

MATCH LIGHTING STUDIO

Old Granada Studios (OGS) | External Lighting Assessment

4th March 2025

1.0 INTRODUCTION

Match Lighting Studio has been commissioned by the client to provide a Lighting Assessment report in respect of the new external lighting proposals at the new project site in response to ‘Condition 6’ placed upon the project by the local planning authorities.

2.0 AIMS AND OBJECTIVES

This report aims to:

- Outline the proposed external lighting scheme, detailing the location and types of luminaires at each external position.
- Conduct a desktop assessment using 3D model simulations to quantify achieved light levels and illustrate light spillage in the immediate surroundings.
- Justify the use of alternative luminaire data, where photometric data was unavailable due to the custom nature of the luminaires.
- Highlight any mitigation measures implemented to ensure obtrusive light is minimised.

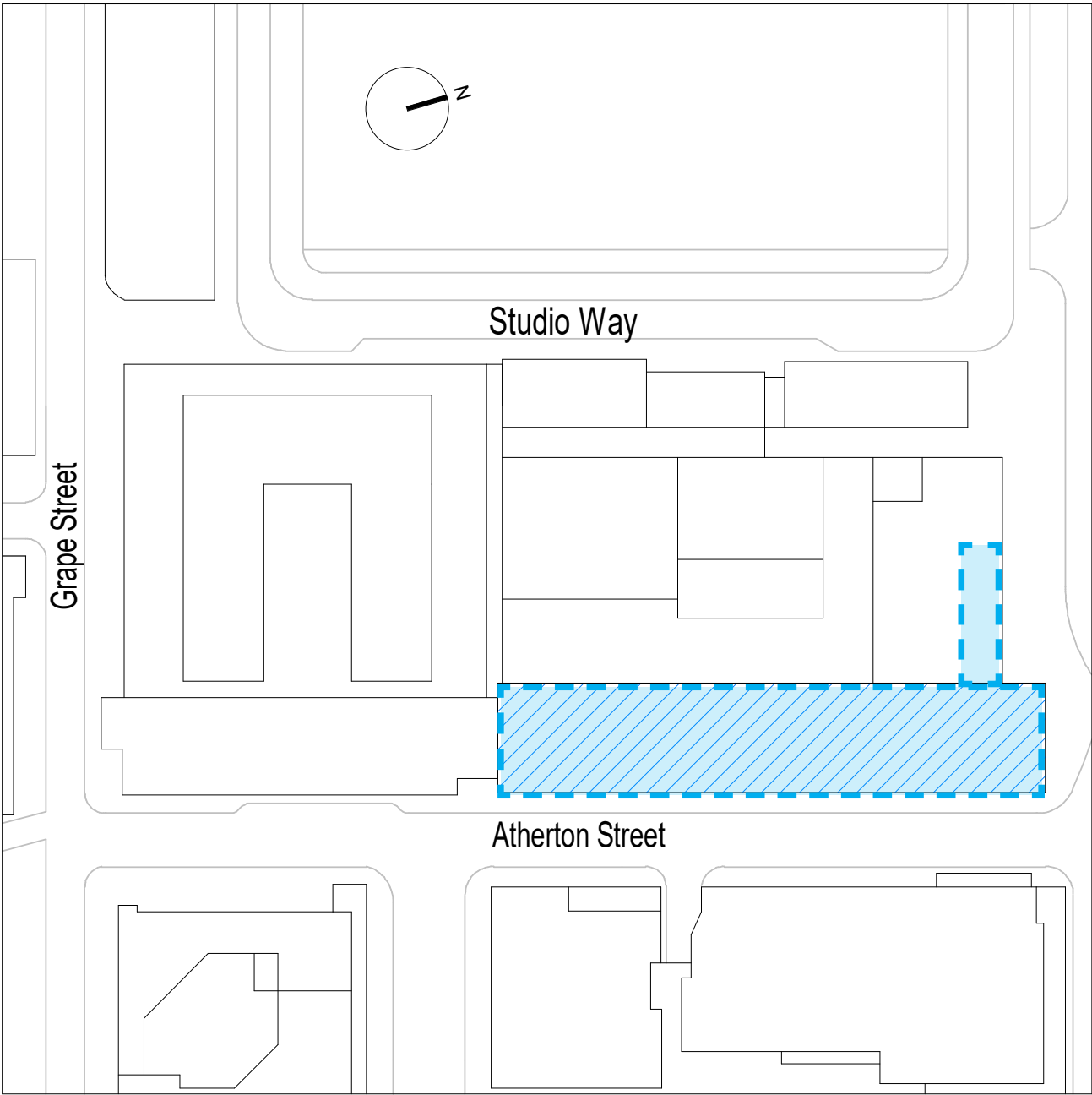
3.0 SITE

The application site is OGS, Atherton Street, Manchester, M3 3GS. Building boundaries are as illustrated in the plan across.

4.0 EXTERNAL LIGHTING LOCATIONS

The external areas which will be covered within this report are as follows:

- Atherton St - Soho Entrance (Ground Level)
- Atherton St - Mollies Entrance (Ground Level)
- St John’s Place Terrace (Lower Ground Floor)
- Pool terrace (Level 8)

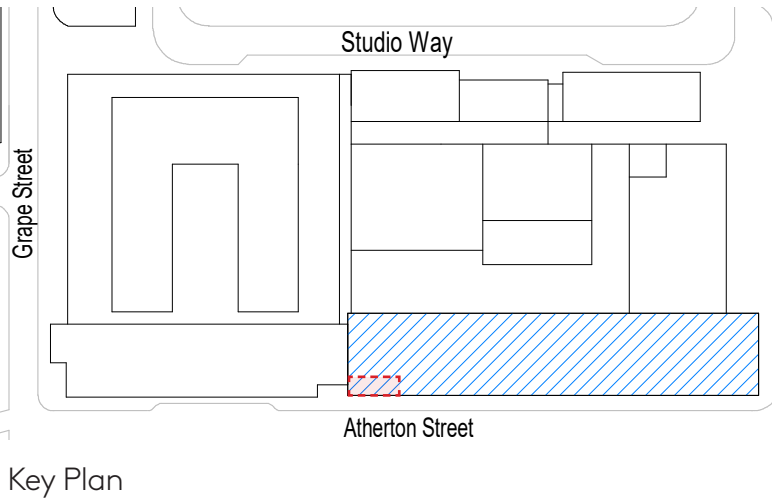
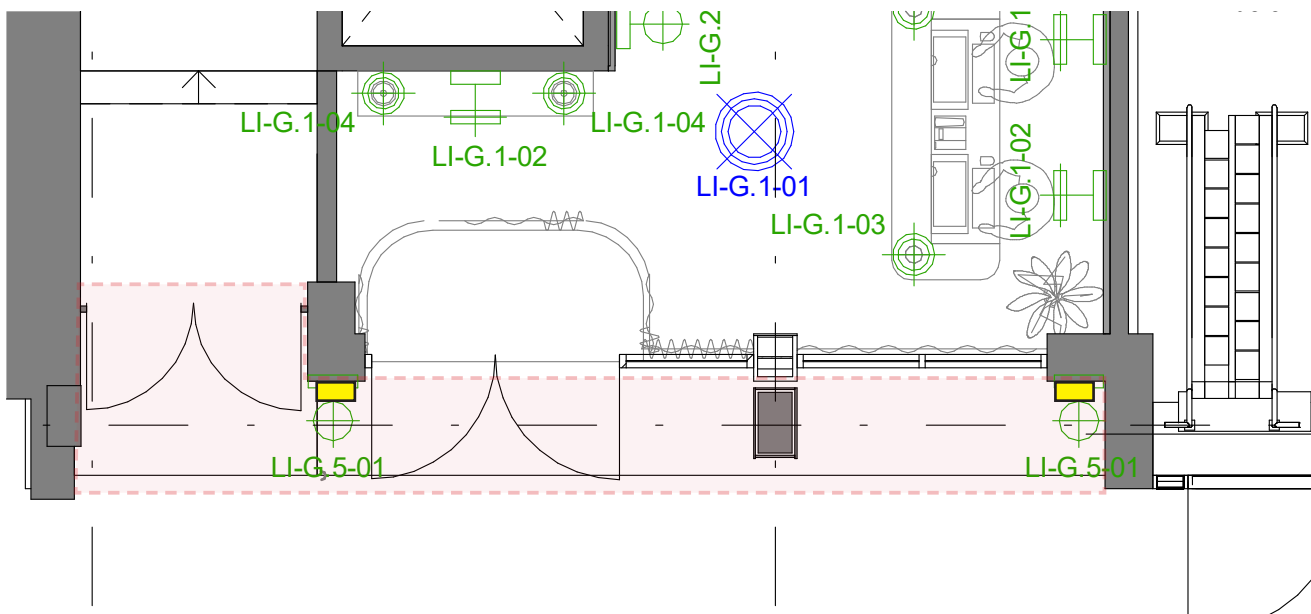


Site Plan

5.0 AHERTON STREET - GROUND FLOOR SOHO ENTRANCE

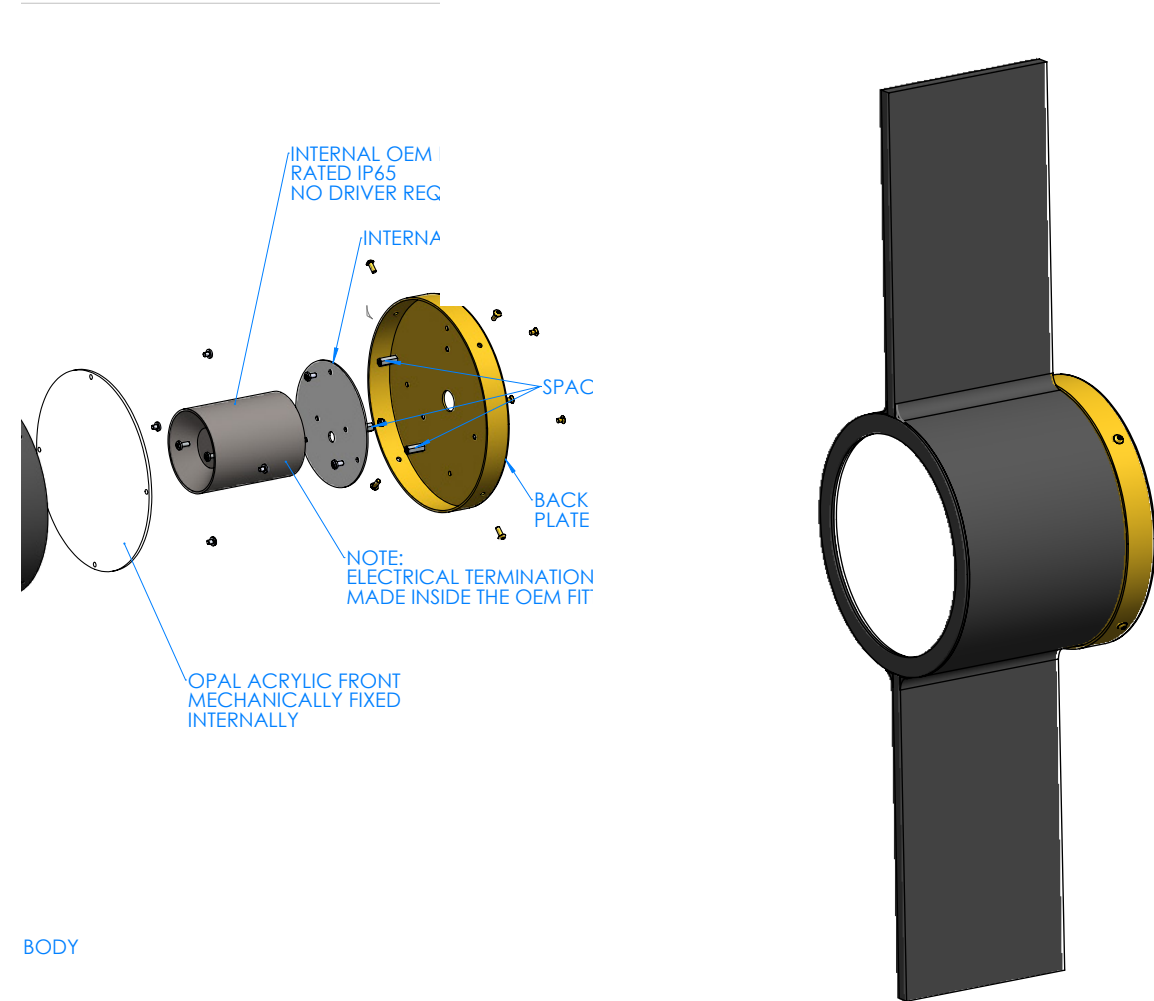
Below illustrates the proposed lighting locations at the entrance.

- External Lighting Zone
- LI-G.5-01 Wall Light



5.1 LI-G.5-01 CUSTOM WALL LIGHT SPECIFICATION

The specified luminaire is fully custom, and as a result, no photometric data was available.

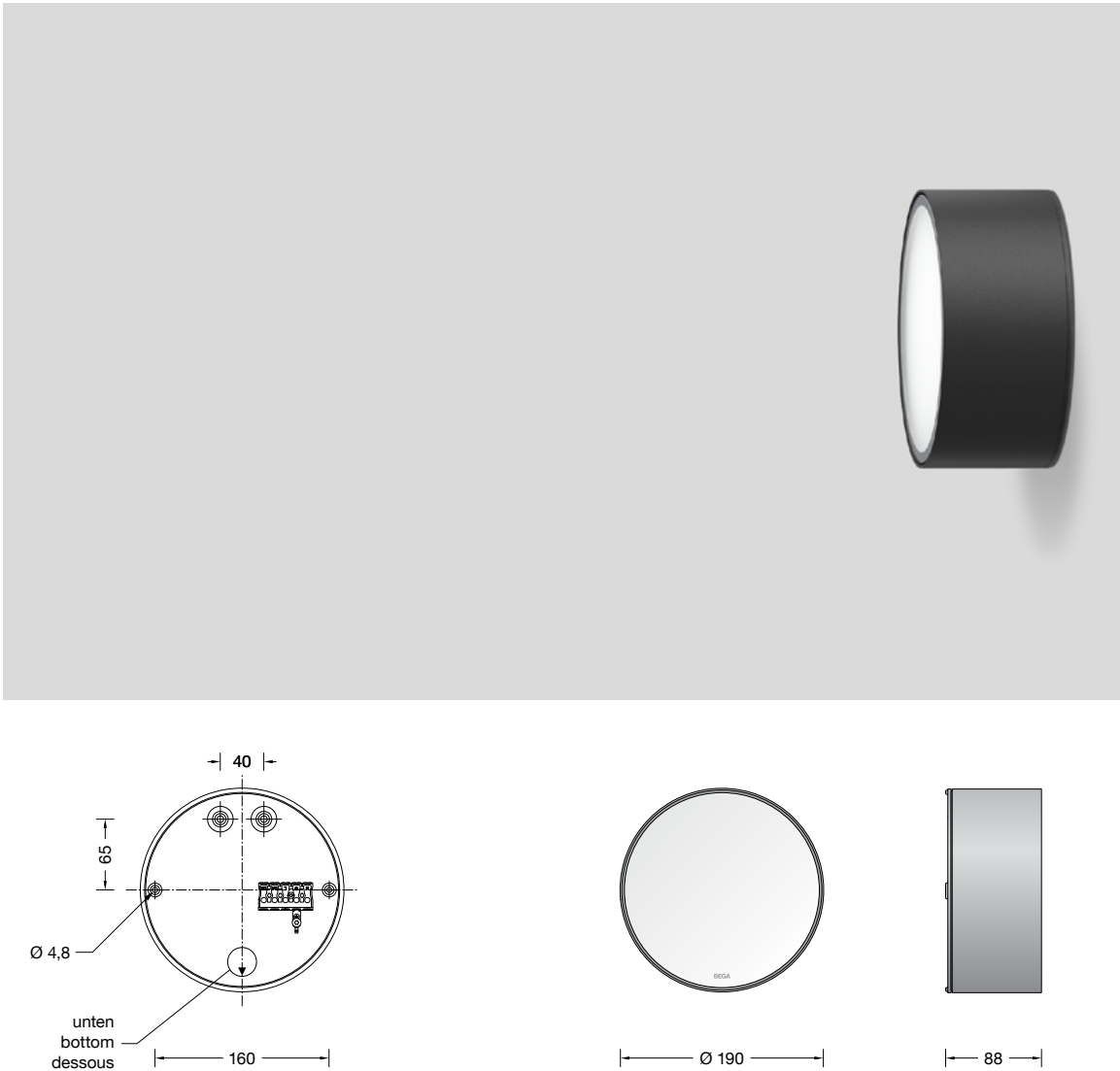


5.11 TECHNICAL CHARACTERISTICS

- Lamp: LED retrofit lamp (5.5W)
- Lumen Output: 390 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Diffused (Opal diffuser)

