



Station Hill, Reading – One Station Hill
L8147

LIGHTING EQUIPMENT SPECIFICATION

Revision: T03 – Stage 4 Detailed Design
Status: D2

24th September 2020

1.0 Introduction

1.01 The following notes are intended to highlight various issues in order to help avoid any misunderstandings, errors or omissions relating to the lighting as designed and specified by **dpa** lighting consultants. It must be read in conjunction with all relevant **dpa** project documents, specifications and drawings.

1.02 If anything, whatsoever is unclear please submit written requests for clarification.

2.0 General Notes

2.01 Equipment selected as a standard item from a particular manufacturer's range has been specified with a view to performance, optics, maintenance, quality, aesthetics, cost, availability, etc.

2.02 **dpa** lighting consultants cannot accept any responsibility for the resultant lit effect of an installation of non-approved equipment, or for equipment not installed in accordance with manufacturer's instructions or in a manner other than indicated in the relevant drawings and specifications. However, wherever it is of benefit to the project **dpa** lighting consultants are happy to consider any equivalent/alternative fixtures to those specified. Please refer to section 7.00 Assessment of Alternative Lighting Equipment.

2.03 The setting-out/final location of each luminaire and where relevant its integration within the architecture shall be as detailed on the relevant co-ordinated Architectural/Interior-Designer/Landscape-Architect/MEP Consultant's drawings. Subsequent Contractor shop drawings detailing the lighting installation must be submitted with adequate time to **dpa** lighting consultants for approval prior to installation.

2.04 Luminaire recess depths and cut out sizes should be noted. Refer to manufacturer's installation detail for all specific dimensions.

2.05 All DMX/0-10V/1-10V/DALI dimmable fluorescent and LED luminaires etc. require appropriate control cables for dimming, in addition to the power supply cable, Electrical Contractor to provide appropriate wiring.

2.06 All cable, conduit and containment, etc. shall be to Electrical Consultant's/Contractor's detail and specification.

2.07 All secondary fixings, mounting and bracketry are to Architect's/Engineer's detail and specification.

2.08 All lighting equipment quantities, parts and accessories required to form complete working electrical and mechanical systems are to be confirmed by the Electrical Contractor prior to order.

2.09 Refer to Electrical Consultant's drawings and specifications for full details of all emergency lighting requirements.

2.10 All lighting mock-ups must be provided, reviewed and approved by **dpa** lighting consultants before procurement and final installation. Contractor to allow mock-ups of lighting installation methods and details as follows:

Luminaire references:	D2 (trimless installation to wood finish ceiling) G1/P1/SP1 (Suspended feature grid structure and fixings) XL2 (linear graze luminaire to external colonnade columns)
Lighting Details:	Western Canopy Backlighting Detail, drawing ref: SHR-DPA-BG-ZZ-DR-Y-2002 Typical Handrail lighting detail, drawing ref: SHR-DPA-BG-ZZ-DR-Y-2005 Feature Ceiling Grid Structure, drawing ref: SHR-DPA-BG-ZZ-DR-Y-2007

3.0 Lamps / Light Sources

3.01 The importance of colour consistency within ranges and across the full specification is paramount. The light produced by lamps/light sources of the same correlated colour temperature (CCT) should produce light that is indiscernible in appearance from other lamps/light sources of the same CCT. If alternatives are proposed against **dpa** lighting consultant's specification or any approved alternative specifications, then it is the responsibility of the Party producing the final specification to compare samples with **dpa** lighting consultant's specified luminaires to ensure this consistency is achieved across the project.

3.02 The minimum benchmark for acceptable colour consistency within a manufacturer's range shall be a three step MacAdam ellipse. Should a manufacturer have a different method for ensuring colour consistency, this shall be assessed by **dpa** lighting consultants on a case by case basis.

3.03 As with luminaires, lamps or sources must not be substituted without the prior written approval of the employer and **dpa** lighting consultants. Particular attention is to be paid to compliance with the specified requirements for colour rendering, colour temperature, light distribution, life expectancy and general performance.

3.04 LED systems shall include appropriate thermal protection circuits to ensure that the LEDs are operated within their stated thermal ranges; typically, these should reduce the output of the LEDs to maintain an appropriate temperature. This is particularly important for external fixtures which will experience the highest ambient temperatures and accidental operation during the daytime may result in irreversible damage to the LEDs and/or electronics.

3.05 Where specified as "dimmable" LED systems (luminaires combined with their drivers) shall be fully dimmable between 1% and 100% and provide flicker free, stable light output. Dimming shall be achieved either through the use of a standard analogue or digital lighting protocol as stated in the specification (0-10V, 1-10V, DMX or DALI, etc.) or through the use of phase dimming as appropriate.

3.06 Unless otherwise stated, all LED luminaires shall have depreciation of not more than 30% of initial lumen output at 50,000 hours of operation (i.e. $L70 \geq 50,000$ hours). All luminaires shall be designed to operate the LEDs within the LED manufacturers stated conditions to achieve the above performance.

4.0 Control Gear/LED Drivers

4.01 All LED drivers shall either be supplied by the manufacturer of the LED luminaire (or as specified by **dpa** lighting consultants) and/or shall be in accordance with the Manufacturers/Suppliers recommendations and shall be fully compatible with the luminaire and the LEDs used, as previously stated in section 3.0.

4.02 All drivers/control gear are to be installed strictly in accordance with the equipment manufacturer's specific installation instructions, details and specifications.

4.03 All control gear, LED drivers and transformers shall be located in adequately ventilated accessible spaces. Contractor to supply appropriate cabling and containment between control gear/LED driver/transformer and luminaire to manufacturers and electrical engineers' requirements.

4.04 Multiple LED drivers may be required. The exact quantities, schematics and specifications to be confirmed by Electrical Contractor/Consultant and Manufacturer/Supplier to ensure the correct operation.

4.05 The Electrical Contractor shall ensure compatibility between drivers/control gear and the specified/installed lighting control system.

5.0 Standards & Compliance

5.01 All equipment supplied shall comply with all relevant EN, CE, BS, IEC and all other relevant standards currently in force in region of the project location and be capable of installation in accordance with the manufacturer's instructions, the current edition of the IET wiring regulations and all other statutory and local authority requirements.

6.0 Guarantees

6.01 Unless stated within the main Tender Documentation issued by the Client, all lighting equipment and components supplied shall be guaranteed for a period of not less than 36 months from the date of practical completion, with the exception of lamps, which shall be covered only by their manufacturer's normal assurances as to life expectancy and performance.

7.0 Assessment of Alternative Lighting Equipment

7.01 **dpa** lighting consultants have specified one luminaire and light sources for each fixture type on this project. The selection has been made carefully balancing; size, appearance, photometric performance, cost, availability, maintainability, durability, controllability, local technical and sales support and special criteria for the particular application.

7.02 **dpa** lighting consultants cannot accept responsibility for installation of non **dpa** lighting consultants approved luminaires/lighting equipment.

7.03 Wherever it is of benefit to the project, **dpa** lighting consultants are happy to consider equivalent/alternative fixtures to those specified.

7.04 Should alternative equipment be offered, working samples and full technical information, including photometric data must be submitted for review to the employer who shall forward to **dpa** lighting consultants in time to enable its accurate assessment.

Technical Information of Proposed Equivalent/Alternative Fixtures:

- a. Working samples with the correct lamp (wattage, beam angle, colour temperature, etc.)
- b. Photometric data (plots if applicable for selected areas)
- c. Supply Cost
- d. Delivery times
- e. Details of control gear, driver or transformer as appropriate
- f. Confirmation of compatibility with the Lighting Control System
- g. Details of the local agent
- h. Confirmation of suitability in the local climate
- i. Surface temperatures of luminaires located within hands reach (e.g. floor recessed uplights)
- j. Confirmation that the size does not cause any installation problems or coordination issues with other services
- k. Confirmation of fitness for purpose in the intended application

8.0 Commissioning

8.01 The final focussing and scene setting of the installation must be undertaken with **dpa** lighting consultants and lighting control technician(s) in attendance.

8.02 The Electrical Contractor is to ensure that adequate personnel and all necessary access equipment are provided for such focussing and scene setting as are required to commission the installation.

8.03 The programming of a lighting control system with a written lighting scene schedule shall not constitute completion. Refer to the Lighting Controls System Performance Specification for further details on the Commissioning Process.

