



# British Electric Lamps Ltd

## Sports & Area Lighting, Technical Guide 2018



Manufacturers of quality lighting since 1920



ACCREDITED  
SUPPLIER



Certificate Number 12255  
ISO 9001: 2015

[www.belllighting.co.uk](http://www.belllighting.co.uk)



# SkylinePRO Asymmetric/ Symmetric LED Floodlight

Designed and engineered in the UK specifically to meet the requirements for sports lighting and to reduce light pollution levels. The Skyline Pro is a high specification floodlight with a 70,000 hour lifespan, 5 year guarantee and one year on site warranty.

- Genuine replacement for 250/400/600W Metal Halide/Sodium Floodlight
- Perfect for sports, building facade's, landscape, security & car park lighting
- Asymmetric distribution, low light pollution\*
- Up to 133 lm/W
- Surge protected up to 10,000 volts (250/240W) for lighting protection
- Cool White
- Aerodynamic, streamlined design for reduced windage
- Fully encapsulated IP66 TUV certified driver
- Nichia GRT-V1 LED / Meanwell Driver
- Long life 70,000 hours (L80 B10 @ 25° C)
- IK08
- Robust construction IP66
- Standard universal mounting bracket
- Supplied pre-flexed (1.5M), tool free entry and construction for simple and quick installation

80W  $\equiv$  250W MH/SON Energy Saving 68%

150W  $\equiv$  400W MH/SON Energy Saving 63%


240W  $\equiv$  600W MH/SON Energy Saving 60%

Suitable for  
Site Lighting



110V



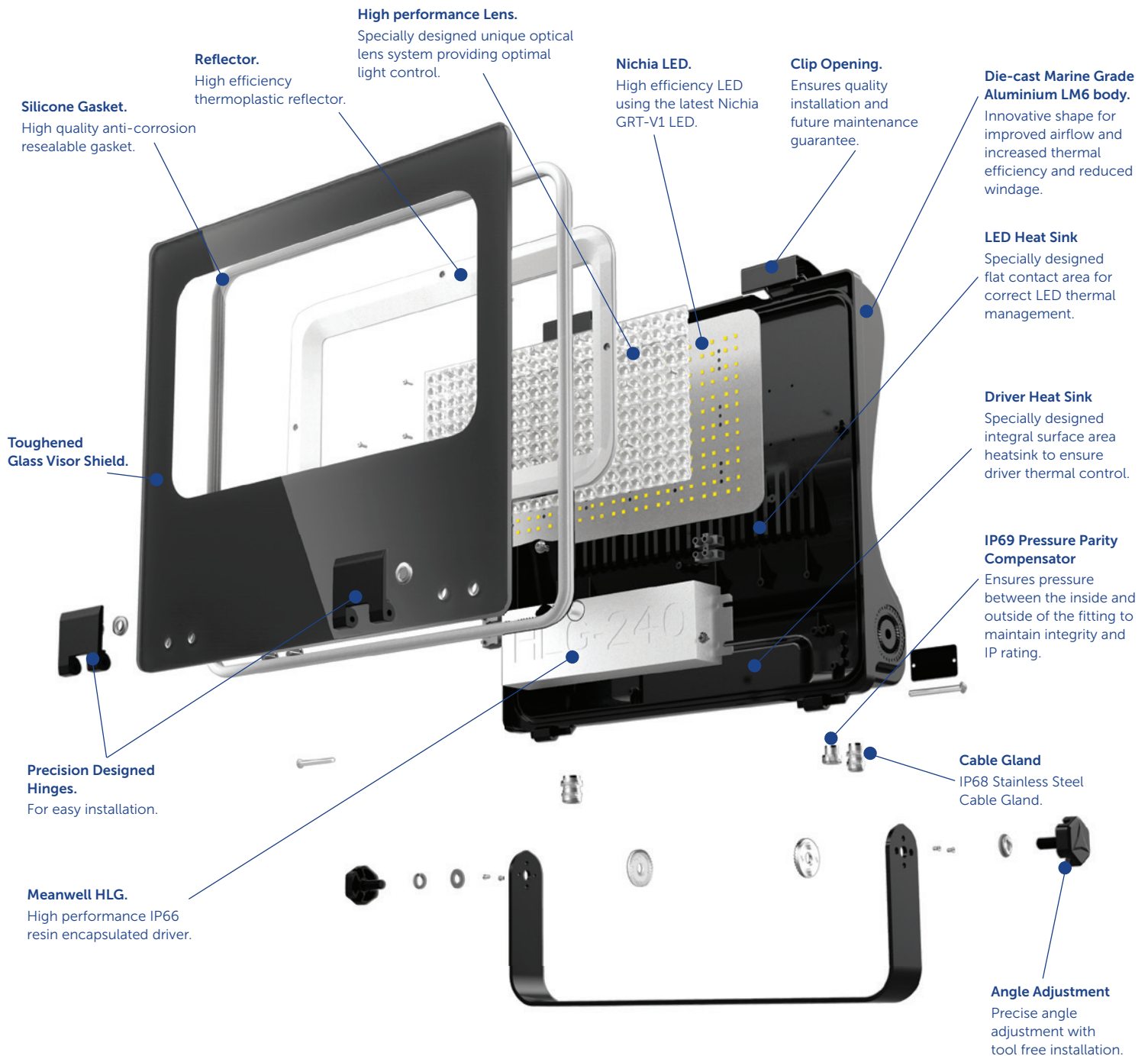
Data	
Construction	Polyester coated die-cast LM6 Marine Grade aluminium & toughened safety glass
Driver	Meanwell  /HLG
LED Chip	Nichia GRT-V1
IP Rating	IP66
Operating Temp	-30°C to +35°C
Input Voltage	100 - 240V
Power Factor	> 0.9
CRI	85 - Exceeds EU standard of Ra 80 for Colour Rendering Index
LMR	80 - Exceeds EU standard of 70 for Lumens Maintenance Ratio
ECA Compliant	Yes
Windage	80W 0.1M <sup>2</sup> / 150W 0.12M <sup>2</sup> / 240W 0.2M <sup>2</sup>
Weight	80W - 4.6Kg / 150W - 6.8Kg / 240W - 8.9Kg



