Proposed Development - Carrick-on-Shannon Ireland

Installation : STADIA

Project number : 53356
Customer :
Processed by : Nick Cadman
Date : 08.12.2020

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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.
In the case of office lighting we have defaulted to 300lux average unless advised otherwise by specification. 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.
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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.

1 Luminaire data

1.1 Tamlite Lighting, STADIA (STA850NWMB)

1.1.1 Data sheet

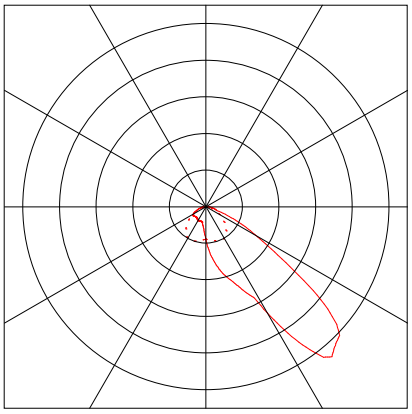
Manufacturer: Tamlite Lighting

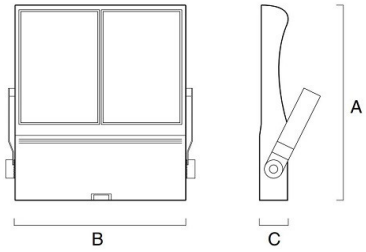
STA850NWMB Floodlight STADIA
Asymmetric, Low glare LED floodlight

Luminaire data		
Luminaire efficiency	:	100%
Luminaire efficacy	:	135.33 lm/W
Classification	:	A40 ↓100.0% ↑0.0%
CIE Flux Codes	:	45 85 97 100 100
UGR 4H 8H	:	34.6 / 27.1
Control gear	:	LED Driver
Power	:	600 W
Luminous flux	:	81200 lm

Equipped with		
Quantity	:	1
Designation	:	
Power	:	600 W
Colour	:	
Luminous flux	:	81200 lm