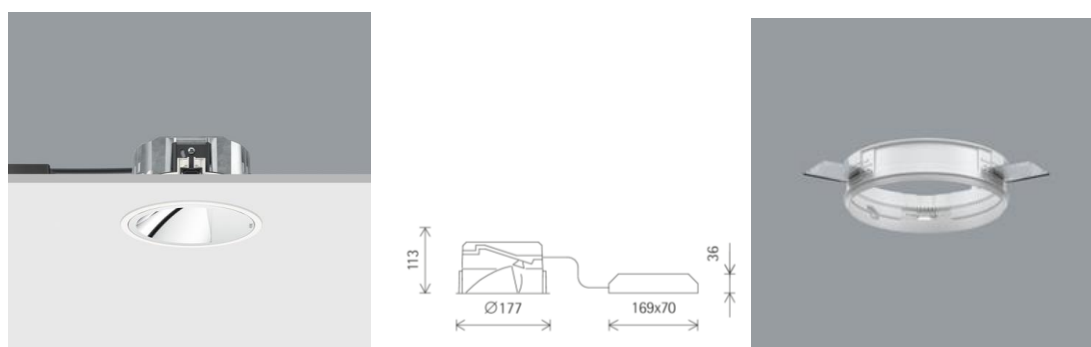
Luminaire Reference:	D1a	
Manufacturer's Ref:	Erco	Quintessence Lens Wallwasher Ref: 48032.00
Accessories:	Concrete Housing, ref: 83740.000 Spacer Plate, ref: 83596.000 DALI Driver	
Luminaire Location:	Reception Area - Wallwash	
Luminaire Description:	Ceiling recessed LED luminaire with wall wash optic. Housing made from cast aluminium with black polymer fixing ring rotatable through 360° and lockable in position. Wall washer reflector made from aluminium with silver mirror finish and 80° cut off angle. Supplied complete with concrete housing for cast-in installation and spacer plate for flush recessed trimless finish IP20 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 177 mm diameter x 113 mm recess depth Concrete Housing: 490 mm length x 350 mm width x 167 mm depth	
Finish:	Trimless installation via spacer plate accessory	
Fixing Method:	Fixed via cast in concrete housing – refer to manufacturer's information	
Lamps:	Wattage: 29W, Colour Temperature: 3000K, Colour Rendering: 92 CRI, Beam Angle: Wall Wash, Lumen Output: 1319 lm, Rated Life: 50,000 hours to L90-B10	

Luminaire Illustration:



Luminaire Reference:	D1b	
Manufacturer's Ref:	Erco	Quintessence Lens Wallwasher Ref: 48032.00
Accessories:	Mounting Ring, ref: 82937.000 DALI Driver	
Luminaire Location:	Reception Stairs - Wallwash	
Luminaire Description:	Ceiling recessed LED luminaire with wall wash optic. Housing made from cast aluminium with black polymer fixing ring rotatable through 360° and lockable in position. Wall washer reflector made from aluminium with silver mirror finish and 80° cut off angle. Supplied complete with Mounting Ring for trimless installation IP20 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 177 mm diameter x 113 mm recess depth Mounting Ring: 172 mm diameter cut-out	
Finish:	Trimless installation via Mounting Ring Accessory	
Fixing Method:	Recessed via mounting ring accessory – refer to manufacturer's information	
Lamps:	Wattage: 29W, Colour Temperature: 3000K, Colour Rendering: 92 CRI, Beam Angle: Wall Wash, Lumen Output: 1319 lm, Rated Life: 50,000 hours to L90-B10	

Luminaire Illustration:

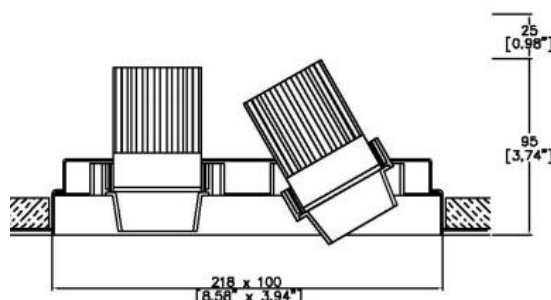


Luminaire Reference:	D2 / D2E - Mock-up required	
Manufacturer's Ref:	Lucent	Gimbal Mini Twin Trimless D2 Ref: 216/2-LED-TL-RAL: LED50 ONE GEN2 D2E Ref: 216/2-LED-TL-RAL/E: LED50 ONE GEN2
Accessories:	D2: Two Number DALI Drivers D2E: One Number DALI driver and one number DALI EM-PRO Driver with 3hr Emergency Battery Pack Trimless fixing frame – special to suit wooden ceiling – mock-up required	
Luminaire Location:	Reception Area	
Luminaire Description:	Ceiling recessed gimbal downlight with 2 fully directional gimbal heads, adjustable to 35° from vertical and 360° rotational. Complete with trimless fixing frame accessory for wooden ceiling IP20 D2E only: 'E' indicates fitting complete with 3 hour maintained emergency conversion battery pack and Tridonic DALI EM Pro Driver. Please refer to Lighting Plans for locations and quantities. Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 218 mm length x 100 mm width x 120 mm recess depth Cut-out: 221 mm x 103 mm TBC – subject to fixing frame requirements	
Finish:	Black – RAL TBC by architect.	
Fixing Method:	Trimless fixing via fixing frame – details TBC subject to ceiling	
Lamps:	Two number, LED50 ONE GEN2: LED51/2-930-24-D 13.6 Watts @ 350 mA, Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 24°, Lumen Output: 841 lm, Rated Life: 50,000 hours to L70 (to 70% light output). LEDs supplied with luminaire.	

Luminaire Illustration:



Note. Black finish

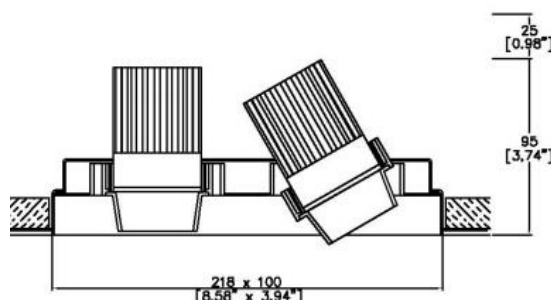


Luminaire Reference:	D2a / D2aE	
Manufacturer's Ref:	Lucent	Gimbal Mini Twin Trimless D2a Ref: 216/2-LED-TL-RAL: LED50 ONE GEN2 D2aE Ref: 216/2-LED-TL-RAL/E: LED50 ONE GEN2
Accessories:	D2a: Two Number DALI Drivers D2aE: One Number DALI driver and one number DALI EM-PRO Driver with 3hr Emergency Battery Pack Trimless fixing frame for plasterboard ceiling	
Luminaire Location:	LGF Reception Area	
Luminaire Description:	Ceiling recessed gimbal downlight with 2 fully directional gimbal heads, adjustable to 35° from vertical and 360° rotational. Complete with trimless fixing frame for plasterboard ceiling IP20 D2E only: 'E' indicates fitting complete with 3 hour maintained emergency conversion battery pack and Tridonic DALI EM Pro Driver. Please refer to Lighting Plans for locations and quantities. Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 218 mm length x 100 mm width x 120 mm recess depth Cut-out: 221 mm x 103 mm	
Finish:	Black – RAL TBC by architect.	
Fixing Method:	Trimless fixing via fixing frame – refer to manufacturer's information	
Lamps:	Two number, LED50 ONE GEN2: LED51/2-930-24-D 13.6 Watts @ 350 mA, Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 24°, Lumen Output: 841 lm, Rated Life: 50,000 hours to L70 (to 70% light output). LEDs supplied with luminaire.	