<sup>1</sup> Exceeds EU standard of 70 for Lumens Maintenance Ratio  
<sup>2</sup> Exceeds EU standard of Ra 80 for Colour Rendering Index  
<sup>3</sup> Subject to terms & conditions (Contact Customer Service)  
 \* Asymmetric version



# SkylinePRO Asymmetric/ Symmetric LED Floodlight

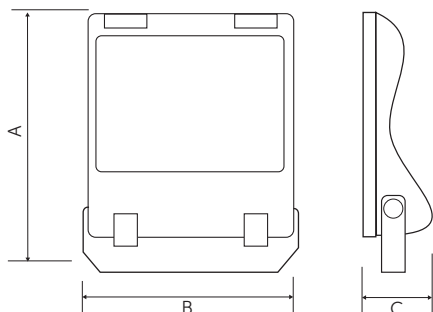


Contact BELL Technical Helpline for advice on compatible columns and correct mounting height.

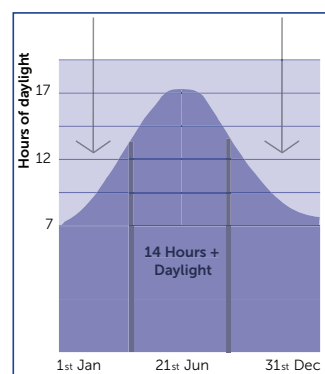


# SkylinePRO Asymmetric/ Symmetric LED Floodlight

Code	V	W	Description	Lm	Temp	lm/W	Peak Intensity	Hours
08850	110-240	80	80W Skyline Pro Symmetric Flood Light IP66	10000	4000	125	1332	50000
08851	110-240	80	80W Skyline Pro Asymmetric Flood Light IP66	10000	4000	125	499	50000
08852	110-240	80	80W Skyline Pro 30° Flood Light IP66	10000	4000	125	2562	50000
08853	110-240	80	80W Skyline Pro 15° Flood Light IP66	10000	4000	125	5006	50000
08854	110-240	150	150W Skyline Pro Symmetric Flood Light IP66	20000	4000	133	1315	50000
08855	110-240	150	150W Skyline Pro Asymmetric Flood Light IP66	20000	4000	133	481	50000
08856	110-240	150	150W Skyline Pro 30° Flood Light IP66	20000	4000	133	2513	50000
08857	110-240	150	150W Skyline Pro 15° Flood Light IP66	20000	4000	133	4800	50000
08858	110-240	240	240W Skyline Pro Symmetric Flood Light IP66	30000	4000	125	1339	50000
08859	110-240	240	240W Skyline Pro Asymmetric Flood Light IP66	30000	4000	125	502	50000
08860	110-240	240	240W Skyline Pro 30° Flood Light IP66	30000	4000	125	1567	50000
08861	110-240	240	240W Skyline Pro 15° Flood Light IP66	30000	4000	125	4587	50000



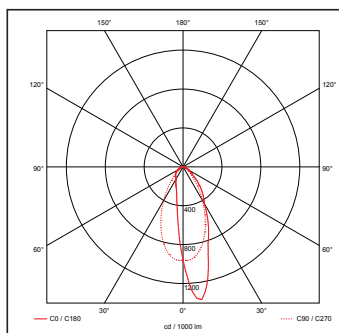
	80W	150W	240W
A (mm)	309	325	418
B (mm)	265	413	452
C (mm)	82	83	87



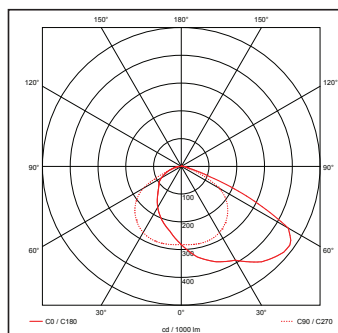
There is the potential for an additional 1000 - 1500 hours of activity every year after installing LED floodlighting at outdoor sporting facilities.

CIBSE Lighting Guide LG4.

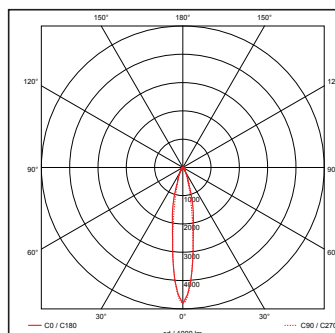
08854 150W Symmetric



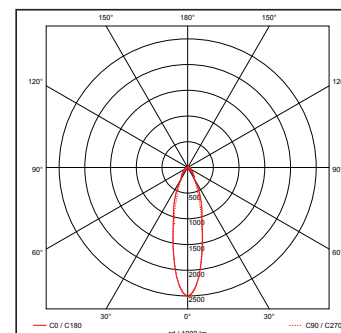
08855 150W Asymmetric



08857 150W 15° Projector



08856 150W 30° Projector



Contact BELL Technical Helpline for advice on compatible columns and correct mounting height.



