



LIGHTING SPECIFICATION

P2 BUILDING, EXTERIOR KINGS CROSS, LONDON

Date: 17th April 2020

Reference: KXC-P2-001-J-00944-63-850

Issue: Stage 4

Revision: 01

Michael Grubb Studio Ltd

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1 INTRODUCTION

- 1.1 This document provides detailed information on the lighting requirements for the P2 Building, Kings Cross project.
- 1.2 Luminaire specification details and control performance requirements is included and should be read in conjunction with all relevant Michael Grubb Studio drawings and associated schedules. Please refer to the Data Issue sheet to ensure you have all relevant drawings and associated schedules.
- 1.3 In addition to the detailed listed within this document, all associated notes on all relevant documents should be adhered to.
- 1.4 Please contact Michael Grubb Studio directly if you require any additional information or clarifications in order to complete the tender. If in doubt, Ask!

2 TENDER CONDITIONS

- 2.1 The contractor should price for all aspects of the proposed lighting scheme. This shall include for the supply and installation of all equipment along with any additional costs that will be required to complete the installation, such as the cost of obtaining any necessary approvals or for the hire or supply of any access equipment. The final price should also include any emergency luminaires and provisional sums that may be required to cover any unforeseen circumstances that may arise.
- 2.2 It is assumed that the contractor has visited site and has assessed access for any vehicles, plant or machinery that may be required.
- 2.3 The contractor should specify what hours they intend to work. If work is required to be carried out outside of normal working hours prior agreement must be obtained from client.
- 2.4 Staff employed by the contractor must be skilled at a level commensurate with the nature of the work, which the contractor instructs them to undertake.
- 2.5 The contractor and all associated sub-contractors will be asked to provide full and complete CDM documentation prior to the commencement of works.
- 2.6 Electrical power is available on site for contractor's tools and equipment. This will be provided free of charge by the client.
- 2.7 It is the contractor's responsibility to have all relevant insurance applicable to the work being undertaken. The client reserves the right to see copies of insurance certificates.
- 2.8 The contractor shall take out and maintain insurance to indemnify the employer for loss or damage. The client will advise on the amount of cover required for the project.
- 2.9 The law of this contract is the law of England, subject to the jurisdiction of the Courts of England and Wales.
- 2.10 The appointed Contractor must allow and arrange for samples to be ordered of decorative lighting equipment. For custom lighting such as bespoke pendant luminaires, the contractor must allow for payment of mock-up testing and prototyping.



3 STANDARDS, LEGISLATION & COMPLIANCE

- 3.1 Please note that when ordering the luminaires specified for this project in the following documentation, manufacturer's and supplier's details are to be adhered to.
- 3.2 Michael Grubb Studio cannot accept responsibility for installation of non-approved luminaries.
- 3.3 For projects in the United Kingdom, all equipment supplied shall comply with the relevant BS and EN/ CE requirements, and be capable of installation in accordance with the manufacturer's instructions, the current edition of the IEE Wiring regulations and all statutory and local authority requirements.
- 3.4 All work must be compliant with the relevant British Standards. Where design requirements are specified, these must be used, where guidance is not included the contractor must apply the latest available standard at the time of the contract being awarded.
- 3.5 The contractor shall conform in every way with all Acts of Parliament and regulations that relate to buildings and building services.
- 3.6 The Contractor, in all respects, undertakes the works in a manner that fully discharges his legal obligations and manages health and safety on site in accordance with CDM 2007 regulations and to ensure that risks are reduced and managed properly.
- 3.7 Lighting requirements and specification details set out within this document have been developed to ensure compliance with all relevant codes and guidelines (such as Part L (Conservation of Fuel and Power of the Building Regulations). Michael Grubb Studio cannot accept responsibility for any changes that inadvertently affect the discharge of these requirements.
- 3.8 Environmental guidelines, restrictions and installation directives relating to the installation of the lighting are to be adhered to.
- 3.9 All equipment and components supplied shall be guaranteed against failure due to poor workmanship, materials, or luminaire design, for a period of not less than twelve months from the date of practical completion. Lamps shall be covered only by their manufacturer's normal assurances as to life expectancy and performance.

