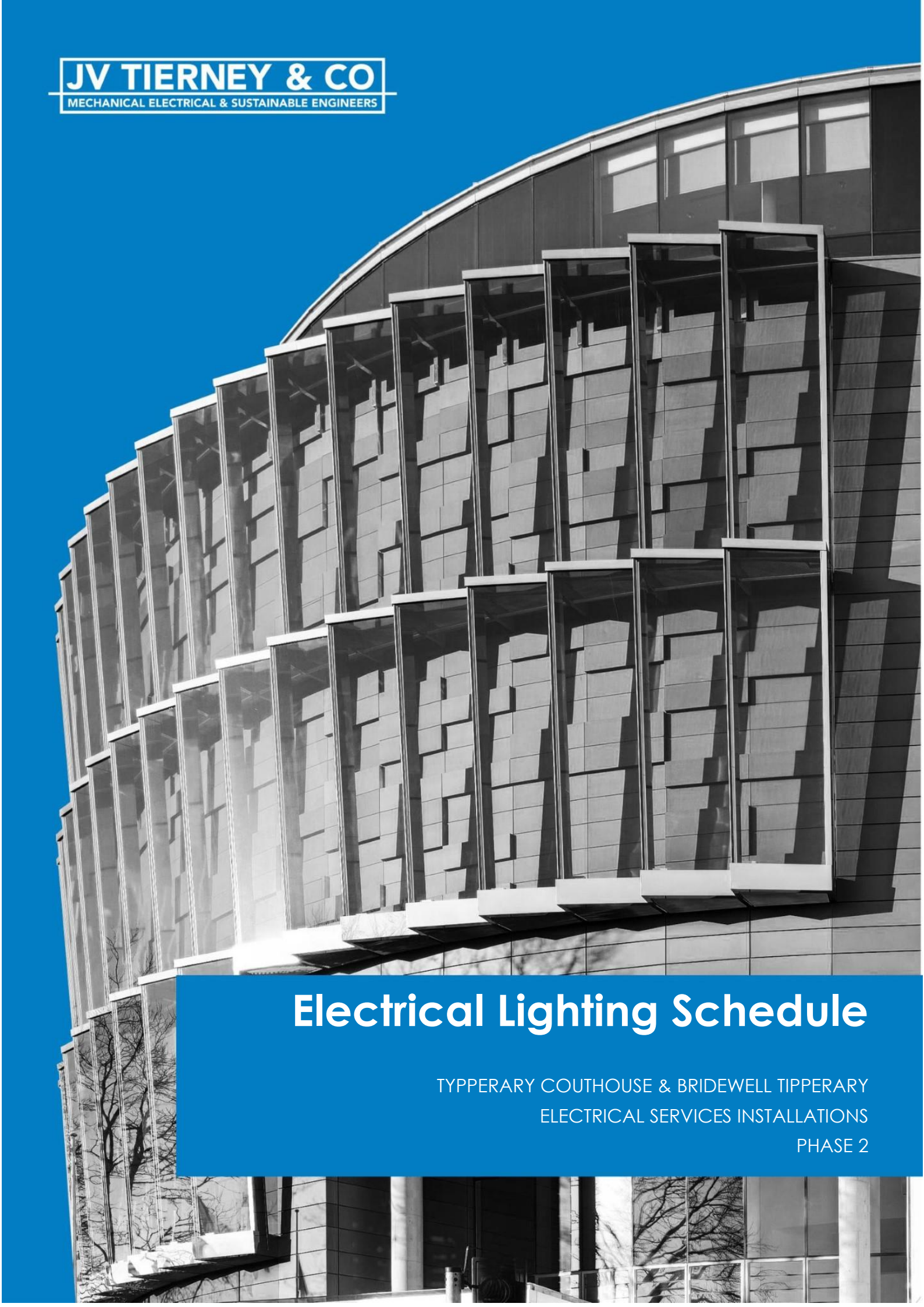
JV TIERNEY & CO
MECHANICAL ELECTRICAL & SUSTAINABLE ENGINEERS



