

> CASE STUDY

HOLOPHANE HELPS BOLTON LIGHT THE WAY TO A SMART FUTURE



Estimated saving of £5.25 million over a 7-year period

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Factor™



Factor™ Small

Background

In 2010 Bolton Council took part in the Greater Manchester Climate Change Strategy 2010-2020 which set out to reduce carbon emissions by 48%.

A seven-year package of measures was agreed to achieve this goal and in April 2015 the final three-year phase began which focused on replacing the existing street lighting lanterns with new LED luminaires.

Challenge

The challenge for the new street lighting was to not only reduce energy consumption and therefore reduce carbon emissions but to also lay the foundations for future Smart City lighting technology via the integration of a Central Management System. The luminaires selected by Bolton Council had to be a one for one retro-fit replacement for the existing stock whilst at the same time complying with the light levels stated in BS5489 EN12013.

Solution

The Holophane Factor and Factor Small range were selected by the Street Lighting Engineers as the ideal replacement. Holophane provided accurate and concise photometric data to prove that the light levels would be achieved as per the clients' requirements. The Factor range is extremely flexible with lumen packages that cover the equivalent of 35W to 100W CMH lamps which helps to make the retro-fit process easier. The precision engineered optics control light output, carefully and deliver excellent uniformity and a high degree of visual comfort for drivers and pedestrians alike.

The sleek body design is perfect for dissipating heat away from the LED's and guarantees an extended luminaire life of 100,000+ hours whilst the tool-less access makes installation quick and simple job.

The Central Management System (CMS) allows the Street Lighting Engineers to address the luminaires remotely and enables them to set variable lighting levels to individual lanterns offering the chance to save more energy and further reduce the cost of running the lighting system.

This has helped to achieve a reduction in energy costs, in the last financial year, of £447,313 per annum. The luminaire maintenance cycle has also increased from a 4-yearly cycle with the previous lighting to a 20-year cycle with the Factor and Factor Small achieving substantial savings on the maintenance of the lighting too.

A fault detection system built in to the CMS means that a valuable reduction in site visits, which is estimated to save £5.25 million over a 7-year period (CALC is 0.50m Energy 0.25m Maintenance = 0.75m*7yrs = 5.25m). It also ensures a high resident satisfaction level as any faults are flagged up and rectified far more quickly than was possible before.

The overall feedback has been extremely positive. The new LED lanterns are visibly better performing than their predecessors and keep the streets well-lit and safer for pedestrians, cyclists and drivers alike. The project was awarded a prestigious Lux Award in 2015 for the effective recycling of the old lanterns which enabled the council to meet its disposal responsibilities in a sustainable and environmentally friendly way.

