



**THORN**  
LIGHTING

**LIGHT THAT  
STIMULATES MINDS**

**EDUCATION LIGHTING  
UNIVERSITIES**



Prifysgol Cymru  
Y Drindod Dewi Sant  
University of Wales  
Trinity Saint David

# **LIGHT THAT STIMULATES MINDS**

## **DID YOU KNOW?**

**Globally, 59 million children of primary school age are denied education and almost 65 million adolescents don't have access to a secondary school. For those lucky enough to have access to education, natural and artificial light can improve learning rates by 26%.**



STEMLab

WWE MAKE THE WORLD



West Park Teaching Hub

# EDUCATIONAL BUILDINGS

## STIMULATING LEARNING FROM THE OUTSIDE-IN

### ✓ BEST PRACTICE

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#### DELIVERING ON LIVED EXPERIENCES

Preparing our learners for the big wide world is multi-faceted. We need to create inspiring environments at the exact time that learners are asking for inspiration. From the inside out, light can repeatedly reaffirm learner engagement.

#### SUSTAINABILITY

Whilst creating a space that is optimised for learning and engagement, we also have a responsibility to deliver energy efficient solutions that ensure the environmentally conscious operation of our education hubs. Our unique NightTune technology also ensures maximum energy savings in external spaces, whilst significantly lowering light pollution, improving safety and being sympathetic to local, nocturnal ecology.

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Recommended solutions



URBA DECO



PLURIO



URBA BOLLARD



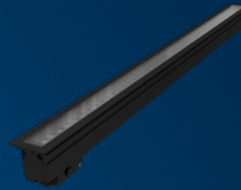
PIAZZA



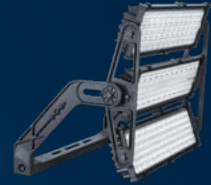
PLAZA R



CONTRAST



BLADE



ALTIS



# BUILDING SURROUND & PATHWAYS

## FEELING AT HOME IN OUTDOOR AREAS

### ENHANCING SPACES

For many students, the university campus is their home. Therefore, lighting needs to make them feel safe, providing secure walkways between buildings. But lighting should also maximise energy saving targets across the site.

By lighting up the architecture of the various buildings around the campus, you accent the identity of a specific educational brand. People feel pride, a sense of belonging and most importantly, they feel part of something big.

### LIGHT WHERE IT'S NEEDED

It's important that a balance is struck between the value that a great lighting scheme delivers whilst responsibly managing light spill. Our ONE technology balances this need through a clean beam design, a 5D lens and seamlessly connects the end user (this could be maintenance teams or security staff) with an engaging interface for an additional layer of active engagement.





Products used in the scene:



Other recommended products:



# OUTDOOR SOCIAL SPACES

## ENHANCING THE LIVED EXPERIENCE

### LIGHTING LIVES

How learners engage with their surroundings is constantly developing. Outdoor spaces are social. They're co working and independent learning environments. As such, it's the light that is essential to illuminating ideas. Simple controls can effectively manage the lighting needs, the energy efficiency goals and the needs of the local wildlife.



