




SPORT LIGHTING

ewo
designplan™ 

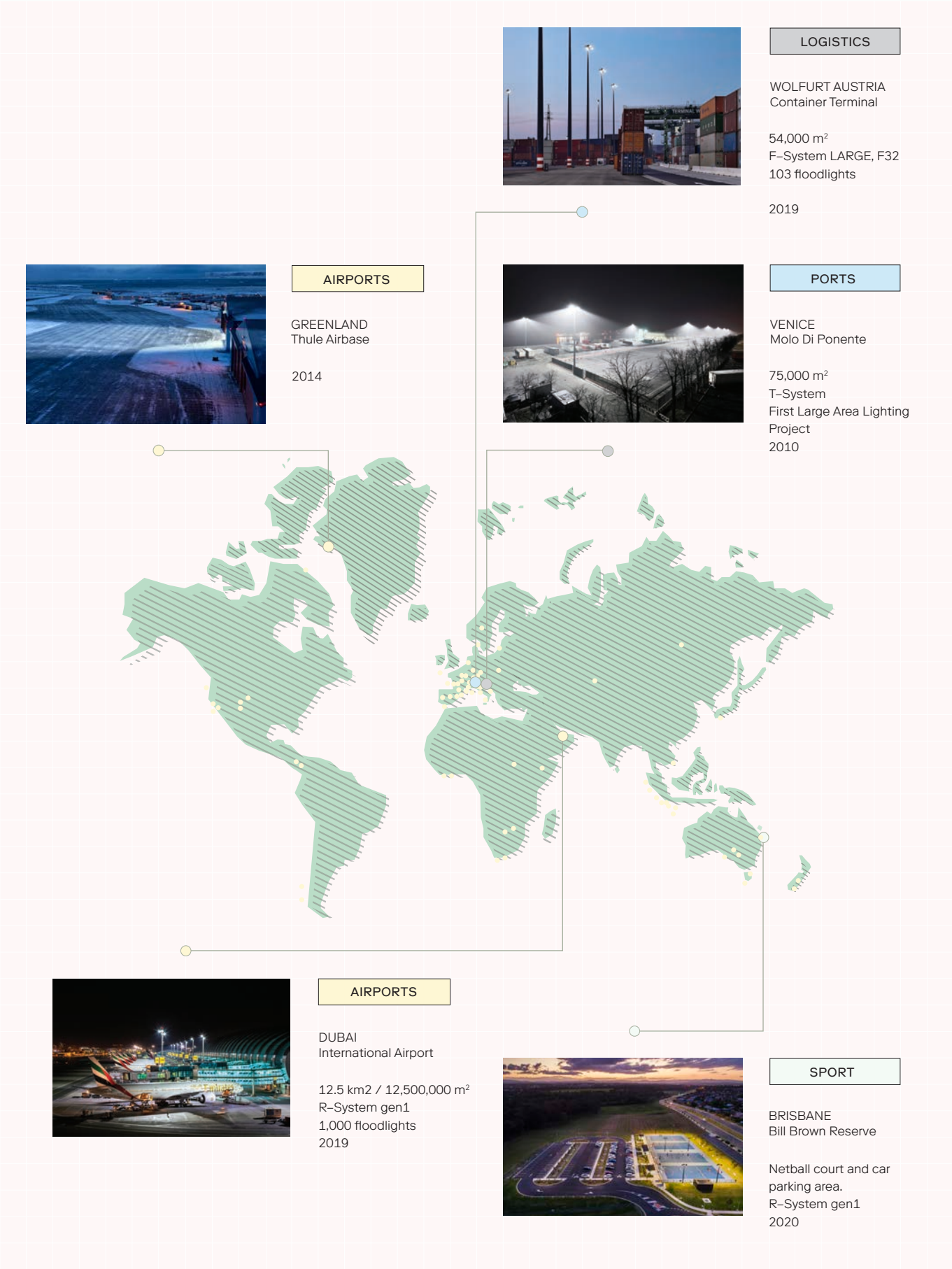


Top performance in sport shown in its best light

Overview

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Large Area Lighting around the globe



From airport lighting to sports facilities

ewo already exploited the potential offered by LED technology for large areas as far back as 2010 at Venice cargo terminal and since its project at Innsbruck Airport, has conquered airport installations of various sizes one by one throughout the world.

A development that never stops.

Since 2020, the third generation of high performance floodlights R-System gen3 is on the starting line with different power variants.

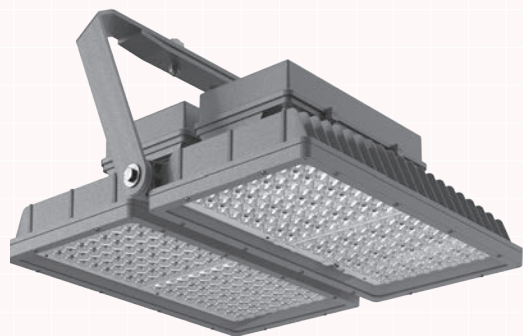
When it comes to lighting sports facilities, maximum performance and power are paramount.

Due to its scope of configuration options, our high power floodlights are optimised for sports fields, sports halls and stadiums – irrespective of size.

High-power floodlights for sport lighting

R-System gen3

A-Series and E-Series



Outstanding lifetime:
L80B10 > 100.000 h

R-System gen3 MAX

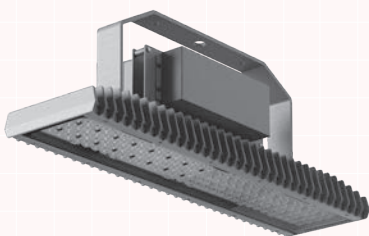
A-Series and E-Series



Maximum performance:
up to 265,000 lm

R-System R1

A-Series



Lower performance
categories: small tennis
areas

R-System

Superior flexibility thanks to modular design

Each project has its own specific requirements. That's why we have developed a modular product system, which we can modify and fine-tune down to the smallest details, allowing us to produce sophisticated and technologically advanced solutions in different settings as well as a sustainable spare parts supply system.



1	PRINTED CIRCUIT BOARDS	individually interchangeable	wide-ranging configuration options
2	LENS OPTICS	UV stabilised PMMA and PC	different light distributions
3	COOLING SYSTEM	reliable temperature management	optimal thermal performance
4	GLASS COVER	high light transmittance	protection of optical components
5	MOUNTING BRACKET	infinitely variable 360° swivelling	floor, wall and ceiling mounting
6	DRIVER BOX	separate mounting	for optimal thermal separation

R-System gen3

Recipe for success: simplicity

Cost efficiency with maximum performance and a focus on what matters. At ewo we have a word for this: simplicity. Because simplicity in design and application optimises performance by R-System gen3 in any large area, with up to 480 LEDs.