Luminaire Illustration:

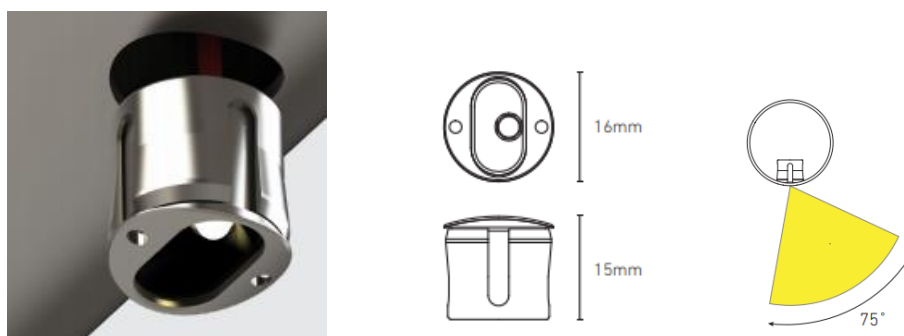


Note. Black finish



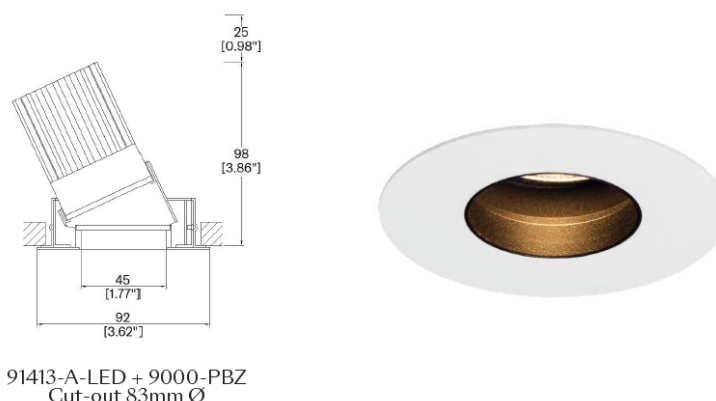
Luminaire Reference:	D3	
Manufacturer's Ref:	Via Optelma Lighting	Planet Lighting, Zero Ref: ZERO-AS-CF-3000K
Accessories:	DALI Driver (1 number driver to power multiple luminaires, refer to manufacturer for details)	
Luminaire Location:	GF-1F Stairs	
Luminaire Description:	Miniature recessed LED luminaire integrated into handrail. Luminaire made from stainless steel with anti-glare lens coating. Luminaire has curved face to match curvature of handrail. IP65 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 16 mm diameter x 15 mm height	
Finish:	Stainless Steel	
Fixing Method:	Recessed into handrail	
Lamps:	Wattage: 1.4W, Colour Temperature: 3000 K, Colour Rendering: 80 CRI, Beam Angle: Elliptical Asymmetric, Lumen Output: 92 lm, Rated Life: 100,000 hours to L70-B50	

Luminaire Illustration:



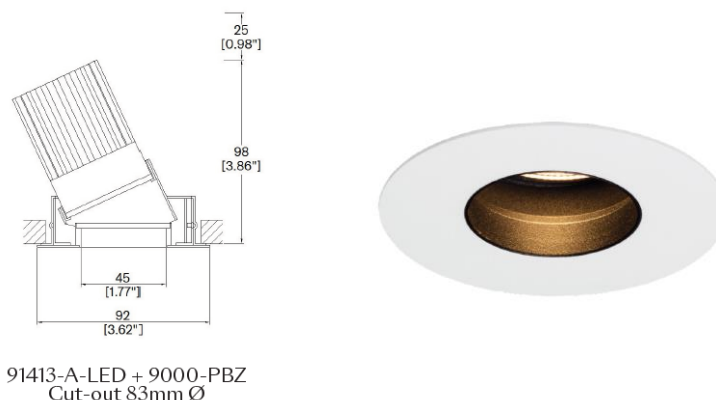
Luminaire Reference:	D4
Manufacturer's Ref:	Lucent Prospex Pinhole Edge 90 Accent 91413-A-LED/SILVER-TBC: LED50 ONE GEN2
Accessories:	DALI Driver Trimmed Fixture Ring, Ref: 9000-PBZ
Luminaire Location:	Reception GF Bar Niche
Luminaire Description:	Ceiling recessed LED pinhole downlight. Powder coated pressed and spun steel body. Luminaire adjustable up to 35° from the vertical and rotates 360°. IP20 Supplied complete with 350 mA remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
1Dimensions:	Luminaire: 92 mm diameter x 96 mm height (min.120 mm recess depth required) Cut-out: 83 mm diameter
Finish:	Silver-Grey TBC subject to ceiling wood finish
Fixing Method:	Ceiling recessed via fixing ring with spring clips
Lamps:	13.6 Watts @ 350 mA warm white LED, LED50 ONE GEN2 Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 24°, Rated Life: 50,000 hours to L70 (to 70% light output) LEDs supplied with luminaire.

Luminaire Illustration:



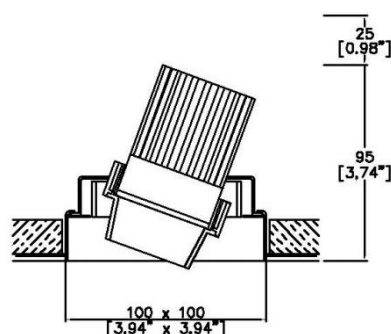
Luminaire Reference:	D5 / D5E	
Manufacturer's Ref:	Lucent	Prospex Pinhole Edge 90 Accent D5: 91413-A-LED/RAL: LED50 ONE GEN2 D5E: 91413-A-LED/RAL/ED
Accessories:	D5: DALI Driver D5E: DALI EM-PRO Driver and 3hr Emergency Battery Pack D5/D5E: Trimmed Fixture Ring, Ref: 9000-PBZ	
Luminaire Location:	Lift Lobbies	
Luminaire Description:	Ceiling recessed LED pinhole downlight. Powder coated pressed and spun steel body. Luminaire adjustable up to 35° from the vertical and rotates 360°.	
	IP20	
	D5E only: 'E' indicates fitting complete with 3 hour maintained emergency conversion battery pack and Tridonic DALI EM Pro Driver. Please refer to Lighting Plans for locations and quantities.	
	Supplied complete with 350 mA remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order.	
	Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
1Dimensions:	Luminaire: 92 mm diameter x 96 mm height (min. 120 mm recess depth required) Cut-out: 83 mm diameter	
Finish:	TBC – RAL finish to match ceiling.	
Fixing Method:	Ceiling recessed via fixing ring with spring clips	
Lamps:	13.6 Watts @ 350 mA warm white LED, LED50 ONE GEN2 Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 24°, Rated Life: 50,000 hours to L70 (to 70% light output) LEDs supplied with luminaire.	

Luminaire Illustration:



Luminaire Reference:	D6
Manufacturer's Ref:	Lucent Gimbal Mini Single Trimless D2 Ref: 116/2-LED-TL-RAL: LED50 ONE GEN2
Accessories:	DALI Driver Trimless fixing frame – special to suit wooden ceiling – mock-up required
Luminaire Location:	1F Meeting Room
Luminaire Description:	Ceiling recessed gimbal downlight with fully directional gimbal heads, adjustable to 35° from vertical and 360° rotational. Complete with trimless fixing frame accessory for wooden ceiling IP20 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
Dimensions:	Luminaire: 100 mm length x 100 mm width x 120 mm recess depth Cut-out: 103 mm x 103 mm TBC – subject to fixing frame requirements
Finish:	Black – RAL TBC by architect.
Fixing Method:	Trimless fixing via fixing frame – details TBC subject to ceiling
Lamps:	One number, LED50 ONE GEN2: LED51/2-930-24-D 13.6 Watts @ 350 mA, Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 24°, Lumen Output: 841 lm, Rated Life: 50,000 hours to L70 (to 70% light output). LEDs supplied with luminaire.

Luminaire Illustration:

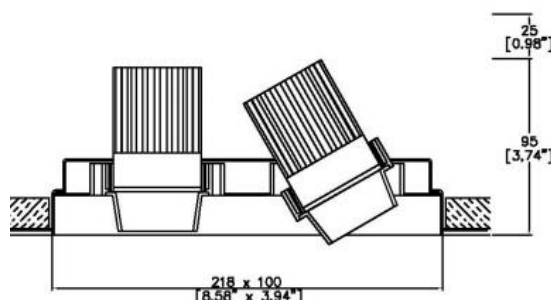


Luminaire Reference:	D7 / D7E	
Manufacturer's Ref:	Lucent	Gimbal Mini Twin Trimless D7 Ref: 216/2-LED-TL-RAL: LED50 ONE GEN2 D7E Ref: 216/2-LED-TL-RAL/E: LED50 ONE GEN2
Accessories:	D7: Two Number DALI Drivers D7E: One Number DALI driver and one number DALI EM-PRO Driver with 3hr Emergency Battery Pack Trimless fixing frame – special to suit wooden ceiling	
Luminaire Location:	Reception Area	
Luminaire Description:	Ceiling recessed gimbal downlight with 2 fully directional gimbal heads, adjustable to 35° from vertical and 360° rotational. Complete with trimless fixing frame accessory for wooden ceiling IP20 D7E only: 'E' indicates fitting complete with 3 hour maintained emergency conversion battery pack and Tridonic DALI EM Pro Driver. Please refer to Lighting Plans for locations and quantities. Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 218 mm length x 100 mm width x 120 mm recess depth Cut-out: 221 mm x 103 mm TBC – subject to fixing frame requirements	
Finish:	Black – RAL TBC by architect.	
Fixing Method:	Trimless fixing via fixing frame – details TBC subject to ceiling	
Lamps:	Two number, LED50 ONE GEN2: LED51/2-930-12-D 13.6 Watts @ 350 mA, Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 12°, Lumen Output: 731 lm, Rated Life: 50,000 hours to L70 (to 70% light output). LEDs supplied with luminaire.	

