

A technical offer is to be provided by the Economic Operator in response to Technical Specifications. The submission shall be in a structured form and is to be in the same sequence as listed hereunder for ease of reference and evaluation.

1.0 Technical Specifications - Scope

These technical specifications are supplementary to the contents of [Section 6.1, *Bills of Quantity*].

Notes:

*1 Indicative figures only, a degree of flexibility is allowable.

2.0 Technical Specifications - General

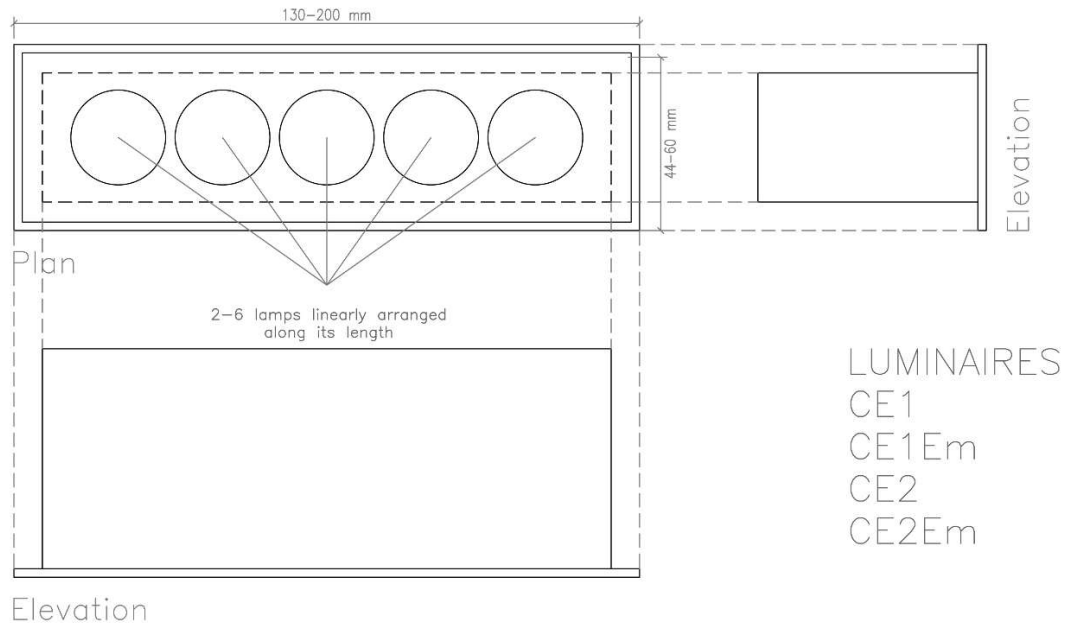
All luminaires are to be supplied complete and inclusive of all wiring accessories and lamps.

3.0 Technical Specifications - Schedule

3.1 Luminaire Ref: CE1

| | |
|--------------------------|--|
| Technical Description | Rectangular miniaturised recessed luminaire with several optical elements arranged in a linear fashion with LED lamps. |
| Type | Wall or ceiling recessed. |
| Main Body | Die-cast aluminium, with perimeter surface frame. |
| Design Intent | Metal perimeter surface frame around plastic interior which holds the LED lamps, with a colour contrast between the metal (white) and the plastic (dark). Rectangular shape with sharp edges at corners. No exposed fixtures/mountings/screw caps. |
| Anti-Glare Screen | Yes. |
| Optics | Fixed optics with a wide beam angle, 40 to 50 degrees. |
| Dimmable | Yes, DALI driver to be supplied with fitting. |
| Dimension Range | Width: 44mm to 60mm *1 Length: 130mm to 200mm *1 |
| IP Rating (housing) | IP20 |
| IP Rating (visible part) | IP23 |
| Standards | Adheres to EN60598-1 |
| Total Lighting Output | 700 – 900 Lumens |
| Lifetime | >40,000h |
| Lamp Type | LED |
| Lamp Configuration | Multiple lamps (that is, more than 2, but less than 6) linearly arranged along the length of the fitting. |
| Colour Temperature | 3000K |

Indicative
Diagram



3.2 Luminaire Ref: CE1Em

| | |
|-------------------------|--|
| Technical Description | As per CE1Em (should be identical light fitting) with the following additions: |
| Control | Switch control to BMS for emergency light. |
| Integral Backup Battery | 3 Hours |

