



EDMUNDSON
LIGHTING
CONSULTANCY

LIGHTING DESIGN REPORT

Glebe Farm

LIGHTING APPLICATION NOTES

Glebe Farm



DESIGN NOTES

This preliminary design is produced by the Edmundson Lighting Consultancy based on information supplied by the Customer for the purpose of identifying suitable products and costing the proposal. This design cannot be used for Construction. This design does not purport to eliminate health and safety risks as a CDM Regulation risk assessment has not been undertaken.

Depending on the level of information received, a number of assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting industry guidelines and incorporating industry best practice methods. These assumptions are documented below and will require confirmation by the Principle Designer (which is not Edmundson Lighting Consultancy) during the detailed design phase.

PROJECT SPECIFIC INFORMATION

- Lighting Levels as per CIBSE Guidelines BS EN12464-2:2014
- Surface reflectance values of 70/50/20 and Maintenance factor of 0.8 used
- Mounting Height: 6m
- Asymmetric floodlights vertically rotated up 15 degrees.

TRANSPARENCY

- All designs and information provided are based upon Edmundson Lighting Consultancy interpretation of information provided by the client. It remains the responsibility of the client to determine that the design is suitable for the purpose it is to be put. Edmundson Lighting Consultancy cannot accept responsibility in respect of the design provided and shall in no way be liable for any direct or consequential damage, loss or expense arising from any defect arising from the design provided.
- This design and the information provided is done so in confidence, for the sole purpose of the recipient and may not be disclosed to any non-related third party or used for any other purpose without the express written permission of Edmundson Lighting Consultancy.
- Unless stated otherwise the Preliminary Design proposals must not be treated as a fully compliant Emergency Lighting Design. Whilst the Edmundson Lighting Consultancy team will include Emergency Lighting luminaires to achieve >0.5 lux in Anti-panic areas (spaces over 60m²) and >1 lux in corridors & on stairs. A fully compliant emergency lighting design can be carried out on request, as long as all of the necessary information is provide to do so.
- Unless stated otherwise, Edmundson Lighting Consultancy has not visited site. Therefore, all proposed luminaire locations are indicative and are subject to an onsite verification arranged/ performed by the Principle Designer. In the event a proposed luminaire location is not feasible, a revised calculation should be requested.

4.5 Obtrusive light

To safeguard and enhance the night time environment it is necessary to control obtrusive light (also known as light pollution), which can present physiological and ecological problems to surroundings and people.

The limits of obtrusive light for exterior lighting installations, to minimize problems for people, flora and fauna, are given in Table 2 and for road users in Table 3.

Table 2 — Maximum obtrusive light permitted for exterior lighting installations

Environmental zone	Light on properties		Luminaire intensity		Upward light ratio	Luminance	
	E_v lx		I cd		R_{UL} %	L_b cd·m ⁻²	L_s cd·m ⁻²
	Pre-curfew ^a	Post-curfew	Pre-curfew	Post-curfew		Building facade	Signs
E1	2	0	2 500	0	0	0	50
E2	5	1	7 500	500	5	5	400
E3	10	2	10 000	1 000	15	10	800
E4	25	5	25 000	2 500	25	25	1 000
where E1 represents intrinsically dark areas, such as national parks or protected sites; E2 represents low district brightness areas, such as industrial or residential rural areas; E3 represents medium district brightness areas, such as industrial or residential suburbs; E4 represents high district brightness areas, such as town centres and commercial areas; E_v is the maximum value of vertical illuminance on properties in lx; I is the light intensity of each source in the potentially obtrusive direction in cd; R_{UL} is the proportion of the flux of the luminaire(s) that is emitted above the horizontal, when the luminaire(s) is (are) mounted in its (their) installed position and attitude, and given in %; L_b is the maximum average luminance of the facade of a building in cd·m⁻²; L_s is the maximum average luminance of signs in cd·m⁻². ^a In case no curfew regulations are available, the higher values shall not be exceeded and the lower values should be taken as preferable limits.							

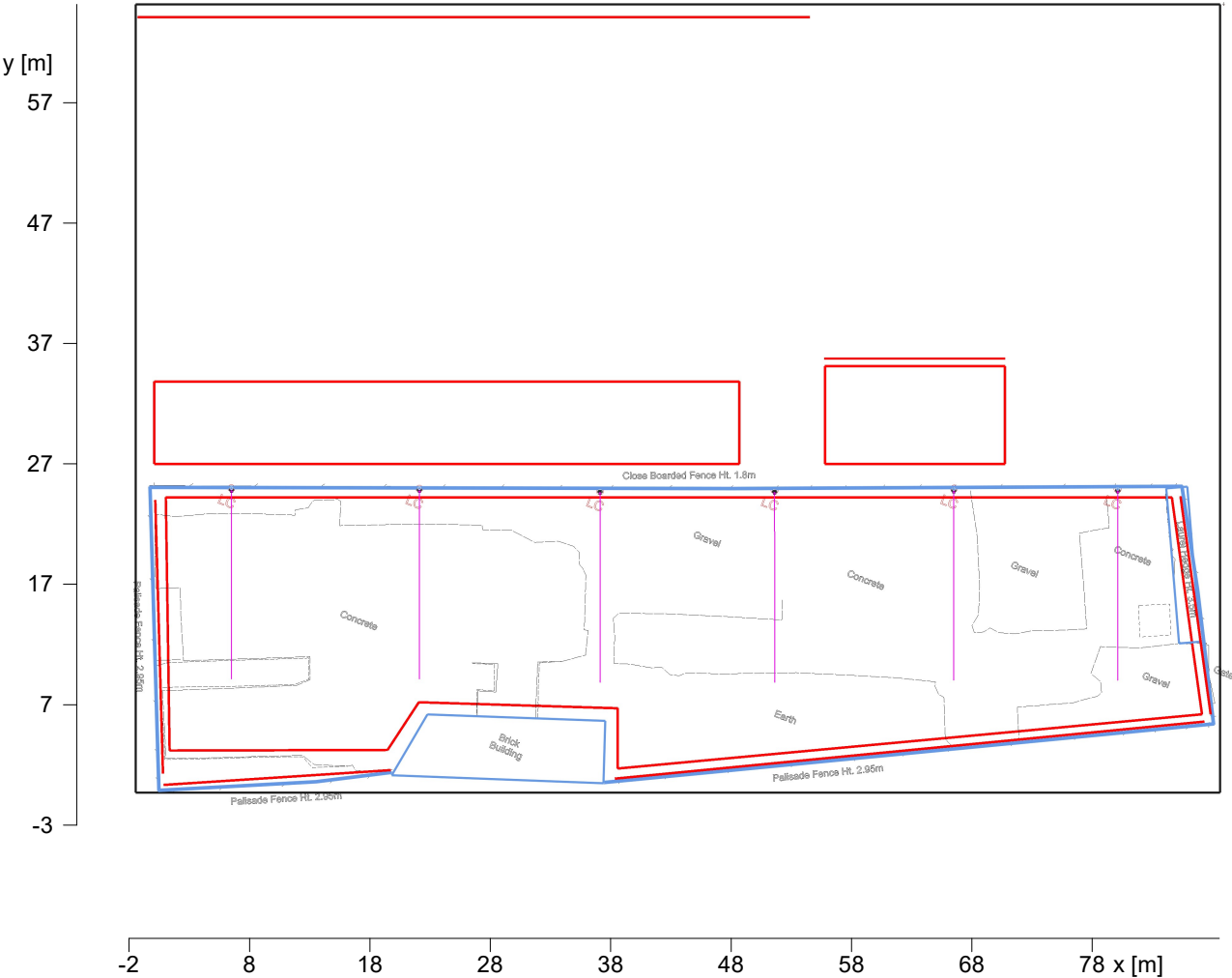
Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Exterior 1

