DESIGNED ARCHITECTURAL LIGHTING

LED DOWNLIGHTERS

The Shard
Architect: Renzo Piano
Lighting Consultant: ARUP Lighting
Construction Management: MACE
Photographer: © Dennis Gilbert/VIEW

Many of London's structures: Tower Bridge, St Paul's Cathedral, the London Eye, vie for the title of top icon. Now it's The Shard that's drawing attention. Constructed over four years on a technically challenging site adjacent to London Bridge Station, amidst existing buildings, the 87- storey 1,004ft skyscraper forms the major part of The London Bridge Quarter. Opened to the public early in 2013, visitors can visit Level 69 and on a clear day view the panorama stretching for 40 miles.

As part of the project Designed Architectural Lighting supplied 3,000 luminaires of various types, including CIVIC X100 and AMBIANCE X100 LED downlighters.

DESIGNED ARCHITECTURAL LIGHTING

Designed Architectural Lighting, founded in 1983, has steadily established itself as one of Britain's leading independent companies in the design and manufacture of luminaires. DAL's philosophy is one of constant improvement. Our aim is to design, develop and manufacture products of the highest standard, whilst working closely with clients and their needs.

The range of products presented in this catalogue is the result of Designed Architectural Lighting's experience in integrating the requirements of architects, designers and engineers with the best in LED technology and materials. All luminaires are supplied with the latest developments in control gear ensuring the best in energy efficiency. DAL continually tracks and reviews the development of LEDs and offers the best and most reliable products available at the time.

Company procedures ensure that a consistency of product quality and respect for the environment is maintained by constant monitoring. This is recognised by DAL obtaining the ISO 9001 quality mark and ISO 14001 accreditation.

Designed Architectural Lighting products are designed and built in the United Kingdom to conform to the requirements EN 60598-1.

The primary purpose of the Waste Electrical and Electronic Equipment Regulations is to 'Reuse', 'Recycle' and 'Recover', and DAL is fully committed to the WEEE Directive. DAL is an established member of the Lumicom Producer Compliance Scheme, which has been approved by the Environment Agency. Via this scheme, DAL is doing the utmost to keep the costs of recycling to a minimum so that the benefits are passed on to you, the client, and society as a whole. DAL registration number WEE/EA0290TY.

LUMICOM MEMBER

ISO 14001 REGISTERED FIRM

ISO 9001 REGISTERED FIRM

Whilst every effort is made to give up-to-date information, the manufacturer reserves the right to amend any specification herein detailed without prior notice. Descriptions contained within this publication shall not form part of any contract. Orders accepted for DAL products are subject to our standard condition of sale. When products are made specially to customer's requirements, we cannot make subsequent alteration or accept cancellation or return without making a charge.

It is essential that the correct LED/lamp type must be used. Incorrect LEDs/lamps may affect the operation of the luminaire and in some cases seriously overheat the luminaire. All fittings in this brochure are supplied with LEDs. Dimensions are shown in mm.

For full Terms and Conditions please contact us.

Brent Civic Centre
Architect: Hopkins Architects
Electrical and lighting specialists: URS Scott Wilson
Main Contractor: Skanska
M & E Contractor: Skanska

The new Civic Centre incorporates the Council's main administration offices together with Civic Chamber for council meetings, Wembley Public Library, marriage suites and grand banqueting hall. The aim is to provide a hub and heart for the community where residents can meet, shop and eat. With its internal amphitheatre a programme of high-quality arts and cultural experiences is planned. As the most sustainable local authority building to be completed in the UK so far, it features a combination of solar shading, natural ventilation, high-performance façade, and combined cooling, heating and power which utilises waste fish oil.

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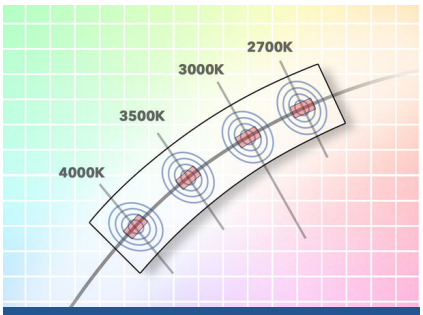

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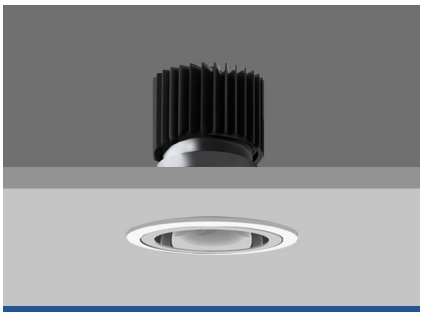

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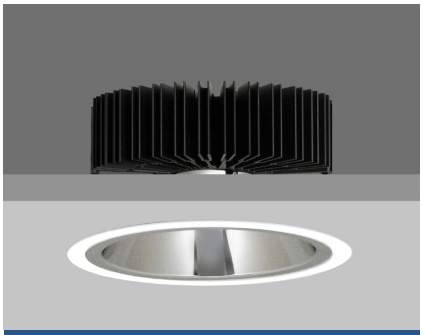

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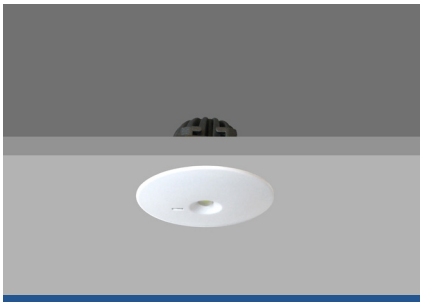

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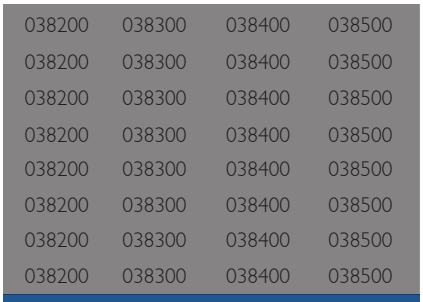

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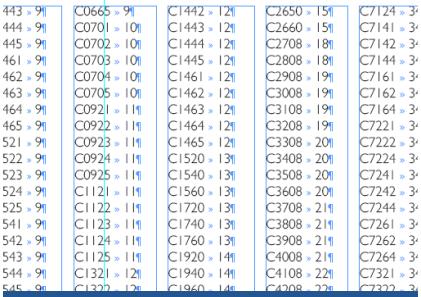

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LED TECHNOLOGY

When artificial lighting and control systems are used to their fullest potential they can create healthy living and working environments. To this end, LEDs are a light source with which intelligent and dynamic installations can be created. LEDs also offer cost effective and energy efficient lighting for many applications, but like other light sources each type should be chosen on its own merits. For this reason DAL has chosen specific LED products to suit their luminaires.
The wide use of LEDs in interior lighting design has been hindered until recently by the poor quality of white light LEDs and their low light output. But now there have been significant advances in LED lighting technology, enabling Designed Architectural Lighting to develop their downlighters with confidence.
With many years of experience in the design, development and manufacture of all types of luminaires Designed Architectural Lighting is a respected member of the lighting industry, affording them access to LED and control products from many specialist companies. Therefore, DAL is not constrained to a single brand, and uses the most appropriate type of LED for the application.
Unlike many other lamps (compact fluorescent, HID, tungsten halogen) the luminaire, driver and LED components are not interchangeable with other manufacturers' products. This is because, for optimum performance of the LED, good heat management is essential; this ensures the correct operating characteristic of the LED. Conventional lamps emit most of their heat through radiation. LEDs transfer their heat by conduction, and if the heat is not adequately dispersed light output and life will be adversely affected. Various methods can be used to transfer heat and the most simple and reliable way is a well-designed heat sink (passive cooling).
LEDs can be easily controlled as part of energy management systems. Dali, SwitchDim and other dimming or lighting control systems are feasible with the appropriate driver.
In order to achieve the best downlighter product Designed Architectural Lighting works with four major LED manufacturers: Xicato, Luxeon, GE and CREE. For in depth LED product specification please contact us.
The information is correct at the time of printing and the products shown are specific to the DAL range.

Advantages of LEDs Include:

Long life resulting in low maintenance costs
Cool beams of light
No ultraviolet
Low infrared
Mercury free / Lead free
Low energy
High luminous efficacy
Colour stability
Instant light
High performance
Precise optical control
Emergency options
Dimmable

LED information

LEDs (Light-emitting diodes) generate light using the special electronic properties of crystalline semiconductors and solid state technology.
As well as being free of Ultraviolet radiation, LEDs have very low Infrared radiation in the beam.
Because the thermal operation is crucial, the LED is supplied as an integral part of the DAL luminaire.
LEDs are sometimes known as Light Engines, Pucks or Modules.
LED control gear is known as a Driver.

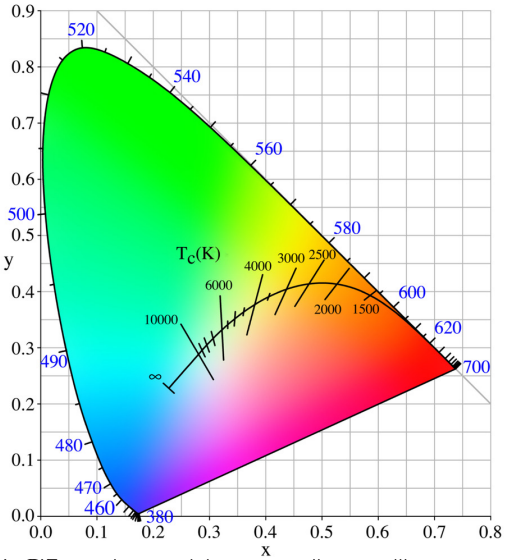
LED COLOUR TECHNOLOGY

Colour Temperature

Light and Colour is a huge topic, much bigger than can be explained here, but obviously it is a major characteristic of artificial light, with a lamp's colour temperature playing a major part in lighting design - how warm or cool an interior will appear - so, being informed about the colour properties of light sources, such as LEDs is important.

The colour temperature of all light sources, from candle light to daylight, is measured in units of absolute temperature - Kelvin (K), using the scientific laws of the black body radiator. But, because, LED manufacturers produce different colours of white light by adding various phosphors to blue light LEDs, there is an allowable tolerance (+/-) and the colours are specified by correlated colour temperature (CCT).

The CIE 1931 x,y chromaticity space diagram illustrates where the black-body curve defines white light. It also shows the chromaticities of black body light sources of various temperatures and lines of constant Correlated Colour Temperature. The CCT is the colour temperature at a point on a black-body radiator (Planckian locus) which most closely matches the colour of the light emitted from the light source. The most commonly used colour temperatures in interior lighting design range from 2700K through to 4000K, with the lower number being warmest and the higher number being the coolest.

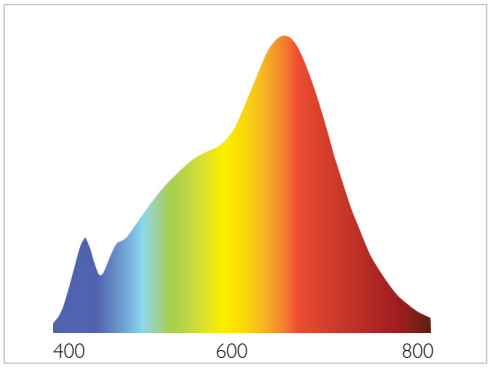


A CIE x,y chromaticity space diagram illustrates where the black body locus defines white light. It also shows black-body light sources of various temperatures and lines of constant correlated colour temperature.

Colour Rendering Index (CRI)

Just as significant as choosing an LED for its color appearance is its colour rendering properties, and CRI is an indicator of its ability to realistically reproduce the colour of an object.

The colour rendering properties of a light source are illustrated by its spectral distribution in the form of a curve. However, more commonly used is the CIE colour rendering index. This classifies how true a colour surface will appear when lit by an artificial light source. The higher the colour rendering index (on a scale of 0 to 100) of the source, the more accurate it is.
The CIE classifies colour rendering in two ways: Colour Rendering Groups 1- 4 and the general Colour Rendering Index Ra ≥20 to ≥ 90. These, however, are based on 8 pastel colours and do not take into account all 15 CIE test colours so closer reading of LED manufacturers' literature maybe needed.
Wherever accurate colour matching is required sources in Group 1A, Ra ≥ 90 should be specified. When slightly less accuracy is needed Group 1B, Ra ≥ 80 should be sufficient. It should be noted, with LEDs, as with other sources using phosphors, the higher the CRI luminance efficacy will be reduced.

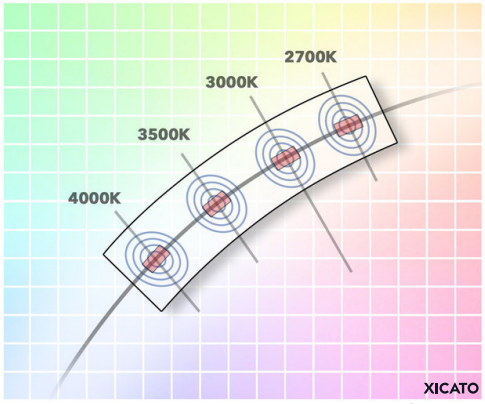


Typical spectral power distribution of a 3000K phosphor coated LED.