3.3 Luminaire Ref: CE2

| | |
|-----------------------|--|
| Technical Description | As per CE1 (should be identical light fitting) with the following additions: |
| Type | Surface mounted box, RAL Colour TBC. |

3.4 Luminaire Ref: CE2Em

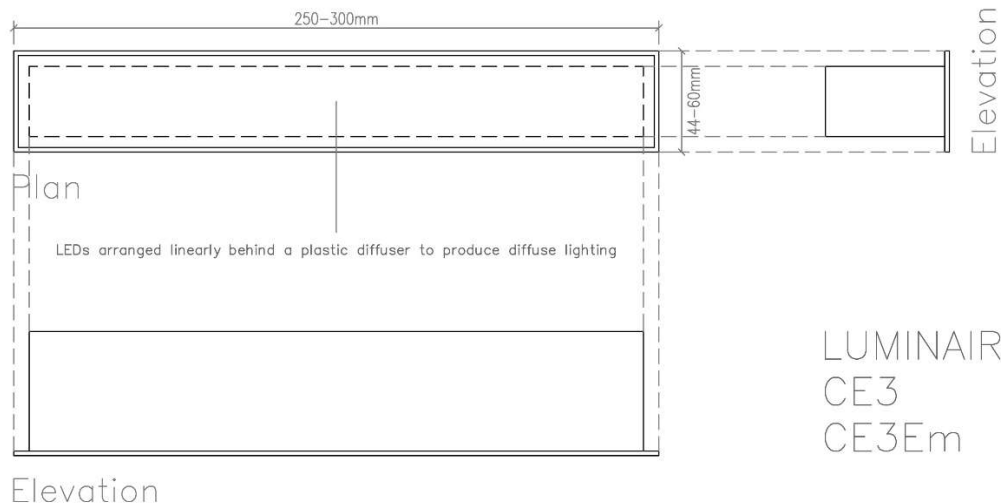
| | |
|-------------------------|--|
| Technical Description | As per CE2 (should be identical light fitting) with the following additions: |
| Control | Switch control to BMS for emergency light. |
| Integral Backup Battery | 3 Hours |

3.5 Luminaire Ref: CE3

| | |
|-----------------------|--|
| Technical Description | Rectangular, recessed frame miniaturized luminaire with LEDs with an optical system designed for diffused lighting distribution. |
| Type | Recessed. |
| Main Body | Die-cast aluminium with perimeter surface frame. |

| | |
|--------------------------|---|
| Design Intent | White metal perimeter surface frame around a thin contrasting gasket which in turn surrounds the anti-glare screen. No exposed fixtures/mountings/screw caps. |
| Anti-Glare Screen | Diffuser in transparent plastic. |
| Optics | Flux enhancer, aluminium reflector and anti-glare screen. |
| Dimmable | Yes, DALI driver to be supplied with luminaire. |
| Dimension Range | Width: 44mm to 60mm *1 Length: 250mm to 300mm *1 |
| IP Rating (housing) | IP20 |
| IP Rating (visible part) | IP43 |
| Colour | Black/White |
| Standards | Adheres to EN60598-1 |
| Total Lighting Output | 900-1100 Lumens |
| Lifetime | >40,000h |
| Lamp Type | LED |
| Lamp Configuration | LEDs arranged linearly behind a plastic diffuser to produce diffuse lighting. |
| Colour Temperature | 3000K |

Indicative Diagram



LUMINAIRES
CE3
CE3Em

3.6 Luminaire Ref: CE3Em

Technical Description As per CE3 (should be identical light fitting) with the following additions:

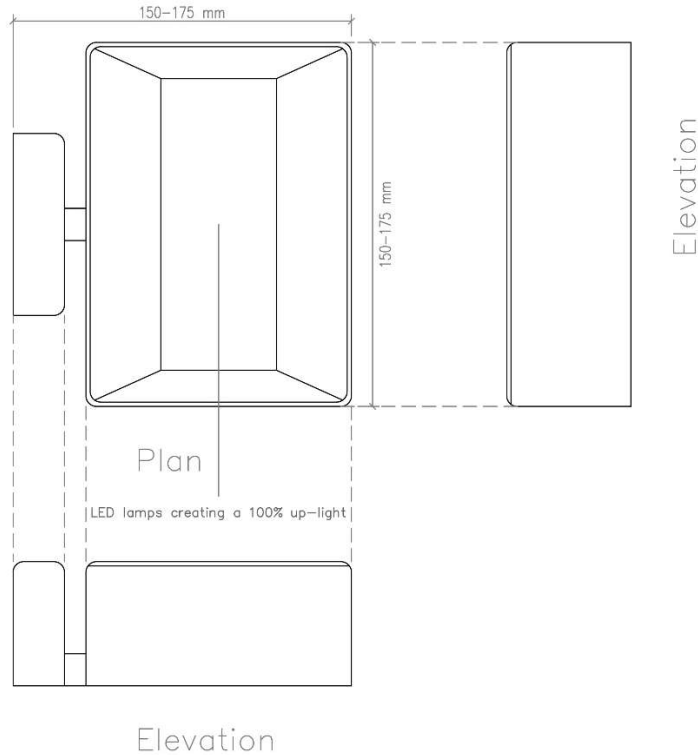
Control Switch control to BMS for emergency light.

