Alton Towers Car Park J

Installation : Proposed New Lighting

Project number : 141116-535
Customer : BLES
Processed by : KC
Date : 21.02.2017

Project description:

Calculation based on standard reflectances.

Room/exterior area dimensions and floor to ceiling/mounting heights issued from wholesaler.

PLEASE NOTE: All room/exterior area dimensions to be checked on-site prior to installation.

Lighting designed to CIBSE guidelines where applicable and/or client requirements, all stated lux values are for overall averages across the room reference plane.

If dimmable luminaires have been specified, then it is the responsibility of the contractor to establish which dimming ballasts/system is required by the lighting control ethos/specification.

Emergency lighting design conforms to BS5266/EN1838 where applicable. Please note that 'points of emphasis' such as locations of fire fighting equipment also require emergency lighting, these locations are to be confirmed by contractor. Please note that the emergency lighting calculation MUST be produced using the emergency lighting calculation facility within this program, failure to use the correct method will show false results.

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

Object : Alton Towers Car Park J
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1 Luminaire data

1.1 ANSELL, Floodlighting - Carina LED ... (!ACALED50/WW)

1.1.1 Data sheet

Manufacturer: ANSELL

!ACALED50/WW Rectangular projector Floodlighting - Carina LED Polycarbonate Floodlight
ACALED50/WW
Floodlighting Carina LED Polycarbonate Floodlight Warm White 50W LED Black
Carina LED Polycarbonate Floodlight
supplied c/w Integral Driver
Compact and economic polycarbonate LED floodlight
Warm and Cool white options
30W LED comparable light output of 35W HQI 50W LED exceeds performance of 70W HQI
Polished faceted reflector and textured glass for optimum performance
Pre-wired with 1 metre of rubber insulated cable for ease of installation
PIR versions complete with manual override facility
30,000 hours average lifetime
Non-dimmable
Supplied c/w Integral Driver
(Cool White)

LED Information
50W Total (Watts)
4099lm Lumens Delivered
91lm/W
4000K CCT
240V input

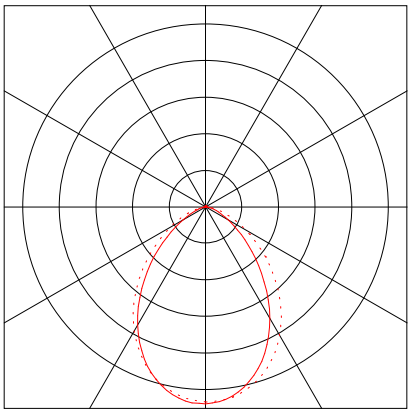
Luminaire data

Absolute Photometry		
Luminaire efficacy	:	80.52 lm/W
Classification	:	A50 ↓99.5% ↑0.5%
CIE Flux Codes	:	63 90 99 99 100
UGR 4H 8H	:	15.8 / 17.8
Control gear	:	Electronic ballast
Power	:	46.2 W
Luminous flux	:	3720 lm

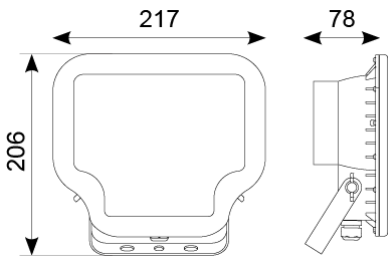
Dimensions : 1000 mm x 206 mm x 78 mm

Equipped with

Quantity	:	1
Designation	:	
Colour	:	







