



Green Lane Depot - Yard Lighting

Installation : Standard Lighting

Project number :
Customer :
Processed by : CS
Date : 14.09.2023

Project description:

Columns at 8m
Building mounted at 5m
Uo<0.25 (requirement >0.25)

Calculations as per your instructions and guidance. Please check and confirm all details are correct. All areas have been assumed as being open plan without any obstructions above the working plane. Please be aware of L2 requirements and check that conformity has been met where required. SBEM calculations are the responsibility of the contractor. If our design has been submitted with emergency lighting coverage, it was designed as a service to provide an overall illuminance in line with current emergency lighting recommendations, but to be strictly in line with guidelines, other factors need to be considered including, but not limited to,

- Any change of direction requires emergency lighting consideration.
- Any change in floor levels (Including a step or ramp) requires additional consideration.
- Any fire-fighting equipment (Hoses or extinguishers) needs additional consideration.
- Any fire assembly areas require additional considerations.
- All fire call points require additional consideration.
- Exit routes need extra considerations.

We have not carried out a risk assessment for emergency lighting on the site. We accept no responsibility for current requirements that under HSE and fire regulations are the responsibilities of the 'Responsible Person' or management of the site owners or operators. The emergency scheme must be checked and confirmed with a local building/fire control officer and ultimately approved by the owner of the building. We have used common design parameters in order to carry out all our calculations and if any divergences that are not accepted, please contact us in order for re calculations to be carried out prior to an order. Please ensure that this lighting scheme complies with all requirements, and if further details/ calculations are required please contact us on the above number. Final quantities are to be confirmed prior to an order/installation. Whilst every effort will be made by Powerlite Fitzgerald Ltd to adhere to the written or product specification, it is always the responsibility of the customer to ensure that any scheme, specification, or product satisfies the end users requirements.

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 Exterior 1

1.1 Description, Exterior 1

1.1.1 Floor plan



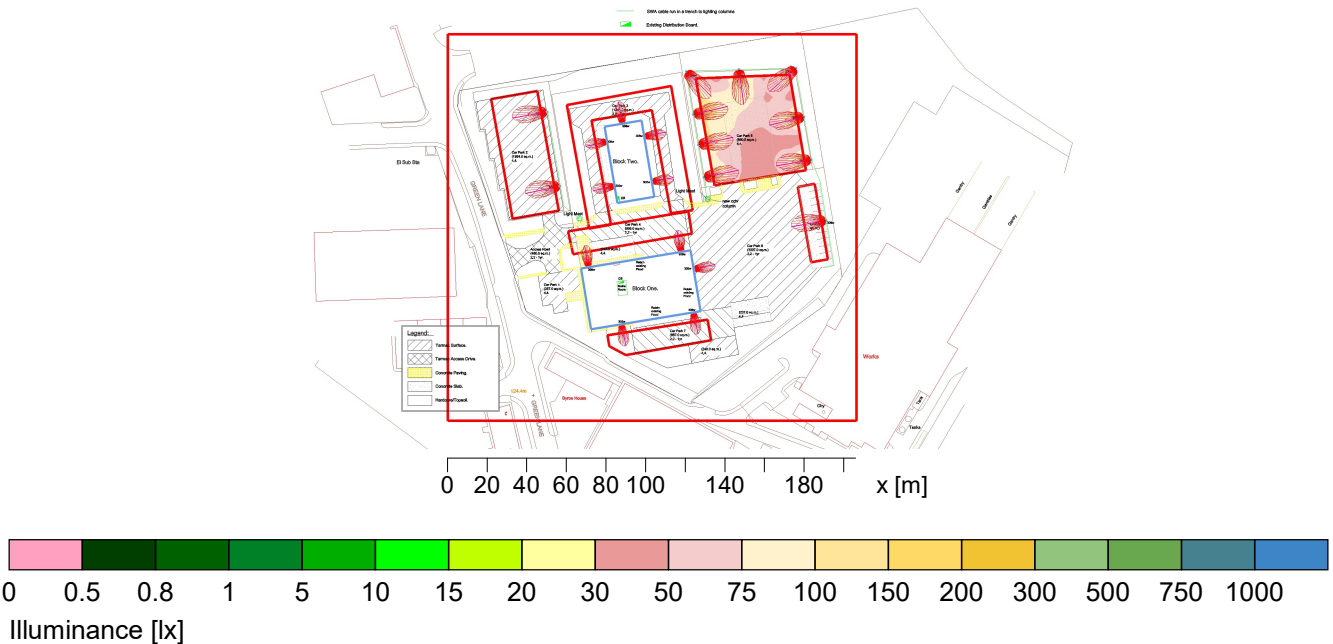
Object : Green Lane Depot - Yard Lighting
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1 Exterior 1

1.2 Summary, Exterior 1

1.2.1 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	918456 lm
Total power	6470.1 W
Total power per area (40067.00 m²)	0.16 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	68 lx
Minimum illuminance	E_{min}	32 lx
Maximum illuminance	E_{max}	124 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:2.11 (0.47)
Diversity U_d	E_{min}/E_{max}	1:3.86 (0.26)

Type No. \Make

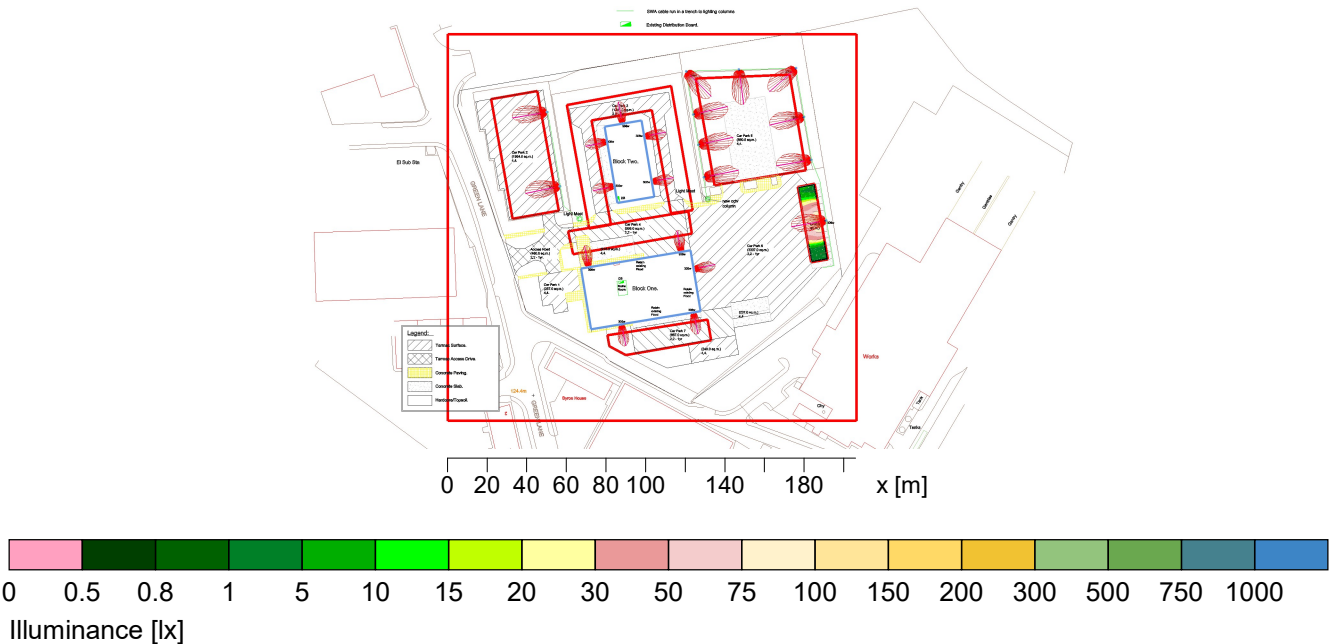
2 21 x	Powerlite Fitzgerald
	Order No. : R11L300-SPORT-4K
	Luminaire name : Regor 11 Sport
	Equipment : 1 x 308.1 W / 43736 lm