### Products used in the scene:



### Other recommended products:



# EXTERNAL TRANSIT ZONES

## SAFE WAYFINDING

### ENGAGING SPACES

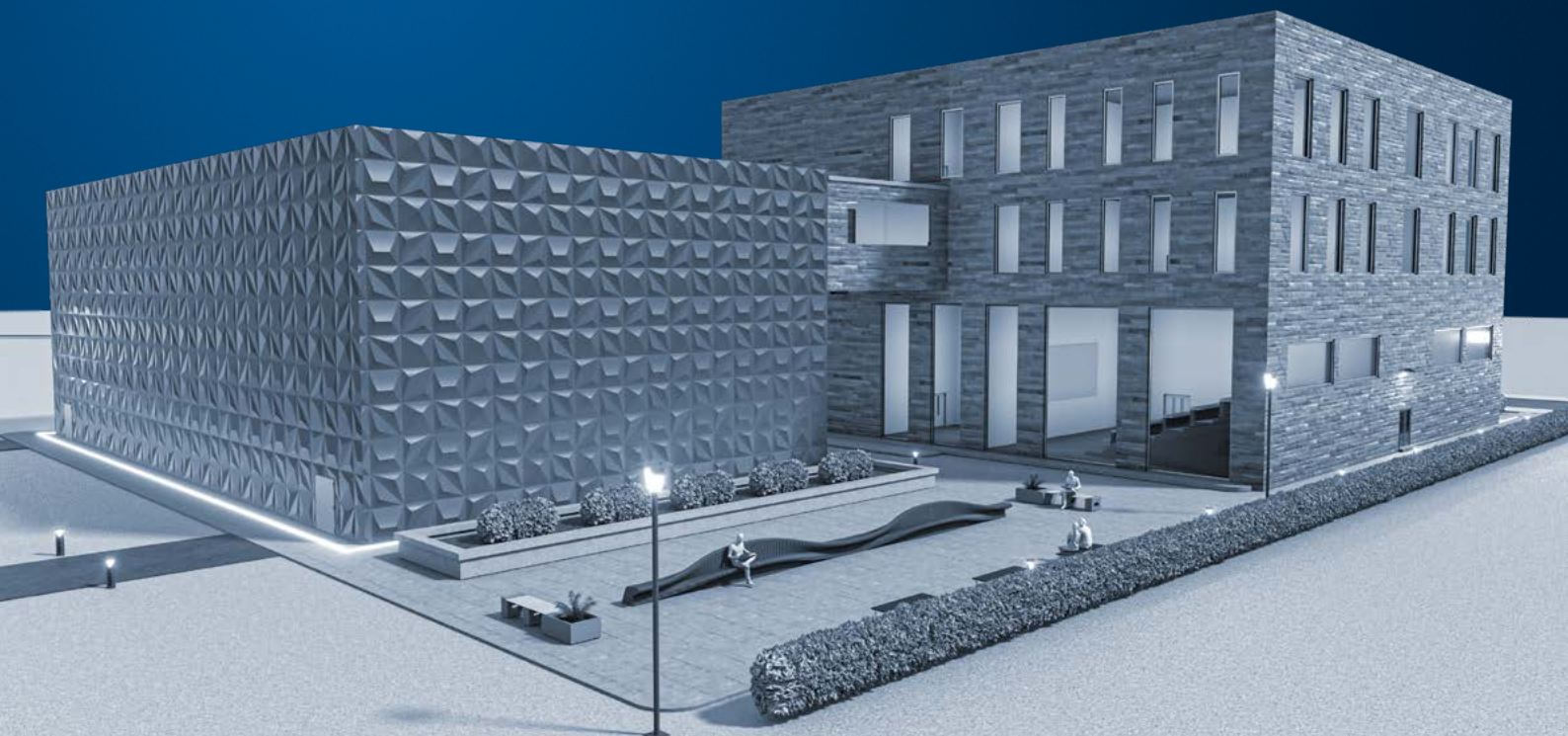
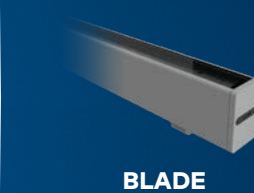
Our lighting solutions are designed to offer the right lighting levels with efficiency, safety and engagement in mind. Lighting the spaces most commonly used for wayfinding helps illuminate the surrounding architecture at the time light is most needed.

It's a further nod to the feeling of safety and belonging which we feel when we're experiencing a well illuminated space.



Products used in the scene:

Other recommended products:



# ENTRANCE LOBBY

WHERE LEARNING BEGINS... EVERYDAY

## ✓ BEST PRACTICE

### IMPACT LIGHTING

Engaging entrances aren't just a tool for attracting learners – it's a consistent re-confirmation that the right educational journey is being had. Natural light levels are often high here, but the artificial elements

need to enhance the space whenever natural light is lacking. An intelligent control system, in line with EN12464 standards can ensure that sustainability credentials can be aligned to lighting needs.

#### Products used in the scene:



#### Other recommended products:



# LIBRARY AND CANTEEN

## CO-WORKING AND INDEPENDENT LEARNING

The requirements of co-working areas are increasingly multi-faceted. Communities engage in these spaces and the lighting solutions here

need to suit both short and long term work assignments. A comfortable lit effect, especially in regards to glare management is essential here.

Products used in the scene:



# AUDITORIUM

## THE ARCHETYPAL LEARNING SPACE

### ENLIGHTENING SPACES

Engaging learning requires focused minds. However, sometimes, a uniform illumination structure can leave us feeling a bit flat. By introducing premium optic technology alongside a strong controls solution in line with EN12464, you can balance a comfortable lit

effect with drawing eyes to where they need to be. By grouping fixtures you can create different lighting scenes for different educational tasks whilst saving energy and when you introduce variable colour temperatures, we can ramp up engagement even further.