2 Exterior 1 with floods on road boundary

2.1 Description, Exterior 1 with floods on road boundary

2.1.1 Floor plan

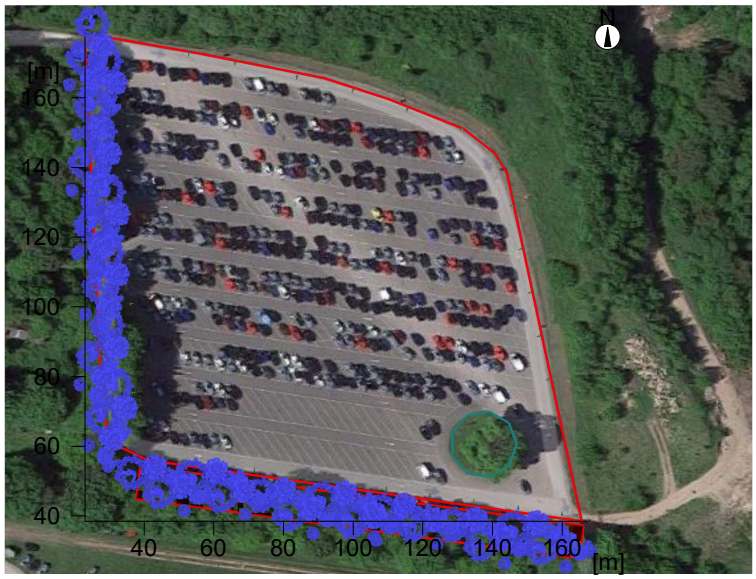


1 : 2000

2 Exterior 1 with floods on road boundary

2.2 Summary, Exterior 1 with floods on road boundary

2.2.1 Result overview, Measuring area 1





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
photometric centre height. [m]:	4.04 m
Maintenance factor	0.90
Total luminous flux of all lamps	122760 lm
Total power	1524.6 W
Total power per area (14574.13 m²)	0.10 W/m²

Illuminance

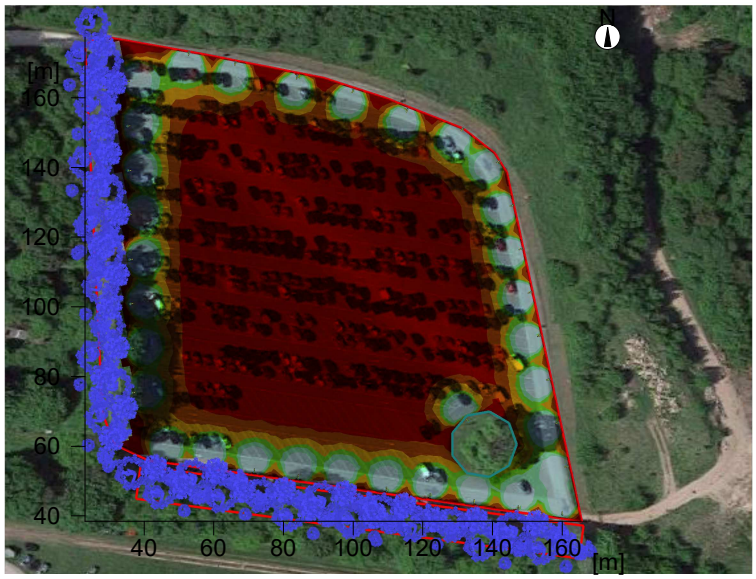
Average illuminance	Eav	0.19 lx
Minimum illuminance	Emin	0.03 lx
Maximum illuminance	Emax	0.63 lx
Uniformity Uo	Emin/Em	1:6.74 (0.15)
Diversity Ud	Emin/Emax	1:22.6 (0.04)

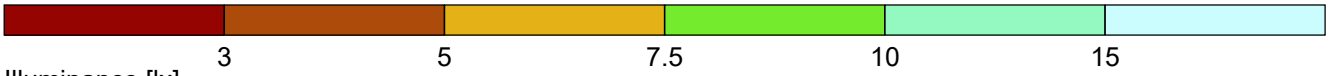
Type No.\Make

		ANSELL	
1	33	Order No.	: !ACALED50/WW
		Luminaire name	: Floodlighting - Carina LED Polycarbonate Floodlight
		Equipment	: 1 x 46.2 W / 3720 lm

2.2 Summary, Exterior 1 with floods on road boundary

2.2.2 Result overview, Evaluation area 1





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
photometric centre height.	4.04 m
Maintenance factor	0.90
Total luminous flux of all lamps	122760 lm
Total power	1524.6 W
Total power per area (14574.13 m²)	0.10 W/m² (1.61 W/m²/100lx)

Evaluation area 1	**Reference plane 1.1**
	Horizontal
Em	6.5 lx
Emin	0.07 lx
Emin/Eav (Uo)	0.01
Emin/Emax (Ud)	0.00
Position	0.00 m