Description, Exterior 1

Floor plan



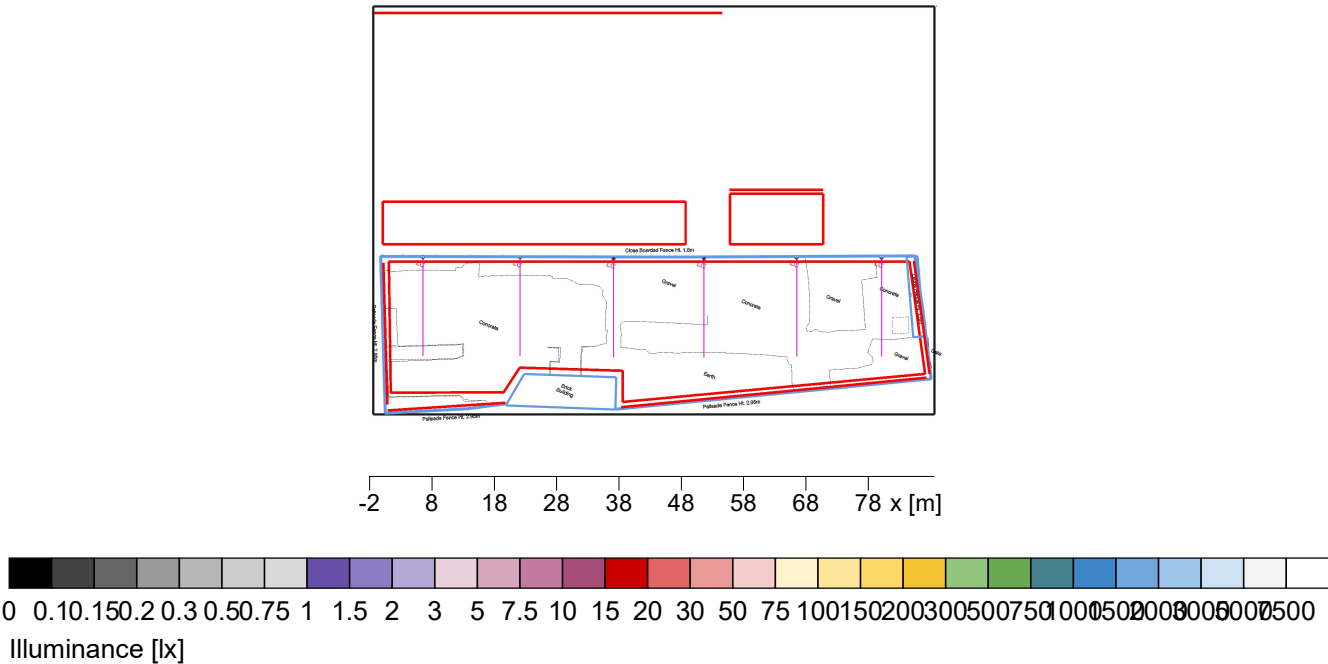


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Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Summary, Exterior 1

Result overview, East Vertical Reference Plane



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	85590 lm
Total power	600 W
Total power per area (5886.63 m²)	0.10 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	5 lx
Minimum illuminance	E_{min}	0 lx
Maximum illuminance	E_{max}	26 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:400 (0)
Diversity U_d	E_{min}/E_{max}	1:2080 (0)