Electrical Lighting Schedule

TYPPERARY COUTHOUSE & BRIDEWELL TIPPERARY
ELECTRICAL SERVICES INSTALLATIONS
PHASE 2

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TIPPERARY CURTHOUSE & BRIDEWELL

ELECTRICAL LIGHTING SCHEDULE

PHASE 2

CCT-JVT-PH2-XX-XX-SH-E-0001 ELECTRICAL SUMMARY OF TENDER

Description	Rev. No.	Date	Prepared By:	Reviewed by:
P7 – PRE-TENDER	0	30/10/2026	YG	APL

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CONTENTS

SECTION 1 - Schedule of Luminaires 4

1.1 Specified Equipment 4

1.2 General Lighting 4

1.3 NOTE ON SUBMISSIONS AND ALTERNATIVE EQUIPMENT/SUPPLIERS 7

SECTION 2 - Internal Lighting 9

2.1 Type B 9

2.2 Type C 10

2.3 Type C/E 11

2.4 Type D 12

2.5 Type W1 13

SECTION 3 - External Lighting 14

3.1 Type W2 14

SECTION 4 - Emergency Lighting 15

4.1 Type E1 15

4.2 Type V/E 16

4.3 Type EX1 17

SECTION 1 - SCHEDULE OF LUMINAIRES

This document is the Luminaire Schedule for submission to St. Cecilia's School, outlining the luminaire types proposed for the St Cecilia's School.

This luminaire schedule outlines the proposed luminaire types for internal, external and emergency lighting to be installed in the proposed building.

Some notes to consider:

1. *Electrical Contractor shall include for 3-hour integrated battery supply to emergency luminaires.*
2. *Electrical Contractor shall include for all suspension wires, brackets, fixings for all fittings.*
3. *All lamps shall be LED type.*
4. *Al external fittings shall be robust corrosion proof fitting, being conscious of the sea air.*
5. *All luminaires shall be CE marked as required by the specific EU directive(s).*
6. *Colour temperatures shall be agreed with the Architect. There shall be no additional cost to the contract for this.*
7. *The contractor shall provide 3m length suspension chain for all suspended light fittings and it shall be supplied to a length agreed by the architect.*
8. *All luminaires shall be registered on the SEAI Triple E register.*

1.1 SPECIFIED EQUIPMENT

Where Materials are specified in this Document they shall be included in the Tender without adjustment or alteration. The Engineers may consider alternatives (as a below the line Tender Sum Option), at their discretion, but it will be the responsibility of the Services Contractor to provide all supporting information to prove that their proposed alternative is equivalent to, (or better than), the specified product, particularly regarding the following:-

1. Performance;
2. Appearance;
3. Longevity (Robustness);
4. Energy Efficiency;
5. Certification;
6. Product support and Warranty.

1.2 GENERAL LIGHTING

The objectives of the System are as follows:

- To provide an effective and efficient Lighting System, compliant with:-
  - NSAI/ET101:2008 and subsequent Amendments;
  - LL 4 Lighting Guide (2006);
  - SLL 7 Lighting Guide (2015);
  - SLL 9 Lighting Guide (2013);
  - SLL 10 Lighting Guide (2014);
  - SLL 14 Lighting Guide (2016);
  - EN 12665:2011;
  - EN 12464-1:2011;
  - EN 61347-1: 2015;
  - EN 61347-2-13 2014;
  - EN 62722-2-1: 2016;
  - IEC 62717: 2014/prEN 62717: 2016;

- EN 61995-1:2008;
- EN 61995-2:2009;
- EN 60669-1:1999 + A2: 2008;
- CIE 97.2;
- CIE 117;
- CIBSE Commissioning Code L 2003;
- 2014/35/EU Low Voltage Directive (LVD);
- 2014/30/EC Electromagnetic Compatibility (EMC);
- CE Marking Directive;
- SEAI Accelerated Capital Allowance Programme / S.I. 151 of 2011.

