

C5271

Christie - TCP

Technical Submittal : External Lighting

Document No. TCP-HES-XX-XX-TS-ME-50007

Revision : P02



Client

Main Contractor



Rev	Status	Date	Author	Checked	Approved	Summary of Changes
2	P	19/08/2021	RD	KS		



C5271 Christie - TCP

Technical Submittal : External Lighting

Document No. TCP-HES-XX-XX-TS-ME-50007

Revision : P02

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Revision : P02

Technical Submission Compliance Statement

Sub Contractor: N/A
 Package No : EM004 & EM007
 Equipment: 3.6
 Proposed Manufacturer: Thorlux
 Catalogue No : N/A
 Colour : Grey - Black
 Dimensions : N/A

Specification/Specification Clauses

Specification : Engineering Performance Specification 267472-ARUP-ZZ-SP-N-0001
 Page No's : 60-62
 Clauses : 3.6
 Schedule : N/A
 Page No's : N/A

Compliance Statement

Fully Compliant with Specification ☒
 Not Compliant with Specification due to the following: ☐

Sign Off / Approval

Reviewed		Signed		Date	
Position					
Status					
	A		B		C
Comments					



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Appendix 1

Selections & Data Sheets

**THORLUX RL19116 Realta LED - 20W - Area
Distribution - 4000K**



**THORLUX SB19677 Starbeam ECO - Area
Distribution - 31W - 4000K**



**THORLUX SB19679 Starbeam ECO - Roadway
Distribution - 31W - 4000K**



All external luminaires are identified on drawing - TCP-HES-XX-ZZ-DR-E-600002-C01_A5 -
EXTERNAL SERVICES(A0)

External lighting to be switched Via CP Electronics EBR-DIN-DALIG DIN rail DALI lighting control
module and local time clock/photocell. During the hours of 2.30 – 06.00 - The lighting will dim to
50% brightness - Times to be confirmed by the Trust



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Appendix 2

Manufacturers Literature

3 Pieces THORLUX RL19116 Realta LED - 20W - Area

Distribution - 4000K

Article No.: RL19116

Luminous flux (Luminaire): 2840 lm

Luminous flux (Lamps): 2840 lm

Luminaire Wattage: 23.0 W

Luminaire classification according to CIE: 100

CIE flux code: 32 74 96 100 100

Fitting: 1 x Realta LED - 20W - Area Distribution -
4000K (Correction Factor 1.000).

10 Pieces THORLUX SB19677 Starbeam ECO - Area

Distribution - 31W - 4000K

Article No.: SB19677

Luminous flux (Luminaire): 4890 lm

Luminous flux (Lamps): 4890 lm

Luminaire Wattage: 35.0 W

Luminaire classification according to CIE: 100

CIE flux code: 20 47 89 100 100

Fitting: 1 x Starbeam ECO 31W Area (Correction
Factor 1.000).

1 Pieces THORLUX SB19679 Starbeam ECO - Roadway

Distribution - 31W - 4000K

Article No.: SB19679

Luminous flux (Luminaire): 5070 lm

Luminous flux (Lamps): 5070 lm

Luminaire Wattage: 35.0 W

Luminaire classification according to CIE: 100

CIE flux code: 40 73 96 100 101

Fitting: 1 x Starbeam ECO 31W Roadway
(Correction Factor 1.000).

Christie Hospital - External Car Park Lighting

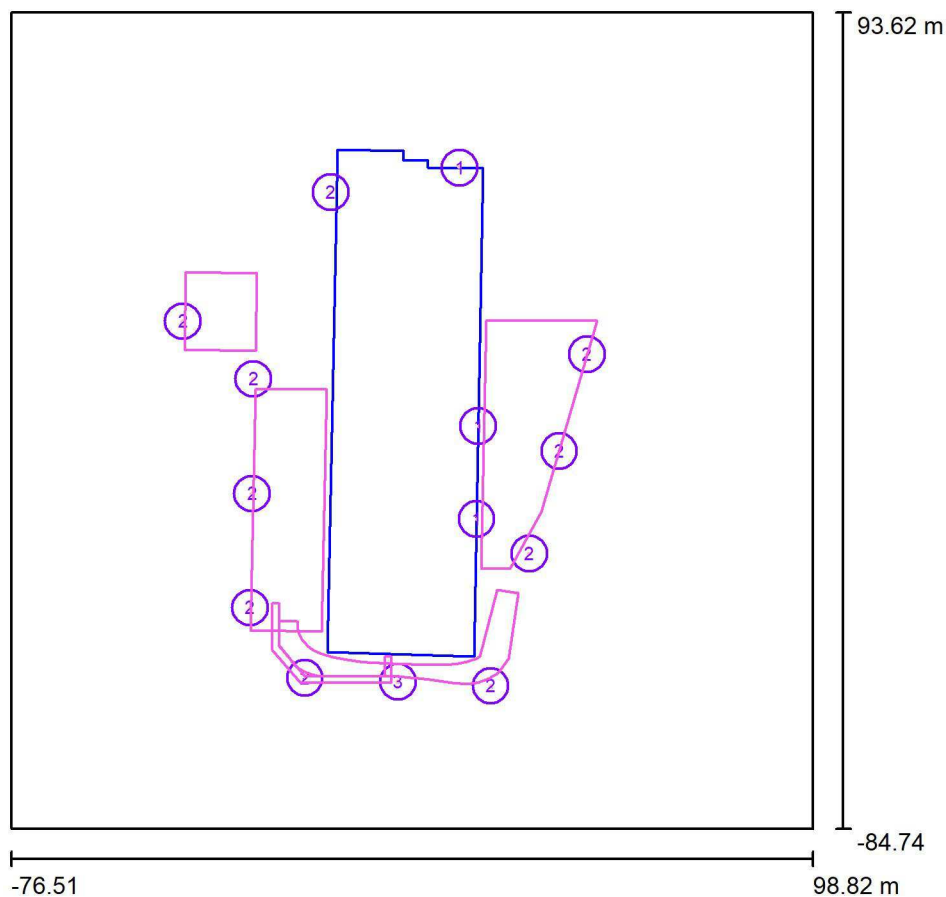
Partner for Contact:
Order No.:
Company:
Customer No.:

Date: 27.08.2021
Operator: Mike Jakeman

F.W. Thorpe
Thorlux Lighting
Merse Road, North Moons Moat
Redditch, B98 9HH

Operator Mike Jakeman
Telephone 01527 583200
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e-Mail michael.jakeman@thorlux.co.uk

Exterior Scene 1 / Planning data



Light loss factor: 0.80, ULR (Upward Light Ratio): 0.5%

Scale 1:1654

Luminaire Parts List

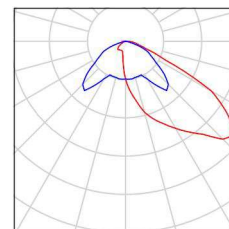
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	3	THORLUX RL19116 Realta LED - 20W - Area Distribution - 4000K (1.000)	2840	2840	23.0
2	10	THORLUX SB19677 Starbeam ECO - Area Distribution - 31W - 4000K (1.000)	4890	4890	35.0
3	1	THORLUX SB19679 Starbeam ECO - Roadway Distribution - 31W - 4000K (1.000)	5070	5070	35.0
Total:			62490	Total: 62490	454.0

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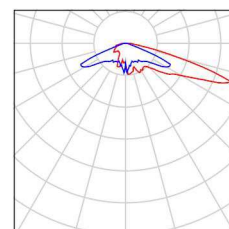
Operator Mike Jakeman
Telephone 01527 583200
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e-Mail michael.jakeman@thorlux.co.uk

Exterior Scene 1 / Luminaire parts list

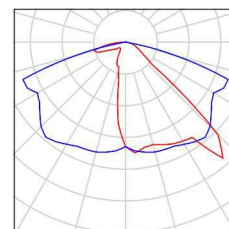
3 Pieces THORLUX RL19116 Realta LED - 20W - Area
Distribution - 4000K
Article No.: RL19116
Luminous flux (Luminaire): 2840 lm
Luminous flux (Lamps): 2840 lm
Luminaire Wattage: 23.0 W
Luminaire classification according to CIE: 100
CIE flux code: 32 74 96 100 100
Fitting: 1 x Realta LED - 20W - Area Distribution -
4000K (Correction Factor 1.000).



10 Pieces THORLUX SB19677 Starbeam ECO - Area
Distribution - 31W - 4000K
Article No.: SB19677
Luminous flux (Luminaire): 4890 lm
Luminous flux (Lamps): 4890 lm
Luminaire Wattage: 35.0 W
Luminaire classification according to CIE: 100
CIE flux code: 20 47 89 100 100
Fitting: 1 x Starbeam ECO 31W Area (Correction
Factor 1.000).



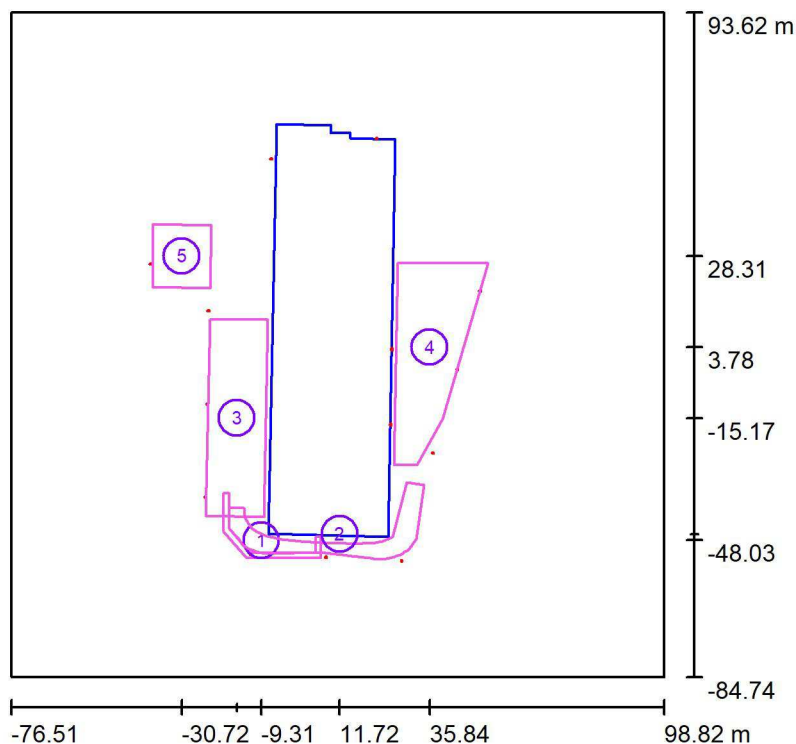
1 Pieces THORLUX SB19679 Starbeam ECO - Roadway
Distribution - 31W - 4000K
Article No.: SB19679
Luminous flux (Luminaire): 5070 lm
Luminous flux (Lamps): 5070 lm
Luminaire Wattage: 35.0 W
Luminaire classification according to CIE: 100
CIE flux code: 40 73 96 100 101
Fitting: 1 x Starbeam ECO 31W Roadway
(Correction Factor 1.000).