# KEY CONSIDERATIONS

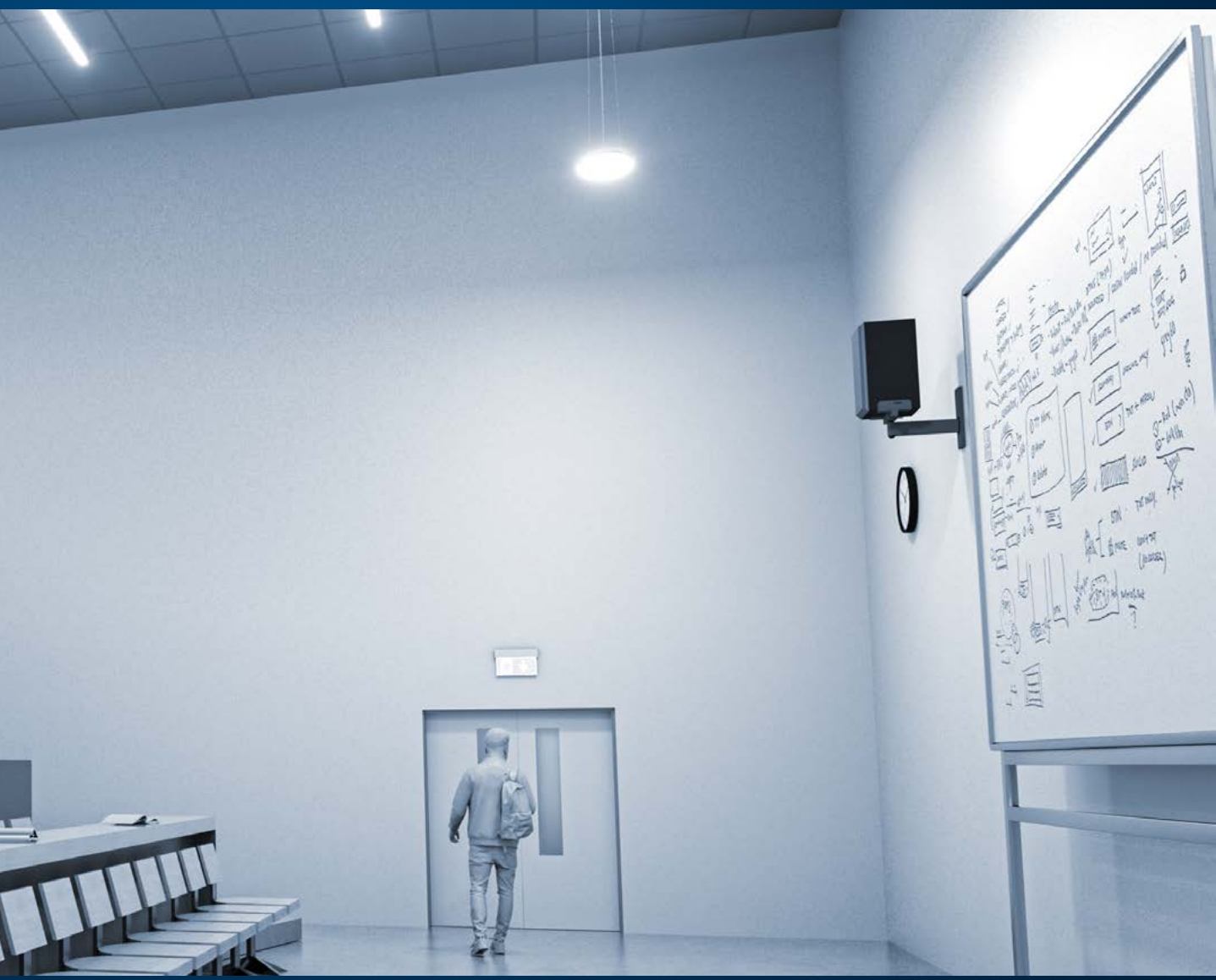
- 01 CYLINDRICAL ILLUMINANCE**  
To aid learner to educator communicatio.n
- 02 CRI90+**  
To enhance colour recognition and balance the right light vs the installed efficiency.

- 03 VERTICAL AND HORIZONTAL ILLUMINANCE**  
To highlight all learning surfaces around the seminar room or lecture theatres.
- 04 EN12464**  
Controlling the light where needed.
- 05 GLARE CONTROL**  
Maximising learner comfort.

