



Westfield London, UK

– lighting up an icon

With 150,000 square metres of floor space, over 280 retail outlets and 50 eateries, Westfield London is certainly an icon of the UK's retail landscape.

As well as being Europe's largest urban shopping centre, Westfield London has been designed to incorporate innovative and sustainable technologies and an 'everything-under-one-roof' approach to shopping and entertainment.

With the potential to accommodate 20 million visitors a year, the shopping centre demanded a sophisticated lighting control system with wide ranging capabilities.

The Philips Dynalite solution was to install a state-of-the-art lighting control system offering superior functionality and flexibility, which has taken shopping centre lighting to a new level.

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Client requirements

First and foremost, Westfield London asked for a lighting control system that would satisfy shopper expectations and enhance the shopping experience. Second, it needed control flexibility and diagnostic capabilities.



Lighting such a large area is a challenge in itself and creating ambient lighting within different shopping, dining and entertainment areas of the centre added to the complexity of the project.

Quick and easy configuration

The ability to quickly and easily configure lighting schemes in individual zones of the centre was also critical and called for a lighting control system with a high degree of functionality and flexibility.

Importantly, the operation and management of the lighting for the entire centre needed to be straightforward. The lighting control system is readily integrated into the local area network (LAN), allowing for more flexible network solutions.

Another key element of the lighting project was to deliver a lighting control system with built-in energy management features to match the centre's sustainability policy.

The Philips Dynalite solution

Working with electrical contractor T Clarke, the Philips Dynalite team delivered an advanced state-of-the-art automated lighting control and energy management system that has enhanced Westfield London as an iconic shopping destination.

Using a combination of light sources, including natural light, the lighting control system allows staff to quickly and easily tailor lighting schemes to individual retail zones and event areas as well as to create special themed days such as Christmas.

A major requirement of the project was to develop a gateway that would interact with Westfield London's highly secure LAN. Philips Dynalite's ethernet gateways allowed full integration between the two systems.

EnvisionManager – intelligent software that makes complex functions easy

The lighting control system is configured and managed by EnvisionManager software via a PC located in the central management suite, which has made the operation and management of the centre's 5500-plus lighting control channels extremely straightforward.

The intelligent software and graphical interface allows staff to identify every light, circuit and channel across the centre and car park and make live changes with a click of a mouse.

A further advantage of the system is its WiFi functionality, which allows Westfield staff to configure lighting schemes and make adjustments on the spot via a hand held device from the shopping floor.

A clever feature of the system is its ability to identify faults such as circuit trips or failures and send an alarm to the head-end PC and its operator, which streamlines maintenance and alerts to problems.

The automatic programming of lighting schemes around the centre's trading activity means lighting only comes on when and where it is needed. The system also gradually takes lights offline to coax shoppers towards the exits at the end of trading which controls the flow of people in the centre.

The system also incorporates daylight harvesting to control lighting levels in areas of the shopping centre where natural light is available, which saves energy and money. Essentially, the system detects lux levels and transmits them to a controller that automatically dims artificial lighting according to the natural light levels available.

Products and technology used

Westfield London features a range of luminaire varieties, including Philips LED lighting throughout the atrium and exterior, providing energy efficient architectural illumination.

A linked network

The scale of the shopping centre means power and control are distributed to 90 'cores' – a series of control hubs, each housing a range of Philips Dynalite dimming, ballast and relay controllers to operate lighting in the immediate area.

All components are linked via Philips Dynalite's sophisticated peer-to-peer communications serial bus network, DyNet (one per core). Together, the Philips Dynalite controllers are able to accommodate various dimming and switched lighting applications.

There are 90 DyNet networks that are integrated with the central LAN via Philips Dynalite TCP/IP network gateways.

Westfield London's 5500 plus control channels are configured and managed using Philips Dynalite's EnvisionManager MapView site management software.

“ The Philips Dynalite advanced site-wide automated lighting control system has enhanced the shopping experience at Westfield London. ”

Key client benefits

Westfield says the lighting system has delivered on all counts – from an operational, diagnostic and energy management perspective.

The lighting control system and the sophisticated graphical interface has made an extremely complex system of over 5500 lighting control channels easy to operate and manage.

With so many of the processes automated via EnvisionManager, operators can easily configure single-click buttons to execute one or a sequence of lighting commands.

Daylight harvesting – saving energy and money

The system's use of daylight harvesting – the dimming of artificial lighting when natural light is available – has helped the centre to save energy and money.

Incorporating a powerful troubleshooting tool within the system to detect and alert operators to faults has also streamlined the maintenance and operation of the building.

An enhanced shopping experience

Overall, the lighting control system has effectively enhanced the shopping experience and has set the benchmark for Westfield's future shopping centre projects.



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