MacAdam Ellipses

MacAdam ellipses are also quoted as method by which a specifier can ensure consistence in colour. MacAdam ellipses describe the colour distances on the xy coordinates in the form of steps around target points. Again, this it to do with manufacturing tolerances and perceptible difference. These are certain target point on the CIE diagram, which lamp and LED manufacturers endeavour to meet. Whilst industry standard LED binning structures allow for colour points in a 7 step MacAdam ellipse, it is recognised that this is too large a tolerance leading to perceptible colour variation. An LED of 3 step MacAdam is considered very high quality and 2 steps even higher.

As an LED ages it can have colour shift, so if they are manufactured within a small MacAdam Step it is likely to keep to an imperceptible difference.



Corrected Cold Phosphor Technology® Xicato XSM modules perform to less than a 2 step MacAdam Ellipse as illustrated.

LED Life and Lumen Maintenance

During its operating life the amount of light from all light sources decreases. Calculated as a percentage of the original light output, the amount of light emitted from the source at a specific time in the future is referred to as its lumen maintenance.

In general, LEDs have better lumen maintenance than any other light source. It is usual to see quoted Lumen Maintenance figures of 70% or higher after 50,000 hours of use. However, good lumen maintenance and consistent colour are also dependent on the correct thermal operating conditions of the LED, so the correct heat sink and luminaire designs are fundamental.

7 More London Riverside
Architect: Foster + Partners
Consulting Engineer: Grontmij
Lighting Consultant: BDP Lighting; Atrium: Speirs and Major
Photographers: Sanna Fisher Payne; James Newton

Sustainability was the heart of the client's philosophy for their building in More London. Their aim: one of the most sustainable workplaces in Europe. If they could achieve this, the skills learned along the way could be passed on to assist their clients in adapting and minimising their own environmental impact, helping them prosper in the evolving business landscape of today. As part of a sustainability ideology practical issues have to be addresses, one of them being energy use. To this end DAL AMBIANCE X100 LED luminaires were specified and supplied.

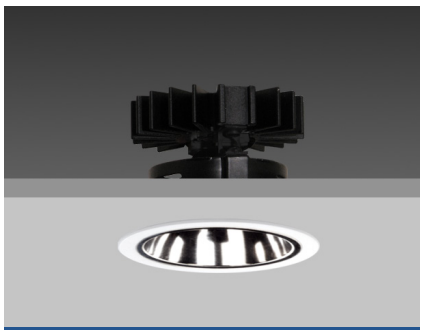
SMALL APERTURE

AMBIANCE L73

AMBIANCE X100

AMBIANCE X100 DIRECTIONAL

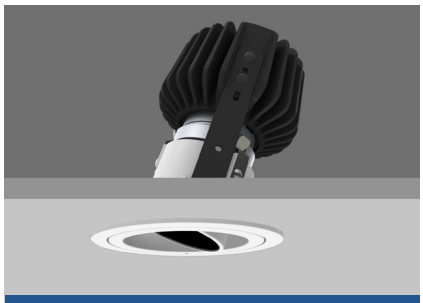
AMBIANCE X100 WALLWASHER



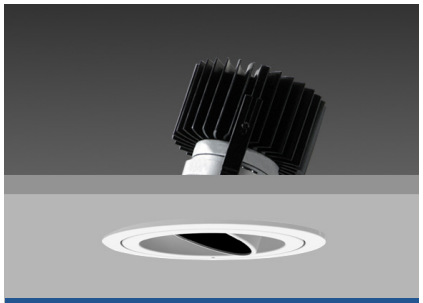
AMBIANCE L100

AMBIANCE L100 DIRECTIONAL

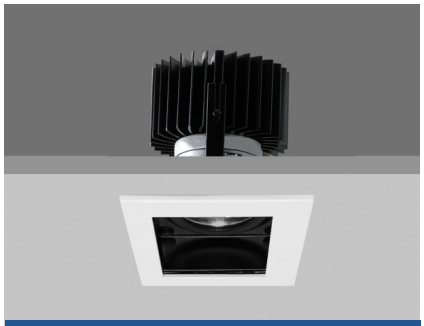
MINITRIM X86



JAZZ X100



JAZZ X110



QUAD X86 / L86

QUAD DOUBLE

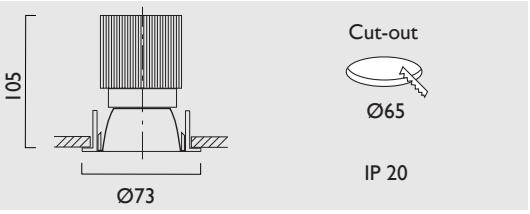
AMBIANCE L73

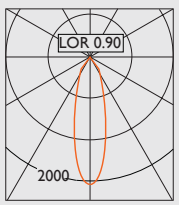
SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

AMBIANCE L73 with Luxeon LED recessed downlighter with deep cone reflector finished in specular silver, satin silver, black, white or gold, and white ceiling trim. Overall diameter 73mm, cut out 65mm.

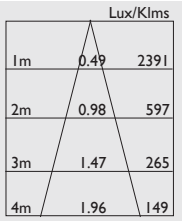
Beam	Specular Silver	Satin Silver	Black	White	Gold
Light Fixture IP20 - 742 lms, 8.9w, 83 lm/w, Ra80					
28°	C0131	C0132	C0133	C0134	C0135
45°	C0151	C0152	C0153	C0154	C0155
56°	C0161	C0162	C0163	C0164	C0165

To specify the Light Engine & Driver code please refer to pages 48-49.

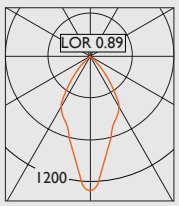




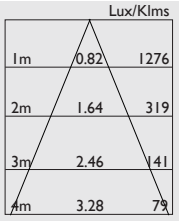
Intensity values in cds per 1,000 lumens.



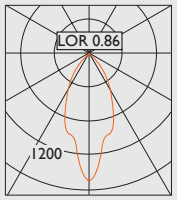
28° Beam diameter to 50% of E max



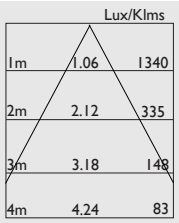
Intensity values in cds per 1,000 lumens.



45° Beam diameter to 50% of E max



Intensity values in cds per 1,000 lumens.



56° Beam diameter to 50% of E max

LIGHT ENGINES & DRIVERS

A driver is needed to operate and control every downlighter. The current of the driver determines the output, i.e. 350mA, 500mA, 700mA and 1000mA. Each driver is specific to the lumen output. This is why it is necessary to have so many product numbers.

Specification example -

Step 1: Choose a downlighter.
E.G. **AMBIANCE X100, 20°, Satin Silver** the number is - **C0322**.

Step 2: Choose an Engine Code from the specification charts shown on pages 48-49
E.G. Lumens - **720**, colour temperature - **3000K**, **no dimming** (0), **no emergency** (0) and the number is - **072300**

The complete product number is **C0322/072300**

For Dimming and Control System Driver Protocols and Emergency Protocols insert a number and a letter from the list.

If Dali dimming is required the number becomes 0723**5**0
If Dali dimming and maintained emergency is required the number becomes 07235**E**

To specify a Light Engine & Driver please refer to pages 48-49. The options cover LED Colour Appearance (K), dimming control systems and emergency protocols

Dimming, Control System (5th digit)
1 - 1-10v
3 - DSI
5 - Dali
7 Lead/trailing
9 - Addressable

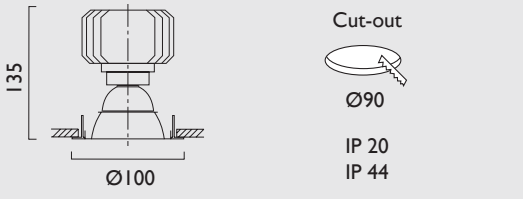
Emergency Protocols (6th digit)
E - Maintained
N - Non-maintained

AMBIANCE X100

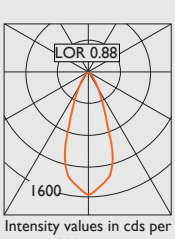
SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

AMBIANCE X100 with Xicato LED recessed downlighter with deep cone reflector finished in specular silver, satin silver, black, white or gold, and white ceiling trim. Overall diameter 100mm, cut out 90mm.

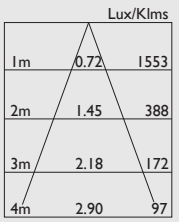
Beam	Specular Silver	Satin Silver	Black	White	Gold
Light Fixture IP20 - Up to 1300 lms					
20°	C0321	C0322	C0323	C0324	C0325
40°	C0341	C0342	C0343	C0344	C0345
60°	C0361	C0362	C0363	C0364	C0365
Light Fixture IP44 - Up to 1300 lms					
20°	C0421	C0422	C0423	C0424	C0425
40°	C0441	C0442	C0443	C0444	C0445
60°	C0461	C0462	C0463	C0464	C0465



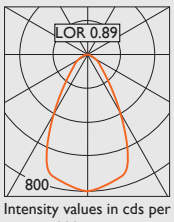
To specify the Light Engine & Driver code please refer to pages 48-49.



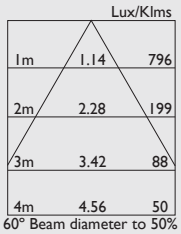
Intensity values in cds per 1,000 lumens.



40° Beam diameter to 50% of E max



Intensity values in cds per 1,000 lumens.



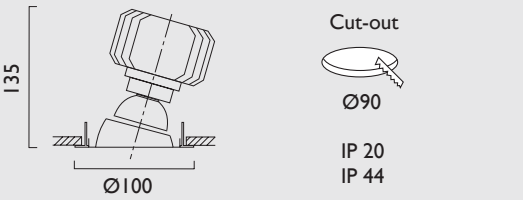
60° Beam diameter to 50% of E max

AMBIANCE X100 DIRECTIONAL

SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

AMBIANCE X100 with Xicato LED recessed directional downlighter with deep cone reflector finished in specular silver, satin silver, black, white or gold, and white ceiling trim. Adjustable 0-30° tilt. Lockable. Overall diameter 100mm, cut out 90mm.

Beam Angle	Specular Silver	Satin Silver	Black	White	Gold
Light Fixture IP20 - Up to 1300 lms					
20°	C0521	C0522	C0523	C0524	C0525
40°	C0541	C0542	C0543	C0544	C0545
60°	C0561	C0562	C0563	C0564	C0565
Light Fixture IP44 - Up to 1300 lms					
20°	C0621	C0622	C0623	C0624	C0625
40°	C0641	C0642	C0643	C0644	C0645
60°	C0661	C0662	C0663	C0664	C0665



To specify the Light Engine & Driver code please refer to pages 48-49.

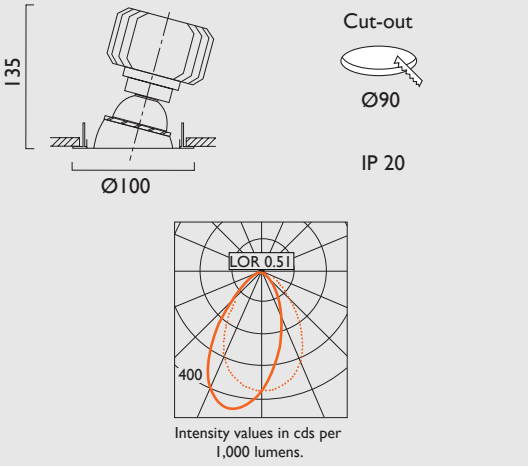
AMBIANCE X100 WALLWASHER

SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

AMBIANCE X100 with Xicato LED recessed wallwasher with deep cone reflector and spread lens, finished in specular silver, satin silver, black, white or gold, and white ceiling trim.
Overall diameter 100mm, cut out 90mm.

Product No	Luminous Flux	Reflector
C0701	Up to 1300 lm	Specular Silver
C0702	Up to 1300 lm	Satin Silver
C0703	Up to 1300 lm	Black
C0704	Up to 1300 lm	White
C0705	Up to 1300 lm	Gold

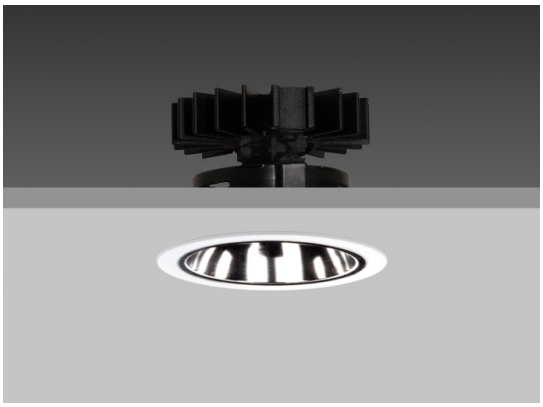
To specify the Light Engine & Driver code please refer to pages 48-49.