<sup>1</sup> Exceeds EU standard of 70 for Lumens Maintenance Ratio  
<sup>2</sup> Exceeds EU standard of Ra 80 for Colour Rendering Index  
<sup>3</sup> Subject to terms & conditions (Contact Customer Service)  
 \* Asymmetric version





# Light Pollution

## What is light pollution?

Most of us are familiar with air, water, and land pollution, but did you know that light can also be a pollutant?

The inappropriate or excessive use of artificial light – known as light pollution – can have serious environmental consequences for humans, wildlife, and our climate. Components of light pollution include:

**Glare** – excessive brightness that causes visual discomfort.

**Skyglow** – brightening of the night sky over inhabited areas, also known as upward light ratio (ULR).

**Light trespass** – light falling where it is not intended.

**Clutter** – bright, confusing and excessive light sources.

Light pollution is a side effect of industrial civilization. Its sources include building exterior and interior lighting, advertising, commercial properties, offices, factories, street lights, and illuminated sporting venues.

The fact is that much of the outdoor lighting used at night is inefficient, overly bright, poorly targeted, improperly shielded, and, in many cases, completely unnecessary. This light, and the electricity used to create it, is being wasted by spilling it into the sky, rather than focusing it on to the actual objects.

Modern society requires outdoor lighting for a variety of needs, including safety and commerce. The Institute of

Lighting Engineers recognises this but advocates that any required lighting be used wisely. To minimise the harmful effects of light pollution, lighting should:

**Only be on when needed / Only light the area that needs it/  
Be no brighter than necessary/ Minimise blue light emissions  
Be fully shielded (pointing downward)**

The transition from sodium to LED exterior lighting over recent years appears to have made global light pollution worse not better, scientists have reported.

The findings are certain to increase the pressure on the lighting industry to take light pollution seriously and improve the optics and upward light control.

**BELL LED Asymmetric Floodlights minimise light pollution.**

Skyline Pro Asymmetric floodlights have been designed and developed to meet the strict requirements for a range of sports and area lighting applications.

Specifically designed to control obtrusive light, a precision lensing system ensures a tight beam pattern, reducing overspill upwards light and directing light only where it is needed.

BELL lighting is constantly striving towards reducing light skyglow (ULR), and the Skyline Pro Floodlight is at the forefront of this pollution reducing technology.

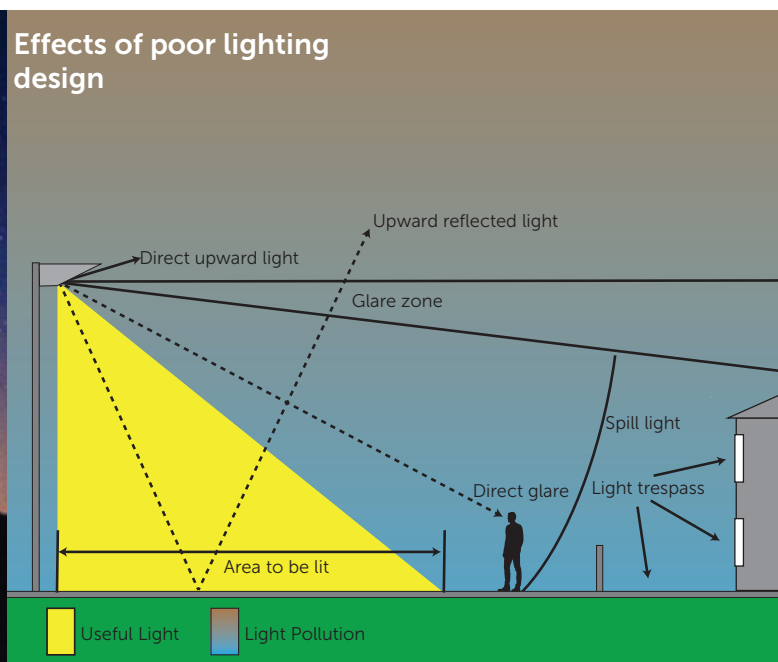
**Night sky with Light Pollution**



**Without Light Pollution**



**Effects of poor lighting design**



# Tennis Court Lighting

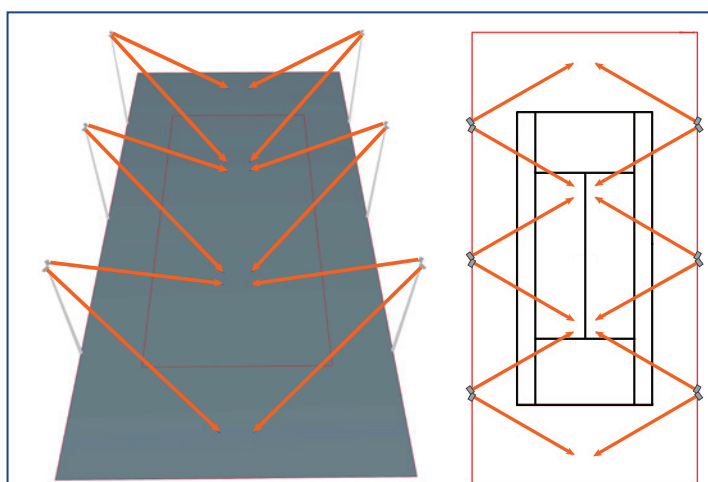
## Benefits of lighting for tennis clubs

As with many other outdoor sports, lighting gives the opportunity to play tennis for an increased amount of time throughout the year and encourage and support participation, coaching and development for all levels of play.