Luminaire Illustration:



Note. Black finish

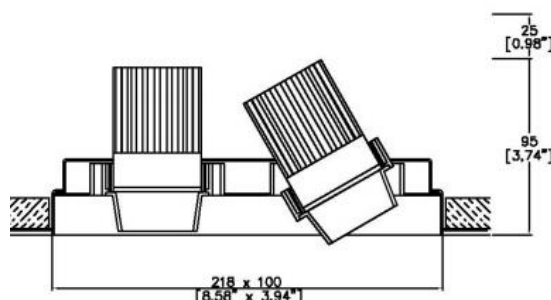


Luminaire Reference:	D7a / D7aE	
Manufacturer's Ref:	Lucent	Gimbal Mini Twin Trimless D7a Ref: 216/2-LED-TL-RAL: LED50 ONE GEN2 D7aE Ref: 216/2-LED-TL-RAL/E: LED50 ONE GEN2
Accessories:	D7a: Two Number DALI Drivers D7aE: One Number DALI driver and one number DALI EM-PRO Driver with 3hr Emergency Battery Pack Trimless fixing frame for plasterboard ceiling	
Luminaire Location:	LGF Reception Area	
Luminaire Description:	Ceiling recessed gimbal downlight with 2 fully directional gimbal heads, adjustable to 35° from vertical and 360° rotational. Complete with trimless fixing frame for plasterboard ceiling IP20 D2E only: 'E' indicates fitting complete with 3 hour maintained emergency conversion battery pack and Tridonic DALI EM Pro Driver. Please refer to Lighting Plans for locations and quantities. Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 218 mm length x 100 mm width x 120 mm recess depth Cut-out: 221 mm x 103 mm	
Finish:	Black – RAL TBC by architect.	
Fixing Method:	Trimless fixing via fixing frame – refer to manufacturer's information	
Lamps:	Two number, LED50 ONE GEN2: LED51/2-930-12-D 13.6 Watts @ 350 mA, Colour Temperature: 3000 K, Colour Rendering: 90 Ra, Beam Angle: 12°, Lumen Output: 731 lm, Rated Life: 50,000 hours to L70 (to 70% light output). LEDs supplied with luminaire.	

Luminaire Illustration:

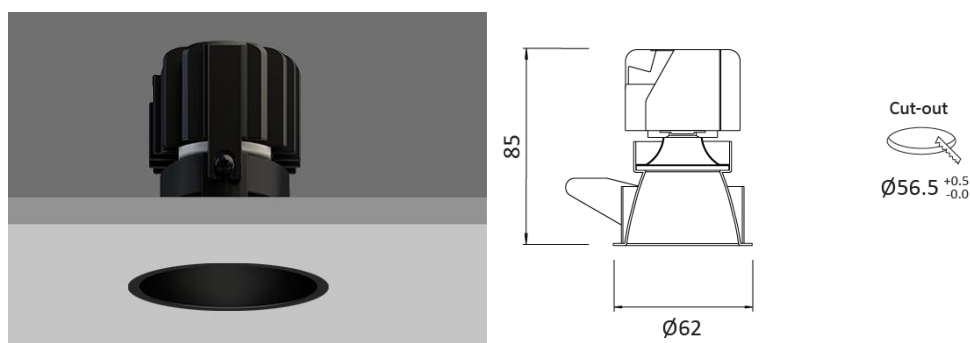


Note. Black finish



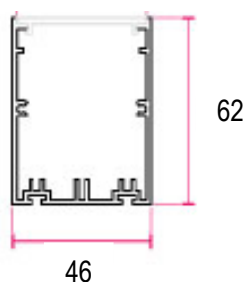
Luminaire Reference:	D9
Manufacturer's Ref:	DAL Minitrim 62 Luminaire Ref: F865X-13H3-5-0
Accessories:	DALI Dimmable Driver 300mA
Luminaire Location:	1F/2F Co-Working Space – Perimeter Bulkhead
Luminaire Description:	Ceiling recessed fixed downlight with deep recessed light source for low glare. Wide beam distribution (46°). Complete with black or specular silver reflector – TBC with architect and lighting consultant prior to order. IP20 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
Dimensions:	Luminaire: 62 mm diameter x 85 mm recess depth Cut-out: 56.5 mm diameter
Finish:	Black
Fixing Method:	Ceiling recessed via spring clips
Lamps:	One number, Cree Light Engine supplied with luminaire 9.82 Watts @ 300 mA, Colour Temperature: 3000 K, Colour Rendering: 80+ Ra, Beam Angle: 46°, Lumen Output: 1308 lm, Rated Life: 50,000

Luminaire Illustration:



Luminaire Reference:	G1 – Subject to mock-up	
Manufacturer's Ref:	Optelma	Suspended Grid Lighting Structure– Special QUAD 46 - Special
Accessories:	Clip in plates Suspension Rods 200 mm Pre-assembled 90° mitres Pre-assembled T sections Pre-assembled X sections	
Luminaire Location:	Reception	
Luminaire Description:	Custom suspended grid lighting structure feature formed from manufacturer's standard aluminium channel, to accommodate dpa luminaire references: P1 (feature pendant), SP1 (surface mounted spotlight) and miniature dedicated emergency luminaire (refer to Electrical Engineer's specifications and drawings). Grid structure to be suspended from ceiling by 200mm via rigid rods. Cables to be concealed through rods. Grid channel structure to house all drivers wiring and batteries for above. Channel to be open at top to allow access to drivers and wiring if required. Nodes spaced at 2.5m x 2.5m grid. Each grid node to have fixing for one number pendant luminaire ref P1. Grid manufacturer to liaise with selected pendant manufacturer to ensure coordinated fixings. Associated P1 drivers to fit in channel. Additional fixings to be allowed for adjustable spotlights ref SP1. Fixing either by integrated track or custom fixing detail in locations required, subject to development with Grid manufacturer. Dedicated stand-alone miniature emergency luminaires to be recessed into channel, batteries and drivers concealed in channel. Refer to Electrical Engineer's information. Refer to dpa lighting layout drawings and architect setting out drawings for further information IP20 Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture. Mock-up of typical section and fixings to be allowed for. Shop drawings to be approved by Client and Design Team prior to manufacture	
Dimensions:	Structure: (WxHxL) 46mm x 62mm x Made to Measure	
Finish:	RAL Finish: 7021	
Fixing Method:	Suspended via rigid rods	
Lamps:	Not applicable	

Luminaire Illustration:



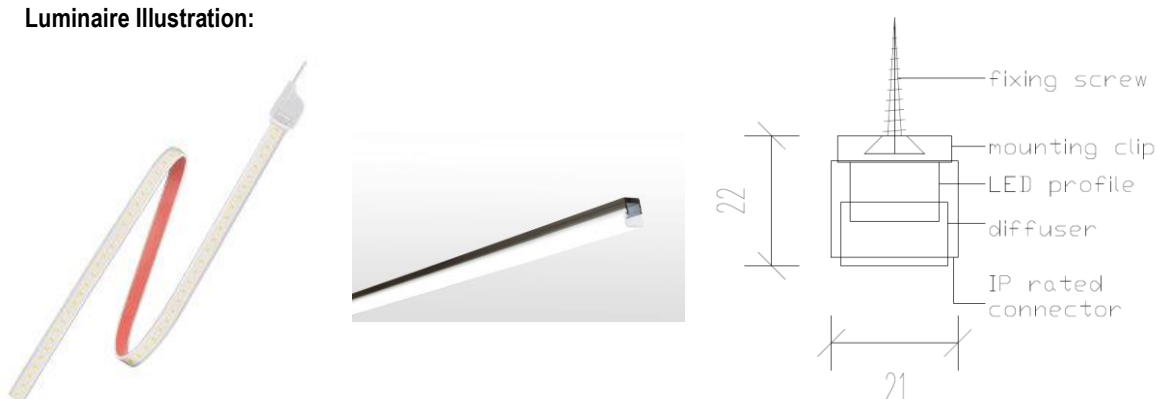
Luminaire Reference:	L1	
Manufacturer's Ref:	Osram	LINEARlight FLEX Protect Shortpitch LFP1200S – G3 – 830 – 09
Accessories:	Track Profile: LF-LTS-2100 SLIM TRACK Cover: LF-LTS-COVER-SHORTPITCH End caps, mounting brackets, connectors. Remote DALI drivers	
Luminaire Location:	Reception/ Lounge Areas	
Luminaire Description:	Flexible linear 3000 K LED strips. PCB mounted LEDs in waterproof silicone casing within linear aluminium extrusion heat sink with detachable polycarbonate diffuser. IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Overall (W x H x L): 21mm x 22mm x Length to suit Lengths to be confirmed and measured by contractor before ordering. Refer to manufacturer for maximum run lengths.	
Finish:	Silicon encapsulated LED tape within extruded aluminium channel and clip-on opal diffuser	
Fixing Method:	Screw fixed via mounting clip	
Lamps:	810.6 Watts per metre warm white LEDs 8.3mm LED pitch Wattage: 10.6W / m, Beam Angle: 120°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000 K, Colour Rendering Index (CRI): >80 Ra, Lumen Output: 1200 lm/m, Rated Life: 50,000 hours @ L70	