AREAS OF APPLICATION	airports, ports, logistics centres, sports facilities and roads
MAX LUMEN PACKAGE	up to 193,000 lm
CURRENT FEED	up to 1,850 mA depending on ambient temperature
AMBIENT TEMPERATURE RANGE	−40 to +45 °C
OUTSTANDING LIFETIME	L80B10 > 100,000 h
DARK SKY	full-cut-off optic at 0°, optional visor up to 7° (E-Series)
ELECTRONIC OPERATING DEVICE	on request with DALI2 or line switch
SMART LIGHTING	control modules for different communication standards available upon request
LENSES	made with UV-stabilised polycarbonate (E-Series) or PMMA (A-Series)
COVER	single-pane safety glass (ESG)
LUMINAIRE HOUSING	in die-cast aluminium
BRACKET	made of hot-dip galvanised steel, on request with swivelling bracket for floor, wall and ceiling mounting
FINISH	polyester powder coating, white aluminium (RAL 9006 / DB 701)



Left R2 (144 LEDs) / right R4 (288 LEDs)

R-System gen3

A-Series model variants



R-System gen3

A-Series model variants

R2

52.91 lbs (incl. bracket 7.05 lbs)
+ 4.41 lbs driver (optional,
internal or external)

↓ = 3.55"
→ = 1.18" / 1.29*** / 1.61****

R4 (two driver boxes)

89.29 lbs (incl. bracket 7.05 lbs)
+ 9.92 lbs driver (internal)

↓ = 4.84"
→ = 1.40" / 1.72*** / 3.34****

R4 (one driver box)

81.57 lbs (incl. bracket 7.05 lbs)
+ 9.92 lbs driver (external)

↓ = 4.84"
→ = 1.29" / 1.61**** / 3.01****

ACCESSORIES

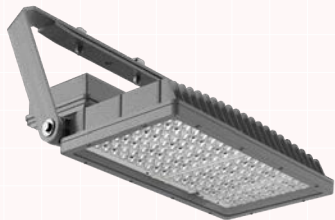
360° Swivel-mounted bracket

Driver box

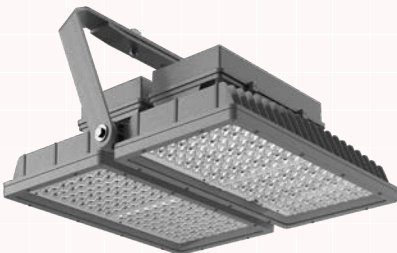
① Obere Windangriffsfläche [ftz] ② Seitliche Windangriffsfläche [ftz] * Tilt 0° ** Tilt 5° *** Tilt 30°

R-System gen3

E-Series model variants



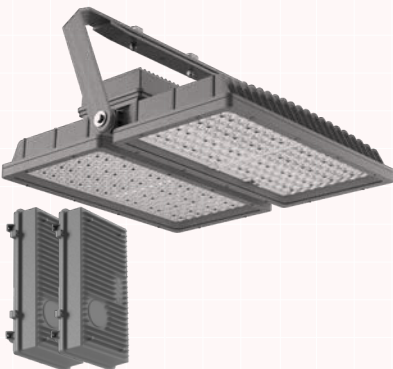
R2
(one driver box)



R4
(two driver boxes)



R2
(One external driver, with optional driver box)



R4
(Two external drivers, with optional driver box)

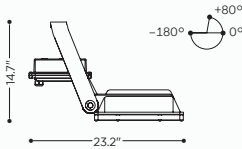
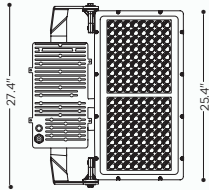
R-System gen3

E-Series model variants

R2

52.91 lbs (incl. bracket 7.05 lbs)
+ 4.41 lbs driver (optional, internal or external)
+ 3.31 lbs full-cut-off visor

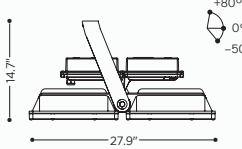
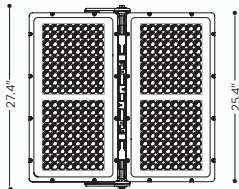
↓ = 3.55"
→ = 1.18" / 1.29" / 1.61"



R4 (two driver boxes)

89.29 lbs (incl. bracket 7.05 lbs)
+ 9.92 lbs driver (internal)
+ 4.41 lbs full-cut-off visor

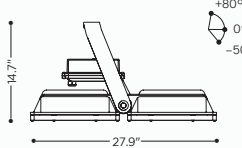
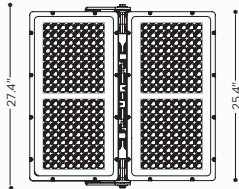
↓ = 4.84"
→ = 1.40" / 1.72" / 3.34"



R4 (one driver box)

81.57 lbs (incl. bracket 7.05 lbs)
+ 9.92 lbs driver (external)
+ 4.41 lbs full-cut-off visor

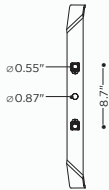
↓ = 4.84"
→ = 1.29" / 1.61" / 3.01"



ACCESSORIES



360° Swivel-mounted bracket



Driver box



Full-cut-off visor (E-Series)

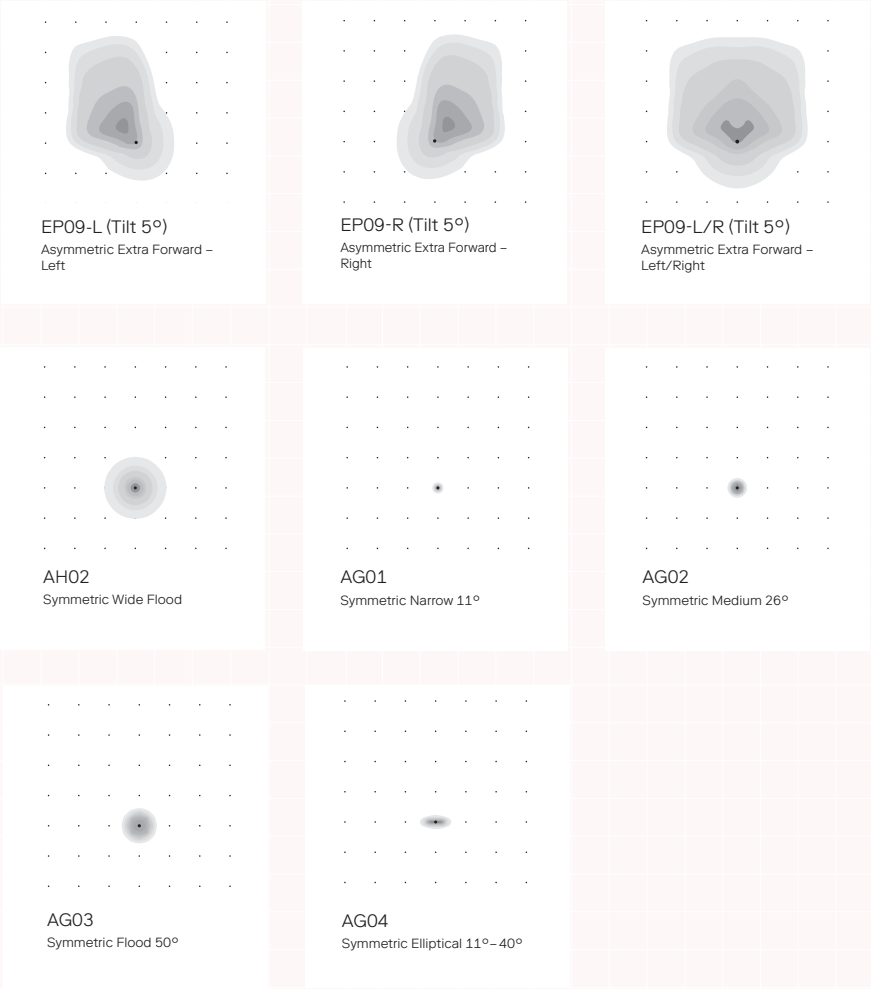
① Projected windage area [ft²] ② Lateral windage area [ft²] * Tilt 0° ** Tilt 5° *** Tilt 30°



R-System gen3

MODEL	LIGHT DISTRIBUTION	LUMINOUS FLUX [lm]	MAX. POWER [W]	CURRENT FEED [mA]	LEDs
R2	A-Series	117,000	905	1,200	240
R2	A-Series	205,000	1,496	1,000	480
R2	E-Series	89,500	807	1,850	144
R4	E-Series	179,000	1,614	1,850	288