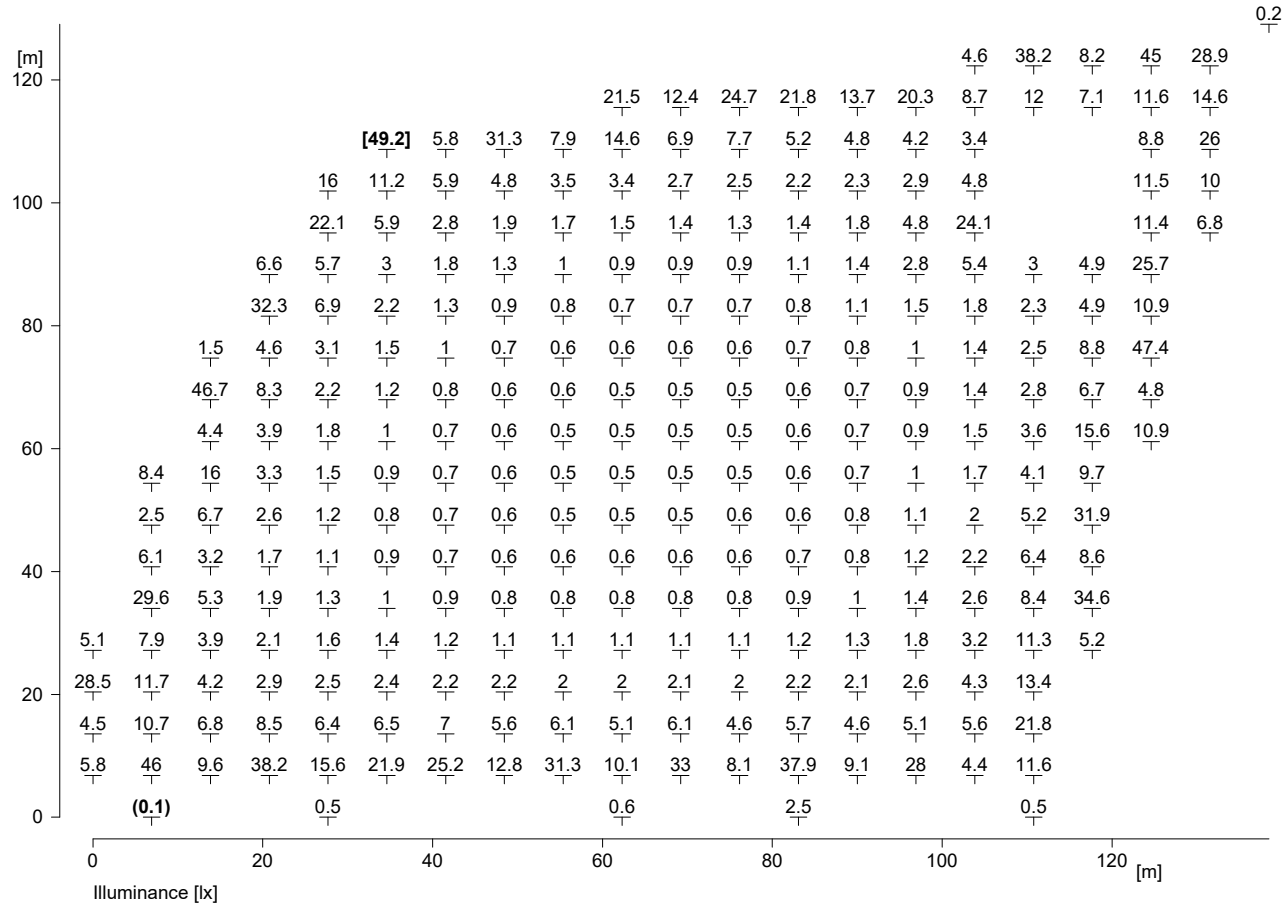
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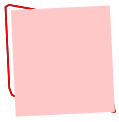
		ANSELL	
1	33	Order No.	: !ACALED50/WW
		Luminaire name	: Floodlighting - Carina LED Polycarbonate Floodlight
		Equipment	: 1 x 46.2 W / 3720 lm

2 Exterior 1 with floods on road boundary

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.1 Table, Reference plane 1.1 (E)



