

Our Lady's RC School External

Installation : LED

Project number : 64264

Customer : CEF Nelson

Processed by : John Estabrook

Date : 13.10.2022

Project description:

> Lighting calculation completed on a point for point basis against the competitors scheme, light levels and uniformity to be confirmed suitable prior to order.

All calculations unless stated have been based upon an open plan area without any obstructions above the working plane. With regards to CIBSE/ BSEN12464-1:2011 we have shown illuminance levels and ratios for your ultimate approval. UGR and luminance values are available for your approval if necessary. It may be necessary in some instances to check UGR values even if the luminance values are below the compliant threshold.

Emergency lighting has been designed in accordance with BS5266-1:2016 but is an indicative layout only - additional lighting may be required. All emergency lighting is to be checked and confirmed with a local building/fire control officer and ultimately approved by the owner of the building. Any emergency lighting calculations that have been completed have been based on 0.5 lux for open areas and 1 lux for escape routes (where details of escape routes have been given).

Please be aware of L2 requirements and check that conformity has been met where required. In addition, ensuring that fire tents are used where needed to conform to current building regulations is vital; please contact our sales office for a quotation.

All luminaires used are subject to approval/certification of client/end user.

Common design parameters (shown below) have been used in order to carry out all calculations.

If any part of this scheme or luminaire choice within this scheme is deemed not suitable for the application, please contact us for re-calculations to be carried out prior to an order being placed.

All calculations have been based upon rated lumen outputs and may vary with ambient on site temperatures.

Please ensure that this lighting scheme complies with all requirements, and if further details/calculations are required please contact us via the below details.

Final quantities are to be confirmed prior to an order/installation and we will not be held responsible for any errors or omissions.

Nominal Values Used:

Maintenance Factor - 0.8

Reflectance Values (Office Type Interior): 70\50\20

Reflectance Values (Warehouse Type Interior): 50\30\20

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

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1 Luminaire data

1.1 Tamlite Lighting, CITY BL (CBL90NW)

1.1.1 Data sheet

Manufacturer: Tamlite Lighting



CBL90NW Bollard CITY BL

CITY BL - BOLLARD - 9W - 4000K - Fixed output

Luminaire data

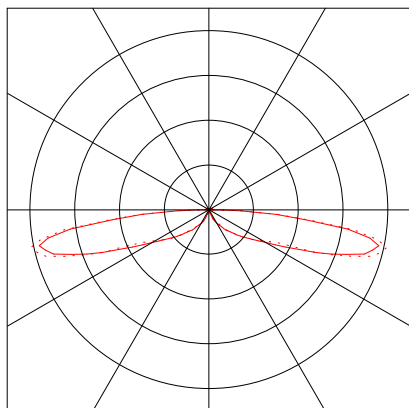
Absolute Photometry

Luminaire efficacy : 100 lm/W
Classification : A11 ↓96.4% ↑3.6%
CIE Flux Codes : 4 18 59 96 100
UGR 4H 8H : 29.0 / 28.9
Control gear : LED Driver
Power : 9 W
Luminous flux : 900 lm

Equipped with

Quantity : 1
Designation :
Colour :
Socket : N/A

Dimensions : Ø180 mm x 1000 mm



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1 Luminaire data

1.2 Tamlite Lighting, PLAZA T4 (PLZ690T4NW)

1.2.1 Data sheet

Manufacturer: Tamlite Lighting



PLZ690T4NW Post Top PLAZA T4

PLAZA T4 - Lantern - 360° area optic - 55W - 4000K - Fixed output

Luminaire data

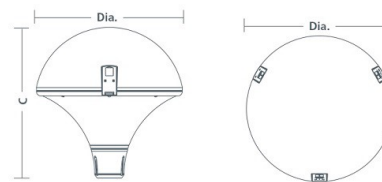
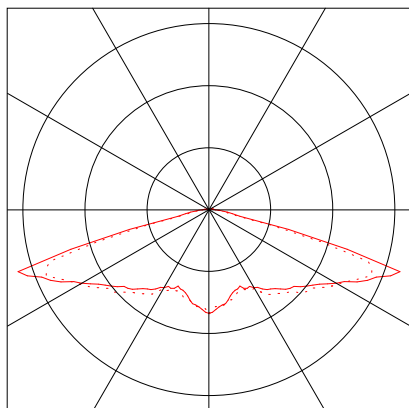
Absolute Photometry

Luminaire efficacy : 125.45 lm/W
Classification : A20 ↓98.3% ↑1.7%
CIE Flux Codes : 22 53 93 98 100
UGR 4H 8H : 30.0 / 29.6
Control gear : LED Driver
Power : 55 W
Luminous flux : 6900 lm