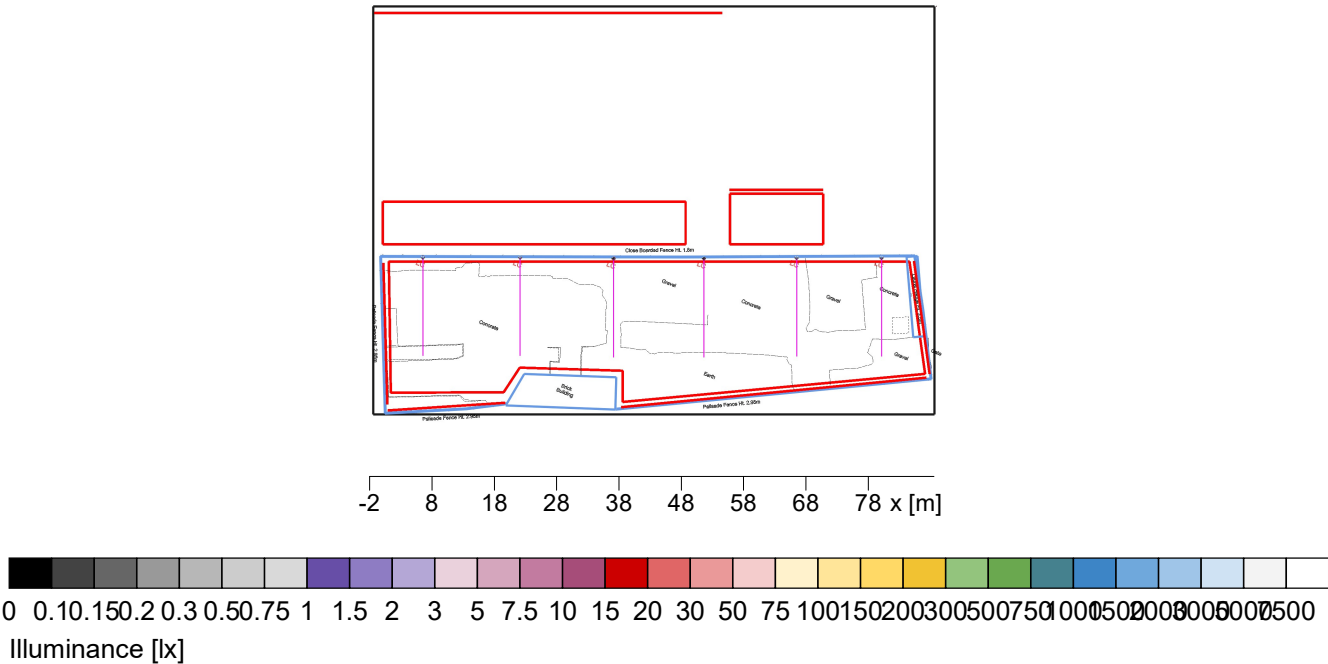
Type No.Make

2	6 x	ANSELL	
		Order No.	: AAZLED100/ASY
		Luminaire name	: FLOODLIGHTS - Aztec Asymmetric
		Equipment	: 1 x LED single 840 100 W / 14265 lm

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Summary, Exterior 1

Result overview, West Vertical Reference Plane



General	
Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	85590 lm
Total power	600 W
Total power per area (5886.63 m²)	0.10 W/m²

Illuminance		
Average illuminance	$\bar{E}_m$	7.2 lx
Minimum illuminance	E_{min}	0.8 lx
Maximum illuminance	E_{max}	37.6 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:9.63 (0.1)
Diversity U_d	E_{min}/E_{max}	1:50 (0.02)

Type No.Make

26 x 	ANSELL	
	Order No.	: AAZLED100/ASY
	Luminaire name	: FLOODLIGHTS - Aztec Asymmetric
	Equipment	: 1 x LED single 840 100 W / 14265 lm



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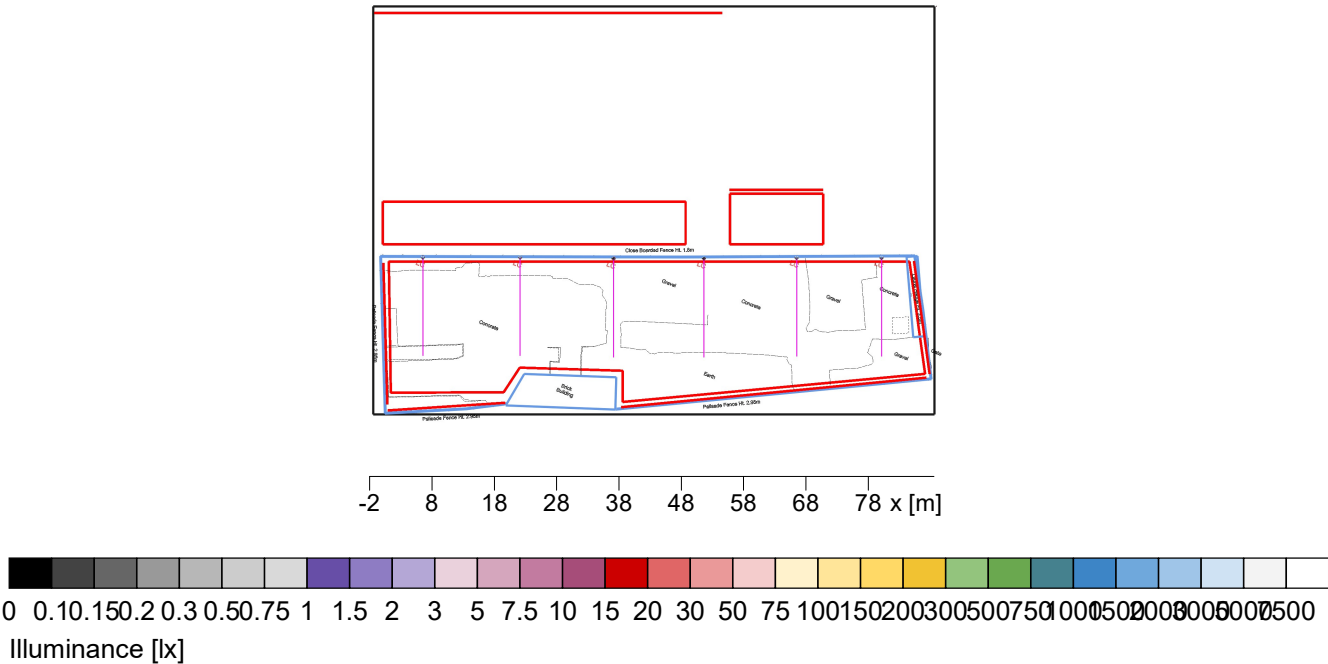


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Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Summary, Exterior 1

Result overview, Residential Vertical Reference Plane 1



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	85590 lm
Total power	600 W
Total power per area (5886.63 m²)	0.10 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	1.21 lx
Minimum illuminance	E_{min}	0.41 lx
Maximum illuminance	E_{max}	2.05 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:2.95 (0.34)
Diversity U_d	E_{min}/E_{max}	1:4.98 (0.2)