- To enhance the architectural features of the Development.
  - The Lighting System is defined on the System Drawings. For Luminaires and Lamp Types, refer to the Schedule of Luminaires and Lamps below.
  - The Lighting System shall be supplied from local Distribution Boards as indicated on the System Drawings.
  - Manufacturers photometric and energy efficiency data shall be presented to the Engineer/Client prior to installation of any Luminaire, and the Manufacturer's Data Sheets shall be retained in the Record Documents handed over to the Client upon completion. All Luminaires' photometric data shall comply with EN 13032-1: 2004, EN 13032-2: 2004, EN 13032-3: 2007 and EN 13032-4: 2015.
  - Supplier's Data shall be subject to checking by SEAI for Energy Efficiency, and the determination of SEAI shall be binding in any energy efficiency query.
  - The Contractor shall ensure that Luminaires specified of similar type have same photometric performance as published data within the tolerances defined by I.S. EN 13032 Parts 1, 2 3 & 4.
  - Luminaires shall be in accordance with all parts of EN 60598-1:2008.
  - All Luminaires on the Project shall utilise LED light sources throughout all Areas.
  - Luminaires shall be equipped with either LED Drivers or LED Dimmable Drivers. The LEDs utilised in the Luminaires shall be from an internationally recognised leading Manufacturer in the field. The LEDs shall meet or exceed the standardised industry LED lifetime to L70 = minimum 50000 hours and with the LED Lumen Maintenance measured to LM-80 and TM-21 Standards.
  - All LEDs shall be tested per IES LM-79, LM-80, and TM-21 parameters and test reports be submitted to the Technical Advisory Team/Client for review and approval with the Technical Submission for the Luminaires.
  - All Luminaires used on the Project shall be a minimum colour rendering index greater than 90.
  - LEDs with a long burning time (50,000 hours minimum) shall be used on the Project.
  - All Led Luminaires and components shall have the CE mark and shall be manufactured in accordance with all applicable current EN regulations including EN 62471: 2008, EN 60598: 2015, EN 62722-2-1: 2016 and IEC 62717: 2014 and with the requirements of all appropriate Irish Standards and Regulations and shall comply with the requirements of the Fire Certificate.
  - All Luminaires used on this Project shall have a minimum of 5 Years Warranty.
  - Luminaires shall be installed complete with all necessary drivers, louvres and diffusers, including any necessary proprietary fixings and steel supports. All Luminaire components shall be as per the Luminaire Manufacturer. All necessary mounting accessories such as suspension kits and separate recessing frames shall be included to suit ceiling types shown for a complete and compliant installation.
  - Luminaires shall be cleaned prior to final handover, if necessary, with an anti-static cleaning agent, to provide clean, dust free lighting.
  - The metal work of all Luminaires and Equipment shall be effectively earthed to the Installation.

- All drivers shall be produced by a company operating Quality Standards procedure complying with ISO 9001: 2015. All components shall be guaranteed for at least three years under the conditions of assembly and use.
- Prismatic/opal luminaires where required, shall be provided with TPa fire rated diffusers in accordance with the Building Regulations.
- All lighting diffusers shall comply with all of the requirements of Table 2.1 TGD-B and if there are any perforations of the fire-resistant structure they will sealed with adequate gaskets, pillows etc.
- Luminaires shall be installed strictly in accordance with the Manufacturer's Instructions.
- LED Lamp Colour Temperature shall be consistent in particular Areas and shall be as specified.
- A fully operational sample of each Luminaire specified shall be displayed for review by the Engineer/Client for comments or final approval. The Contractor shall include for all costs associated with the provision of all Luminaire Samples with the Tender Return and include for erecting and connection of all Sample Luminaires.
- The Contractor shall demonstrate the operation of all Samples during the hours of darkness and shall arrange to have electricians and other operatives in attendance as required. The Design and Build Contractor shall include for three separate lighting demonstrations.
- All Luminaires installed shall meet the base criteria of the SEAI ACA program.
- All Luminaires installed shall meet the minimum requirements for efficiency as outlines in Technical Guidance Document L of the Building Regulations.
- Any thermoplastic materials to be used in lighting diffusers in ceiling spaces or otherwise are to comprise materials which meet the appropriate classifications specified by Building Regulations Approved Document B, section B2. Any/all thermoplastic materials to be used in lighting diffusers on this project shall comply with a minimum TP(a) rating. Submit confirmation of same as part of all lighting submittals for all types.