Object : Green Lane Depot - Yard Lighting
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1.2 Summary, Exterior 1

1.2.2 Result overview, Measuring area 2



General

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

Total luminous flux	918456 lm
Total power	6470.1 W
Total power per area (40067.00 m²)	0.16 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	39 lx
Minimum illuminance	E_{min}	1 lx
Maximum illuminance	E_{max}	113 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:41.3 (0.02)
Diversity U_d	E_{min}/E_{max}	1:121 (0.01)

Type No. \ Make

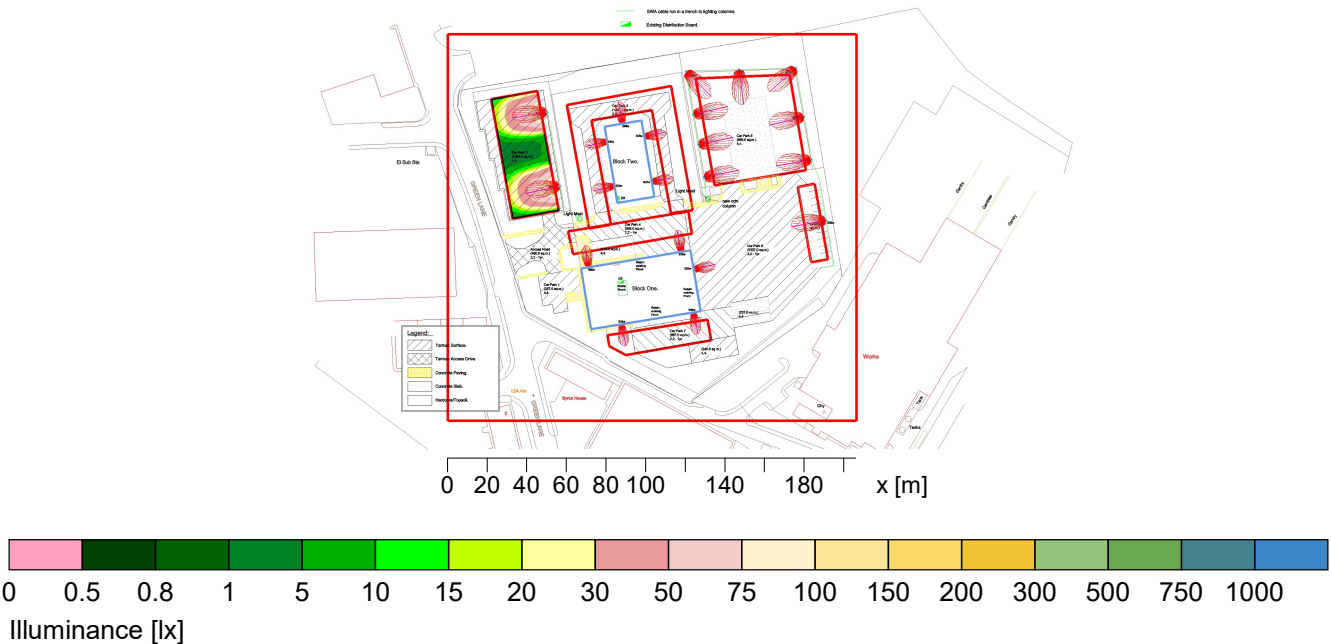
	Powerlite Fitzgerald
2 21 x	Order No. : R11L300-SPORT-4K
	Luminaire name : Regor 11 Sport
	Equipment : 1 x 308.1 W / 43736 lm

Object : Green Lane Depot - Yard Lighting
 Installation : Standard Lighting
 Project number :
 Date : 14.09.2023



1.2 Summary, Exterior 1

1.2.3 Result overview, Measuring area 3



General

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

Total luminous flux	918456 lm
Total power	6470.1 W
Total power per area (40067.00 m²)	0.16 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	31 lx
Minimum illuminance	E_{min}	2 lx
Maximum illuminance	E_{max}	117 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:17.5 (0.06)
Diversity U_d	E_{min}/E_{max}	1:65.6 (0.02)

Type No. \Make

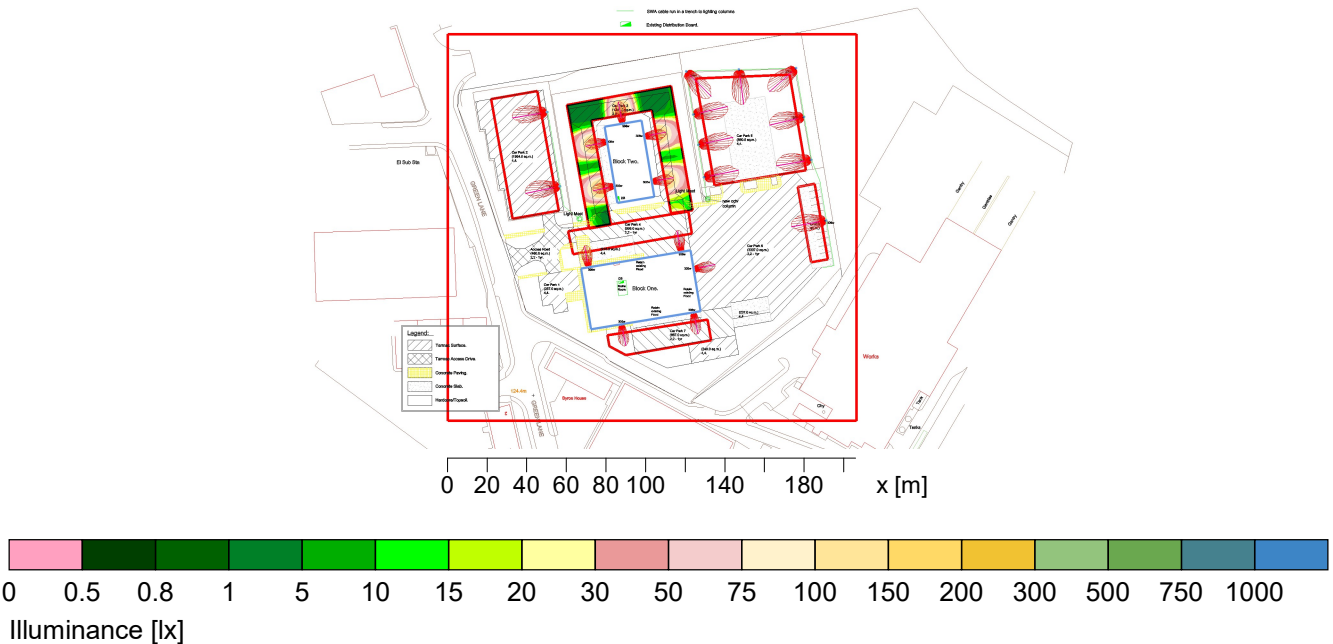
2 21 x	Powerlite Fitzgerald
	Order No. : R11L300-SPORT-4K
	Luminaire name : Regor 11 Sport
	Equipment : 1 x 308.1 W / 43736 lm

