



## LED lighting for **sports facilities**



# SPORTS LIGHTING REGULATIONS

# EN 12193

European Standard EN 12193 is a standard set by the European Committee for Standardisation. Its aim is to ensure high quality sports lighting by setting recommendations and requirements for all sports disciplines.

## FOR EACH TYPE OF COMPETITION STANDARD EN 12193 SPECIFIES:

### MINIMUM ILLUMINATION LEVEL (E) IN LUX [LX]:

The aim is to achieve an optimum average illumination level and maximise visual perception.

### MINIMUM LEVEL OF LIGHT UNIFORMITY (U<sub>0</sub>):

The aim is to provide uniform lighting in a defined area and to maximise visual comfort.

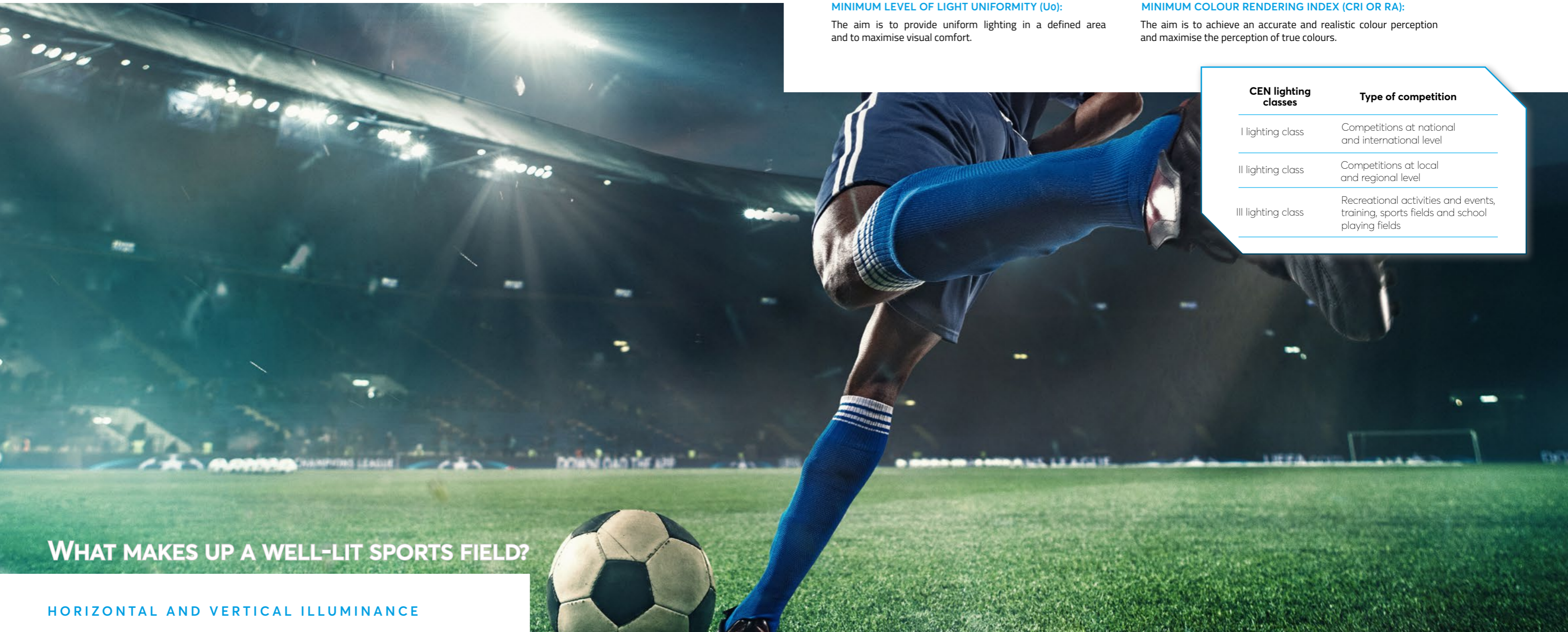
### MAXIMUM LEVEL OF GLARE (GR OR RG):

The aim is to minimise the discomfort caused by glare and reduce glare to improve overall visual perception.

### MINIMUM COLOUR RENDERING INDEX (CRI OR RA):

The aim is to achieve an accurate and realistic colour perception and maximise the perception of true colours.

CEN lighting classes	Type of competition
I lighting class	Competitions at national and international level
II lighting class	Competitions at local and regional level
III lighting class	Recreational activities and events, training, sports fields and school playing fields



## WHAT MAKES UP A WELL-LIT SPORTS FIELD?

### HORIZONTAL AND VERTICAL ILLUMINANCE

What makes up a well-lit sports field? The horizontal illuminance (E<sub>h</sub>) main function is to create a stable background, enabling the human eye to identify individual people and objects on the pitch. For the facilities that are not intended for television broadcasting, an average horizontal illuminance should be between 50 and 100 lux and even up to 750 lux, depending on sport discipline and lighting class.

In television broadcasting, more important than horizontal illuminance is vertical illuminance (E<sub>v</sub>). The sportsman and the ball used during the event can be seen as vertical surfaces. This means that when illuminating these objects the primary focus should be on vertical illumination

(E<sub>v</sub>). To ensure optimal visibility and allow players to be identified from all sides, E<sub>v</sub> should be measured 1.5 metres above the pitch surface, which corresponds to the approximate height of the players' faces.

Vertical lighting has a significant impact on the quality of the TV and film image, hence the required average illuminance E<sub>v</sub> for broadcasting is typically between 1,000 and 2,000 lux.

In order to maintain a balanced brightness of the television picture, the ratio of the average illumination level in the vertical and horizontal planes should be as close as possible, not exceeding a value of 0.5-2. The horizontal illuminance should not be less than half that of the vertical

illuminance, nor more than twice its value. For sports for which vertical lighting criteria are not specified, it is sufficient to meet the horizontal illuminance requirements while complying with the rules of the art of lighting system design.

### UNIFORMITY OF LIGHTING

Ensuring uniformity of lighting is essential to avoid problems with players' and spectators' eye adaptation to the environment. Where there is no insufficient uniformity, certain objects or details may be difficult to see.

The uniformity of lighting in the horizontal plane is usually in the range of 0.5 to 0.7 (E<sub>min</sub>/E<sub>av</sub>), depending on the sport and lighting class. For televised events, the ratio should reach 0.8 for horizontal illuminance and 0.7 for vertical illuminance (E<sub>min</sub>/E<sub>av</sub>) towards fixed cameras.

### GLARE REDUCTION

In the context of sports applications, the GR value should not exceed 50.

### COLOUR RENDERING

Colour perception plays a key role in most sports. Although some colour distortion is acceptable for non-transmitted events, television requires accurate colour reproduction. The European Broadcasting Union has developed the Television Lighting Consistency Index (TLCI), assuming a value of >80 for proper colour representation. However, for non-broadcast events, the EN12193 standard suggests that CRI values of 70 or even 60 are sufficient.