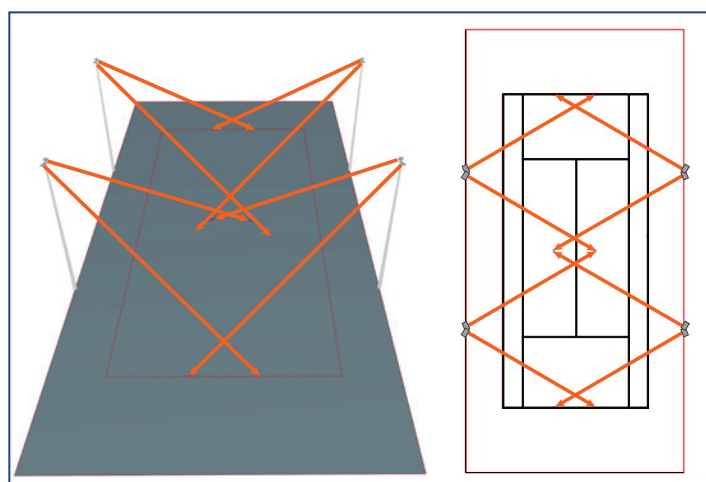
Taking bad weather into account, an all-weather court in England is available for about 2,500 hours of daylight playing time per year. Clubs with lighting have an enormous advantage over those without lighting, attracting

coaches, more players, extending playing times and gaining increased revenue from court fees during the winter months.


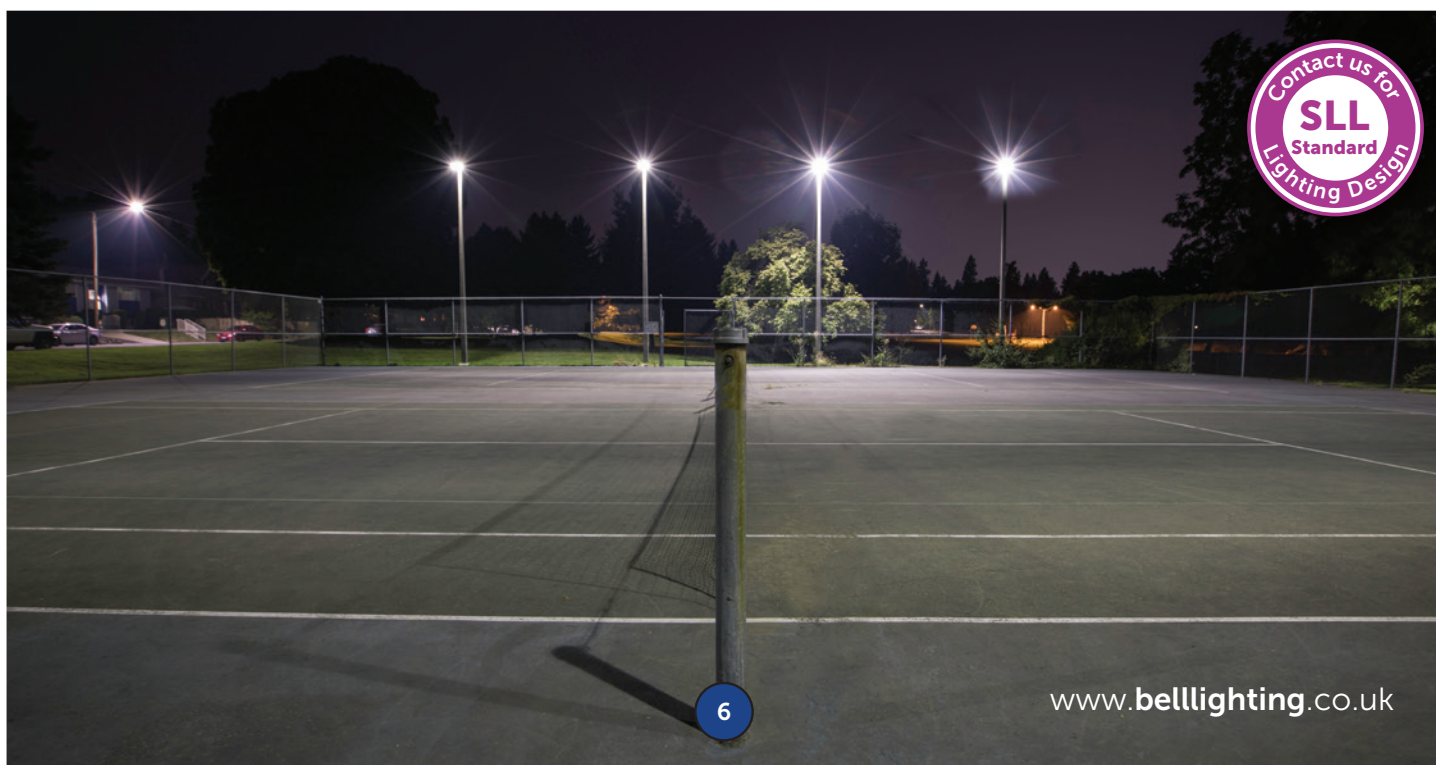
These same benefits will also be available to floodlit tennis court providers in all other sectors e.g. schools, colleges and Local Authority sports centres. The problem is that, of the estimated 30,000 courts available to tennis players in Great Britain, less than 1.5% are floodlit.