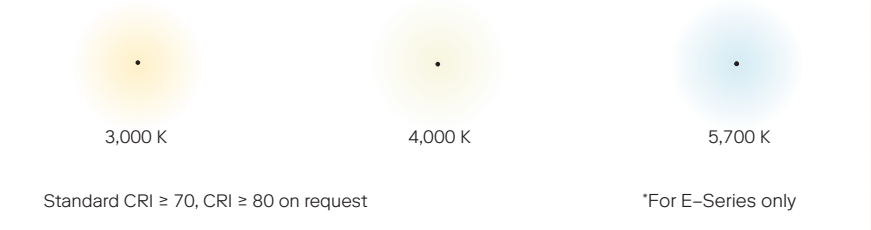
LIGHT DISTRIBUTIONS



- AIRPORTS
- PORTS
- TRAFFIC
- LOGISTICS
- SPORTS

- SPORTS

COLOUR TEMPERATURES



IP66 RoHS IK08

You will find the complete selection of light distributions on ewo.com

R-System gen3 MAX

Optimised for sports facilities and stadiums, our new R-System gen3 MAX is available in two versions with different LED quantities and outputs to meet any requirements. R-System gen3 MAX can deliver 265,000 lm for maximum performance and output, for entire stadiums, compatible with DMX-DALI converters for light shows.

CHARACTERISTICS	ADVANTAGES
HIGH LUMEN PACKAGE UP TO 265,000 LM	Fewer light points required
LIFETIME OF UP TO 60,000 h L80B10	Maintenance greatly reduced
8 DIFFERENT LIGHT DISTRIBUTIONS	Precise and accurate solutions without wasting light
NEWLY DEVELOPED OPTICS	Prevents upward lighting
AMBIENT TEMPERATURE RANGE -40° TO +45°C	Applicable in any region
SINGLE-PANE SAFETY GLASS COVER	Light transparency is maintained and glass does not discolour
SMART LIGHTING AND DMX CONVERTER	Enhancement of the sports experience with light shows

ADVANTAGES OF LED TECHNOLOGY COMPARED TO HALOGEN
Energy savings of up to 85 %
Maintenance costs up to 30 × lower
Service life increased by approx. 3,000 %



R-System gen3 MAX R4/ A-Series / Alfortville Sports venues / 2020

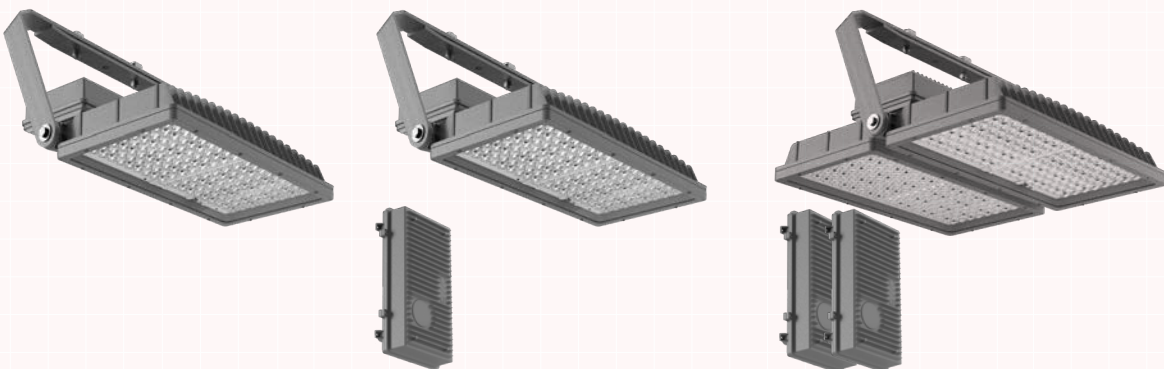
R-System gen3 MAX

Four product variants, endless possibilities

A-Serie

R2-MAX
(two external drivers with optional driver boxes)R4-MAX
(three external drivers with optional driver boxes)

E-Serie

R2-MAX
(one driver box)R2-MAX
(one external driver with optional driver box)R4-MAX
(two external drivers with optional driver boxes)

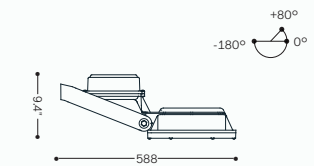
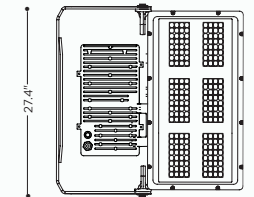
R-System gen3 MAX

One to two panels for maximum flexibility

R2-MAX A-Series

52.91 lbs (incl. bracket 7.05 lbs)
+ 9.92 lbs driver (external)

$$\begin{aligned} \downarrow &= 3.55' / 3.55''' / 1.18''''' \\ \rightarrow &= 1.18' / 1.61''' / 3.66''''' \end{aligned}$$

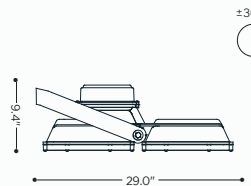
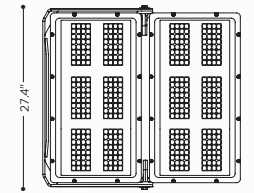


*** Tilt
*** Tilt 30°
** Tilt 5°
* Tilt 0°

R4-MAX A-Series

82.67 lbs (incl. bracket 8.16 lbs)
+ 14.33 lbs driver (external)

$$\begin{aligned} \downarrow &= 4.84' / 4.84''' / 1.29''''' \\ \rightarrow &= 1.29' / 3.01''' / 5.05''''' \end{aligned}$$

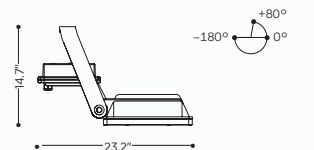
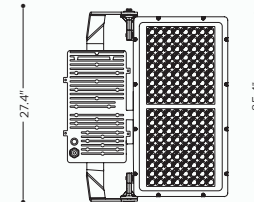


② Lateral windage area [ft²]

R2-MAX E-Series

52.91 lbs (incl. bracket 7.05 lbs)
+ 4.41 lbs driver (internal or external)
+ 3.31 lbs full-cut-off visor

$$\begin{aligned} \downarrow &= 3.55' \\ \rightarrow &= 1.18' / 1.29''' / 1.61''''' \end{aligned}$$

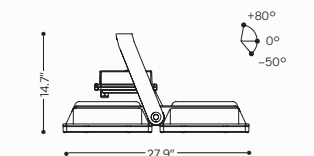
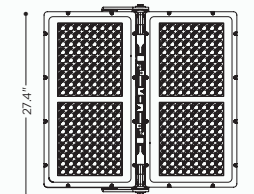


① Projected windage area [ft²]
90°

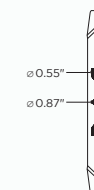
R4-MAX E-Series

81.57 lbs (incl. bracket 7.05 lbs)
+ 9.92 lbs driver (external)
+ 4.41 lbs full-cut-off visor

$$\begin{aligned} \downarrow &= 4.84' \\ \rightarrow &= 1.29' / 1.61''' / 3.01''''' \end{aligned}$$