The colour temperature of sports lighting should be in the range 4000-6500K.



# EN 12193

SPECIFIES MIN. AND MAX.

# STANDARD

LIGHT LEVELS

## SELECT LUMINAIRES ACCORDING TO THE REQUIREMENTS OF THE FACILITY

A properly designed lighting system should not only meet visual requirements but also provide greater comfort for players and spectators while delivering additional excitement. The starting point for the selection of lighting at a venue is the technical requirements, which vary depending on the rank of the event being organised. Different regulations apply to training or mass events, while others apply to competitions at international, national, regional or local level. The size of the facility and the distance from which spectators watch the match also influence the decision.

When organising national or international games, it is important to ensure lighting parameters suitable for television broadcasts. High illuminance, uniformity of lighting, flicker control, colour rendering or minimisation of glare are all elements that have a significant impact on the quality of the image transmitted to viewers via television.

The lighting of football pitches plays a key role not only in ensuring visibility during games, but also in shaping the prestige of the sports facility. The solutions we offer are tailored

made, taking into account the sport discipline, location of the facility (indoor vs. outdoor), as well as expectations regarding its operation and the technical-installation requirements of the contractor.

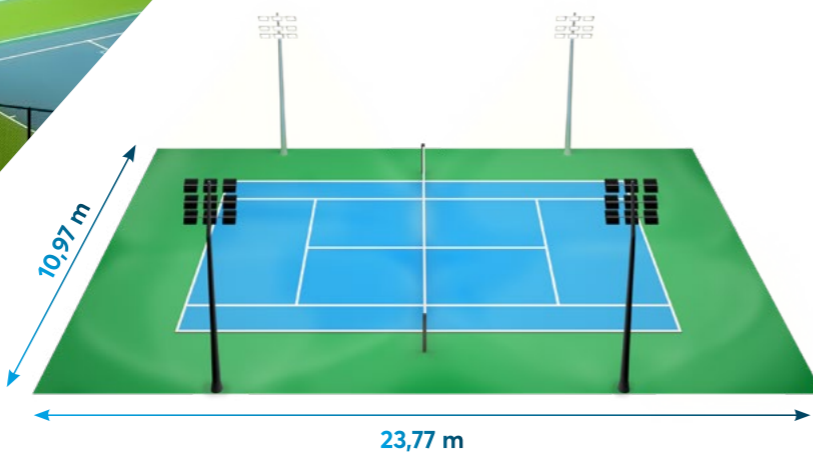
Below and on the following pages, we present the requirements of the EN 12193 standard for the most popular sports disciplines.

The height of the masts affects the uniformity of the lighting, the elimination of shadows, the reduction of glare and the overall quality of the lighting, which is crucial for the comfort of players and spectators.

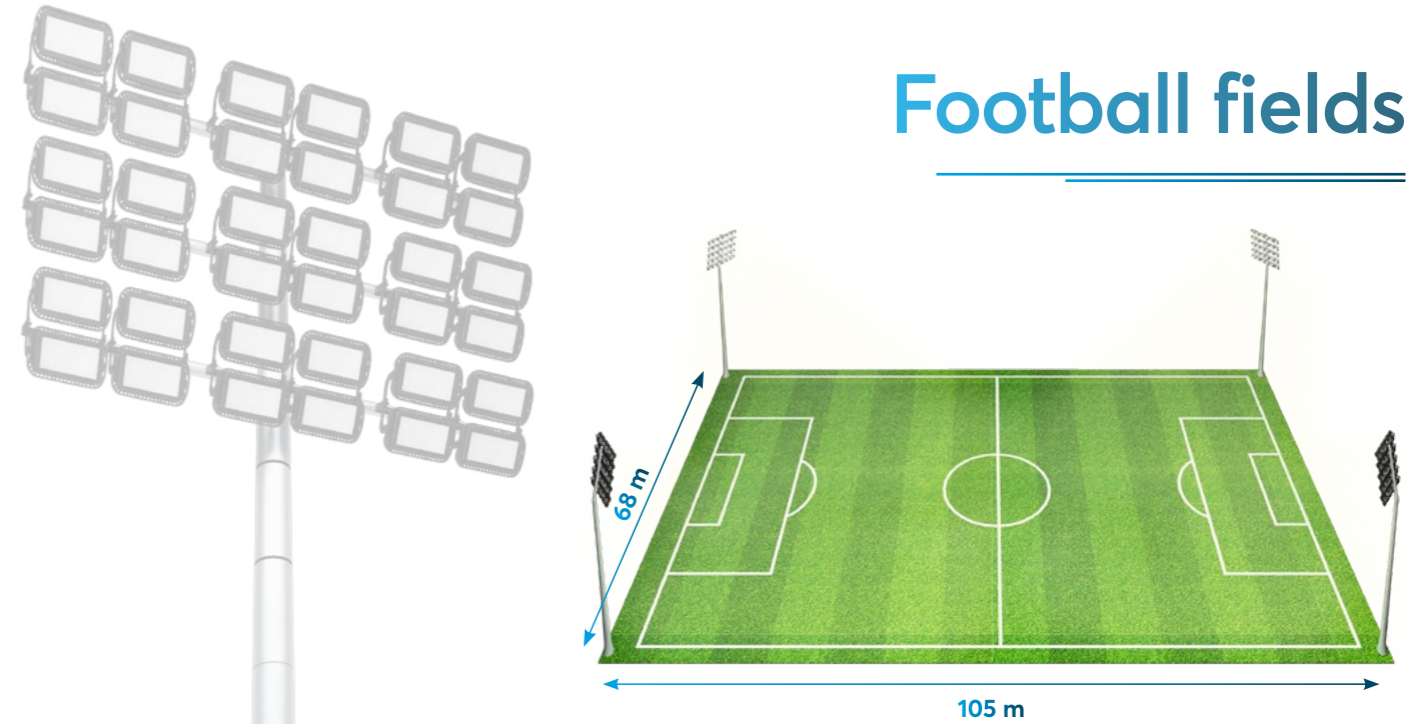
## Outdoor courts

sport facility	recommended mast height
football field	12-30 m
tennis court	8-16 m

CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 500 lux	≥ 0,7	70	50
II lighting class	≥ 300 lux	≥ 0,7	60	50
III lighting class	≥ 200 lux	≥ 0,6	60	55



## Football fields



CEN lighting classes	Type of competition	Illuminance	Uniformity	CRI	GR
FIFA	Matches played as part of tournaments organized by FIFA	≥ 1500-2000 lux	≥ 0,7	80	50
I lighting class	Competitions at national and international level	≥ 500 lux	≥ 0,7	70	55
II lighting class	Competitions at local and regional level	≥ 200 lux	≥ 0,6	60	55
III lighting class	Recreational activities and events, training, sports fields and school playing fields	≥ 75 lux	≥ 0,5	60	55