5.2 LI-G.5-01 WALL LIGHT EQUIVALENT USED IN COMPUTER SIMULATION

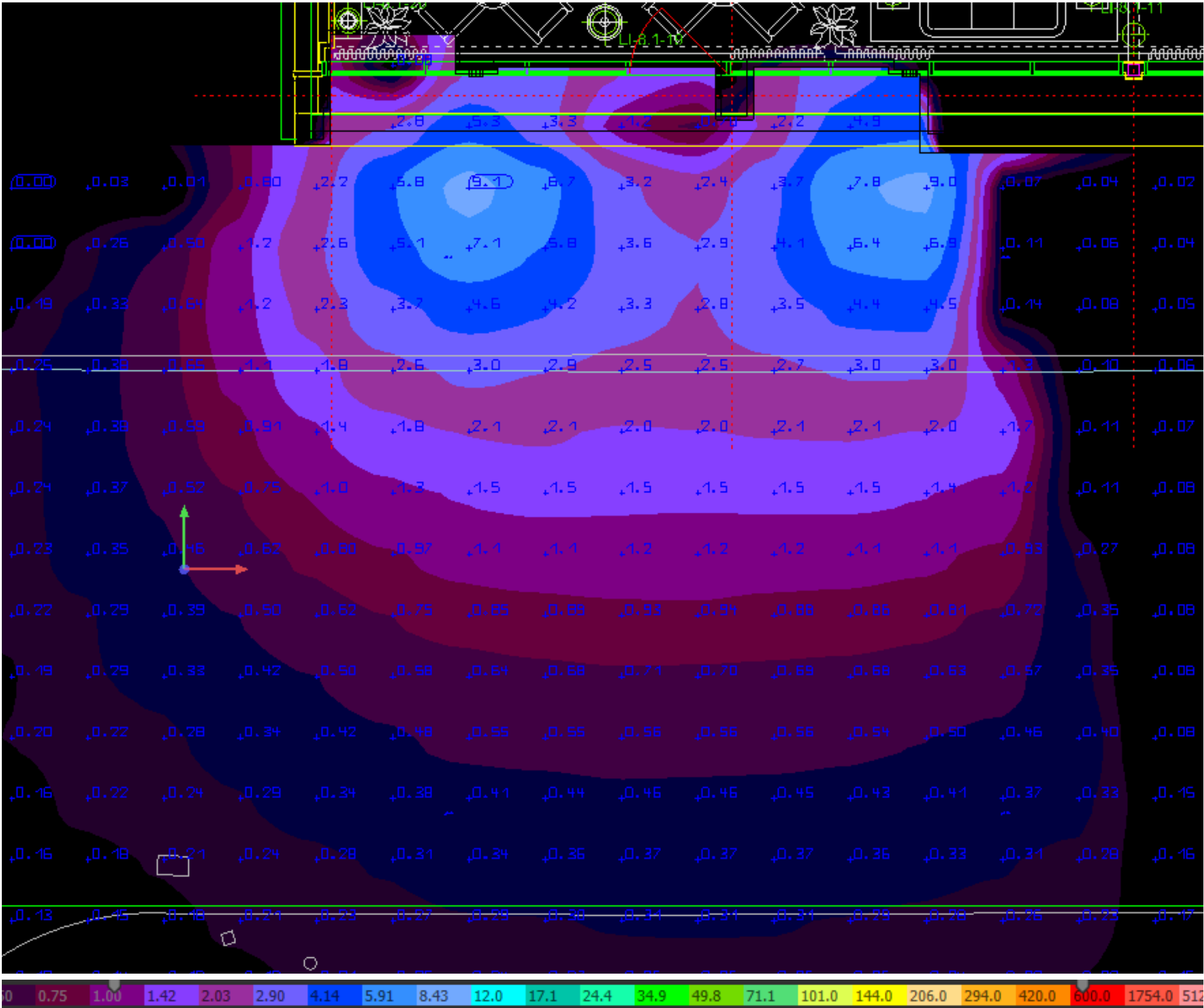
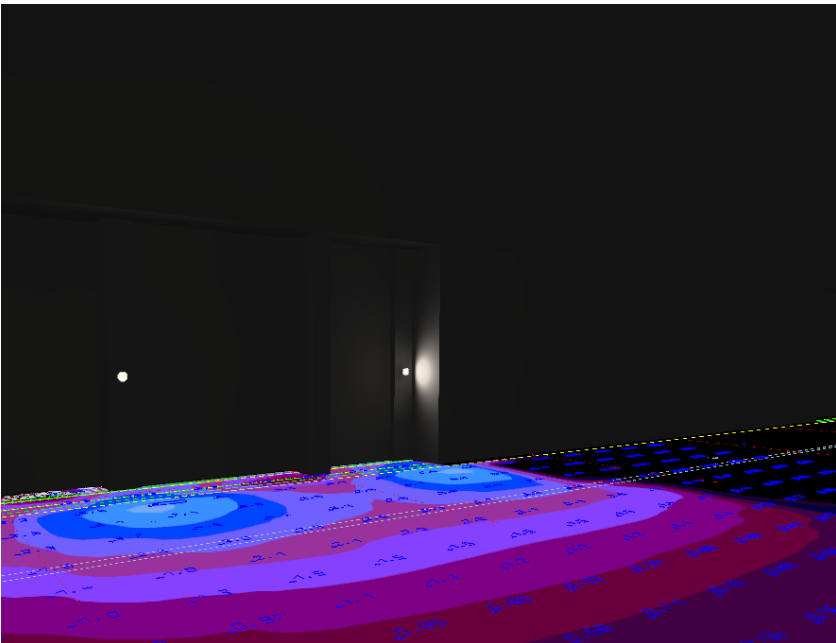
The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen due to its near identical design, dimensions, and lighting distribution characteristics, ensuring accurate representation in the assessment.



5.21 TECHNICAL CHARACTERISTICS

- Lamp: LED (5W)
- Lumen Output: 390 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Diffused (Opal diffuser)

5.3 LIGHT LEVEL PLOT (LUX)



5.4 ATHERTON STREET - GROUND FLOOR SOHO ENTRANCE COMMENTARY

The desktop study, based on full output, indicates that light levels on the ground directly in front of the opposite development will not exceed 1 lux.

The vertical illuminance measured on the building opposite does not exceed 1.5 lux at any point, remaining within the ILP-recommended limit of 10 lux for an E3 Environmental Zone, in accordance with ILP Guidance (GN01:2021).

5.41 DESIGN CONSIDERATIONS & MITIGATIONS

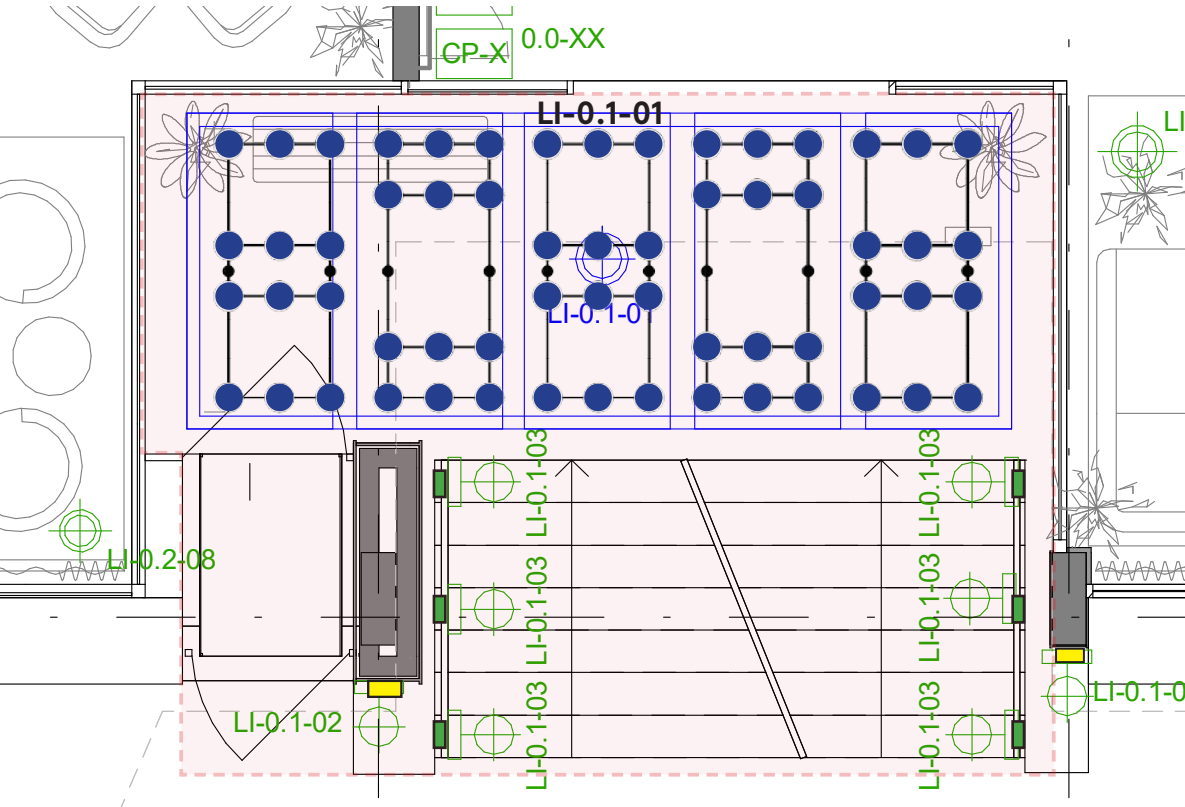
To minimise the impact on the surrounding environment, the following design considerations and mitigations have been implemented:

- The entrance and its lighting are set back from the outer building line to help limit and contain the lighting impact on the surroundings.
- A minimal and straightforward lighting scheme has been proposed to reduce the overall light levels applied across this area.
- The scheme features built-in flexibility, allowing light intensity to be adjusted via the dedicated lighting control system.
- External lighting will be automatically managed using an astronomical time clock, ensuring precise on/off operation as part of the lighting control strategy.

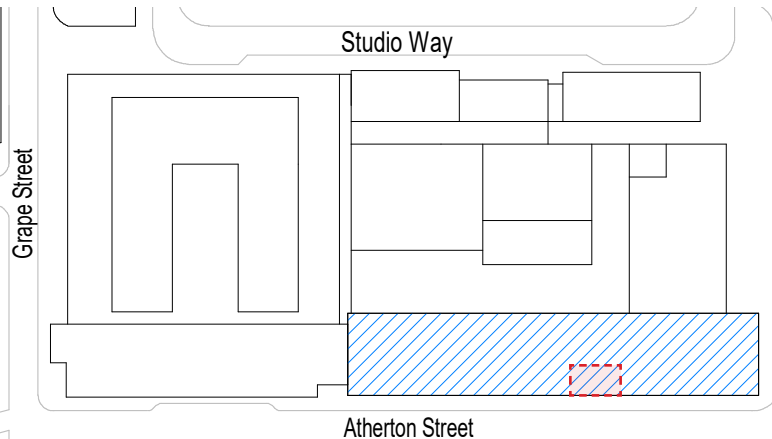
6.0 ATHERTON STREET - GROUND FLOOR MOLLIES ENTRANCE

Below illustrates the proposed lighting locations at the entrance.

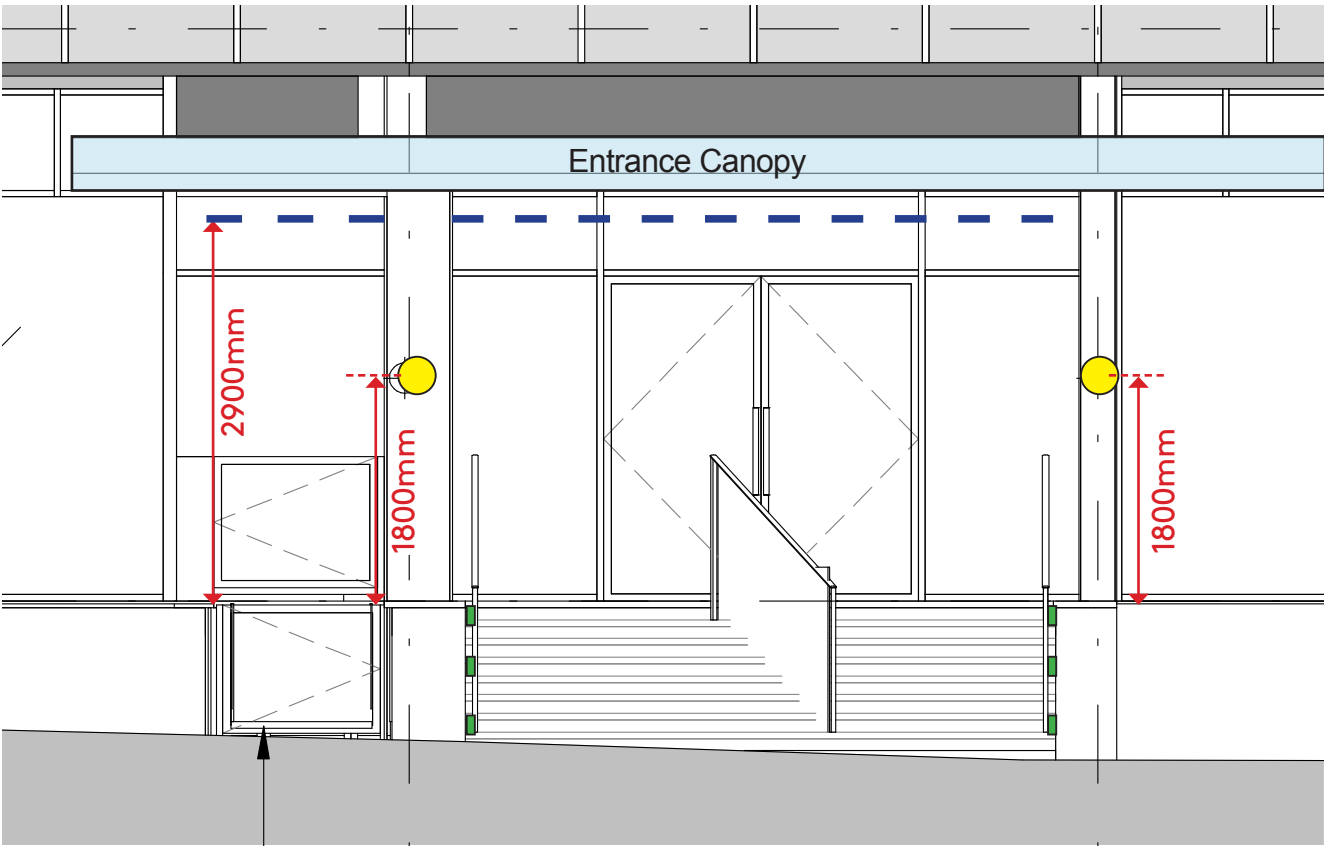
- External Lighting Zone
- LI-0.1-01 Feature Chandelier
- LI-0.1-02 Wall Light
- LI-0.1-03 Wall Recessed Steplight