AMBIANCE L100

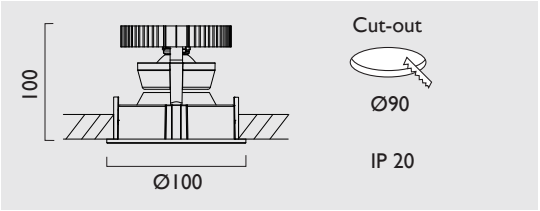
SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

AMBIANCE L100 with Luxeon LED recessed downlighter with cone reflector finished in specular silver, satin silver, black, white or gold, and white ceiling trim.
Overall diameter 100mm, cut out 90mm.



Product No	Luminous Flux	Reflector
C0921	560 lms	Specular Silver
C0922	560 lms	Satin Silver
C0923	560 lms	Black
C0924	560 lms	White
C0925	560 lms	Gold

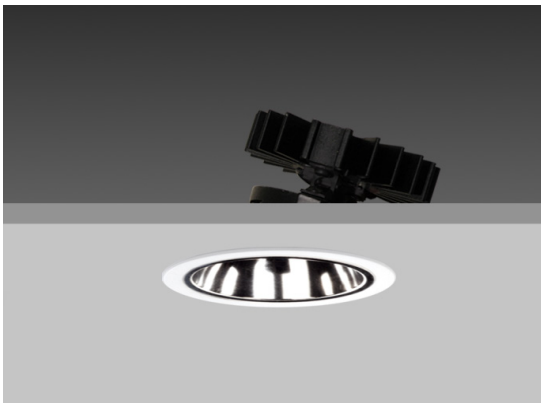
To specify the Light Engine & Driver code please refer to pages 48-49.



AMBIANCE L100 DIRECTIONAL

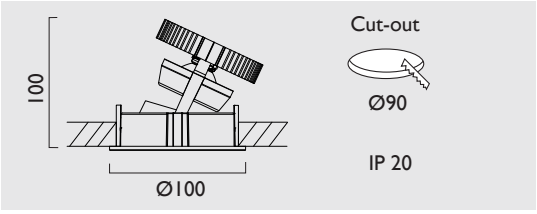
SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

AMBIANCE L100 with Luxeon LED recessed directional downlighter with cone reflector finished in specular silver, satin silver, black, white or gold, and white ceiling trim.
Adjustable 0-30° tilt, 340° rotation.
Overall diameter 100mm, cut out 90mm.



Product No	Luminous Flux	Reflector
C1121	560 lms	Specular Silver
C1122	560 lms	Satin Silver
C1123	560 lms	Black
C1124	560 lms	White
C1125	560 lms	Gold

To specify the Light Engine & Driver code please refer to pages 48-49.

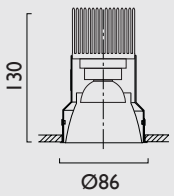


MINITRIM X86

SPECULAR SILVER, SATIN SILVER, BLACK, WHITE, GOLD

MINITRIM X86 with Xicato LED recessed downlighter with deep cone reflector finished in specular silver, satin silver, black, white or gold. No separate ceiling trim offers a minimal appearance.
Overall diameter 86mm, cut out 80mm.

Beam Angle	Specular Silver	Satin Silver	Black	White	Gold
Light Fixture IP20 - Up to 1000 lm					
20°	C1321	C1322	C1323	C1324	C1325
40°	C1341	C1342	C1343	C1344	C1345
60°	C1361	C1362	C1363	C1364	C1365
Light Fixture IP44 - Up to 1000 lm					
20°	C1421	C1422	C1423	C1424	C1425
40°	C1441	C1442	C1443	C1444	C1445
60°	C1461	C1462	C1463	C1464	C1465

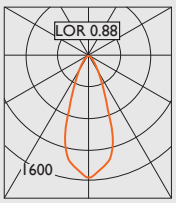


Cut-out

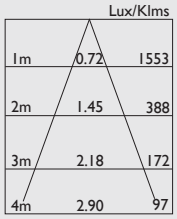
Ø80

IP 20
IP 44

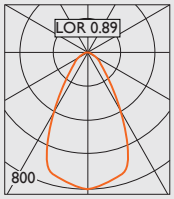
To specify the Light Engine & Driver code please refer to pages 48-49.



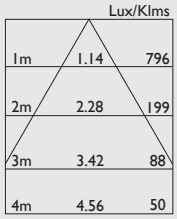
Intensity values in cds per 1,000 lumens.



40° Beam diameter to 50% of E max



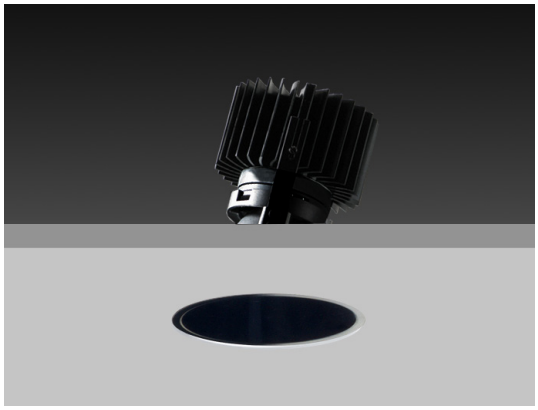
Intensity values in cds per 1,000 lumens.



60° Beam diameter to 50% of E max

MINITRIM X86

MINITRIM X86 with Xicato LED recessed downlighter with deep cone reflector finished in specular silver, satin silver, black, white or gold. No separate ceiling trim offers a minimal appearance.
Overall diameter 86mm, cut out 80mm.



Beam Angle	Specular Silver	Satin Silver	Black	White	Gold
Light Fixture IP20 - Up to 1000 lm					
20°	D6121	D6122	D6123	D6124	D6125
40°	D6141	D6142	D6143	D6144	D6145
60°	D6161	D6162	D6163	D6164	D6165
Light Fixture IP44 - Up to 1000 lm					
20°	D6221	D6222	D6223	D6224	D6225
40°	D6241	D6242	D6243	D6244	D6245
60°	D6261	D6262	D6263	D6264	D6265

To specify the Light Engine & Driver code please refer to pages 48-49.

Cut-out

Ø80

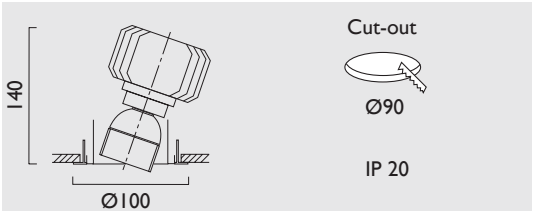
IP 20
IP 44

JAZZ X100

JAZZ X100 with Xicato LED recessed pivot-style downlighter with black baffle for low glare, white housing and ceiling trim. Adjustable 0-30° lockable tilt, 340° rotation. Overall diameter 100mm, cut out 90mm.

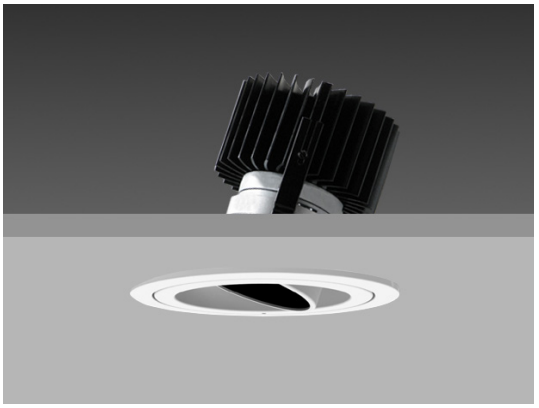
Product No	Beam Angle	Luminous Flux
C1520	20°	Up to 1300 lm
C1540	40°	Up to 1300 lm
C1560	60°	Up to 1300 lm

To specify the Light Engine & Driver code please refer to pages 48-49.



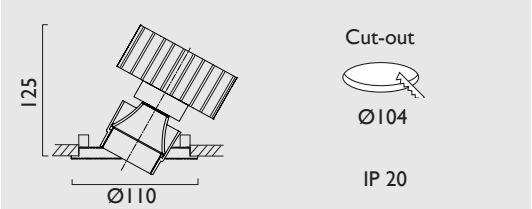
JAZZ X110

JAZZ X110 with Xicato LED recessed pivot-style downlighter with black baffle for low glare, white housing and ceiling trim. Adjustable 0-25° tilt, 340° rotation. Overall diameter 110mm, cut out 104mm.

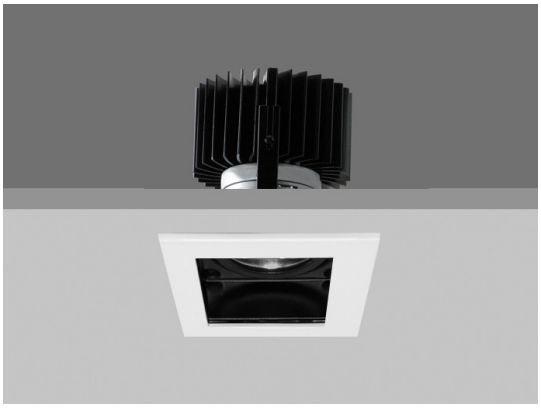


Product No	Beam Angle	Luminous Flux
C1720	20°	Up to 2000 lm
C1740	40°	Up to 2000 lm
C1760	60°	Up to 2000 lm

To specify the Light Engine & Driver code please refer to pages 48-49.

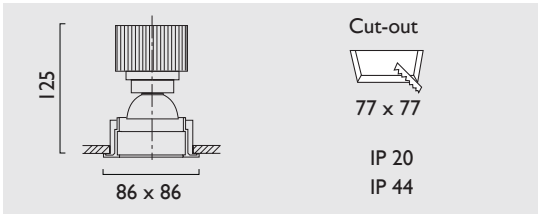


QUAD X86

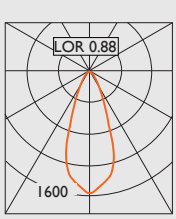


QUAD X86 with Xicato LED recessed square downlighter with black interior and white ceiling trim. Adjustable 0-30° tilt, 340° rotation.
Overall dimension 86mm x 86mm, cut out 77 x 77mm.

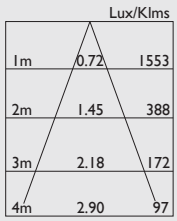
Product No	Beam Angle	Luminous Flux	IP
C1920	20°	Up to 1300 lm	IP20
C1940	40°	Up to 1300 lm	IP20
C1960	60°	Up to 1300 lm	IP20
C2020	20°	Up to 1300 lm	IP44
C2040	40°	Up to 1300 lm	IP44
C2060	60°	Up to 1300 lm	IP44



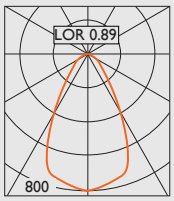
To specify the Light Engine & Driver code please refer to pages 48-49.



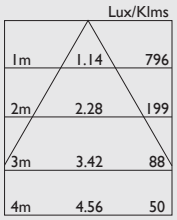
Intensity values in cds per 1,000 lumens.



40° Beam diameter to 50% of E max

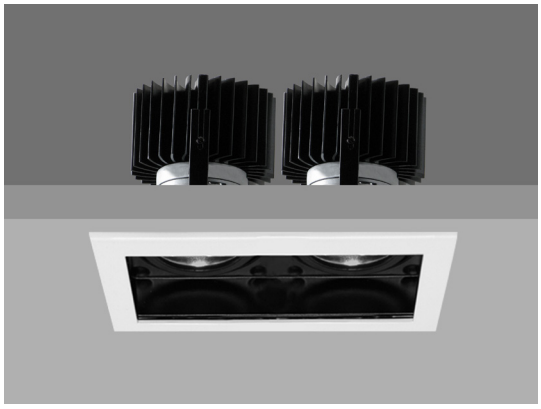


Intensity values in cds per 1,000 lumens.



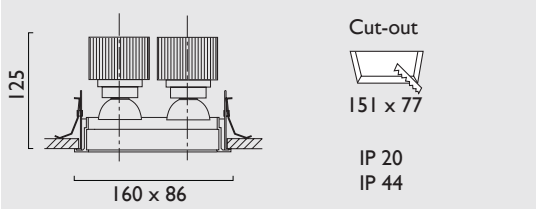
60° Beam diameter to 50% of E max

QUAD X86 DOUBLE



QUAD X86 with Xicato LED double recessed rectangular downlighter with black interior and white ceiling trim. Adjustable 0-30° tilt, 340° rotation.
Overall dimension 160mm x 86mm, cut out 151 x 77mm.