Object : Green Lane Depot - Yard Lighting
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1.2 Summary, Exterior 1

1.2.4 Result overview, Measuring area 4



General

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

Total luminous flux	918456 lm
Total power	6470.1 W
Total power per area (40067.00 m²)	0.16 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	43 lx
Minimum illuminance	E_{min}	2 lx
Maximum illuminance	E_{max}	223 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:28.1 (0.04)
Diversity U_d	E_{min}/E_{max}	1:148 (0.01)

Type No. \Make

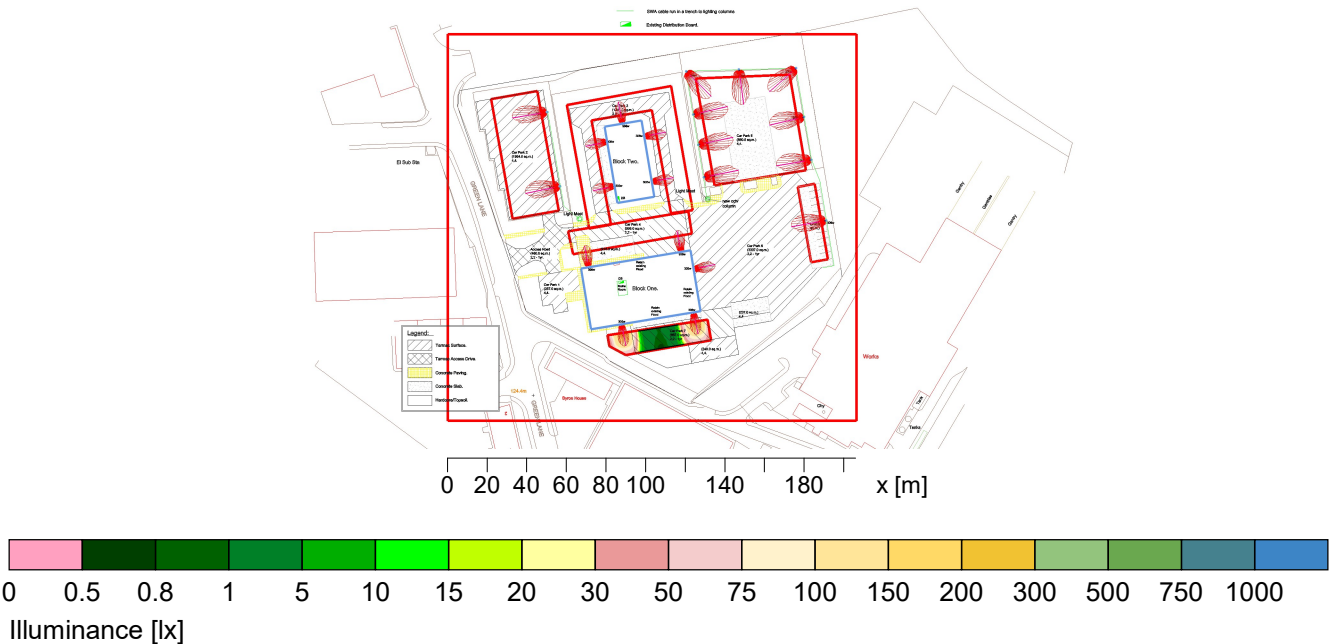
2 21 x	Powerlite Fitzgerald
	Order No. : R11L300-SPORT-4K
	Luminaire name : Regor 11 Sport
	Equipment : 1 x 308.1 W / 43736 lm

Object : Green Lane Depot - Yard Lighting
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1.2 Summary, Exterior 1

1.2.5 Result overview, Measuring area 5



General

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

Total luminous flux	918456 lm
Total power	6470.1 W
Total power per area (40067.00 m²)	0.16 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	54 lx
Minimum illuminance	E_{min}	1 lx
Maximum illuminance	E_{max}	226 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:74.9 (0.01)
Diversity U_d	E_{min}/E_{max}	1:312 (0)

Type No. \ Make

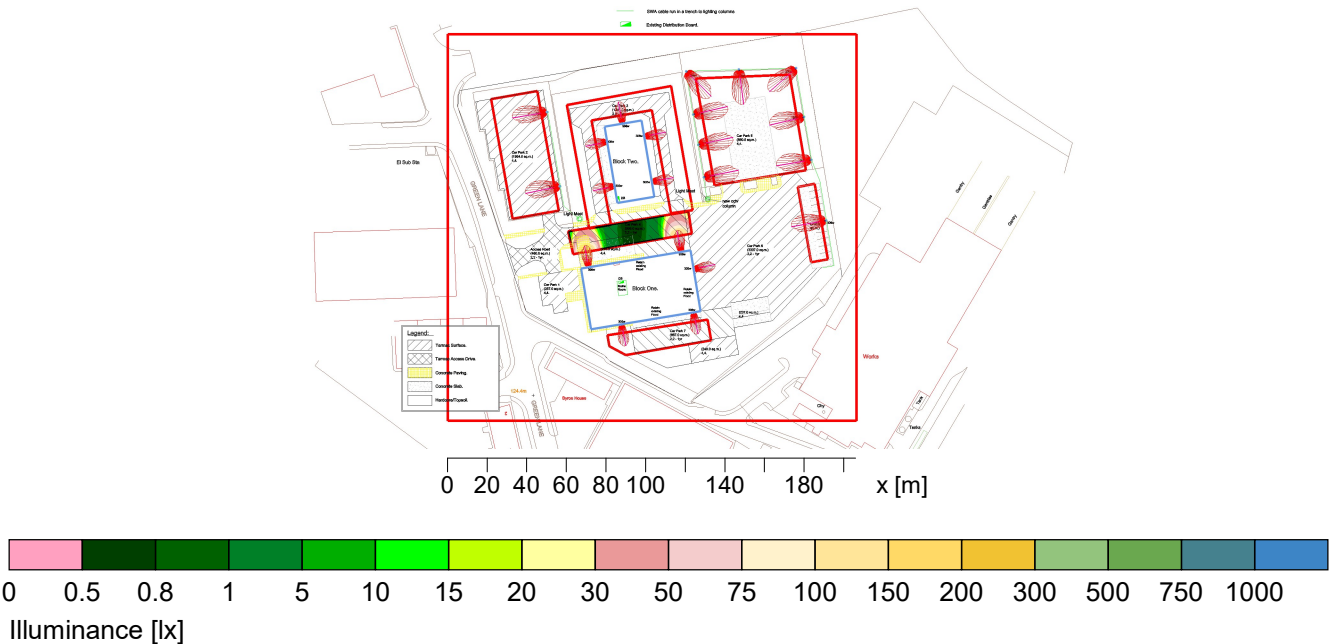
	Powerlite Fitzgerald
2 21 x	Order No. : R11L300-SPORT-4K
	Luminaire name : Regor 11 Sport
	Equipment : 1 x 308.1 W / 43736 lm