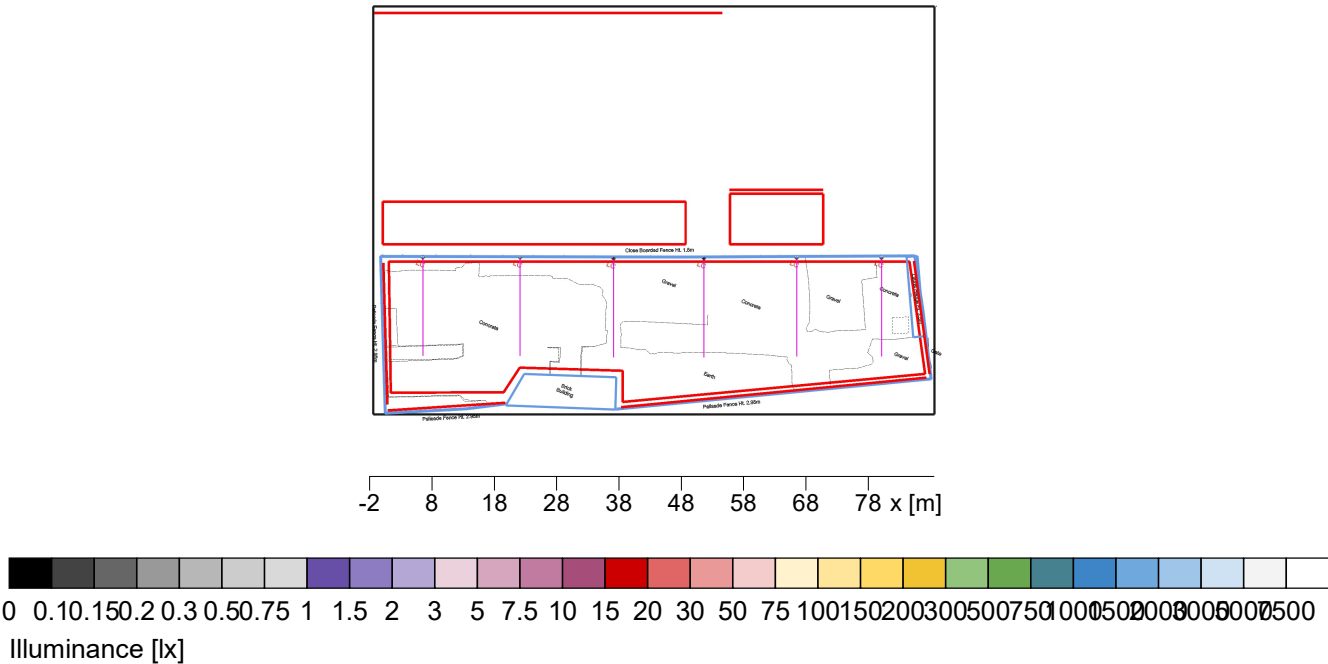
Type No.Make

2	6 x	ANSELL	
		Order No.	: AAZLED100/ASY
		Luminaire name	: FLOODLIGHTS - Aztec Asymmetric
		Equipment	: 1 x LED single 840 100 W / 14265 lm

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Summary, Exterior 1

Result overview, Residential Vertical Reference Plane 2



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	85590 lm
Total power	600 W
Total power per area (5886.63 m²)	0.10 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	0.08 lx
Minimum illuminance	E_{min}	0.01 lx
Maximum illuminance	E_{max}	0.18 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:12.4 (0.08)
Diversity U_d	E_{min}/E_{max}	1:27.8 (0.04)

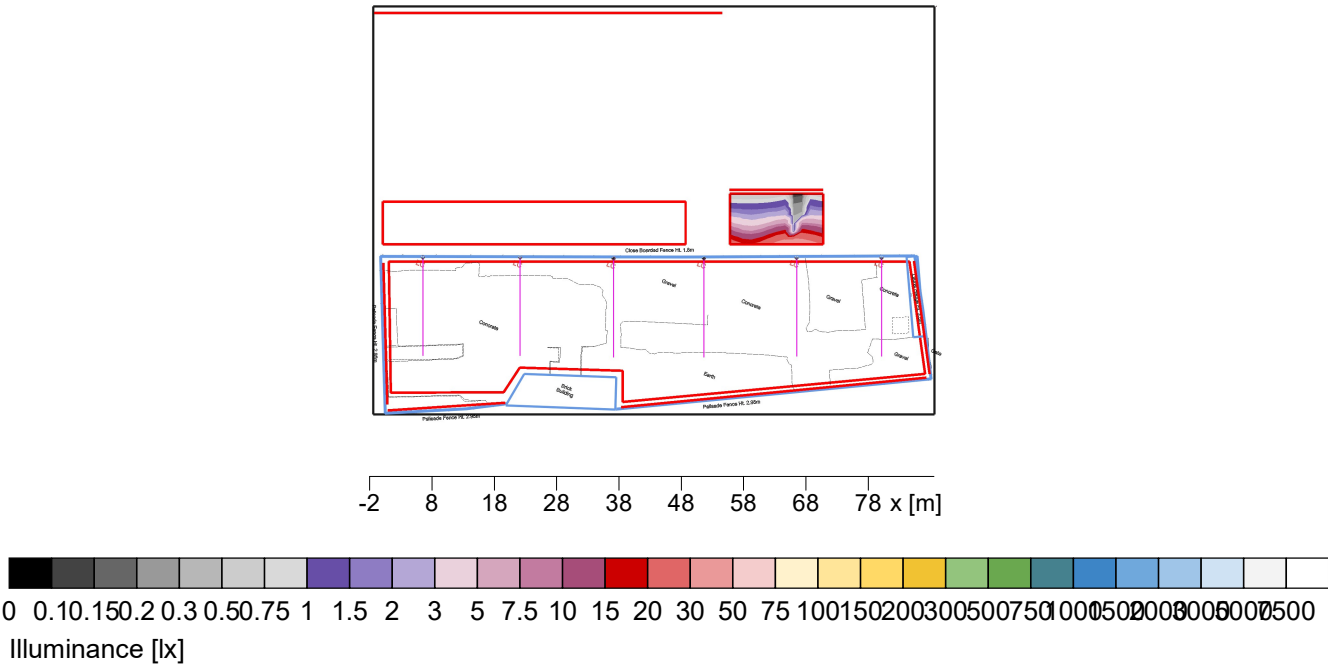
Type No.Make

2		6 x		ANSELL	
				Order No.	: AAZLED100/ASY
				Luminaire name	: FLOODLIGHTS - Aztec Asymmetric
				Equipment	: 1 x LED single 840 100 W / 14265 lm

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Summary, Exterior 1

Result overview, Residential Reference Plane 1



General

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

Total luminous flux	85590 lm
Total power	600 W
Total power per area (5886.63 m²)	0.10 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	7.5 lx
Minimum illuminance	E_{min}	0.2 lx
Maximum illuminance	E_{max}	32.9 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:47.9 (0.02)
Diversity U_d	E_{min}/E_{max}	1:209 (0)