Dimensions : 601 mm x 752 mm x 143 mm

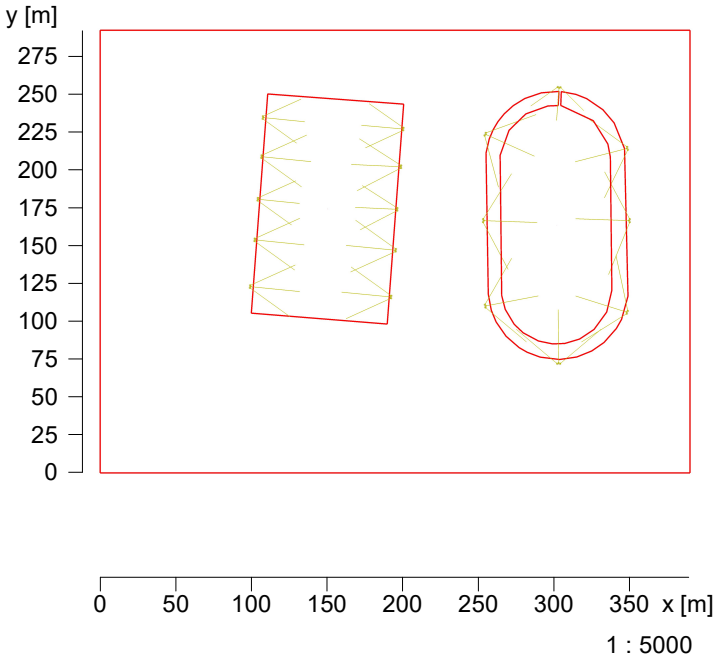




2 Room1

2.1 Description, Room1

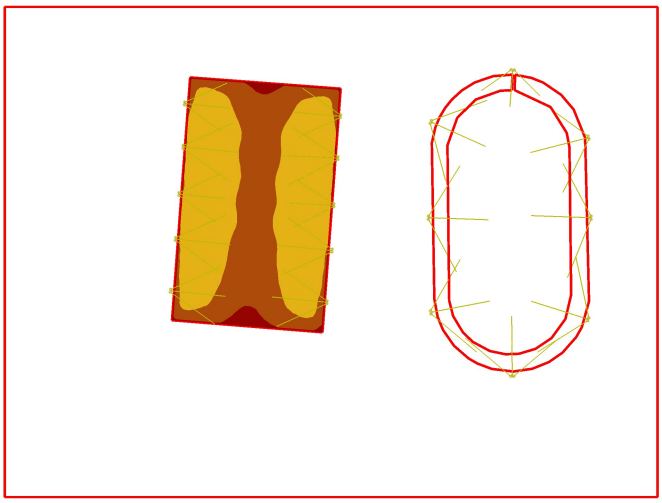
2.1.1 Floor plan



2 Room1

2.2 Summary, Room1

2.2.1 Result overview, Measuring area 1



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	4384800 lm
Total power	32400 W
Total power per area (113676.96 m²)	0.29 W/m²

Illuminance

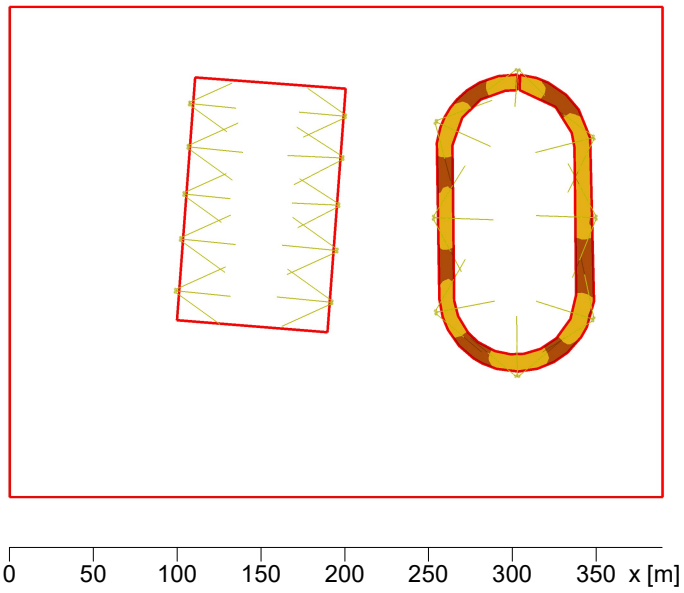
Average illuminance	Em	106 lx
Minimum illuminance	Emin	35.4 lx
Maximum illuminance	Emax	180 lx
Uniformity Uo	Emin/Em	1:3 (0.33)
Diversity Ud	Emin/Emax	1:5.08 (0.2)

Type No.\Make

		Tamlite Lighting	
1	54	Order No.	: STA850NWMB
		Luminaire name	: STADIA
		Equipment	: 1 x 600 W / 81200 lm

2.2 Summary, Room1

2.2.2 Result overview, Measuring area 2



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	4384800 lm
Total power	32400 W
Total power per area (113676.96 m²)	0.29 W/m²

Illuminance

Average illuminance	Em	110 lx
Minimum illuminance	Emin	58.8 lx
Maximum illuminance	Emax	163 lx
Uniformity Uo	Emin/Em	1:1.88 (0.53)
Diversity Ud	Emin/Emax	1:2.77 (0.36)

