



Advanced
LIGHTING TECHNOLOGIES



CREE SYRIUS

A NEW ERA IN STREET LIGHTING



A New Way To Measure Exterior Lighting

There are several well-established performance benchmarks and industry standards relating to internal lighting. Numerous accreditation programs such as LEED, Greenstar and WELL make a concerted effort to heavily scrutinise the performance and suitability of an interior luminaire for its given application.

Consideration is given to:

- Circadian Light Design
- Glare Control
- Visual Balance
- Light Quality (CRI)
- Occupancy Control and more

External luminaires carry a much lower burden of proof to demonstrate excellence. Outside of ensuring limited light spill to neighbouring properties and the night sky, any further scrutiny typically focuses on efficiency only (how many lumens per watt of energy can I achieve?). Very little is done to analyse the quality of light being generated, which is ultimately the most important criteria of all. AS 1158.3.1:2020 was a great leap forward, helping to establish a baseline for glare, but nothing further.

There is no question external lighting needs to be efficient, but efficiency should not be the only metric used. If careful consideration towards how the lighting interacts with end users has not been given, then the design is only half-complete.

Over a decade ago, when commercially viable LED technology was in its infancy, saving energy was the main priority. Now, achieving Standards compliance makes up only one element. Emphasis should no longer be placed just on performance but also visual comfort, the quality of light generated and how that light interacts with its surrounding environment. A luminaire's physical design and housing colour also play an important role.

If you want a space to be occupied at night, consideration beyond just complying to the Australian Standards is required. Lux levels alone will not determine safety or usability. Considering key design criteria such as CRI, colour temperature, surface reflectance and glare is essential. When evaluating road lighting a quick web search will offer up hundreds of examples of locals complaining that newly-installed LED streetlights in their area are too bright – often it is not actually lumen output causing the issue, but poor glare control.

Enter the Sirius from Cree Lighting. Promising to deliver a new era in street lighting, the Cree Sirius was engineered to meet the needs of everyone involved in the process - electrical engineers, designers, installers and the people that live under it. The Sirius offers a revolutionary approach to minimising glare, challenging conventions for exterior luminaire design while offering high quality light in a range of colour temperatures to suit all projects.

PERFORMANCE SUMMARY

Lumens Per Watt

Up to 130

Lumen Output

620 – 5,000

CCT

2700K / 3000K / 4000K

CRI

Up to 80

Ingress Protection

IP66

Impact Resistance

IK10

Control Options

1-10V Dimming / DALI (Optional)

NEMA / Zhaga Optional

International Dark Sky

Association Approved

CREE WAVEMAX[®] TECHNOLOGY

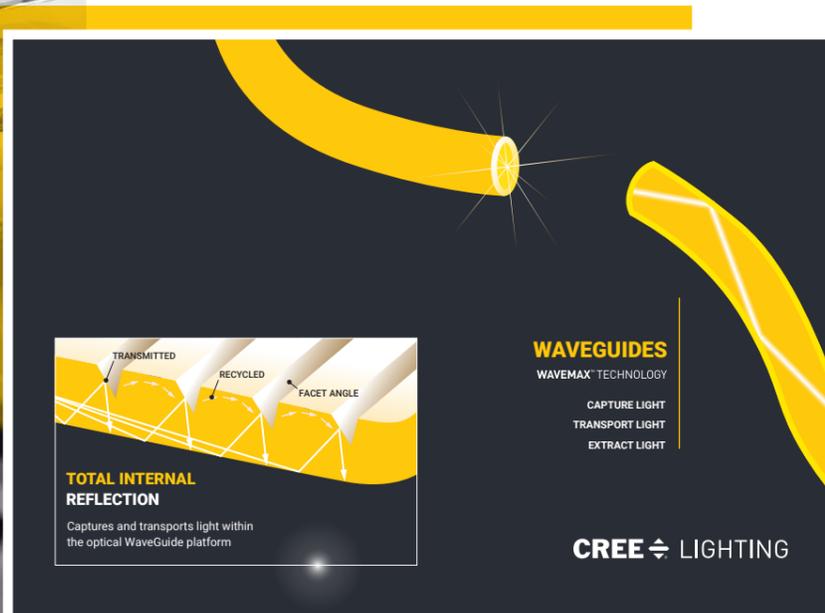
An optic completely free of direct LEDs, significantly reducing glare

The Sirius' LED module is fully integrated within its housing, generating light indirectly using Cree's game-changing **WaveMax[®] Technology**.

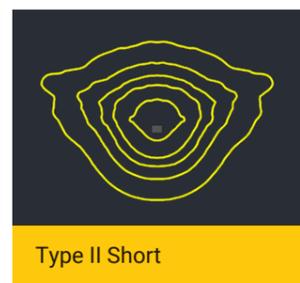
Light is efficiently captured and transported by Cree's patented optic, before being precisely distributed. This highly efficient system offers a glare-free, visually comfortable environment.

