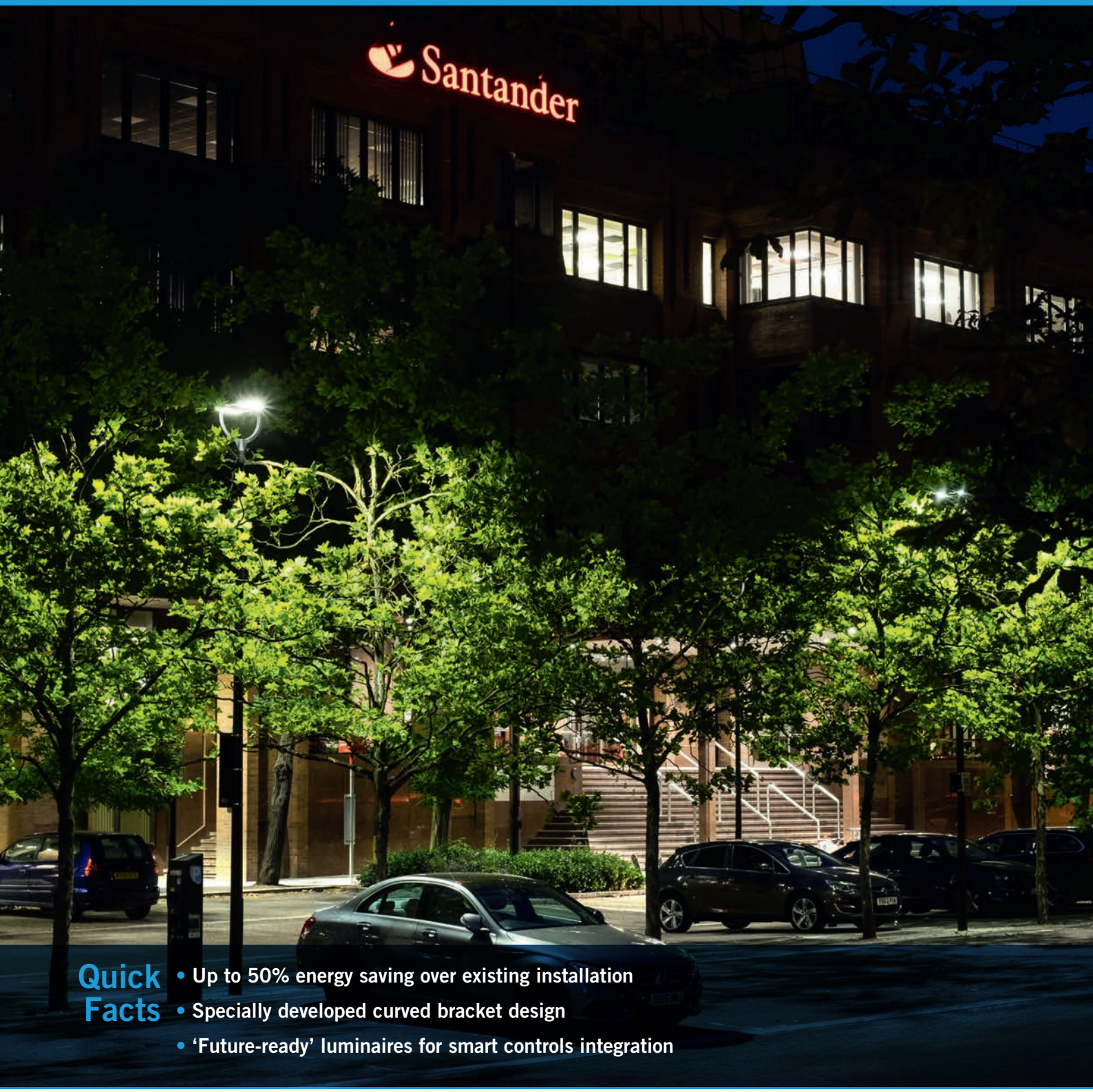
HOLOPHANE®

An AcuityBrands Company

CASE STUDY