Equipped with

Quantity : 1
Designation :
Colour :
Socket : N/A

Dimensions : Ø496 mm x 511 mm



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1 Luminaire data

1.3 Tamlite Lighting, CITY RL T4 (CTRT4570NWG)

1.3.1 Data sheet

Manufacturer: Tamlite Lighting



CTRT4570NWG Road lanterns CITY RL T4

CITY RL T4 - Road lantern - Area optic - 40W - 4000K - Fixed output

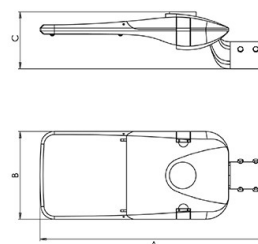
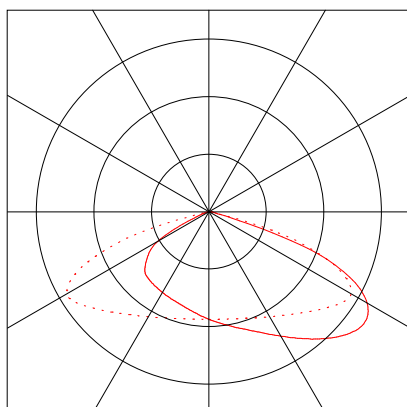
Luminaire data

Absolute Photometry
Luminaire efficacy : 142.5 lm/W
Classification : A30 ↓100.0% ↑0.0%
CIE Flux Codes : 32 70 97 100 100
UGR 4H 8H : 35.1 / 34.5
Control gear : LED Driver
Power : 40 W
Luminous flux : 5700 lm

Equipped with

Quantity : 1
Designation :
Colour :
Socket : N/A

Dimensions : 230 mm x 595 mm x 140 mm



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1 Luminaire data

1.4 Tamlite Lighting, CITY WL T4 (!CWL160T4NWBM3)

1.4.1 Data sheet

Manufacturer: Tamlite Lighting



!CWL160T4NWBM3 Bulkhead - Exterior CITY WL T4

CITY WL T4 - Wall exterior - 19W - 4000K - Fixed output - Emergency

Luminaire data

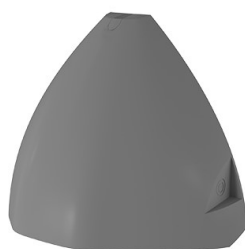
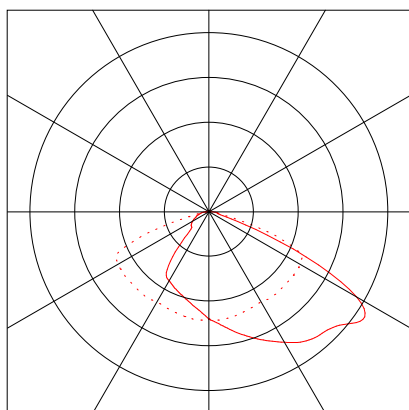
Absolute Photometry

Luminaire efficacy : 145.45 lm/W
Classification : A30 ↓99.0% ↑1.0%
CIE Flux Codes : 38 74 97 99 100
UGR 4H 8H : 28.0 / 27.7
Control gear : LED Driver
Power : 11 W
Luminous flux : 1600 lm