Integral Backup Battery 3 Hours

3.7 Luminaire Ref: AP1

| | |
|--------------------------|--|
| Technical Description | Rectangular indoor, indirect light, wall mounted luminaire, inclusive of electronic ballast integrated into the body. |
| Type | Wall mounted. |
| Main Body | Metal. |
| Design Intent | Rectangular body supported by short arm and wall mount with slightly rounded edges and corners. Thermo-plastic external body (white) contrasting with internal chamfered frame which conceals the reflector. No exposed fixtures/mountings/screw caps. |
| Reflector | Yes, to produce 100% up light beam, aluminium reflector. |
| Dimmable | Yes, DALI driver to be supplied with luminaire. |
| Dimension Range | Width: 150mm to 175mm *1 Length: 150mm to 175mm *1 |
| IP Rating (housing) | IP20 |
| IP Rating (visible part) | IP40 |
| Standards | Adheres to EN60598-1 |
| Total Lighting Output | 2200 - 2600 Lumens |
| Lifetime | >40,000h |
| Lamp Type | LED |
| Lamp Configuration | LED lamps creating a 100% up-light. |
| Colour Temperature | 3000K |

Indicative
Diagram



LUMINAIRES
AP1
AP1Em

3.8 Luminaire Ref: AP1Em

| | |
|-------------------------|--|
| Technical Description | As per AP1 (should be identical light fitting) with the following additions: |
| Control | Switch control to BMS for emergency light. |
| Integral Backup Battery | 3 Hours |

3.9 Luminaire Ref: SP1

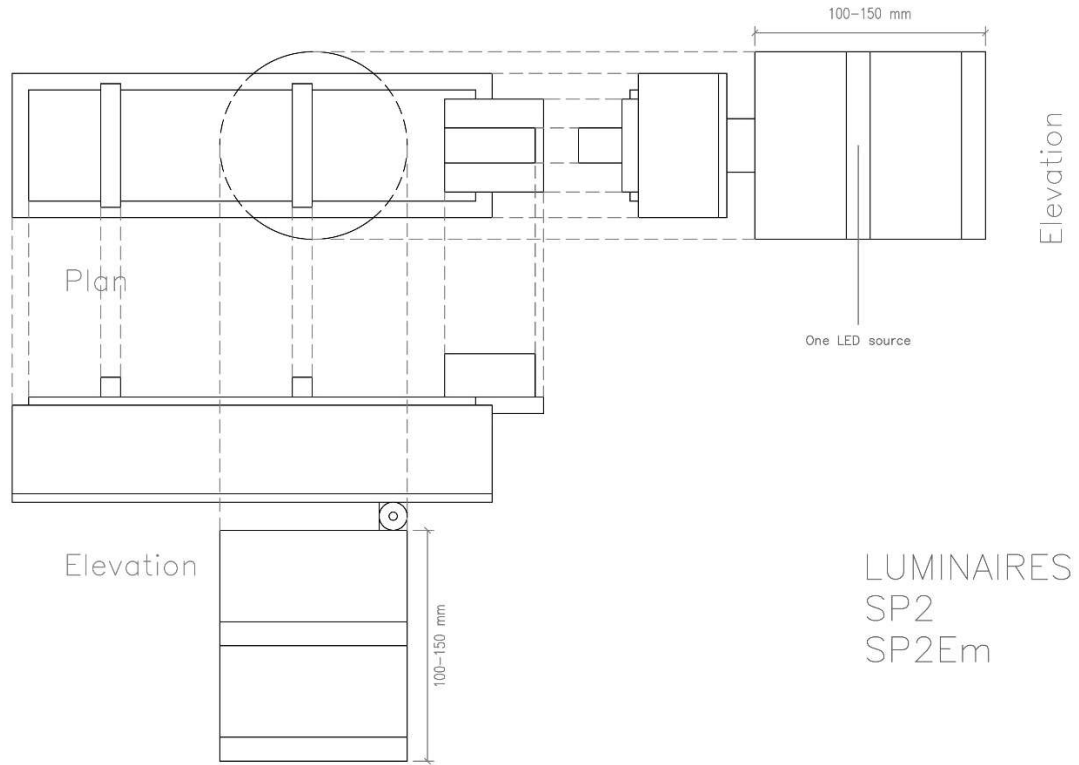
| | |
|--------------------------|--|
| Technical Description | Shaper projector for distances 4 – 8m with an adjustable focus beam. |
| Type | Wall mounted via a recessed joint box as per: |
| Main Body | Aluminium, black anodized finish. |
| Optic Type | 20 degrees with frame shaper. |
| Dimension Range | Length: 200mm - 230mm*1 |
| IP Rating (housing) | IP20 |
| IP Rating (visible part) | IP20 |
| Standards | Adheres to relative part of EN60598-2. |
| Initial Luminous Flux | 600-1100 lumens |