**LTA Class 2 Scheme, 8M Column**  
**Fittings:** 12 x 240W Skyline Pro Floodlights  
**Details:**  
 PPA 300 Lux - 0.8 / TPA 250 Lux / ULR - 0%

**LTA Class 3 Scheme, 8M Column**  
**Fittings:** 8 x 240W Skyline Pro Floodlights  
**Details:**  
 PPA 257 Lux - 0.6 / TPA 205 Lux / ULR - 0%





# Football Lighting

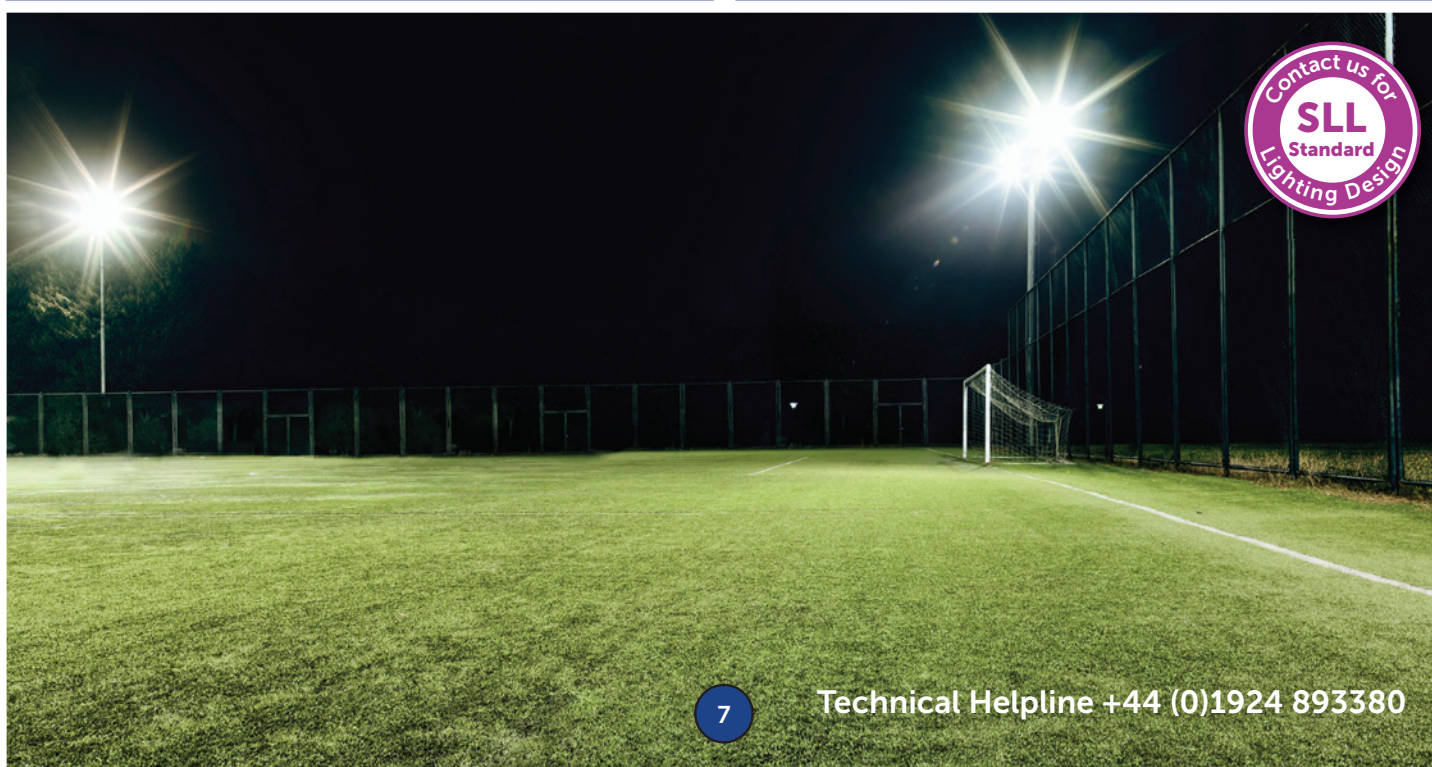
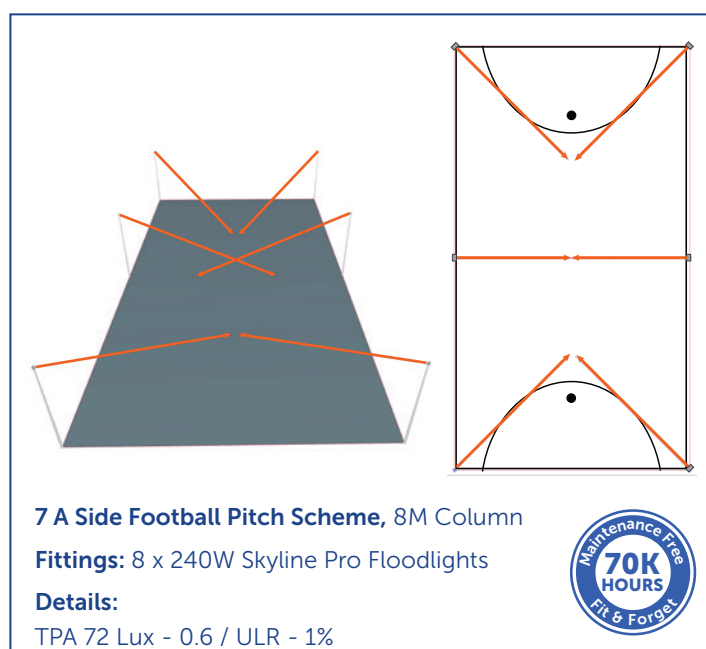
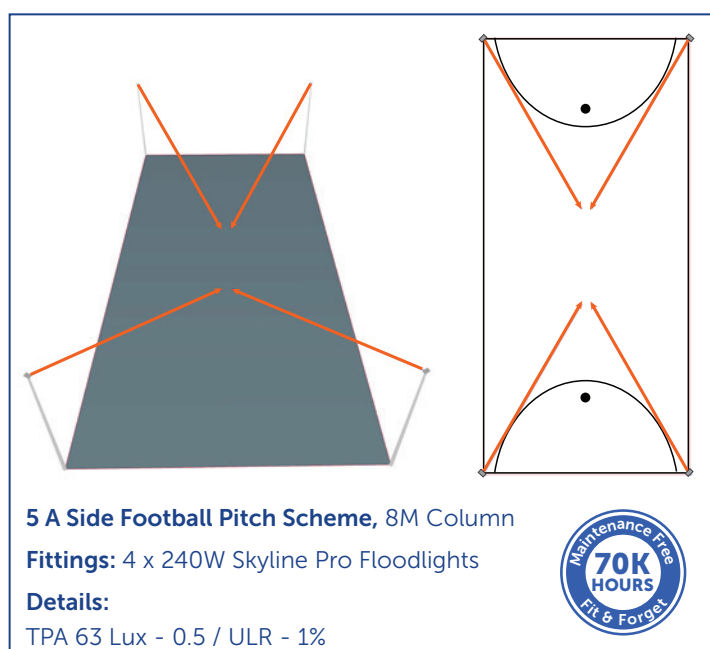
## Benefits of LED lighting for football