Object : Green Lane Depot - Yard Lighting
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1.2 Summary, Exterior 1

1.2.6 Result overview, Measuring area 6



General

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

Total luminous flux	918456 lm
Total power	6470.1 W
Total power per area (40067.00 m²)	0.16 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	29 lx
Minimum illuminance	E_{min}	1 lx
Maximum illuminance	E_{max}	161 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:53.7 (0.02)
Diversity U_d	E_{min}/E_{max}	1:299 (0)

Type No. \Make

	Powerlite Fitzgerald
2 21 x	Order No. : R11L300-SPORT-4K
	Luminaire name : Regor 11 Sport
	Equipment : 1 x 308.1 W / 43736 lm

The image shows two logos stacked vertically. The top logo is for 'powerlite' in a white, lowercase, sans-serif font, with a registered trademark symbol (®) to the upper right of the 'e'. It is set against a blue rounded rectangular background. The bottom logo is for 'Fitzgerald' in a large, bold, black, italicized serif font. Below it, the tagline '...Better together' is written in a smaller, black, italicized sans-serif font. The entire bottom logo is set against a yellow rounded rectangular background.

1.2.7 Result overview, Evaluation area 1

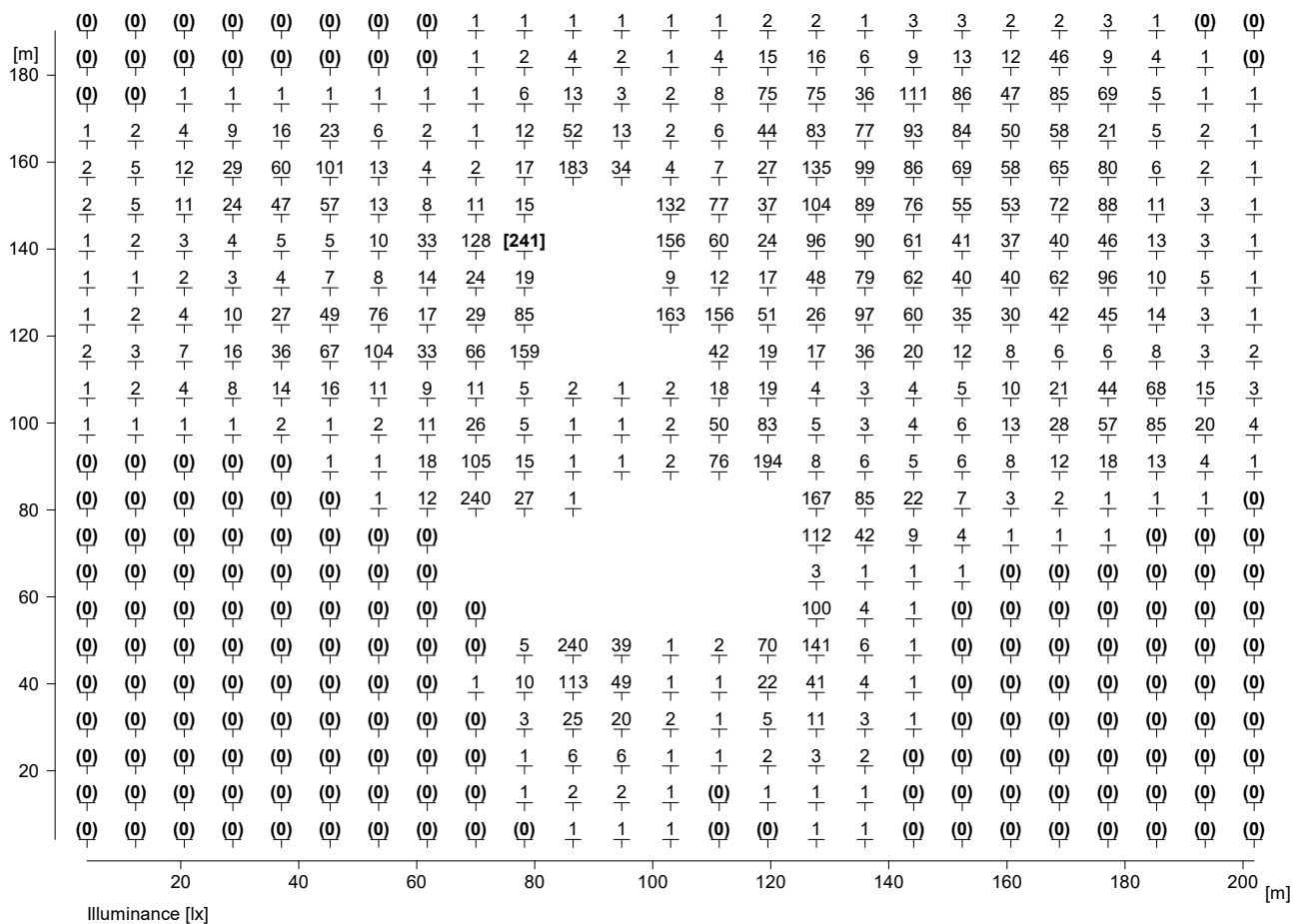
Object : Green Lane Depot - Yard Lighting
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1 Exterior 1

1.3 Calculation results, Exterior 1

1.3.1 Table, Reference plane 1.1 (E)



Height reference plane

Average illuminance

Minimum illuminance

Maximum illuminance

Uniformity U_o

Diversity U_d

: 0.00 m

$\bar{E}_m$: 18 lx

E_{min} : 0 lx

E_{max} : 241 lx

$E_{min}/\bar{E}_m$: 1 : 3744.15 (0.00)

E_{min}/E_{max} : 1 : 49437.15 (0.00)