4 TECHNICAL REQUIREMENTS

- 4.1 Equipment selected as a standard item from a particular manufacturer's range has been specified with a view to performance, optics, maintenance, quality, aesthetics etc.
- 4.2 The final location of each luminaire and its relevant integration within the architecture of the scheme will be detailed on Construction Issue drawings. Michael Grubb Studio cannot accept responsibility for luminaires installed in a manner other than detailed in the relevant drawings or as otherwise agreed.



5 LUMINAIRES

- 5.1 It is the contractor's responsibility to liaise directly with the manufacturer to make sure the specification is correct and fully understood. We advise that the contractor forward the specification sheet to the manufacturer for review and approval prior to ordering. Please advise immediately if there is any conflict or confusion prior to order. If in doubt, Ask!
- 5.2 Electrical loads are nominal lamp loads only, and do not include ballast and transformer losses, motors, fans or any other loads which may exist within a luminaire or associated control equipment.
- 5.3 It is the contractor's responsibility to store all luminaires and associated accessories in a clean, dry and safe environment. The contractor shall take responsibility to ensure that all products are checked for damage or fault upon receipt. Any damage must be reported immediately upon delivery to the supplier and then reported Michael Grubb Studio.
- 5.4 Special consideration and care must be taken when handling luminaires with exposed reflectors. A reflector must not be touched as will have a negative effect on the optical performance of the fitting. Gloves must be used where the risk of contact is considered to be a possibility.
- 5.5 CE marking is a mandatory conformity mark requirement for all lighting equipment offered for sale within the European Economic Area (EEA) covering the European Union (EU). The contractor should therefore ensure that all products specified within this specification any other supplied equipment meet these guidelines.
- 5.6 Should a sample of a standard, or prototype of a special luminaire or variant of a standard luminaire be ordered, the cost shall either be incorporated in the project price, or shall be invoiced to the Client or his nominated representative separately, as agreed.
- 5.7 Notwithstanding the above, the manufacturer shall remain responsible for ensuring compliance with relevant standards, the accuracy of the information shown on his drawings at all times and for ensuring that the equipment shown fulfills the requirements of this specification.
- 5.8 Luminaires shall be supplied with adequate means of protection to ensure its preservation during transport to site and any subsequent storage prior to installation.
- 5.9 After installation all equipment is to be kept clean and free of dust. At the time of practical completion all luminaires are to be completely free of all grease, dust, scratches, paint (other than the luminaires own paint finish), plaster or other detritus. Particular care is to be taken that lenses, glasses, reflectors and louvers are clean and not scratched.
- 5.10 All luminaire measurements, quantities and lengths must be checked on site by the Contractor/ M&E Consultant prior to ordering. Measurements must not be taken from Michael Grubb Studio Lighting Layout Plans, Schedules or Specifications, as these are for pricing purposes only.

6 LAMPS

- 6.1 Michael Grubb Studio will only consider alternative lamps to those specified if full technical data is supplied. This shall include efficacy, colour rendering, colour temperature, light distribution, life expectancy and general performance.
- 6.2 It is the contractor's responsibility when ordering LED products to ensure that the manufacture is aware of the overall quantities of each luminaire type, this will allow the manufacture to reserve a *bin for all products ordered.
- 6.3 Fluorescents lamps should be ordered and supplied in their entirety to ensure comparable colour rendition. Where this is unachievable lamps should be installed in batches per their location and use. The contractor should liaise directly with Michael Grubb Studio to agree on zones and locations prior to order.
- 6.4 Once manufactured LED lamps are tested and sorted by colour and by brightness into a unique bin. This process is commonly known as 'binning'. A bin contains LEDs from only one colour and brightness group and is uniquely identified by a bin code. LED binning provides uniformity in both colour and brightness, it is therefore essential that all LED lamps form a single specified manufacturer come from the same bin. For this reason luminaires housing LED lamps must not be ordered as periodically.