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Exterior Scene 1 / Calculation surfaces (results overview)



Scale 1 : 2030

Calculation Surface List

No.	Designation	Type	Grid	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
1	Exit path from stair core 3	perpendicular	23 x 11	15	9.42	36	0.620	0.261
2	Access road	perpendicular	27 x 11	12	4.64	34	0.376	0.135
3	Parking	perpendicular	5 x 17	7.36	4.04	19	0.549	0.213
4	Parking	perpendicular	9 x 17	10.00	1.29	32	0.129	0.040
5	Parking	perpendicular	11 x 13	7.05	3.23	20	0.458	0.159

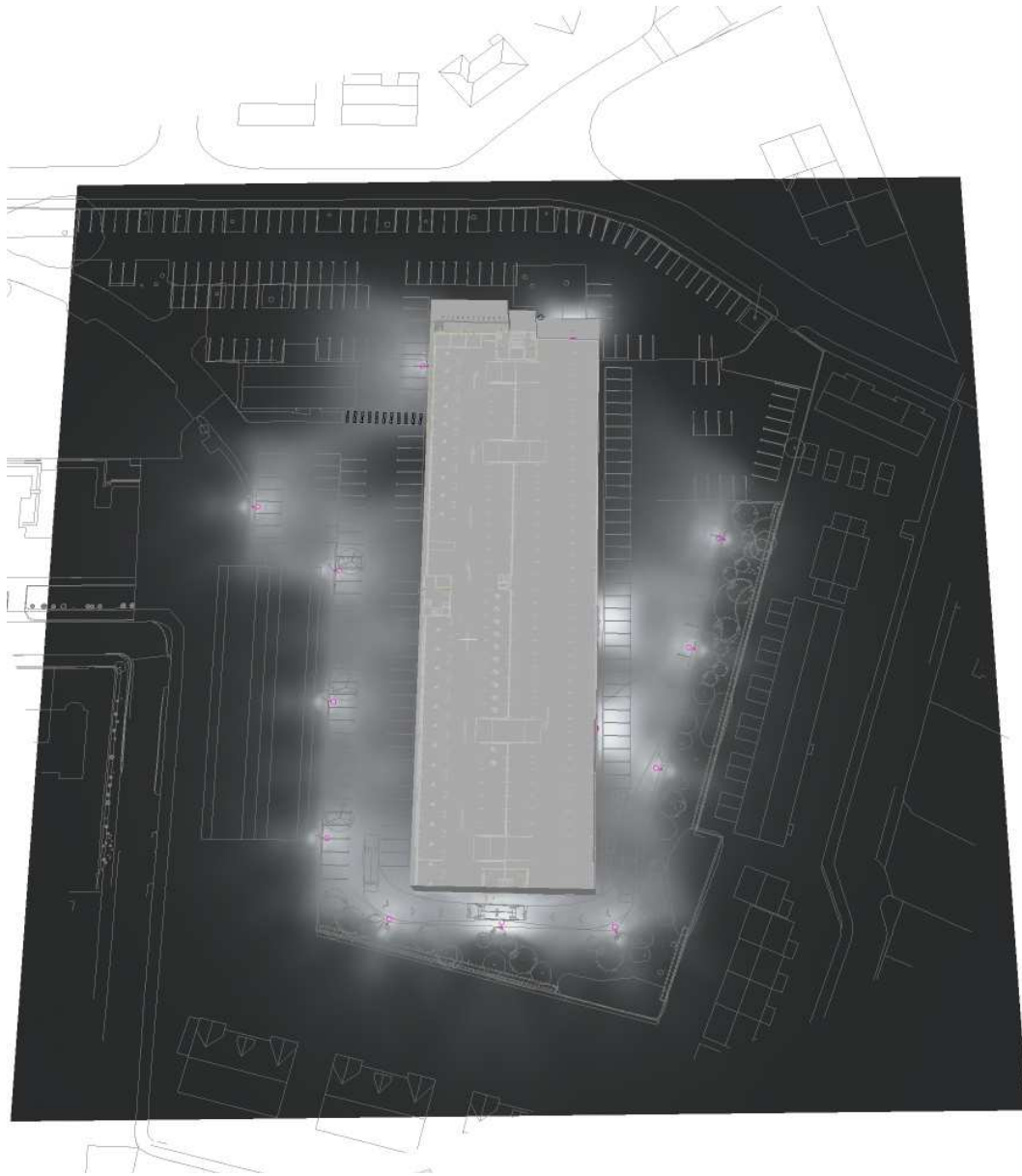
Summary of Results

Type	Quantity	Average [lx]	Min [lx]	Max [lx]	u0	E_{min} / E_{max}
perpendicular	5	9.16	1.29	36	0.14	0.04

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Exterior Scene 1 / 3D Rendering

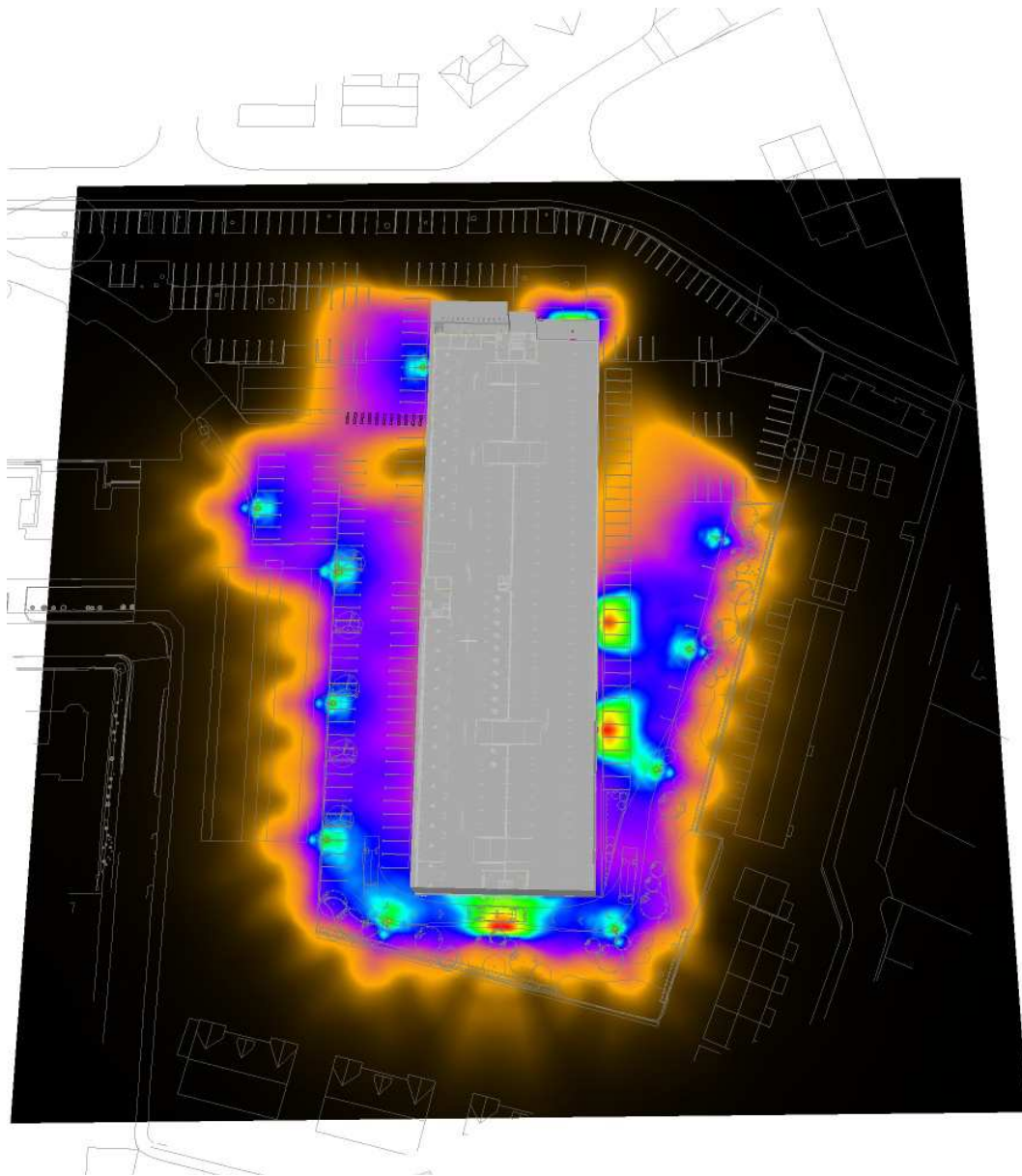




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Exterior Scene 1 / False Color Rendering