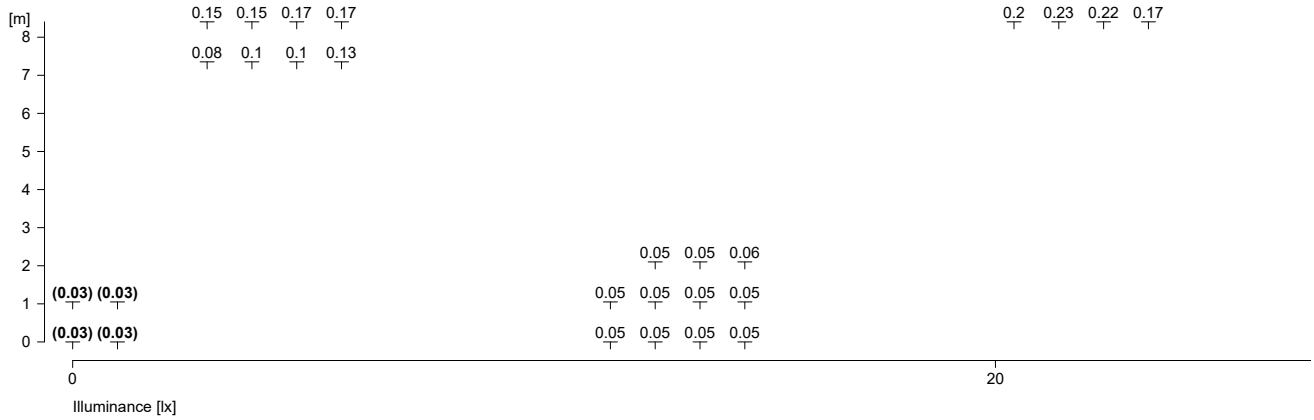


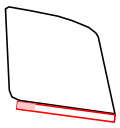
Height of the reference plane : 0.00 m

Average illuminance	Eav	: 6.5 lx
Minimum illuminance	Emin	: 0.1 lx
Maximum illuminance	Emax	: 49.2 lx
Uniformity Uo	Emin/Eav	: 1 : 87.61 (0.01)
Diversity Ud	Emin/Emax	: 1 : 663.65 (0.00)

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.2 Table, Measuring area 1 (E)





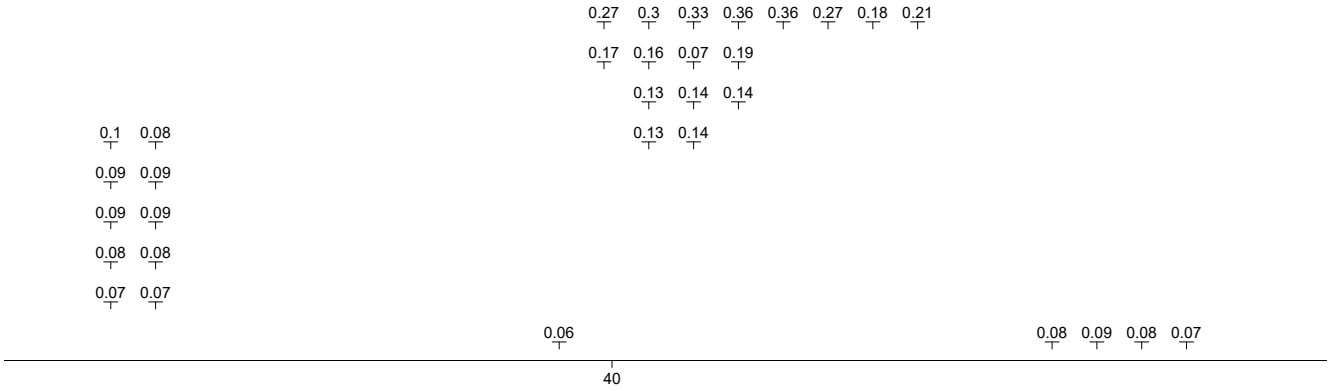
Part1

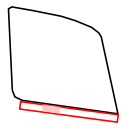
Height of the reference plane : 0.00 m

Average illuminance	Eav	: 0.19 lx
Minimum illuminance	Emin	: 0.03 lx
Maximum illuminance	Emax	: 0.63 lx
Uniformity Uo	Emin/Eav	: 1 : 6.74 (0.15)
Diversity Ud	Emin/Emax	: 1 : 22.63 (0.04)