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1.3 NOTE ON SUBMISSIONS AND ALTERNATIVE EQUIPMENT/SUPPLIERS

- The Contractor and their Electrical Services Specialist Contractor shall include in their Tender for Equipment supplied by the Specification.
- The Contractor and their Electrical Services Specialist Contractors may offer for approval an equivalent alternative.
- The technical differences between the alternative and the specified item, such as where applicable the power rating, efficiency, noise generation, physical dimensions, weight, standards complied with, LOR (light Output Ratio), DLOR (Downward Light Output Ratio), IP rating, IK Rating (Impact resistance), Class type, CE mark, EN Standards, Polar Curves, Third Party approval such as BSI, ENEC, Kitemark, etc, WEE Compliance, Warranty, confirmation that all components have been designed, developed tested and manufactured under the scope of EN/9000 quality systems that are registered and audited by independent third parties.
- Glow wire test compliance for plastic parts, UGR Unified Glare Rating etc. shall also be clearly listed and highlighted.
- The Employer's Representative will consider the submission and advice on its acceptance or rejection.
- Where the Contractor and its Electrical Services Specialist Contractor chooses to offer an alternative Manufacturer's Equipment, the Contractor and their Electrical Services Specialist Contractor shall include for all measures necessary to make the Equipment and the total installation equivalent to that specified e.g. upgrading cable sizes where electrical loads are higher and all necessary drawing and co-ordination to demonstrate the successful installation.
- Any re-design work required by the Client's Representative to make a particular alternative work shall be paid for directly by the Contractor and their Electrical Services Specialist Contractor.
- In the event that the Contractor and their Electrical Services Specialist Contractor proposes an alternative Manufacturer, Item of Plant, Equipment, or Material which is accepted by the Employer's Representative but later is found not to comply with the Specification, the Electrical Services Specialist Contractor must immediately replace the item and/or pay the Employer's Representative directly for any additional design and supervision work associated with any problems caused by the provision of non-specification compliant Equipment.
- In the events that payments for supervision and/or redesign are not made promptly, equivalent amounts may be withheld from the Contractor until the issue and payment of all associated costs is resolved to the satisfaction of the Client's Representative. Any non-specification plant or equipment that is installed in the works without approval must be immediately removed and replaced at the request of the Client's Representative.
- Where a Contractor or its Electrical Services Specialist Contractor fails to state a proposed alternative Supplier or Manufacturer at Tender Stage of the Project then the Client's Representative is under no obligation to accept alternatives during the progress of the Contract.
- When offering alternative products, the Contractor and their Electrical Services Specialist Contractor must provide detailed technical information about the alternative product in addition to Samples if requested by the Client's Representative.
- All requests must be made within good time to allow the alternative to be considered. If inadequate time is allowed for approval, then the specified supplier must be used. The Electrical Services Specialist Contractor must examine the technical information available before submitting to the Client's Representative and determine if the alternative is of equivalent quality before offering the alternative.