This remarkable luminaire merges performance and visual comfort. It is not outlandish to claim this might be the biggest technological leap exterior lighting has seen in years - a low glare/indirect solution that creates a positive visual experience while maintaining typical pole spacing, all without sacrificing Standards compliance or efficiency.

When evaluated alongside the new glare metrics outlined in AS 1158.3.1:2020, the Cree Sirius does not just comply – **it blows them out of the water**, setting a new benchmark against which all other luminaires should be measured.



The **Cree Sirius** offers traditional streetlight and pathway optics



Litestrong

In addition to efficiency and visual comfort, the Cree Sirius also boasts significant green credentials. Built using 98% recyclable materials, it features housing made from an innovative new composite plastic known as **Litestrong**.

Litestrong is a proprietary technopolymer, designed specifically to reduce Sirius' impact on the environment. Shifting away from traditional cast aluminium housing has resulted in a low density, reduced weight design - greatly reducing the carbon emissions required to manufacture and ship the product.

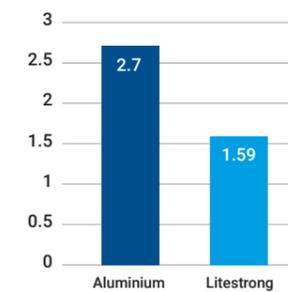
Litestrong's colour is injected as a dye during manufacturing, rather than being painted separately afterwards, reducing chemical pollution. Significantly less water is used during the manufacture of Litestrong compared with its aluminium counterparts.

This holistic approach to luminaire design and manufacturing by Cree Lighting makes the Sirius an easy choice for projects where a product's entire application life (i.e. Cradle to Grave) is considered. But why stop there? Carbon footprint evaluation should not just be reserved for projects implementing accreditation programs such as Greenstar, it should be a key consideration across all projects.

For designers and engineers, evaluating embodied energy can be a difficult and convoluted process. Cree Lighting have removed the complication - providing a solution that achieves huge gains for the environment (compared to conventional luminaires), allowing users to make a positive impact with every project.

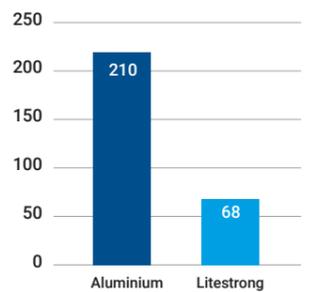
Density

g/cm³



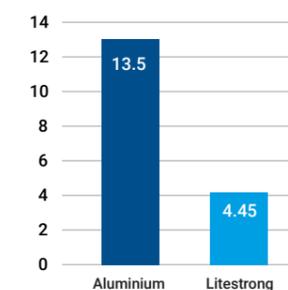
Embodied Energy

Mj/Kg



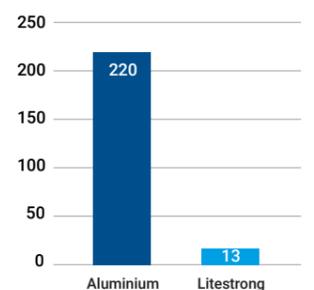
Co2 Footprint

Kg/Kg



Water Usage

L/Kg





Applications

The Cree Sirius offers both high impact and ingress protection ratings (IK10 and IP66 respectively), with wattages and optics designed specifically for road and pathway applications.

It is the perfect solution for:

- Municipalities, governments and organisations conscious of their environmental footprint, or with carbon reduction schemes and targets to meet.
- Educational institutions and other organisations seeking innovative and sustainable solutions that will have a real impact.
- Feature spaces and public activity areas where enhanced aesthetics and user experience is prioritised.
- Coastal applications. Litestrong is corrosion resistant and does not require salt spray testing, removing any chance of degradation due to salt air and water in aggressive environments.

The Sirius' range of colour temperatures, colour rendering and housing finishes ensures maximum flexibility for designers and architects alike. Genuine marketing opportunities exist for any organisation keen to publicise their commitment to green solutions.

Under the hood, Sirius' lifetime data of L90 B10 @ 205,000 hours (calculated based on IESNA TM-21-11 Projecting Long Term Lumen Maintenance Of LED Light Sources) guarantees visual comfort for years to come. For further consumer confidence, a standard Cree Lighting 10-year manufacturer's warranty also applies.



2700K
WARM

3000K
WARM WHITE

4000K
COOL WHITE

For more information on this remarkable luminaire, contact your **Advanced Lighting Technologies** sales representative directly, call us on 03 9800 5600 or visit adlt.com.au.





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Advanced Lighting Technologies

Striving to revolutionise the lighting industry by delivering high-quality, sustainable LED lighting that is affordable and available to all. We're dedicated to developing new LED lighting solutions that improve our clients' infrastructure and reduce energy costs.

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