

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

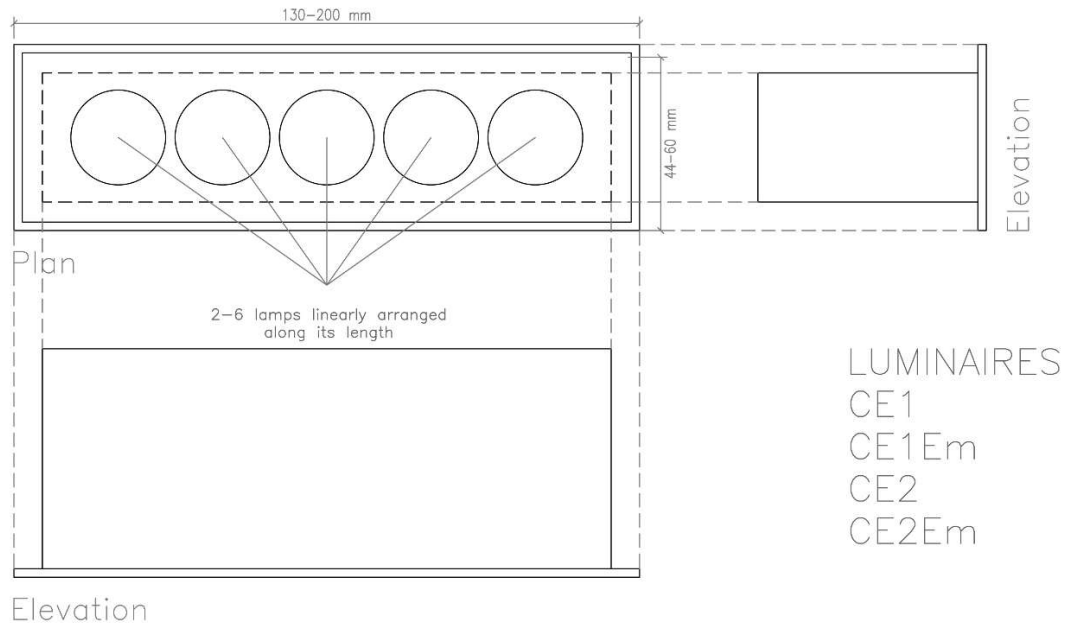
All luminaires are to be supplied complete and inclusive of all wiring accessories and lamps.

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

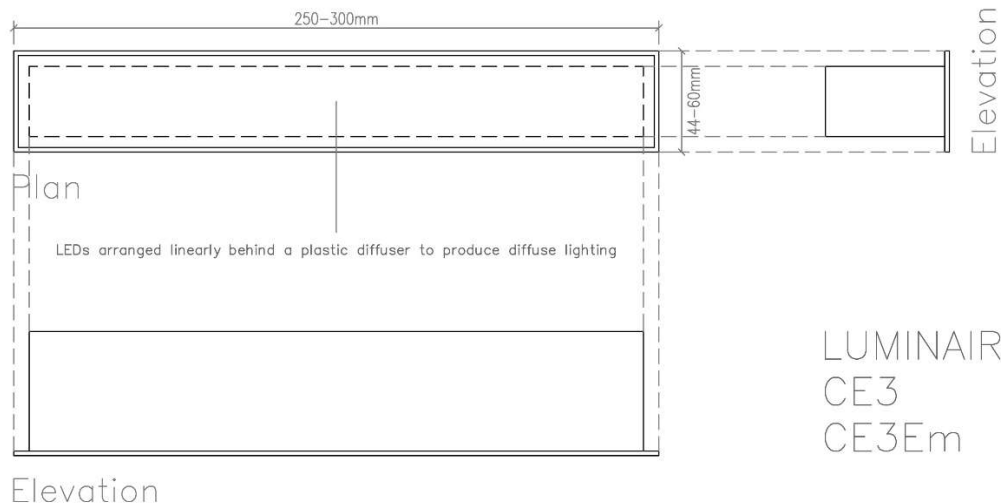
Technical Description	As per CE2 (should be identical light fitting) with the following additions:
Control	Switch control to BMS for emergency light.
Integral Backup Battery	3 Hours