Luminaire Illustration:



Luminaire Reference:	L6	
Manufacturer's Ref:	Osram	LINEARlight FLEX Protect Shortpitch LFP1200S – G3 – 830 – 09
Accessories:	Track Profile: LF-LTS-2100 SLIM TRACK Cover: LF-LTS-COVER-SHORTPITCH End caps, mounting brackets, connectors. Remote DALI drivers	
Luminaire Location:	Lift Lobbies	
Luminaire Description:	Flexible linear 3000K LED strips are PCB mounted in waterproof silicone casing within linear aluminium extrusion heat sink with detachable polycarbonate diffuser. IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Overall (W x H x L): 21mm x 22mm x Length to suit Lengths to be confirmed and measured by contractor before ordering. Refer to manufacturer for maximum run lengths.	
Finish:	Silicon encapsulated LED tape within extruded aluminium channel and clip-on opal diffuser	
Fixing Method:	Screw fixed via mounting clip	
Lamps:	10.6 Watts per metre warm white LEDs 8.3mm LED pitch Wattage: 10.6 W / m, Beam Angle: 120°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000 K, Colour Rendering Index (CRI): >80 Ra, Lumen Output: 1200 lm/m, Rated Life: 50,000 hours @ L70	

Luminaire Illustration:



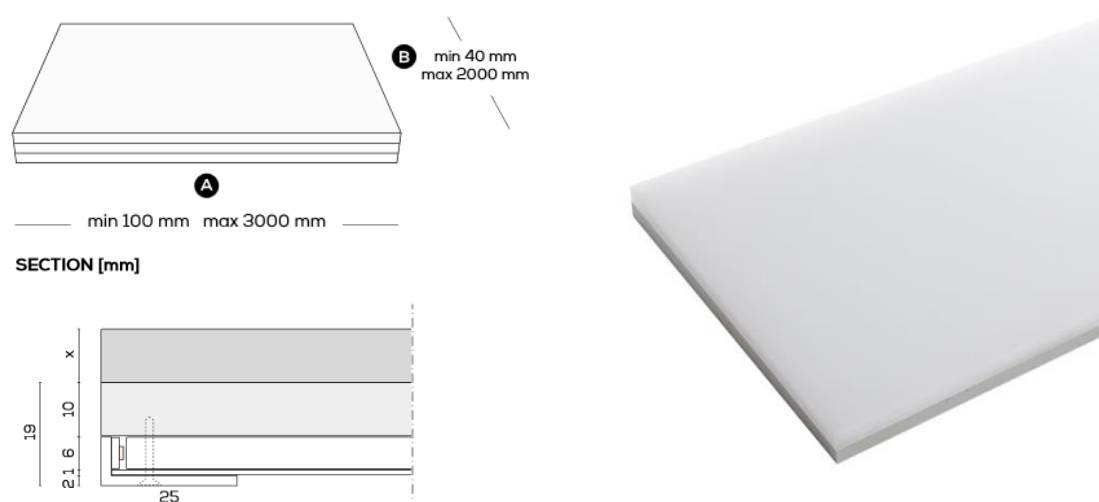
Luminaire Reference:	L7	
Manufacturer's Ref:	Osram	LINEARlight FLEX Protect Shortpitch LFP1200S – G3 – 830 – 09
Accessories:	Track Profile: LF-LTS-2100 SLIM TRACK Cover: LF-LTS-COVER-SHORTPITCH End caps, mounting brackets, connectors. Remote DALI drivers	
Luminaire Location:	1F Meeting Room – Curtain slot detail	
Luminaire Description:	Flexible linear 3000 K LED strips. PCB mounted LEDs in waterproof silicone casing within linear aluminium extrusion heat sink with detachable polycarbonate diffuser. IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Overall (W x H x L): 21mm x 22mm x Length to suit Lengths to be confirmed and measured by contractor before ordering. Refer to manufacturer for maximum run lengths.	
Finish:	Silicon encapsulated LED tape within extruded aluminium channel and clip-on opal diffuser	
Fixing Method:	Screw fixed via mounting clip	
Lamps:	810.6 Watts per metre warm white LEDs 8.3mm LED pitch Wattage: 10.6W / m, Beam Angle: 120°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000 K, Colour Rendering Index (CRI): >80 Ra, Lumen Output: 1200 lm/m, Rated Life: 50,000 hours @ L70	

Luminaire Illustration:



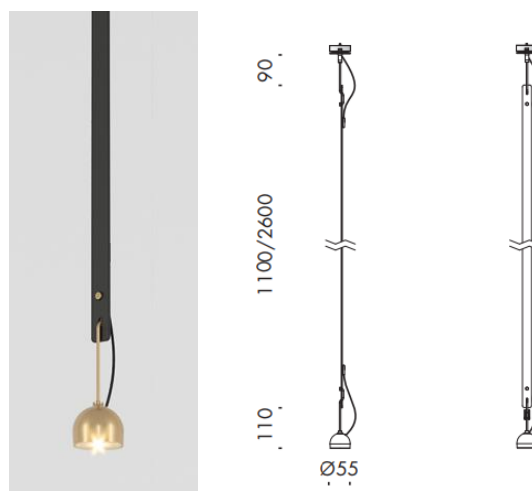
Luminaire Reference:	LS1 – Allowance subject to lift car fit-out specification	
Manufacturer’s Ref:	FOLIO	FOLIO Custom 3000K
Accessories:	DALI Driver	
Luminaire Location:	Backlit Lift Ceiling	
Luminaire Description:	Surface mounted light panel complete with integral 3000K light LED light source to provide a homogeneously backlit effect. A bespoke finish (to the interior designer’s specification) can be factory fitted on top of the diffuser layer or a bespoke image/ pattern can be hi-res printed directly onto the diffuser layer, which might be worth considering as cost-effective alternative. IP40 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Light Panel: 19mm x 2000mm (TBC) x 1575mm (TBC)	
Finish:	To be agreed with lift supplier	
Fixing Method:	To be agreed with lift supplier	
Light Source:	3000K LED	

Luminaire Illustration:



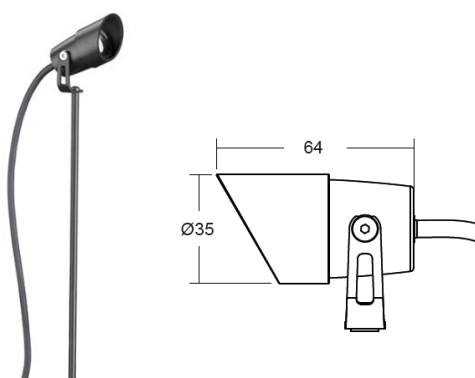
Luminaire Reference:	P1 – TBC subject to mock-up and Client/Architect approval	
Manufacturer's Ref:	Cirrus Lighting	Viabizzuno, sul sole va Ref: vb8.621.41.27
Accessories:	DALI Driver (manufacturer to confirm number of luminaires per driver) Special Fixing for integration with suspended grid structure, dpa ref: G1	
Luminaire Location:	Reception	
Luminaire Description:	Feature metal bell pendant luminaire with electrified leather belt suspension. Luminaire to be fixed at each node of grid structure. IP20 Remote DALI dimmable driver included. To be compatible with control system – Electrical contractor to check this prior to procuring. DALI driver to be located within suspended grid structure, dpa ref: G1 Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Diameter: 55 mm x Height: 110 mm Pendant Drop: TBC subject to Architect Setting Out	
Finish:	Pendant – Satin Brass Suspension – Black leather	
Fixing Method:	Surface mounted to grid structure, ref G1. Fixing to be agreed subject to mock-up	
Lamps:	As supplied with luminaire Wattage: 26.8 W, Beam Angle: 20°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): 90 Ra, Lumen Output: 2510lm, Rated Life: 50,000 hours.	