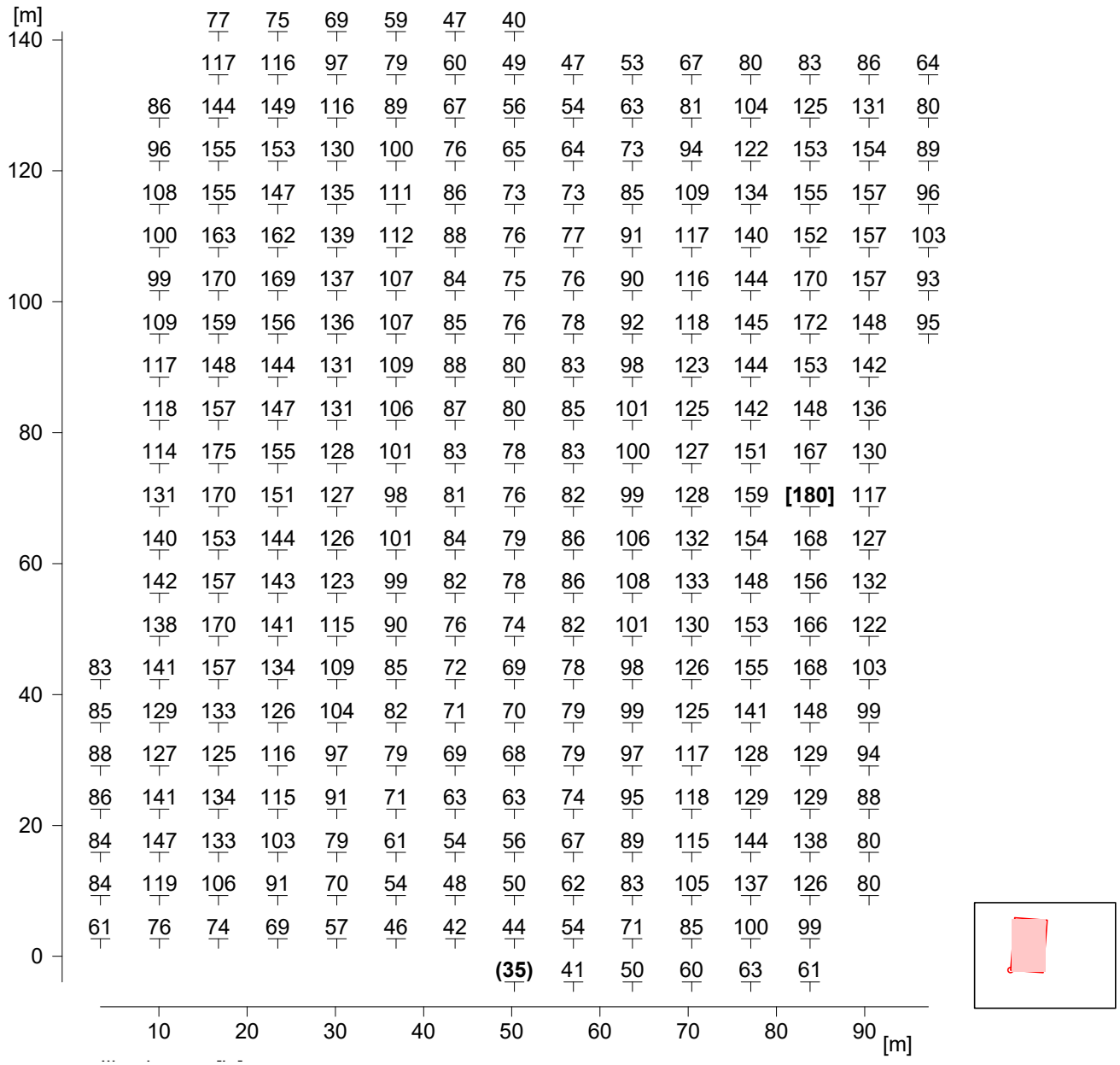
Type No.\Make

		Tamlite Lighting	
1	54	Order No.	: STA850NWMB
		Luminaire name	: STADIA
		Equipment	: 1 x 600 W / 81200 lm