| | |
|--------------------|---|
| Lifetime | >40,000h |
| Lamp Type | LED |
| Lamp Configuration | One LED source. |
| Colour Temperature | 3000K |
| Dimmable | Yes, DALI driver to be supplied with luminaire. |

3.10 Luminaire Ref: SP2

| | |
|------------------------------|---|
| Technical Description | Variable spot light with frontal lens. |
| Type | Wall mounted via a recessed joint box as per: |
| Main Body | Aluminium. |
| Design Intent | Simple cylindrical luminaire with no exposed fixtures/mountings/screw caps. |
| Optic Type | Variable spotlight with angle from c. 7deg – 43deg including soft frontal lens. |
| Dimension Range | Length: 100mm – 150mm. |
| IP Rating (housing) | IP20 |
| IP Rating (visible part) | IP20 |
| Standards | Adheres to EN60598-2. |
| Initial Luminous Flux | c. 600lm – 1200lm. |
| Lifetime | >40,000h |
| Lamp Type | LED |
| Lamp Configuration | One LED source. |
| Colour Temperature | 3000K |
| Colour Rendering Index (CRI) | 90+ |
| Dimmable | Yes, DALI driver to be supplied with luminaire. |

Indicative
 Diagram



3.11 Luminaire Ref: SP2Em

| | |
|-------------------------|--|
| Technical Description | As per SP2 (should be identical light fitting) with the following additions: |
| Control | Switch to BMS for emergency light. |
| Integral Backup Battery | 3 Hours |

3.12 Luminaire Ref: LD1

| | |
|-----------------------|---|
| Technical Description | LED Strip Light, mounted in aluminium profile with plastic diffuser. |
| Type | LED strip. |
| Main Body | Housed in aluminium profile. |
| Diffuser | White polycarbonate front diffuser forming part of the proprietary profile. |
| Dimension Range | Length: 100mm – 150mm. |
| IP Rating (housing) | IP20 |
| Standards | Adheres to EN60598-1 |

| | |
|-----------------------|---|
| Initial Luminous Flux | c. 800-1200lm/m |
| Lifetime | >30,000h |
| Lamp Type | LED. |
| Lamp Configuration | LED lamps mounted on tape. |
| Colour Temperature | 2800-3000K |
| Dimmable | Yes, DALI driver included with luminaire. |

3.13 Luminaire Ref: CM1

| | |
|-----------------------|---|
| Technical Description | Tubular ceiling light fitting for diffuse general lighting. |
| Type | Suspended, mounted to stone slabs. |
| Main Body | Light tube in satin finish polycarbonate diffuser. |
| Optic Type | Tube diffuser in polycarbonate. |
| Dimension Range | Length: 750mm – 1500mm. |
| IP Rating (housing) | IP67 |
| Standards | Adheres to EN60598-1 |
| Initial Luminous Flux | c. 2400lm – 4000lm. |
| Lifetime | >40,000h |
| Lamp Type | LED |
| Colour Temperature | 3000K |
| Dimmable | Yes, DALI driver included with luminaire. |

3.13 Luminaire Ref: CM1Em

| | |
|-------------------------|--|
| Technical Description | As per CM1 (should be identical light fitting) with the following additions: |
| Control | Switch to BMS for emergency light. |
| Integral Backup Battery | 3 Hours |

-End of Section 4.-