ACCESSORIES



360° Swivel-mounted bracket

Driver box

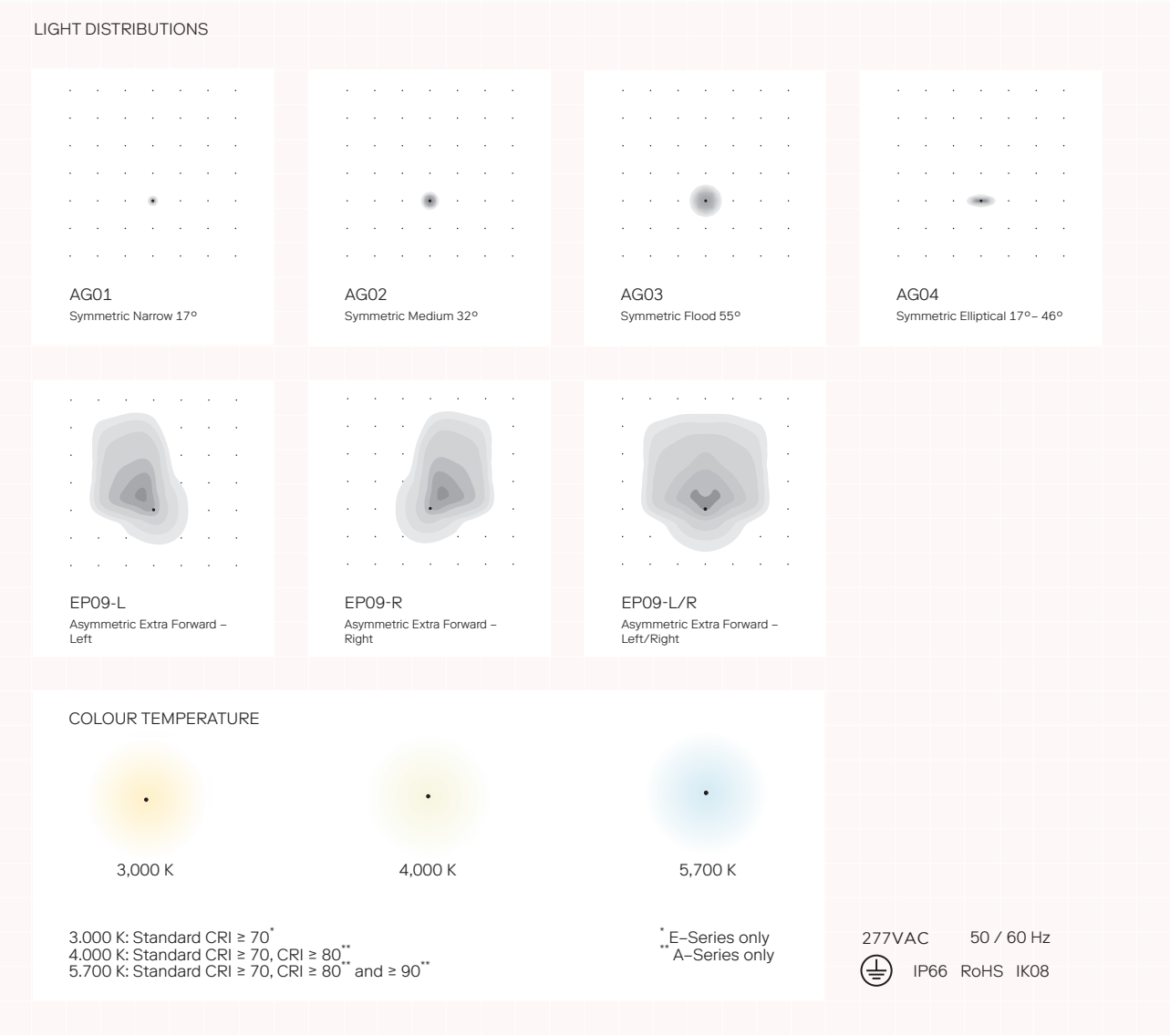
Full-cut-off visor (E-Series)

R-System gen3 MAX

Mastering the shape of light

With our optics, designers have all the tools at their fingertips, to create any desired light scenario.

MODEL	LIGHT DISTRIBUTION	MAX.LUMINOUS FLUX [lm]	MAX. POWER [W]	MAX.CURRENT FEED [mA]	LEDs	DRIVER
R2	A-Series	132,000	1,179	2,000	192	2 external
R4	A-Series	265,000	2,357	2,000	384	3 external
R2	E-Series	96,500	965	2,200	144	1 external or internal
R4	E-Series	193,500	1,930	2,200	288	2 external



R-System gen3 MAX

Performance at the highest level

Mechanical Details

Luminaire housing of die-cast aluminium
Polyester powder-coated surface, metallic grey (RAL 9006 / DB 701)
Mounting bracket made of hot-dip galvanised steel - on request with infinitely variable 360° swivel-mounted bracket for floor, wall and ceiling mounting
Cover made from single-pane safety glass (ESG)
GORE® valve to prevent condensation
Protection class IP66 / IK08 impact resistance
Hermetically sealed cable entry - no exposed cable

Electrical Details

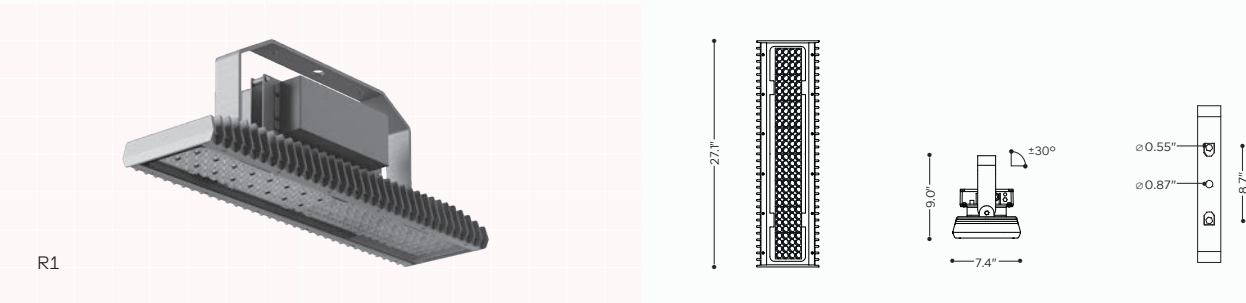
Input voltage 277VAC (50-60 Hz)
Power Factor > 98% / Pout > 240 W Power Factor > 95%
Electronic control gear with DALI2 or Line-Switch available
Insulation class I
Flicker free at full power
Overvoltage protection integrated 10 kV
Features for constant luminous output control (CLO) available

Certificates

   
RCM Pending Pending

R-System R1

The tried-and-tested R-System R1 is still available and optimised for applications such as traffic areas as well as small sports areas (tennis courts etc.).



MODEL	LIGHT DISTRIBUTION	LUMINOUS FLUX [lm]	POWER [W]	MAX. CURRENT FEED [mA]	LEDs
R1	A-Series	33.961	273	700	128

AP04-L/R (Tilt 20°)
Asymmetric Extra Forward - Left/Right

AP05 (Tilt 8°)
Asymmetric Extra Forward

AP07
Asymmetric Extra Forward

7.5 kg
+ 3 kg Driver

$\frac{A}{A} = 1.40$
 $\frac{A}{A} = 0.54^* / 0.86^{**}$

IP66 RoHS IK08

UL US ENEC

① Projected windage area [ft²] * Tilt 0° ** Tilt 30°
② Lateral windage area [ft²]