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



3.6 Luminaire Ref: CE3Em

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

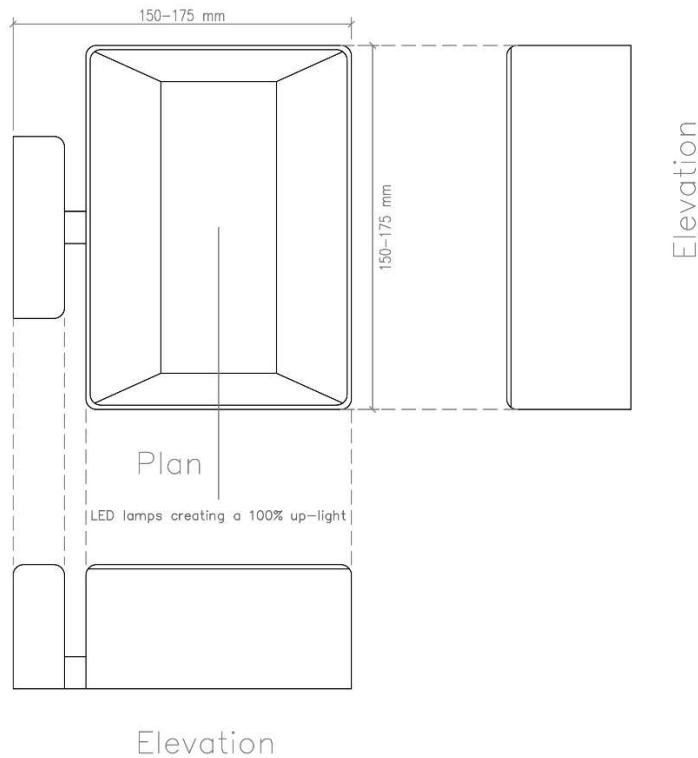
Control Switch control to BMS for emergency light.

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

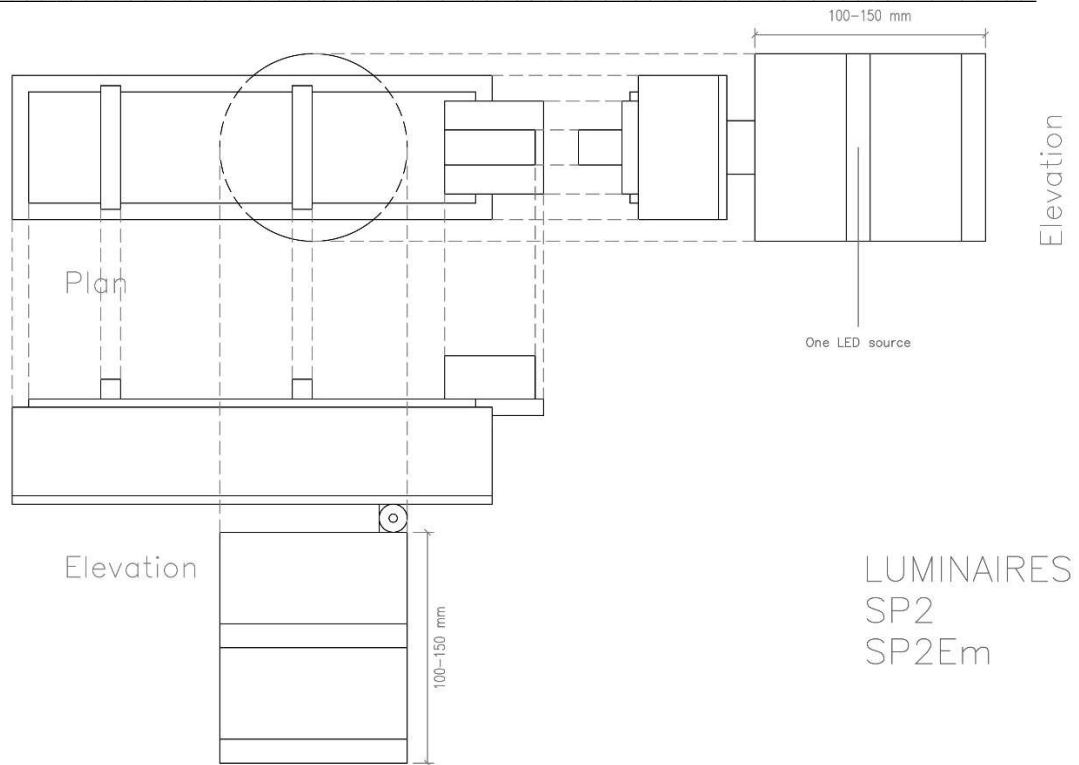
Technical Description	Shaper projector for distances 4 – 8m with an adjustable focus beam.
Type	Wall mounted via a recessed joint box as per:
Main Body	Aluminium, black anodized finish.
Optic Type	20 degrees with frame shaper.
Dimension Range	Length: 200mm - 230mm*1
IP Rating (housing)	IP40
IP Rating (visible part)	IP40
Standards	Adheres to EN60598-1
Initial Luminous Flux	600*1 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)	IP40
IP Rating (visible part)	IP40
Standards	Adheres to EN60598-1
Initial Luminous Flux	c. 430lm – 685lm.
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