Outdoor sports lighting provides a great way of extending the use and the overall value of outdoor football venues. In the summer period, England enjoys long hours of daylight that give the opportunity to take part in football during the long summer evenings.

In contrast, the winter daylight can be as short as 7 hours a day and can restrict opportunities for football to short periods during the weekends.

In numerical terms, outdoor sports lighting can extend the playing hours by some 1000-1500 additional hours per annum and this can allow people to train or play in the evening all year round, increasing your revenue stream.

Typical use after the installation of floodlights can include: playing, training and coaching sessions for all adult and junior teams during the dark autumn/winter evenings.



# Outdoor Bowls Lighting

## Benefits of LED lighting for outdoor bowls

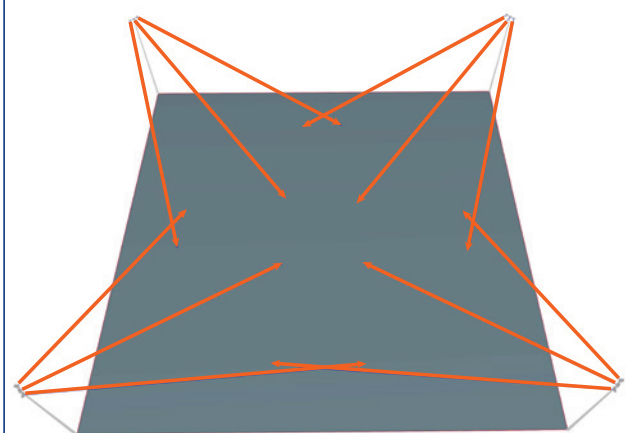
Artificial lighting at outdoor bowls centres can fundamentally affect the enjoyment and quality of play. As well as being critical during a game, the quality of the lighting can have a major impact on the overall ambience.

Artificial lighting must be considered as an integral element of the overall design and planning of all areas. The colours and types of surface must be carefully selected in conjunction with the lighting scheme to achieve the optimum overall

visual quality, and to provide an attractive environment.

Visual requirements are for players to clearly see the jack and the locations of the woods around it together with being able to follow the run of the live wood from the far end of the rink.

Because of the large playing area, the uniformity of the brightness of the green is very important. The material of the green itself may influence the apparent uniformity.

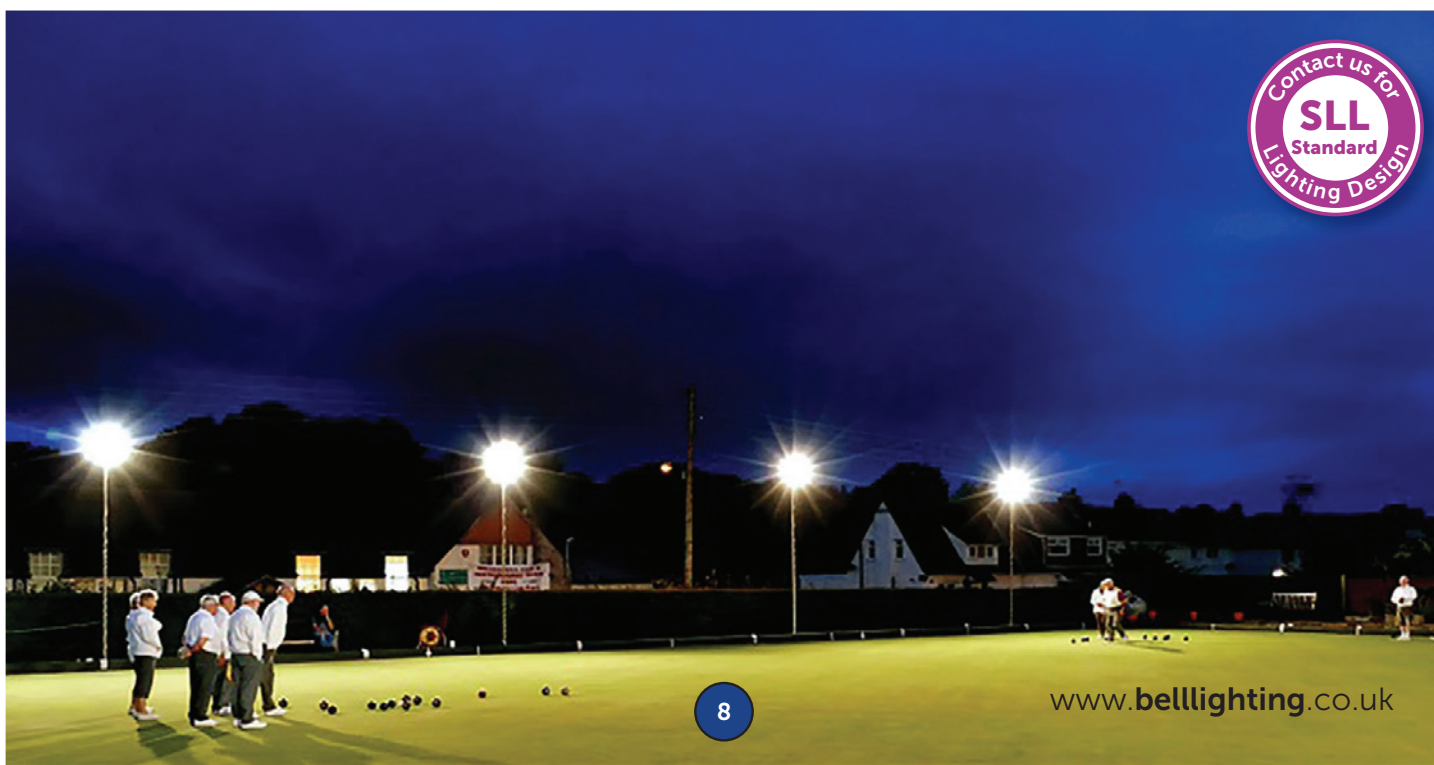
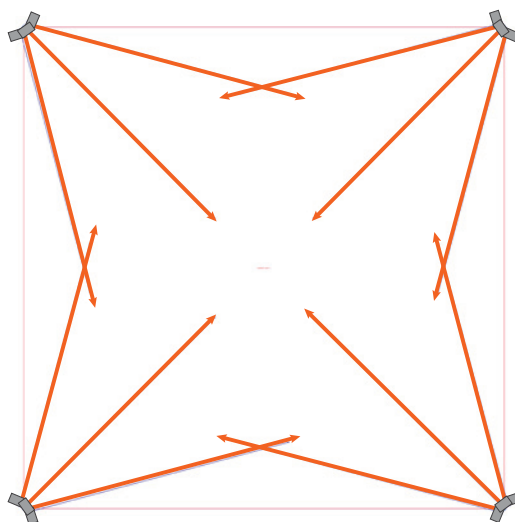