Lighting Plan



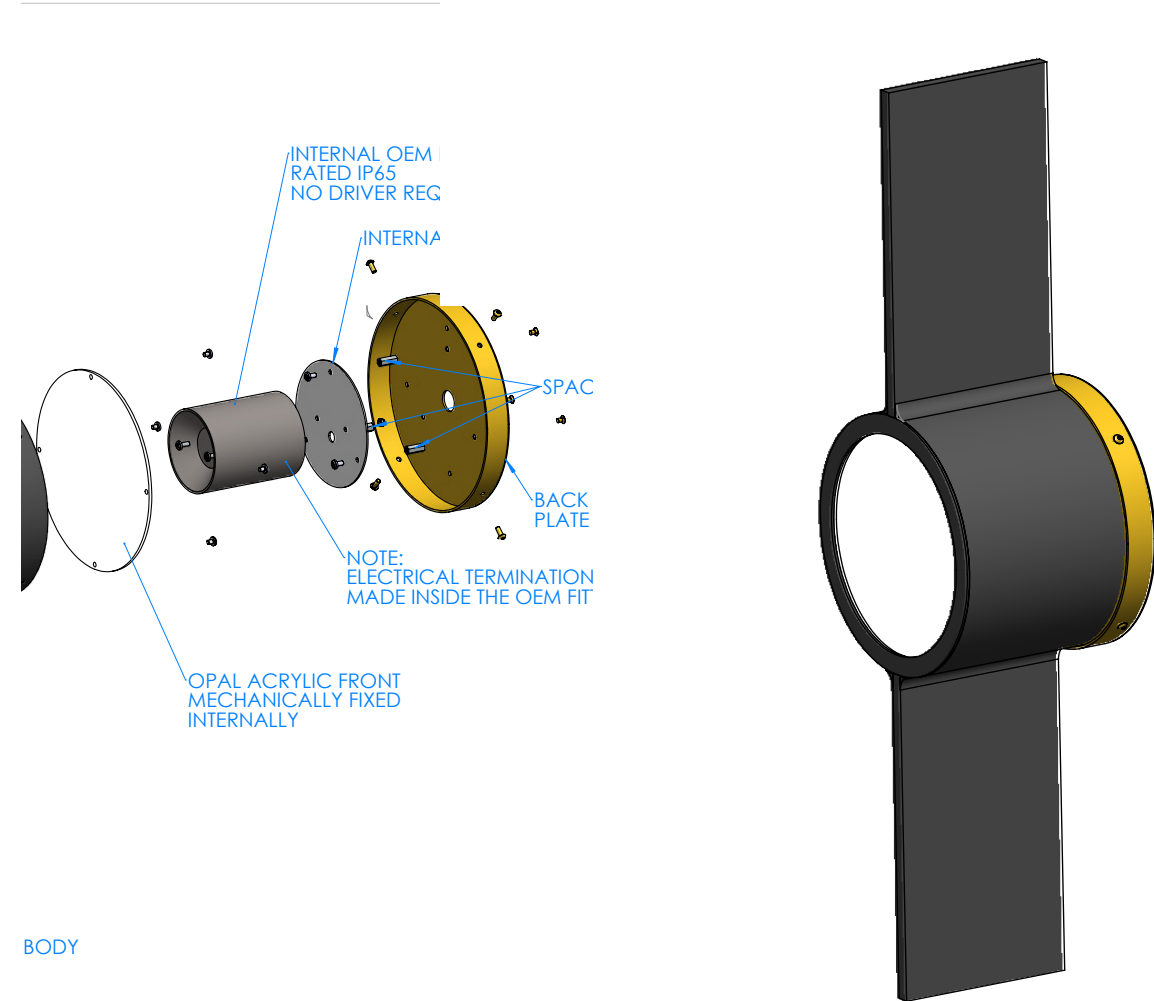
Key Plan



Lighting Elevation

6.1 LI-0.1-02 CUSTOM WALL LIGHT SPECIFICATION FOR PROJECT

The specified luminaire is fully custom, and as a result, no photometric data was available.

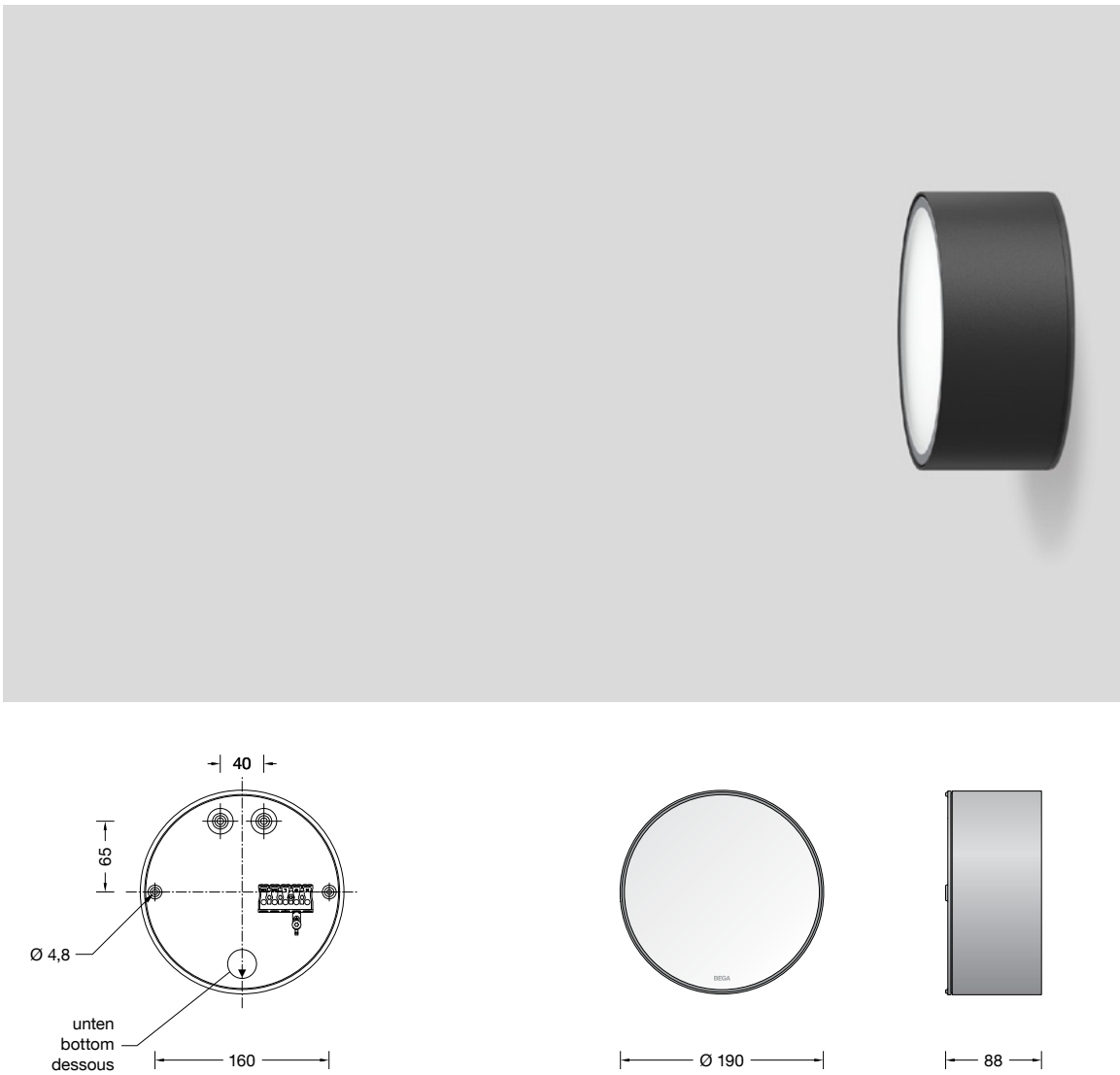


6.11 TECHNICAL CHARACTERISTICS

- Lamp: LED retrofit lamp (5.5W)
- Lumen Output: 390 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Diffused (Opal diffuser)

6.2 LI-0.1-02 WALL LIGHT EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen due to its near identical design, dimensions, and lighting distribution characteristics, ensuring accurate representation in the assessment.

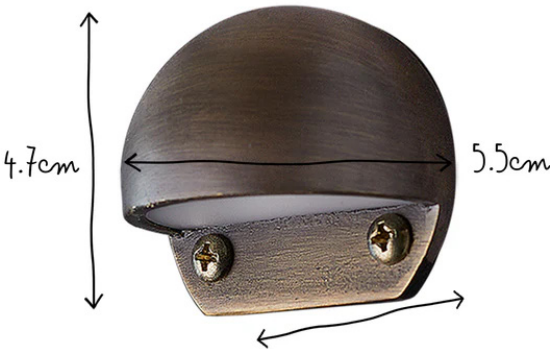


6.21 TECHNICAL CHARACTERISTICS

- Lamp: LED (5W)
- Lumen Output: 390 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Diffused (Opal diffuser)

6.3 LI-0.1-03 LED STEPLIGHT SPECIFICATION FOR PROJECT

The specified luminaire has no photometric data available.

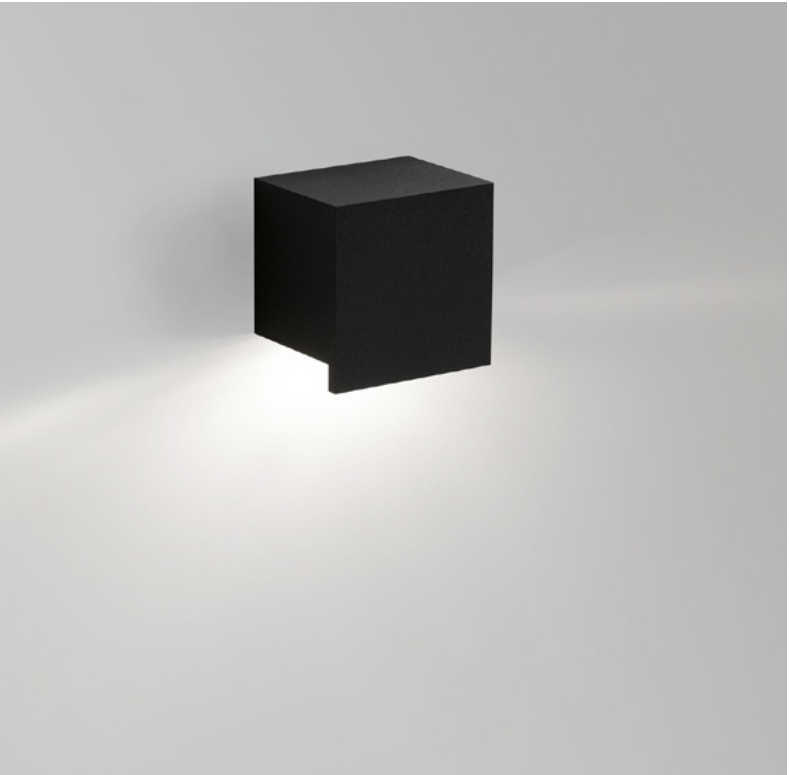
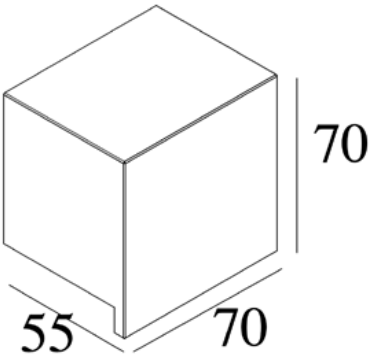


6.31 TECHNICAL CHARACTERISTICS

- Lamp: LED (1W)
- Lumen Output: 105 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Downward only (Diffused)

6.4 LI-0.1-03 STEPLIGHT EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen for its closely matching design intent, dimensions, and lighting distribution characteristics, where the light source remains concealed and directed downward, functioning as a step light. This ensures an accurate and representative assessment.



6.41 TECHNICAL CHARACTERISTICS

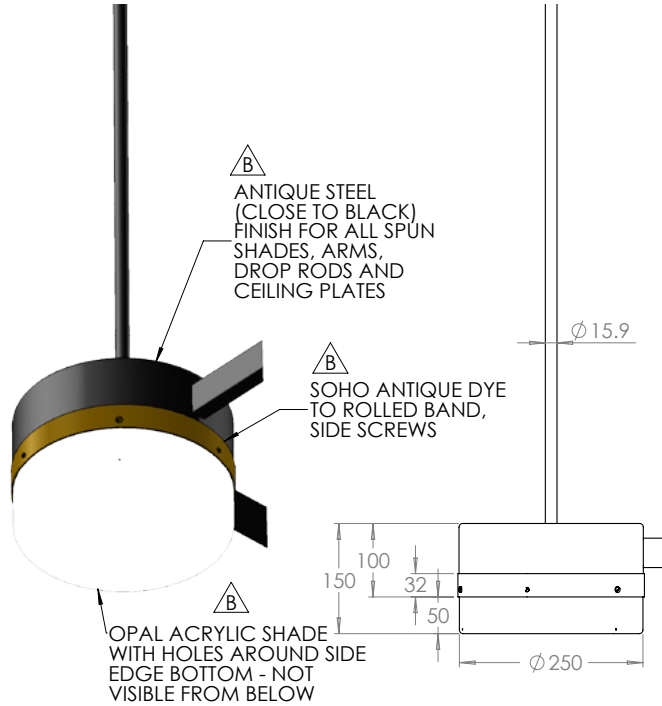
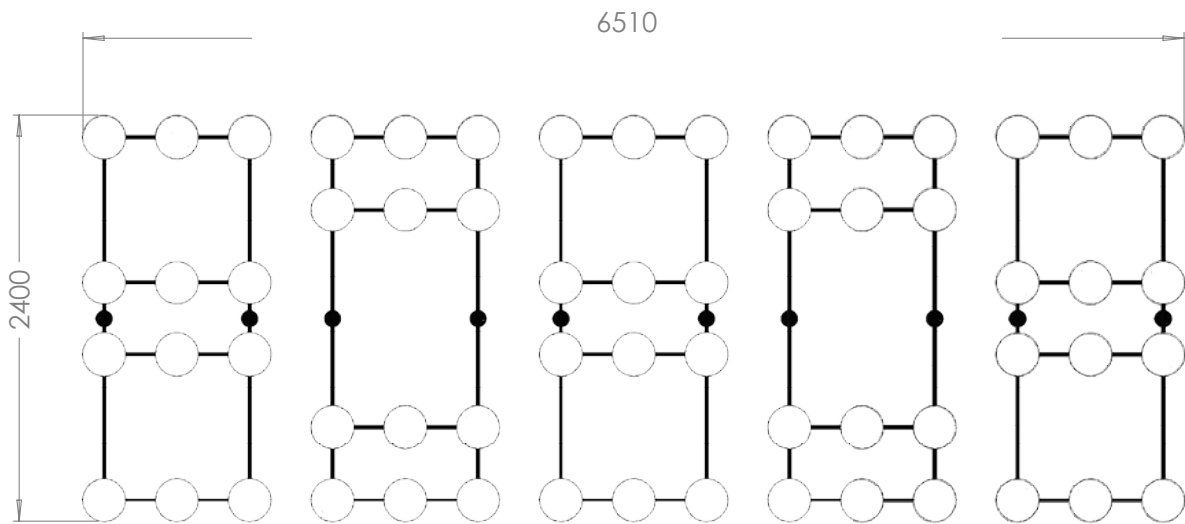
- Lamp: LED (1W)
- Lumen Output: 105 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Downward only (Diffused)

6.5 LI-0.1-01 ENTRANCE CHANDELIER SPECIFICATION FOR PROJECT

The specified luminaire is fully custom, and as a result, no photometric data is available.