Equipped with

Quantity : 1
Designation :
Colour :
Socket : N/A

Dimensions : 319 mm x 165 mm x 244 mm

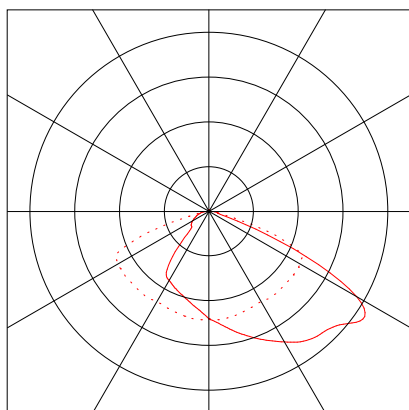


Emergency Lighting

Emergency lighting with own light source

Absolute Photometry

Luminaire efficacy : 15.79 lm/W
Power : 19 W
Luminous flux : 300 lm



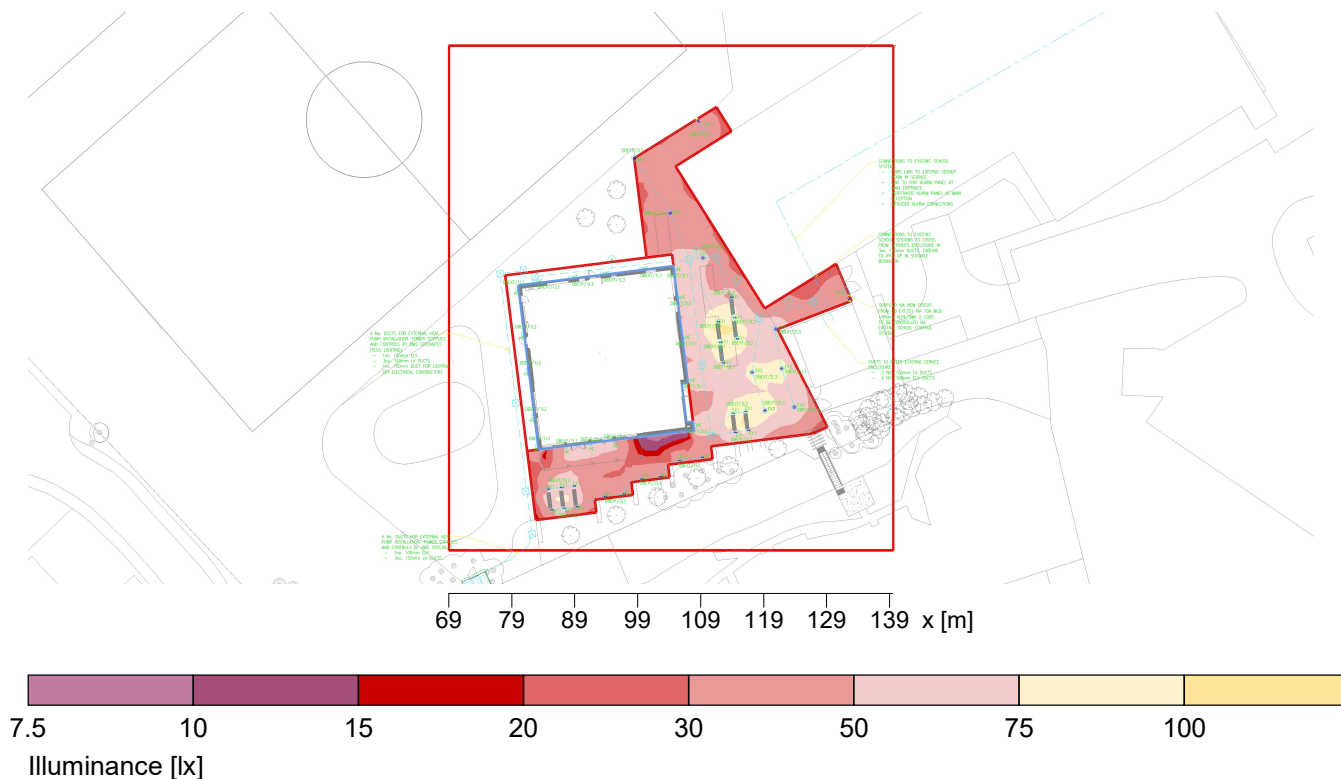
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2 Exterior 1

2.2 Summary, Exterior 1

2.2.1 Result overview, Measuring area 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux	114500 lm
Total power	914 W
Total power per area (5640.00 m²)	0.16 W/m²

Illuminance

Average illuminance	Em	47 lx
Minimum illuminance	Emin	10 lx
Maximum illuminance	Emax	103 lx
Uniformity Uo	Emin/Em	1:4.83 (0.21)
Diversity Ud	Emin/Emax	1:10.5 (0.1)

Type No. Make

Tamlite Lighting	
1	23 x
	Order No. : CBL90NW
	Luminaire name : CITY BL
	Equipment : 1 x 9 W / 900 lm
2	8 x
	Order No. : PLZ690T4NW
	Luminaire name : PLAZA T4
	Equipment : 1 x 55 W / 6900 lm