**Outdoor Bowls Class 3 Scheme, 10M Column**

**Fittings:** 12 x 240W Skyline Pro Floodlights

**Details:**

TPA 90 Lux - 0.6 / ULR - 1%







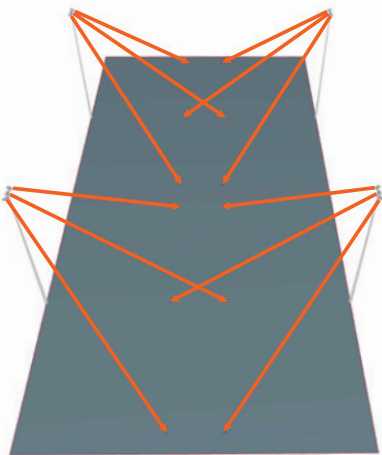
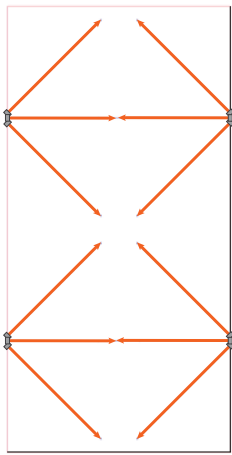
# Equestrian Arena Lighting

## Benefits of LED lighting for equestrian


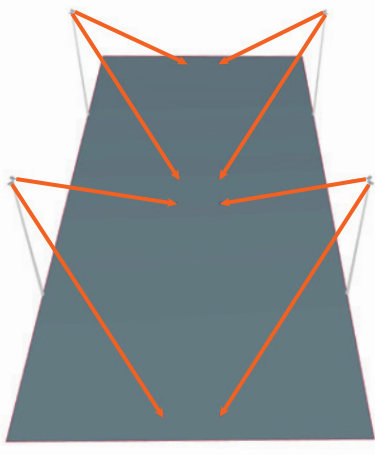
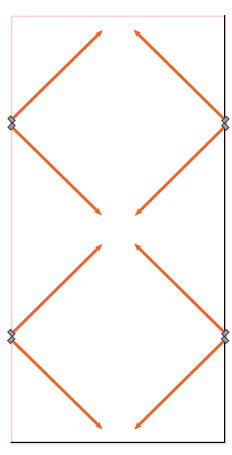
Equestrian Manège require a minimum average light level of 100 lux with a uniformity of 0.5 for flat work and jumping. Shadows should be minimized as these may distract the horses.

It is important that a good uniformity is achieved with minimal shadows around any show jumping fences. A good general uniformity is vital as poor lighting may distract the horses.


BELL Skyline Pro Floodlights are highly efficient units, offering higher colour rendering resulting in a crisper and cleaner light. This aids vision considerably as humans, horses and other animals do not see well under low colour temperature lighting. With 70,000 hours life once BELL Skyline Pro Floodlights are installed they will not need any maintenance for years.