A COMPOSITION OF INDIVIDUAL LIGHT NODES

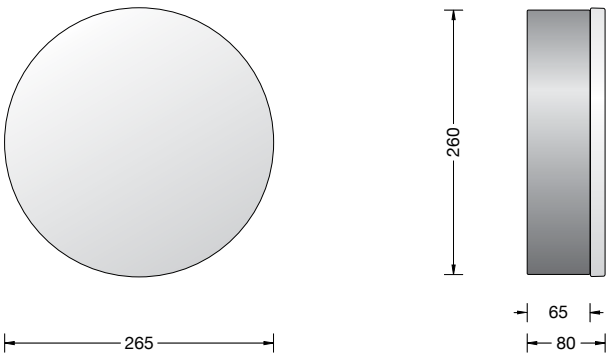


6.51 TECHNICAL CHARACTERISTICS (PER NODE)

- Lamp: LED (2 x4W) retrofit
- Lumen Output: 2 x 280 Lumen (Total 560 lumen)
- Colour temperature: 2200K
- Lighting Distribution: Opal diffuser (Diffused)

6.6 LI-0.1-01 ENTRANCE CHANDELIER EQUIVALENT USED IN COMPUTER SIMULATION

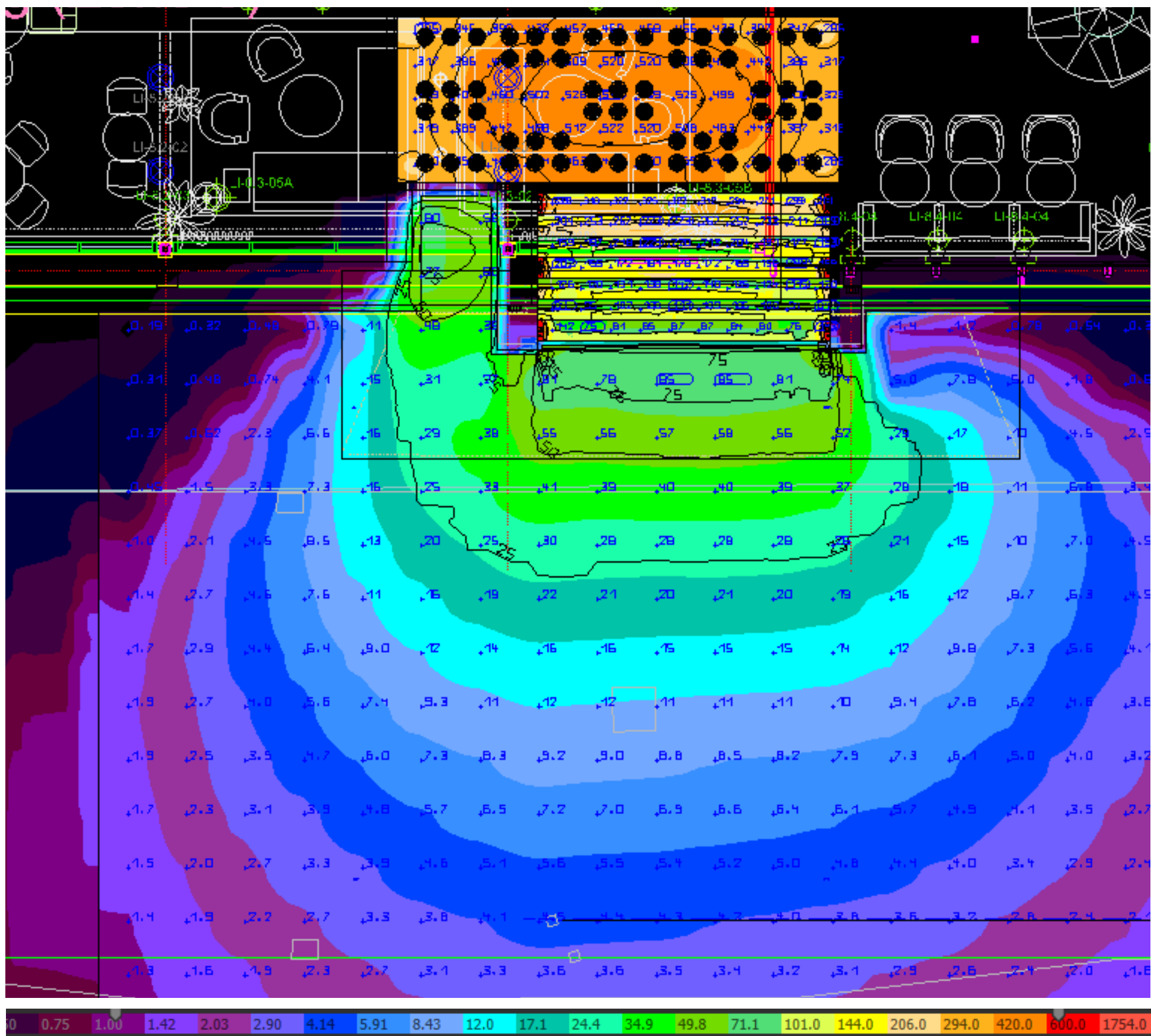
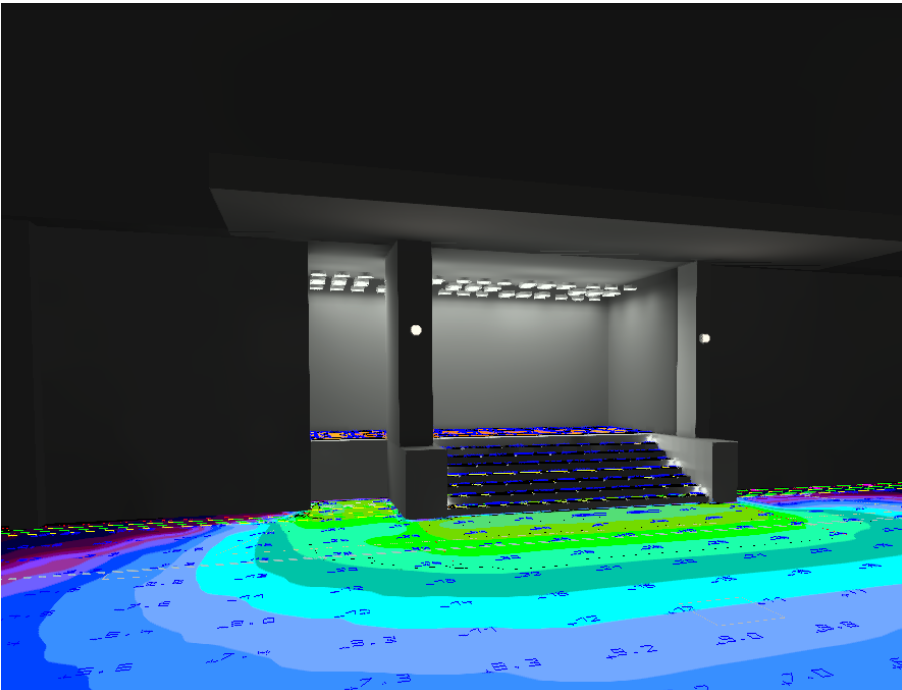
The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen due to its near identical design, dimensions, and lighting distribution characteristics, ensuring accurate representation in the assessment.



6.61 TECHNICAL CHARACTERISTICS (PER NODE)

- Lamp: LED (8W)
- Lumen Output: 560 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Opal diffuser (Diffused)

6.7 LIGHT LEVEL PLOT (LUX)



6.8 **ATHERTON STREET - GROUND FLOOR MOLLIES ENTRANCE COMMENTARY**

The desktop study, based on full output, indicates that light levels on the ground directly in front of the opposite development will not exceed 2 lux.

The vertical illuminance measured on the building opposite does not exceed 8.5 lux at any point, remaining within the ILP-recommended limit of 10 lux for an E3 Environmental Zone, in accordance with ILP Guidance (GN01:2021).

6.81 **DESIGN CONSIDERATIONS & MITIGATIONS**

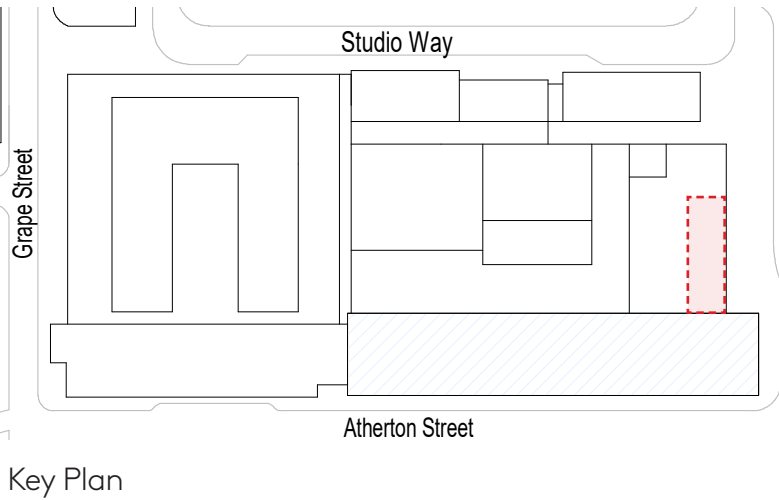
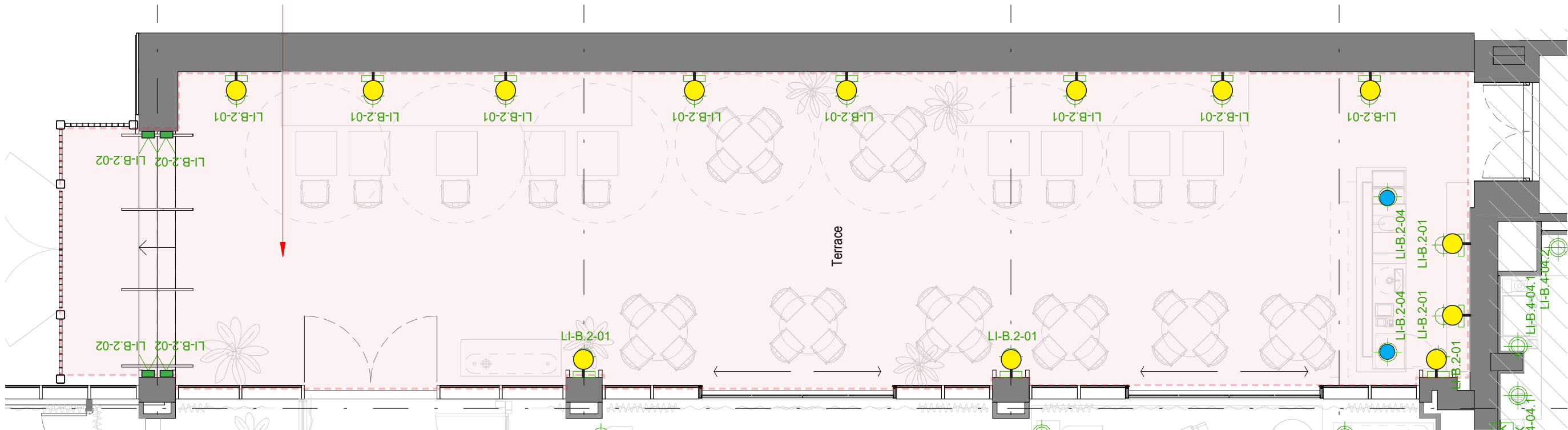
To minimise the impact on the surrounding environment, the following design considerations and mitigations have been implemented:

- The entrance and its lighting are set back from the outer building line to help contain and limit the impact of lighting on the surroundings.
- A large cantilevered canopy extends beyond the building line directly above and in front of the entrance, acting as a shield to prevent any upward reflected light spill coming from the lighting scheme.
- Step lights have been designed to direct light downward only, providing localised illumination to the stair treads.
- The scheme features built-in flexibility, allowing light intensity to be adjusted via the dedicated lighting control system.
- External lighting will be automatically managed using an astronomical time clock, ensuring precise on/off operation as part of the lighting control strategy.

7.0 LOWER GROUND FLOOR - ST JOHNS PLACE TERRACE

Below illustrates the proposed lighting locations.

- External Lighting Zone
- LI-B.2-02 Wall recessed spotlight
- LI-B.2-01 Wall lantern
- Battery Powered portable Table Lamp

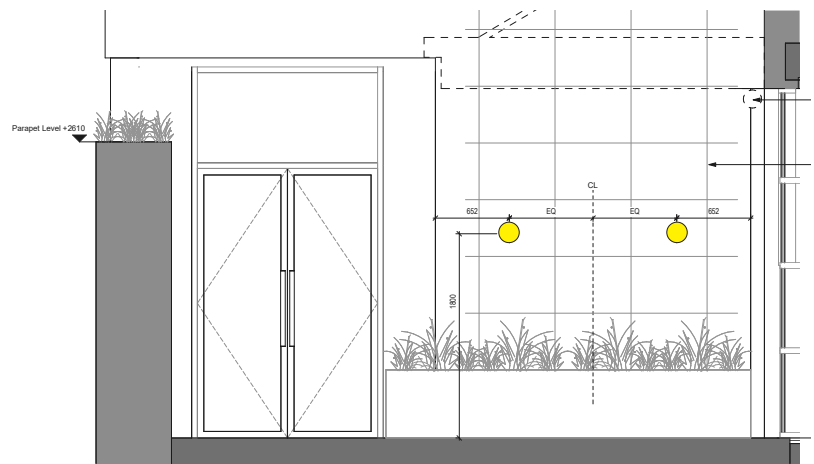


7.0 LOWER GROUND FLOOR - ST JOHNS PLACE TERRACE

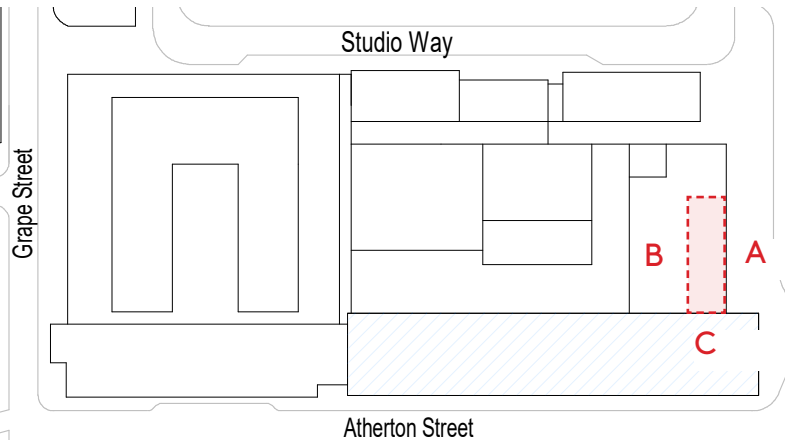
Below illustrates the proposed lighting locations.