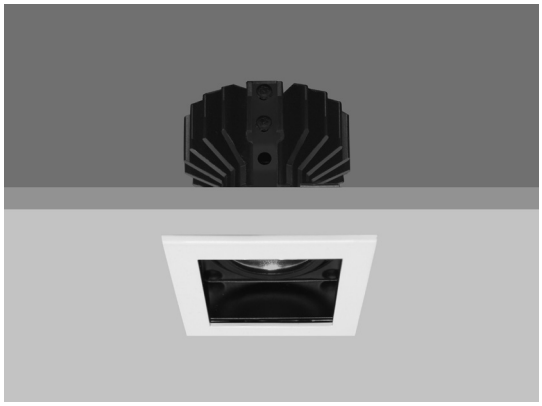
Product No	Beam Angle	Luminous Flux	IP
C2120	20°	Up to 2 x 1300 lm	IP20
C2140	40°	Up to 2 x 1300 lm	IP20
C2160	60°	Up to 2 x 1300 lm	IP20
C2220	20°	Up to 2 x 1300 lm	IP44
C2240	40°	Up to 2 x 1300 lm	IP44
C2260	60°	Up to 2 x 1300 lm	IP44



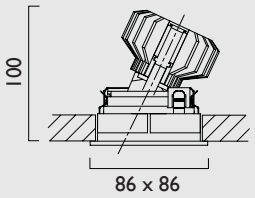
To specify the Light Engine & Driver code please refer to pages 48-49.

QUAD L86

QUAD L86 with Luxeon LED recessed square downlighter with black interior and white ceiling trim. Adjustable 0-30° tilt, 340° rotation.
Overall dimension 86mm x 86mm, cut out 77 x 77mm.



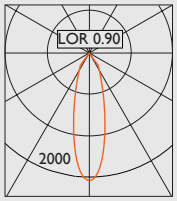
Product No	Beam Angle	Luminous Flux	IP
C2330	28°	Up to 982 lm	IP20
C2350	45°	Up to 982 lm	IP20
C2360	56°	Up to 982 lm	IP20
C2430	28°	Up to 982 lm	IP44
C2450	45°	Up to 982 lm	IP44
C2460	56°	Up to 982 lm	IP44



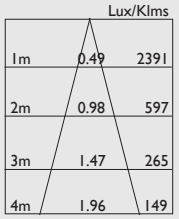
Cut-out

77 x 77

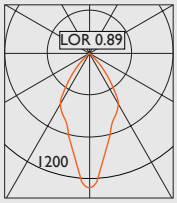
IP 20
IP 44



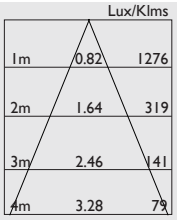
Intensity values in cds per 1,000 lumens.



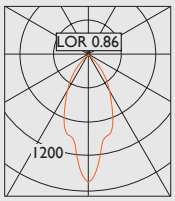
28° Beam diameter to 50% of E max



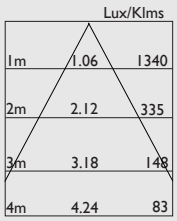
Intensity values in cds per 1,000 lumens.



45° Beam diameter to 50% of E max



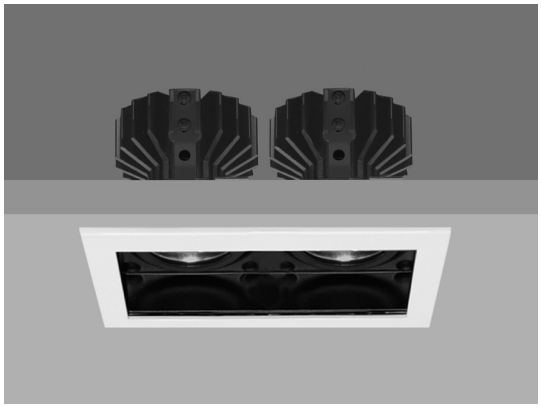
Intensity values in cds per 1,000 lumens.



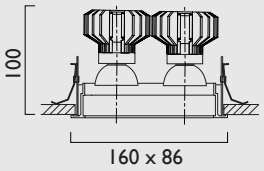
56° Beam diameter to 50% of E max

QUAD L86 DOUBLE

QUAD L86 with Luxeon LED double recessed rectangular downlighter with black interior and white ceiling trim. Adjustable 0-30° tilt, 340° rotation
Overall dimension 160mm x 86mm, cut out 151 x 77mm.



Product No	Beam Angle	Luminous Flux	IP
C2530	28°	Up to 982 lm	IP20
C2550	45°	Up to 982 lm	IP20
C2560	56°	Up to 982 lm	IP20
C2630	28°	Up to 982 lm	IP44
C2650	45°	Up to 982 lm	IP44
C2660	56°	Up to 982 lm	IP44



Cut-out

151 x 77

IP 20
IP 44

To specify the Light Engine & Driver code please refer to pages 48-49.

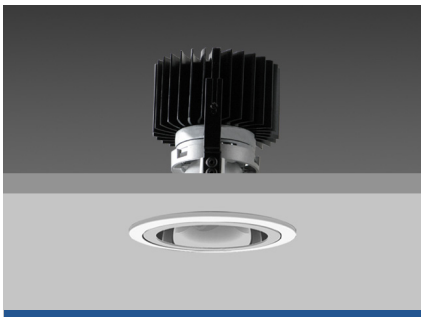
Hilton London Wembley Stadium
Architect: The Manser Practice
Main Contractor: John Sisk
Photograph: ©Hilton Hotels & Resorts

The 361 room luxury Hilton Hotel was one of the first buildings to be completed in the new multi-use development now known as Wembley Park Development. Designed Architectural Lighting supplied a package of luminaires for the public and hospitality areas of this prestigious project situated opposite Wembley Stadium. Ambiance X100 downlighters are installed in the hotel rooms, bars and restaurants providing accent and ambient lighting.

The project was designed in accordance with BREEAM and achieved a 'Very Good' rating.

DEEP CONE

VP X73



VP X100

VP X143

VP X143
WALLWASHER

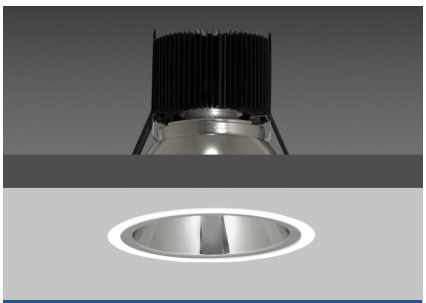
VP X143 LENS
WALLWASHER

VP X143
DIRECTIONAL

VP X143
CORNER WASHER

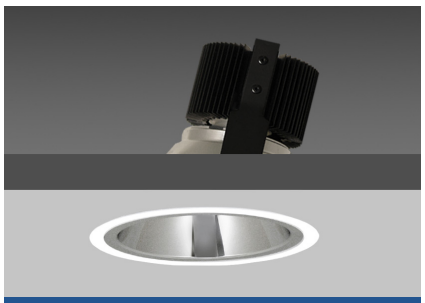
VP X143
DOUBLE WALLWASHER

VP X161



VP X161
WALLWASHER

VP X161
LENS WALLWASHER



VP X161
DIRECTIONAL

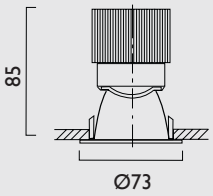
VP X73

SPECTRO SILVER

VP X73 with Xicato LED visual performance and comfort recessed downlighter with deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 73mm, cut out 65mm.

Product No	Luminous Flux	Reflector	IP
D0708	Up to 700 lm	Spectro Silver	IP20
D0808	Up to 700 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



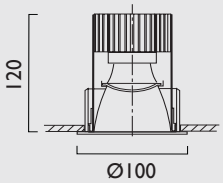
VP X100

SPECTRO SILVER

VP X100 with Xicato LED visual performance and comfort recessed downlighter with deep cone reflector finished in low glare, high reflectivity, diffused spectro silver and white ceiling trim.
Overall diameter 100mm, cut out 90mm.

Product No	Luminous Flux	Reflector	IP
C2708	Up to 1000 lm	Spectro Silver	IP20
C2808	Up to 1000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



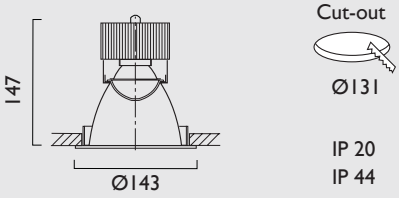
VP X143

SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 143mm, cut out 131mm

Product No	Luminous Flux	Reflector	IP
C2908	Up to 2000 lm	Spectro Silver	IP20
C3008	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



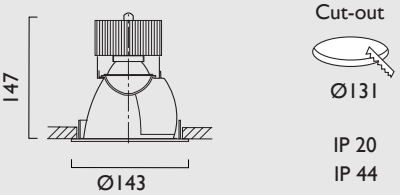
VP X143 WALLWASHER

SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed wallwasher with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver and white ceiling trim.
Overall diameter 143mm, cut out 131mm

Product No	Luminous Flux	Reflector	IP
C3108	Up to 2000 lm	Spectro Silver	IP20
C3208	Up to 2000 lm	Spectro Silver	IP44

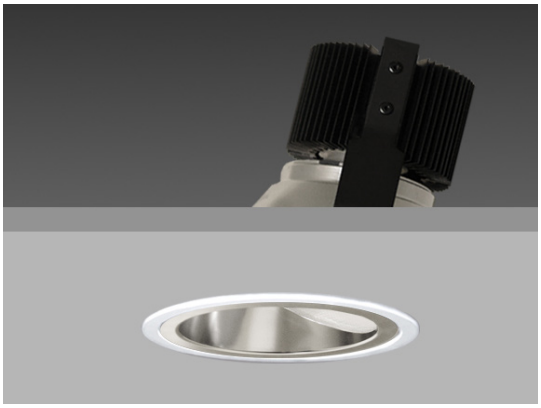
To specify the Light Engine & Driver code please refer to pages 48-49.



VP X143
LENS WALLWASHER

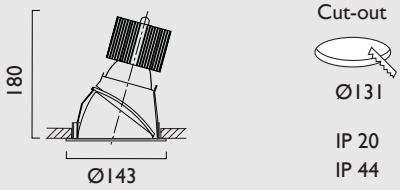
SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed spread-lens wall-washer with deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 143mm, cut out 131mm



Product No	Luminous Flux	Reflector	IP
C3308	Up to 2000 lm	Spectro Silver	IP20
C3408	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



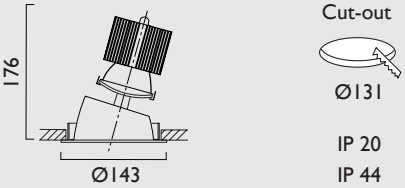
VP X143
DIRECTIONAL

SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed directional downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 143mm, cut out 131mm

Product No	Luminous Flux	Reflector	IP
C3508	Up to 2000 lm	Spectro Silver	IP20
C3608	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



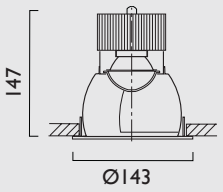
VP X143
CORNER WASHER

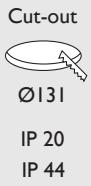
SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed corner washer with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 143mm, cut out 131mm

Product No	Luminous Flux	Reflector	IP
C3708	Up to 2000 lm	Spectro Silver	IP20
C3808	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.





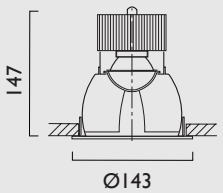
VP X143
DOUBLE WALLWASHER

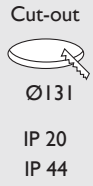
SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed double wallwasher with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 143mm, cut out 131mm

Product No	Luminous Flux	Reflector	IP
C3908	Up to 2000 lm	Spectro Silver	IP20
C4008	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.

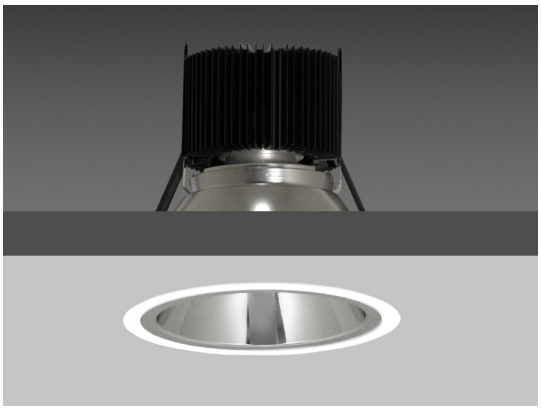




VP X161

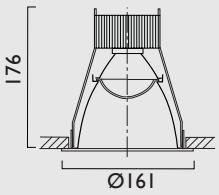
SPECTRO SILVER

VP X161 with Xicato LED visual performance and comfort recessed downlighter with lens diffuser, deep cone reflector finished low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm



Product No	Luminous Flux	Reflector	IP
C4108	Up to 2000 lm	Spectro Silver	IP20
C4208	Up to 2000 lm	Spectro Silver	IP44

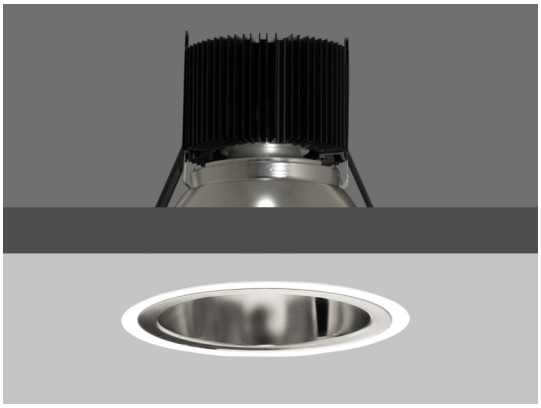
To specify the Light Engine & Driver code please refer to pages 48-49.