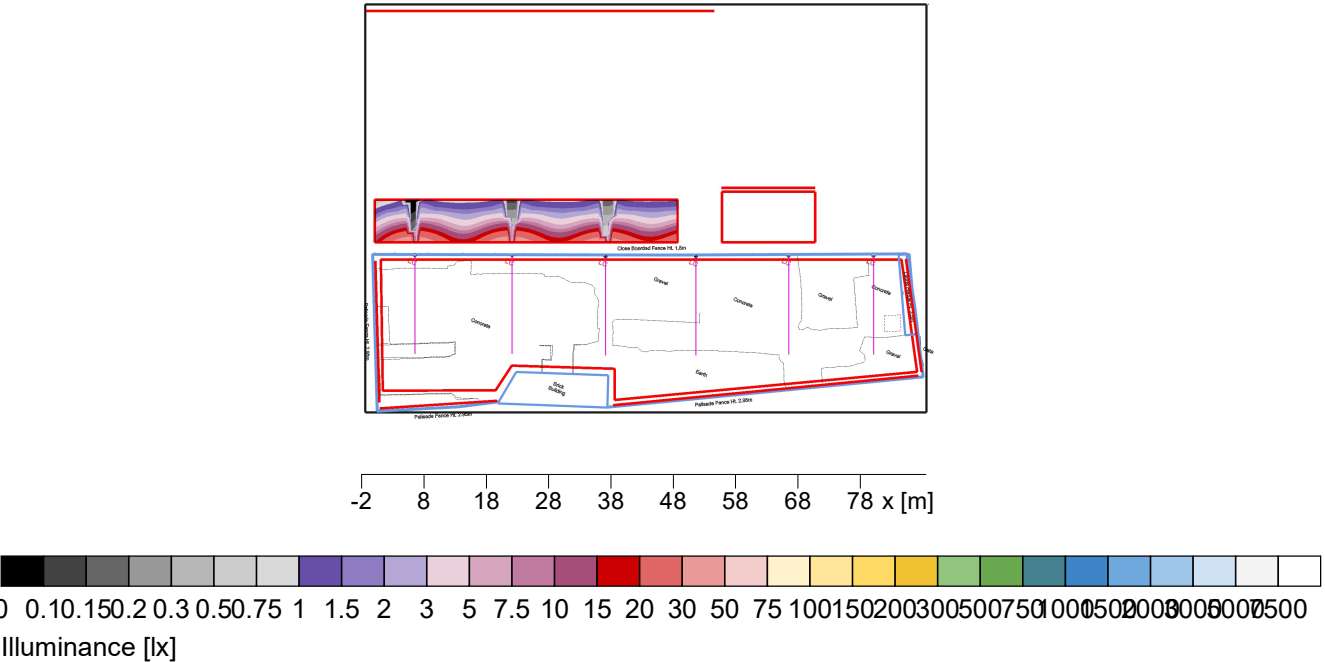
Type No.\Make

2	6 x	ANSELL	
	Order No.	: AAZLED100/ASY	
	Luminaire name	: FLOODLIGHTS - Aztec Asymmetric	
	Equipment	: 1 x LED single 840 100 W / 14265 lm	

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Summary, Exterior 1

Result overview, Non-residential Reference Plane 1



General	
Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	
85590 lm	
Total power	
600 W	
Total power per area (5886.63 m²)	
0.10 W/m²	

Illuminance	
Average illuminance	$\bar{E}_m$ 8.3 lx
Minimum illuminance	E_{min} 0.1 lx
Maximum illuminance	E_{max} 36.6 lx
Uniformity U_o	$E_{min}/\bar{E}_m$ 1:151 (0.01)
Diversity U_d	E_{min}/E_{max} 1:663 (0)

Type No.\Make

ANSELL	
2 6 x	Order No. : AAZLED100/ASY
	Luminaire name : FLOODLIGHTS - Aztec Asymmetric
	Equipment : 1 x LED single 840 100 W / 14265 lm

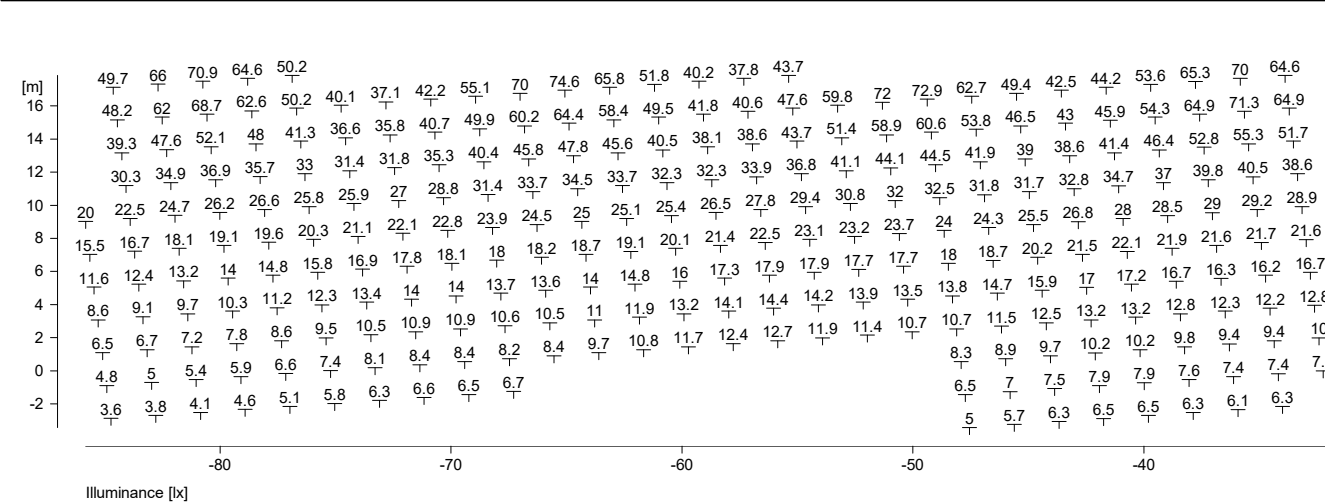
Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Exterior 1

Calculation results, Exterior 1

Table, Yard Reference Plane (E)



Part1

Height reference plane		: 0.00 m
Average illuminance	$\bar{E}_m$	: 27.2 lx
Minimum illuminance	E_{min}	: 1.6 lx
Maximum illuminance	E_{max}	: 75.5 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 17.31 (0.06)

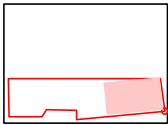
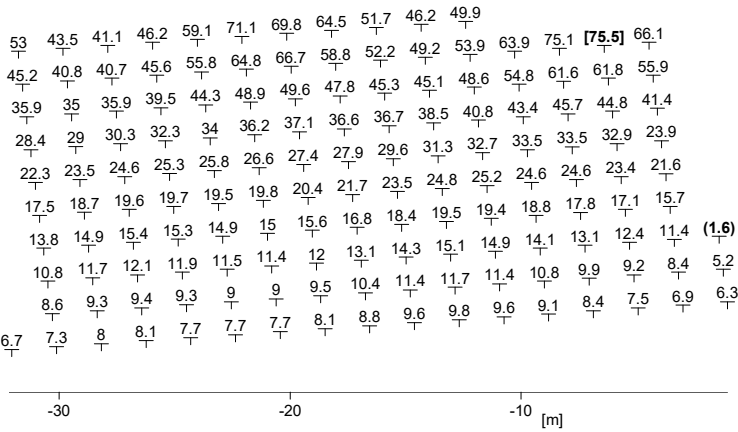
Object :
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Project number : Glebe Farm
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Exterior 1