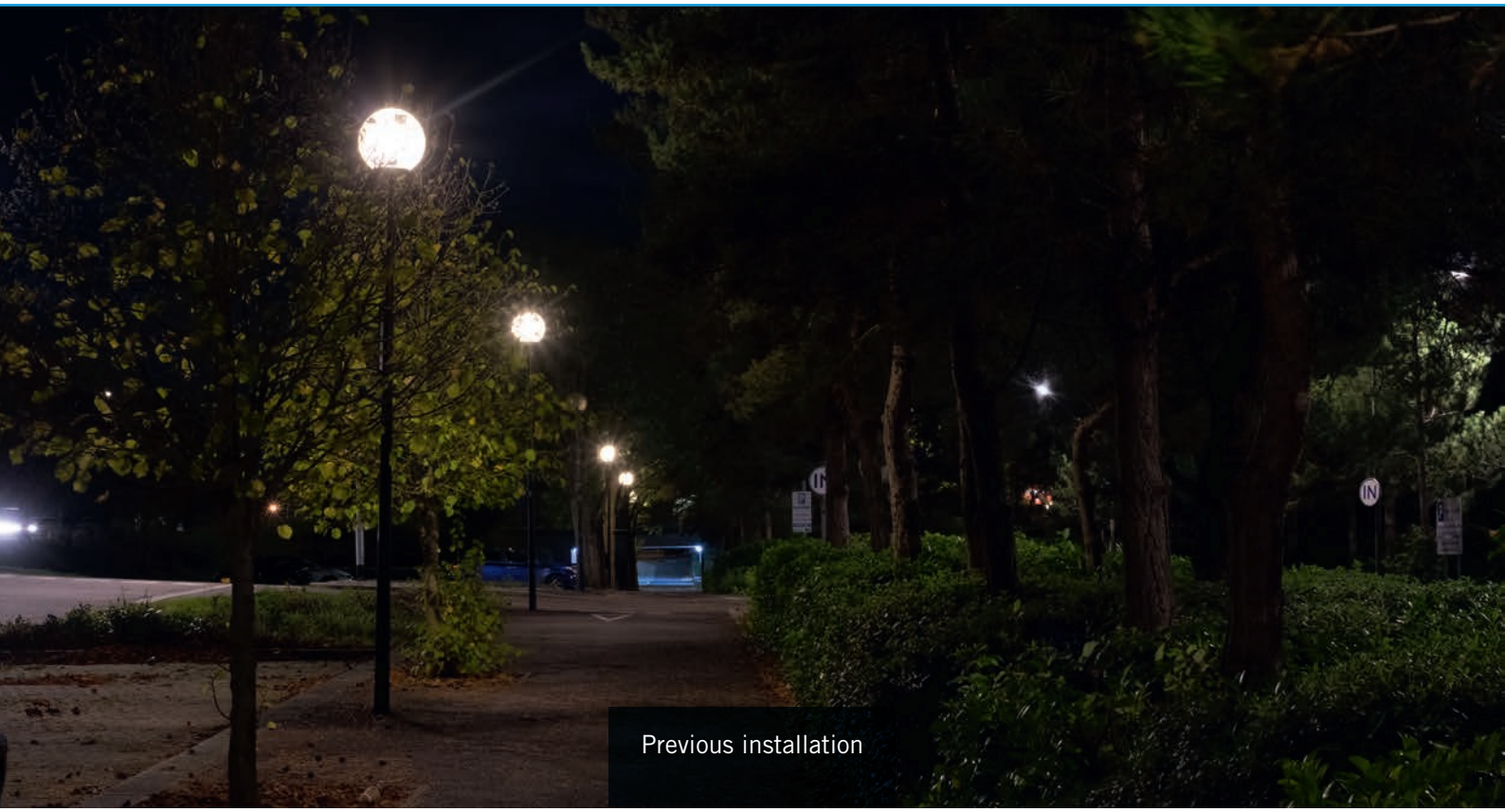
CENTRAL MILTON KEYNES: HOW DO YOU REPLACE A CLASSIC?