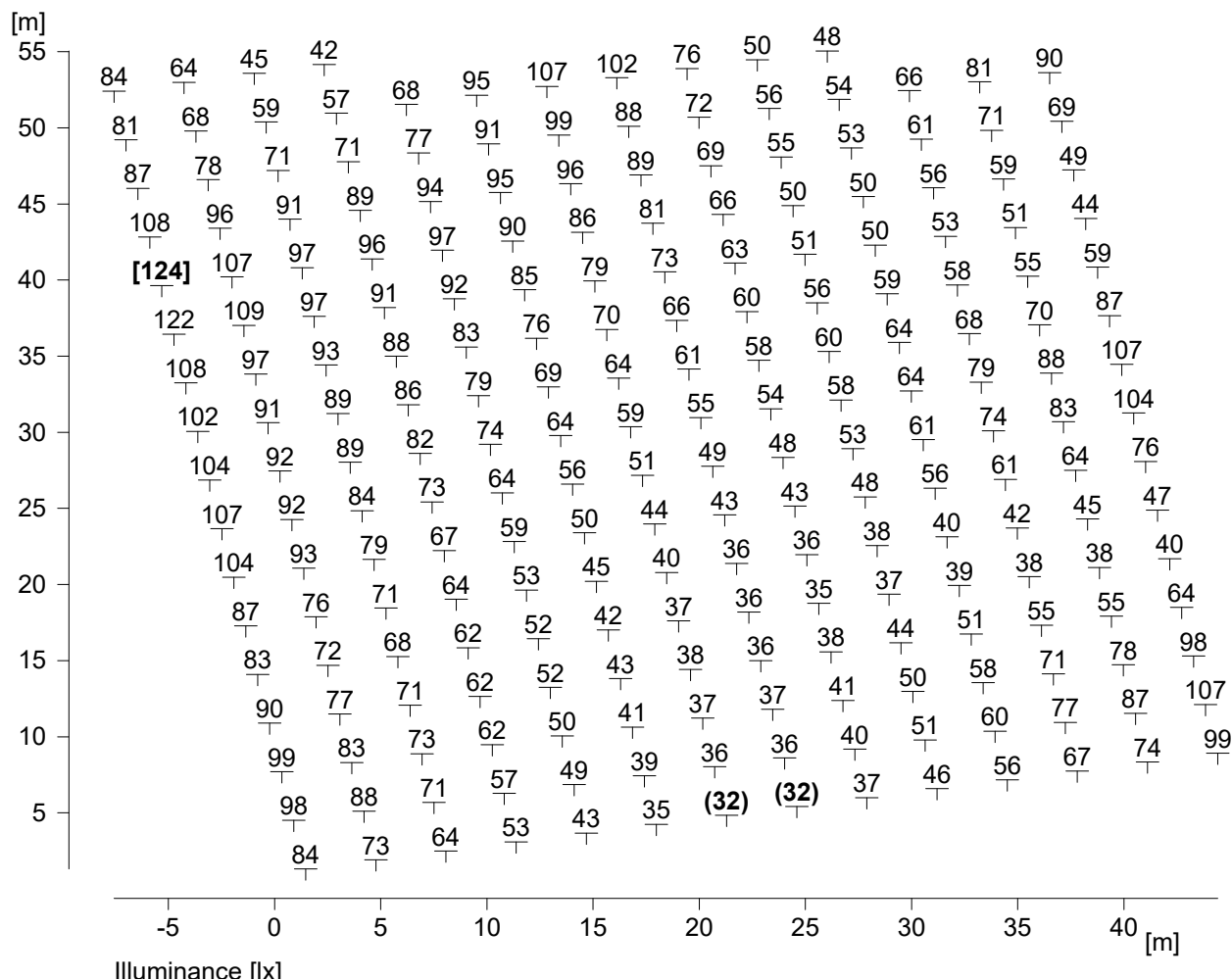


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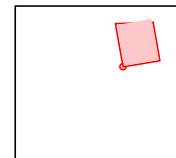


1.3 Calculation results, Exterior 1

1.3.2 Table, Measuring area 1 (E)



Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 68 lx
Minimum illuminance	E_{min} : 32 lx
Maximum illuminance	E_{max} : 124 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 2.11 (0.47)
Diversity U_d	E_{min}/E_{max} : 1 : 3.86 (0.26)

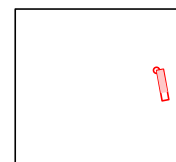
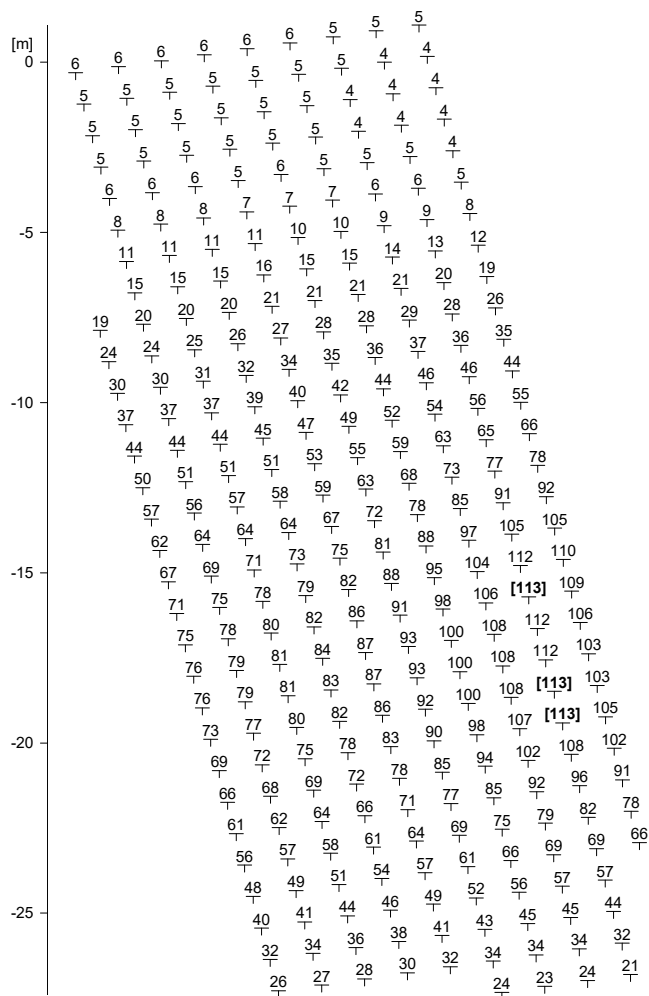


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1.3 Calculation results, Exterior 1

1.3.3 Table, Measuring area 2 (E)



Part1

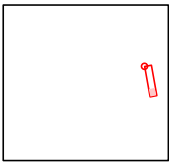
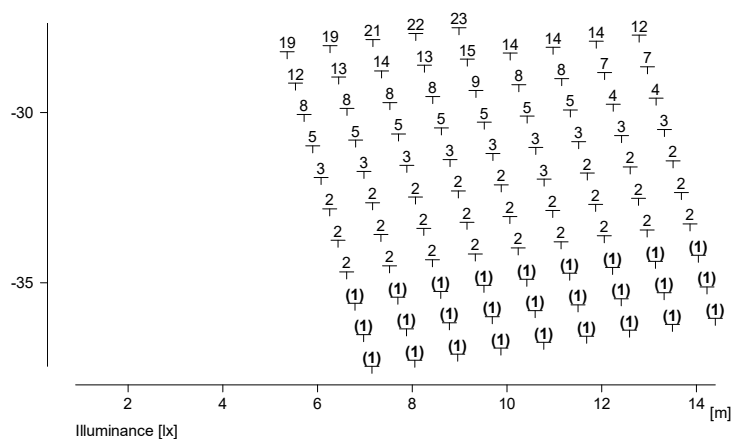
Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 39 lx
Minimum illuminance	E_{min} : 1 lx
Maximum illuminance	E_{max} : 113 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 41.33 (0.02)
Diversity U_d	E_{min}/E_{max} : 1 : 121.30 (0.01)