**Equestrian Area Class 2 Scheme, 10M Column**  
**Fittings:** 12 x 240W Skyline Pro Floodlights  
**Details:**  
 Total Area 208 Lux - 0.5 / ULR - 0%

**Equestrian Area Class 3 Scheme, 10M Column**  
**Fittings:** 8 x 240W Skyline Pro Floodlights  
**Details:**  
 Total Area 135 Lux - 0.5 / ULR - 0%






# Car Park Lighting

## Benefits of LED lighting for car parks

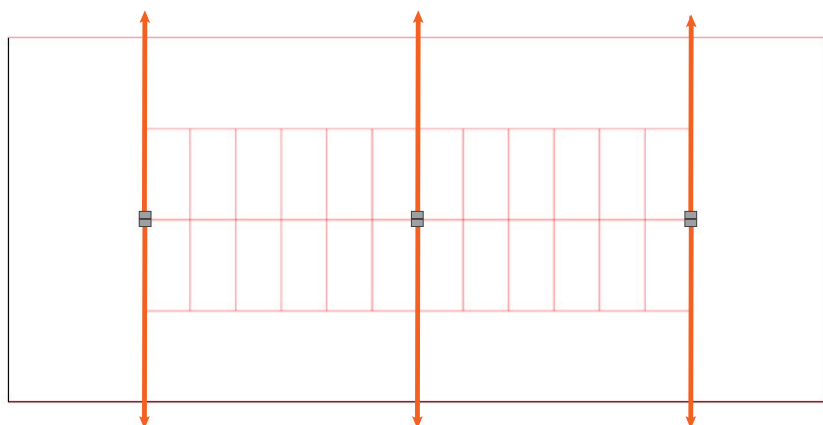
Correct car park lighting contributes to greater safety for all users. Signs, vehicles and people are more easily seen when BELL Skyline Pro Floodlights are installed. The risk of accidents is greatly reduced and an enhanced sense of comfort and personal security is achieved.

Studies have shown that there is almost certainly a correlation between lighting levels & people's fear of crime as indeed there is between lighting levels & actual criminal activity.

Good lighting therefore plays a pivotal role in such areas in that it reduces people's fear of crime & reduces actual crime.

High colour rendering also helps with vehicle identification, assists with general security & safety measures.

Our lighting design service ensures correct light levels and uniformity are achieved in compliance with current regulations.

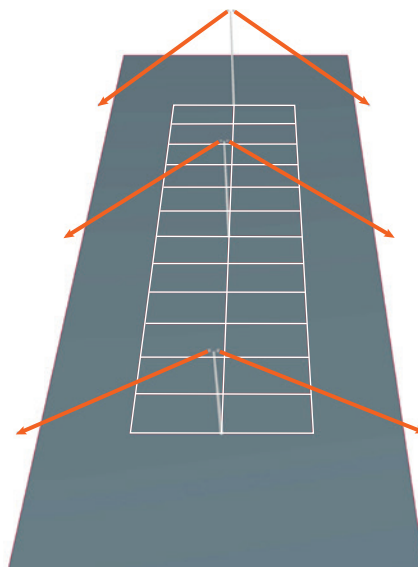


**Car Park Scheme, 8M Column**

**Fittings:** 6 x 80W Skyline Pro Floodlights

**Details:**

Total Area 36 Lux - 0.3 / ULR - 0%







# Loading Bay Lighting

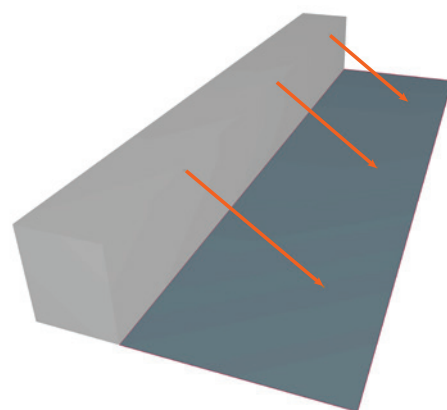
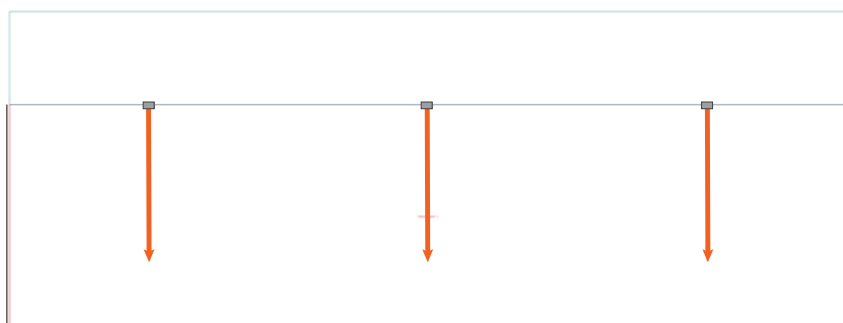
## Benefits of LED lighting for loading bays

Loading bays present a number of significant risks which require careful management. Differing specifications for bays and vehicles, visiting drivers and the lack of direct communication between drivers and warehouse staff all contribute to potential problems.

Lighting at loading bays is very important to the health and safety of everyone using the workplace. The quicker and easier it is to see a hazard, the more easily it is avoided.

BELL Skyline Pro Floodlights will illuminate your loading bay to the correct levels, without distracting glare, creating a safe working environment for employees and visitors

Our lighting design service ensures correct light levels and uniformity are achieved in compliance with current regulations.



**Loading Bay Scheme, 6M Mounting Height**

**Fittings:** 3 x 80W Skyline Pro Floodlights

**Details:**

Total Area 53 Lux - 0.2 / ULR - 0%







**Distributed by**



**ACCREDITED  
SUPPLIER**



Certificate Number 12255  
ISO 9001: 2015



©2018 British Electric Lamps Ltd. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher and copyright holder.

EbOE. As it is our policy to continually update our products with the latest in technological advances, the information and images contained in this catalogue are subject to change without notice. All measurements stated are approximate to within production tolerances of +/-5mm.

[www.belllighting.co.uk](http://www.belllighting.co.uk)