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.2 Table, Measuring area 1 (E)

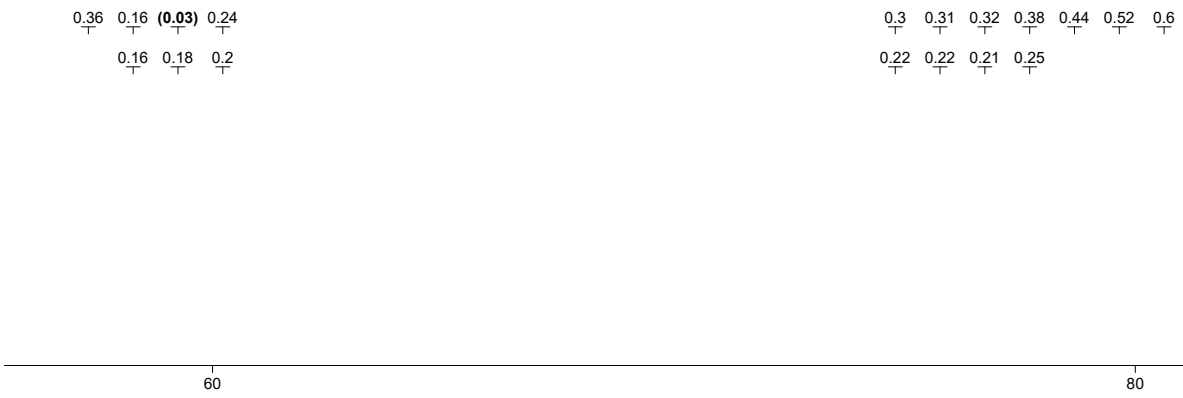


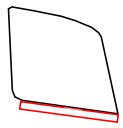


Part2

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.2 Table, Measuring area 1 (E)

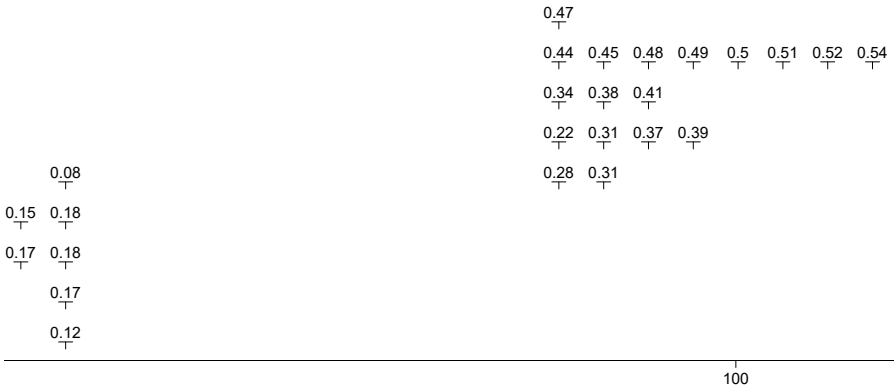


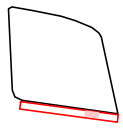


Part3

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.2 Table, Measuring area 1 (E)

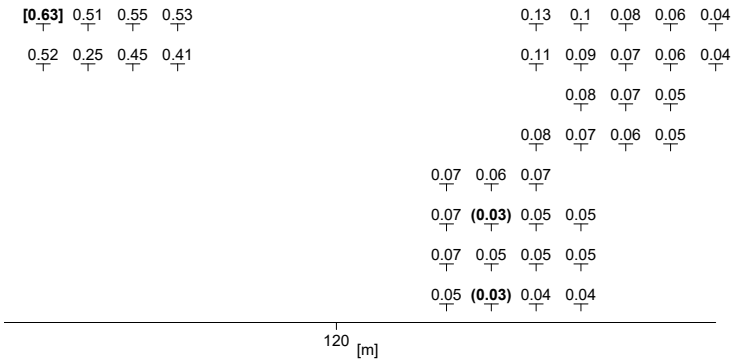


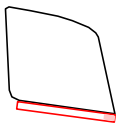


Part4

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.2 Table, Measuring area 1 (E)