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2 Exterior 1

2.2 Summary, Exterior 1

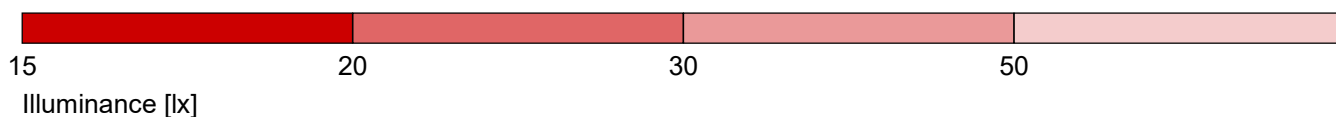
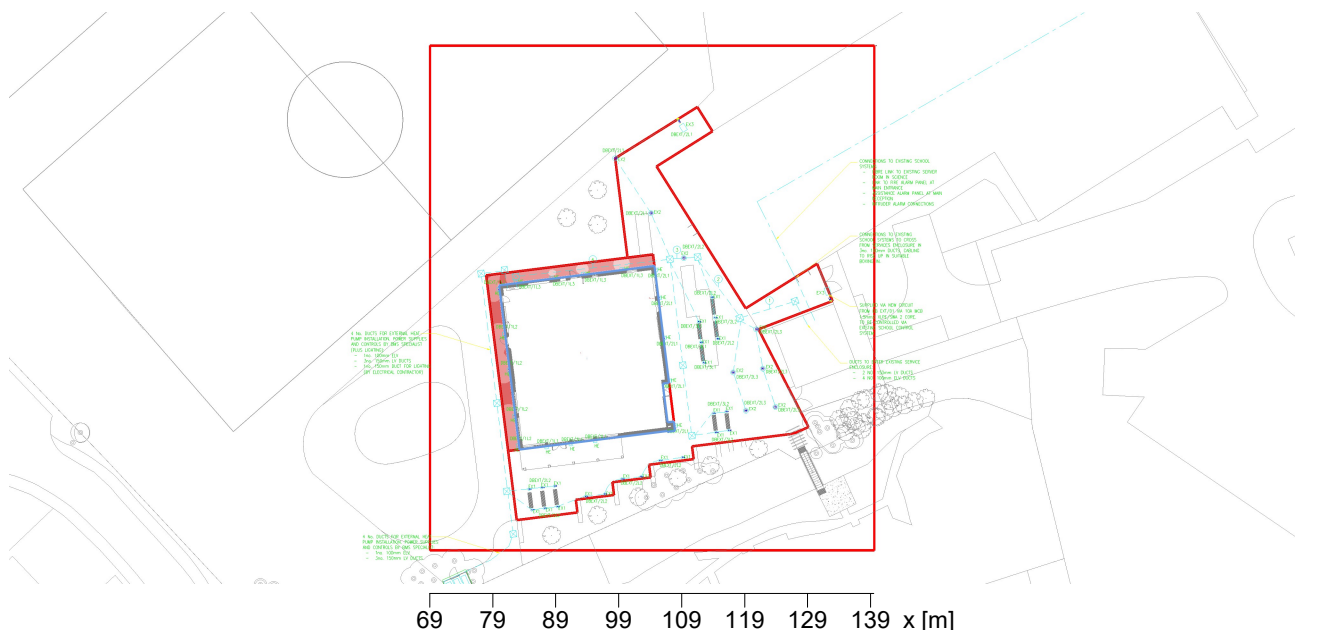
2.2.1 Result overview, Measuring area 1

3	2 x	Order No.	: CTRT4570NWG
		Luminaire name	: CITY RL T4
		Equipment	: 1 x 40 W / 5700 lm

4	17 x	Order No.	: ICWL160T4NWBM3
		Luminaire name	: CITY WL T4
		Equipment	: 1 x 11 W / 1600 lm
		Emergency	: 300 lm

2.2 Summary, Exterior 1

2.2.2 Result overview, Measuring area 2



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (5640.00 m²)

114500 lm
 914 W
 0.16 W/m²

Illuminance

Average illuminance	Em	36.5 lx
Minimum illuminance	Emin	17.9 lx
Maximum illuminance	Emax	56.3 lx
Uniformity Uo	Emin/Em	1:2.04 (0.49)
Diversity Ud	Emin/Emax	1:3.15 (0.32)

Type No. Make

Tamlite Lighting

1	23 x	Order No.	: CBL90NW
		Luminaire name	: CITY BL
		Equipment	: 1 x 9 W / 900 lm
2	8 x	Order No.	: PLZ690T4NW
		Luminaire name	: PLAZA T4
		Equipment	: 1 x 55 W / 6900 lm

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2.2 Summary, Exterior 1

2.2.2 Result overview, Measuring area 2

3	2 x	Order No.	: CTRT4570NWG
		Luminaire name	: CITY RL T4
		Equipment	: 1 x 40 W / 5700 lm