COLORS

4,000 K

5,700 K

Standard CRI ≥ 70, CRI ≥ 80 on request

You will find the complete selection of light distributions on ewo.com

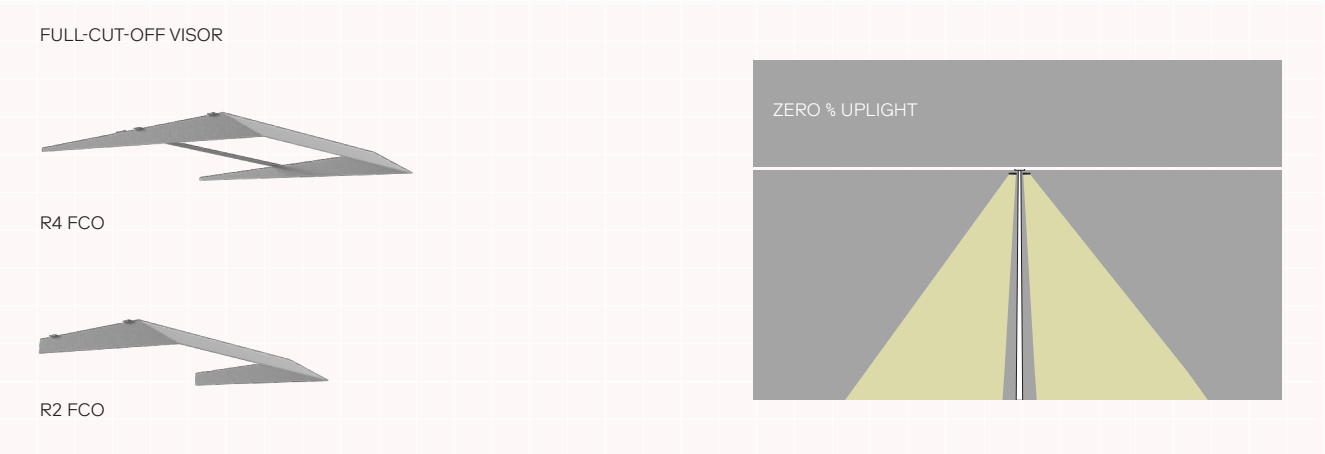
OPTIMISED PERFORMANCE	33,961 lm, 110-130 lm/W
LIFETIME	L90B10 > 100,000 h
ELECTRONIC OPERATING DEVICE	DALI interface and CLO on request
MATERIALS	lens optics made from PMMA luminaire body from die-cast aluminium luminaire cover of reinforced safety glass (ESG)



Brisbane, Australia / Bill Brown Reserve / Netball courts / R-System gen1, R3 / 2020

Accessories to guide light precisely

To direct light even more precisely, we offer two accessories for the E-Series: a full-cut-off-visor and a Backlight Shield. While the FCO visor minimizes uplight, the Backlight Shield shapes the light in such a way that the rear illuminance is reduced by about two thirds. The goal: light exactly where it is needed.



Smart Lighting

When lighting is intelligent, it can respond to a variety of elements in the environment. To enhance end-user enjoyment, maximum flexibility is required. Intelligent lighting management is always a step towards any goal, be it safety, sustainability or a unique lighting experience.

Intelligent lighting options with wireless and touchscreen control or with touchscreen control that responds to a DALI signal
DMX converter for light shows
Nema socket
Zhaga Book 18 Socket
Line switch

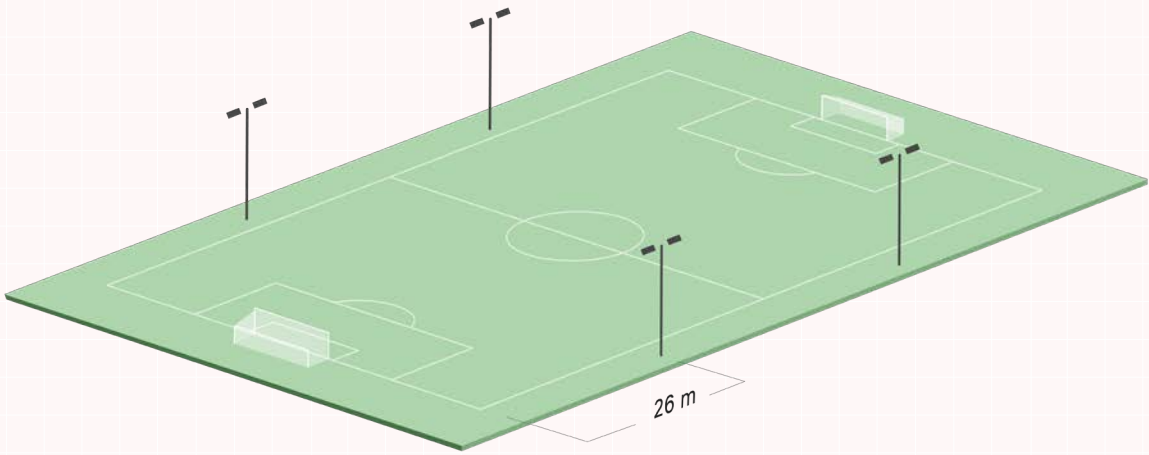


Alfortville, France / R-System gen3 MAX / Standardised according to the French National Football Association / 150 lux, U_o > 0,7, E_{min}/E_{max} > 0,4

Lighting Examples

Soccer - 4 poles

DIN EN 12193



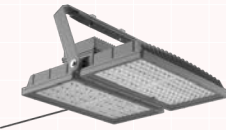
Field size 344.49' × 223.10'
Pole height 59.06' LPH (4x)

R-System gen3 MAX

Angle/inclination 0°
MaintenanceFactor 0.9
CRI ≥ 70
Color temperature:
4,000 K / 5,700 K

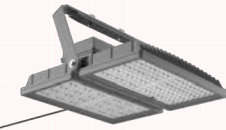
75 LUX

Class III
R4-MAX EP09



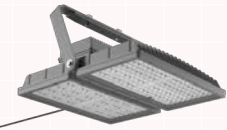
200 LUX

Class II
R4-MAX EP09



500 LUX

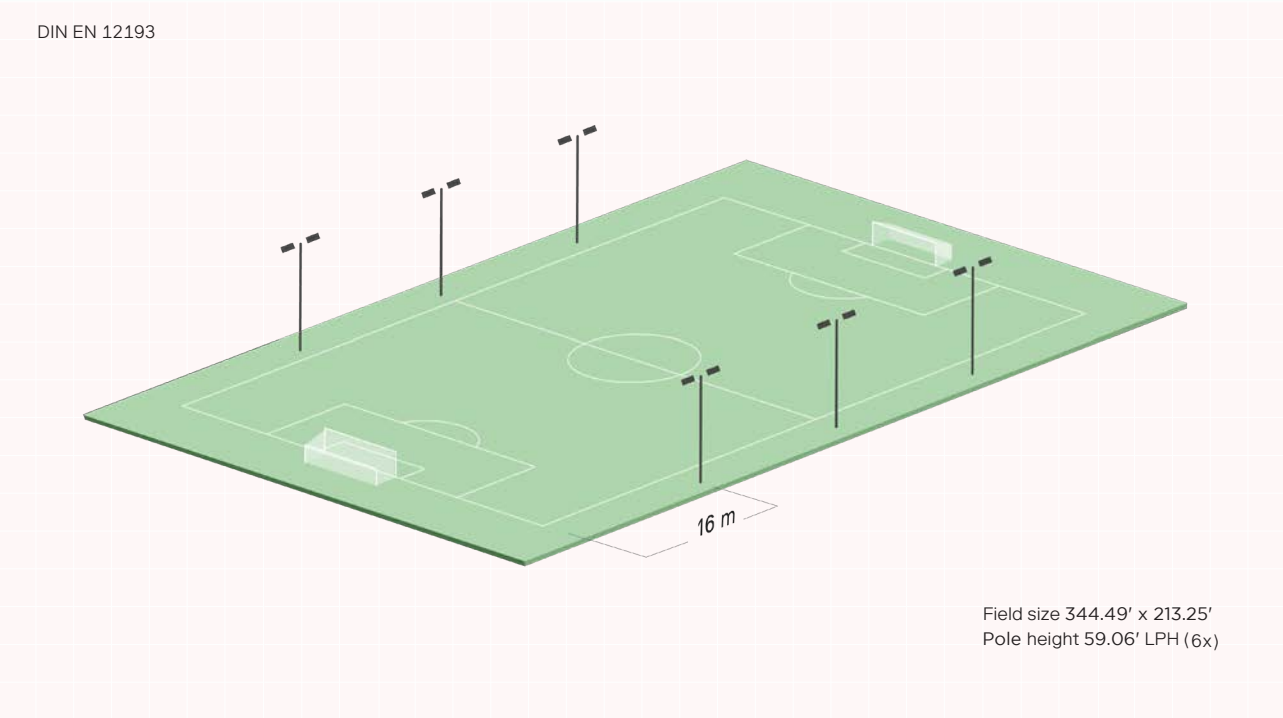
Class I
R4-MAX EP09



CALCULATED LUX LEVEL	75.3 lx	214 lx	501 lx
NUMBER OF PRODUCTS	4	12	28
PERFORMANCE	7.14 kW	21.42 kW	49.98 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.5 U _o (0.5 U _o)	0.62 U _o (0.6 U _o)	0.75 U _o (0.7 U _o)