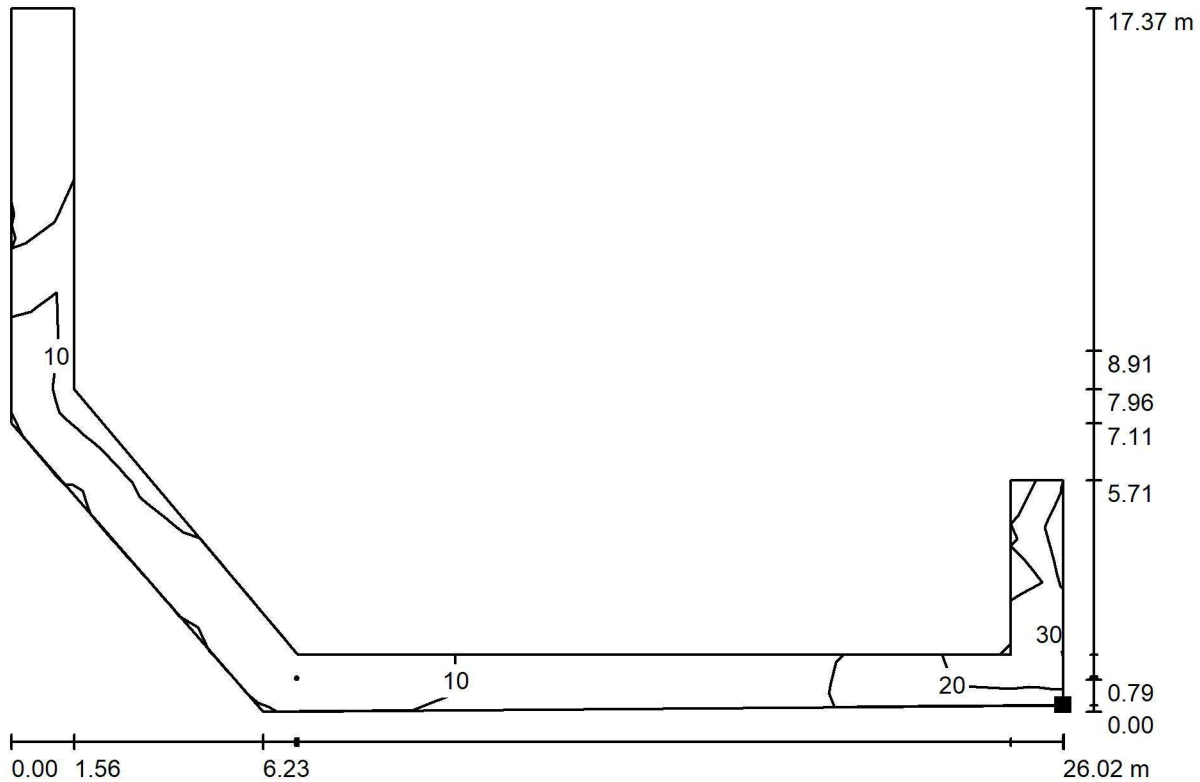
0 1 5 10 15 20 30 40 50

lx

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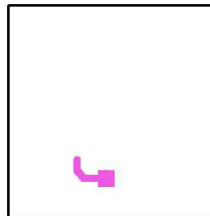
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Exterior Scene 1 / Exit path from stair core 3 / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 187

Position of surface in external scene:
 Marked point:
 (6.595 m, -52.626 m, 0.000 m)



Grid: 23 x 11 Points

E_{av} [lx]
 15

E_{min} [lx]
 9.42

E_{max} [lx]
 36

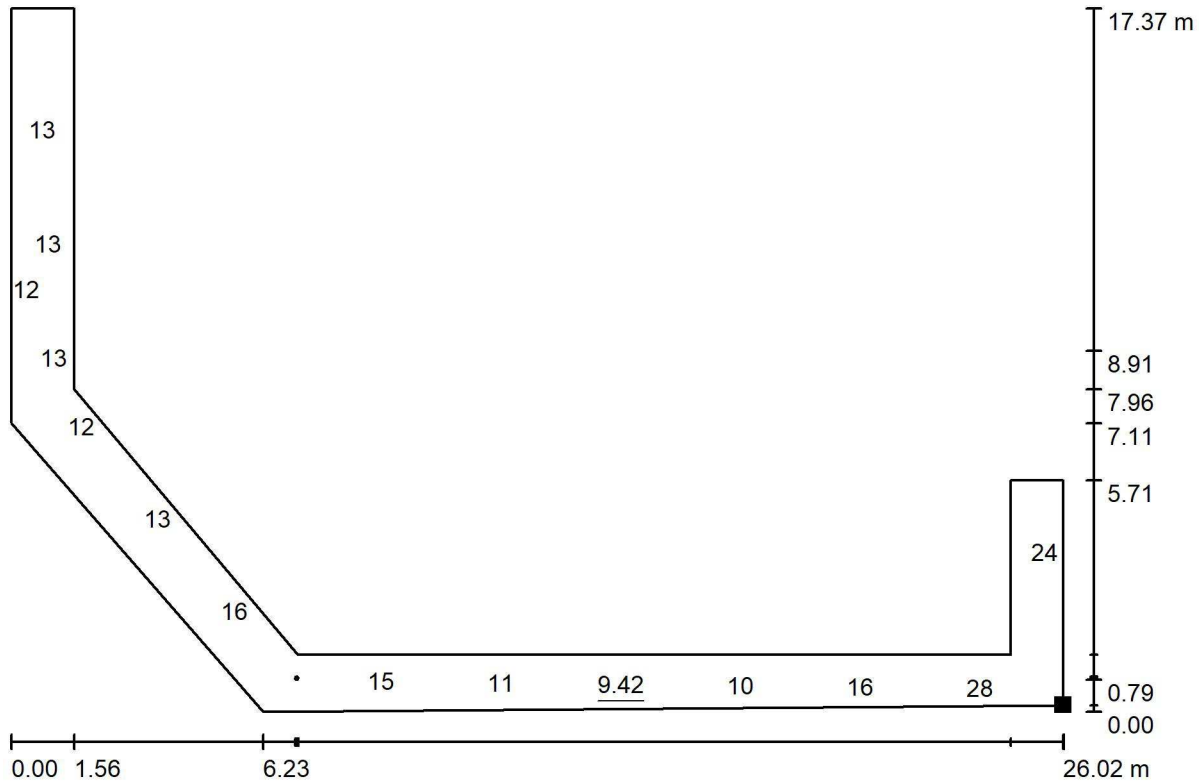
u_0
 0.620

E_{min} / E_{max}
 0.261

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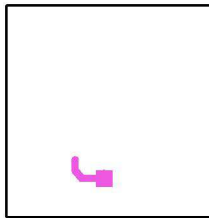
Operator Mike Jakeman
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Exterior Scene 1 / Exit path from stair core 3 / Value Chart (E, Perpendicular)



Not all calculated values could be displayed.

Position of surface in external scene:
 Marked point:
 (6.595 m, -52.626 m, 0.000 m)



Grid: 23 x 11 Points

E_{av} [lx]
 15

E_{min} [lx]
 9.42

E_{max} [lx]
 36

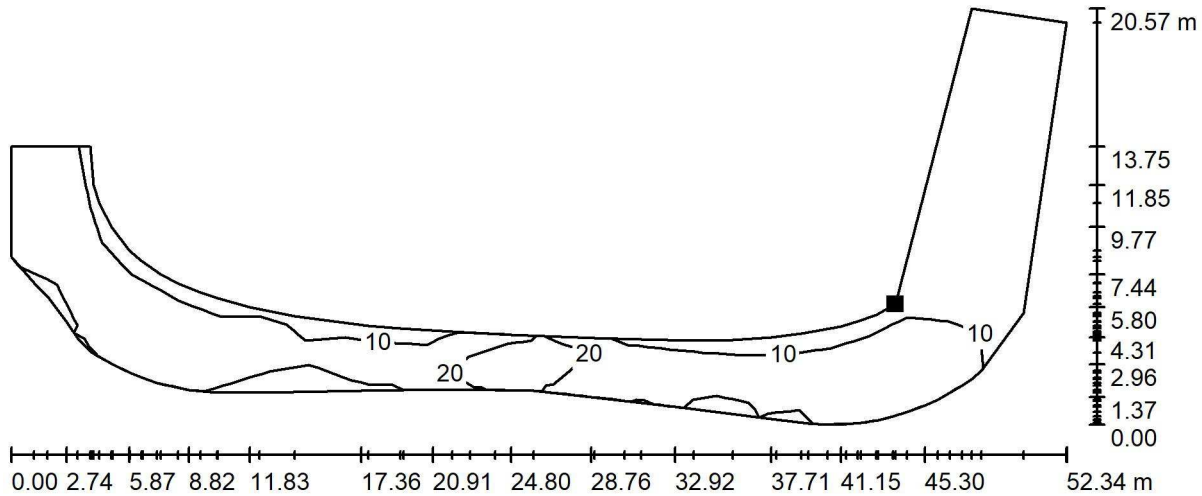
u_0
 0.620

E_{min} / E_{max}
 0.261

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Exterior Scene 1 / Access road / Isolines (E, Perpendicular)

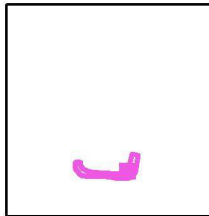


Values in Lux, Scale 1 : 375

Position of surface in external scene:

Marked point:

(25.905 m, -47.129 m, 0.000 m)



Grid: 27 x 11 Points

E_{av} [lx]
12

E_{min} [lx]
4.64

E_{max} [lx]
34

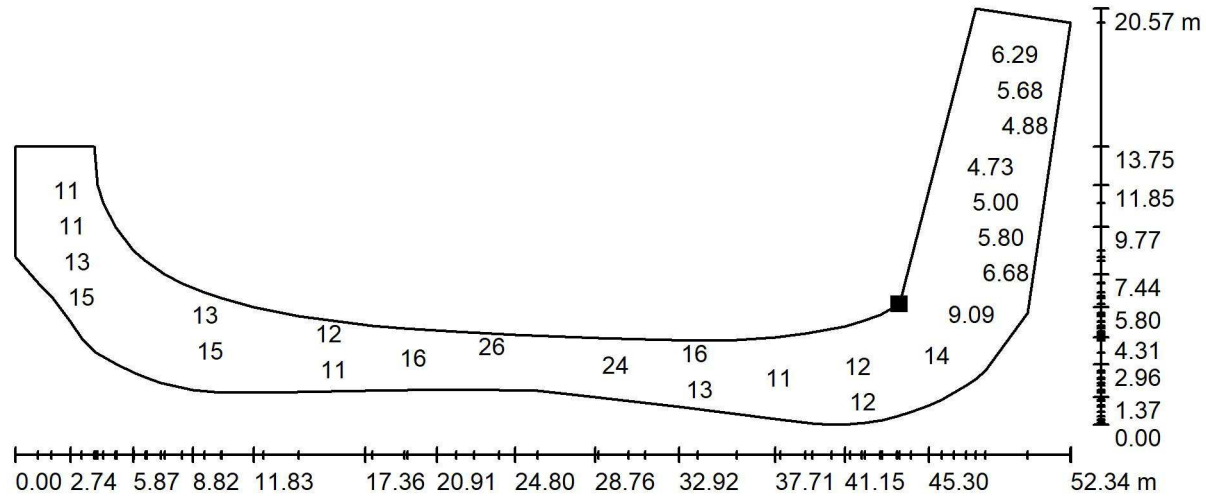
u_0
0.376

E_{min} / E_{max}
0.135

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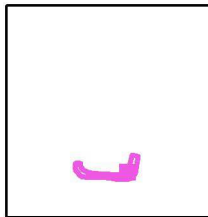
Exterior Scene 1 / Access road / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 375