## Products used in the scene:



## Other recommended products:



# CLASSROOMS

## THE HUB OF LEARNER ENGAGEMENT

### LIGHT WHERE YOU NEED IT

As the role of the lecture hall and seminar room evolves year by year and learner by learner, we need to ensure that we have a lighting solution in place that can keep up. A fundamental part of this is getting the cylindrical illumination right. We understand the importance of illumination of vertical surfaces from EN 12464-1.

Not only is this best practice, it is something that users of the space are aware of (especially if it's not done correctly).

### VARIABLE LIGHT EFFECTS

To provide a dynamic learning environment, we recommend Variable Colour Temperature (VCT) solutions. By adjusting both output and colour temperature of the light throughout the day, these solutions help optimise focus. The right light is especially important in creating an ideal environment for visual learners. By varying the colour temperature of a space whilst implementing a higher quality of light (CRI90+, we're including a wider variety of learners in our thought process when illuminating university learning environments.







Products used in the scene:



Other recommended products:



# OUTDOOR SPORTS

## HEALTH, WELLBEING AND LEARNING

### LIGHTING LIVES

More than ever before, young people are prioritising their health and wellbeing. This makes the outdoor sporting venues such as tennis courts and football pitches an increasingly frequented space. This is where grouping lighting solutions through an intelligent controls system can really enhance the operability of the space as different sports are practiced and perhaps not all luminaires are needed at all times.



Products used in the scene: Other recommended products:



**ALTIS**



**CHAMPION**



**AREA FLOOD**



# SPORTS CENTRE

## HEALTH, WELLBEING AND LEARNING

### UNIFORM ILLUMINATION

Sports centres are well used morning, noon and night. Especially on university campuses where students and staff can access facilities in between

lectures and activities. As a result of this high usage, sports centres require light levels that are uniform throughout day and night - another reason why EN12464 highlights the importance of lighting controls.

## KEY CONSIDERATIONS

01

### RUGGED EQUIPMENT

Luminaires and fittings must be able to withstand the force of impact of sports objects.

02

### PREVENT FLICKER

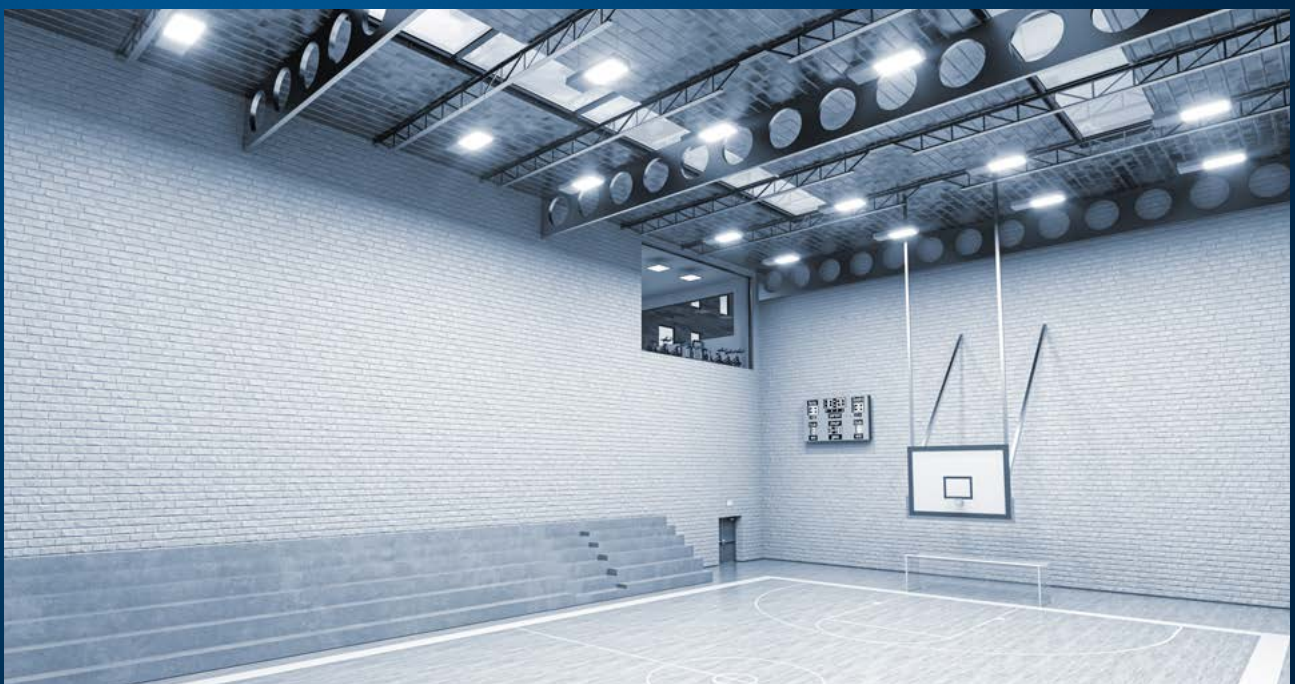
With a certain competitive element being in play for most sporting activities, it's important that light flicker is well within parameters to avoid unnecessary distraction.