■ LI-B.2-02 Wall recessed steplight

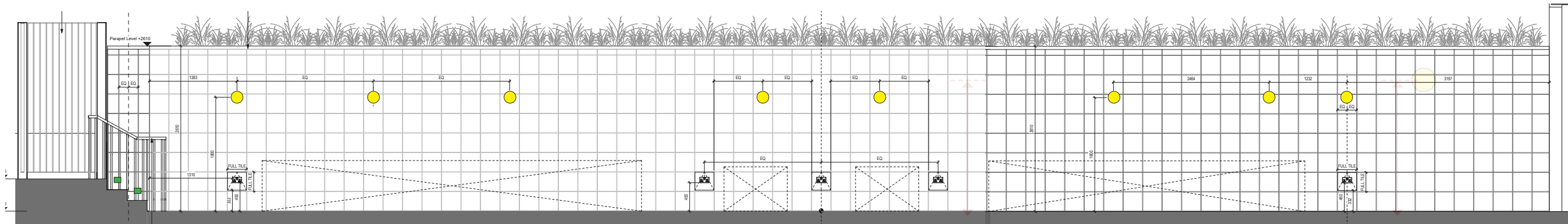
● LI-B.2-01 Wall lantern



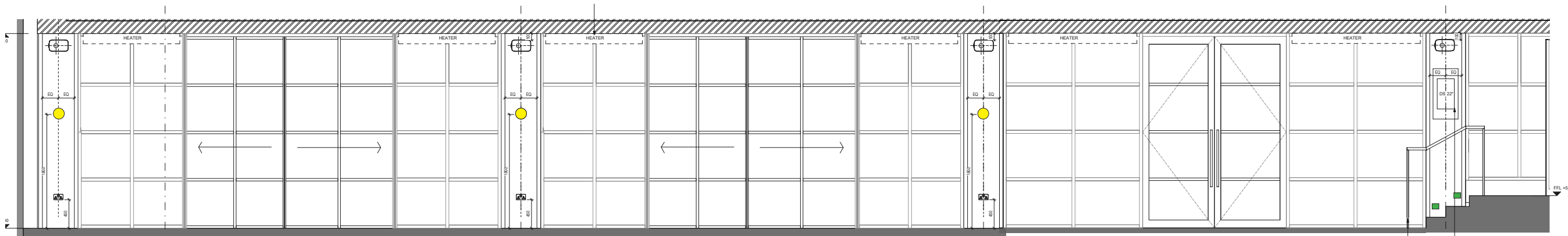
Lighting Elevation C



Key Plan



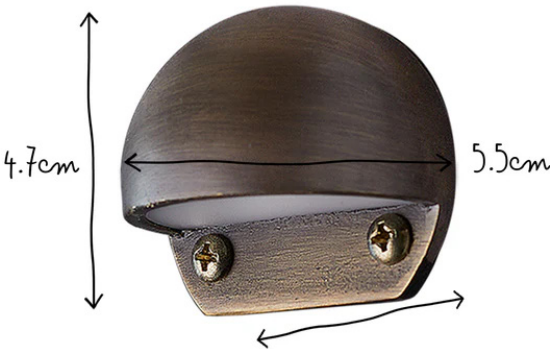
Lighting Elevation A



Lighting Elevation B

7.1 LI-B.2-02 LED STEPLIGHT SPECIFICATION FOR PROJECT

The specified luminaire has no photometric data available.

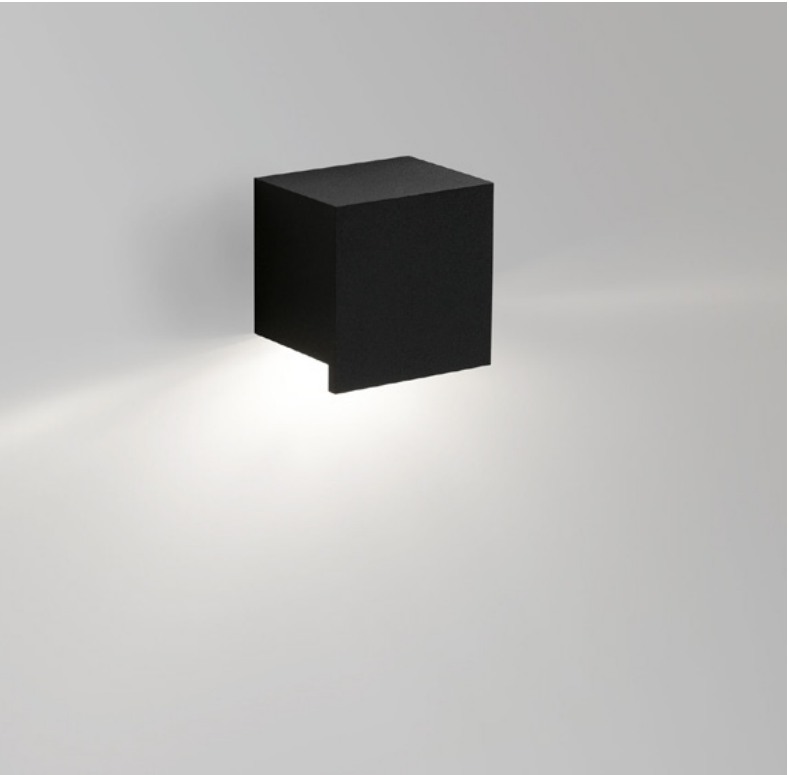
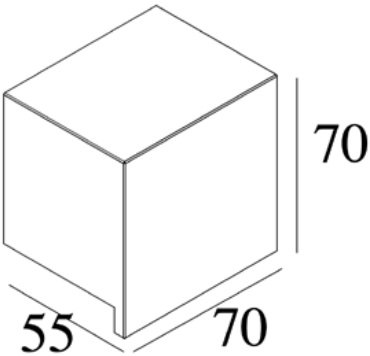


7.11 TECHNICAL CHARACTERISTICS

- Lamp: LED (1W)
- Lumen Output: 105 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Downward only (Diffused)

7.2 LI-B.2-02 WALL LIGHT EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen for its closely matching design intent, dimensions, and lighting distribution characteristics, where the light source remains concealed and directed downward, functioning as a step light. This ensures an accurate and representative assessment.

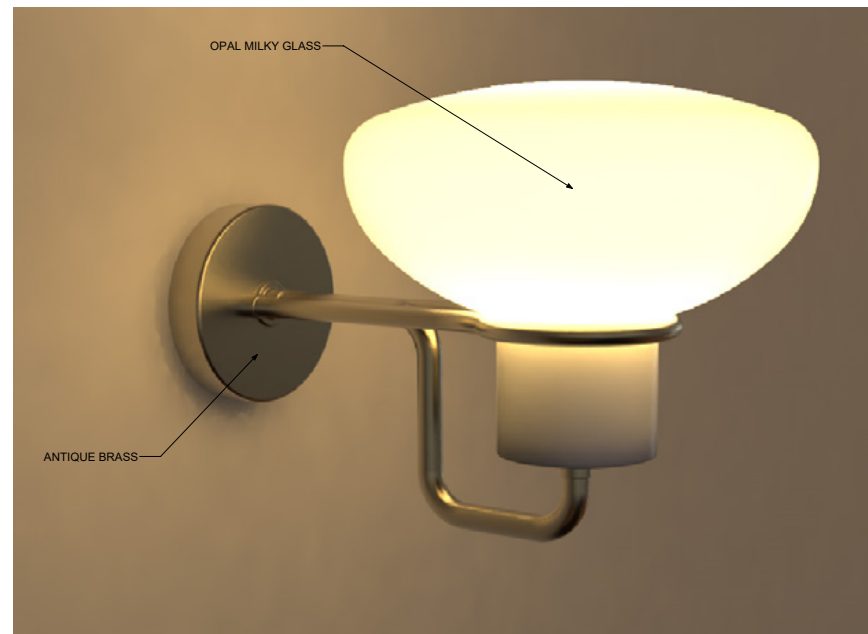
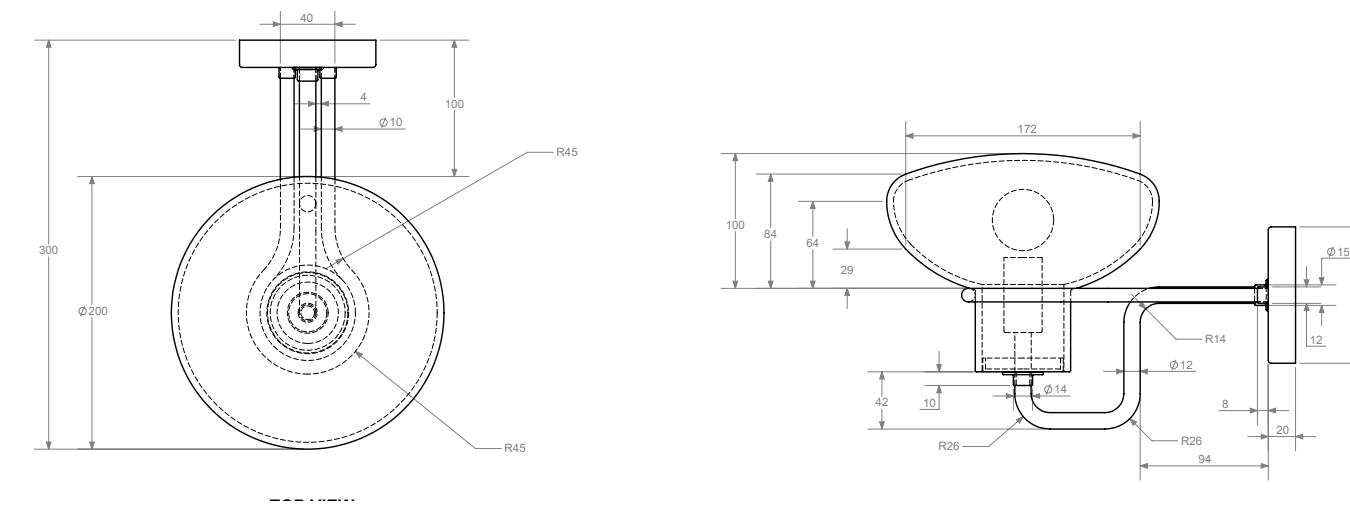


7.21 TECHNICAL CHARACTERISTICS

- Lamp: LED (1W)
- Lumen Output: 105 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Downward only (Diffused)

7.3 LI-G.5-01 CUSTOM WALL LANTERN SPECIFICATION FOR PROJECT

The specified luminaire is fully custom, and as a result, no photometric data is available.

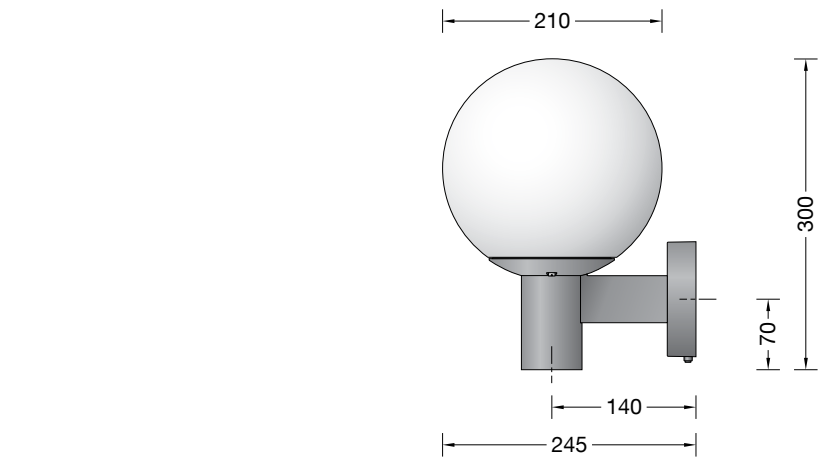


7.31 TECHNICAL CHARACTERISTICS

- Lamp: LED retrofit lamp (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Diffused (Opal diffuser)

7.4 LI-G.5-01 WALL LANTERN EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation due to its closely matching design intent, dimensions, and lighting distribution characteristics. While the enclosing diffuser shape differs slightly from the proposed design, the overall light distribution remains consistent, ensuring an accurate and representative assessment.



7.41 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Diffused (Opal diffuser)

7.6 LOWER GROUND FLOOR ST JOHNS PLACE TERRACE COMMENTARY

The desktop study, based on full output, confirms that light levels within the terrace area are appropriate for its intended use and remain well-contained due to the enclosing nature of the space and its lower ground floor positioning relative to the adjacent street level.

The only area where some light spill occurs onto the adjacent street is through the gate and stairs elevation. However, within the first 2 metres, light levels drop well below 0.5 lux, demonstrating minimal impact.

Note: Within this terrace area, two portable battery powered decorative table lamps are planned for placement at the waiter station. As these are portable, non-fixed lighting elements, they have been excluded from the assessment. It is understood that Condition 6 applies only to fixed elements of the external lighting installation.

7.61 DESIGN CONSIDERATIONS & MITIGATIONS

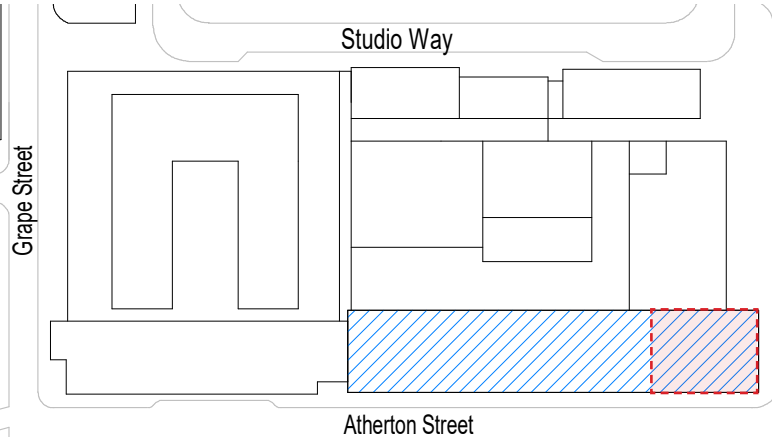
To minimise the impact on the surrounding environment, the following design considerations and mitigations have been implemented:

- The terrace area is located on the lower ground floor and is naturally enclosed by the building itself on two sides and a tall retaining wall on another. The fourth elevation serves as the entrance and access point, positioned at a slightly higher level than the terrace itself. This configuration inherently limits potential light spill into the immediate surroundings.
- As the terrace is situated below street level, the lighting remains largely concealed from view and unobtrusive from most angles.
- The scheme incorporates only a single type of fixed lighting, ensuring minimal overall illumination within this area.
- The scheme features built-in flexibility, allowing light intensity to be adjusted via the dedicated lighting control system.
- External lighting will be automatically managed using an astronomical time clock, ensuring precise on/off operation as part of the lighting control strategy.

