

LEDiL

Guide for sports lighting optics



LEDiL[®]

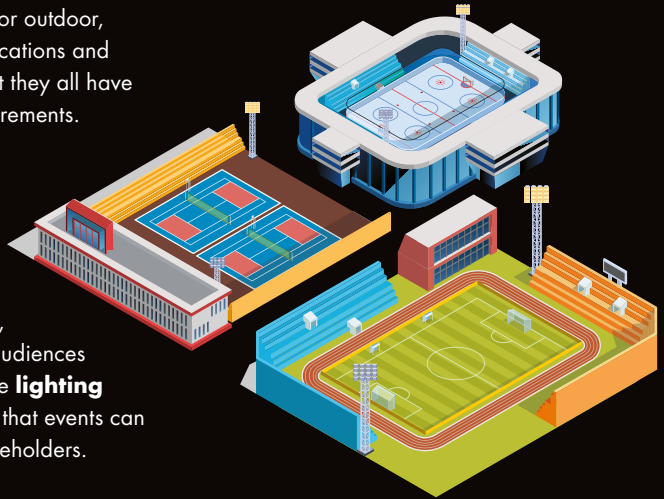
v1-0 / 2021

SPORTS LIGHTING IN A NUTSHELL

There is a huge variety in the size, standard and location of sporting venues and stadiums around the world. Venues may be indoor or outdoor, small or large, in rural or urban locations and either single or multi-discipline, but they all have a need for their own lighting requirements.

Stadiums especially, can be unique pieces of architecture, with a need for specific lighting to showcase or enhance the building itself.

Venue owners, players, spectators, television broadcasters and their audiences have different needs, and therefore **lighting solutions must be flexible** so that events can be played and enjoyed by all stakeholders.



GOOD SPORTS LIGHTING



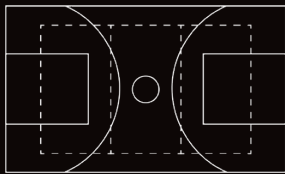
WHY LEDiL?

All our optics for sports venues and stadiums fully comply with current standards set by different standards authorities. Our modular optic design makes **mixing and replacing** different beam types inside one luminaire easy, allowing the same light engine to be used for multiple purposes.

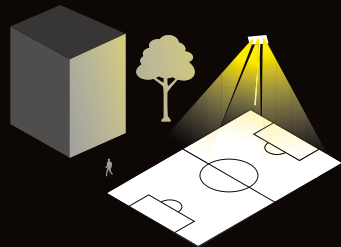
Sports venue lighting luminaires must perform well in all conditions, and our high-quality optics and IP-capable products ensure a long product lifetime, even in the most extreme environments.

MAKE OUR OPTICS
THE HEART OF YOUR
LUMINAIRE TO
**OPTIMIZE COST,
EFFICACY AND
LIGHT DISTRIBUTION
WITH GREAT RESULTS**

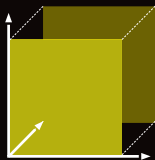
THINGS TO CONSIDER IN SPORTS LIGHTING



THE **LAYOUT(S)** OF SPORTS AREAS



ADJACENT AREAS WITH **VISUAL LINKS**



THE **VOLUME(S)** OF THE FIELD(S) OF PLAY



GENERAL LIGHTING **REQUIREMENTS**



PRIMARY AND ADDITIONAL **USES**

PLAYING WITH THE ENVIRONMENT IS NOT **A GAME**

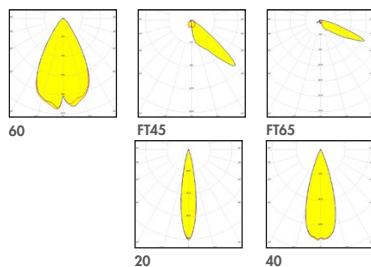
With the right lighting solutions you can reduce environmental impact, save energy and get the effect you want for the heroes **at play**.





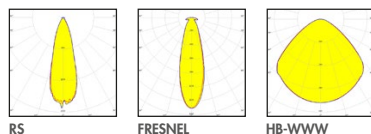
JENNY

35 x 35 mm single lenses and 8X1 arrays for up to 7070 size LED packages. Made from silicone.