03

### EMERGENCY LIGHTING

Factors determining emergency lighting needs include spectator seating, and positions of evacuation routes.

### Products used in the scene:



# OUTDOOR

## A SUMMARY OF LIGHTING SOLUTIONS

### URBA DECO

Smart, sophisticated architectural urban lighting



### PLAZA R

Perfect for illuminating architectural features



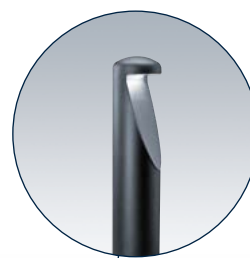
### CONTRAST

Emphasises modern architecture and urban environment



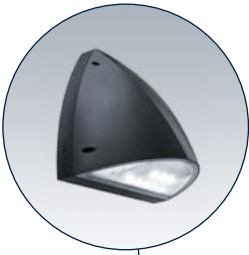
### URBA BOLLARD

Stylish yet robust bollard



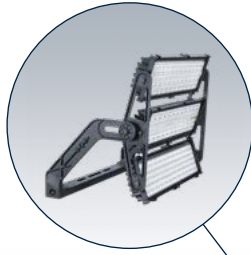
**PIAZZA**

Lighting with minimal light pollution



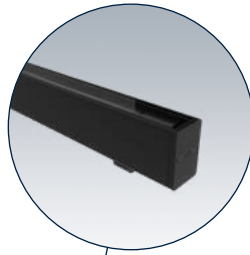
**ALTIS**

High power LED floodlight for sports



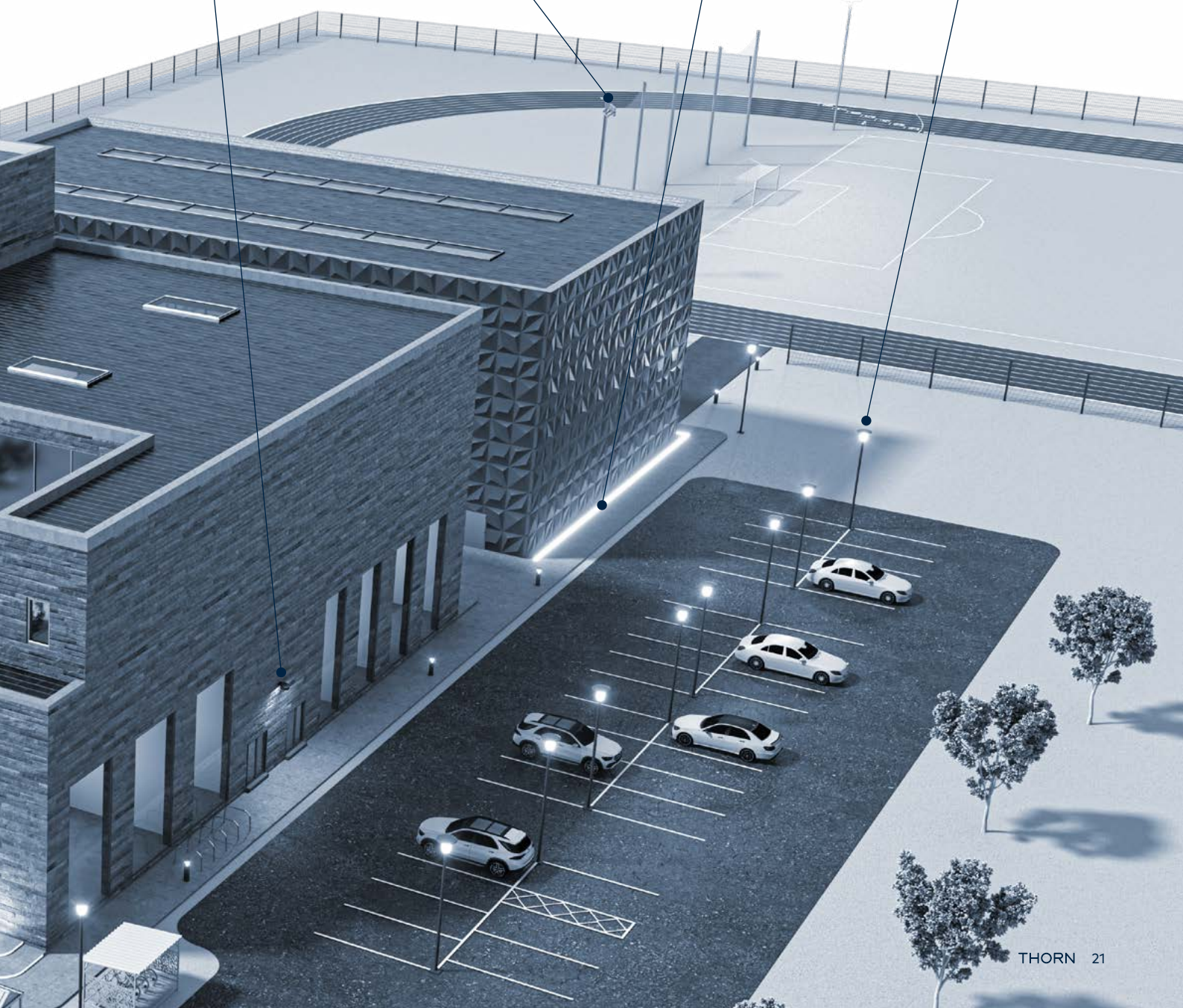
**BLADE**

Single colour or RGBW solution for wall grazing



**PLURIO**

High performance with obtrusive light avoidance

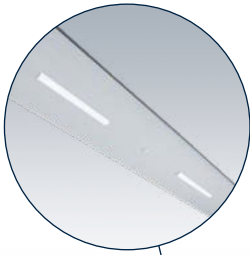


# INDOOR

## A SUMMARY OF LIGHTING SOLUTIONS

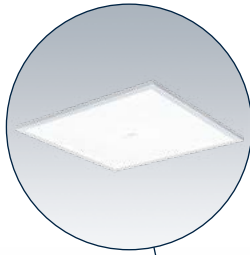
### ARENA SYMPHONY

Solutions for light and sound