- In the event that the Electrical Services Specialist Contractor offers two consecutive alternatives that clearly are not specification compliant then they must proceed with the specified manufacturer to avoid project delay.
- A full technical submittal is required for every item intended to be installed on the project whether specified or alternative proposal, please refer to Specification for a list of Submittals required. The Submittal should be in the format of 1 disk with a separate folder section for each service. All Submittals must be submitted at the same time in one package, submissions will not be entertained in dribs and drabs.
- Each service folder should be subdivided into two sections “Specified Equipment” and “Proposed Equipment”, the first shall contain all the data sheets for the specified equipment, the second shall contain all the proposed alternative data sheets (if any). The alternative submissions procedure document as per schedule 6 of this Specification shall be included for all alternative submissions.
- When the Engineers are satisfied that from the data sheets the submissions are acceptable from a technical point of view they can then be forwarded to the architect for an aesthetic review where applicable. When the architect is satisfied, samples can be brought to site for final approval.
- No item is deemed to be approved until this procedure is complete and the spread sheet has both a JVT and an architectural initial in the boxes provided for those items.
- A full technical submittal is required for every item intended to be installed on the project whether specified or alternative proposal, please refer to Specification for a list of Submittals required. The Submittal should be in the format of 1 disk with a separate folder section for each service. All Submittals must be submitted at the same time in one package, submissions will not be entertained in dribs and drabs.
- Each service folder should be subdivided into two sections “Specified Equipment” and “Proposed Equipment”, the first shall contain all the data sheets for the specified equipment, the second shall contain all the proposed alternative data sheets (if any). The alternative submissions procedure document as per schedule 6 of this Specification shall be included for all alternative submissions.
- When the Engineers are satisfied that from the data sheets the submissions are acceptable from a technical point of view they can then be forwarded to the architect for an aesthetic review where applicable. When the architect is satisfied, samples can be brought to site for final approval.
- No item is deemed to be approved until this procedure is complete and the spread sheet has both a JVT and an architectural initial in the boxes provided for those items.

SECTION 2 - INTERNAL LIGHTING

2.1 TYPE B

LUMINAIRE REFERENCE:	B	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Sheet steel painted white 1200x200mm LED luminaire with a micro-prismatic acrylic diffuser	Surface, Ceiling or Wall Mounted	Suspended Mounted
DIFFUSER TYPE:	Acrylic	LAMPS:	30W, 118lm/W
REFLECTOR:	N/A	COLOUR OF LAMPS:	4000K
CONTROL GEAR:	On/off	LAMP LIFE (LED) :	100,000 hrs
AREA OF APPLICATION:	Classrooms/Office	MANUFACTURER:	NOT SPECIFIED
WARRANTY	5 Years	IP Rating	IP20 ik07



2.2 TYPE C

LUMINAIRE REFERENCE:	C	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Luminaire body of polycarbonate	Surface, Ceiling or Wall Mounted	Surface Mounted
DIFFUSER TYPE:	Opal polycarbonate	LAMPS:	14W, 137lm/W
REFLECTOR:	Aluminium	COLOUR OF LAMPS:	4000K
CONTROL GEAR:	N/A	LAMP LIFE (LED) :	84,000 hrs
AREA OF APPLICATION:	Bathrooms, store	MANUFACTURER:	NOT SPECIFIED
WARRANTY	5 Years	IP Rating	IP44



2.3 TYPE C/E

LUMINAIRE REFERENCE:	C/E	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Luminaire body of polycarbonate, with integral emergency lighting to compliance with IS3217	Surface, Ceiling or Wall Mounted	Surface Mounted
DIFFUSER TYPE:	Opal polycarbonate	LAMPS:	14W, 137lm/W
REFLECTOR:	Aluminium	COLOUR OF LAMPS:	4000K
CONTROL GEAR:	N/A	LAMP LIFE (LED) :	84,000 hrs
AREA OF APPLICATION:	Bathrooms, store	MANUFACTURER:	NOT SPECIFIED
WARRANTY	5 Years	IP Rating	IP44