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(25.905 m, -47.129 m, 0.000 m)



Grid: 27 x 11 Points

E_{av} [lx]
12

E_{min} [lx]
4.64

E_{max} [lx]
34

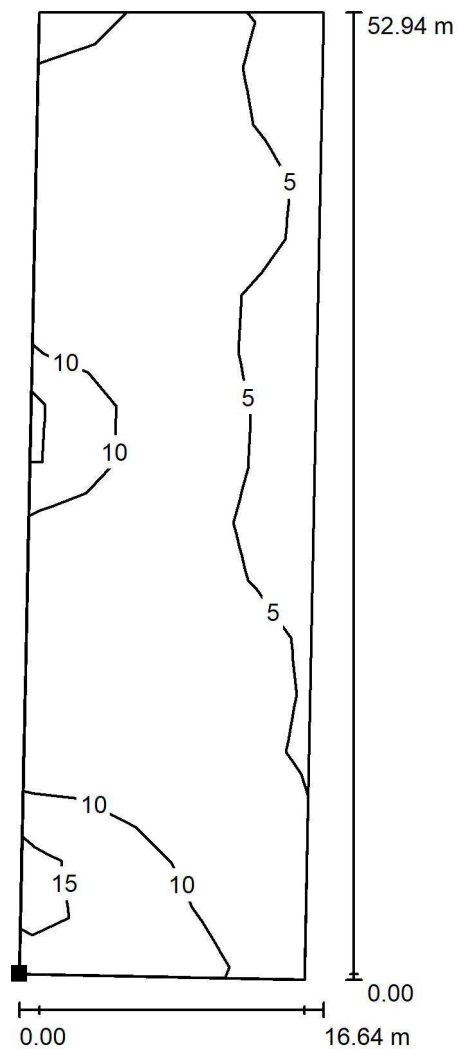
u_0
0.376

E_{min} / E_{max}
0.135

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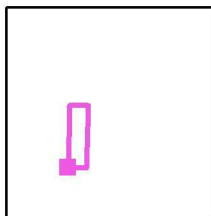
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Exterior Scene 1 / Parking / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 414

Position of surface in external scene:
 Marked point:
 (-24.230 m, -41.385 m, 0.000 m)



Grid: 5 x 17 Points

E_{av} [lx]
 7.36

E_{min} [lx]
 4.04

E_{max} [lx]
 19

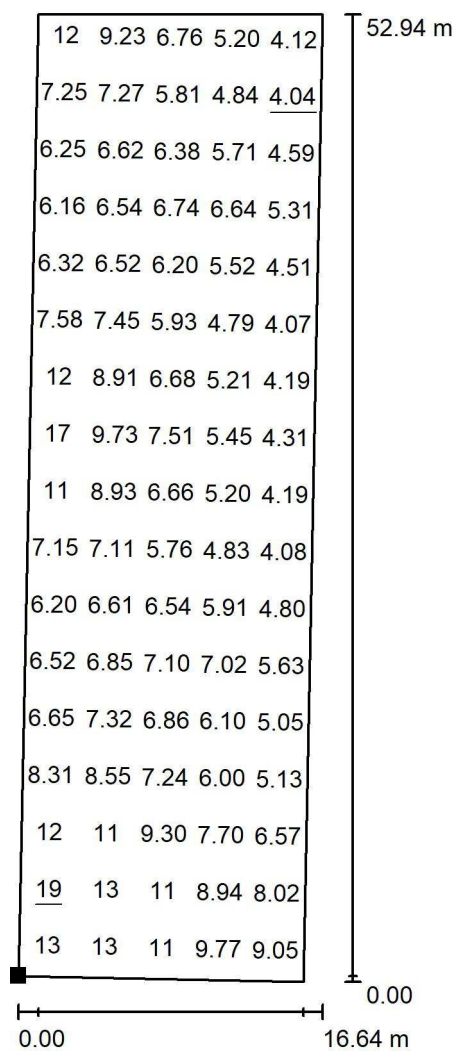
u_0
 0.549

E_{min} / E_{max}
 0.213

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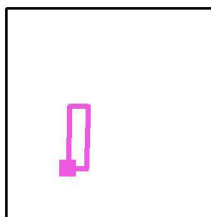
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Exterior Scene 1 / Parking / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 414

Position of surface in external scene:
Marked point:
(-24.230 m, -41.385 m, 0.000 m)



Grid: 5 x 17 Points

E_{av} [lx]
7.36

E_{min} [lx]
4.04

E_{max} [lx]
19

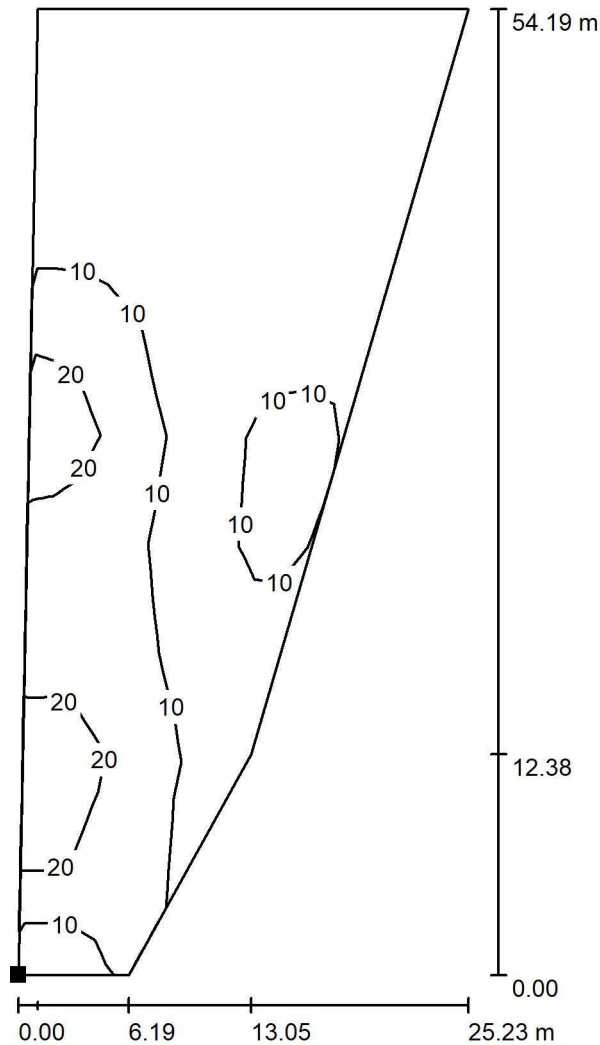
u_0
0.549

E_{min} / E_{max}
0.213

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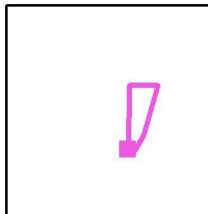
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Exterior Scene 1 / Parking / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 424

Position of surface in external scene:
 Marked point:
 (26.289 m, -27.878 m, 0.000 m)



Grid: 9 x 17 Points

E_{av} [lx]
 10.00

E_{min} [lx]
 1.29

E_{max} [lx]
 32

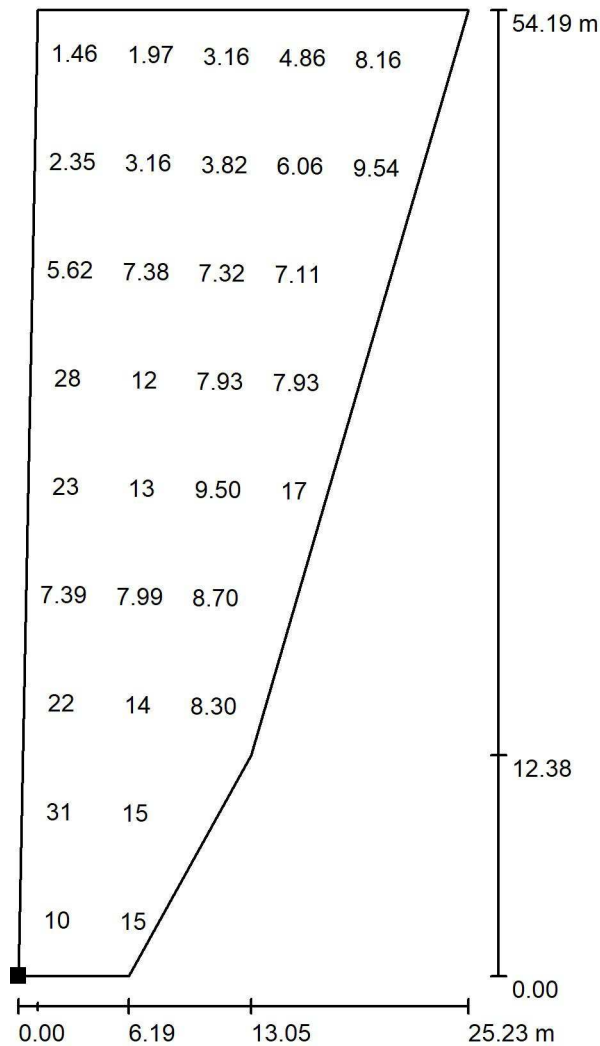
u_0
 0.129

E_{min} / E_{max}
 0.040

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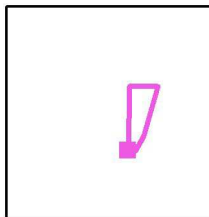
Exterior Scene 1 / Parking / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 424