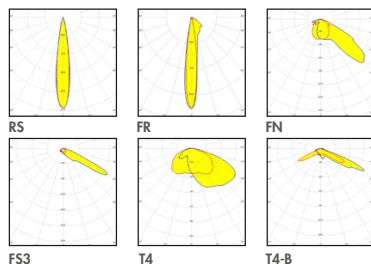
STELLA

Ø90 mm ingress protected silicone lenses for up to 30 mm LES size COBs.



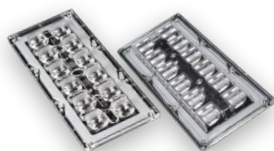
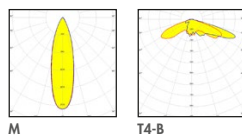
2X2 (STRADA & HB)

50 x 50 mm modular product families for up to 5050 size LED packages.



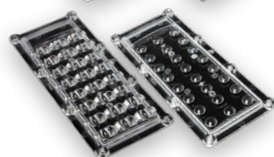
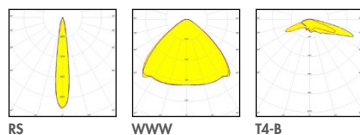
2X2MXS (STRADA & HB)

90 x 90 mm ingress protected silicone arrays for up to 9 mm COBs.



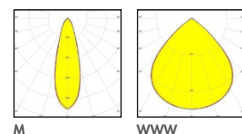
IP-2X6 (STRADA & HB)

173 x 71.4 mm ingress protected arrays for up to 5050 size LED packages.



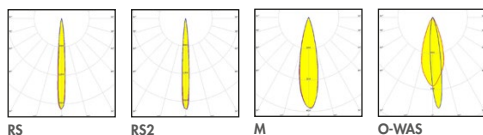
IP-24 (STRADA & HB)

173 x 71.4 mm ingress protected arrays for 5050 size LED packages.



LEILA-2X8

175 x 43 mm array holding 16 pieces of single LEILA lenses.



GAME-CHANGER

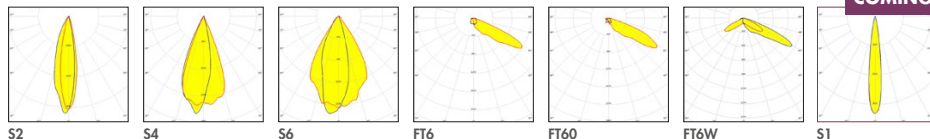
SPORT-2X2

Low glare optics for all types
of sports lighting



- Allows optimal lighting conditions for both players and spectators that meet standards and requirements of different sports
- Symmetrical and asymmetrical beams designed for low glare sports lighting floodlights
- Enables creation of energy efficient solutions that are also neighbour friendly

Compatibility: Optimized for HP 3535 and compatible with up to 5050 size flat LED packages.



SPORT-2X2 APPLICATION EXAMPLES

FOOTBALL PITCH

6 poles

Optics:

SPORT-2X2-FT6
SPORT2X2-FT6W

Mounting height:

16 m

Pitch size:

110 x 72 m

Upwards light ratio (ULR):

1.0 %

Luminous flux (Corner poles):

220 klm

Luminous flux (Centre poles):

240 klm

Total luminous flux:

1390 klm

Total power:

10 400 W

Results from calculation grid (TA)