7 CONTROL GEAR

- 7.1 All necessary control gear and transformers shall be mounted within the luminaire unless shown as being located remotely. All such gear shall be of good quality construction, shall comply with all relevant statutory regulations, shall be compatible with the lamps specified and the control method stated, and shall be mounted and wired in accordance with the manufacturers' instructions.
- 7.2 LED products are likely to have specific driver configurations, please see Michael Grubb Studio drawings and specifications for driver numbers, groupings and locations. The manufacturer will provide wiring diagrams and must be adhered to.
- 7.3 Wiring configurations from luminaire to drivers / transformers should be double checked with the wiring details supplied by Michael Grubb Studio and the associated manufacturers prior to electrical activation. This includes control protocol and electrical ratings to ensure that the lighting products are not damaged.
- 7.4 LED driver locations must not exceed the maximum length as detailed by the specified supplier. It is the Electrical Contractors responsibility to ensure that all wiring lengths and types are approved with the manufacturer in advance of works taking place on site.

8 CONTROL SYSTEM & PERFORMANCE

- 8.1 Where appropriate, the Electrical Contractor should liaise with the selected lighting control system manufacturer to ensure compatibility between control gear and the control system. The Electrical Contractor should also confirm all necessary data regarding circuit load of luminaires, to ensure that dimmers and connectors are correctly sized.
- 8.2 All control equipment shall be protected from unexpected mains failure, and mains interference.



9 LUMINAIRES

- 9.1 Where possible all cables will be hidden from public view. Where this is not feasible the routing of the cable and colour of the outer sheath will be agreed in advance of any works on site. It is the contractor's responsibility to issue samples of cables / containment to Michael Grubb Studio for approval.
- 9.2 All existing cabling, which is not required, is to be terminated, removed and / or concealed according to current electrical regulations and practices.

10 FOCUSING, PROGRAMMING & COMMISSIONING

- 10.1 The Electrical Contractor is to liaise with Michael Grubb Studio and the Control System supplier to arrange suitable dates for programming and commissioning.
- 10.2 The Electrical Contractor is to provide personnel to assist in the focusing, adjustment, programming and commissioning of the lighting scheme after it has passed practical completion. The personnel provided by the contractor should have been working on the installation so that they are familiar with it. The contractor should allow for the following time to undertake this work: 2 Days (Focusing) & 1 Day (Control Commissioning).
- 10.3 It is the contractor's responsibility to ensure that personnel and all necessary equipment is organised and in place prior to the arrival of the lighting consultant. It is also the contractor responsibility to liaise with the client to ensure that access is available and that works can run continuously without delay or disruption.
- 10.4 Upon completion the Electrical Contractor is required to provide a full demonstration of the lighting system to the client. The contractor should then handover over all associated paper work, drawings, details that explain how the lighting system is both used and maintained. An electronic copy should be forwarded to Michael Grubb Studio for our records.



11 THE LIGHTING CONSULTANT

- 11.1 Copyright of all Drawings, Plans, Schedules, Specifications and other documents of any nature provided or prepared by Michael Grubb Studio Ltd for or in connection with the project and in any designs contained in them ("The Deliverables") shall remain vested in the Lighting Consultant. The Lighting Consultant shall not be liable for any use of the Deliverables for any project or purpose other than that for which they were provided or prepared.
- 11.2 All publicity about the project where Design Team Credits are given, both during and after the project, shall include the name of Michael Grubb Studio as Lighting Consultants.

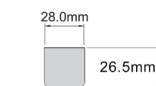


PROJECT: P2 BUILDING, KINGS CROSS, LONDON
 STATUS: STAGE 4
 REVISION: 01

PRODUCT DATA SHEET



Side View



Dimensions Excluding
Bespoke Recess Kit

PRODUCT DESCRIPTION:

Linear Uplight Luminaire. IP68 Rated. To include: DALI ELV Drivers, 2Core Cables, Connectors, ELV Power Supplies, Bespoke 70MM Install Kit.