Luminaire Illustration:



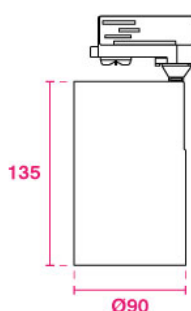
Luminaire Reference:	S1
Manufacturer's Ref:	Lightgraphix LD51 Ref: LD151-700/LW30/MB/CO/GS/Black Anodised
Accessories:	Ground Spike Half Cowl Snoot Remote dimmable DALI / 700 mA driver – manufacturer to confirm number of luminaires per driver.
Luminaire Location:	Planter beneath stairs
Luminaire Description:	Spike mounted, miniatures, adjustable (134° from vertical), LED medium beam spotlight, with half cowl snoot and ground spike accessory. Aluminium construction. IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
Dimensions:	Diameter: 35 mm, Length: 64 mm Spike length: 250 mm
Finish:	Black
Fixing Method:	Spike mounted
Lamps:	LED Supplied integral to luminaire Wattage: 2.4 W, Beam Angle: 31°, Correlated Colour Temperature (CCT): 3000 K, Colour Rendering Index (CRI): 93 R _a , Lumen Output: 153 lm, Rated Life: 50,000 hours @ L70

Luminaire Illustration:



Luminaire Reference:	SP1 – Mock-up required	
Manufacturer's Ref:	Optelma	Axia Spotlight Ref: AXIA-special-B-D-S-M-930-090+C+H
Accessories:	Integral DALI Driver Honeycomb Anti-Glare Louvre Cone – Anti-Glare Accessory Special Fixing Bracket for use with Suspended Grid Structure, dpa ref: G1. Details TBC subject to Mock-up	
Luminaire Location:	Reception fixed to grid structure	
Luminaire Description:	Narrow beam (20°), adjustable LED spotlight luminaire. Luminaire to be mounted via special fixing bracket to suspended grid structure, dpa ref G1. IP20 Integral DALI dimmable driver included. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Diameter: 76 mm x Height: 150mm	
Finish:	Black finish, RAL 7021 TBC by Architect	
Fixing Method:	Fixed to suspended grid structure, dpa ref G1.	
Lamps:	LED supplied integral to luminaire Wattage: 25.4 W @750 mA, Beam Angle: 20°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): 90+ R _a , Lumen Output: 3529 lm, Rated Life: 50,000 hours.	

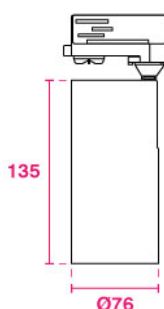
Luminaire Illustration:



Anti-glare cone and honeycomb louvre

Luminaire Reference:	SP2	
Manufacturer's Ref:	Optelma	Axia Spotlight Ref: AXIA-TM-B-D-M-H-930-076+C+H
Accessories:	Integral DALI Driver Honeycomb Anti-Glare Louvre Cone – Anti-Glare Accessory	
Luminaire Location:	L1/L2 Co-Working space	
Luminaire Description:	Medium beam (40°), adjustable LED spotlight luminaire. Luminaires mounted to 3-circuit lighting track via track adapter. Refer to reference T1 & T2 for lighting track specification. IP20 Integral DALI dimmable driver included. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Diameter: 76 mm x Height: 135 mm	
Finish:	Black finish, RAL 7021 TBC by Architect	
Fixing Method:	Fixed via 3-circuit lighting track	
Lamps:	LED supplied integral to luminaire Wattage: 20 W @600 mA, Beam Angle: 40°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): 90+ Ra, Lumen Output: 2899 lm, Rated Life: 50,000 hours.	

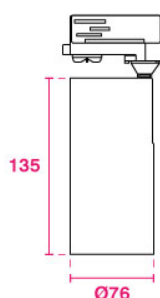
Luminaire Illustration:



Anti-glare cone and honeycomb louvre

Luminaire Reference:	SP3	
Manufacturer's Ref:	Optelma	Axia Spotlight Ref: AXIA-TM-B-D-M-H-930-076+C+H
Accessories:	Integral DALI Driver Honeycomb Anti-Glare Louvre Cone – Anti-Glare Accessory	
Luminaire Location:	L2 Co-working space core wall	
Luminaire Description:	Medium beam (40°), adjustable LED spotlight luminaire. Luminaires mounted to 3-circuit lighting track via track adapter. Refer to reference T1 for lighting track specification. IP20 Integral DALI dimmable driver included. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Diameter: 76 mm x Height: 135 mm	
Finish:	Black finish, RAL 7021 TBC by Architect	
Fixing Method:	Fixed via 3-circuit lighting track	
Lamps:	LED supplied integral to luminaire Wattage: 20 W @600 mA, Beam Angle: 40°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): 90+ Ra, Lumen Output: 2899 lm, Rated Life: 50,000 hours.	

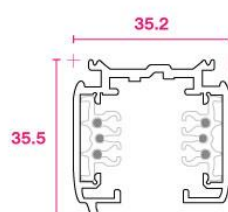
Luminaire Illustration:



Anti-glare cone and honeycomb louvre

Luminaire Reference: T1	
Manufacturer's Ref:	Optelma Rod suspended three-circuit universal DALI track Ref: 3CTR-SP-B-NA-NA-NA-xxxx
Accessories:	Suspension rods (length to suit installation locations and to be confirmed by contractor. Length to be suitable to allow underside of track to be level with underside of perimeter bulkhead – TBC by architect) Initial Feeds Connectors as required End Plates Plus all necessary equipment to form a complete working electrical and mechanical system
Luminaire Location:	L1/L2 Co-Working Spaces
Luminaire Description:	Mains voltage 3-circuit, rod suspended DALI Dimmable lighting track. Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Manufacturer to confirm details of specification and any other installation requirements prior to manufacture. Contractor and supplier to be responsible for verifying site dimensions prior to manufacture. To be compatible with dpa luminaire Ref: SP2 and SP3, contractor to check this prior to order. DALI dimmable - To be compatible with control system – Electrical contractor to check this prior to procuring.
Dimensions:	35.2 mm width x 35.5 mm height. Length to suit site conditions. Individual lengths and layout to be determined from dpa lighting drawings. Suspension rod length: To suit installation location/ site condition to be level with underside of perimeter bulkhead Contractor to advise exact length of the track prior placing the order. To suit site dimensions.
Finish:	All visible components: Black (TBC by Architect)
Fixing Method:	Rod suspended. Details to be confirmed by manufacturer/ supplier.
Lamps:	N/A

Luminaire Illustration:



Note. Black Finish

Luminaire Reference: T2		
Manufacturer's Ref:	Optelma	Ceiling recessed three-circuit universal DALI track Ref: 3CTR-RE-B-NA-NA-NA-xxxx
Accessories:	Initial Feeds Connectors as required End Plates Plus all necessary equipment to form a complete working electrical and mechanical system	
Luminaire Location:	L2 Co-Working Spaces	
Luminaire Description:	Mains voltage 3-circuit, recessed DALI Dimmable lighting track. Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Manufacturer to confirm details of specification and any other installation requirements prior to manufacture. Contractor and supplier to be responsible for verifying site dimensions prior to manufacture. To be compatible with dpa luminaire Ref: SP2 and SP3, contractor to check this prior to order. DALI dimmable - To be compatible with control system – Electrical contractor to check this prior to procuring.	
Dimensions:	35.2 mm width x 35.5 mm height. Length to suit site conditions. Individual lengths and layout to be determined from dpa lighting drawings. Contractor to advise exact length of the track prior placing the order. To suit site dimensions.	
Finish:	All visible components: Black (TBC by Architect)	
Fixing Method:	Rod suspended. Details to be confirmed by manufacturer/ supplier.	
Lamps:	N/A	

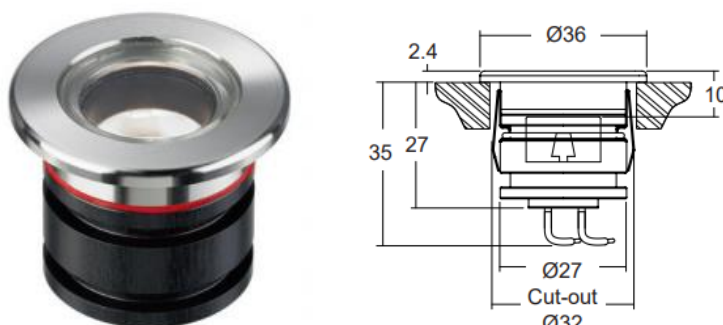
Luminaire Illustration:
 (image indicative only, suspension rods not shown)