E Average (requirement ≥ 75 lx): 84 lx

E Min: 64 lx

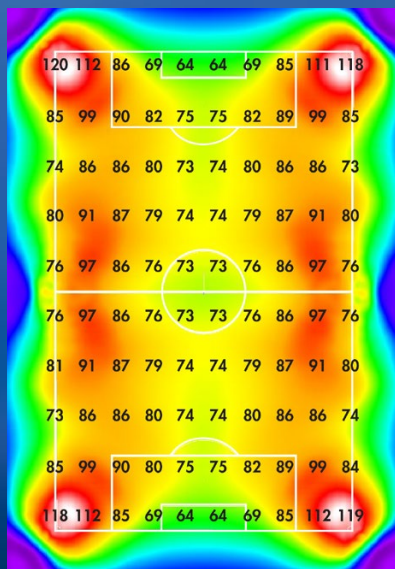
E Max: 120 lx

Uo (requirement ≥ 0.7): 0.77

Qualifies for post-curfew E2*

Source intensity at 140 m: Max 0.3 kcd

*CIE 1917, IESNA 1999



MULTI-PURPOSE INDOOR SPORTS FACILITY

3 lighting scenes to meet 3 different sport requirements with 1 setup

Number of luminaires:

SPORT-2X2-S4 58 pcs

DAISY-7X1-W 16 pcs

Mounting height:

10 m

Room size:

19 x 32 m

Total load*:

1344–1585 W

Power consumption*:

2.2–2.6 W/m²

BASKETBALL BADMINTON VOLLEYBALL

Field results

E Average 242 lx 316–317 lx 233 lx

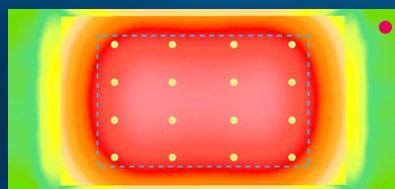
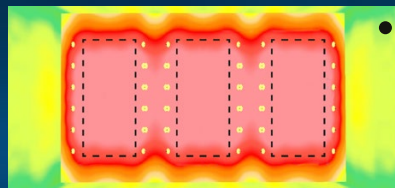
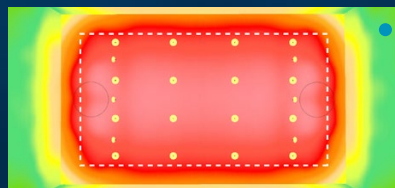
Uo 0.69 0.73 0.66

Vertical illuminance levels on net

E Average 62 lx 56 lx

Uo 0.42 0.37

*Based on individual lighting scenes



HOW TO READ POLAR CURVES

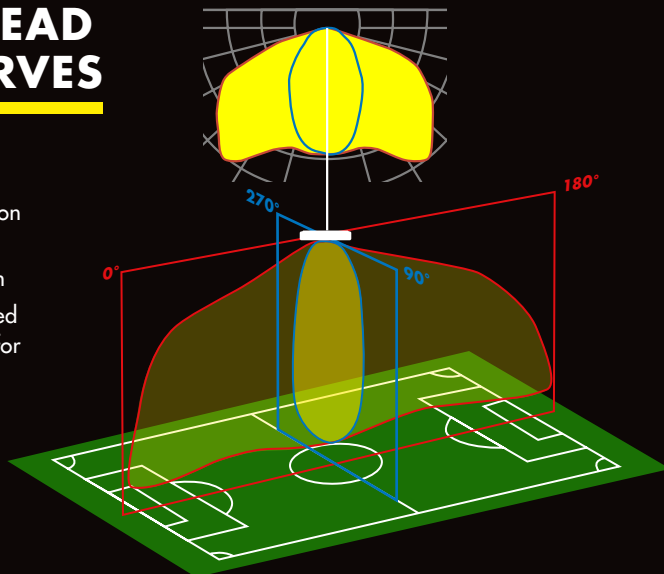
0° to 180°

Longitudinal light distribution

90° to 270°

Horizontal light distribution

The polar curve can be used to estimate optimal beam for installation



TECHNICAL SUPPORT

- Simulations to show optic performance in real applications
- Installation guides and tips
- Thermal analysis for luminaire designs

FREE FOR ALL OUR CUSTOMERS

GLOBAL

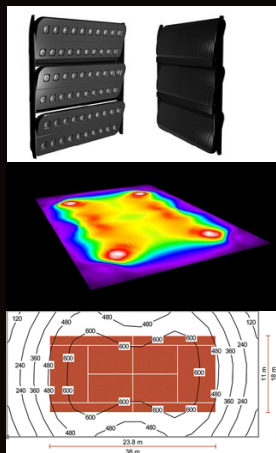
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