Lighting Examples

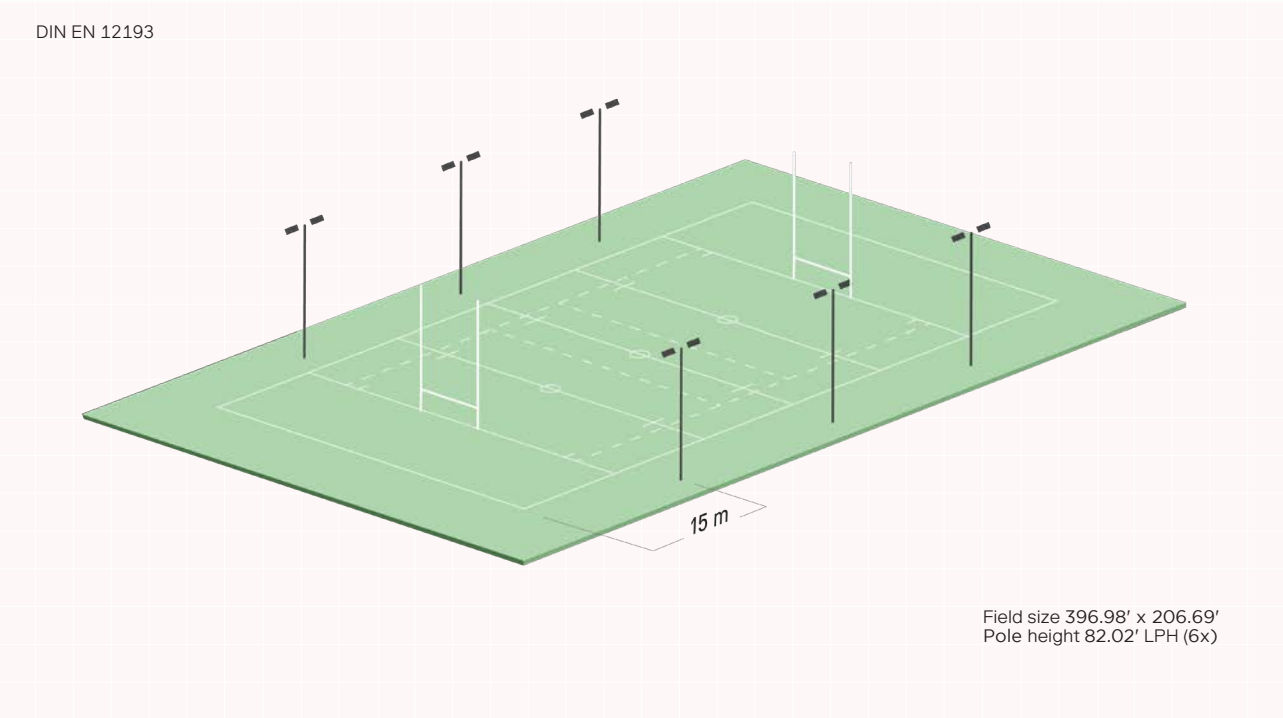
Football 6 poles



CALCULATED LUX LEVEL	79.6 lx	233 lx	501 lx
NUMBER OF PRODUCTS	6	14	30
PERFORMANCE	7.79 kW	24.99 kW	53.55 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.61 U ₀ (0.5 U ₀)	0.7 U ₀ (0.6 U ₀)	0.78 U ₀ (0.7 U ₀)

Lighting Examples

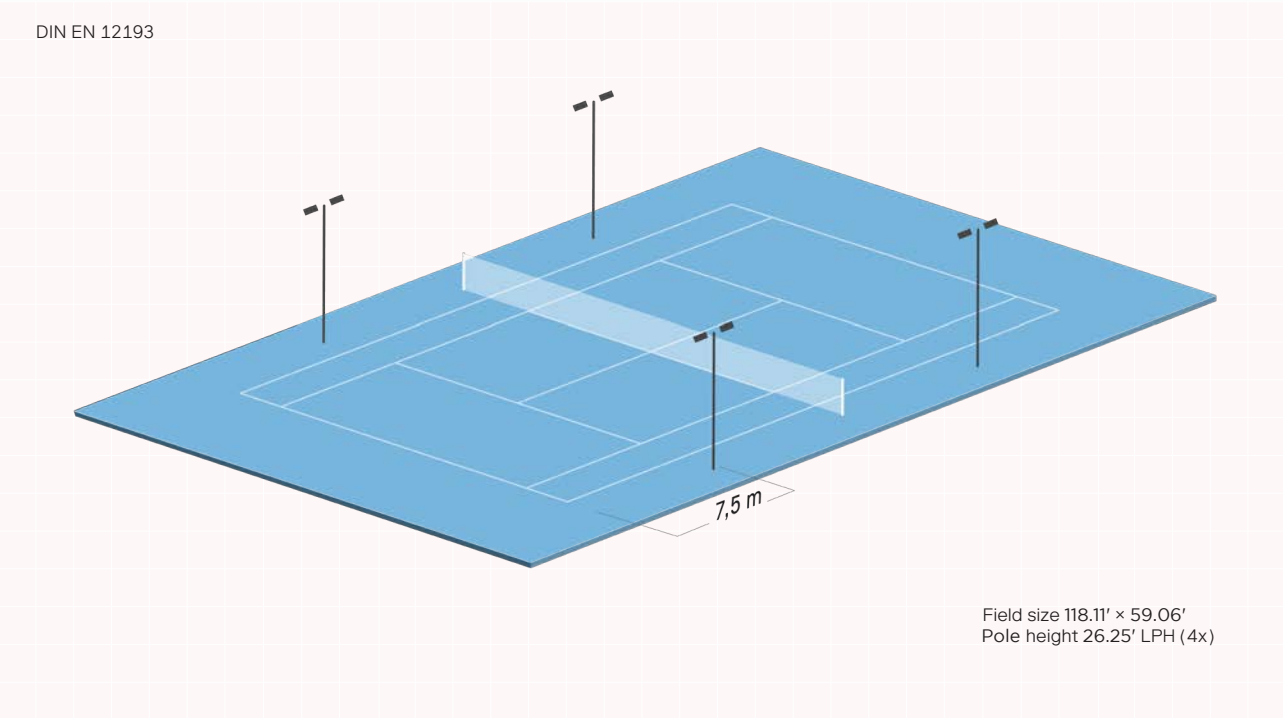
Rugby



CALCULATED LUX LEVEL	76 lx	211 lx	501 lx
NUMBER OF PRODUCTS	6	16	40 × R4 + 4 × R2
PERFORMANCE	11.57 kW	30.87 kW	81.05 kW
GLARE (STANDARD VALUE)	< 50 (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.6 U ₀ (0.6 U ₀)	0.7 U ₀ (0.6 U ₀)	0.75 U ₀ (0.7 U ₀)