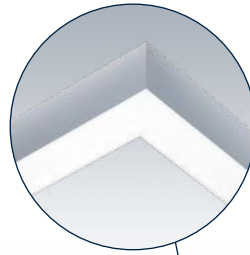
### OMEGA PRO

Immersive variable light control



### EQUALINE

The right solution to fit any space



### CHALICE PRO

High performance, exceptional efficiency



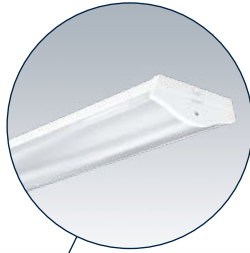
**NOVALINE STYLE**

Contemporary  
versatility and  
functionality combined



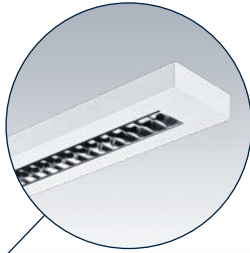
**COLLEGE**

Verstile curved profile  
linear luminaire



**PUNCH**

Classic simplicity



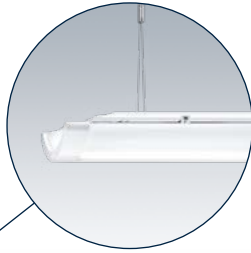
**HIPAK PRO SPORT**

Hi-bay solution design  
for sports



**IQ WAVE**

Lighting for the task,  
space and face



# LIGHTING CONTROL SOLUTIONS

## RIGHT LIGHT, RIGHT TIME

### WIRED LIGHTING CONTROLS

If you have a wired control solution in place already, then a simple upgrade can enable a world of features to enhance teaching. Control groups of lighting fixtures to reflect the learning activity, maximise energy savings through daylight mirrored dimming and connect to a simple switch for flexible and simple scene switching.