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(26.289 m, -27.878 m, 0.000 m)



Grid: 9 x 17 Points

E_{av} [lx]
10.00

E_{min} [lx]
1.29

E_{max} [lx]
32

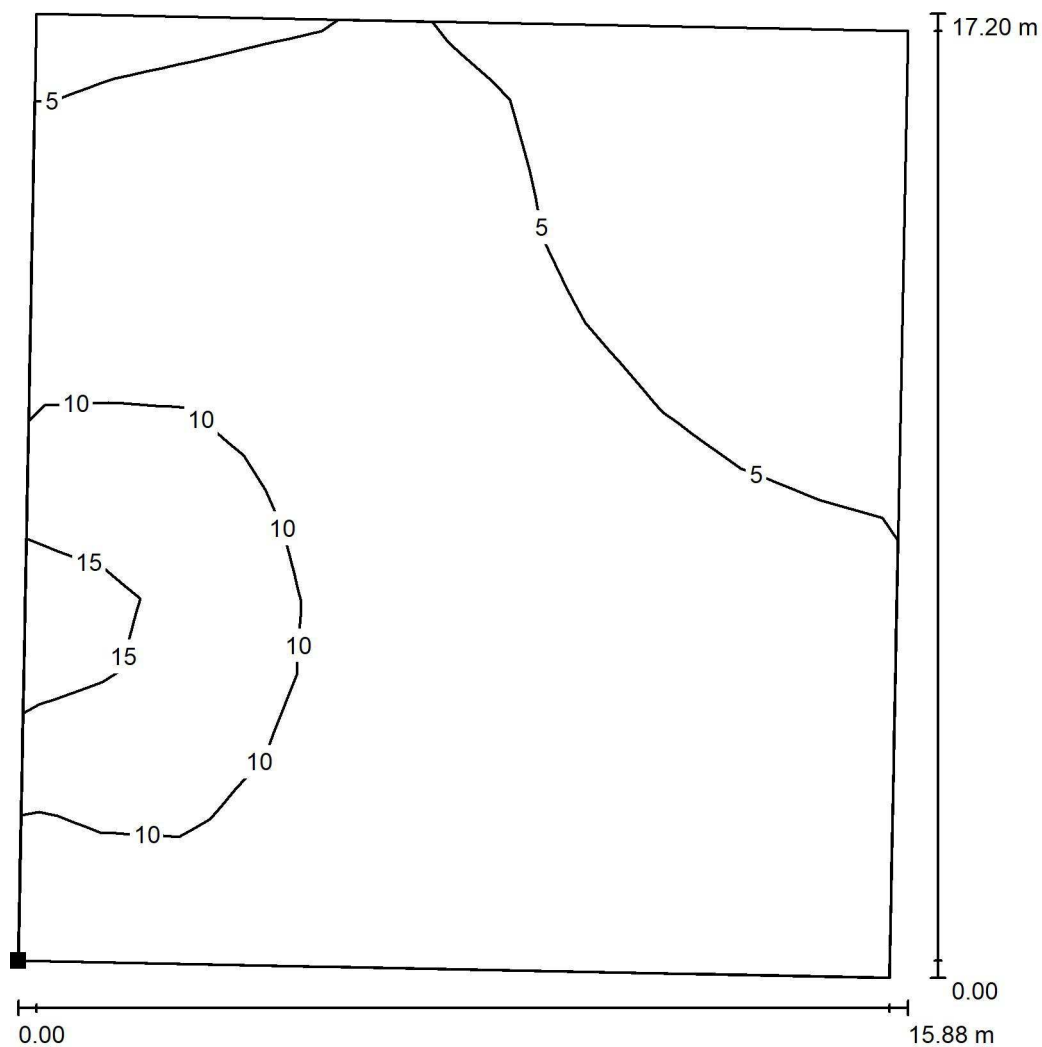
u_0
0.129

E_{min} / E_{max}
0.040

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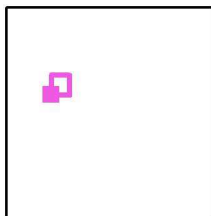
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Exterior Scene 1 / Parking / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 135

Position of surface in external scene:
 Marked point:
 (-38.654 m, 20.007 m, 0.000 m)



Grid: 11 x 13 Points

E_{av} [lx]
 7.05

E_{min} [lx]
 3.23

E_{max} [lx]
 20

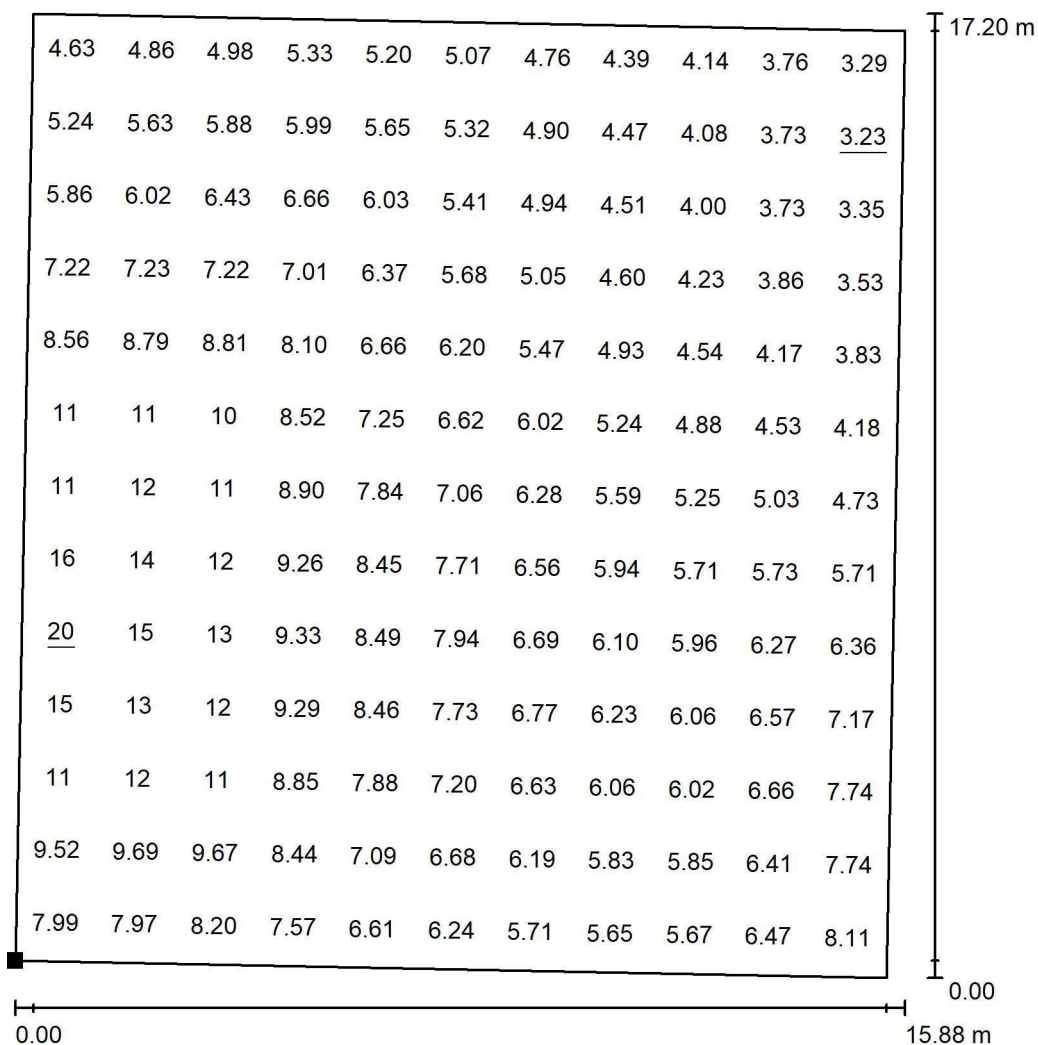
u_0
 0.458

E_{min} / E_{max}
 0.159

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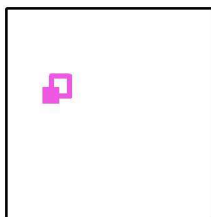
Operator Mike Jakeman
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e-Mail michael.jakeman@thorlux.co.uk

Exterior Scene 1 / Parking / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 135

Position of surface in external scene:
Marked point:
(-38.654 m, 20.007 m, 0.000 m)



Grid: 11 x 13 Points

E_{av} [lx]
7.05

E_{min} [lx]
3.23

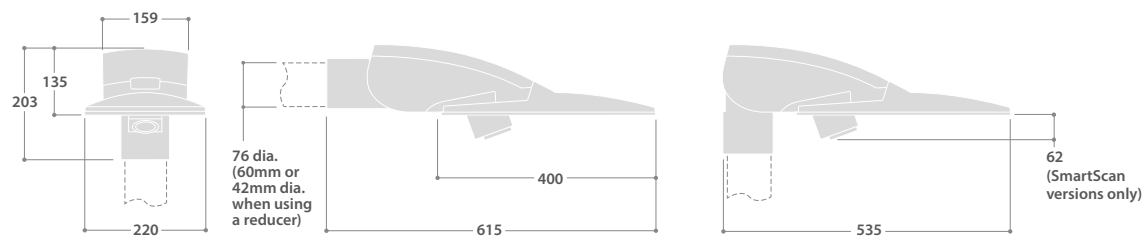
E_{max} [lx]
20

u_0
0.458

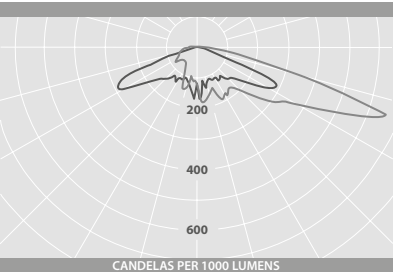
E_{min} / E_{max}
0.159

STARBEAM ECO

DIMENSIONS

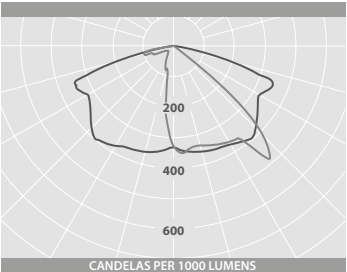


PHOTOMETRIC GUIDE



AREA DISTRIBUTION

Luminaire Lumen Output:
31W = 4135lm
48W = 6745lm



ROADWAY DISTRIBUTION

Luminaire Lumen Output:
31W = 4225lm
48W = 6890lm

OPTIONS

DESCRIPTION	SUFFIX	EXAMPLE
Photocell	PC	SB 19677LPC

ACCESSORIES - see page 3





LED FLOODLIGHTS AND STREET LIGHTS

IP66 IP65 SMART VERSION IK08 CE LED

WINDAGE - 0.06m²

SPECIFICATION

- Die-cast aluminium body and gear compartment finished polyester silver RAL 9006
- Die-cast aluminium, fast release gear compartment lid finished polyester graphite
- Acrylic high efficiency LED lenses
- Area or roadway optical distributions
- Integral high efficiency driver
- Extremely efficient and long system life up to 100,000 hours
- Smart External versions with intelligent lighting control for use up to 12 metres mounting height
- SmartScan wireless technology removes the need for control cabling. Ideal for retro-fit
- Pole top 76mm as standard, adjustable through 90°
- Wall mounting bracket accessory
- Wide range of mounting options (see page 3 for details)
- Photocell option
- Fitted with 4000K LEDs