Football field, Wadowice, Poland



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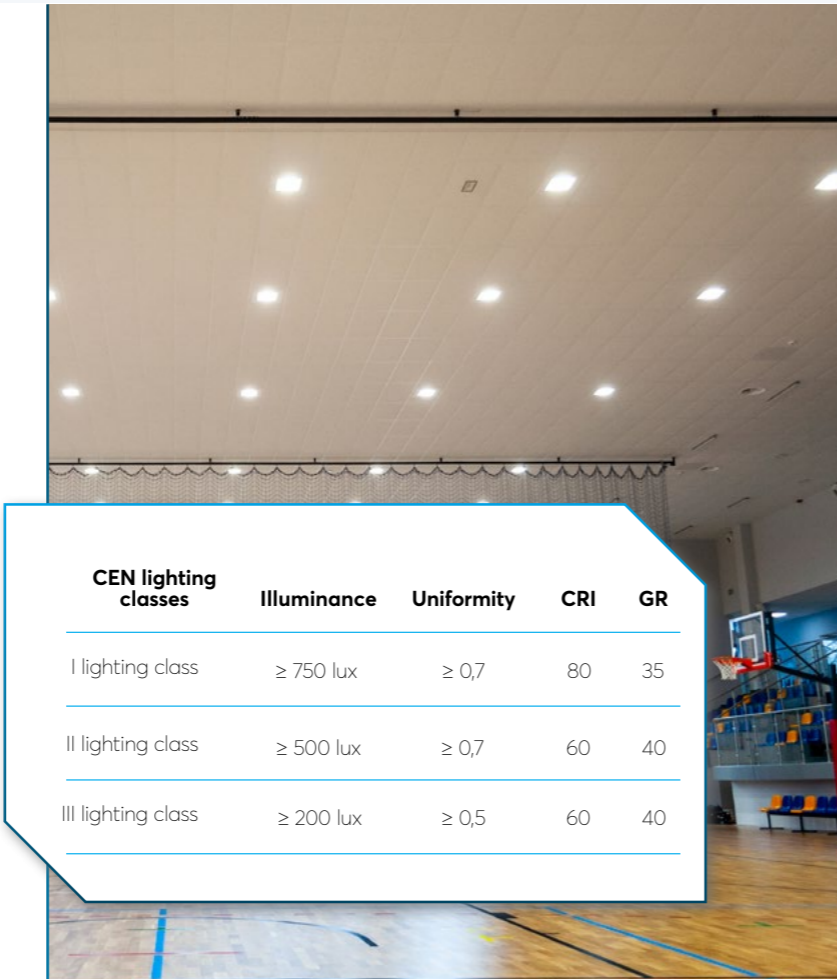
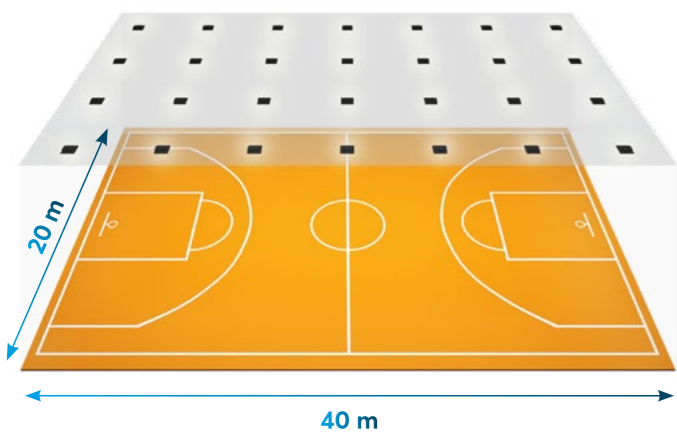
# EN 12193

SPECIFIES MIN. AND MAX.

# STANDARD

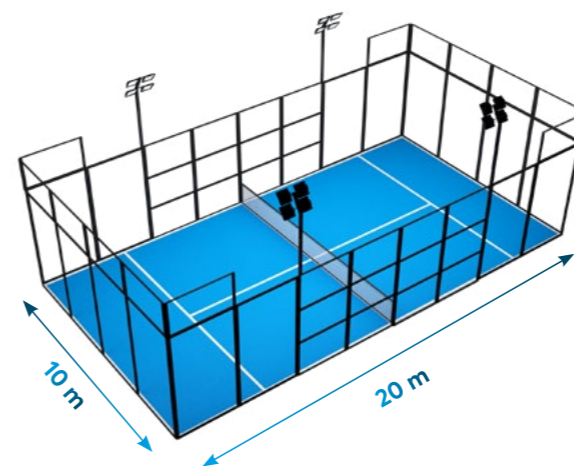
LIGHT LEVELS

## Multi-sport halls



CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 750 lux	≥ 0,7	80	35
II lighting class	≥ 500 lux	≥ 0,7	60	40
III lighting class	≥ 200 lux	≥ 0,5	60	40

## Padel courts



CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 750 lux	≥ 0,7	80	35
II lighting class	≥ 500 lux	≥ 0,7	60	40
III lighting class	≥ 300 lux	≥ 0,5	60	40

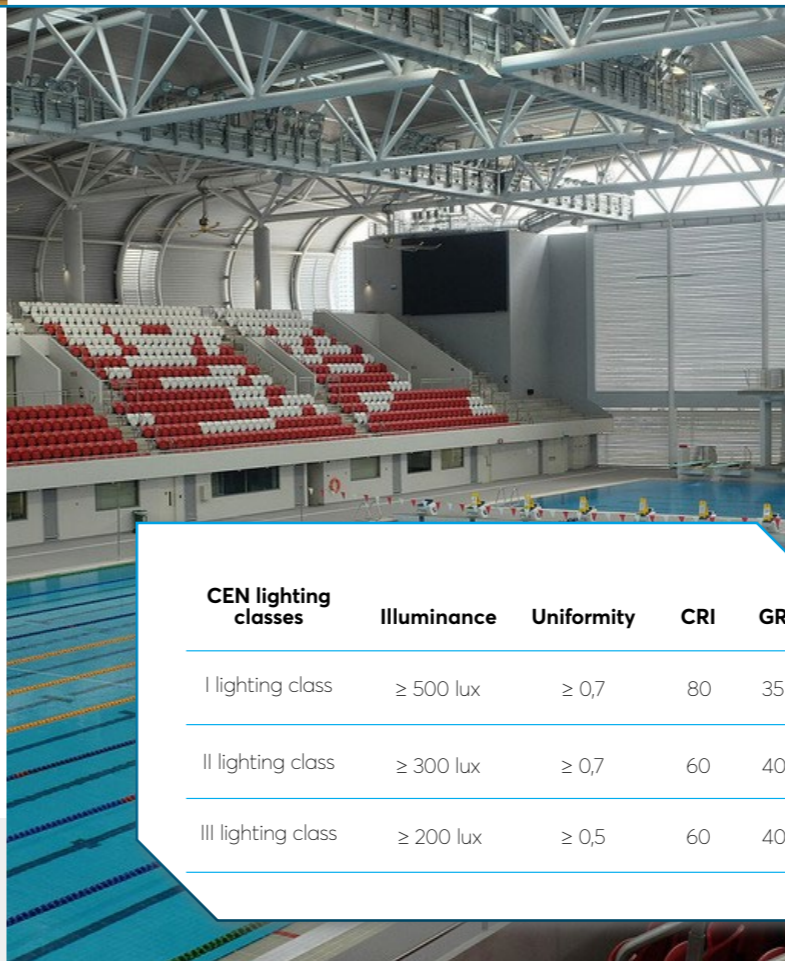
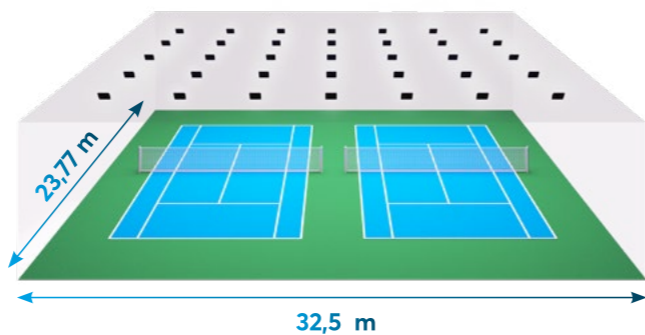
indoor



CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 500 lux	≥ 0,7	70	35
II lighting class	≥ 300 lux	≥ 0,7	60	40
III lighting class	≥ 200 lux	≥ 0,6	60	40

outdoor

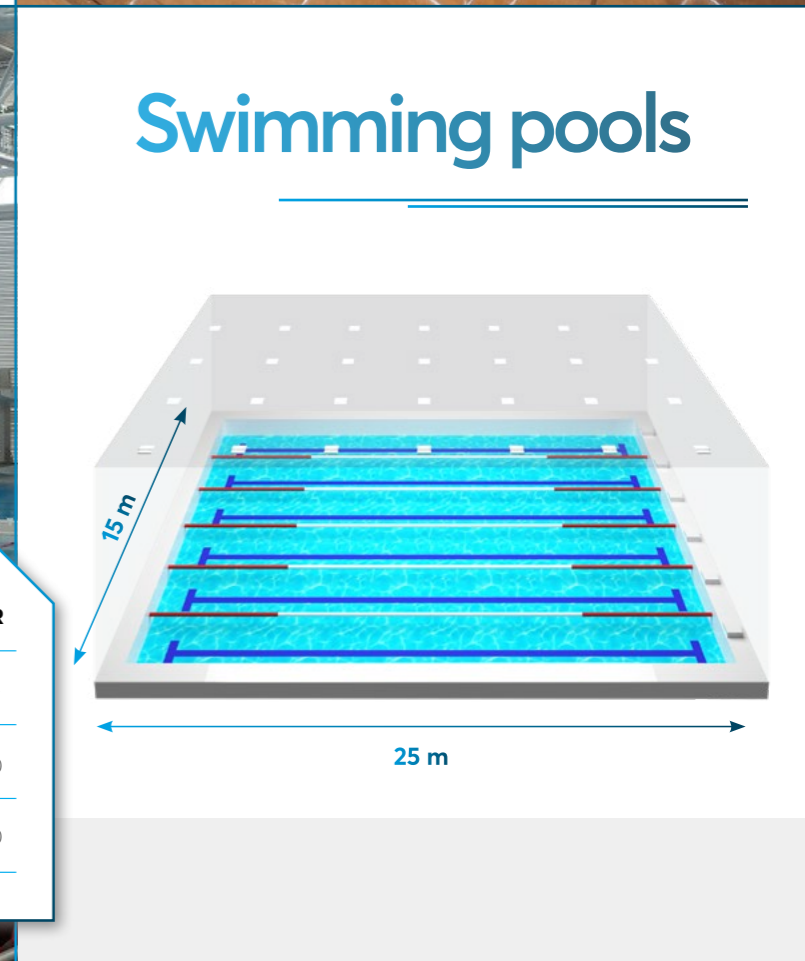
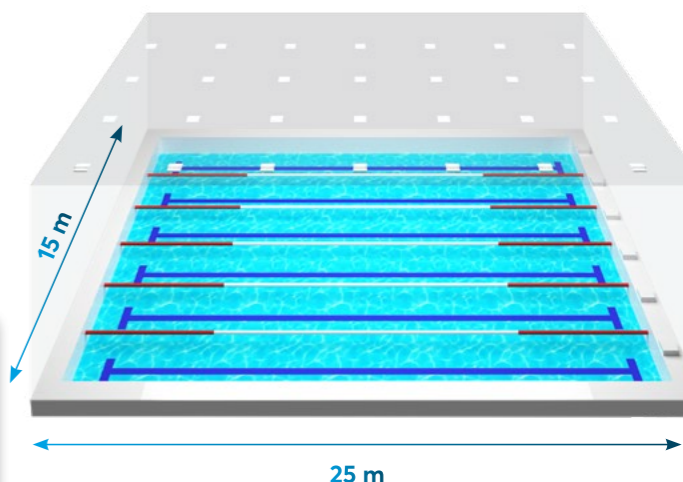
## Indoor courts



CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 750 lux	≥ 0,7	80	35
II lighting class	≥ 500 lux	≥ 0,7	60	40
III lighting class	≥ 200 lux	≥ 0,5	60	40

CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 500 lux	≥ 0,7	80	35
II lighting class	≥ 300 lux	≥ 0,7	60	40
III lighting class	≥ 200 lux	≥ 0,5	60	40

## Swimming pools



CEN lighting classes	Illuminance	Uniformity	CRI	GR
I lighting class	≥ 500 lux	≥ 0,7	80	35
II lighting class	≥ 300 lux	≥ 0,7	60	40
III lighting class	≥ 200 lux	≥ 0,5	60	40

# SQUARE LED HIGH BAY



Scan QR code for full product details, photos and downloads.

HIGH BAY LED FITTING WITH GREAT PARAMETERS AND VERSATILE APPLICATION



The main advantages of the SQUARE LED HIGH BAY luminaire are its versatility and flexibility of use. It can be used both indoors and outdoors and can be mounted in a variety of ways - suspended on wires, mounted on a bracket, built into ceiling panels. Equipped with a tempered glass pane with a silicone seal, the luminaire effectively protects the light source from dirt. Due to its high efficiency (up to 165 lm/W) and high ingress protection class (IP67), it is suitable as a floodlight for the illumination of various sports facilities, including sports halls, arenas, sports fields, tennis courts, swimming pools and ice rinks. The large selection of wattages and optics allows the lighting to be perfectly matched to the customer's needs. The luminaire is impact-resistant, making it extremely durable and perfect for areas where there is a risk of mechanical damage, such as from ball strikes.