Lighting Examples

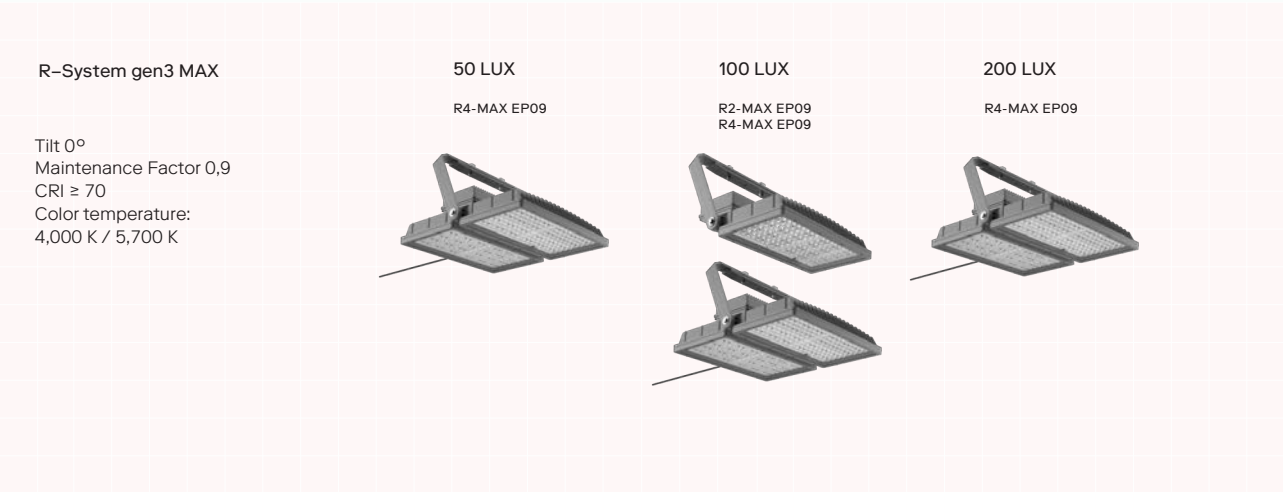
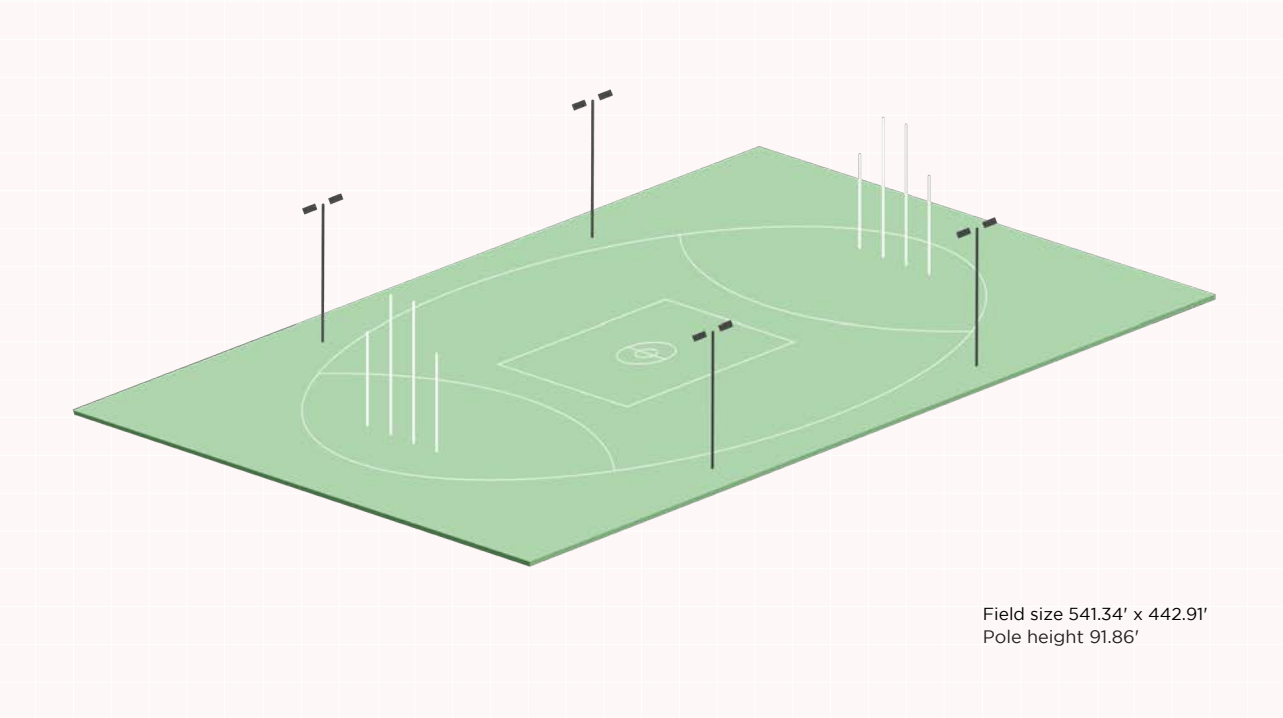
Tennis



CALCULATED LUX LEVEL	202 lx	309 lx	517 lx
NUMBER OF PRODUCTS	4	4	4x R4 + 4 x R2 total
PERFORMANCE	3.13 kW	4.13 kW	7.26 kW
GLARE (STANDARD VALUE)	< 35 GR (50 GR)	< 35 GR (50 GR)	< 35 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U ₀ (0.6 U ₀)	0.71 U ₀ (0.7 U ₀)	0.71 U ₀ (0.7 U ₀)

