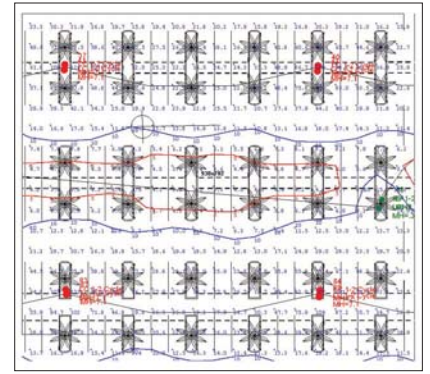


Lighting Technology

With the introduction of the new BS5489 lighting standards in 2003, the methods have changed to meet new lighting requirements with a view to providing effective lighting with reduced lighting levels utilising whiter light sources. Thereby reducing ongoing power requirements while not compromising on the visual appearance of the nightscape or public safety. This coupled with part night dimming and part night operations, with a view to reduce wasted energy. Sugg Lighting have a range of optical solutions that suit both clear and coated lamps including fluorescent lamps providing a wide palette for a variety of applications and with new LED solutions available greatly reduced power consumptions, this can be achieved while not compromising the design objectives. Sugg Lighting offer a complimentary lighting design service where proposed solutions to given areas can be provided and through mutual discussion a performance proposal, with ongoing maintenance and running costs, can be considered in equal measure to arrive at the preferred solution.



Large Road Lighting Optic

The Large Road Lighting Optic is ideally suited to main road lighting where a beam toe for vehicular traffic is important, providing even illumination and effective performance luminance solutions with both good overall uniformities as well as achieving longitudinal uniformities. Ideally suited for mounting heights of 6m to 15m, depending on the lantern selection and road geometries. This optic is used for lighting categories ME1/CE0 through to ME3/CE2 lighting requirements and can accommodate a wide range of lamp and gear combinations, see individual product data sheets for more details.

Small Road Lighting Optic

The Small Road Lighting Optic differs in both size and lighting performance to the larger unit, this optic has been designed to fit within smaller fittings and provide solutions for lower category roads where the mounting heights are reduced and a greater surround ratio is required for the pedestrian user. This optic has a limited wattage range which is governed by the lamp size, but will accommodate a wide range of lamps and gear. Widely used for lighting residential roads and associated footways ME3/CE2 > ME6/CE5/S3, it provides a controlled light distribution and has a full cut off to prevent light pollution and reduce obtrusive light.

LED Road Lighting Module

The introduction of the LED into street lighting has created a great deal of excitement and the longevity of the light source and the reduction in potential power requirements have both driven the industry for an effective solution. Sugg Lighting have adopted the approach of using an asymmetric optical unit that can easily fit into a wide range of fittings, this high performance optical unit has a fixed output in terms of lumens, but where higher standards are required multiple units can be added into the product to overlay the units distributions, meeting standardised ME4/CE3/S1 > ME6/CE5/S3, enabling a range of standards to be met. Mounted within a lantern at 5m with a 5m wide road a 25m spacing will achieve a Eave of 5lux (S4) providing a cost effective LED solution to urban areas, residential and village lighting requirements, coupled with part night switching can also reduce ongoing energy costs.

Cycle Optic

The Cycle Optic provides a longitudinal distribution that is more evenly spread either side of the column so providing ideal lighting for footpaths, cycle paths, car parks and dual carriageways where the columns are centrally mounted. Sugg Lighting were awarded the Lighting Design Award in 2004 for an innovative solution to the Boulevard in Hull where a 28m Ew area, the road was lined with mature trees, was effectively lit by the cycle optic suspended at 8m from a catenary system. Suspended centrally across the carriageway, with 5m pedestrian luminaires mounted on the transmission poles to provide pedestrian lighting and verge illumination. The scheme at 35m spacings used 1 x 70w HPST lamp for the carriageway and 2 x 35w Metal halide lamps for the pedestrian areas all merging together to provide a lighting solution that could not be achieved from conventional column mounted luminaires.