## Key advantages:

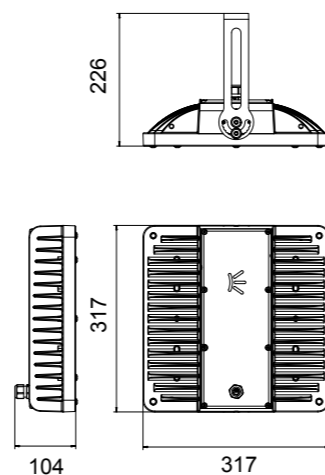
- luminaire efficacy 165 lm/W
- lifetime up to 100,000 h (L80B10)
- equipped with tempered glass panel
- wide range of power and beam angles
- easy mounting and adjustment
- versatile use
- possibility of mounting in ceiling panels
- can be adapted to any control system
- modern design and solid workmanship (IP66, IK09)
- made in Poland

## Application:

The luminaire can be used in all outdoor and indoor sports facilities including:

- multi-sport halls
- swimming pools
- ice rinks
- equestrian arenas
- tennis courts
- school playing fields

## Dimensions [mm]



## Optional: asymmetrical optics

Thanks to the use of asymmetrical optics, the light is precisely directed onto the selected surface (e.g., field, courts), eliminating dispersion upwards.

## Control system

The luminaire can be equipped with a wireless intelligent control system.

## Optional: protective grid

An additional steel grid serves a protective function, protecting the frame from potential mechanical damage such as ball strikes.



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## Heavy-duty construction

Our luminaires are created from high-pressure aluminium castings, making them highly durable.

## Effective heat dissipation

Ribbed structure construction of the luminaire ensures its exceptional thermal performance even at 40°C.



## Optional: custom-made masking panel

A custom-made masking panel enables installation in sound-absorbing suspended ceilings (Ecophon type).



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## Technical data

Light source	LED
Power consumption	50 - 150 W
Luminaire luminous flux	6 600 - 24 700 lm
Luminaire efficacy	131 - 165 lm/W
Colour temperature	4 000 K, 5 700 K
Colour rendering index (CRI)	70, 80
Lumen maintenance output	100 000 h (L80B10)
Operating temperature	-40°C do +40°C
Beam angles	55°, 94°, 37°/103°
Material	high-pressure die-cast aluminium
Finish	powder coating
Colour	anthracite; other colours on request
Optics	PMMA
Glass	tempered glass
Ingress protection rating	IP66/IP67
Impact protection rating	IK09
Weight	7 kg
Voltage	230 V
Frequency	50 Hz
Warranty	5 years
Control systems	optional

## Family

INDEX NO	NAME	POWER	LUMINAIRE LUMINOUS FLUX	LUMINAIRE EFFICACY	RA/CRI
S200500401XXXXAKEA1	SQUARE HB 50 W, 40 LED, CRI 70	50 W	7 100 lm	142 lm/W	70
S200700401XXXXAKEA1	SQUARE HB 70 W, 40 LED, CRI 70	70 W	10 000 lm	143 lm/W	70
S200900401XXXXAKEA1	SQUARE HB 90 W, 40 LED, CRI 70	90 W	12 800 lm	142 lm/W	70
S200900601XXXXAKEA1	SQUARE HB 90 W, 60 LED, CRI 70	90 W	14 400 lm	160 lm/W	70
S201001001XXXXAKEA1	SQUARE HB 100 W, 100 LED, CRI 70	100 W	16 500 lm	165 lm/W	70
S201100601XXXXAKEA1	SQUARE HB 110 W, 60 LED, CRI 70	110 W	17 600 lm	160 lm/W	70
S201300601XXXXAKEA1	SQUARE HB 130 W, 60 LED, CRI 70	130 W	20 800 lm	160 lm/W	70
S201301001XXXXAKEA1	SQUARE HB 130 W, 100 LED, CRI 70	130 W	21 400 lm	165 lm/W	70
S201501001XXXXAKEA1	SQUARE HB 150 W, 100 LED, CRI 70	150 W	24 700 lm	165 lm/W	70
S200500402XXXXAKEA1	SQUARE HB 50 W, 40 LED, CRI 80	50 W	6 600 lm	132 lm/W	80
S200700402XXXXAKEA1	SQUARE HB 70 W, 40 LED, CRI 80	70 W	9 200 lm	131 lm/W	80
S200900402XXXXAKEA1	SQUARE HB 90 W, 40 LED, CRI 80	90 W	11 800 lm	131 lm/W	80
S200900602XXXXAKEA1	SQUARE HB 90 W, 60 LED, CRI 80	90 W	13 300 lm	148 lm/W	80
S201001002XXXXAKEA1	SQUARE HB 100 W, 100 LED, CRI 80	100 W	15 400 lm	154 lm/W	80
S201100602XXXXAKEA1	SQUARE HB 110 W, 60 LED, CRI 80	110 W	16 200 lm	147 lm/W	80
S201300602XXXXAKEA1	SQUARE HB 130 W, 60 LED, CRI 80	130 W	19 200 lm	148 lm/W	80
S201301002XXXXAKEA1	SQUARE HB 130 W, 100 LED, CRI 80	130 W	20 000 lm	154 lm/W	80
S201501002XXXXAKEA1	SQUARE HB 150 W, 100 LED, CRI 80	150 W	23 100 lm	154 lm/W	80

When ordering, please specify the desired beam angle curve and colour temperature.

Luminous flux tolerance +/- 10%. Power consumption tolerance depends on the power level - less than 100 W or equal to 100 W power consumption tolerance is 5%, over 100 W - 2.5%. The luminous flux, light intensity distribution and light efficiency were tested according to PN-EN 13032-4: 2015-09 and PN-EN 60598-1: 2015-04 at an ambient temperature of 25°C. Accessories for installation are quoted separately by the manufacturer.