Calculation results, Exterior 1

Table, Yard Reference Plane (E)

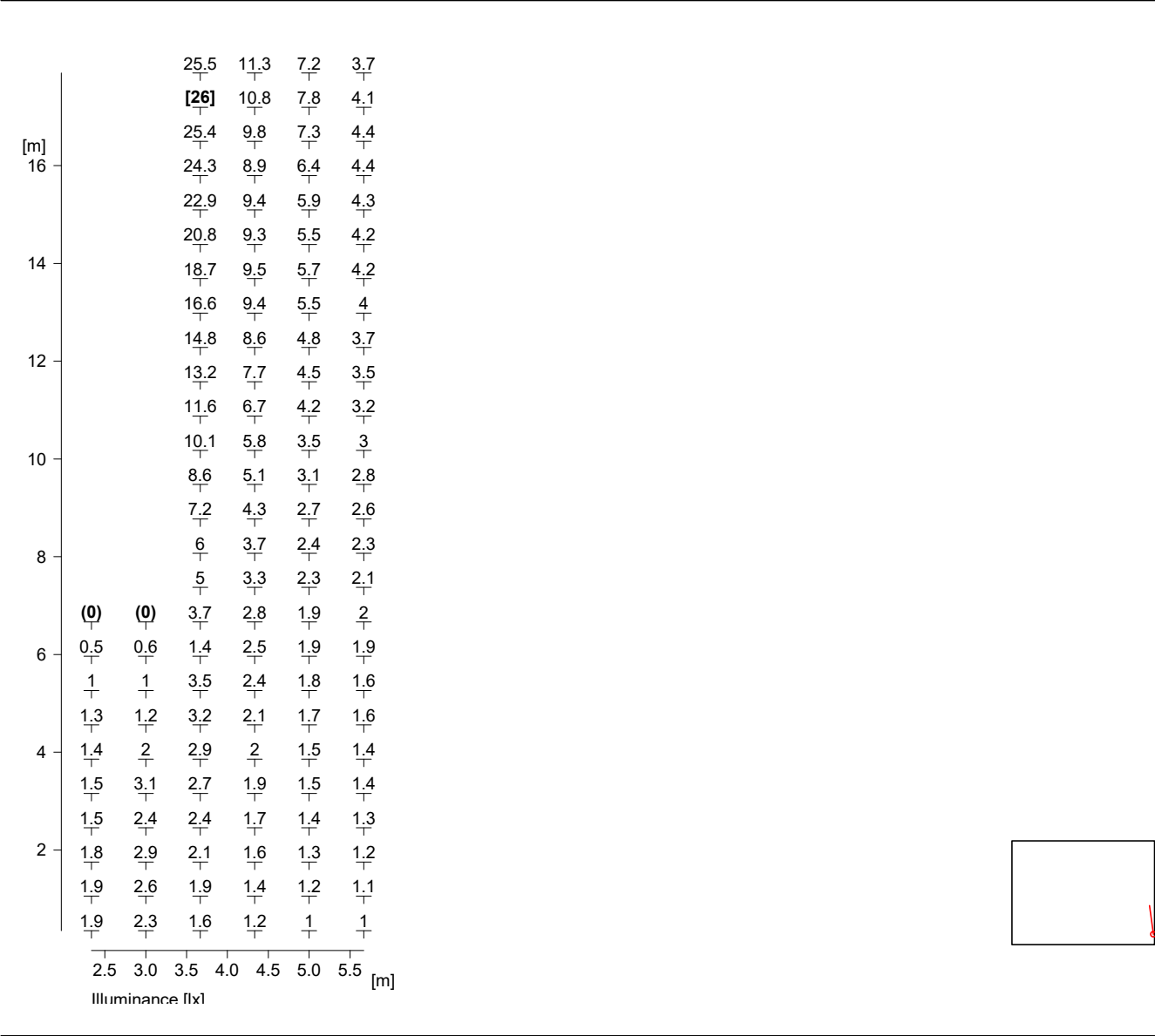


Object :
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Calculation results, Exterior 1

Table, East Vertical Reference Plane (E)



Average illuminance	$\bar{E}_m$	: 5 lx
Minimum illuminance	E_{min}	: 0 lx
Maximum illuminance	E_{max}	: 26 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 400.47 (0.00)

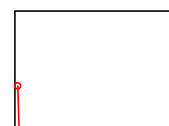
Object :
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Calculation results, Exterior 1

Table, West Vertical Reference Plane (E)

[m]	1.6	1.2	1	0.9	(0.8)	(0.8)
22	1.8	1.4	1.1	1	0.9	(0.8)
	2	1.5	1.2	1.1	0.9	0.9
20	2.2	1.7	1.3	1.1	1	0.9
	2.4	1.8	1.4	1.2	1.1	1
	2.7	2	1.6	1.3	1.2	1.1
18	3.1	2.3	1.7	1.4	1.2	1.1
	3.6	2.6	1.9	1.5	1.3	1.2
	4.2	3	2.1	1.7	1.4	1.3
16	4.9	3.4	2.4	1.8	1.5	1.3
	5.7	4	2.8	2	1.6	1.4
	6.7	4.7	3.2	2.2	1.7	1.5
14	7.8	5.5	3.6	2.4	1.9	1.6
	9	6.5	4.3	2.7	2	1.7
	10.4	7.6	5	3	2.1	1.8
12	12.1	9	5.8	3.5	2.3	1.9
	13.9	10.5	6.9	4	2.5	2
	15.8	12.2	7.9	4.6	2.7	2.2
10	17.8	13.9	9.1	5.2	3	2.3
	20	15.8	10.1	5.6	3.2	2.4
	22	17.5	11.4	6.1	3.4	2.6
8	24.2	19.1	12.3	6.4	3.8	2.7
	26.2	20.8	13.2	6.9	4.1	2.9
6	27.9	21.9	13.9	7.3	4.3	3
	30.6	23.3	14	7.7	4.4	3.1
	32.8	24.6	13.7	7.1	4.4	3.1
4	34.1	25.8	13.4	6.4	4.3	3
	36.2	26.2	11.6	5.9	4.1	3
	36.3	25	9.1	5.7	4.1	2.9
2	[37.6]	23.5	10.1	5.8	4.2	2.8
	35.7	21.6	8.3	6.1	4.2	2.6
	32.5	19.1	8.1	6.3	4	2.3
	2.5	3.0	3.5	4.0	4.5	5.0
	[m]					