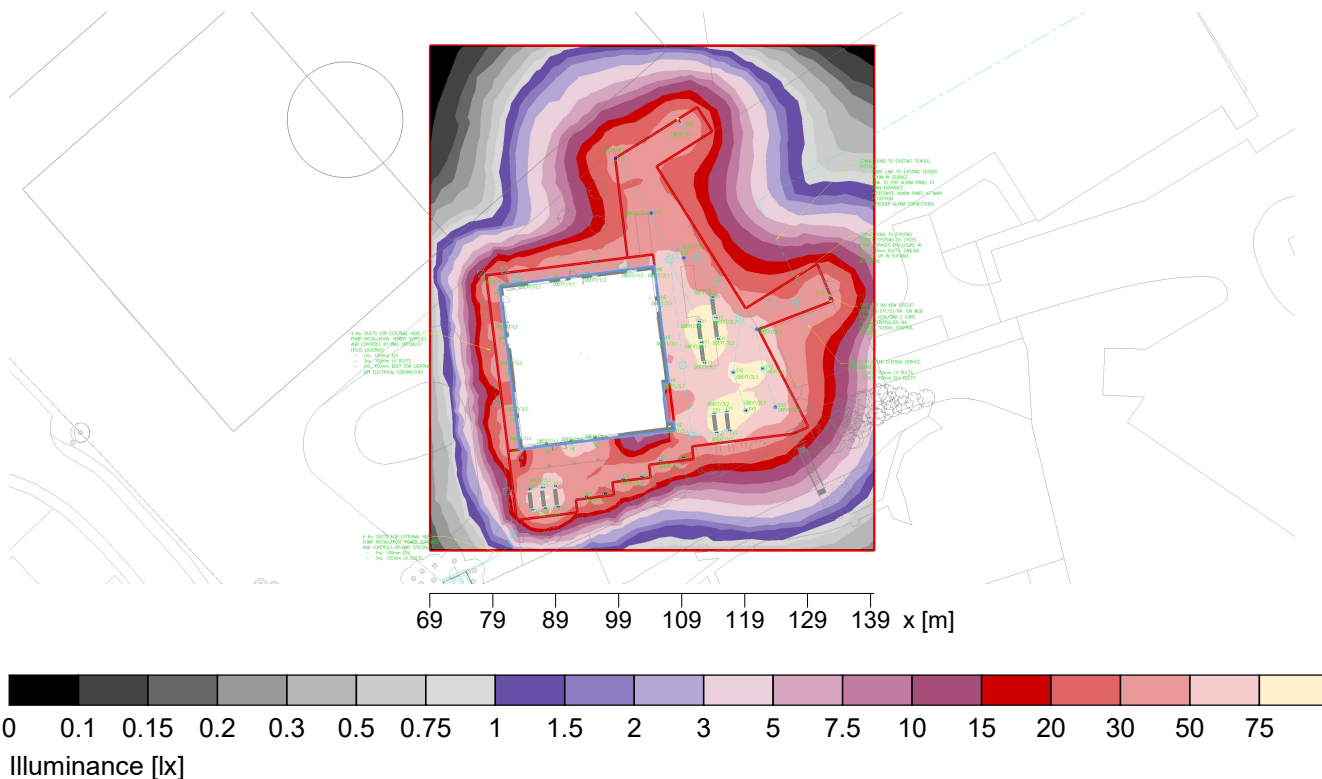
4	17 x	Order No.	: ICWL160T4NWBM3
		Luminaire name	: CITY WL T4
		Equipment	: 1 x 11 W / 1600 lm
		Emergency	: 300 lm

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2.2 Summary, Exterior 1

2.2.3 Result overview, Evaluation area 1



General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 0.80

Total luminous flux
 Total power
 Total power per area (5640.00 m²)

114500.00 lm
 914.0 W
 0.16 W/m² (0.98 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 Em 16.6 lx
 Emin 0.1 lx
 Emin/Em (Uo) 0.00
 Emin/Emax (Ud) 0.00
 Position 0.00 m

Type No.\Make

Tamlite Lighting	
1	23 x
	
Order No.	: CBL90NW
Luminaire name	: CITY BL
Equipment	: 1 x 9 W / 900 lm
2	8 x
	
Order No.	: PLZ690T4NW
Luminaire name	: PLAZA T4
Equipment	: 1 x 55 W / 6900 lm

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2.2 Summary, Exterior 1

2.2.3 Result overview, Evaluation area 1

3	2 x	Order No.	: CTRT4570NWG
		Luminaire name	: CITY RL T4
		Equipment	: 1 x 40 W / 5700 lm

4	17 x	Order No.	: ICWL160T4NWBM3
		Luminaire name	: CITY WL T4
		Equipment	: 1 x 11 W / 1600 lm
		Emergency	: 300 lm

