switching	⊗	⊗	⊗	⊗	⊘
FUTURE PROOF	Over the air Upgradeable	⊗	⊗	⊘	⊘	⊘

📱 Via App App communicates via Bluetooth, in close proximity to the device only. Physical presence on site is necessary.