

# Insight

## Showtime in Frankfurt

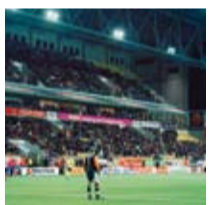
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Thorn showcases new technologies and ideas at 2006 Light + Building

### Major Projects



**Around the world**  
What links sports and leisure facilities, parks and bridges? International expertise in lighting (page 2)



**Scintillating Soccer**  
Borås Stadium: Thorn scores early as football fever sweeps Europe (page 3)

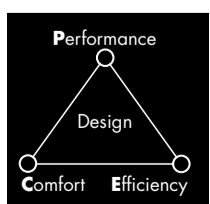


**A breath of fresh air**  
Air handling luminaires are a breath of fresh air at London's Cardinal Place development (page 3)

### Lighting Application



**Lightlinks**  
Encouraging partnerships between cities to improve urban lighting (page 4)



**Quality in Lighting**  
PEC: Performance, Efficiency and Comfort (page 4)

Yes - it's a look into the future from Thorn at the world's biggest lighting show - Light + Building at Frankfurt, April 23-27 - where the company has a real show-stopper stand (Hall 2, Stand 31) just brimming with the very best in fabulous, new lighting ideas! And, ideas that deliver performance, efficiency and comfort.

There's some terrific technical advances for 2006. Among them are:

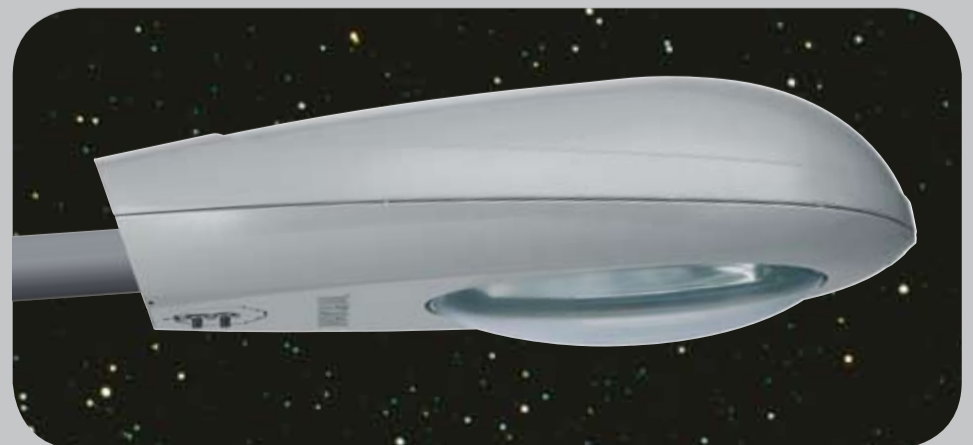
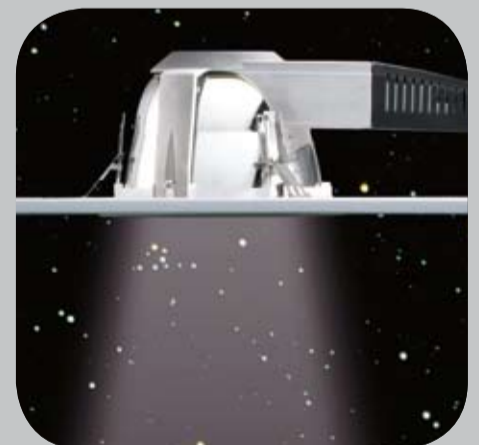
**Orus** - a unique road lighting luminaire with an innovative 'Flat Beam®' optical system allowing it to be mounted at low level, only 0.9m high! Ideal for lighting roads on bridges, near airports and those areas facing extreme weather conditions or obtrusive light concerns.

**Oracle** - few aluminium lanterns combine such a high degree of advanced performance and modern styling. And it's all down to precision optics. There is a choice of 'Comfort', 'Access' or 'Wide' light distributions, the former being dedicated for EN13201 and the latter two having double IP66 protection. With a body able to incorporate future innovations, 25 lamp options including CosmoPolis, hinged canopy and an aerodynamic shape in two sizes, Oracle moves road lighting up a gear.

**Cruz** - a comprehensive and technical low energy downlight. Notable benefits include a ingenious quick-fix method and optics giving high LOR's with excellent light control. With wattages ranging from 18-150W, over 10 compact sizes and a wide selection of attachments Cruz is suitable for many areas.

**Graffiti** - spotlights available in three sizes with a wide range of efficient lamps and wattages, plus stepless adjustable beam angles, this range is a desirable and versatile display lighting tool and one with the looks to match today's interiors.