LED CHARACTERISTICS

CRI	70+
COLOUR TEMPERATURE	4000K
RATED LIFE (HOURS)	100K - L90/B10
PROTECTION	LED PROTECT
DRIVER EFFICIENCY	>90%
REPLACEABLE	YES
POWER FACTOR	>0.9
LL/CW	135.1

For LED characteristics explanation see www.thorlux.com/led-guide

RANGE

	LED	AREA DISTRIBUTION	ROADWAY DISTRIBUTION	APPROX. kg
SMART EXTERNAL	31W	SB 19673SS	SB 19675SS	5.0
	48W	SB 19674SS	SB 19676SS	5.2
STANDARD	31W	SB 19677L	SB 19679L	4.8
	48W	SB 19678L	SB 19680L	5.0

CIRCUIT TYPE -

SMART EXTERNAL SS - SmartScan
STANDARD L - non-dimming (LED)

EMERGENCY VERSION - prefix catalogue number with:

WSB - SmartScan (Only available when selecting the 'SS' suffix) e.g. WSB 19673SS etc. Add 0.3kg to weights listed.



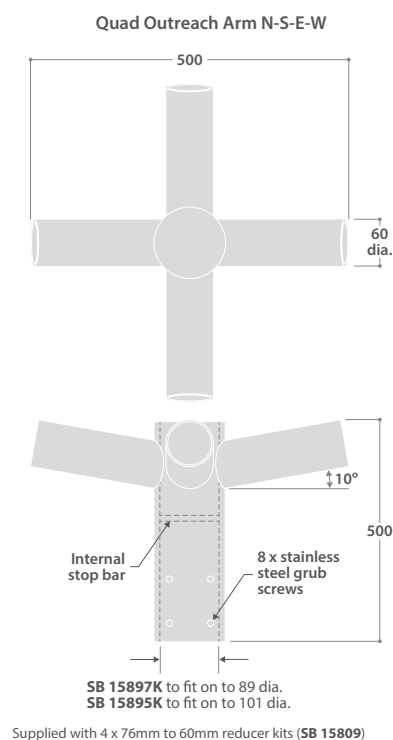
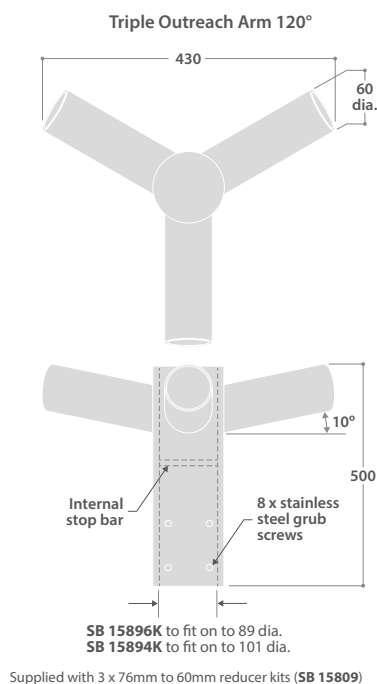
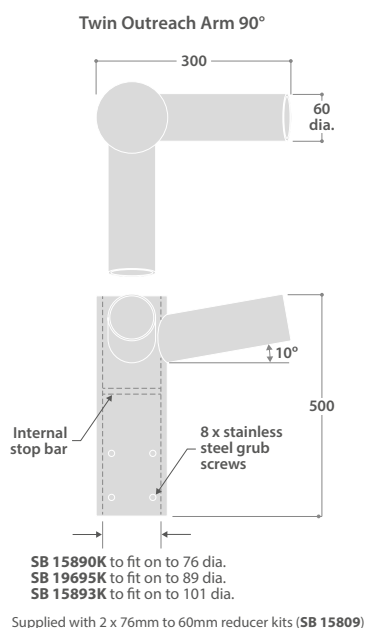
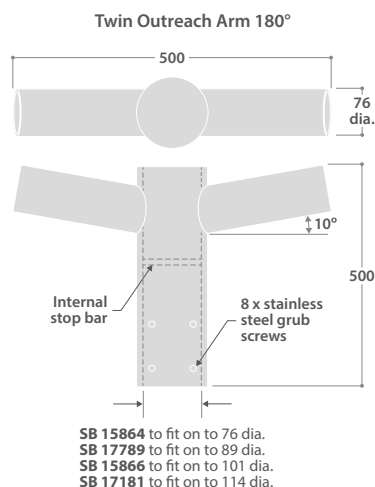
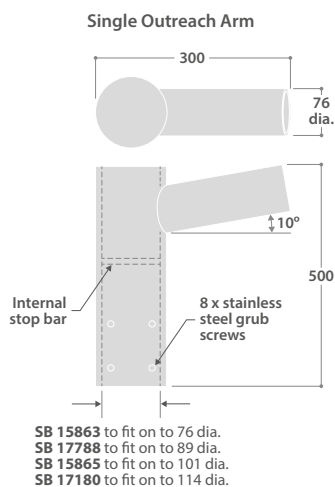
Smart External version

SmartScan Configurations

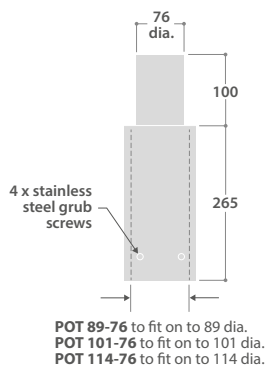


Find out more at www.thorlux.com/smartsan

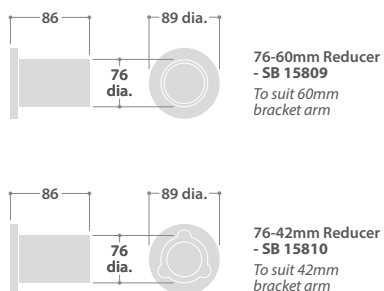
COLUMN MOUNTING OPTIONS



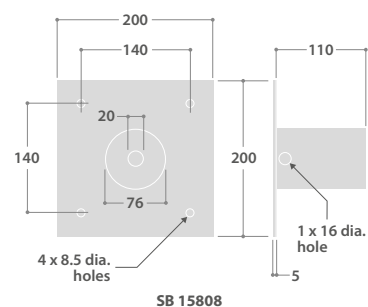
COLUMN ADAPTORS



BRACKET ARM REDUCERS



WALL MOUNTING BRACKET



For further mounting and bracket options please contact our Technical Department

STARBEAM ECO COLUMNS

COLUMNS SPECIFICATION

- Stepped tubular galvanised steel columns, to BS EN 40-2:2004
- Mounting accessories are hot dip galvanised to BS EN ISO 1461:2009
- Supplied with wooden baseboard for mounting cable connection accessories
- Accessories are easily fixed with stainless steel grub screws and have an internal stop to ensure cable exit

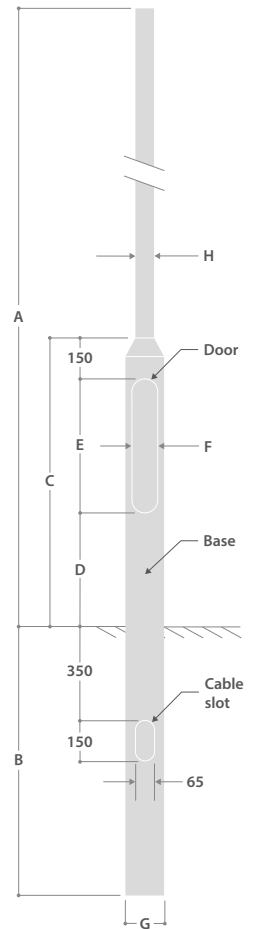
UK DELIVERY

Columns are delivered to site at a pre-arranged time. An off-loading service is not included and it is the responsibility of the client (or client's agent) for the safe undertaking of this requirement. A fork lift truck is recommended to minimise manual handling.