2.4 TYPE D

LUMINAIRE REFERENCE:	D	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Surface mounted downlights with integrated option for surface-mounted cable	Surface, Ceiling or Wall Mounted	Suspended Mounted
DIFFUSER TYPE:	Polycarbonate (PC)	LAMPS:	1610W
REFLECTOR:	Black	COLOUR OF LAMPS:	3000K
CONTROL GEAR:	N/A	LAMP LIFE (LED) :	100,000 hrs
AREA OF APPLICATION:	Soft play, multi sensory room…	MANUFACTURER:	NOT SPECIFIED
WARRANTY	5 Years	IP Rating	IP20



2.5 TYPE W1

LUMINAIRE REFERENCE:	W1	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Easily replaceable lens system, die-cast aluminium body	Surface, Ceiling or Wall Mounted	Surface Wall Mounted
DIFFUSER TYPE:	N/a	LAMPS:	27W, 117lm/W
REFLECTOR:	36°, and 54° beam angle	COLOUR OF LAMPS:	4000K
CONTROL GEAR:	N/a	LAMP LIFE (LED) :	100,000 hrs
AREA OF APPLICATION:	Breakout Spaces	MANUFACTURER:	NOT SPECIFIED
WARRANTY	5 Years	IP Rating	IP20



SECTION 3 - EXTERNAL LIGHTING

3.1 TYPE W2

LUMINAIRE REFERENCE:	W2	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Wall luminaire. Light emission on one side, downwards, with integral emergency lighting to compliance with IS3217	Surface, Ceiling or Wall Mounted	Surface Wall Mounted
DIFFUSER TYPE:	N/a	LAMPS:	5.2W, 85lm/W
REFLECTOR:	Symmetrical Narrow Beam frosted glass	COLOUR OF LAMPS:	3000K
CONTROL GEAR:	On/Off	LAMP LIFE (LED) :	100,000 hrs
AREA OF APPLICATION:	Exit Dors	MANUFACTURER:	NOT SPECIFIED
WARRANTY	5 Years	IP Rating	IP65



SECTION 4 - EMERGENCY LIGHTING

4.1 TYPE E1

LUMINAIRE REFERENCE:	E1	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Circular recessed emergency downlight. Dimensions: D=55mm	Surface, Ceiling or Wall Mounted	Recessed Ceiling Mounted
DIFFUSER TYPE:	Polycarbonate (PC)	LAMPS:	3W
REFLECTOR:	N/A	COLOUR OF LAMPS:	4500K
CONTROL GEAR:	N/A	LAMP LIFE (LED) :	N/A
AREA OF APPLICATION:	All Areas Inside Building	MANUFACTURER:	NOT SPECIFIED
WARRANTY	3 Years	IP Rating	IP20



4.2 TYPE V/E

LUMINAIRE REFERENCE:	V/E	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Vandal resistant high powered emergency bulkhead. Dimensions: L=370mm, W=152mm	Surface, Ceiling or Wall Mounted	Wall Mounted
DIFFUSER TYPE:	Polycarbonate (PC)	LAMPS:	3W
REFLECTOR:	N/A	COLOUR OF LAMPS:	6000K
CONTROL GEAR:	N/A	LAMP LIFE (LED) :	N/A
AREA OF APPLICATION:	Outside Areas of Building	MANUFACTURER:	NOT SPECIFIED
WARRANTY	3 Years	IP Rating	IP65



4.3 TYPE EX1

LUMINAIRE REFERENCE:	EX1-(Down), (Right), (Double sided right)	CATALOGUE NO.	NOT SPECIFIED
BODY DESCRIPTION:	Emergency exit luminaire Dimensions: L=330mm, W=250mm, H=15mm	Surface, Ceiling or Wall Mounted	Ceiling Mounted
DIFFUSER TYPE:	ABS	LAMPS:	1W
REFLECTOR:	N/A	COLOUR OF LAMPS:	5000K
CONTROL GEAR:	N/A	LAMP LIFE (LED) :	N/A
AREA OF APPLICATION:	Escape Routes	MANUFACTURER:	NOT SPECIFIED
WARRANTY	TBC	IP Rating	IP20