In addition to everything that's new from Thorn, the varied and comprehensive range of existing luminaires are displayed, including Concavia high bays, Champion low glare sports floodlights, Voyager Elite emergency signs and Rivers bulkheads. Watch us put the 'light' into Light + Building!



## Around the world

The best sports centre in Northern Europe...  
A peaceful park in Sydney...The longest suspension bridge in Finland...  
What links them all? Thorn does!



### Flying High

The recent upsurge in attention to health and fitness has not only created substantial demand for sports and leisure facilities, it has demanded greater attention to the adequacy and efficiency of the equipment - whether it be specific sports equipment or facilities to improve atmosphere while keeping overheads to a minimum. The Grøndal Centre in Vanløse, near Copenhagen in Denmark, has recently undertaken such a transformation. The centre boasts facilities for 40 sports, from bowling and boxing, through squash and shooting, to table tennis and trampolining. Other state-of-the-art support facilities include conference and meeting rooms, a fitness suite and a cafeteria. They ensure that the Centre will fulfil its role of being the biggest and best in Northern Europe.

### Burwood Park gets a lighting facelift

Lit by Victorian style post-top lanterns the footpaths at Burwood Park, Sydney, present a picture of peace and tranquillity. That's one reason why Rolly Lawford, Senior Manager City Services at Burwood Council chose the EP145; the lantern improves safety, limits obtrusive light and brings out the ambience of the park in both daytime and evening. The scheme is also acclaimed for energy saving as using 42W compact fluorescent lamps, rather than 80W mercury lamps, gives savings of around 50%. Dimming to 60% via DALI ballasts further cuts energy consumption. The new lighting has already received high praise from people that really matter - the local community. Electrical engineers were Ove Arup Pty Ltd.

### Brighter bridge boosts tourism

Since the sporting activities require quick reactions, visual quality is critical and good colour rendering and a high level of illuminance were clear priorities. One further requirement is that the Centre wanted to minimise the number of different product variants and have a single, dedicated source of supply. The performance and colour of Titus Sport (4 x 49W) and Punch (2x58W) fluorescent fittings was investigated and found to be ideal for the tasks in hand. For the centre management, the advantages are many as the lighting provides a safe, cost-effective installation with low energy and maintenance costs.

Southwest of the city of Turku, at the foot of Finland, lies a chain of islands, known as Saaristomeri (the Southwestern Archipelago). Forming the gateway from the mainland to the archipelago is the Kirjalansalmi suspension bridge: Finland's longest spanning 220m. The bridge, built in the sixties, has been refurbished with Thorn Finland playing a major role. Apart from providing a major traffic link between Kaarina and Parainen, the bridge now forms a striking image at night to reinforce the efforts towards developing the area's tourist value. Contrast architectural floodlights are used to expose and link the dramatic form of the bridge, with the towers and main cables highlighted by cold and warm white metal halide light respectively. To meet the needs of conservation the floods are fitted with low glare barn doors, as well as wire guards to ward off vandals and passing snow ploughs!

The Centre's investment has been rewarded, with the public already making greater use of the facilities - over 3,000 people now visit daily.

Lighting design: VALOA design, in conjunction with the Finnish Road Administration.



## A breath of fresh air

Air-handling luminaires chosen for new London landmark offices



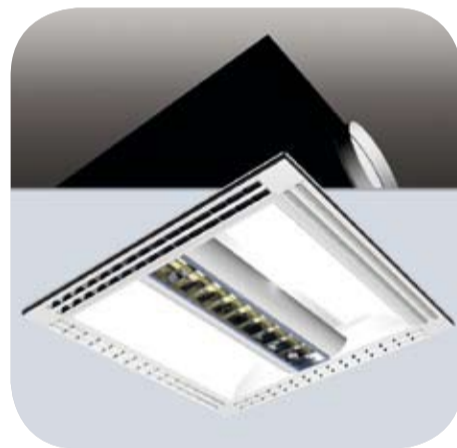
Air-handling luminaires by Thorn are an important feature of the Cardinal Place redevelopment in central London. Land Securities has created a new vision for Victoria; transforming a brownfield site into an eye-catching mixed-use development of offices, retail and restaurant units and generous public spaces.

Designed by EPR Architects, this exciting and innovative scheme, includes the revitalisation of Esso and Glen Houses (now known as 80 and 100 Victoria Street) and 16 Palace Street. 100 Victoria Street is characterised by its tapering 'nose', which makes maximum use of the available space without overshadowing adjacent buildings. The trio of buildings deliver 50,750m<sup>2</sup> of high-quality office accommodation.