COLUMN RANGE

NOMINAL HEIGHT	CAT. No.	PLANTING DEPTH	BASE HEIGHT	DOOR HEIGHT	DOOR DIMENSIONS		BASE DIAMETER	SHAFT DIAMETER	APPROX. kg	BASEBOARD SIZE
A		B	C	D	E	F	G	H		
Single and Twin Starbeam Standard Columns										
4m	FC4	800	925	300	500	100	140	76	33	89 (w) x 500 (h)
5m	FC5	800	925	300	500	100	140	76	40	89 (w) x 500 (h)
6m	FC6	1000	925	300	500	100	140	76	44	89 (w) x 500 (h)
8m	FC8	1200	1200	400	600	115	168	114 ■	100	89 (w) x 600 (h)
10m	FC10	1500	1300	500	600	115	168	114 ■	142	89 (w) x 600 (h)
Triple and Quad Starbeam Medium Duty Columns										
4m	FC4/89	800	1280	300	600	115	168	89	60	89 (w) x 500 (h)
5m	FC5/89	800	1280	300	600	115	168	89	64	89 (w) x 500 (h)
6m	FC6/89	1000	1280	300	600	115	168	89	68	89 (w) x 500 (h)
8m	FC8	1200	1200	400	600	115	168	114 ■	100	89 (w) x 600 (h)
10m	FC10	1500	1300	500	600	115	168	114 ■	142	89 (w) x 600 (h)

■ Reduced at top to 101mm to accept accessories



ORDERING INFORMATION

	SINGLE COLUMN MOUNT	SINGLE OUTREACH ARM	TWIN OUTREACH ARM 180°	TWIN OUTREACH ARM 90°	TRIPLE OUTREACH ARM 120°	QUAD OUTREACH ARM N-S-E-W
Mounting Height	Column Adaptor	Column Bracket	Column Bracket	Column Bracket	Column Bracket	Column Bracket
4m	FC4	FC4 SB 15863	FC4 SB 15864	FC4 SB 15890K	FC4/89 SB 15896K	FC4/89 SB 15897K
5m	FC5	FC5 SB 15863	FC5 SB 15864	FC5 SB 15890K	FC5/89 SB 15896K	FC5/89 SB 15897K
6m	FC6	FC6 SB 15863	FC6 SB 15864	FC6 SB 15890K	FC6/89 SB 15896K	FC6/89 SB 15897K
8m	FC8 POT 114-76	FC8 SB 15865	FC8 SB 15866	FC8 SB 15893K	FC8 SB 15894K	FC8 SB 15895K
10m	FC10 POT 114-76	FC10 SB 15865	FC10 SB 15866	FC10 SB 15893K	FC10 SB 15894K	FC10 SB 15895K



LEDbar



The patented LEDbar substitutes the conventional Realta lamp source with an 8W LED lamp package. The aluminium bar dissipates the heat generated by the LEDs for optimum performance.

< 2% Upward Light ✓

Help reduce light pollution and protect the night sky by selecting < 2% upward light luminaires

WIDE DISTRIBUTION LED CHARACTERISTICS

CRI	80
COLOUR TEMPERATURE	4000K
RATED LIFE (HOURS)	67K - L80/B10
PROTECTION	LUX GUARD
DRIVER EFFICIENCY	>80%
REPLACEABLE	YES
POWER FACTOR	>0.95
LL/CW	120.0

AREA DISTRIBUTION LED CHARACTERISTICS

CRI	70+
COLOUR TEMPERATURE	4000K
RATED LIFE (HOURS)	100K - L90/B10
PROTECTION	LED PROTECT
DRIVER EFFICIENCY	>85%
REPLACEABLE	YES
POWER FACTOR	>0.95
LL/CW	127.6

For LED characteristics explanation see www.thorlux.com/led-guide



Smart External version



Area distribution

Wide distribution

Realta Design Registration Number 3024955

HIGH PERFORMANCE LUMINAIRES
DESIGNED TO MINIMISE LIGHT
POLLUTION AND ENERGY
CONSUMPTION

IP66 IK10++ / IK10 / IK06 UK CA CE

LED

SPECIFICATION

- Graphite full polyester powder finish. Silver option
- Strong high-pressure die-cast LM2 aluminium body
- High efficiency prismatic polycarbonate or borosilicate glass front refractor
- Wide distribution (8W) or area distribution (20W, 34W and 42W) options
- Highly specular, multi-faceted injection moulded vacuum metallised reflector on wide distribution versions
- Excellent distribution with less than 2% upward light component
- Optional photocell control
- Smart External versions with intelligent lighting control for use up to 10 metres mounting height
- SmartScan wireless technology removes the need for control cabling. Ideal for retro-fit
- Fitted with 4000K LEDs

SmartScan Configurations



Find out more at www.thorlux.com/smartsan

RANGE

	LED	WIDE DISTRIBUTION	AREA DISTRIBUTION	APPROX. kg
SMART EXTERNAL	IK10 Polycarbonate Cover			
	8W	RL 19069SS		3.9
	20W		RL 19110SS	4.0
	34W		RL 19111SS	4.0
	42W		RL 19112SS	4.0
STANDARD	IK10++ Polycarbonate Cover			
	8W	RL 19071L		3.8
	20W		RL 19116L	3.9
	34W		RL 19117L	3.9
	42W		RL 19118L	3.9
	IK06 Glass Cover			
	8W	RL 19073L		4.6

CIRCUIT TYPE -

SMART EXTERNAL SS - SmartScan
STANDARD L - non-dimming (LED)

SILVER OPTION - add suffix **SV3** e.g. **RL 19069SSSV3** etc.

EMERGENCY VERSION - prefix catalogue number with:

ERL - Emergency / **TRL** - AutoTest (Not available when selecting the 'SS' suffix)

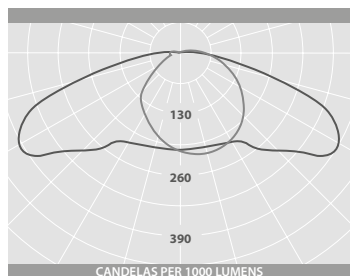
WRL - SmartScan

e.g. **WRL 19069SS** etc.

Add 0.4kg to weights listed

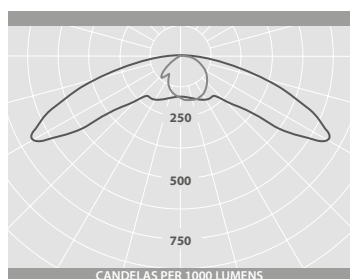
Photometrics, Accessories, Options and Dimensions pages 3 and 4

PHOTOMETRIC GUIDE



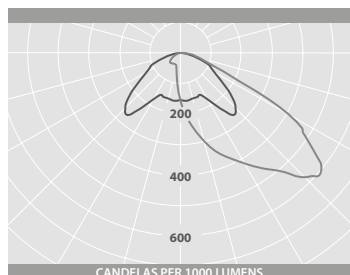
GLASS COVER (Wide Distribution)

Luminaire Lumen Output:
8W = 1175lm



POLYCARBONATE COVER (Wide Distribution)

Luminaire Lumen Output:
8W = 1320lm



POLYCARBONATE COVER (Area Distribution)

Luminaire Lumen Output:
20W = 2840lm
34W = 4850lm
42W = 5635lm



Single luminaire pole mounting attachment



Twin luminaire pole mounting attachment

ACCESSORIES

DESCRIPTION	CAT. No.	APPROX. kg
Single luminaire pole mounting attachment (for 60mm dia. poles)	RL 13759	1.6
Twin luminaire pole mounting attachment (for 60mm dia. poles)	RL 14175	2.6
76/60mm dia. spigot adaptor (for retro-fit on 76mm dia. columns)	RL 11184	0.8

OPTIONS

DESCRIPTION	SUFFIX	EXAMPLE
Photocell (standard versions only)	PC	RL 19071LPC
Tamper resistant screws ♦	T	RL 19071LT

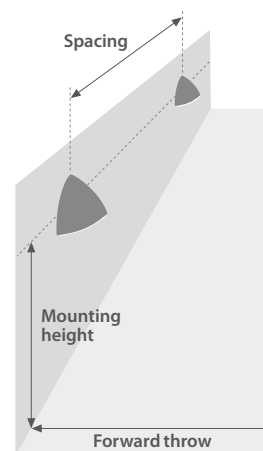
♦ To fasten tamper resistant screws order special screwdriver **KEY 10008**

PERFORMANCE GUIDE - Wide Distribution

Photometric Performance -
8W LED with polycarbonate cover

SPACING	AVERAGE ILLUMINANCE	UNIFORMITY (min/av)
3m mounting height - 3m forward throw		
10m ctrs	22 lux	0.48
15m ctrs	15 lux	0.47
20m ctrs	11 lux	0.22
4m mounting height - 4m forward throw		
10m ctrs	17 lux	0.48
15m ctrs	11 lux	0.45
20m ctrs	8 lux	0.47
5m mounting height - 5m forward throw		
10m ctrs	13 lux	0.42
15m ctrs	9 lux	0.48
20m ctrs	7 lux	0.45

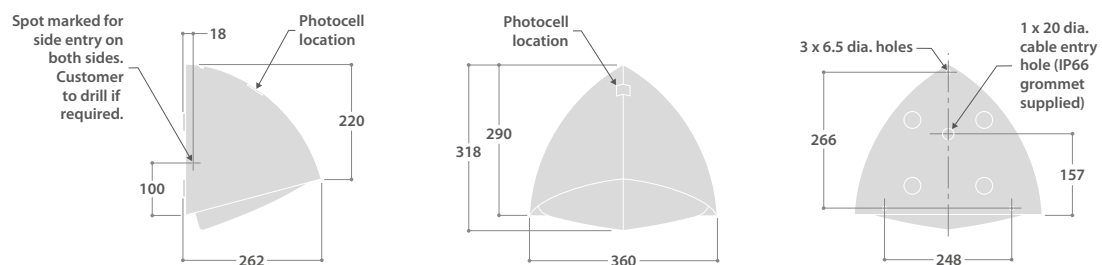
FIGURES ARE BASED ON INITIAL LUMENS



e.g. At 3m mounting height and 10m centres: 22 lux average horizontal illuminance at ground level



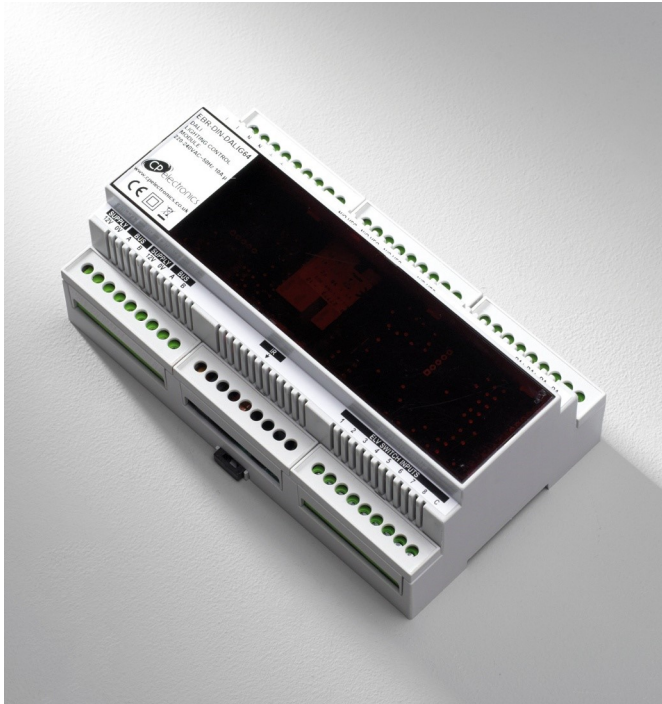
DIMENSIONS



EBR-DIN-DALIG64

DINrail DALI lighting control module

Overview



The EBR-DIN-DALIG64 is a Rapid lighting control module designed for controlling 64 addressable DALI devices such as fluorescent or LED lighting ballasts. There are two relays providing a switched live output and a third relay for emergency test. Additionally there is a volt free contact to control external devices.