Object : Green Lane Depot - Yard Lighting
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1.3 Calculation results, Exterior 1

1.3.3 Table, Measuring area 2 (E)



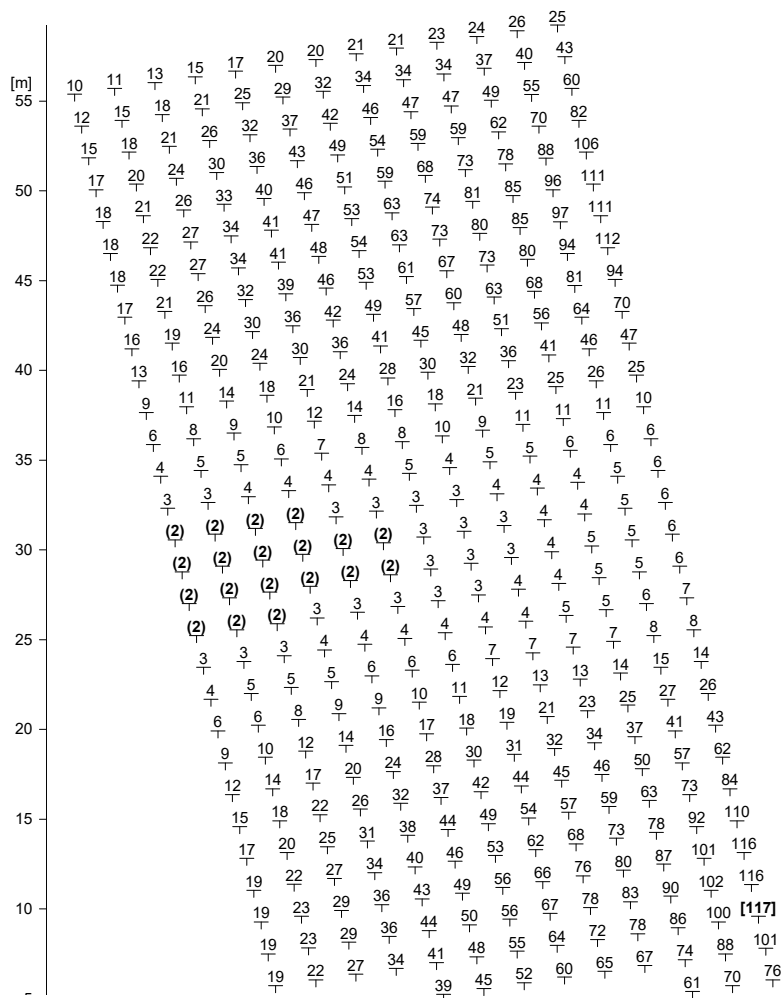
Part2

Object : Green Lane Depot - Yard Lighting
 Installation : Standard Lighting
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1.3 Calculation results, Exterior 1

1.3.4 Table, Measuring area 3 (E)



Part1

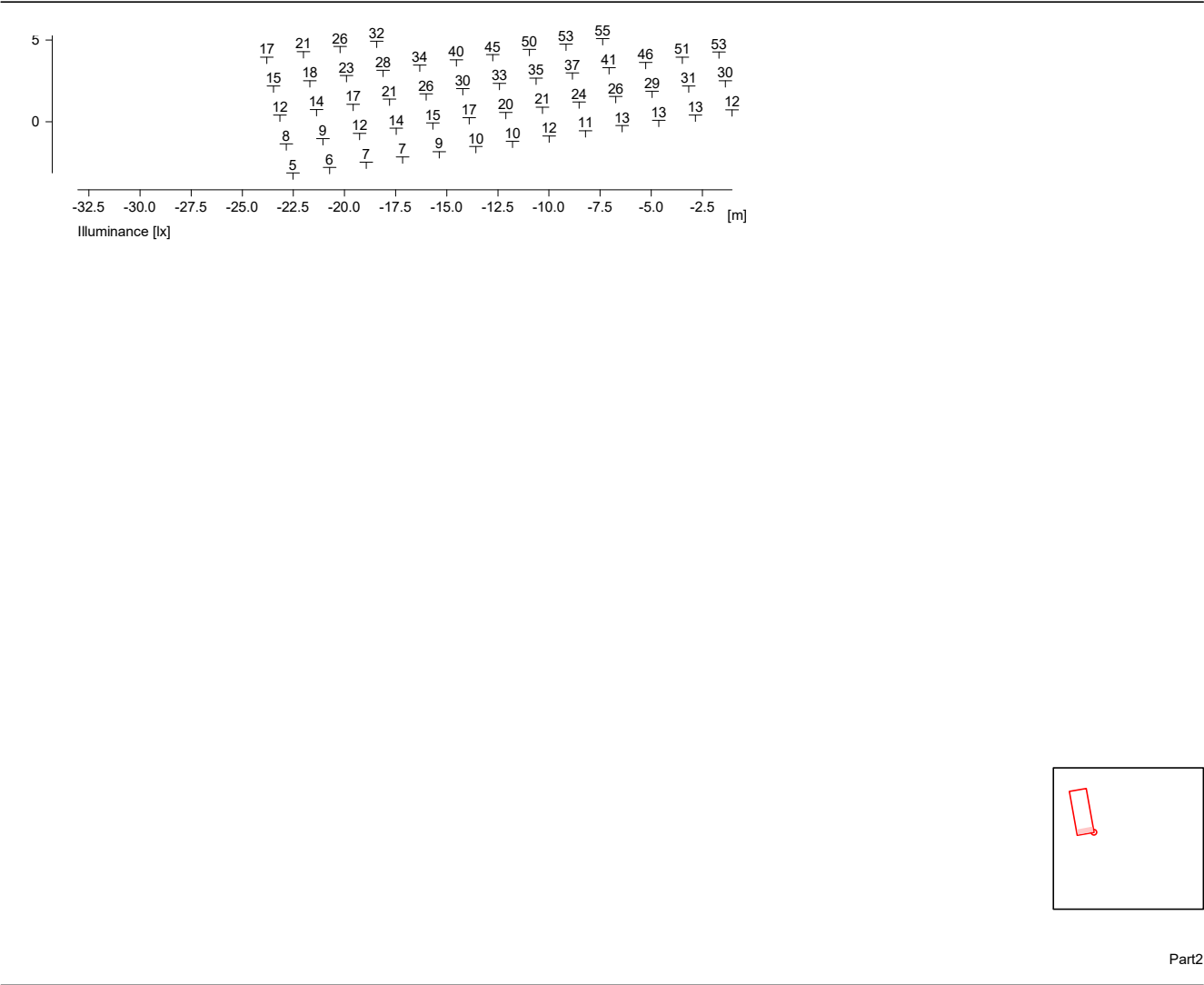
Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 31 lx
Minimum illuminance	E_{min} : 2 lx
Maximum illuminance	E_{max} : 117 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 17.47 (0.06)
Diversity U_d	E_{min}/E_{max} : 1 : 65.59 (0.02)