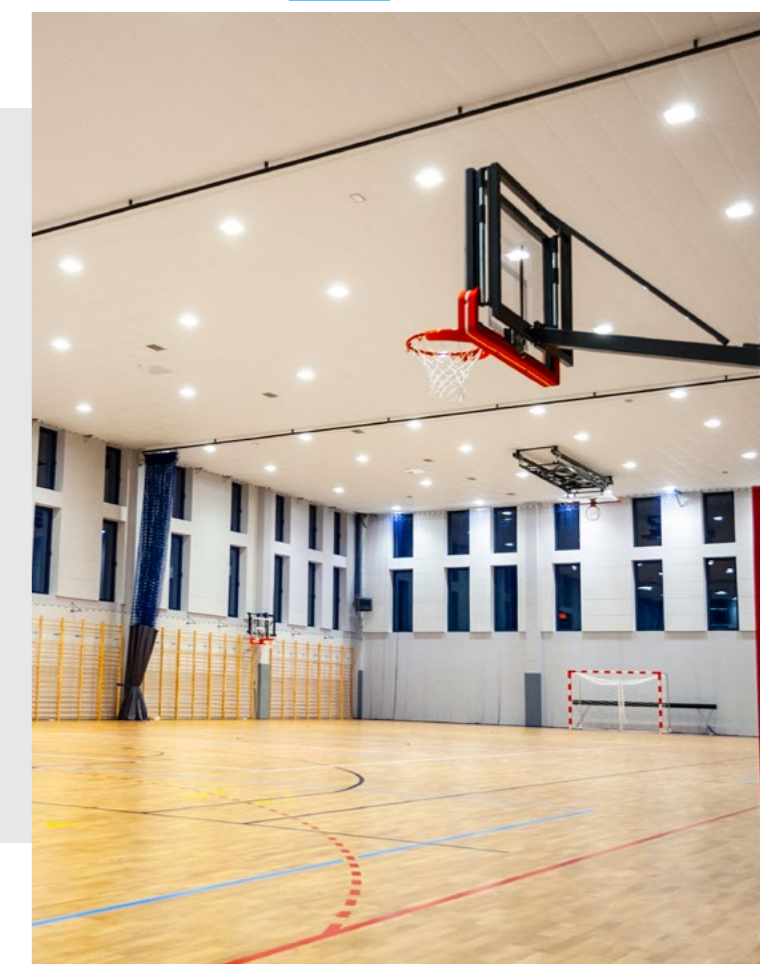
## Lighting for indoor sports facilities

Following the lighting standards set by EN 12193 is the starting point when selecting a luminaire. In order to achieve a perfect fit, it is also worth paying attention to additional parameters such as:

**Resistance to mechanical damage:** High IK-rated (09) luminaires are a natural choice for sports facilities where there is a risk of impact from balls. We also offer additional protection in the form of a steel protective grid specially designed for SQUARE and BEETLE LED HIGH BAY luminaires.

**Control system:** Innovative technology makes it possible to adjust the intensity of lighting in a sports facility on an individual basis, ensuring optimum conditions for each user. Using an advanced system, such as DALI, not only ensures excellent visibility but also efficient energy management, resulting in sustainable lighting usage. The control system enables precise lighting of only those parts of the hall that are currently in use, or balances lighting in areas where natural light enters through skylights.

Multi-sports hall, Dębno, Poland

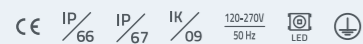


# BEETLE II LED HIGH BAY



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HIGH BAY LED FITTING WITH EXCEPTIONAL PARAMETERS AND VERSATILE APPLICATION



BEETLE II LED HIGH BAY is a luminaire ideally suited to sports facilities. The latest version of this bestselling high-bay model is distinguished by its impressive parameters - high power output of up to 300 W and a luminous flux of up to 39,900 lm. Its excellent luminous efficacy translates into immediate savings. It is a two-chamber luminaire in which the LEDs and power supply are separated by a ribbed space, ensuring optimum airflow for cooling both chambers. This solution (LUMI COOL®) guarantees the most efficient cooling of both heat sources of the luminaire and translates into stable, long-term operation even at very high ambient temperatures exceeding 50°C. BEETLE II LED HIGH BAY is highly resistant to corrosion, which means that it remains durable even in difficult weather conditions. The luminaire can be installed in various types of sports facilities, both indoors and outdoors, such as stadiums, pitches, courts, slopes, multi-sports halls.

## Key advantages:

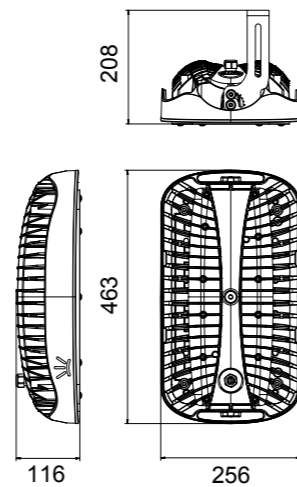
- power up to 250 W
- exceptional luminaire efficacy up to 160 lm/W
- lifetime up to 100 000 h (L80B10)
- resistance to high temperatures (LUMI COOL®)
- versatile use
- a wide range of powers and lighting angles
- three mounting methods (on handle, suspended, single-point)
- easy mounting and adjustment
- tempered glass
- adaptable to any control system
- italian design and solid workmanship (IP66, IK09)
- made in Poland

## Application:

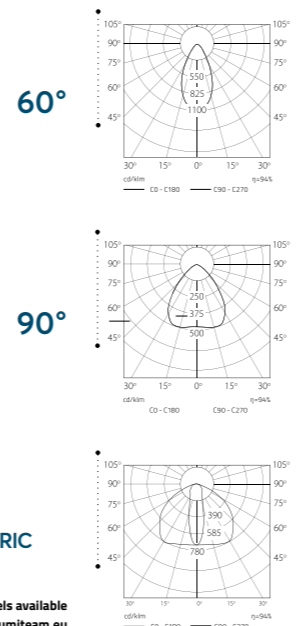
The luminaire can be used in all outdoor and indoor sports facilities including:

- football fields
- tennis courts
- sports and entertainment arenas
- ice rinks
- swimming pools

## Dimensions [mm]



## Beam angles



ASSYMETRIC

Full selection of optic beam angles available on the website [www.lumiteam.eu](http://www.lumiteam.eu)

## Technical data

Light source	LED
Power consumption	60 - 250 W
Luminaire luminous flux	9 000 - 35 200 lm
Luminaire efficacy	132 - 160 lm/W
Colour temperature	4 000 K, 5 700 K, other on request
Colour rendering index (CRI)	70, 80
Lumen maintenance output	100 000 h (L80B10)
Operating temperature	-40°C do +55°C
Beam angles	20°, 30°, 60°, 90°, asymmetric
Material	high-pressure die-cast aluminium
Finish	powder coating
Colour	anthracite; other on request
Optics	PMMA
Glass	tempered glass
Ingress protection rating	IP66/IP67
Impact protection rating	IK09
Weight	9 kg
Voltage	230 V
Frequency	50 Hz
Warranty	5 years
Control systems	optional



## Heavy-duty construction

Our luminaires are created from high-pressure aluminium castings, making them highly durable.

## Control system

The luminaire can be equipped with a wireless intelligent control system.

## Optional: asymmetrical optics

Thanks to the use of asymmetrical optics, the light is precisely directed onto the selected surface (e.g., field, courts), eliminating dispersion upwards.

## Exceptionally efficient light source

Power up to 300 W and maximum luminous flux of the luminaire up to 39 900 lm.

## Optional: protective grid

An additional steel grid serves a protective function, protecting the frame from potential mechanical damage such as ball strikes.