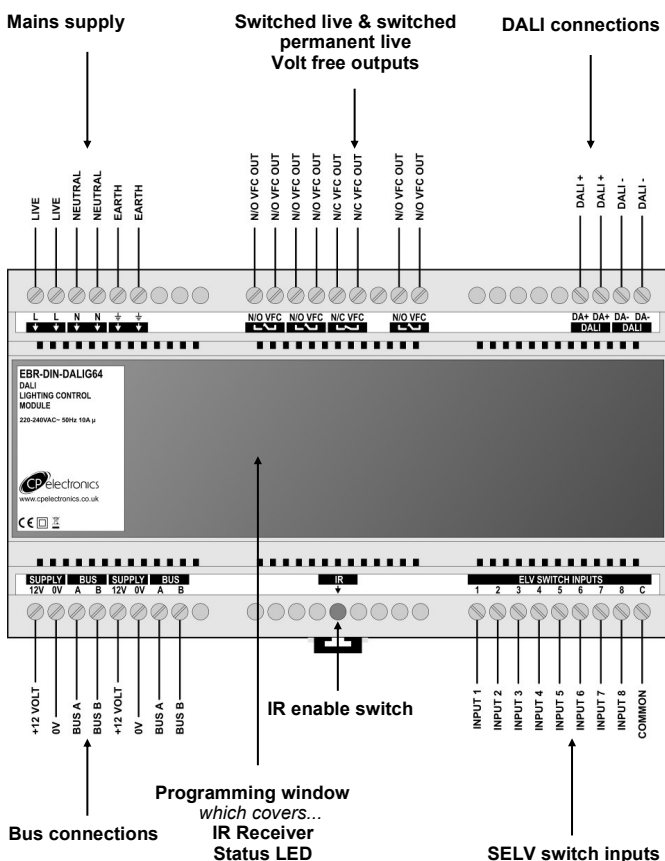
This LCM also has a total of 8 switch inputs and 2 DALI connections.

Used in conjunction with our range of DALI presence detectors a single DALI cable can be run to digitally control all the lighting and power the sensors. This saves time and money on additional specialist cable. It is ideal for chilled beam, continuous run lighting, and core areas.

Please speak to our technical team for further information.

Features

Front features



Mains connections

- Live, Earth, Neutral.

SELV switch inputs

- 8 SELV switch inputs.

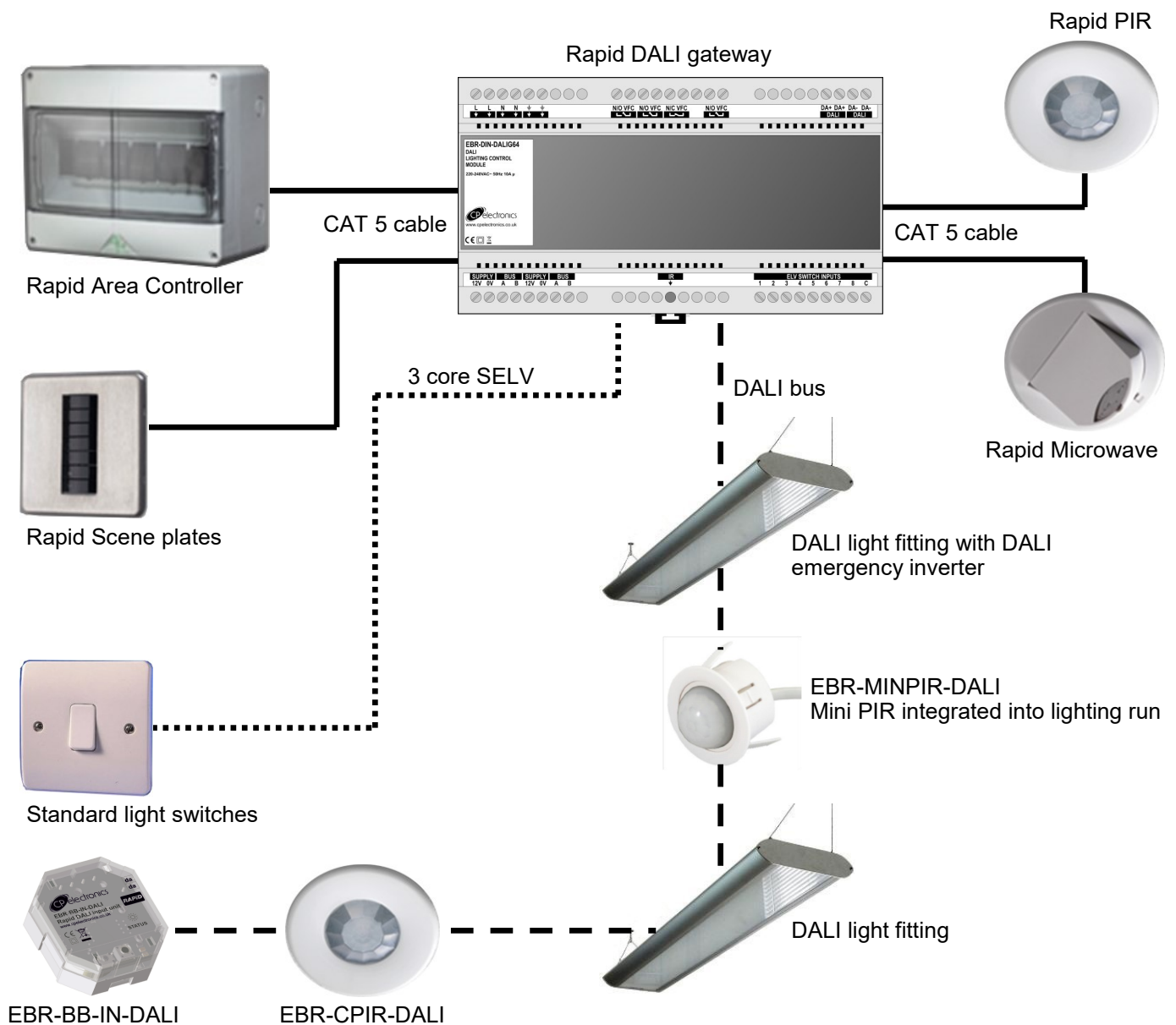
Volt free outputs

- 3 x normally open 10A 230VAC rated Voltage free relays. Used to switch external peripherals, such as HVAC and BMS systems.
- 1 x normally closed 6A 230VAC rated Voltage free relay. Suitable for emergency testing.

Communication ports

- 2 x power and Rapid network bus ports
- 2 x DALI connections

System wiring example



DALI bus loading

Devices (detectors / input units) and ballast combinations for 200mA supply.

This assumes that the sensor LEDs are all on, and the sensor is receiving IR communication.

- 4 devices and up to 64 ballasts
- 5 devices and up to 55 ballasts
- 6 devices and up to 44 ballasts
- 7 devices and up to 33 ballasts
- 8 devices and up to 22 ballasts
- 9 devices and up to 12 ballasts
- 10 devices and up to 2 ballasts

In most realistic scenarios, only one LED is on at a time and only one detector is receiving IR; guidance changes to.

- 10 devices up to 64 ballasts
- 11 devices up to 60 ballasts
- 12 devices up to 55 ballasts
- 13 devices up to 50 ballasts
- 14 devices up to 48 ballasts
- 15 devices up to 44 ballasts

Addressing limits of DG64

- 5 input units of 7 channels each
- 10 detectors

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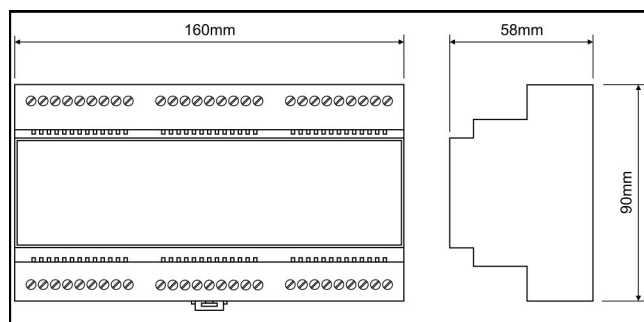
Technical data

Dimensions	See diagrams opposite	
Weight	0.40kg	
Supply Voltage	220 - 240VAC	
Frequency	50Hz	
Relay rating	Normally open relays	10A
	Normally closed relay	6A
	Volt free output	10A
Terminal Capacity	2.5mm ²	
Power consumption	On 2930mW, Off 2120mW	
DALI Voltage	16VDC via DALI	
DALI Output Current	250mA (maximum)	
DALI bus	Cannot be considered as SELV since DALI, ballasts only offer basic insulation, therefore all devices on the DALI bus must be wired as if carrying mains potential.	
Temperature	-10°C to 35°C	
Humidity	5 to 95% non-condensing	
Material (casing)	Flame retardant ABS and PC/ABS	
Classifications	Insulation	Class II
	Purpose	Operating control
	Construction	Incorporated control
	Type of action	Type 1.B action micro disconnection
	Software class	Class A
	Pollution	Degree 2

Compliance EMC-2014/30/EU
LVD-2014/35/EU



For further compliance information visit
www.cpelectronics.co.uk/compliance



Important

For lighting purposes only with suitable circuit protection. For fixed wiring only.
Must be mounted in a suitable enclosure such that terminals are not exposed.

Part numbers

	Part number	Description
Control module	EBR-DIN-DALIG64	DINrail DALI lighting control module
	EBR-DIN-DALIG64-EG	DINrail DALI lighting control module + energy measurement
Accessories	UNLCDHS	Universal LCD programming handset



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