Object : Green Lane Depot - Yard Lighting
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1.3 Calculation results, Exterior 1

1.3.4 Table, Measuring area 3 (E)

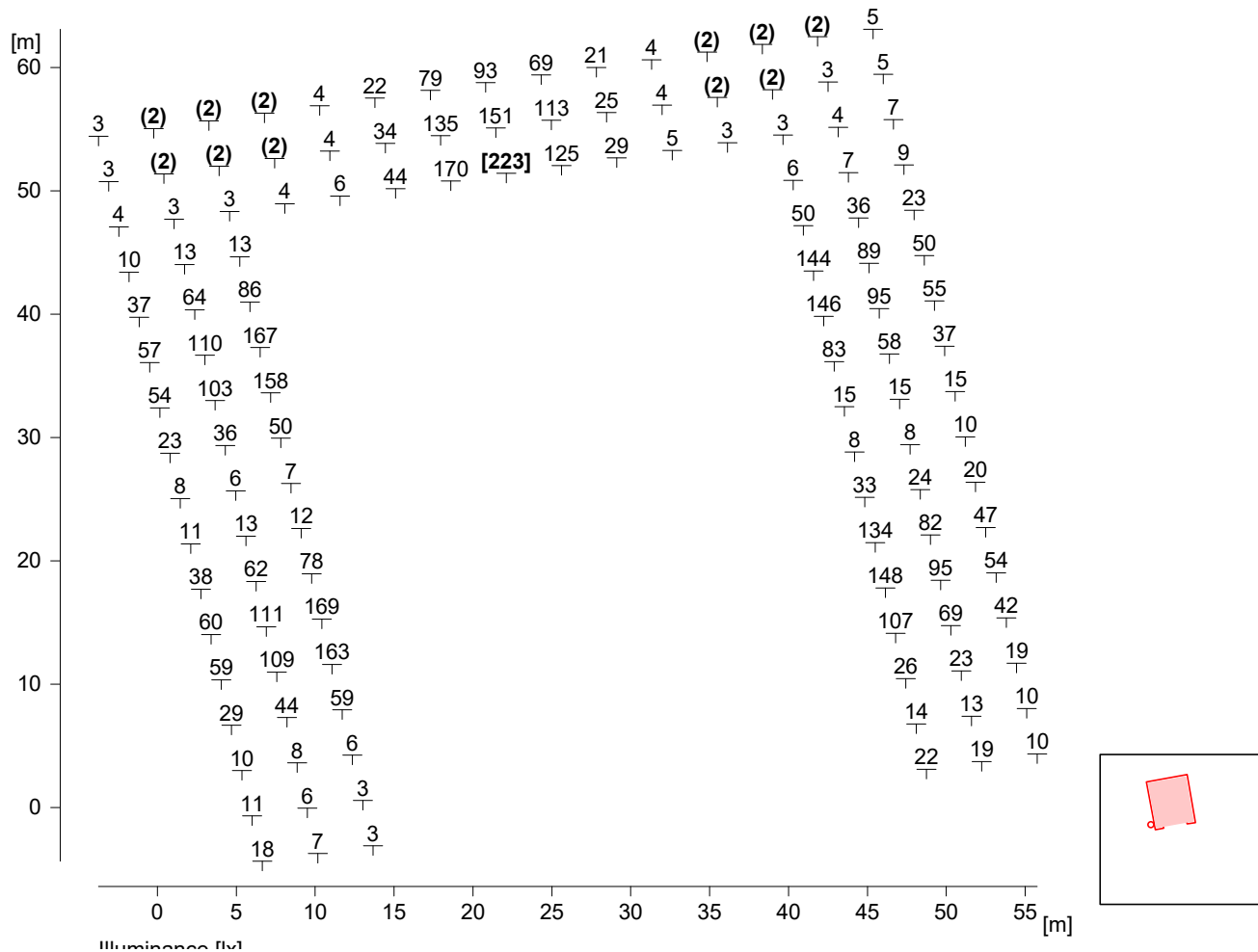


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1.3 Calculation results, Exterior 1

1.3.5 Table, Measuring area 4 (E)



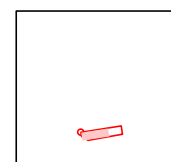
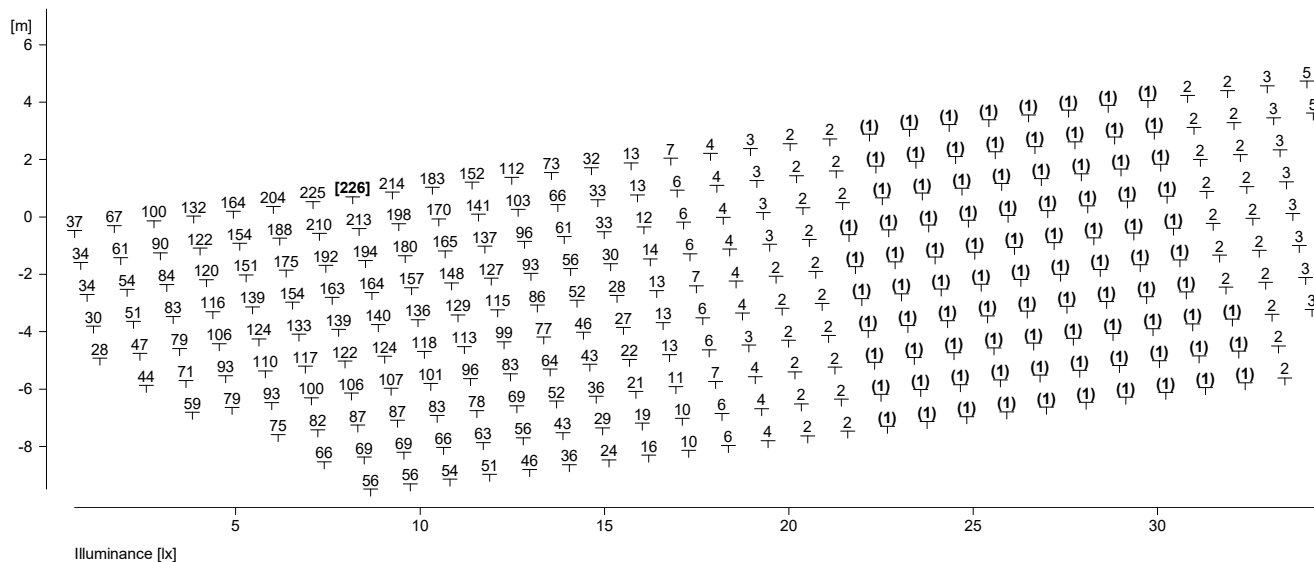
Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 43 lx
Minimum illuminance	E_{min} : 2 lx
Maximum illuminance	E_{max} : 223 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 28.13 (0.04)
Diversity U_d	E_{min}/E_{max} : 1 : 147.66 (0.01)