Average illuminance	$\bar{E}_m$	: 7.2 lx
Minimum illuminance	E_{min}	: 0.8 lx
Maximum illuminance	E_{max}	: 37.6 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 9.63 (0.10)

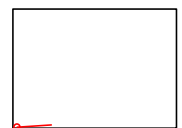
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Calculation results, Exterior 1

Table, South Left Vertical Reference Plane (E)

	4.48	3.14	2.28	1.95	1.76	1.65
18	4.91	3.37	2.36	1.97	1.79	1.66
	5.12	3.42	2.48	2.03	1.8	1.67
	5.21	3.56	2.57	2.09	1.81	1.68
16	5.3	3.67	2.68	2.13	1.84	1.68
	5.35	3.67	2.69	2.18	1.82	1.67
	5.29	3.72	2.74	2.19	1.79	1.65
14	5.2	3.63	2.71	2.19	1.78	1.63
	5.11	3.56	2.64	2.14	1.75	1.61
	4.98	3.42	2.53	2.07	1.72	1.59
12	4.82	3.24	2.42	1.97	1.7	1.56
	4.63	3.04	2.29	1.89	1.65	1.53
	4.42	2.92	2.13	1.78	1.61	1.5
10	4.16	2.65	2	1.71	1.56	1.46
	3.88	2.49	1.89	1.64	1.52	1.43
	3.55	2.33	1.8	1.59	1.48	1.39
8	3.26	2.22	1.75	1.55	1.44	1.35
	2.99	2.09	1.7	1.5	1.4	1.31
	2.78	2.01	1.67	1.46	1.35	1.27
6	2.63	1.93	1.62	1.41	1.3	1.22
	2.58	1.9	1.55	1.35	1.25	1.18
	2.54	1.85	1.5	1.3	1.2	1.13
4	2.55	1.83	1.44	1.24	1.14	1.07
	2.55	1.8	1.38	1.18	1.08	1.01
	2.55	1.75	1.32	1.12	1.01	0.95
2	2.56	1.69	1.27	1.06	0.95	0.89
	2.47	1.65	1.22	1.02	0.88	(0.82)
	2.5	3.0	3.5	4.0	4.5	5.0



Average illuminance	$\bar{E}_m$	: 2.2 lx
Minimum illuminance	E_{min}	: 0.82 lx
Maximum illuminance	E_{max}	: 5.35 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 2.68 (0.37)

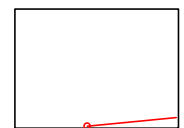
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 Project number : Glebe Farm
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Calculation results, Exterior 1

Table, South Right Vertical Reference Plane (E)

45	[m]	13.6	12.1	9.6	6.4	4.1	2.6	1.8	1.3	(1.2)
		14.2	12.8	10.1	6.8	4.2	2.7	2	1.5	1.3
		14.7	13.3	10.5	7	4.4	2.7	2	1.6	1.4
		15.2	13.7	10.7	7.1	4.5	2.7	2.1	1.7	1.5
		15.6	14.1	10.9	7.1	4.6	2.7	2.1	1.8	1.7
		16.1	14.4	11	7	4.7	2.7	2.2	1.9	1.8
		16.5	14.7	11.2	7.1	4.6	2.8	2.3	2	1.9
		16.9	15.1	11.4	7.2	4.5	2.9	2.3	2.1	2
		17.4	15.5	11.6	7.3	4.5	3.1	2.4	2.2	2.1
		17.9	15.9	11.8	7.5	4.4	3.2	2.6	2.3	2.1
40		18.4	16.4	12.1	7.8	4.5	3.3	2.7	2.4	2.2
		19.1	16.9	12.6	8.1	4.8	3.4	2.7	2.5	2.3
		19.8	17.4	13	8.5	5.1	3.5	2.8	2.5	2.3
		20.5	17.9	13.4	8.8	5.5	3.7	2.9	2.6	2.4
		21.2	18.3	13.8	9.2	6	3.8	3	2.6	2.4
		21.7	18.8	14.1	9.5	6.3	4	3.1	2.7	2.4
		22.1	19	14.3	9.7	6.6	4.2	3.2	2.7	2.4
		22.4	19.3	14.5	9.9	6.7	4.4	3.4	2.7	2.5
		22.5	19.3	14.6	9.9	6.7	4.5	3.5	2.7	2.5
		22.4	19.3	14.6	9.8	6.6	4.5	3.5	2.7	2.4
35		22.1	19	14.3	9.7	6.5	4.4	3.5	2.7	2.4
		21.6	18.4	13.8	9.4	6.3	4.3	3.4	2.7	2.4
		21	17.8	13.2	9.1	6.1	4.1	3.2	2.6	2.4
		20.3	17.2	12.7	8.7	5.9	3.8	3	2.6	2.4
		19.7	16.6	12.1	8.2	5.6	3.6	2.9	2.5	2.3
		19.1	16	11.6	7.8	5.3	3.4	2.8	2.5	2.3
		18.6	15.5	11.2	7.4	4.9	3.3	2.7	2.5	2.3
		18.1	15.1	10.8	7	4.5	3.2	2.7	2.4	2.3
		17.8	14.7	10.5	6.8	4.2	3.2	2.7	2.4	2.2
		17.5	14.4	10.3	6.6	4	3.2	2.7	2.4	2.2
30		17.4	14.3	10.2	6.5	4	3.2	2.7	2.4	2.2
		17.5	14.4	10.3	6.6	4.1	3.2	2.6	2.4	2.2
		17.6	14.4	10.3	6.7	4.3	3.2	2.6	2.4	2.2
		17.7	14.5	10.4	6.9	4.5	3.2	2.7	2.4	2.2



Part1

Average illuminance	$\bar{E}_m$	: 7 lx
Minimum illuminance	E_{min}	: 1.2 lx
Maximum illuminance	E_{max}	: 22.5 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 5.84 (0.17)

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, South Right Vertical Reference Plane (E)