Lighting Examples

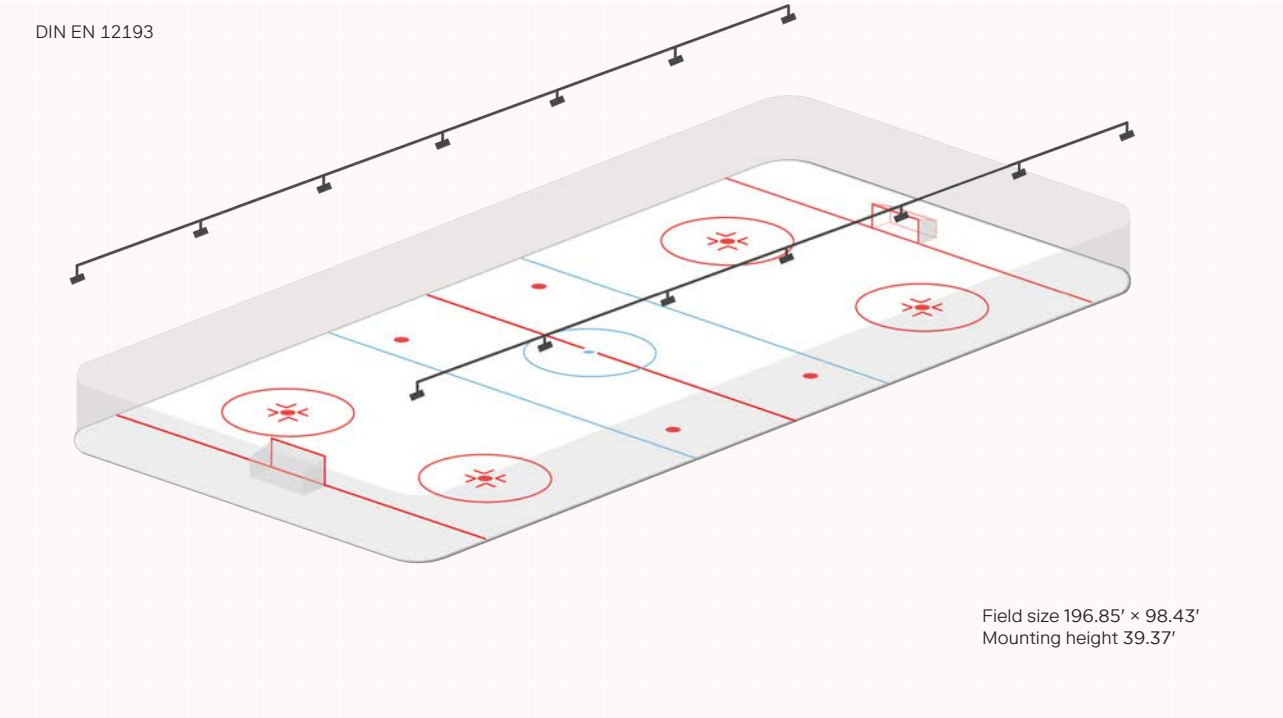
Australian Football



CALCULATED LUX LEVEL	55 lx	100 lx	200 lx
NUMBER OF PRODUCTS	8	4 x R2 + 12 x R4	28
PERFORMANCE	15.4 kW	27.03 kW	54.03 kW
GLARE (STANDARD VALUE)	< 50 GR	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.33 U ₀ (0.3 U ₀)	0.7 U ₀ (0.6 U ₀)	0.7 U ₀ (0.7 U ₀)

Lighting Examples

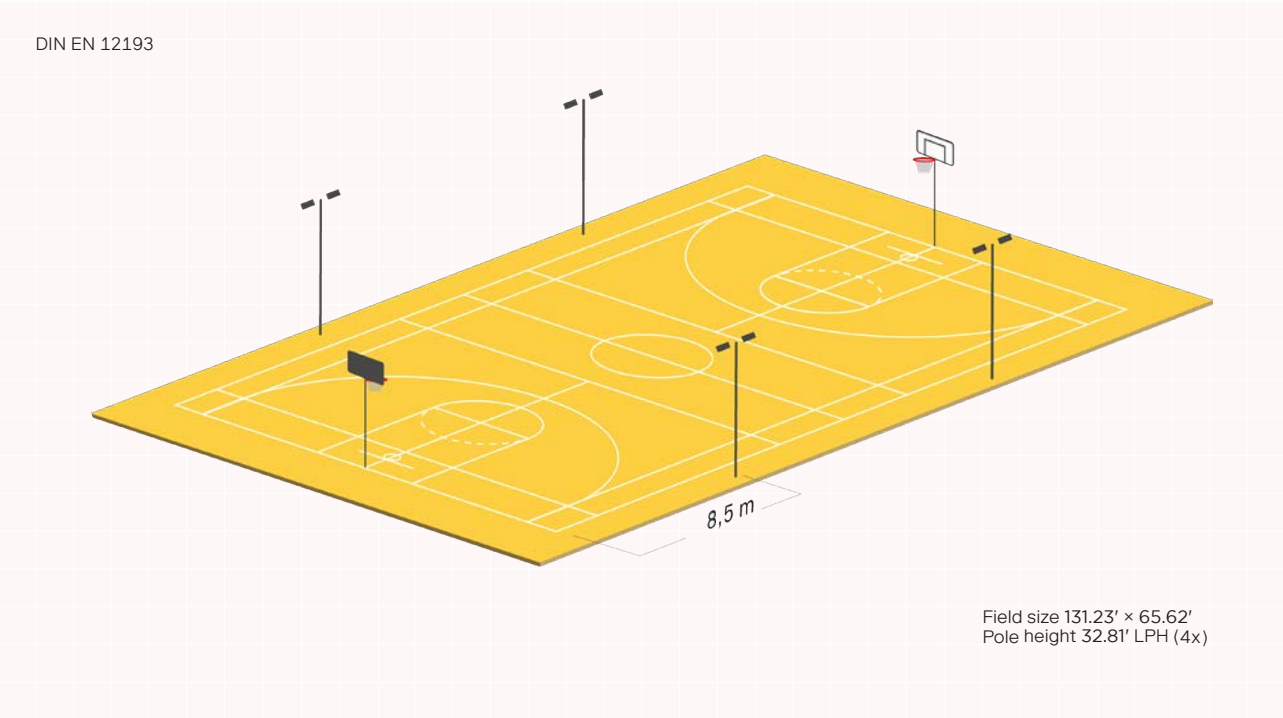
Indoor Ice Hockey



CALCULATED LUX LEVEL	305 lx	500 lx	759 lx
NUMBER OF PRODUCTS	10	16	12 × R4 + 4 × R2
PERFORMANCE	9.65 kW	15.4 kW	20.96 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U ₀ (0.7 U ₀)	0.7 U ₀ (0.7 U ₀)	0.74 U ₀ (0.7 U ₀)

Lighting Examples

Multipurpose Pitch



CALCULATED LUX LEVEL	76 lx	200 lx	501 lx
NUMBER OF PRODUCTS	4	4	8
PERFORMANCE	932 W	3.13 kW	7.7 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U ₀ (0.5 U ₀)	0.7 U ₀ (0.6 U ₀)	0.7 U ₀ (0.5 U ₀)

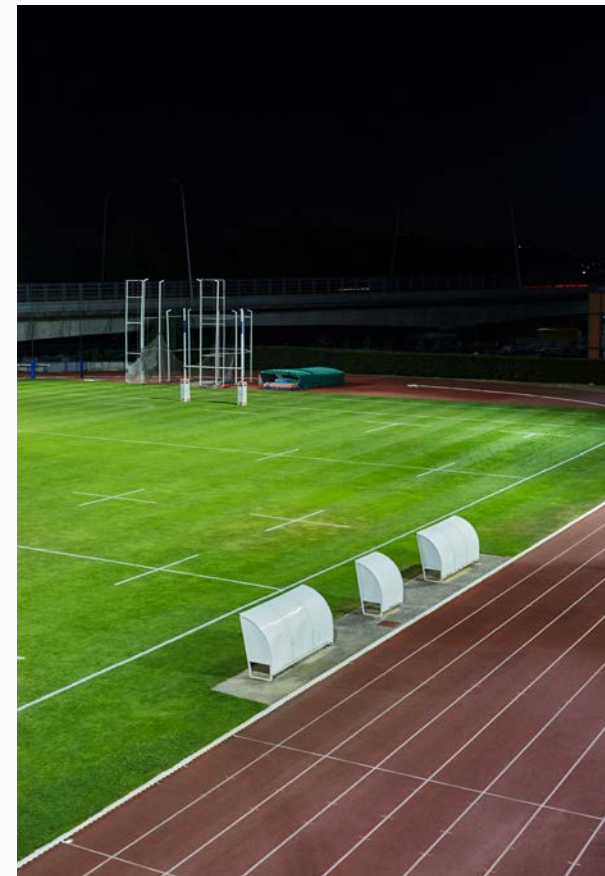
Sports facilities around the globe

“The biggest challenge here was to illuminate several netball fields at the same time, with limited space, in accordance with standards. With ewo’s solution, we achieved excellent results through uniform light distribution in combination with an FCO-compliant effect - it’s a comfortable, natural environment deep into the night.”

Principle Lighting Engineer, Bill Brown Reserve



Brisbane, Australia / Bill Brown Reserve / Netball courts / 2020



Alfortville, France / Rugby and football pitches / R-System gen3 MAX / 2020

“Whether for millions of spectators at high-class sporting events or for a friendly training session at the sports facility next door, our floodlights can be used for all sizes and any sport.”

Stefan Ursch, Technical Sales Support

“The aim of the development of the R-System gen3 MAX was to offer a spotlight with an exceptionally high lumen output – at maximum performance.”

Hannes Wohlgemuth, CEO



Vintl, Italy / Engineering 3M Srl / 2015