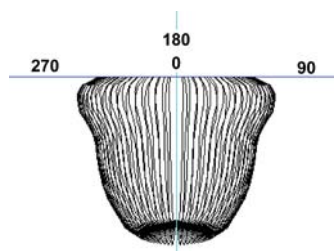
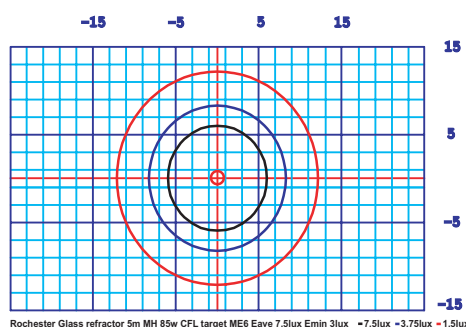
Full Length Glass Refractor

The Full Length Glass Refractor completes the lighting pallet on offer from Sugg. This glass refractor houses vertical coated lamps and provides a vertical element to lighting projects where columns are used to light footways or narrow streets that have high buildings. This option provides a vertical wash of light enhancing areas, or in open parkland areas providing a vertical distribution that can reveal people moving towards a lit area, ensuring vehicles and the drivers are able to see approaching hazards. This unit is also used in our illuminated bollards providing 14m spacings for footway schemes and building illumination by projecting an evenly illuminated facade from a low level as shown in the Wellington College scheme where the bollards were used in conjunction with LED floodlights to light the facades of the college with less than 500w of lamp power, so lifting the building from its dark sky environment but containing the lighting with back shields on the bollards.

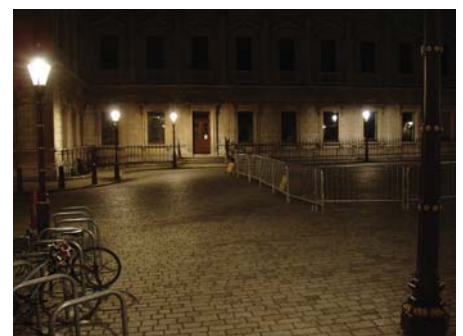
Photometric Data

Full photometric data is available from our web site www.sugglighting.co.uk and IES files are also distributed with the Lighting Reality Design package as part of the Data provided. Additional photometry can be obtained upon request from the office for special applications.

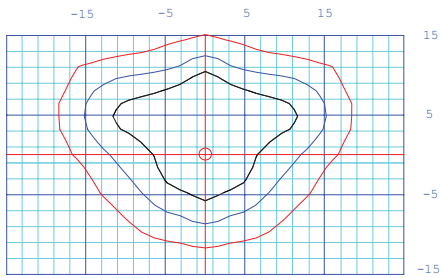
Full Length Glass Refractor



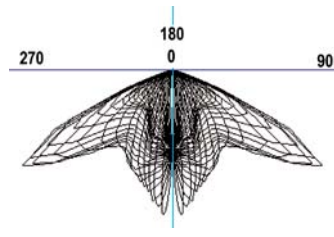
Refurbished lanterns with 70w HQI



Large Road Lighting Optic



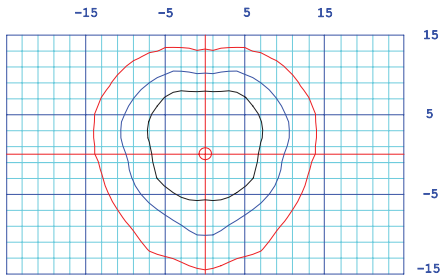
Large road lighting optic 8m MH 150w HPST Target ME3 C2 Eave 20lux Emin 8lux



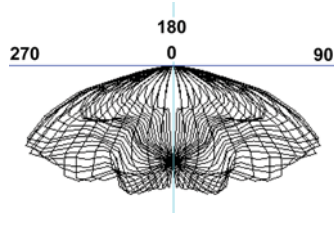
Road Lighting 150w HPST Tunbridge ▶



Small Road Lighting Optic



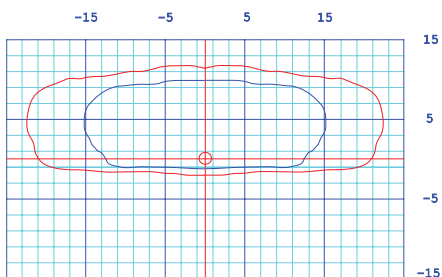
Small Road Optic 5m MH 85w PLT Lamp Target Eave 7.5 lux Emin 3 lux — 7.5lux — 3.75lux — 1.5lux