VP X161 WALLWASHER

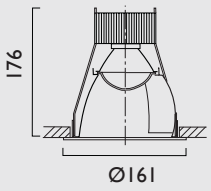
SPECTRO SILVER

VP X161 with Xicato LED visual performance and comfort recessed wallwasher with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm



Product No	Luminous Flux	Reflector	IP
C4308	Up to 2000 lm	Spectro Silver	IP20
C4408	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



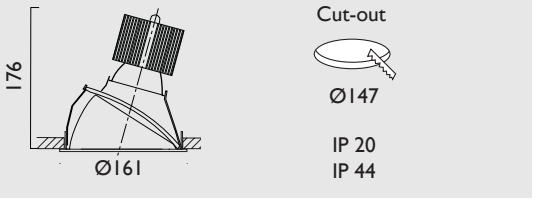
VP X161
LENS WALLWASHER

SPECTRO SILVER

VP X143 with Xicato LED visual performance and comfort recessed directional downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm

Product No	Luminous Flux	Reflector	IP
C4508	Up to 2000 lm	Spectro Silver	IP20
C4608	Up to 2000 lm	Spectro Silver	IP44

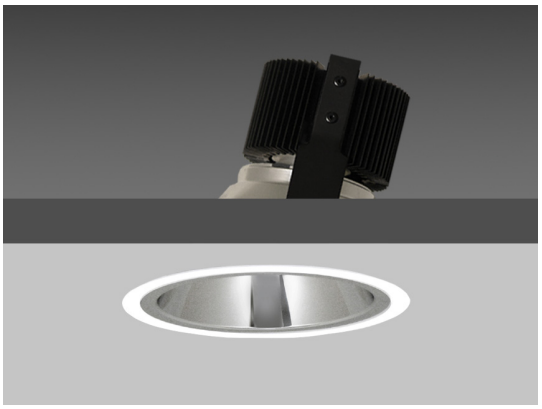
To specify the Light Engine & Driver code please refer to pages 48-49.



VP X161
DIRECTIONAL

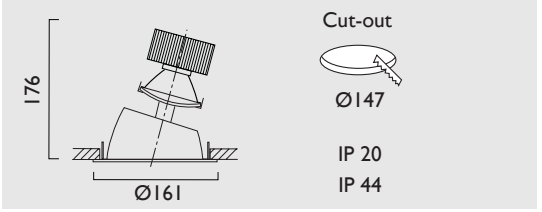
SPECTRO SILVER

VP X161 with Xicato LED visual performance and comfort recessed directional down-lighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.



Product No	Luminous Flux	Reflector	IP
C4708	Up to 2000 lm	Spectro Silver	IP20
C4808	Up to 2000 lm	Spectro Silver	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.



Hilton London Wembley Stadium
Architect: The Manser Practice
Main Contractor: John Sisk
Photograph: ©Hilton Hotels & Resorts

With its proximity to Wembley Arena and the National Stadium the hotel has become a social hub within the regeneration of Wembley Park. Whether nursing a glass of whisky or having a pre match lunch in the stylish Icons Bar visitors can relax in the environs surrounded by the iconic Wembley Arch and the Arena. The Arena, built originally as a swimming pool for the 1934 Empire Games, has with one of the largest ever built reinforced concrete roof spans, and has an English Heritage Grade 2* listing.

TRIMLESS

TRIMLESS VP X82

TRIMLESS VP X124

TRIMLESS VP X124 WALLWASHER

TRIMLESS VP X124 CORNER WALLWASHER

TRIMLESS VP X124 DOUBLE WALLWASHER

TRIMLESS VP X124 LENS WALLWASHER

TRIMLESS VP X124 DIRECTIONAL

TRIMLESS VP X140

TRIMLESS VP X140 WALLWASHER

TRIMLESS VP X140 LENS WALLWASHER

TRIMLESS VP X140 DIRECTIONAL

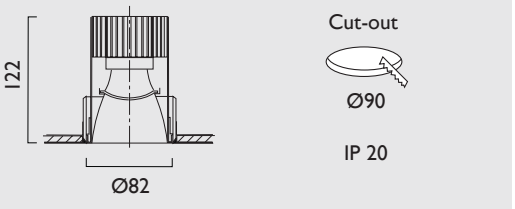
TRIMLESS VP X82

SPECTRO SILVER

TRIMLESS VP X82 with Xicato LED visual performance and comfort recessed downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 82mm, cut out 90mm.

Product No	Luminous Flux	Reflector	IP
C4908	Up to 1000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



LIGHT ENGINES & DRIVERS

A driver is needed to operate and control every downlighter. The current of the driver determines the output, i.e. 350mA, 500mA, 700mA and 1000mA. Each driver is specific to the lumen output. This is why it is necessary to have so many product numbers.

Specification example -

Step 1: Choose a downlighter.
E.G. **AMBIANCE X100, 20°, Satin Silver** the number is - **C0322**.

Step 2: Choose an Engine Code from the specification charts shown on pages 48-49
E.G. Lumens - **720**, colour temperature - **3000K**, **no dimming** (0), **no emergency** (0) and the number is - **072300**

The complete product number is **C0322/072300**

For Dimming and Control System Driver Protocols and Emergency Protocols insert a number and a letter the list.
If Dali dimming is required the number becomes 0723**5**0
If Dali dimming and maintained emergency is required the number becomes 07235**E**

Dimming, Control System (5th digit)
1 - 1-10v
3 - DSI
5 - Dali
7 Lead/trailing
9 - Addressable

Emergency Protocols (6th digit)
E - Maintained
N - Non-maintained

To specify a Light Engine & Driver please refer to pages 48-49. The options cover LED Colour Appearance (K), dimming control systems and emergency protocols

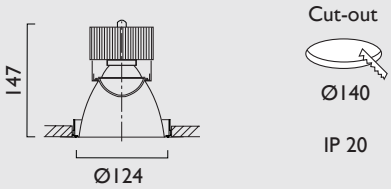
TRIMLESS VP X124

SPECTRO SILVER

TRIMLESS VP X124 with Xicato LED visual performance and comfort recessed downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 124mm, cut out 140mm.

Product No	Luminous Flux	Reflector	IP
C5108	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



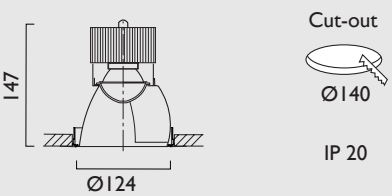
TRIMLESS VP X124 WALLWASHER

SPECTRO SILVER

TRIMLESS VP X124 with Xicato LED visual performance and comfort recessed wallwasher with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 124mm, cut out 140mm.

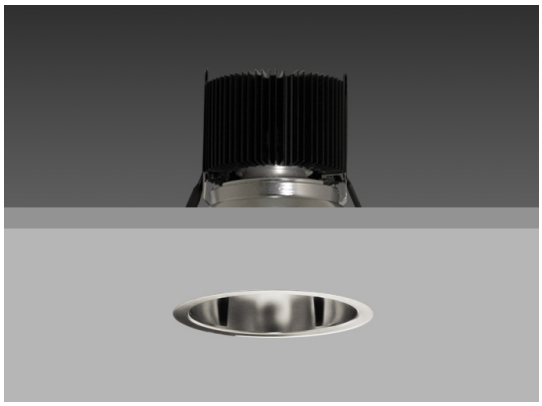
Product No	Luminous Flux	Reflector	IP
C5308	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



TRIMLESS VP X124 CORNER WALLWASHER

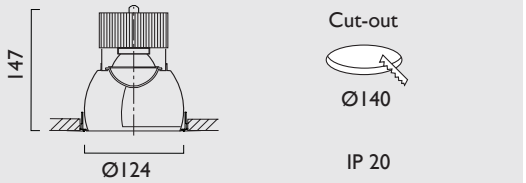
SPECTRO SILVER



TRIMLESS VP X124 with Xicato LED visual performance and comfort recessed corner washer with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 124mm, cut out 140mm

Product No	Luminous Flux	Reflector	IP
C5508	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



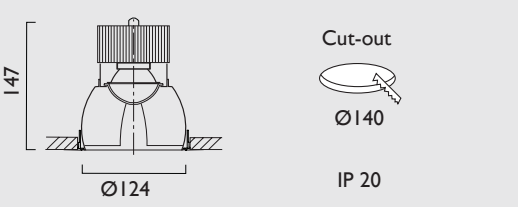
TRIMLESS VP X124 DOUBLE WALLWASHER

SPECTRO SILVER

TRIMLESS VP X124 with Xicato LED visual performance and comfort recessed double wallwasher with lens diffuser, deep cone and kick reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 124mm, cut out 140mm

Product No	Luminous Flux	Reflector	IP
C5708	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



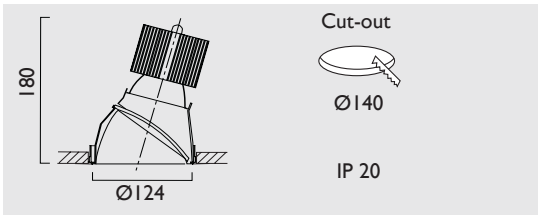
TRIMLESS VP X124 LENS WALLWASHER

SPECTRO SILVER

TRIMLESS VP X124 with Xicato LED visual performance and comfort recessed spread-lens wallwasher with deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 124mm, cut out 140mm

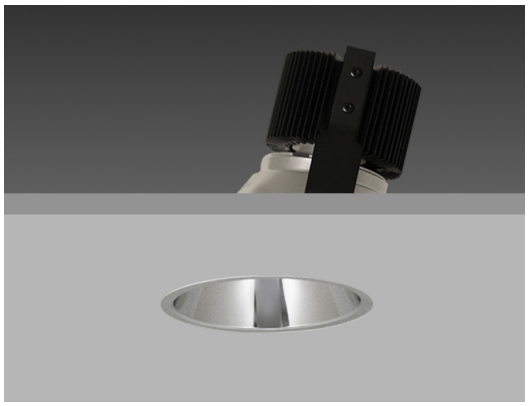
Product No	Luminous Flux	Reflector	IP
C5908	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



TRIMLESS VP X124 DIRECTIONAL

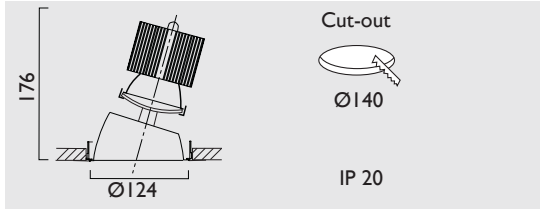
SPECTRO SILVER



TRIMLESS VP X124 with Xicato LED visual performance and comfort recessed directional downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 124mm, cut out 140mm.

Product No	Luminous Flux	Reflector	IP
C6108	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



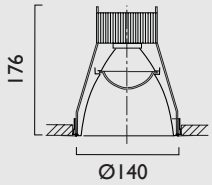
TRIMLESS VP X140

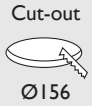
SPECTRO SILVER

TRIMLESS VP X140 with Xicato LED visual performance and comfort recessed downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 140mm, cut out 156mm

Product No	Luminous Flux	Reflector	IP
C6308	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.





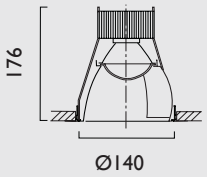
TRIMLESS VP X140 WALLWASHER

SPECTRO SILVER

TRIMLESS VP X140 with Xicato LED visual performance and comfort recessed wall-washer with lens diffuser, deep cone and kick reflector finished low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 140mm, cut out 156mm

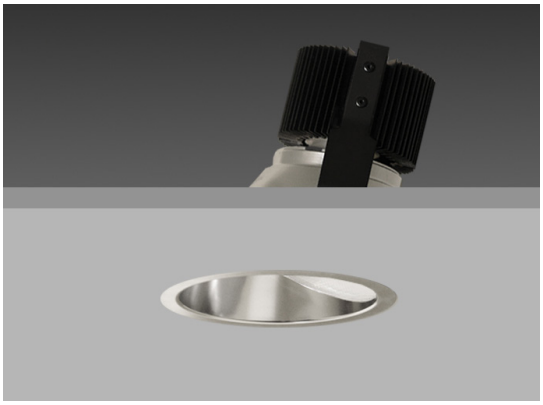
Product No	Luminous Flux	Reflector	IP
C6508	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



TRIMLESS VP X140 LENS WALLWASHER

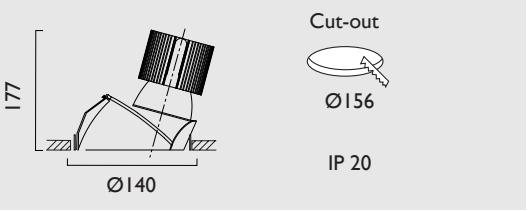
SPECTRO SILVER



TRIMLESS VP X140 with Xicato LED visual performance and comfort recessed directional downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 140mm, cut out 156mm.