Note. Black Finish

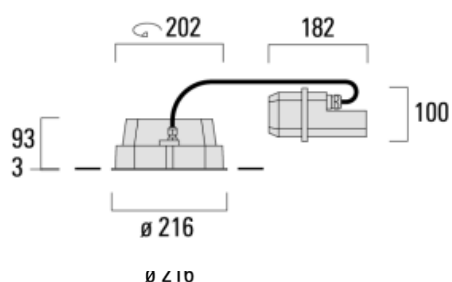
Luminaire Reference:	U1
Manufacturer's Ref:	Lightgraphix LD43 Ref:LD43-500/LW30/OB/SS316/SC
Accessories:	DALI Driver – manufacturer to advise maximum number of luminaires per driver
Luminaire Location:	Core wall beneath stairs
Luminaire Description:	Miniature ground recessed LED uplight with elliptical beam. Anodised aluminium/stainless steel construction. IP66 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
Dimensions:	Diameter: 36 mm, Cut-out Diameter: 32 mm, Recessing Depth: 35mm
Finish:	Steel Bezel
Fixing Method:	Ground recessed via spring clips
Lamps:	As supplied integral to luminaire Wattage: 1.7 W @500 mA, Beam Angle: Elliptical 36° x 12°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000 K, Colour Rendering Index (CRI): 93 Ra, Lumen Output: 120 lm, Rated Life: 50,000 hours

Luminaire Illustration:



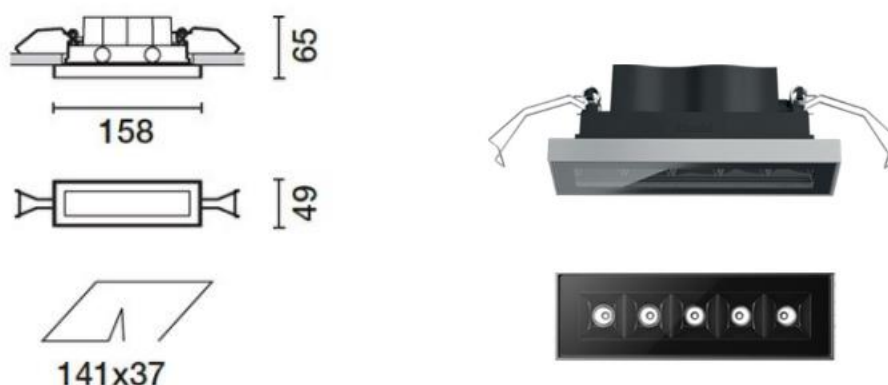
Luminaire Reference:	XD1	
Manufacturer's Ref:	We-ef	Doc140 LED (134-1758)
Accessories:	- DALI Drivers - Pre- installation block out for concrete ceilings	
Luminaire Location:	Colonnade	
Luminaire Description:	Recessed downlight made from marine grade die cast aluminium alloy, with safety glass lens and superior corrosion protection. Optics allow for good glare control, very narrow beam and sharp cut off angle. IP66/ IK07 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 216mm diameter x 96 mm height	
Finish:	Grey Aluminium, colour to architect's approval	
Fixing Method:	Cast into concrete ceiling via installation block out	
Lamps:	Wattage: 55W, Colour Temperature: 3000K, Colour Rendering: 80 Ra, Beam Angle: Very Narrow, Lumen Output: 5177lm, Rated Life: 600,000 hours to L70-B10	

Luminaire Illustration:



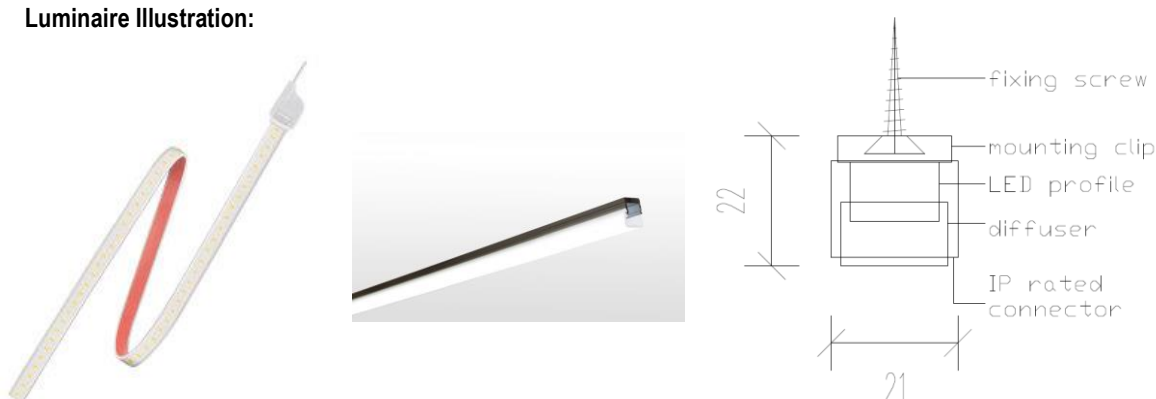
Luminaire Reference:	XD2	
Manufacturer's Ref:	Iguzzini	LaserBlade InOut Ref: BX64.74
Accessories:	- DALI Drivers	
Luminaire Location:	GF Western Canopy and 15th Floor Terrace Canopy	
Luminaire Description:	Rectangular, miniaturised recessed luminaire with 5 spot beam fixed optics. Die cast aluminium body and black anti-glare screen. High definition optics made from metallised thermoplastic. IP65 Supplied complete with remote driver to be located in accessible and ventilated location. Remote driver to be DALI dimmable. To be compatible with control system – contractor to check this prior to order. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.	
Dimensions:	Luminaire: 158 mm x 49 mm x 65 mm Cut-Out: 141 mm x 37 mm	
Finish:	Grey / Black, colour to architect's approval	
Fixing Method:	Ceiling recessed	
Lamps:	Wattage: 12.5, Colour Temperature: 3000K, Colour Rendering: 80 Ra, Beam Angle: 12°, Lumen Output: 689lm, Rated Life: 50,000 hours to L90-B10	

Luminaire Illustration:



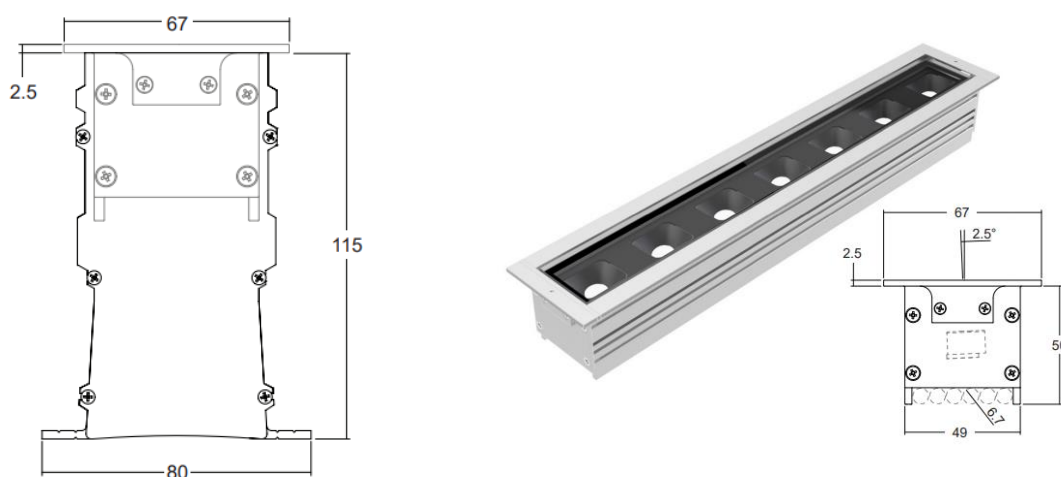
Luminaire Reference:	XL1
Manufacturer's Ref:	Osram LINEARlight FLEX Protect Shortpitch LFP1200S – G3 – 830 – 09
Accessories:	Track Profile: LF-LTS-2100 SLIM TRACK Cover: LF-LTS-COVER-SHORTPITCH End caps, mounting brackets, connectors. Remote DALI drivers
Luminaire Location:	Integrated into Level 15 exterior canopy
Luminaire Description:	Flexible linear 3000K LED strips are PCB mounted in waterproof silicone casing within linear aluminium extrusion heat sink with detachable polycarbonate diffuser. IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
Dimensions:	Overall (W x H x L): 21mm x 22mm x Length to suit Lengths to be confirmed and measured by contractor before ordering. Refer to manufacturer for maximum run lengths.
Finish:	Silicon encapsulated LED tape within extruded aluminium channel and clip-on opal diffuser
Fixing Method:	Screw fixed via mounting clip
Lamps:	10.6 Watts per metre warm white LEDs 8.3mm LED pitch Wattage: 10.6 W / m, Beam Angle: 120°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): >80 Ra, Lumen Output: 1200lm/m, Rated Life: 50,000 hours @ L70