Object : Green Lane Depot - Yard Lighting
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1.3 Calculation results, Exterior 1

1.3.6 Table, Measuring area 5 (E)



Part1

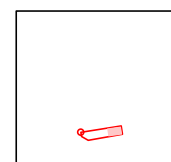
Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 54 lx
Minimum illuminance	E_{min} : 1 lx
Maximum illuminance	E_{max} : 226 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 74.88 (0.01)
Diversity U_d	E_{min}/E_{max} : 1 : 311.72 (0.00)



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Fitzgerald
...Better together

1.3.6 Table, Measuring area 5 (E)

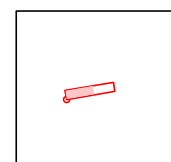
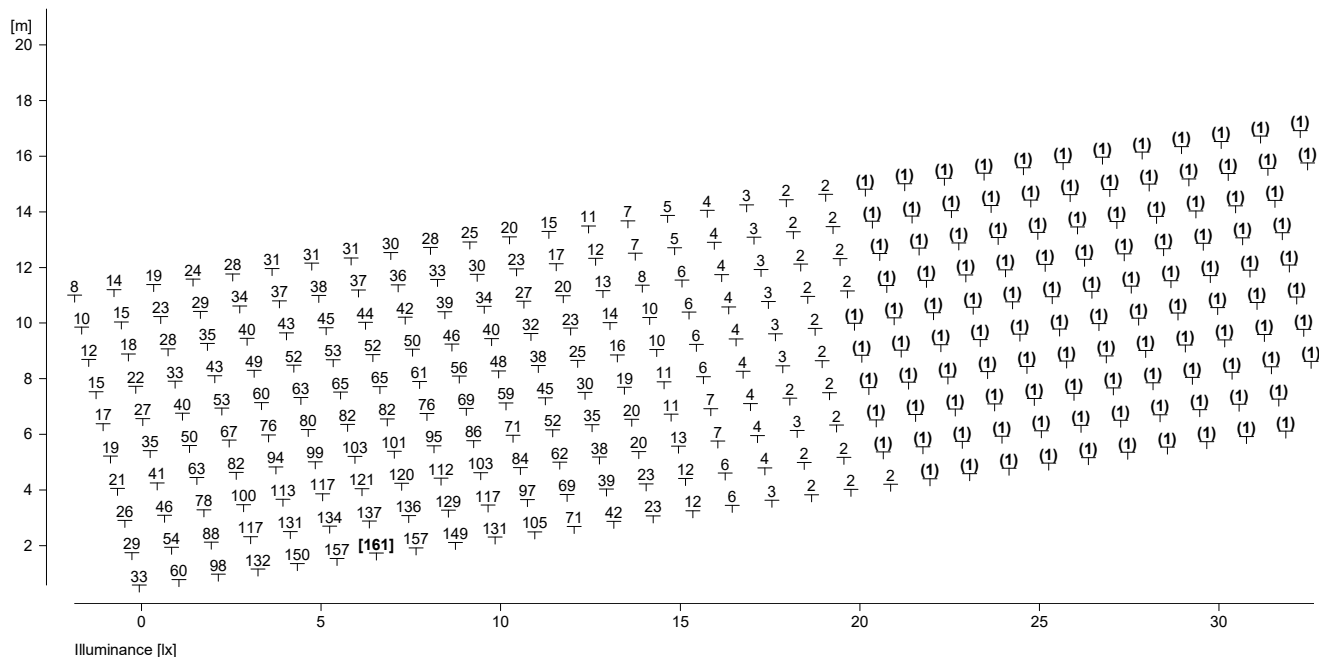


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1.3 Calculation results, Exterior 1

1.3.7 Table, Measuring area 6 (E)



Part1

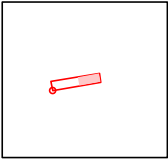
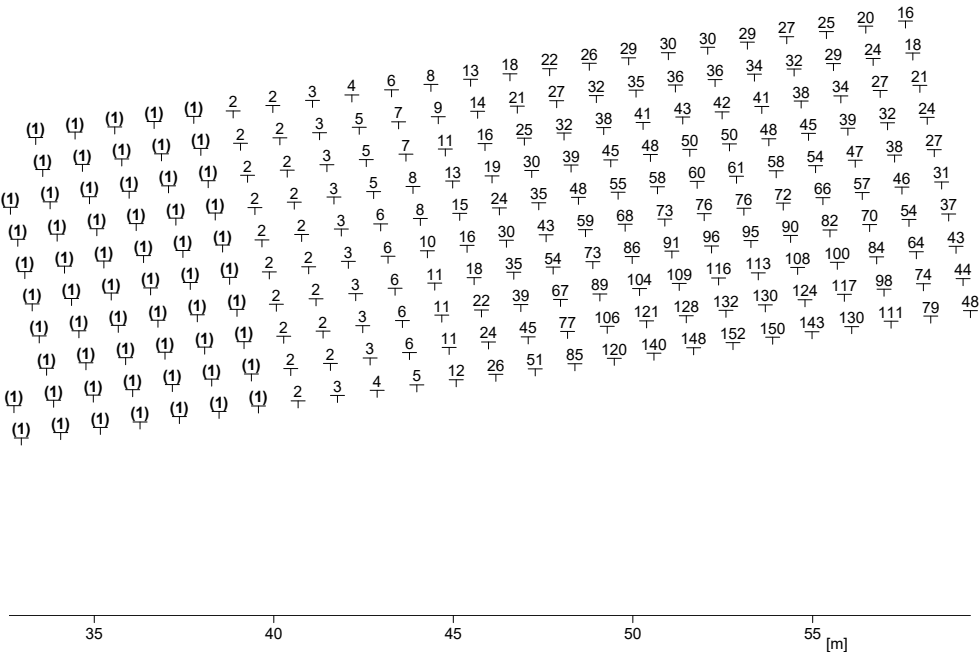
Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 29 lx
Minimum illuminance	E_{min} : 1 lx
Maximum illuminance	E_{max} : 161 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 53.69 (0.02)
Diversity U_d	E_{min}/E_{max} : 1 : 298.69 (0.00)

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1.3 Calculation results, Exterior 1

1.3.7 Table, Measuring area 6 (E)



Part2

Object : Green Lane Depot - Yard Lighting
Installation : Standard Lighting
Project number :
Date : 14.09.2023



1.3 Calculation results, Exterior 1

1.3.8 3D luminance, View 1