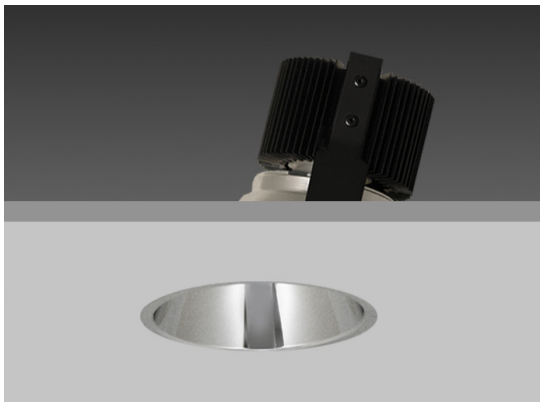
Product No	Luminous Flux	Reflector	IP
C6708	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



TRIMLESS VP X140 DIRECTIONAL

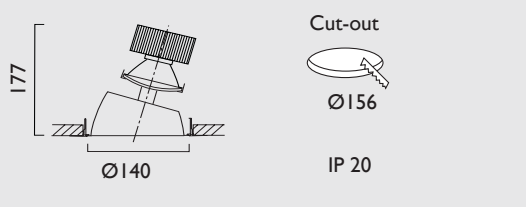
SPECTRO SILVER



TRIMLESS VP X140 with Xicato LED visual performance and comfort recessed directional downlighter with lens diffuser, deep cone reflector finished in low glare, high reflectivity, diffused spectro silver, and white ceiling trim.
Overall diameter 140mm, cut out 156mm.

Product No	Luminous Flux	Reflector	IP
C6908	Up to 2000 lm	Spectro Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



Lotte Hotel, Seoul
Lighting Consultant: Project Lighting Design Singapore
Photograph: ©Lotte Hotel

Lotte Hotel is located in the Sogong neighbourhood of Jung-gu, in the heart of Seoul. In Jung district tourists can experience a mixture of old and new cultures, where there are department stores and shopping malls jostling with cherished historic sites such as Deoksugung and Sungnyemun. Deoksugung is an historical walled Palace compound and the first National Treasure of South Korea, Sungnyemun is one of the eight gates in the fortress wall of Seoul. Lotte has its own world of restaurants and bars, banqueting halls and conference suites, but amongst this exotic and busy environment is the luxurious haven of The Spa, winner of the 2013 Chrystal Award.

SHALLOW DEPTH

TEMPO X161

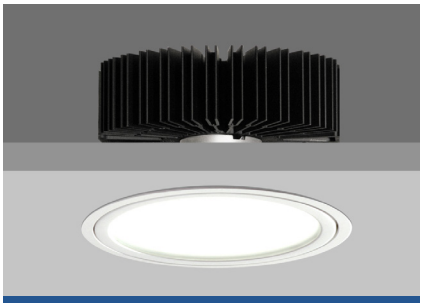
TEMPO X161 ULTRA

TEMPO X161 80°

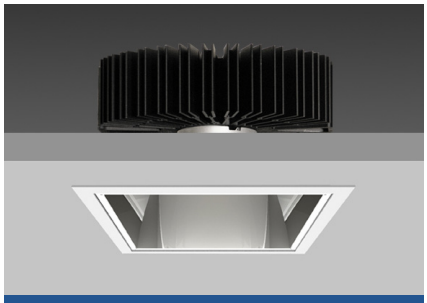
TEMPO X161
80° ULTRA

TEMPO X161
WALLWASHER

AMPIA X161



ICE X161



SQUARE X161

SQUARE X161
DIRECTIONAL

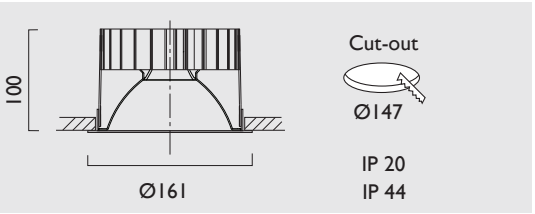
SQUARE X161
LENS WALLWASHER

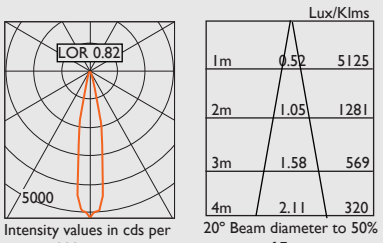
TEMPO X161

SPECULAR SILVER, SATIN SILVER, WHITE

TEMPO X161 with Xicato LED recessed downlighter with cone reflector finished in specular silver, satin silver, or white, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.

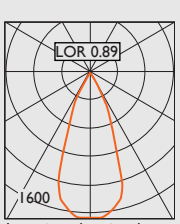
Beam Angle	Specular Silver	Satin Silver	White
Light Fixture IP20 - Up to 2000 lm			
20°	C7121	C7122	C7124
40°	C7141	C7142	C7144
60°	C7161	C7162	C7164
Light Fixture IP44 - Up to 2000 lm			
20°	C7221	C7222	C7224
40°	C7241	C7242	C7244
60°	C7261	C7262	C7264



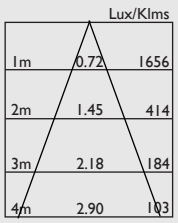


Intensity values in cds per 1,000 lumens.

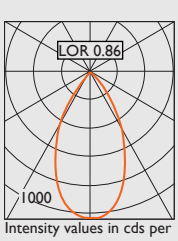
20° Beam diameter to 50% of E max



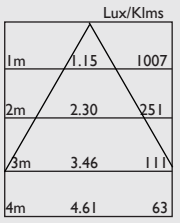
Intensity values in cds per 1,000 lumens.



40° Beam diameter to 50% of E max



Intensity values in cds per 1,000 lumens.

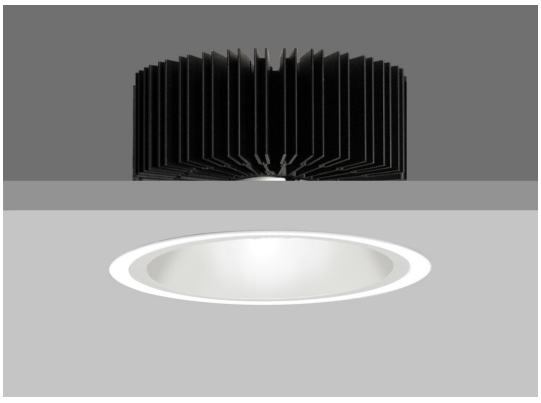


60° Beam diameter to 50% of E max

TEMPO X161 ULTRA

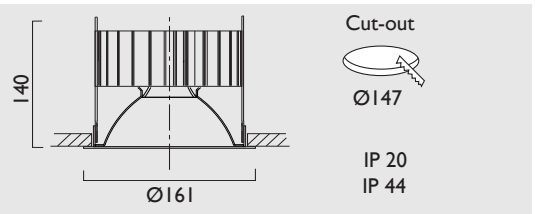
SPECULAR SILVER, SATIN SILVER, WHITE

TEMPO X161 with Xicato LED recessed downlighter with cone reflector finished in specular silver, satin silver, or white, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.



Beam Angle	Specular Silver	Satin Silver	White
Light Fixture IP20 - Up to 3000 lm			
20°	C7321	C7322	C7324
40°	C7341	C7342	C7344
60°	C7361	C7362	C7364
Light Fixture IP44 - Up to 3000 lm			
20°	C7421	C7422	C7424
40°	C7441	C7442	C7444
60°	C7461	C7462	C7464

To specify the Light Engine & Driver code please refer to pages 48-49.



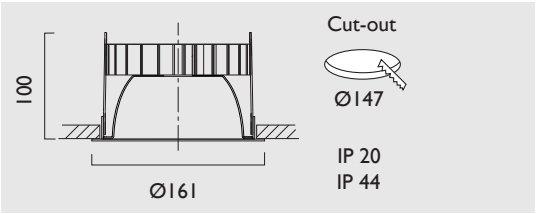
TEMPO X161 80°

SATIN SILVER

TEMPO X161 with Xicato LED recessed downlighter with cone reflector finished in satin silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.

Product No	Beam Angle	Luminous Flux	Reflector	IP
C7581	80°	Up to 2000 lm	Satin Silver	IP20
C7681	80°	Up to 2000 lm	Satin Silver	IP44

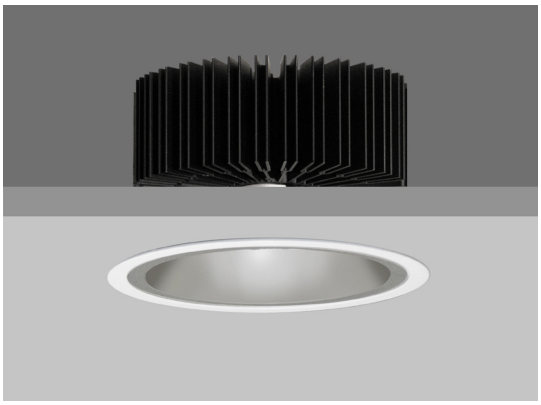
To specify the Light Engine & Driver code please refer to pages 48-49.



TEMPO X161 80° ULTRA

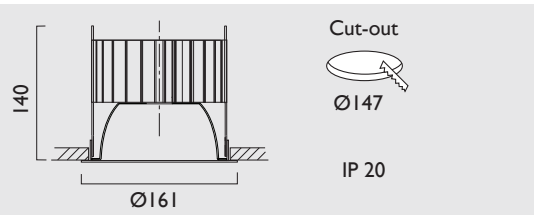
SATIN SILVER

TEMPO X161 with Xicato LED recessed downlighter with cone reflector finished in satin silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.



Product No	Beam Angle	Luminous Flux	Reflector	IP
C7781	80°	Up to 3000 lm	Satin Silver	IP20
C7881	80°	Up to 3000 lm	Satin Silver	IP44

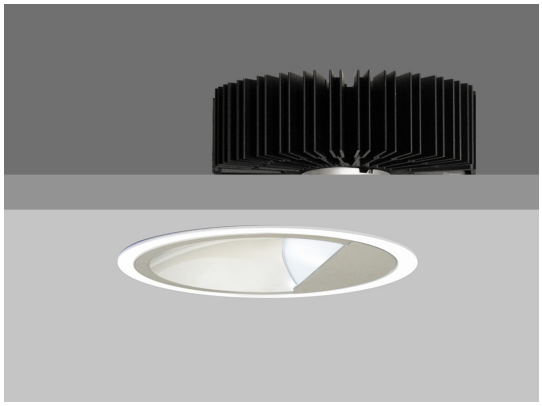
To specify the Light Engine & Driver code please refer to pages 48-49.



TEMPO X161 WALLWASHER

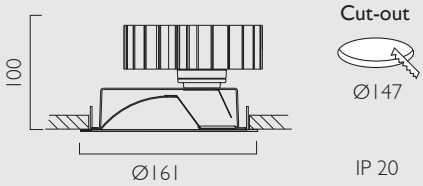
SPECULAR SILVER

TEMPO X161 with Xicato LED recessed wallwasher with cone reflector finished in specular silver, and white ceiling trim.
Overall diameter 161mm, cut out 147mm



Product No	Luminous Flux	Reflector	IP
C7901	Up to 2000 lm	Specular Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



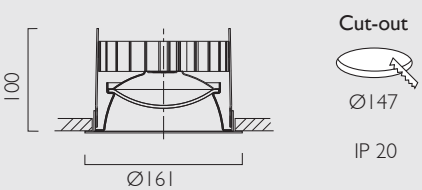
AMPIA X161

SPECULAR SILVER

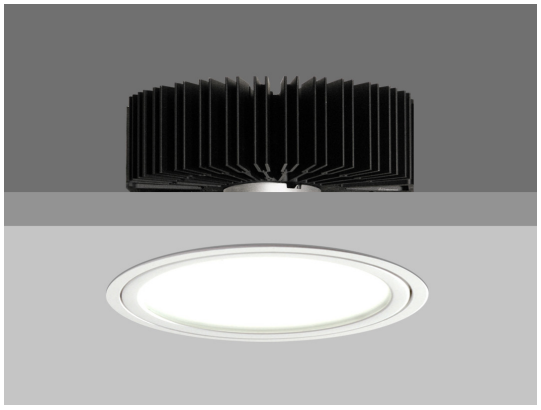
AMPIA X161 with Xicato LED recessed downlighter with cone reflector finished in specular silver, lens diffuser, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.