MANUFACTURER INFORMATION:

Name: NJO Technology
 Contact: Simon Tebbey
 Tel: 01539 730093
 Email: Simon@njoleds.co.uk
 Website: www.njoleds.co.uk

PRODUCT SPECIFICATION:

Part No: DSD-PSQ-2.5M-SS-W30-EL-C-24-5M
 Finish: Stainless Steel
 Adjustable: No

LAMP SPECIFICATION:

Lamp Type: LED
 Beam Angle: 19 Degree
 Lamp Wattage: 18W/Metre
 Lumen Output: 1640LM/Metre
 Colour Temperature: 3000K
 CRI: 83

CONTROL SPECIFICATION:

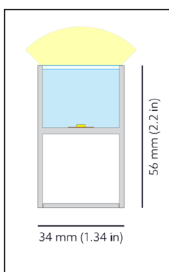
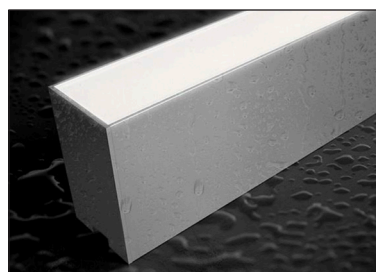
DALI via Building Management System and Astronomical Clock/Sensors. Final details and cabling to be developed by M&E Consultant.

DRIVER SPECIFICATION:

DALI ELV Driver. Manufacturer to provide Driver and all relevant information.

PRODUCT REFERENCE:

XA



PRODUCT DESCRIPTION:

Surface Mounted Linear Luminaire. IP67 Rated. To include: DALI ELV Drivers, Cables, Connectors, ELV Power Supplies, Adjustable Fixing Brackets.

MANUFACTURER INFORMATION:

Name: Architainment
 Contact: Lee Shields
 Tel: 0 1494 471340
 Email: Lee.Shields@architainment.co.uk
 Website: www.architainment.co.uk

PRODUCT SPECIFICATION:

Part No: Opaline/L/PRO100/50/N3/930/AG
 Finish: Grey/Opal
 Adjustable: Yes (Lockable bracket)

LAMP SPECIFICATION:

Lamp Type: LED
 Beam Angle: Diffused
 Lamp Wattage: 48W/Metre
 Lumen Output: 3341LM/Metre
 Colour Temperature: 3000K
 CRI: 80+

CONTROL SPECIFICATION:

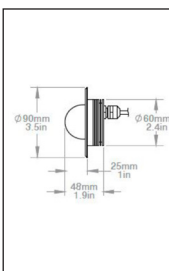
DALI via Building Management System and Astronomical Clock/Sensors. Final details and cabling to be developed by M&E Consultant.

DRIVER SPECIFICATION:

DALI ELV Driver. Manufacturer to provide Driver and all relevant information.

PRODUCT REFERENCE:

XB



PRODUCT DESCRIPTION:

Soffit Downlight. IP66 Rated. To include: DALI Drivers, Cables, Glands, Connectors, AC/DC Power Supplies (PS-ELV24-100-IP66), Install Kit.

MANUFACTURER INFORMATION:

Name: GVA Lighting
 Contact: David Stramazotti
 Tel: 0203 735 7321
 Email: David.Stramazotti@gvalighting.com
 Website: www.gvalighting.com

PRODUCT SPECIFICATION:

Part No: Pixel-Dome-Cust-3W-3K-DMX-FM90
 Finish: Custom (TBC by Architect)
 Adjustable: No

LAMP SPECIFICATION:

Lamp Type: LED
 Beam Angle: Diffused.
 Wattage: 3.5W
 Lumen Output: 181LM
 Colour Temperature: 3000K
 CRI: 80+

CONTROL SPECIFICATION:

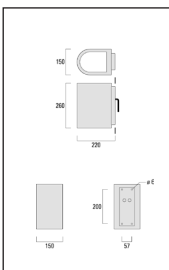
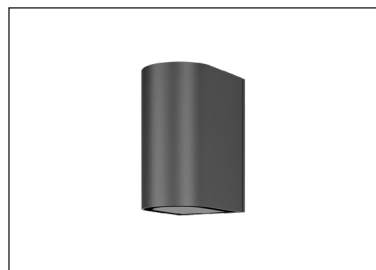
DALI via Building Management System and Astronomical Clock/Sensors. Final details and cabling to be developed by M&E Consultant.

DRIVER SPECIFICATION:

DALI Driver. Manufacturer to provide Driver and all relevant information.

PRODUCT REFERENCE:

XG



PRODUCT DESCRIPTION:

Direct/Indirect Wall Luminaire. IP66, IK07 Rated. To include: Bespoke Diffusers, DALI Drivers, Cables, Connectors, Power Supplies, Install Plate.

MANUFACTURER INFORMATION:

Name: WE-EF Lighting
 Contact: Rob Marsh
 Tel: 0161 518 2900
 Email: r.marsh@we-ef.com
 Website: www.we-ef.com

PRODUCT SPECIFICATION:

Part No: SLS420LED 131-9543
 Finish: (TBC by Architect)
 Adjustable: No

LAMP SPECIFICATION:

Lamp Type: LED
 Beam Angle: Medium Symmetric
 Lamp Wattage: 2X12W@700mA
 Lumen Output: 2952LM (Combined)
 Colour Temperature: 3000K
 CRI: 80

CONTROL SPECIFICATION:

DALI via Building Management System and Astronomical Clock/Sensors. Final details and cabling to be developed by M&E Consultant.

DRIVER SPECIFICATION:

DALI Driver. Manufacturer to provide Driver and all relevant information.

PRODUCT REFERENCE:

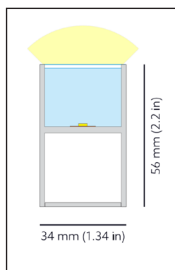
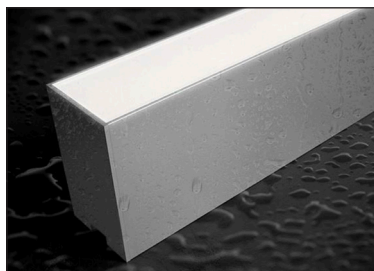
XJ



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PROJECT: P2 BUILDING, KINGS CROSS, LONDON
 STATUS: STAGE 4
 REVISION: 01

PRODUCT DATA SHEET



PRODUCT DESCRIPTION:
 Surface Mounted Linear Luminaire. IP67 Rated.
 To include: DALI Drivers, Cables, Connectors,
 Power Supplies, Adjustable Fixing Brackets.

MANUFACTURER INFORMATION:

Name: Architainment
 Contact: Lee Shields
 Tel: 0 1494 471340
 Email: Lee.Shields@architainment.co.uk
 Website: www.architainment.co.uk

PRODUCT SPECIFICATION:
 Part No: Opaline/L/PRO100/20/N3/930/AG
 Finish: Grey/Opal
 Adjustable: Yes (Lockable bracket)

LAMP SPECIFICATION:

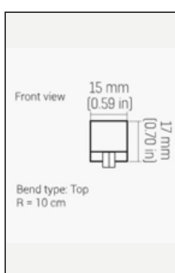
Lamp Type: LED
 Beam Angle: Diffused
 Lamp Wattage: 19.2W/Metre
 Lumen Output: 2393LM/Metre
 Colour Temperature: 3000K
 CRI: 90+

CONTROL SPECIFICATION:
 DALI via Building Management System
 and Astronomical Clock/Sensors. Final
 details and cabling to be developed by
 M&E Consultant.

DRIVER SPECIFICATION:
 DALI Driver. Manufacturer to provide Driver
 and all relevant information.