Luminaire Illustration:



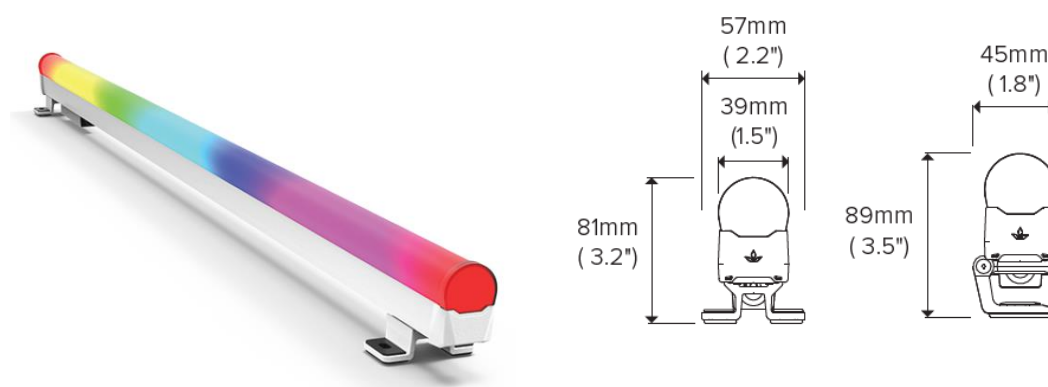
Luminaire Reference:	XL2 – Subject to Mock-up, refer to preamble 2.10		
Manufacturer's Ref:	Light Graphix	LD34	LD34-700/50/NB/CH/GS50
Accessories:	- Half Glare Shield - Concrete Housing		
Luminaire Location:	Linear grazer to up light external columns under canopy		
Luminaire Description:	Floor recessed high power linear lensed LED wall grazer. Silver anodised finished aluminium body and end caps and pre-wired 2m lead. Custom made lengths available with LED's spaced 50mm apart. IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring.		
Dimensions:	Luminaire: W: 67mm x H: 52.5mm x Length to suit (incl. concrete housing: W: 80mm x H: 117.5mm x Length to suit)		
Finish:	Colour to architect's approval		
Fixing Method:	Floor recessed via concrete housing		
Lamps:	Wattage: 20 x LED @ 2.4 W/m, 700mA, Beam Angle: 12° narrow, Lamp Base: NA, Correlated Colour Temperature (CCT): Dynamic White, Colour Rendering Index (CRI): 80 R_a, Lumen Output: 3920lm/m, Rated Life: 50,000 hours @ L70		

Luminaire Illustration:



Luminaire Reference: XL3 – For information only. Façade feature lighting in abeyance	
Manufacturer's Ref:	Lumascap viaArchitainment Vestalux V2 Façade Outliner
Accessories:	- DMX Driver - Mounting Bracket - DMX Controller (1no. controller to control full extent of façade lighting, to supplier recommendations)
Luminaire Location:	Façade Lighting
Luminaire Description:	High performance exterior grade architectural outliner with a UV protected polymer tube diffuser. Designed for direct view the luminaire has excellent light blending properties to ensure uniformity. The luminaire is manufactured from high grade extruded aluminium with anodised finish. IP66/67- IK10 Remote DMX driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring.
Dimensions:	Luminaire: W: 67mm x H: 52.5mm x 1518mm
Finish:	Colour to architect's approval
Fixing Method:	Surface mounted within detail
Lamps:	Wattage: 30W, Beam Angle: N/A, Lamp Base: NA, Correlated Colour Temperature (CCT): RGBW, Colour Rendering Index (CRI): N/A, Lumen Output: N/A, Rated Life: 60,000 hours @ L70-B10

Luminaire Illustration:



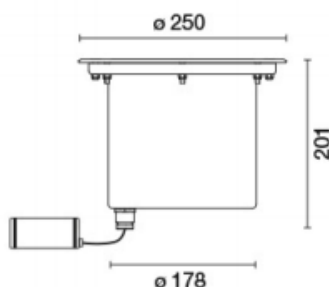
Luminaire Reference:	XLS1
Manufacturer's Ref:	Applelec
	Lightsheet: Ref: refer to Applelec quotation DM204534. All requirements to be confirmed prior to order
Accessories:	DALI dimmable drivers IP rated connectors
Luminaire Location:	GF Western Canopy
Luminaire Description:	Surface mounted, edge lit PMMA acrylic light panel complete with integral 3000K LED light source to provide a homogeneously backlit effect. Light panel mounted to whitedibond to provide rigidity.
	IP67 Remote DALI dimmable driver required. To be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring. Note: Supplier to include for all necessary components for correct installation and operation. Please refer to lighting consultant to verify details if required prior to quotation. Contractor responsible for verifying site dimensions prior to manufacture.
Dimensions:	Light Panel: 11 mm thick. Length/width to fit detail, approx. dimensions: 1500 mm x 2250 mm. All dimensions to be confirmed prior to manufacture
Finish:	White backing
Fixing Method:	Surface mounted
Light Source:	Supplied integral to light sheet Wattage: 105 W (approx), Beam Angle: N/A, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): 90+ R _a , Lumen Output: 11,550 lm (TBC), Rated Life: >50,000 hours @ L70

Luminaire Illustration:



Luminaire Reference:	XU1	
Manufacturer's Ref:	iGuzzini	Light up Earth E150
Accessories:	All required connectors, Outer casing TG3.X209.004.0 DALI dimmable driver Honeycomb Louvre X201	
Luminaire Location:	Exterior Columns	
Luminaire Description:	Ground recessed fixed, medium beam, LED uplighter with deep recessed light source, an aluminium OPTIBEAM reflector and a black plastic cover. Body and frame are made of AISI 304 stainless steel with sodium-calcium extra clear glass, thickness 15 mm construction. Stainless steel body coated with black paint. Black plastic (PPS) external box containing the power supply unit. IP68, IK10 DALI dimmable electronic driver included. (220-240 VAC positioned in a separate box from the optical assembly and with outgoing cable to be located in a dry, accessible and well-ventilated location. To be compatible with control system – Electrical contractor to check this prior to procuring.	
Dimensions:	Diameter: 250 mm, Cut-out Diameter: 178 mm, Recessing Depth: 201 mm etc.	
Finish:	Steel Bezel	
Fixing Method:	Ground recessed and secured to the outer casing by means of two TORX-type screws.	
Lamps:	As supplied with luminaire Wattage: 14.3 W, Beam Angle: 14°, Lamp Base: N/A, Correlated Colour Temperature (CCT): 3000K, Colour Rendering Index (CRI): 80 Ra, Lumen Output: 1062lm, Rated Life: 100,000 hours @ L80 / B10	

Luminaire Illustration:



LIGHTING MANUFACTURERS / SUPPLIER CONTACT SCHEDULE

Manufacturer / Supplier	Contact Details
Applelec	Contact: Sandi Moolman Tel: +44 (0)1274 774 477 Mob: +44 (0) 7714 168 382 Fax: Email: Sandi.Moolman@applelec.co.uk
Cirrus Lighting / Viabizzuno	Contact: Nick Terry Tel: +44 (0)20 7193 2175 Mob: +44 (0)7780 537 856 Fax: Email: nick@cirruslighting.co.uk
DAL (Designed Architectural Lighting)	Contact: TBC Tel: +44(0)207 4903998 Mob: Fax: Email: sales@dal-uk.com
Erco	Contact: David Gale Tel: +44 (0) 20 7344 4900 Mob: +44 (0) 78 60 61 26 07 Fax: +44 (0) 20 7409 1530 Email: d.gale@erco.com
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REVISIONS

Rev	Description	By	Date
00	First Issue – Work in Progress	HR	22/11/19
01	Stage 3 – Developed Design	HR	29/11/19
03	Stage 4 - Issue	HR/IC	15/05/20
04	Stage 4 – Final Issue Rev T01	CHL	05/06/20
05	Stage 4 – Update, Rev T02 Luminaires References Added: D1a, D1b, D2/D2E, D2a/D2aE, D3, D4, D7/D7E, D7a/D7aE, G1, L1, P1, S1, SP1, U1 Luminaire Reference Revised: XL2 List of lighting mock-ups required added to Preamble section 2.10	IC	26/06/20
06	Stage 4 – L1/L2 Co-Working Update, Rev T03 Luminaire Reference Revised: SP1 Luminaire References Added: D6, D9, L7, SP2, SP3, T1, T2	IC	24/09/20