Product No	Luminous Flux	Reflector	IP
C8101	Up to 2000 lm	Specular Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.



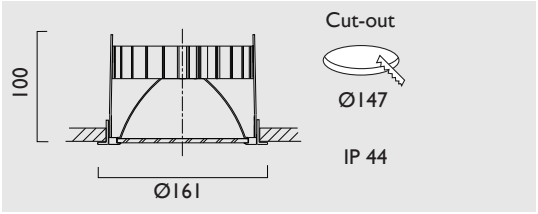
ICE X161



ICE X161 with Xicato LED recessed downlighter with white cone reflector, stippled acrylic diffuser, and white ceiling trim.
Overall diameter 161mm, cut out 147mm.

Product No	Luminous Flux	Reflector	IP
C8401	Up to 2000 lm	White	IP44

To specify the Light Engine & Driver code please refer to pages 48-49.

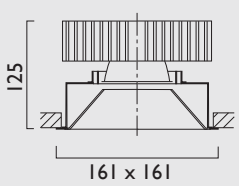


SQUARE X161

SEMI SPECULAR SILVER

SQUARE X161 with Xicato LED recessed downlighter with deep cone reflector finished in semi specular silver, and white ceiling trim.
Overall size 161 x 161mm, cut out 147 x 147mm

Product No	Beam Angle	Luminous Flux	Reflector	IP
C8727	20°	Up to 2000 lm	Semi-Specular	IP20
C8747	40°	Up to 2000 lm	Semi-Specular	IP20
C8767	60°	Up to 2000 lm	Semi-Specular	IP20
C8827	20°	Up to 2000 lm	Semi-Specular	IP44
C8847	40°	Up to 2000 lm	Semi-Specular	IP44
C8867	60°	Up to 2000 lm	Semi-Specular	IP44



Cut-out

147 x 147

IP 20
IP 44

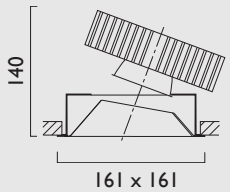
To specify the Light Engine & Driver code please refer to pages 48-49.

SQUARE X161 DIRECTIONAL

SEMI SPECULAR SILVER

SQUARE X161 with Xicato LED recessed directional downlighter with deep cone reflector semi specular silver, and white ceiling trim.
Overall size 161 x 161mm, cut out 147 x 147mm

Product No	Beam Angle	Luminous Flux	Reflector	IP
C8927	20°	Up to 2000 lm	Semi-Specular	IP20
C8947	40°	Up to 2000 lm	Semi-Specular	IP20
C8967	60°	Up to 2000 lm	Semi-Specular	IP20
C9027	20°	Up to 2000 lm	Semi-Specular	IP44
C9047	40°	Up to 2000 lm	Semi-Specular	IP44
C9067	60°	Up to 2000 lm	Semi-Specular	IP44



Cut-out

147 x 147

IP 20
IP 44

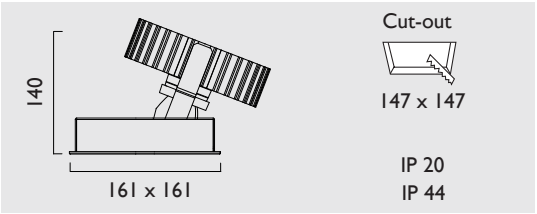
To specify the Light Engine & Driver code please refer to pages 48-49.

SQUARE X161 WALLWASHER

SEMI SPECULAR SILVER

SQUARE X161 with Xicato LED recessed wallwasher with deep cone reflector finished in semi specular silver, and white ceiling trim.
Overall size 161 x 161mm, cut out 147 x 147mm

Product No	Luminous Flux	Reflector	IP
C9107	Up to 2000 lm	Semi-Specular	IP20
C9207	Up to 2000 lm	Semi-Specular	IP44



To specify the Light Engine & Driver code please refer to pages 48-49.

SURFACE

CIVIC X102

CIVIC X165

CIVIC G210

Brent Civic Centre
Architect: Hopkins Architects
Electrical and lighting specialists: URS Scott Wilson
Main Contractor: Skanska
M & E Contractor: Skanska

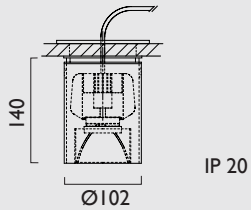
Located on a prominent site next to two well-known civic icons, Wembley Stadium and Wembley Arena, the new Civic Centre houses all aspects of the Council's activities. Now the home of nearly 2000 civic, public and administrative staff, the building boasts many interesting architectural featured including the soaring, naturally-lit foyer and atrium. Designed Architectural Lighting supplied well over 2,000 Civic G210 surface mounted downlighters for the project, which has been awarded the coveted BREEAM 'Outstanding' rating.

CIVIC X102

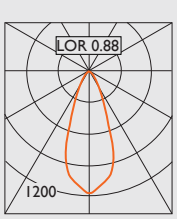
SPECULAR SILVER

CIVIC X102 with Xicato LED surface mounted downlighter with deep cone reflector finished in specular silver, and white casing. Driver mounted remotely.
Overall diameter 102mm.

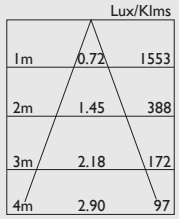
Product No	Beam Angle	Luminous Flux	Reflector	IP
C9321	20°	Up to 1300 lm	Specular Silver	IP20
C9341	40°	Up to 1300 lm	Specular Silver	IP20
C9361	60°	Up to 1300 lm	Specular Silver	IP20



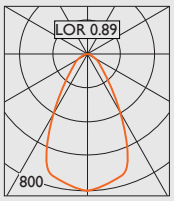
To specify the Light Engine & Driver code please refer to pages 48-49.



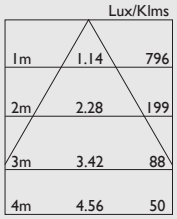
Intensity values in cds per 1,000 lumens.



40° Beam diameter to 50% of E max



Intensity values in cds per 1,000 lumens.



60° Beam diameter to 50% of E max

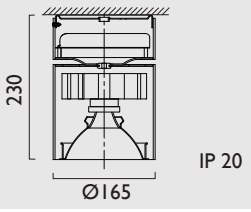
CIVIC X165

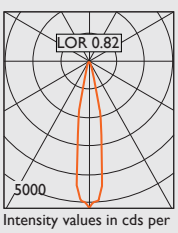
SPECULAR SILVER, SATIN SILVER, WHITE

CIVIC X165 with Xicato LED surface mounted downlighter with deep cone reflector finished in specular silver, satin silver, or white, and black casing.
Overall diameter 165mm.

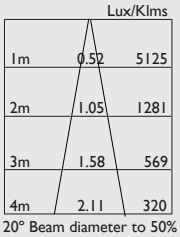
Beam Angle	Specular Silver	Satin Silver	White
Light Fixture IP20 - Up to 2000 lm			
20°	C9521	C9522	C9524
40°	C9541	C9542	C9544
60°	C9561	C9562	C9564

To specify the Light Engine & Driver code please refer to pages 48-49.

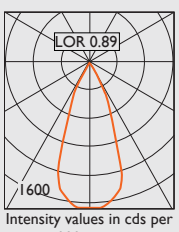




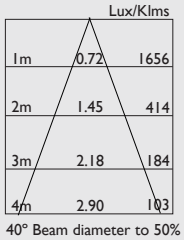
Intensity values in cds per 1,000 lumens.



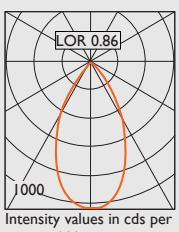
20° Beam diameter to 50% of E max



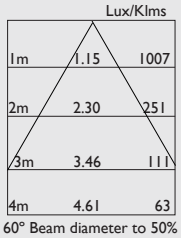
Intensity values in cds per 1,000 lumens.



40° Beam diameter to 50% of E max



Intensity values in cds per 1,000 lumens.



60° Beam diameter to 50% of E max

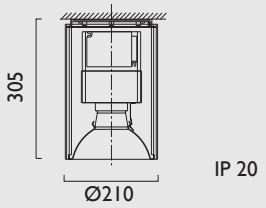
CIVIC G210

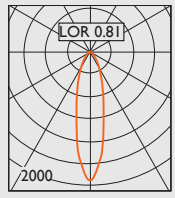
SATIN SILVER

CIVIC G210 with GE Infusion LED surface mounted downlighter with deep cone reflector finished in satin silver, and grey casing.
Overall diameter 210mm.

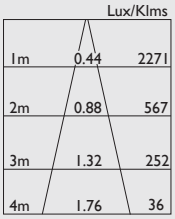
Product No	Beam Angle	Luminous Flux	Reflector	IP
C9732	25°	Up to 3425 lm	Satin Silver	IP20
C9752	36°	Up to 3425 lm	Satin Silver	IP20
C9762	60°	Up to 3425 lm	Satin Silver	IP20

To specify the Light Engine & Driver code please refer to pages 48-49.

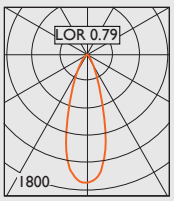




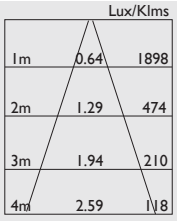
Intensity values in cds per 1,000 lumens.



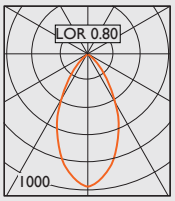
25° Beam diameter to 50% of E max



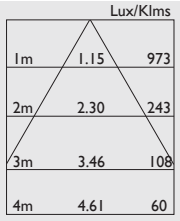
Intensity values in cds per 1,000 lumens.



36° Beam diameter to 50% of E max



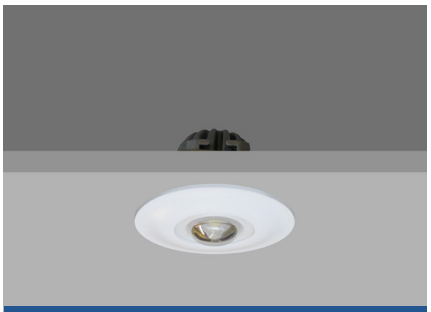
Intensity values in cds per 1,000 lumens.



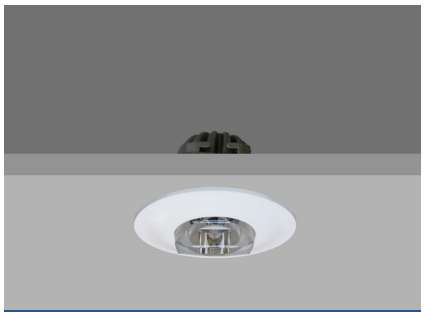
60° Beam diameter to 50% of E max

EMERGENCY UNIT

WAYLIGHT 3



WAYLIGHT
OPEN AREA LENS



WAYLIGHT 3
CORRIDOR LENS

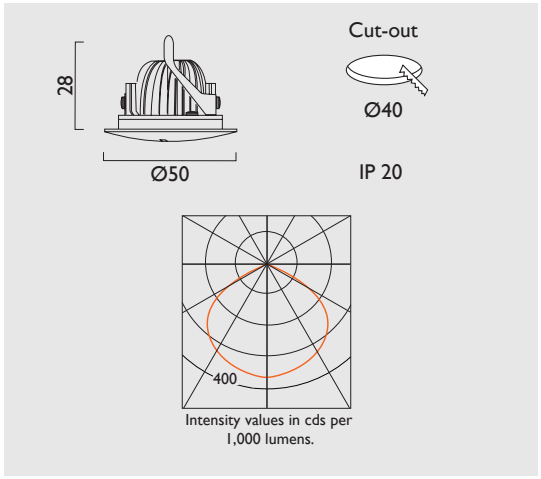
Brent Civic Centre
Architect: Hopkins Architects
Electrical and lighting specialists: URS Scott Wilson
Main Contractor: Skanska
M & E Contractor: Skanska

Brent Civic Centre is one of the many new buildings in the regeneration of the Wembley Park area. Wembley has a long history of unique and interesting building designs, including the relatively new Foster Architect's 2007 stadium with its iconic soaring arch. Also, there is the legacy of the original stadium built in 1923 for the Empire Exhibition; the twin towers etched in the psyche of almost every English football fan. art of the Civic Centre's innovative design is a naturally-lit foyer and atrium, this houses a large amphitheatre suitable for public performances and events.

WAYLIGHT 3

WAYLIGHT 3 a constant current 110 degree wide beam 3W white LED.
Complete with charge LED.
Designed to comply with all of the requirements of BS EN 60598-2-22.