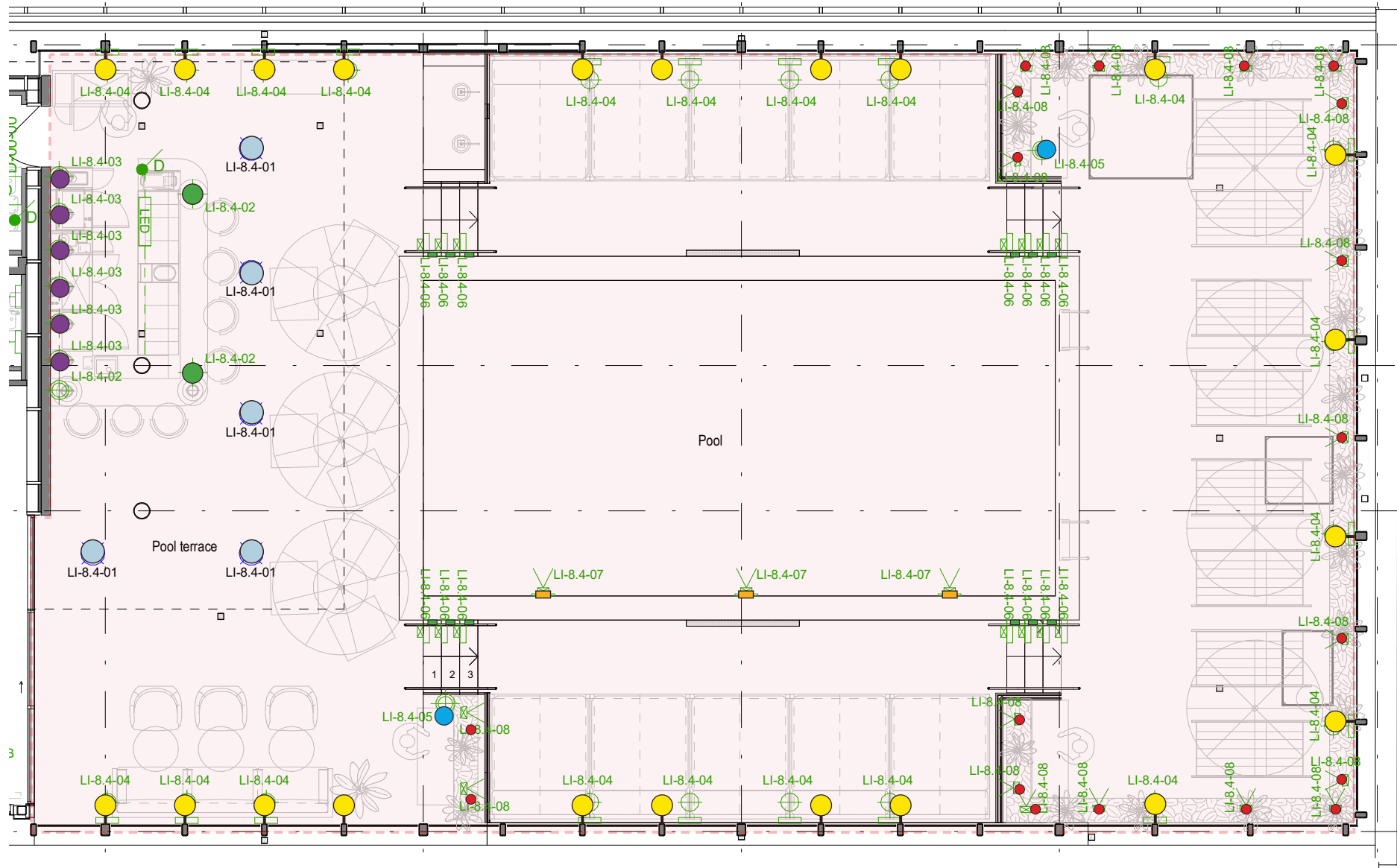
8.0 LEVEL 08 - POOL TERRACE

Below illustrates the proposed lighting locations.

-  External Lighting Zone
-  LI-8.4-06 Wall recessed steplight
-  LI-8.4-07 Wall recessed pool light
-  LI-8.4-04 Wall lantern
-  LI-8.4-05 Table Lamp 1 (non-fixed item)
-  LI-8.4-02 Table Lamp 2 (non-fixed item)
-  LI-8.4-03 Bar Lamp 3 (non-fixed item)
-  LI-8.4-08 Spike Light (in planters)
-  LI-8.4-01 Globe Pendant



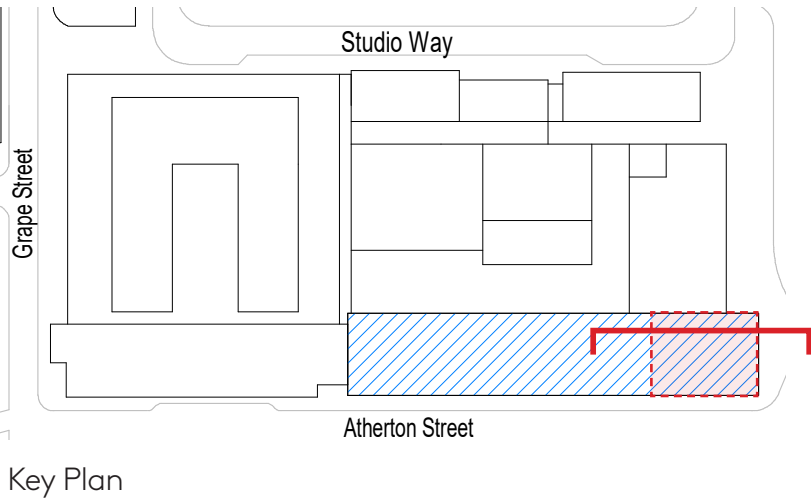
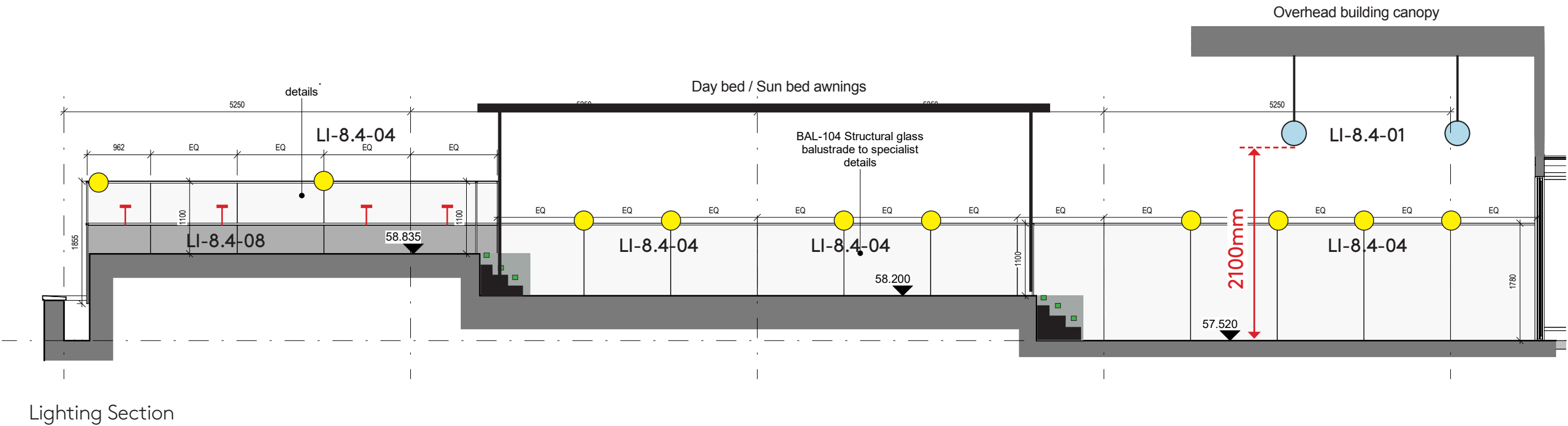
Key Plan



Lighting Plan

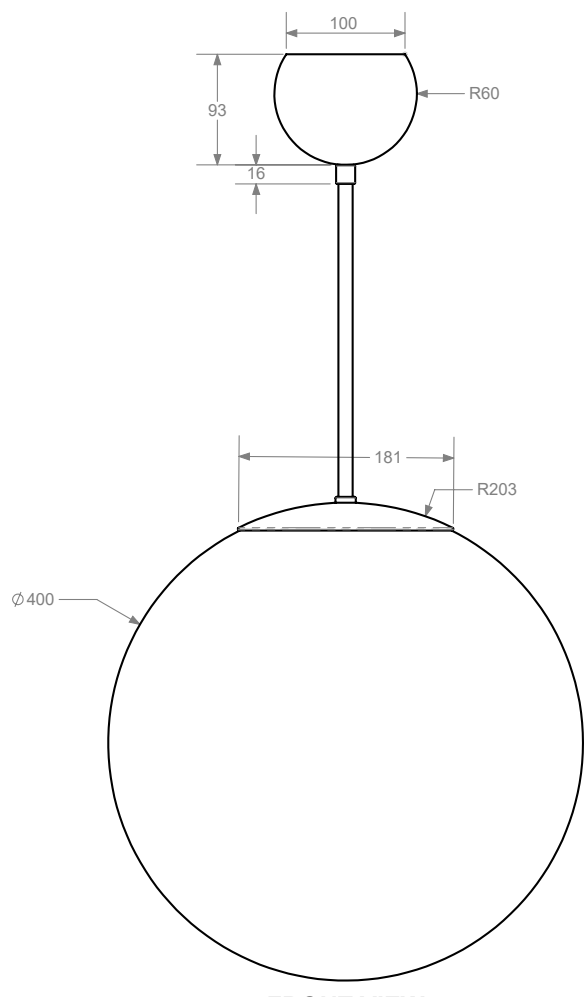
8.0 LEVEL 08 - POOL TERRACE

- LI-8.4-06 Wall recessed steplight
- LI-8.4-07 Wall recessed pool light
- LI-8.4-04 Wall lantern
- LI-8.4-05 Table Lamp 1 (non-fixed item)
- LI-8.4-02 Table Lamp 2 (non-fixed item)
- LI-8.4-03 Bar Lamp 3 (non-fixed item)
- LI-8.4-08 Long Stem Planter Light
- LI-8.4-01 Globe Pendant



8.1 LI-8.4-01 GLOBE PENDANT SPECIFICATION FOR PROJECT

The specified luminaire has no photometric data available.

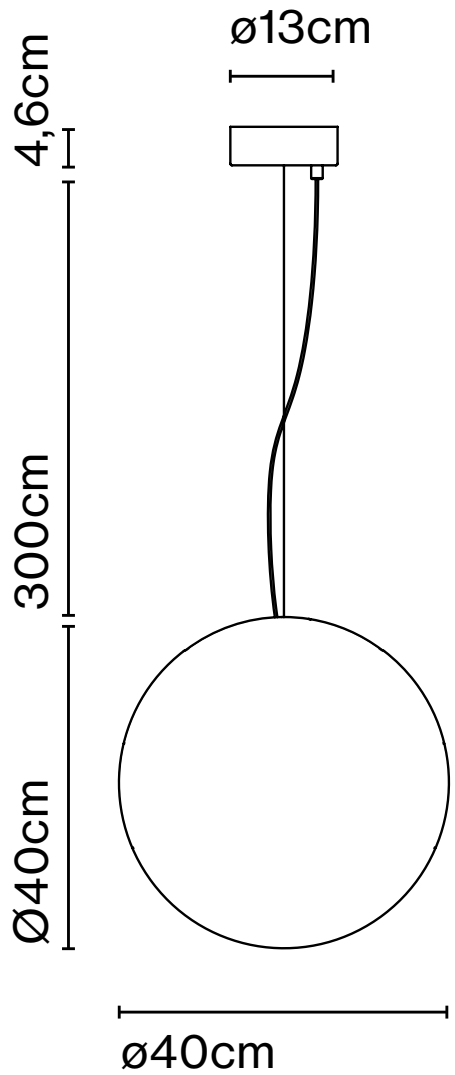


8.11 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W) retrofit
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Frosted Opal Glass with black swirl (Diffused)

8.2 LI-B.2-02 WALL LIGHT EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen due to its near identical design, dimensions, and lighting distribution characteristics, ensuring accurate representation in the assessment.

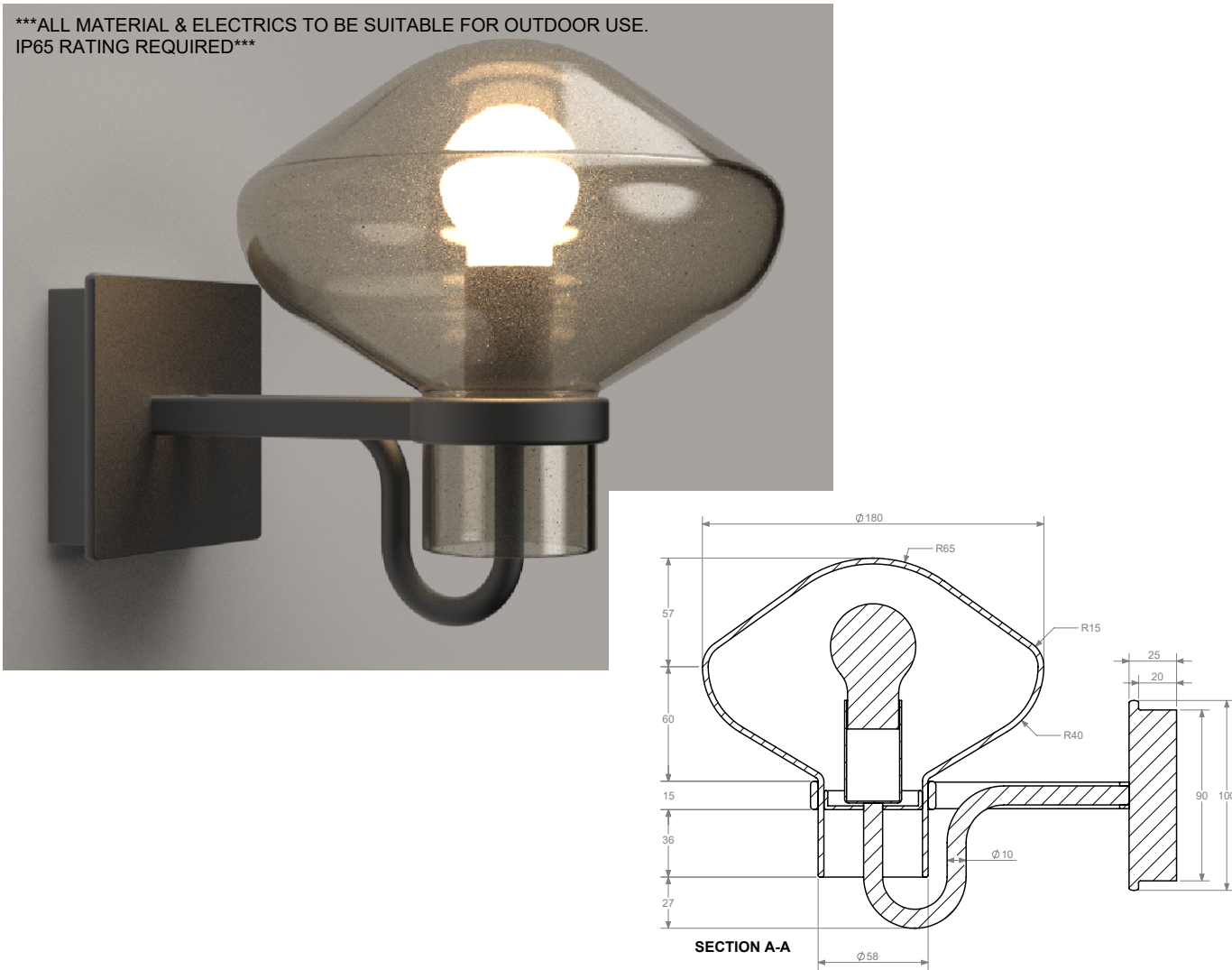


8.21 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Frosted Opal Glass with pattern (Diffused)

8.3 LI-8.4-04 WALL LANTERN WITH BLACK TINTED GLASS SHADE SPECIFICATION

The specified luminaire is fully custom, and as a result, no photometric data is available.



8.31 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W) retrofit
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Black tinted shade enclosure (Diffused from lamp)

8.4 LI-8.4-04 WALL LANTERN WITH BLACK TINTED GLASS SHADE EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen for its closely matching design intent (black tinted glass shade encasing the lamp within), dimensions, and lighting distribution characteristics.

