

> CASE STUDY

NATIONAL INDOOR ARENA COVERED PITCHES SPORT IRELAND CAMPUS



Quick Facts

- Lighting the state-of-the-art Indoor Covered Pitches at Sport Ireland Campus.
- Providing uniform illumination at a variety of mounting heights.
- Project secured by HoloPhane Europe's lighting partner, Electrical & Allied Distributors.

PARTNER SPOTLIGHT

Holophane Europe's lighting partner Electrical & Allied Distributors, EAD have over 50 years' market experience, in providing a high level of personal service and Lighting Solutions throughout Ireland.

The company utilises the latest LED technology to achieve energy efficient Lighting Solutions for every application and vertical and together with Holophane Europe Ltd, are delighted that its product portfolio provides leading-edge solutions to create the ideal customer choice to help transform any lighting project.



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BACKGROUND

As part of the Project Ireland 2040 initiative, the Irish Government has funded several major projects including the building of new facilities at the Sport Ireland Campus in Dublin. The Campus is home to world-class indoor and outdoor facilities. It also provides valuable amenities to the local community.

The intention is to host international, club and county teams. It will also enable teams to practise year-round regardless of weather conditions.

This new facility includes the construction of two indoor sports pitches under one roof.

CHALLENGE

The new indoor campus encloses a soccer pitch measuring 105m x 68m and a rugby half-pitch measuring 70m x 50m. Both pitches are under one curved roof which is more than 15m above ground at its highest point. Long life and reliability were critical issues to consider.

The challenge was to devise a world class scheme which, at the same time, offered the flexibility for local and county teams to be able to practise. The pitches also had to conform to FIFA and World Rugby standards. The pitches are also approved by the GAA, the Gaelic Athletic Association.



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THE SOLUTION

At the design stage, it was decided that the lighting for the pitches should be provided by Holophane due to their long history and extensive experience of indoor sports lighting.

Both pitches are designed to achieve a maintained illuminance of 500 lux with a uniformity of 60%.

Due to the curved roof, the luminaires were mounted at heights varying from 6.8m to almost 15m above the synthetic turf playing surface.

For this reason, the Haloprism high bay was chosen as the best luminaire to illuminate the huge arena because it is available with five different distributions. They range from a focused narrow beam with a punchy 0.7:1 Space to Height Ratio (SHR),

to an extensive wide beam version with a SHR of 2.2:1.

The result is that uniform illumination can be achieved whatever the mounting height.

The torus shaped, recyclable glass refractor with PrismaLED technology gives improved volumetric illumination. The result is that balls in flight and high up in the air can be clearly seen. The refractor optics also mean that there is minimal glare to the players. The whole space appears much lighter and airier.

The 4,000K LEDs have a colour rendering index, CRI of >80 which means that the colours of the teams' strips appear bright and easily recognised.

Also, of importance with luminaires at such a height, is that the rated life of the LED module used in the Haloprism is 100,000 hours (L70B50@30C) meaning that they last six times longer than a typical discharge lamp conventionally used in many large indoor arenas.

A total of 190 Haloprism luminaires are installed using a combination of 60,000 lm, 475W and 30,000 lm, 210W versions.

The lighting design was carried out by Holophane's lighting design team. The contract was won by their distribution partner in Ireland, EAD, who liaised with the local contractors for the installation.



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www.holophane.co.uk



T +44 (0) 1908 649292

F +44 (0) 1908 367618

F Intl +44 (0) 1908 363789

E info@holophane.co.uk

Holophane Europe Limited
Bond Avenue, Milton Keynes,
Buckinghamshire MK1 1JG
United Kingdom