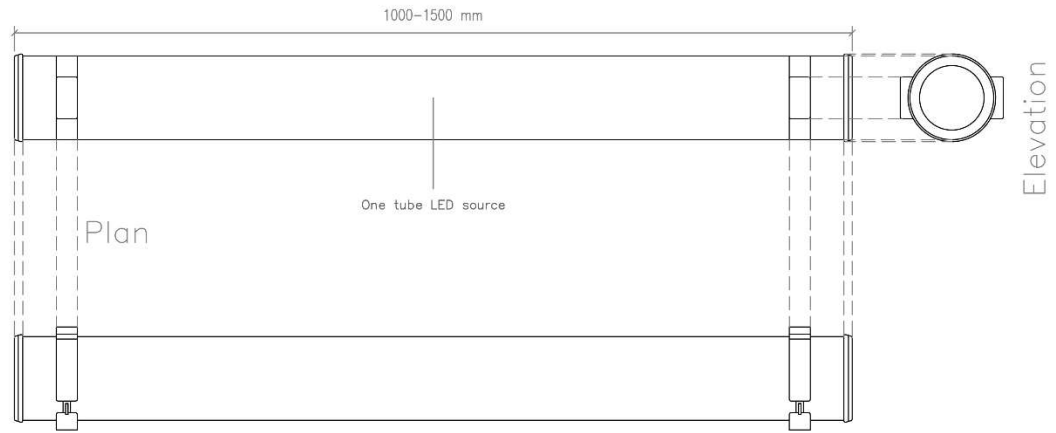
Technical Description	LED Strip Light, mounted in aluminium profile with plastic diffuser.
Type	LED strip.
Main Body	Housed in aluminium profile.
Diffuser	White polycarbonate front diffuser forming part of the proprietary profile.
Dimension Range	Length: 100mm – 150mm.
IP Rating (housing)	IP68
Standards	Adheres to EN60598-1

Initial Luminous Flux	c. 1200lm/m
Lifetime	>30,000h
Lamp Type	LED.
Lamp Configuration	LED lamps mounted on tape.
Colour Temperature	5400K
Dimmable	Yes, DALI driver included with luminaire.

3.13 Luminaire Ref: CM1

Technical Description	Tubular ceiling light fitting for diffuse general lighting.
Type	Surface mounted, tube fitting.
Main Body	Light tube in satin finish polycarbonate diffuser, with end caps being in 304L stainless steel.
Design Intent	Tubular fitting with ring-shaped stainless-steel end caps with no exposed fixtures/ mountings/ screw caps or visible joints. Internal components to be hidden by diffuser.
Optic Type	Tube diffuser in polycarbonate.
Dimension Range	Length: 1000mm – 1500mm.
IP Rating (housing)	IP68
Standards	Adheres to EN60598-1
Initial Luminous Flux	c. 2400lm – 4000lm.
Lifetime	>40,000h
Lamp Type	LED
Lamp Configuration	One tube LED source.
Colour Temperature	3000K
Dimmable	Yes, DALI driver included with luminaire.

Indicative
Diagram



Elevation

LUMINAIRES
CM1
CM1Em

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.-