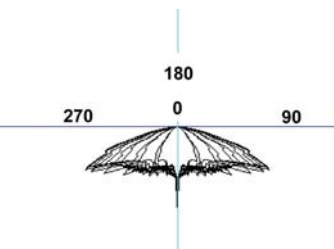
100w HQI Flat Glass Tunbridge ▶



LED Road Lighting Module



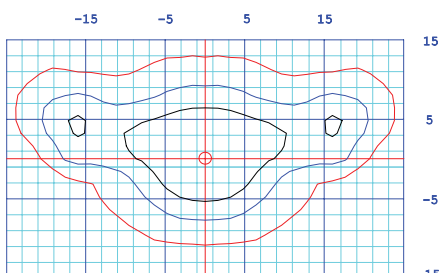
Small Rochester Lantern with two number led units Target SS Eave 3 lux Emin 0.3lux Spacing 40m — 1.5lux — 0.3lux



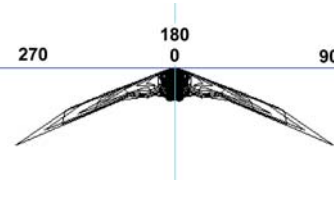
Village Lighting LED Module 57w ▶



Cycle Optic



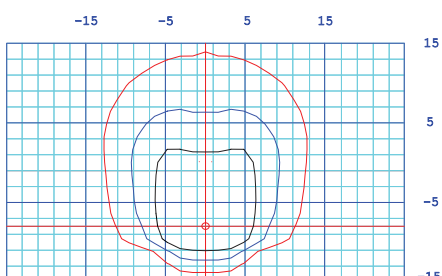
Rochester Cycle optic 8m MH 150w HPST Target ME3 Eave 20lux Emin 8lux — 20lux — 10lux — 4lux



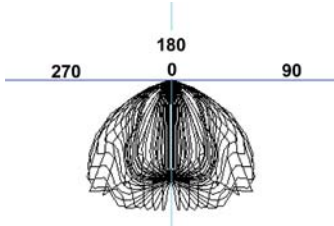
Catenary Pembroke 70w HPST ▶



Area Optic



Area Optic Flat Glass 8m MH 150w HPST Target ME3 Eave 20lux Emin 8lux — 20lux — 10lux — 4lux



Upright Pembroke PLH60w ▶



LED Floodlighting

Combining compact fluorescent lamps and LED projectors we have completed a number of projects. The image shown is Wellington College using six 57w compact lamps in glass reflectors mounted into illuminated bollards which were shielded at the rear and with 4 x 3w LED's with 50 degree lenses, we were able to light the entire facade in a wash of low level illumination with good modeling and colour for the brick and portland detailing and all with 414w of lamp power. The award winning Armed Forces Memorial built to commemorate those who have fallen since the Second World War, was a project we were proud to be involved with. This structure has been illuminated with LED projectors: 12v DC 12w projectors 4 x 3w set within a cast aluminium marker that was painted in a special portland stone powder finish to ensure they blended into the overall appearance of the monument. The LED units are illuminated when the site is used after dark and these low level units lift the entire structure out of the night-scape so providing soft even illumination with low running costs.

Other LED floodlighting projects include cemetery lighting and shopping centre accent lighting.



Cycle Path Optic

The Cycle Path Optic is ideal for lighting areas such as rail platforms where overall uniformities and both horizontal and vertical levels of illuminance at the platform edge require a specialist optic. Close control of the levels and projection of the light are important as glare and the threshold increment toward the driver are paramount in terms of driver safety.



Special Solutions

Where environmental issues dictate a non standard approach to lighting we are able to work with clients and offer solutions to problems. The scheme here was Eaton Bridge in Windsor where the bridge structure prevented the use of columns for the deck lighting. A special compact fluorescent fitting was incorporated within the balustrade to provide even low level illumination with a structure that enhanced the bridge both in the day and after dark.

The same technology is used for manufacturing retrofit subway fittings that fit into existing subways and underpasses reducing costs as the fittings, glazing and gear trays will fit within existing obsolete mountings.



Security Lighting

Many of the products we have supplied have a secondary role to the provision of illumination, they have to perform with CCTV systems that are existing or, in certain installations, covert cameras are required. We are able to provide lighting designs that consider camera positions and have incorporated cameras within lantern canopies or alongside lantern and column bracket combinations. This reduces clutter within a development and provide the best visual scene possible while still complying to design considerations, and standards. Combining the functions greatly improve the cohesion of cabling and ongoing maintenance.



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