PRODUCT REFERENCE:

XK



PRODUCT DESCRIPTION:
 Top Bend Linear Luminaire. IP67 Rated.
 To include: DALI Drivers, Cables, Connectors,
 Power Supplies, Surface Mounting Clips.

MANUFACTURER INFORMATION:

Name: Architainment
 Contact: Lee Shields
 Tel: 0 1494 471340
 Email: Lee.Shields@architainment.co.uk
 Website: www.architainment.co.uk

PRODUCT SPECIFICATION:
 Part No: Opaline/Flex/Top/15W/W930
 Finish: White/Opal
 Adjustable: (Top Bend Only)

LAMP SPECIFICATION:

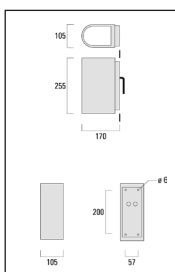
Lamp Type: LED
 Beam Angle: Diffused
 Lamp Wattage: 14.4W/Metre
 Lumen Output: 1188LM/Metre
 Colour Temperature: 3000K
 CRI: 90+

CONTROL SPECIFICATION:
 DALI via Building Management System
 and Astronomical Clock/Sensors. Final
 details and cabling to be developed by
 M&E Consultant.

DRIVER SPECIFICATION:
 DALI Driver. Manufacturer to provide Driver
 and all relevant information.

PRODUCT REFERENCE:

YB



PRODUCT DESCRIPTION:
 Downward Emission Wall Luminaire. IP66, IK07
 Rated. To include: Bespoke Diffusers, DALI Drivers,
 Cables, Connectors, Power Supplies, Install Plate.

MANUFACTURER INFORMATION:

Name: WE-EF Lighting
 Contact: Rob Marsh
 Tel: 0161 518 2900
 Email: r.marsh@we-ef.com
 Website: www.we-ef.com

PRODUCT SPECIFICATION:
 Part No: SLS410LED 131-9473
 Finish: (TBC by Architect)
 Adjustable: No

LAMP SPECIFICATION:

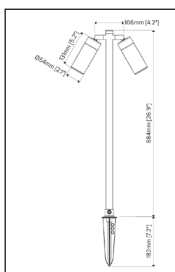
Lamp Type: LED
 Beam Angle: Medium Symmetric
 Lamp Wattage: 6W@700mA
 Lumen Output: 738LM
 Colour Temperature: 3000K
 CRI: 80

CONTROL SPECIFICATION:
 DALI via Building Management System
 and Astronomical Clock/Sensors. Final
 details and cabling to be developed by
 M&E Consultant.

DRIVER SPECIFICATION:
 DALI Driver. Manufacturer to provide Driver
 and all relevant information.

PRODUCT REFERENCE:

YC



PRODUCT DESCRIPTION:
 Dual Head Spike Luminaire. IP65 Rated.
 To include: Drivers, LSLEDDIMDALI converter,
 Cables, Connectors, HLG100 Power Supplies.

MANUFACTURER INFORMATION:

Name: Lumascope (via Architainment)
 Contact: Lee Shields
 Tel: 01494 471340
 Email: Lee.Shields@architainment.co.uk
 Website: www.lumascope.com

PRODUCT SPECIFICATION:
 Part No: Grevillea G442-LED-H6-WD-DALI
 Finish: (TBC by Architect)
 Adjustable: Yes

LAMP SPECIFICATION:

Lamp Type: LED
 Beam Angle: 40 Degree
 Lamp Wattage: 2X7.5W
 Lumen Output: 2X540LM
 Colour Temperature: 3000K
 CRI: 80

CONTROL SPECIFICATION:
 DALI via Building Management System
 and Astronomical Clock/Sensors. Final
 details and cabling to be developed by
 M&E Consultant.

DRIVER SPECIFICATION:
 DALI Driver. Manufacturer to provide Driver
 and all relevant information.

PRODUCT REFERENCE:

YD



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