2 Room1

2.3 Calculation results, Room1

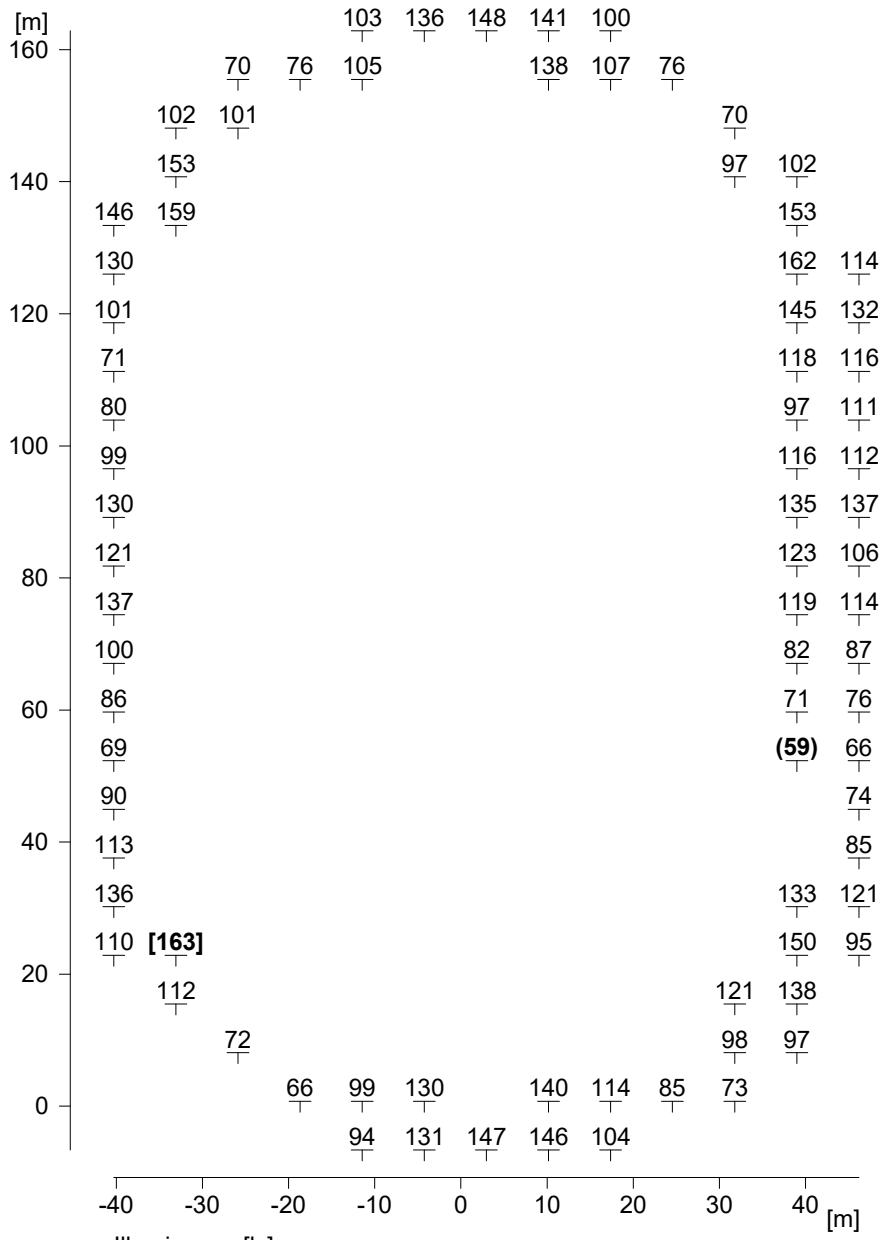
2.3.1 Table, Measuring area 1 (E)

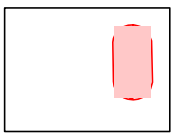


Height reference plane		: 0.00 m
Average illuminance	Em	: 106 lx
Minimum illuminance	Emin	: 35 lx
Maximum illuminance	Emax	: 180 lx
Uniformity Uo	Emin/Em	: 1 : 3.00 (0.33)
Diversity Ud	Emin/Emax	: 1 : 5.08 (0.20)

2.3 Calculation results, Room1

2.3.2 Table, Measuring area 2 (E)





Height reference plane		: 0.00 m
Average illuminance	Em	: 110 lx
Minimum illuminance	Emin	: 59 lx
Maximum illuminance	Emax	: 163 lx
Uniformity Uo	Emin/Em	: 1 : 1.88 (0.53)
Diversity Ud	Emin/Emax	: 1 : 2.77 (0.36)