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## Family

INDEX NO	NAME	POWER	LUMINAIRE LUMINOUS FLUX	LUMINAIRE EFFICACY	RA/CRI	MAX OPERATING TEMPERATURE
S500601921XXXXAKEA1	BEETLE II HB 60 W, 192 LED, CRI 70	60 W	9 600 lm	160 lm/W	70	55°C
S501001921XXXXAKEA1	BEETLE II HB 100 W, 192 LED, CRI 70	100 W	15 600 lm	156 lm/W	70	55°C
S501301921XXXXAKEA1	BEETLE II HB 130 W, 192 LED, CRI 70	130 W	19 600 lm	151 lm/W	70	55°C
S501501921XXXXAKEA1	BEETLE II HB 150 W, 192 LED, CRI 70	150 W	21 600 lm	144 lm/W	70	55°C
S502002881XXXXAKEA1	BEETLE II HB 200 W, 288 LED, CRI 70	200 W	30 200 lm	151 lm/W	70	45°C
S502502881XXXXAKEA1	BEETLE II HB 250 W, 288 LED, CRI 70	250 W	35 200 lm	141 lm/W	70	45°C
S500601922XXXXAKEA1	BEETLE II HB 60 W, 192 LED, CRI 80	60 W	9 000 lm	150 lm/W	80	55°C
S501001922XXXXAKEA1	BEETLE II HB 100 W, 192 LED, CRI 80	100 W	14 600 lm	146 lm/W	80	55°C
S501301922XXXXAKEA1	BEETLE II HB 130 W, 192 LED, CRI 80	130 W	18 300 lm	141 lm/W	80	55°C
S501501922XXXXAKEA1	BEETLE II HB 150 W, 192 LED, CRI 80	150 W	20 200 lm	135 lm/W	80	55°C
S502002882XXXXAKEA1	BEETLE II HB 200 W, 288 LED, CRI 80	200 W	28 200 lm	141 lm/W	80	45°C
S502502882XXXXAKEA1	BEETLE II HB 250 W, 288 LED, CRI 80	250 W	33 000 lm	132 lm/W	80	45°C

When ordering, please specify the desired beam angle curve and colour temperature.

Luminous flux tolerance +/- 10%. Power consumption tolerance depends on the power level - less than 100 W or equal to 100 W power consumption tolerance is 5%, over 100 W - 2.5%. The luminous flux, light intensity distribution and light efficiency were tested according to PN-EN 13032-4: 2015-09 and PN-EN 60598-1: 2015-04 at an ambient temperature of 25°C. Accessories for installation are quoted separately by the manufacturer.

## Lighting for outdoor sports facilities

When choosing outdoor lighting, complementing lighting standards requires conscious attention to the unique conditions of the outdoors.

**Weather resistance:** Luminaires for outdoor applications should have a high resistance to weather conditions such as rain, snow, wind or UV radiation. It is recommended to choose luminaires with a high IP66 protection class to ensure protection against potential flooding and dust.

**Operating temperature:** Luminaires should be suitable for a wide temperature range, especially for areas with extreme temperatures. In areas with intense sunlight,

it is important that luminaires have an effective ventilation and heat dissipation system, which affects their durability and efficiency.

**Impact resistance:** In areas exposed to high winds, hail or intense precipitation, luminaires with a high IK (impact protection rating) are key in providing protection against mechanical damage.

**Construction materials:** The choice of suitable construction materials, such as aluminium or stainless steel, is important for the luminaires' resistance to corrosion caused by moisture or atmospheric pollution

# BEETLE II LED FLOODLIGHT

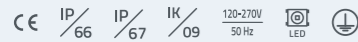


Scan QR code for full product details, photos and downloads.

## HIGH BAY LED FLOODLIGHTS WITH MAXIMUM POWER



BEETLE II LED FLOODLIGHT is a modular lighting solution for sports facilities. It's the right choice wherever strong lighting is needed high up. Due to the fact that BEETLE II LED FLOODLIGHT luminaires are characterised by a strong luminous flux, high luminous efficiency and high temperature resistance, this set is not only energy-saving but also very durable. Free configuration of the number of luminaires and power selection allows for ideal adjustment of BEETLE II LED FLOODLIGHT to customer needs. In addition, the steel structure supporting the luminaires is customised to fit the façade or pole.



### Key advantages:

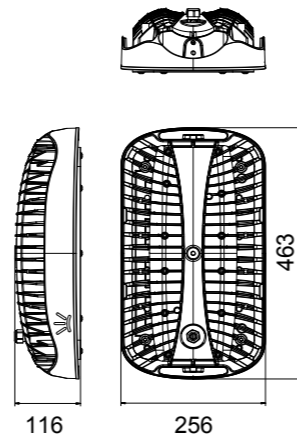
- exceptional luminaire efficacy up to 144 lm/W
- power up to 2000 W
- service life up to 100 000 h (L80B10)
- high temperature resistance (LUMI COOL®)
- possibility to order steel construction made to measure
- power supply can be mounted externally on ground
- possibility to combine any number of luminaires depending on the required luminous flux
- wide range of power and beam angles
- easy assembly and mounting (adjustable handle)
- can be adapted to any control system
- italian design and solid workmanship (IP66/67, IK09)
- made in Poland

### Application:

The luminaire can be used in all outdoor and indoor sports facilities including:

- football fields
- sport stadiums
- multi-sport halls
- tennis courts
- golf courses
- ski slope

### Dimensions [mm]



Scan QR code and check all products dimensions.

### Family

INDEX NO	NAME	POWER	LUMINAIRE LUMINOUS FLUX	LUMINAIRE EFFICACY	RA/CRI	MAX OPERATING TEMPERATURE
S51300XXX1XXXMXAKEA1	BEETLE II FL UNO 300 W, CRI 70	300 W	39 900 lm	133 lm/W	70	40°C
S52500XXX1XXXMXAKEA1	BEETLE II FL DUE 500 W, CRI 70	500 W	70 600 lm	141 lm/W	70	45°C
S52600XXX1XXXMXAKEA1	BEETLE II FL DUE 600 W, CRI 70	600 W	79 800 lm	133 lm/W	70	40°C
S53750XXX1XXXMXAKEA1	BEETLE II FL TRE 750 W, CRI 70	750 W	105 900 lm	141 lm/W	70	45°C
S53900XXX1XXXMXAKEA1	BEETLE II FL TRE 900 W, CRI 70	900 W	119 700 lm	133 lm/W	70	40°C
S54M000XXX1XXXMXAKEA1	BEETLE II FL QUATTRO 1000 W, CRI 70	1 000 W	141 200 lm	141 lm/W	70	45°C
S54M200XXX1XXXMXAKEA1	BEETLE II FL QUATTRO 1200 W, CRI 70	1 200 W	159 600 lm	133 lm/W	70	40°C
S55M250XXX1XXXMXAKEA1	BEETLE II FL CINQUE 1250 W, CRI 70	1 250 W	176 500 lm	141 lm/W	70	45°C
S55M500XXX1XXXMXAKEA1	BEETLE II FL CINQUE 1500 W, CRI 70	1 500 W	199 500 lm	133 lm/W	70	40°C
S56M500XXX1XXXMXAKEA1	BEETLE II FL SEI 1500 W, CRI 70	1 500 W	211 800 lm	141 lm/W	70	45°C
S56M800XXX1XXXMXAKEA1	BEETLE II FL SEI 1800 W, CRI 70	1 800 W	239 400 lm	133 lm/W	70	40°C