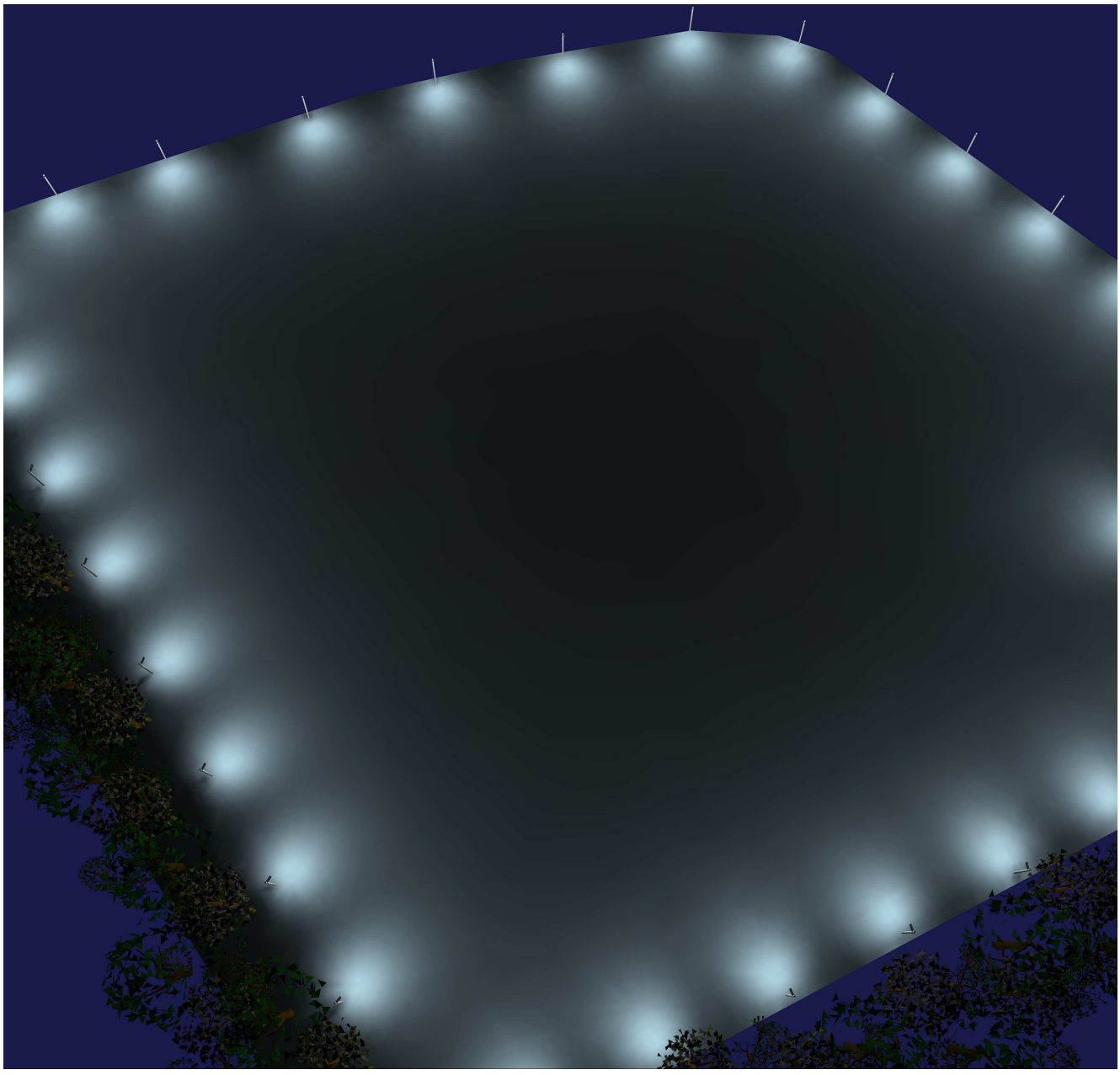




Part5

2.3 Calculation results, Exterior 1 with floods on road boundary

2.3.3 3D luminance, View 1



Luminance in the scene
Minimum: : 0 cd/m²
Maximum: : 8.97 cd/m²