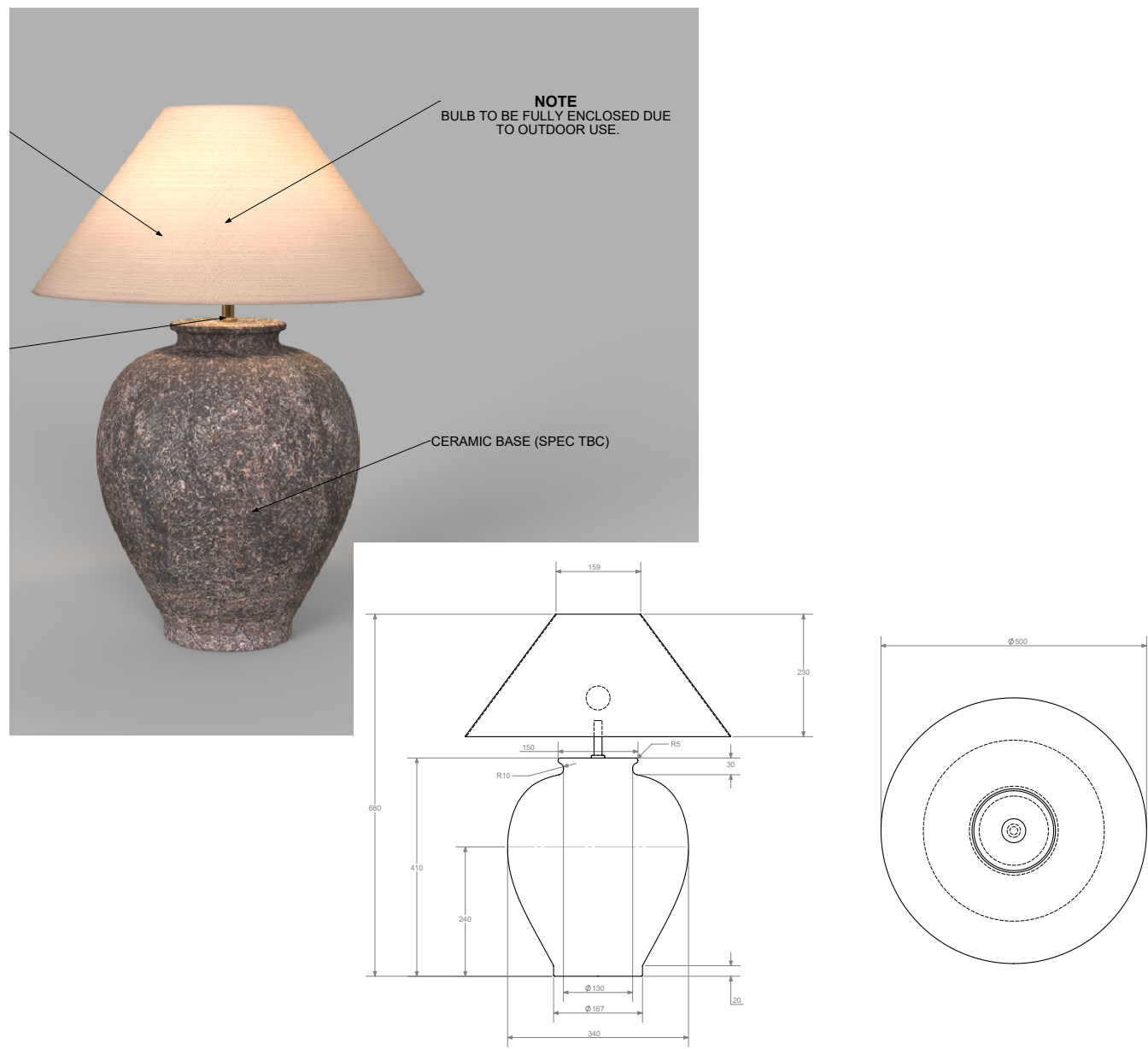


8.41 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Black tinted shade enclosure (Diffused from lamp & inner enclosure)

8.5 LI-8.4-02 TABLE LAMP WITH TRANSLUCENT SHADE SPECIFICATION

The specified luminaire has no photometric data available.

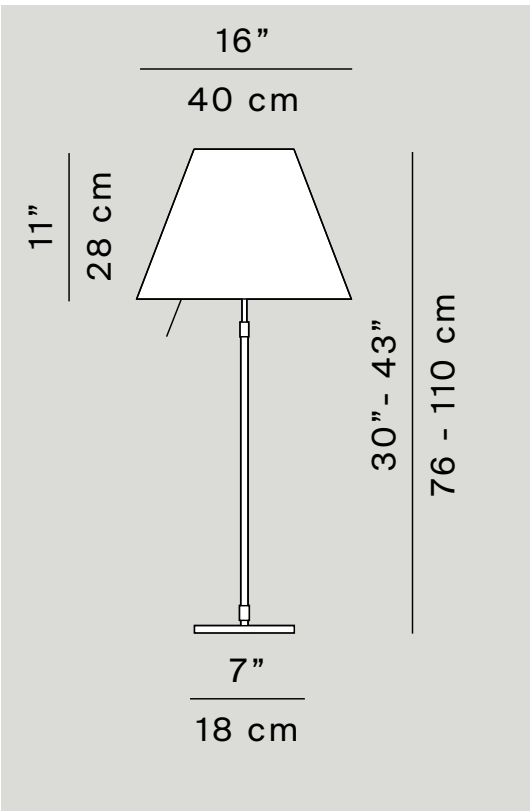


8.51 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W) retrofit
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Fabric shade (Diffused)

8.6 LI-8.4-02 TABLE LAMP WITH TRANSLUCENT SHADE EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation due to its closely matching design, featuring a translucent conical-shaped shade, similar dimensions, and comparable lighting distribution characteristics.

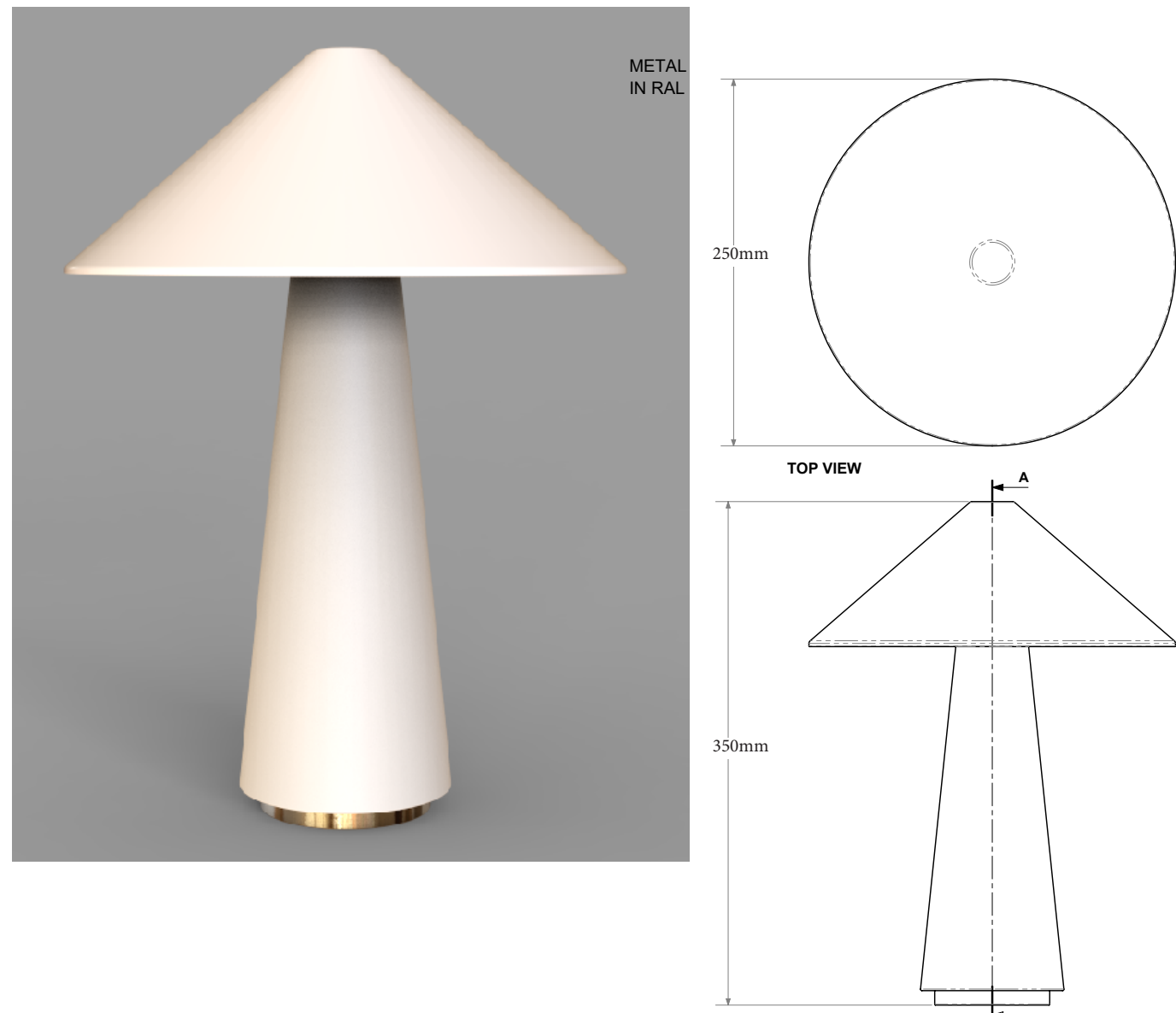


8.61 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Fabric shade (Diffused)

8.7 LI-8.4-05 TABLE LAMP WITH OPAQUE METAL SHADE SPECIFICATION

The specified luminaire has no photometric data available.

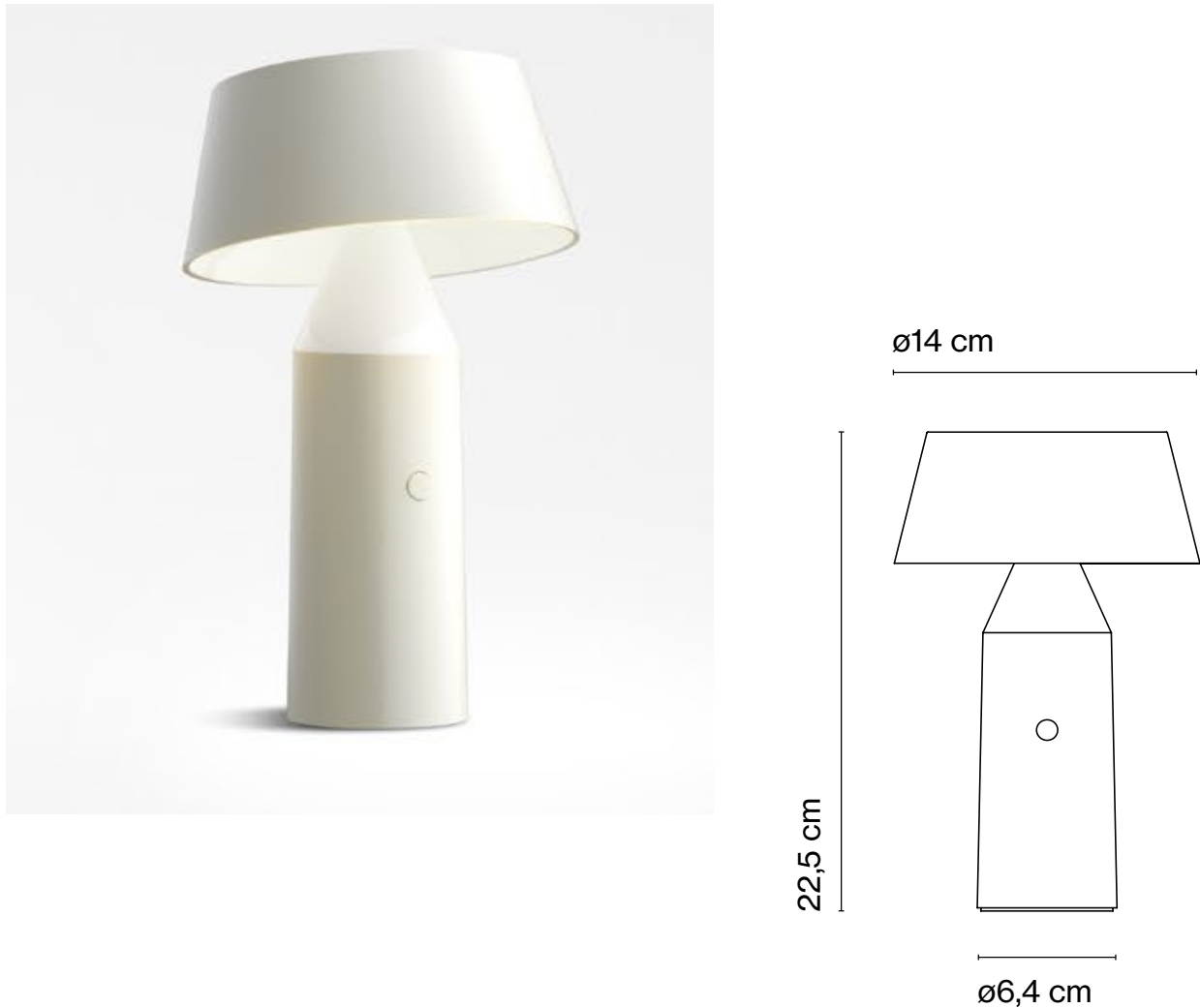


8.71 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W) retrofit
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Black tinted shade enclosure (Diffused from lamp)

8.8 LI-8.4-05 TABLE LAMP WITH OPAQUE METAL SHADE EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation due to its closely matching design, featuring a similar opaque shaped shade, dimensions, and comparable lighting distribution characteristics.



8.81 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Black tinted shade enclosure (Diffused from lamp & inner enclosure)

8.9 LI-8.4-03 VINTAGE TABLE LAMP SPECIFICATION

The specified luminaire has no photometric data available.



Dimensions: Glove Diameter 200mm x Height 280mm

8.9 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W) retrofit
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Transparent globe enclosure (Lamp visible)

8.10 LI-8.4-03 WALL LANTERN WITH BLACK TINTED GLASS SHADE
EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen for its closely matching design intent (black tinted glass shade encasing the lamp within), dimensions, and lighting distribution characteristics.

AMBER GOLFBALL G45

4W | 280 Lm | 2200K

Decorative, ultra dimmable LED filament light bulb with flicker-free technology and 30,000 hours lifetime. This lamp uses 4 watts of power to produce 280 lumens at a CRI 90.