Quick Facts

- Up to 50% energy saving over existing installation
- Specially developed curved bracket design
- 'Future-ready' luminaires for smart controls integration

CENTRAL MILTON KEYNES: HOW DO YOU REPLACE A CLASSIC?



Previous installation

CENTRAL MILTON KEYNES: HOW DO YOU REPLACE A CLASSIC?

BACKGROUND

Milton Keynes was the last of the New Towns to be built and was formally designated in 1967. The layout of the main roads, kept separate from the residential housing, was revolutionary at the time. So too, was having a large shopping mall more than 1km long. This area in Central Milton Keynes, CMK, was surrounded by hectares of car parking spaces and administrative office blocks.

Most of the lighting for this area comprised 4.25m columns fitted with the now iconic spherical post-top globe lantern. Another idea ahead of its time was to use “white light” for the city centre pedestrian areas. However, at that time (1970s and 80s), white light sources only delivered about 50 lumens/watt and they were later replaced by more energy saving 70W and 100W high pressure sodium lamps, albeit the light was “gold” in colour.

CHALLENGE

In 2016, Milton Keynes Council and Ringway, the contractors for the project, identified that the older lanterns were coming to the end of their useful life and developed a plan for their replacement.

They then approached the designers at Holophane and their challenge was how to deliver a modern, ultra-efficient lantern which still retained the iconic style of the original units.

The new lantern should also be future-proof in terms of controls and programming. It also had to be easily retrofitted on to the existing columns. As such, the new lantern had to have a choice of optical distribution so that it could equal or improve the existing lighting.

THE SOLUTION

The CityMax is an award winning lantern (Lux Awards 2017) offering a range of light output, from 2,000 – 15,000 lumens and four different optical distributions. The lantern, itself, is shallow in depth and circular in plan.

In order to adapt the lantern to make it more similar to the original Milton Keynes concept, the Holophane engineers, in conjunction with MK Highways and Ringway, developed a specially curved mounting bracket so that in outline, it retains the shape of the original globes. The design of the new bracket is visually "lighter" than the globes and intrudes less on the view of the wide open skies over CMK. The bracket design also means it has reduced windage which is a useful feature when retrofitting on to older columns.

Although the globe lanterns are predominantly used in Central Milton Keynes, there are other areas such as the train station and some residential areas where they are also used. It is hoped that this new design can be extended to other parts of the city. As such, the bracket is now a standard option in the CityMax range.

In terms of energy, the new design saves over 30W per lantern which means up to a 50% saving over the existing scheme whilst delivering a quality white light. Furthermore, the current lanterns are programmed to dim to 70% between 10pm and 6am. Further energy savings will be made by fitting 7-pin NEMA sockets. This allows for smart control of the lanterns and light output by having an extra two or four control circuits such as CMS or DALI.

Maintenance costs are also greatly reduced. The high-pressure sodium lamps typically had to be replaced every three years. The new LEDs in the CityMax lanterns have a rated life of 100,000 hours (L70B50@25C).

Technical details

The CityMax lantern is available in a wide range of options. There are two configurations used in this Milton Keynes project – 25W 3,000 lm and 36W 4,000 lm. Both are 4,000K and CRI70.