The overall lighting design philosophy was to create a special indirect/direct recessed luminaire, with an air extract capability to blend with the ceiling system. Working alongside Trox, a leading supplier of air distribution and comfort conditioning systems, special 750mm x 750mm luminaires, employing 14W T5 lamps, were produced, which integrate with the perforated metal tiled ceiling. These incorporate slots or plenum boxes for air extract and supply respectively. One further refinement was adding flying leads and plugs to ease installation.

The lighting, which is in constant use within the offices, is pleasantly subdued with no glare and is engineered to provide a uniform 350-400 lux. Low energy recessed Corsa downlights supplement the scheme, which also provides SelfTest emergency lighting coverage. Efficient lighting was a requirement of Land Securities in its aim to provide a first class working environment and the buildings have been awarded a BREEAM 'very good' rating for energy efficiency (12W/Sq m).

Electrical services were installed by T.Clarke and Briggs & Forester.



## Scintillating Soccer

Football floods score at Borås

At a time when football fever is in everyone's mind, more and more of Europe's top soccer clubs - and a number further afield - are switching to Thorn's Mundial floodlights. The system is ideal for colour TV: it also improves spectator - and player - viewing. This impressive picture shows the new floodlighting scheme at IF Elfsborg's football ground at Borås Stadium in Sweden. The most popular and modern football stadium in the country it caters for 18,000 spectators (10,000 seated) and is also used for concerts and

events. To reduce installation costs the 142 floodlights, which employ 2kW metal halide lamps, are mainly side mounted, in two rows, along both sides of the main stands. Thanks to the floodlights performance the stadium is lit to an average 1700 lux (horizontal) and 1000 lux (vertical) for CTV cameras, with excellent uniformity. Action is brilliantly visible, from one goal to another.



# Thorn sponsors urban lighting competition



Thorn is the sponsor of a major urban lighting competition which has been launched by the Lighting Urban Community International Association (LUCI)-an international, non-profit forum that brings together over 40 cities around the world to promote light as a major tool in urban life, architecture and layout.

'LightLinks' challenges cities in low and high-income countries to partner together to prepare an urban lighting project for an area in the former city. It rewards the winning scheme with lighting equipment, expert design advice and LUCI membership benefits.

Commenting on the launch of the competition Christophe Richon, Product Marketing Director - Outdoor said 'both LUCI and Thorn hope that this award will help increase awareness of the role light can play in transforming our towns and cities and the contribution it can make to economic and social development. Encouragement of excellence in urban lighting on a global scale is a key objective of Thorn'.



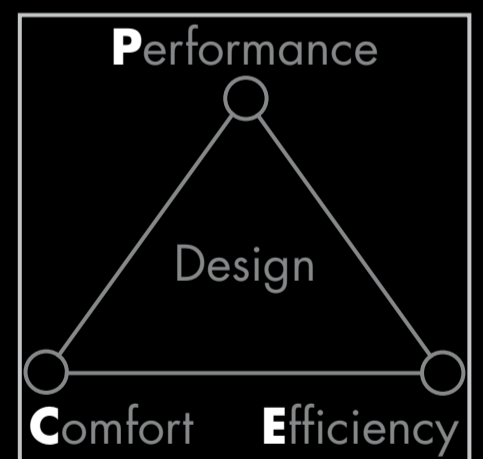
## Performance + Efficiency + Comfort = Quality Lighting

Thorn's aim is to improve the quality of life by lighting people and places. Supporting the mission statement is the recently introduced PEC Programme which provides the framework for the company to deliver efficient and reliable lighting concepts and customer driven services contributing to a healthy and comfortable environment.

The programme is based on the principle that three main factors influence 'quality' in a lighting installation and have the potential to affect the quality of life and our natural environment, either

positively or negatively - Performance, Efficiency and Comfort (PEC). Performance is concerned with providing the best visual effectiveness. Efficiency relates to the effectiveness of the solution in minimising the use of energy, CO<sub>2</sub> emissions, spill and obtrusive light. Comfort is a more subconscious factor relating to the ability to give people satisfaction and stimulation in all areas such as the workplace, town centre or leisure facility. PEC also includes the need for the luminaires, whether switched on or not, to have a satisfactory appearance.

The relative importance of these attributes varies from one application to another. The objective is not to develop a new design method, but to use well founded criteria and establish their interrelationship with people in the context of today's lighting conditions. The programme can be developed for any lighting themes, periods and applications, outside or inside.



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