Item number: ZL-G45/4W22E14A | ZL-G45/4W22E27A | ZL-G45/4W22B22A

ZICO[®]

LIGHTING

WORLDWIDE

LAMP

DIMMABLE

FLICKER FREE

CRI 90

3 YEAR WARRANTY

Style

Socket

Filaments

LED Wattage / Equivalent

Lumen to market

Average in testing

CCT

CRI

Glass finish

Warranty

G45 Golfball

E14, E27, B22

4 x 38mm

LED 4w / 25W

280 Lm

280 Lm

2200K

90

Amber

3 years

DIMMING

Dimmable

Recommended dimmer

Also compatible with products from Mode, Lutron, Rako, Varilight and Casambi. For a full list please see website

0 – 100%, leading & trailing edge

Zico by Anytronics

PERFORMANCE

Lifetime

Starting time

30,000 hours

<0.2 sec

75mm

45mm

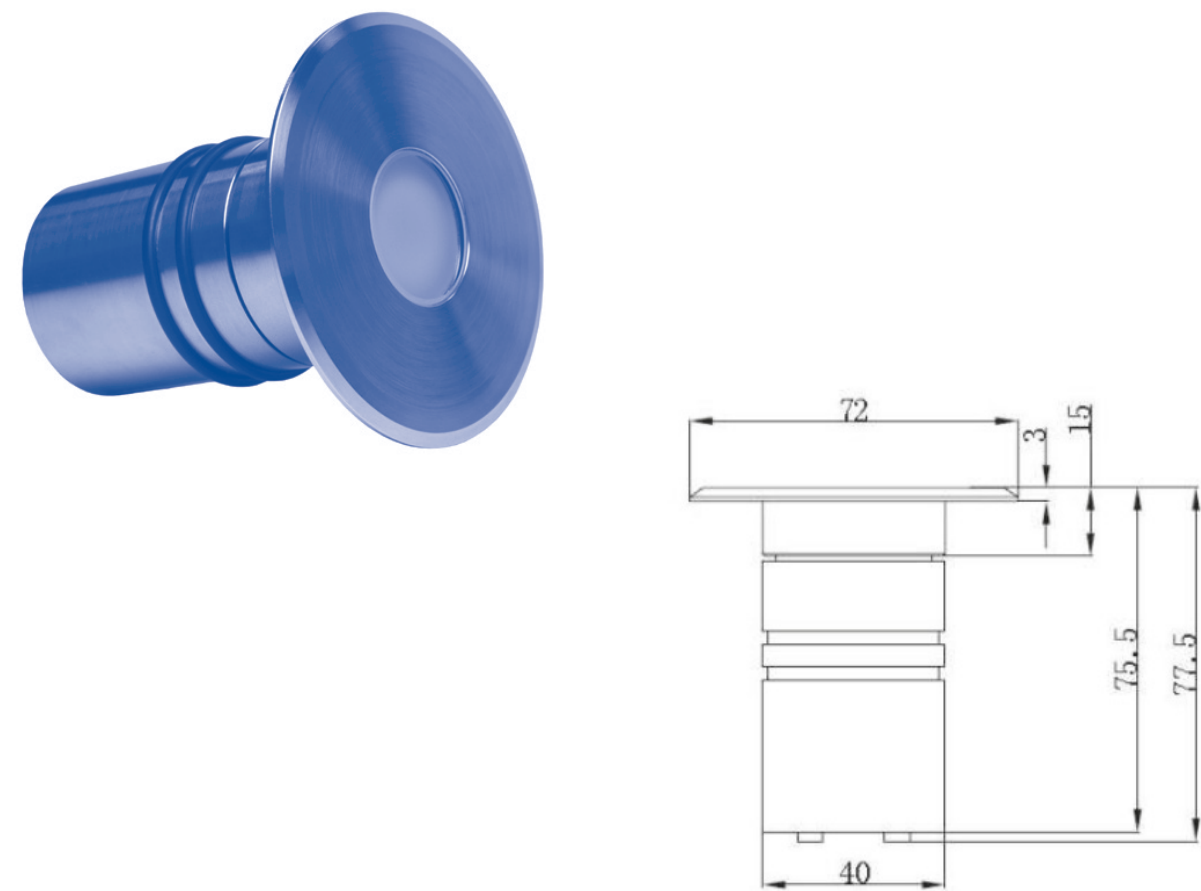
E14 E27 B22

8.101 TECHNICAL CHARACTERISTICS

- Lamp: LED (4W)
- Lumen Output: 280 Lumen
- Colour temperature: 2200K
- Lighting Distribution: Exposed Lamp

8.11 LI-8.4-07 WALL RECESSED POOL LIGHT SPECIFICATION

The specified luminaire has no photometric data available.

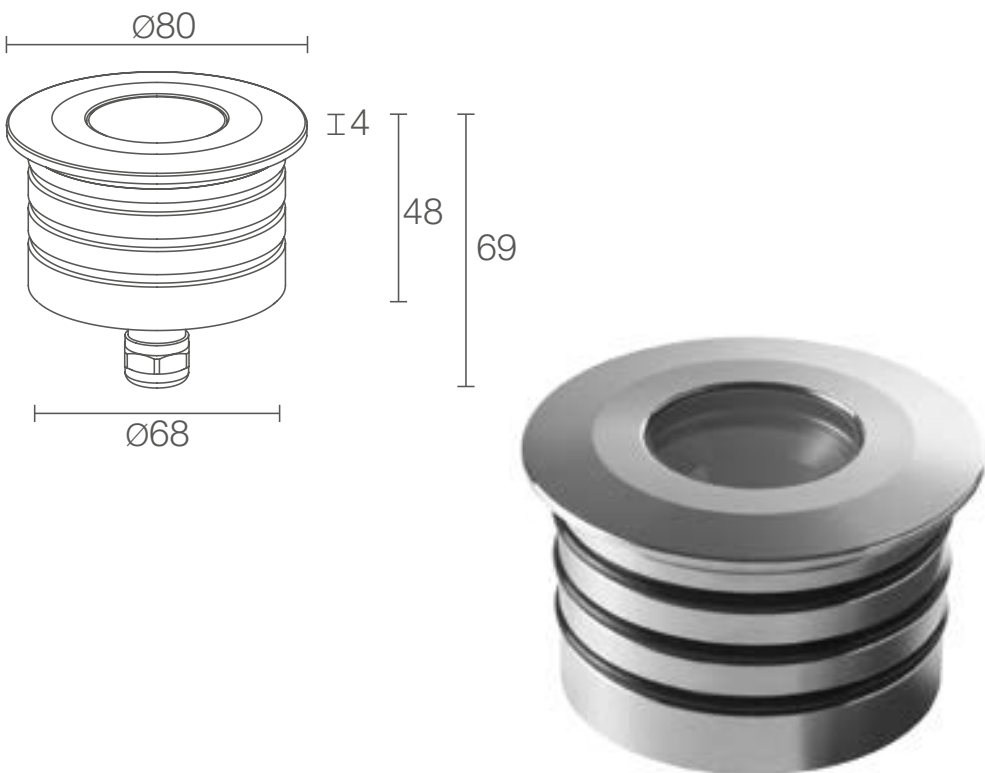


8.111 TECHNICAL CHARACTERISTICS

- Lamp: LED (12W) integral
- Lumen Output: 1750 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Wide beam (Diffused)

8.12 LI-8.4-07 WALL RECESSED POOL LIGHT EQUIVALENT USED IN COMPUTER SIMULATION

The luminaire shown below was selected as the equivalent model for the computer simulation. It was chosen for its closely matching design intent, dimensions, and lighting distribution characteristics, to ensure an accurate and representative assessment.

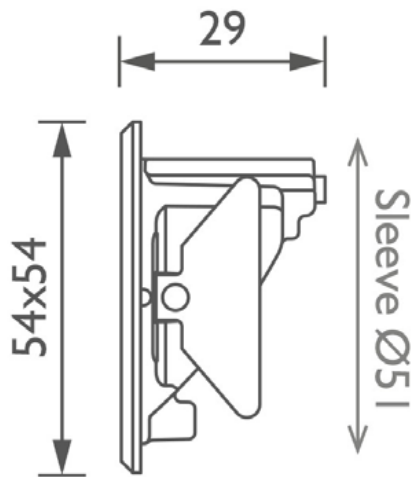


8.121 TECHNICAL CHARACTERISTICS

- Lamp: LED (12W)
- Lumen Output: 1750 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Wide beam (Diffused)

8.13 LI-8.4-06 WALL RECESSED STEPLIGHT SPECIFICATION

The specified luminaire below, with available photometric data, was used in the computer simulation to ensure accurate lighting analysis.

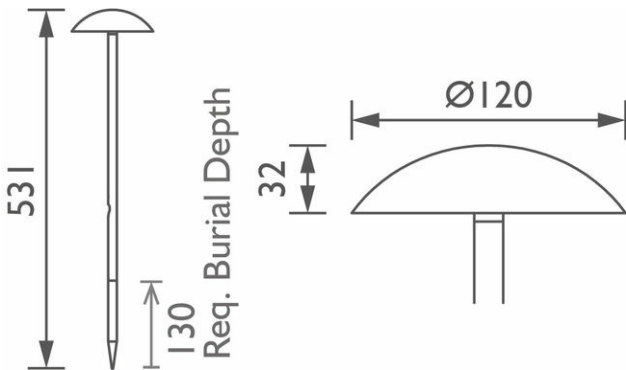


8.131 TECHNICAL CHARACTERISTICS

- Lamp: LED (2W) integral
- Lumen Output: 187 Lumen
- Colour temperature: 2700K
- Lighting Distribution: Asymmetric down

8.14 LI-8.4-08 LONG STEM PLANTER LIGHT SPECIFICATION

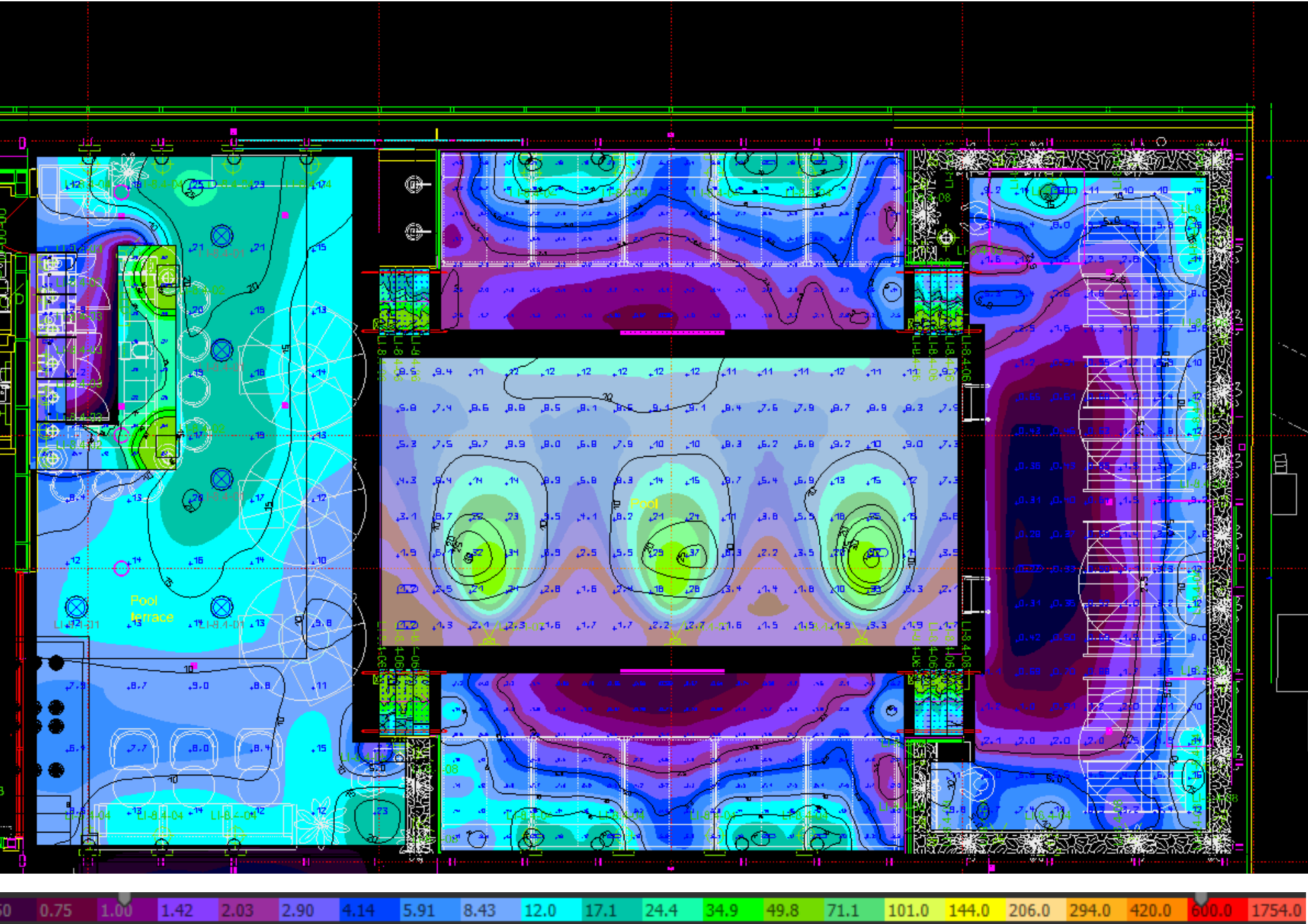
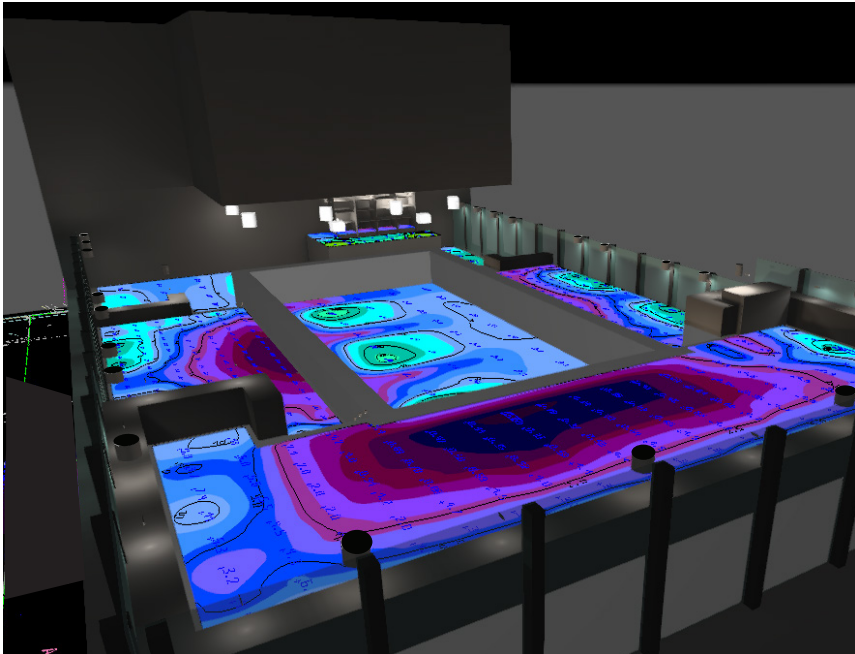
The specified luminaire below, with available photometric data, was used in the computer simulation to ensure accurate lighting analysis.



8.141 TECHNICAL CHARACTERISTICS

- Lamp: LED (2.1W) integral
- Lumen Output: 236 Lumen
- Colour temperature: 2700K
- Lighting Distribution: 360° Downward wash only

8.15 LIGHT LEVEL PLOT (LUX)



8.16 LEVEL 08 ROOF TOP POOL TERRACE COMMENTARY

The desktop study, based on full output, confirms that the lighting scheme remains well-contained within the space. The use of low-glare, black-tinted wall lanterns helps minimise light spill to the surroundings while maintaining the atmospheric character of the design.

Light levels appear appropriate for their intended purpose, and several mitigation measures have been implemented (as detailed below) to further reduce light spill.

A vertical illuminance measurement taken on the building opposite recorded a maximum of 0.9 lux, which is well below the ILP-recommended limit of 10 lux for an E3 Environmental Zone, in accordance with ILP Guidance Notes for the Reduction of Obtrusive Light (GN01:2021).

8.161 DESIGN CONSIDERATIONS & MITIGATIONS

To minimise the impact on the surrounding environment, the following design considerations and mitigations have been implemented:

- The rooftop pool terrace, located on Level 8 of the development, resulting in little to no impact at street level.
- The outdoor bar area features a large cantilevered canopy as part of the building above, which acts as a shield to limit light spill within this zone.
- Perimeter wall lanterns feature black-tinted encasings, which soften light intensity and produce a glare-free, atmospheric glow.
- Daybed/sunbed awnings are positioned in the central section of the space, acting as barriers to any potential light spill on that zone.
- Step lights incorporate optical control and appropriate shielding, directing light asymmetrically downward at low level, illuminating only the stair treads.
- Planter lights mounted on stems feature a mushroom-like cap design, providing warm, low-glare illumination with downward light distribution only, allowing for discreet placement within the planters.
- The scheme features built-in flexibility, allowing light intensity to be adjusted via the dedicated lighting control system.
- External lighting will be automatically managed using an astronomical time clock, ensuring precise on/off operation as part of the lighting control strategy.

MATCH
LIGHTING
STUDIO