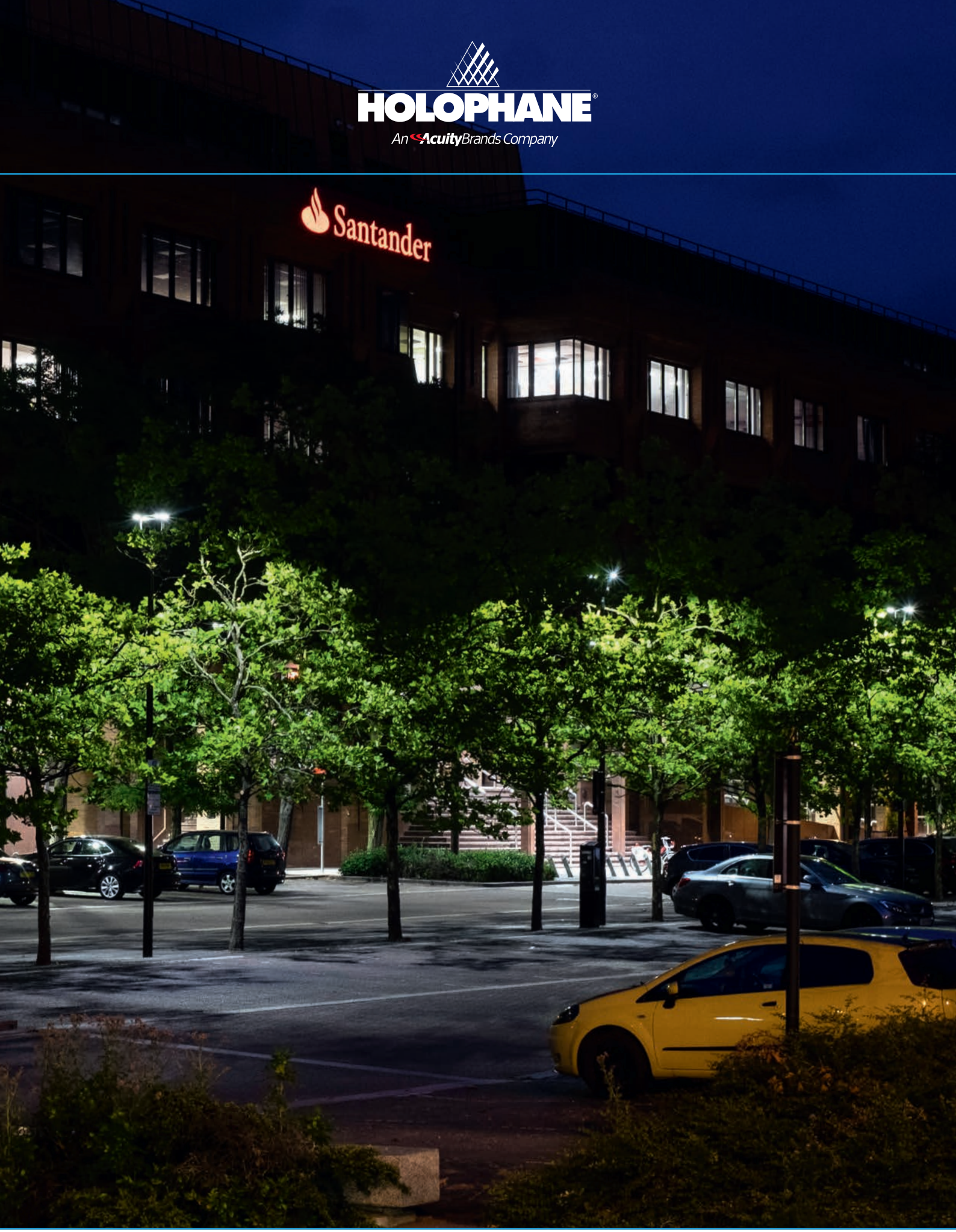
Three light distributions are used to optimise the illumination – Asymmetric, Symmetric long and Symmetric wide.

The lantern is IP66 and has a pressure equalisation valve so that air flow, "breathing", due to temperature differences is minimised. This further extends the life of the electronic components. Additionally, there is a 10kVA over-voltage protection system which resists surges from, for example, thunderstorms. .

The 4mm thick tempered glass lens achieves an impact resistant of IK10.

HOLOPHANE®

An AcuityBrands Company



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