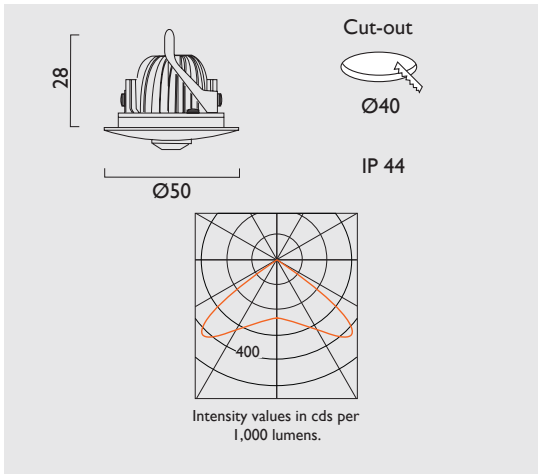
Product No	Beam	Output	IP
D0190	110°	155 lumens	IP20



WAYLIGHT 3
OPEN AREA LENS

WAYLIGHT 3 with open are lens, a constant current 3W white LED.
Complete with charge LED.
Designed to comply with all of the requirements of BS EN 60598-2-22.

Product No	Output	IP
D0390	160 lumens	IP44



WAYLIGHT 3 CORRIDOR LENS

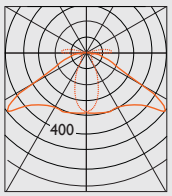
WAYLIGHT 3 with corridor lens, a constant current 3W white LED. Complete with charge LED.
Designed to comply with all of the requirements of BS EN 60598-2-22.

Product No	Output	IP
D0590	157 lumens	IP44

Cut-out

Ø40

IP 44



Intensity values in cds per 1,000 lumens.

LIGHT ENGINES & DRIVERS

A driver is needed to operate and control every downlighter. The current of the driver determines the output, i.e. 350mA, 500mA, 700mA and 1000mA. Each driver is specific to the lumen output. This is why it is necessary to have so many product numbers.

Specification example -

Step 1: Choose a downlighter.
E.G. **AMBIANCE X100, 20°, Satin Silver** the number is - **C0322**.

Step 2: Choose an Engine Code from the specification charts shown on the following pages
E.G. Xicato Lumens - **720**, (column 6) colour temperature - **3000K**, **no dimming** (0), **no emergency** (0) and the number is - **072300**

The complete product number is **C0322/072300**

For Dimming and Control System Driver Protocols and Emergency Protocols insert a number and a letter from the charts opposite.

If Dali dimming is required the number becomes 0723**5**0
If Dali dimming and maintained emergency is required the number becomes 07235**E**

Engine Options for L (Luxeon) downlighters

Product No	Engine Options - Colour Temp (K)	Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	3000K					
CXXXX /	074300	742	8.8	83	80	50 000
	098300	982	12.7	77	80	50 000

Engine Options for G (GE) downlighters

Product No	Engine Options - Colour Temp (K)	Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	4000K					
CXXXX /	050500	1675	18	93	>80	50 000
	070500	2175	27	80		
	093500	3425	35	97		

Dimming, Control System (5th digit)
1 - 1-10v
3 - DSI
5 - Dali
7 Lead/trailing
9 - Addressable

Emergency Protocols (6th digit)
E - Maintained
N - Non-maintained

Light Engine & Driver Options for X (Xicato) downlighters

XSM 700 (280 - 700 lms)

Product No	Engine Options - Colour Temp (K)				Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	2700K	**3000K**	**3500K**	**4000K**					
CXXXX /	028200	028300	028400	028500	280	2.9	95	>80	50,000
	038200	038300	038400	038500	380	4.3	88		
	050200	050300	050400	050500	500	6.2	81		
	070200	070300	070400	070500	700	9.7	72		

XSM 1000 (380 - 1000 lms)

Product No	Engine Options - Colour Temp (K)				Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	2700K	**3000K**	**3500K**	**4000K**					
CXXXX /	038200	038300	038400	038500	380	4.0	96	>80	50,000
	054200	054300	054400	054500	540	5.8	93		
	072200	072300	072400	072500	720	8.3	87		
	100200	100300	100400	100500	1000	13.0	77		

XSM 1300 (500 - 1300 lms)

Product No	Engine Options - Colour Temp (K)				Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	2700K	**3000K**	**3500K**	**4000K**					
CXXXX /	050200	050300	050400	050500	500	5.4	92	>80	50,000
	070200	070300	070400	070500	700	7.9	89		
	093200	093300	093400	093500	930	11.3	82		
	130200	130300	130400	130500	1300	17.8	73		

XSM 2000 (780 - 2000 lms)

Product No	Engine Options - Colour Temp (K)				Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	2700K	**3000K**	**3500K**	**4000K**					
CXXXX /	078200	078300	078400	078500	780	8.8	88	>80	50,000
	107200	107300	107400	107500	1070	12.9	83		
	142200	142300	142400	142500	1420	18.5	77		
	200200	200300	200400	200500	2000	28.8	70		

XSM 3000 (1210 - 3000 lms)

Product No	Engine Options - Colour Temp (K)				Lumen Output at 70°C (lms)	Power (w)	Efficacy (lm/w)	CRI (Ra)	Life (Hrs)
	2700K	**3000K**	**3500K**	**4000K**					
CXXXX /	121200	121300	121400	121500	1210	13.8	88	>80	50,000
	166200	166300	166400	166500	1660	20.2	82		
	220200	220300	220400	220500	2200	29	77		
	300200	300300	300400	300500	3000	45	67		

Dimming, Control System (5th digit)
1 - 1-10v
3 - DSI
5 - Dali
7 Lead/trailing
9 - Addressable

Emergency Protocols (6th digit)
E - Maintained
N - Non-maintained

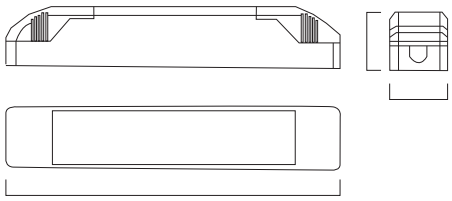
PRODUCT INFORMATION

LED downlighters are Class III and must be operated by a compatible driver. For this reason DAL supplies these, to the clients' control protocol specification, as part of the luminaire.

A driver is needed to operate and control every downlighter. The driver is specific to whether a control system is being used or not, and what type (Driver Protocol).

Actual height dimensions of the downlighters are shown. To ensure suitability, on-site recess depths should be checked.

Unless otherwise specified ceiling trims are finished low gloss white RAL9010



Driver dimensions may vary.
Please contact us for clarification

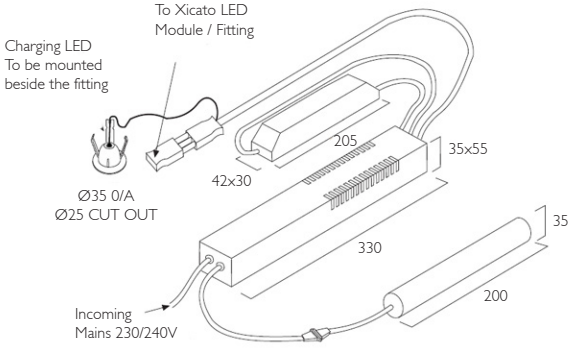
EMERGENCY LIGHTING COMPONENTS

Maintained Emergency Pack
For Xicato LED Module

Due to Building Regulations, the Fire Precautions Act, and the Health and Safety at Work Act it is necessary to provide suitable means of escape from a building in the event of an emergency. Therefore an essential element is to provide enough light for escape. Most of Designed Architectural Lighting luminaires are available as emergency versions and are classed as 'self contained three hour duration' which meet the requirements of EN 60598-I, EN 60598-2.22 and BS5266.

LED luminaires are generally operated on a maintained basis, where the LED is on at all times, whether being operated normally from the mains supply or from self contained emergency control gear. To specify add the appropriate suffix/to the standard catalogue number.
Please refer to the Emergency Lighting Components Table below,

For luminaires with small apertures reduced size versions of emergency pack maybe available. A green battery charging LED is fitted to the luminaire ceiling trim or mounted adjacent to the luminiare.



Xicato LED Module	Lumens	Lumen Output in Emergency
	700	200
	1000	182
	1300	235
	2000	206

DOES NOT INCLUDE ANY DALI MONITORING DEVICE

revision 1 10/021/14

Oxford Brookes University, Headington Campus
Architect: Design Engine
M&E Engineer: Grontmij
Lighting Consultant
Speirs + Major
Photographer: Nick Kane

The Abercrombie Building, Headington Campus, is part of Oxford Brookes University and situated in a residential area about one mile east of Oxford city centre. As with many of the UK's younger Universities, the roots of Oxford Brookes are long established, starting life in 1865 as Oxford School of Art. Now, it is a multi-site, multi-faculty University.
For DAL the project started with the Abercrombie Building extension, the first phase of the much larger John Henry Brookes Building due to be finished in 2014. The extension is linked to the existing building by glass bridges and shared meeting galleries, forming a dramatic interior with internal spaces opening onto The Void, which allows natural ventilation and lots of daylight. With the team DAL developed a linear lighting and services system for the project. This, together with surface mounted and recessed downlighters, including Ambiance X100 LED downlighters, forms a cohesive lighting strategy for New Teaching and Library Building.

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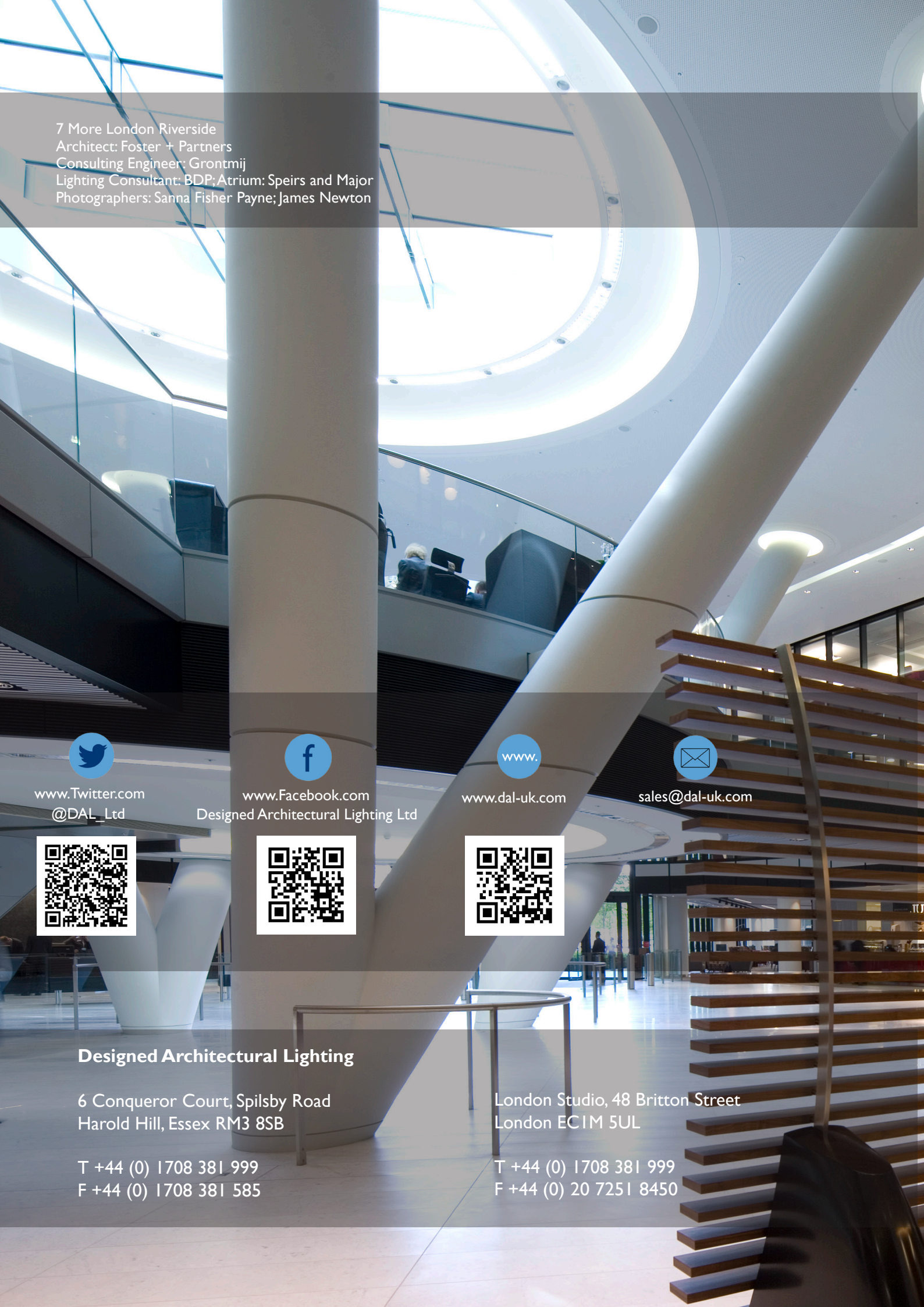
Lotte Hotel Seoul, South Korea

7 More London Riverside

Hilton London Wembley Stadium

Brent Civic Centre, Wembley



7 More London Riverside
Architect: Foster + Partners
Consulting Engineer: Grontmij
Lighting Consultant: BDP; Atrium: Speirs and Major
Photographers: Sanna Fisher Payne; James Newton

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