### WHY GO WIRELESS?

Simply put, controlling your fixtures should not only be realistically accessible to those with an existing wireless infrastructure in place. Here at Thorn, our controls experts and BasicDIM solution can enable luminaire zoning, Variable Colour Temperature, daylight dimming and intelligent presence detection without the need for additional cable runs.



### INTELLIGENCE, SIMPLIFIED?

Enhanced energy savings is just one of many benefits to installing affordable lighting controls. However at Thorn we continually aim to deliver the best of both worlds. PIR systems like MovU mean that you can balance your energy saving targets with security illumination. By maintaining a lower level light output through the night you, exponentially lower energy consumption whilst still aiding CCTV through enhanced light levels.

When linked to our NightTune technology, you can make automatic adjustments to the level of light emitted by a light fitting, as well as its colour temperature, to suit the exact time of night and level of traffic. Perfectly balancing your need for light with the needs of the local ecology.





# EMERGENCY LIGHTING

## A SAFE WAY OUT

Our Voyager range of emergency solutions are designed, manufactured and tested to meet the latest European standards regarding safety and electromagnetic compatibility.

Our intelligent utilisation of LiFePO<sub>4</sub> technology also significantly reduces parasitic load as LiFePO<sub>4</sub> technology means fewer charge cycles once installed.

All emergency lighting should be specified and designed in accordance with local and/or national regulations

EN 60598-1  
EN 60598-2-2  
EN 62471  
EN 55015

LED emergency luminaires  
Photobiological standard  
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment  
Graphical symbols. Safety colours and safety signs. Registered safety signs.

ISO7010



VOYAGER FIT



VOYAGER BLADE



VOYAGER SIGMA



WE  
MAKE  
LIGHT  
WORK





# THE BENEFITS

## OF WORKING WITH THORN

**01**

### OVER 90 YEARS' EXPERIENCE

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Yes, we really have passed the 90-year mark! Thorn has had nearly a century to develop its unique knowledge and expertise. And the best part is that we can build on this knowhow to make sure that we are always ahead of the game with the latest technology, the most reliable services and a price that works for everyone.



ELECTROMAGNETIC COMPATIBILITY (EMC) TESTING LABORATORY

**02**

### CONSTANT RESEARCH AND INNOVATION

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Thorn has been at the forefront of lighting technology for decades, and continues to push the boundaries. Our investment in R&D and innovation aims to bring customers the very best performance, thanks to the latest advanced engineering in light and electronics, with in-house development.

**03**

### EXTENSIVE TESTING AND CERTIFICATION

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Thorn's products undergo demanding tests for compliance, safety and performance. With Thorn, you can be sure that your lighting product does what it says it will do, meets all relevant standards and regulations, and comes with a guarantee of quality and safety.

## 04

### ENVIRONMENTAL PRODUCT DECLARATION (EPD)



At Thorn we provide EPDs as a standard service. The EPD for each specific product details its impact on the environment throughout its lifecycle. The EPDs are based on EN ISO 14025 and EN 15804. The information given by an EPD is relevant not only for environmental certifications such as LEED, BREEAM or ÖGNI. EPDs form the data basis for an environmental building assessment.

## 05

### BEST-IN-CLASS OPTICS

Thorn's product range benefits from our class-leading optical systems. They offer several precision light distributions to fulfil various requirements, with excellent uniformity and glare control.



## 06

### QUALITY FROM THORN'S SPENNYMOOR FACTORY

Thorn's products go through intensive quality manufacturing, assuring the best processes to develop better products all the way. In addition, we are one of the first companies in the UK to be certified to ISO 14001 – the standard for environmental management. In addition, we have successfully been recommended for certification to ISO 50001:2018 for energy management. Our factory at Spennymoor in the UK has achieved a reduction of approximately 25% in significant energy uses and 14% in electricity use compared to the previous year.

## 07

### FIVE YEAR GUARANTEE

All Thorn products carry a five year guarantee.



5 YEAR  
GUARANTEE

## 08

### ZUMTOBEL GROUP MEMBER

The Zumtobel Group is an international lighting group and a leading supplier of innovative lighting solutions, lighting components and associated services. With its core brands, Zumtobel, Thorn and Tridonic, the Group offers its customers around the world a comprehensive portfolio of products and services.

# GET IN TOUCH

[www.thornlighting.com/en/solutions/case-studies/education](http://www.thornlighting.com/en/solutions/case-studies/education)

WE  
MAKE  
LIGHT  
WORK

05/2022