### Models

Beetle II LED Floodlight Due



Beetle II LED Floodlight Tre



Beetle II LED Floodlight Quattro



Beetle II LED Floodlight Cinque



Beetle II LED Floodlight Sei



### Large area floodlights

When designing large floodlights, we prioritised excellent visibility and the various possibilities for creating luminaire layouts perfectly tailored to the requirements of the implemented project. The result is BEETLE II FLOODLIGHT luminaires, which have as many as six different layout options in their family.

One of the most commonly illuminated facilities with this type of luminaire is outdoor sports infrastructures. We specialise in the design and supply of innovative LED lighting solutions for the illumination of football pitches, tennis courts, ski slopes, golf courses, as well as full-size sports stadiums and performance arenas. FLOODLIGHT luminaires are equipped with optics that accurately direct light with a low UGR glare, a key issue for athletes and fans alike, as well as for organisers of televised sports events. Lighting technology has advanced significantly in recent years, enabling outdoor stadiums to be lit more efficiently and environmentally friendly. Intelligent lighting control systems make it possible to adjust the intensity and colour of the light as required. In addition, LED technology reduces energy consumption, which contributes to cost savings and a reduced carbon footprint.

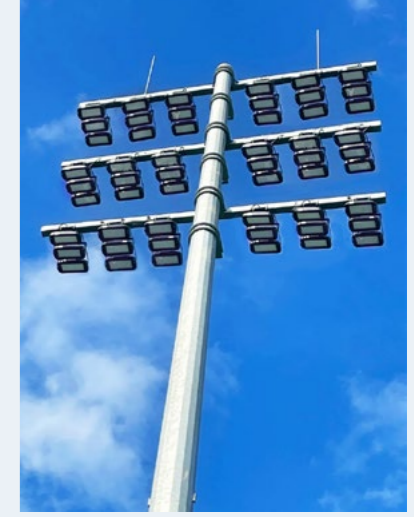
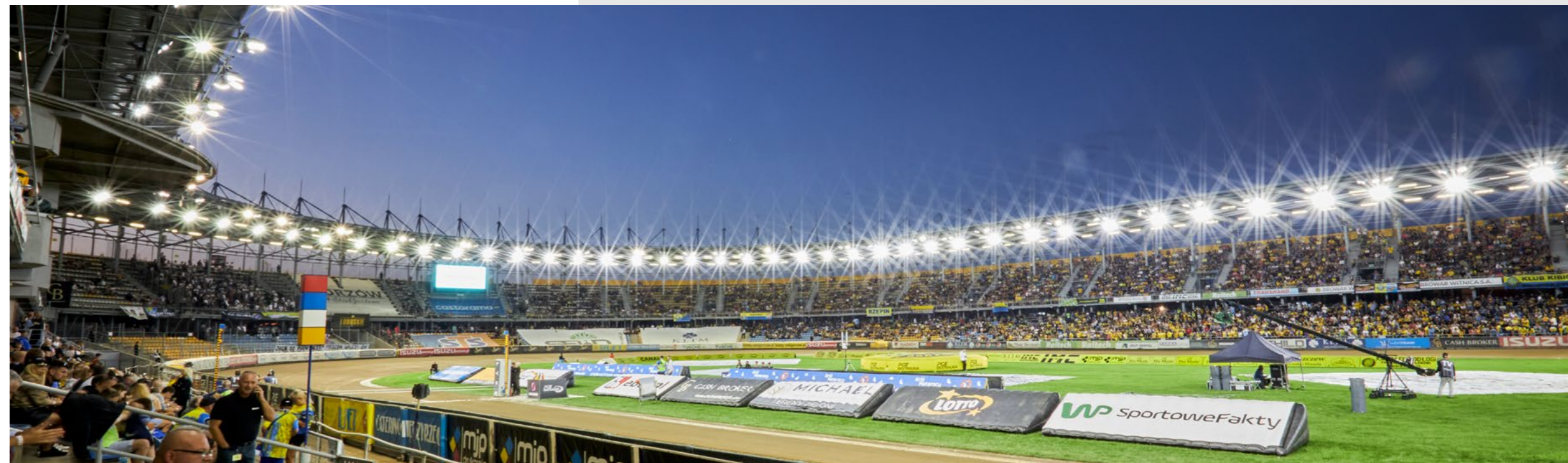
### Technical data

Light source	LED
Power consumption	max. 2 000 W
Luminaire luminous flux	max. 1 800 W
Luminaire efficacy	max. 239 400 lm
Colour temperature	4 000 K, 5 700 K, other colours on request
Colour rendering index (CRI)	70
Lumen maintenance output	100 000 h (L80B10)
Operating temperature	-40°C do +45°C
Beam angles	20°, 30°, 60°, 90°, asymmetric, other on request
Material	high-pressure die-cast aluminium
Colour	anthracite; other colours on request
Finish	powder coating
Optics	PMMA
Glass	tempered glass
Ingress protection rating	IP66/IP67
Impact protection rating	IK09
Weight	1 module - 6,1 kg
Voltage	230 V
Frequency	50 Hz
Warranty	5 years
Control systems	optional



Scan QR code for full product details, photos and downloads.

Speedwaay Track, Stadium Gorzów Stal, Gorzów Wielkopolski, Poland



Sports hall lighting at the Sports and Recreation Center of Grodzisk Mazowiecki, Poland



Speedway Track, Stadium Gorzów Stal, Gorzów Wielkopolski, Poland



Sports hall, Dębno, Poland



Złoty Gróń Ski Resort, Istebna, Poland







INDUSTRY



SPORT



PETROL STATION



STREET

# About Lumi Team

In order to ensure the quality of our products and to meet the expectations of even the most demanding customers, we produce our luminaires from scratch at our site in Poland. We have a professional design and construction office, a modern tooling workshop, an automated aluminium foundry, advanced machining machines, an ecological powder coating plant, semi-automatic assembly lines, a very well-equipped quality control laboratory and a large storage area. From design to final quality control, the production process is carried out under the supervision of experienced specialists. Therefore, by handing over our luminaires to our customers, we guarantee their reliability, safety and good performance.

## We are a polish LED lighting manufacturer



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Scan QR code



Our projects



Our products



See how our LED luminaires are made