25	17,9	14,7	10,6	7,1	4,8	3,3	2,7	2,4	2,2
	18,1	14,8	10,8	7,4	5	3,4	2,7	2,4	2,2
	18,2	14,9	10,9	7,5	5,1	3,5	2,8	2,4	2,2
	18,3	15	10,9	7,6	5,2	3,6	2,8	2,4	2,2
	18,2	15	11	7,7	5,3	3,7	2,9	2,3	2,2
	18,2	15	11	7,6	5,2	3,7	2,9	2,3	2,1
	18	14,8	10,9	7,5	5,1	3,6	2,9	2,3	2,1
20	17,6	14,4	10,6	7,3	5	3,5	2,9	2,3	2,1
	17,2	14	10,2	7,1	4,8	3,4	2,7	2,3	2,1
	16,7	13,5	9,8	6,9	4,6	3,2	2,6	2,2	2,1
	16,2	13,1	9,4	6,6	4,4	3,1	2,5	2,2	2
	15,8	12,7	8,9	6,3	4,1	2,9	2,4	2,2	2
	15,5	12,3	8,6	6	3,9	2,8	2,3	2,1	2
	15,2	12	8,4	5,7	3,7	2,7	2,3	2,1	2
15	15	11,8	8,2	5,4	3,5	2,7	2,3	2,1	2
	14,8	11,6	8	5,2	3,4	2,7	2,3	2,1	1,9
	14,7	11,4	8	5,1	3,3	2,7	2,3	2,1	1,9
	14,7	11,5	8	5,1	3,3	2,7	2,3	2,1	1,9
	15	11,6	8,1	5,2	3,4	2,7	2,3	2,1	1,9
	15,2	11,8	8,3	5,4	3,6	2,7	2,3	2,1	1,9
	15,4	12	8,4	5,6	3,7	2,7	2,3	2,1	1,9
10	15,5	12,1	8,5	5,8	3,9	2,8	2,3	2,1	1,9
	15,5	12,2	8,6	5,9	4	2,9	2,3	2,1	1,9
	15,6	12,3	8,7	6,1	4,1	3	2,4	2,1	1,9
	15,6	12,3	8,8	6,2	4,2	3	2,5	2,1	1,9
	15,6	12,3	8,8	6,2	4,2	3,1	2,5	2,1	1,9
	15,5	12,3	8,8	6,1	4,2	3,1	2,5	2	1,9
	15,3	12,1	8,7	6	4,1	3	2,5	2	1,9
5	15	11,8	8,5	5,9	4	3	2,5	2	1,9
	14,6	11,4	8,1	5,7	3,8	2,8	2,4	2	1,8
	14,2	10,9	7,8	5,5	3,6	2,7	2,2	1,9	1,8
	13,8	10,5	7,4	5,3	3,4	2,5	2,1	1,9	1,8
	12,2	9,4	6,5	4,6	3,2	2,4	2	1,8	1,8
	11,7	8,9	6,1	4,3	3	2,2	1,9	1,8	1,7
	11,2	8,5	5,8	4	2,8	2,1	1,8	1,7	1,7

A diagram showing a rectangle with a red line extending from the bottom right corner and a small red dot at the end of the line.

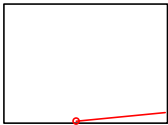
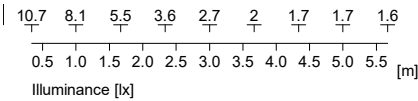
Part2

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, South Right Vertical Reference Plane (E)



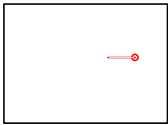
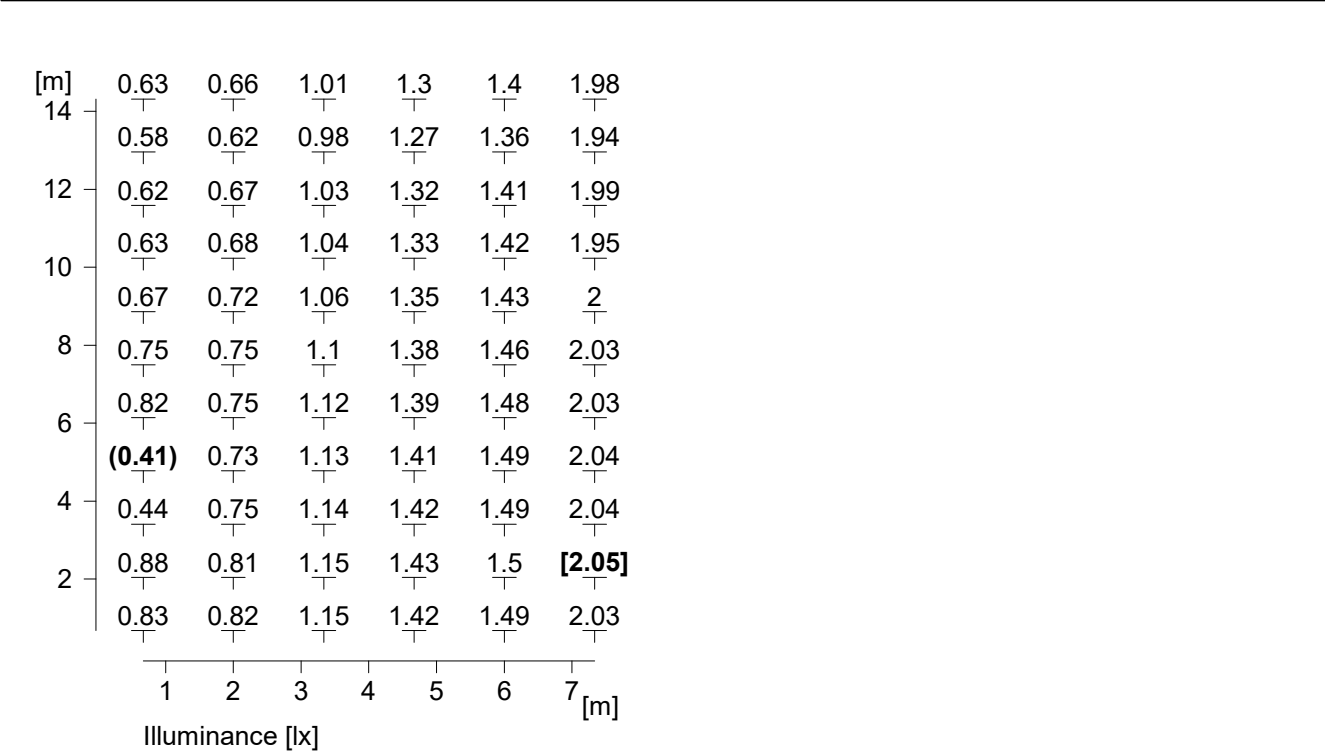
Part3

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, Residential Vertical Reference Plane 1 (E)



Average illuminance	$\bar{E}_m$	: 1.21 lx
Minimum illuminance	E_{min}	: 0.41 lx
Maximum illuminance	E_{max}	: 2.05 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 2.95 (0.34)

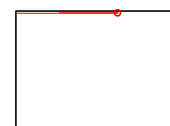
Object :
 Installation : LED Lighting
 Project number : Glebe Farm
 Date : 10.04.2024



Calculation results, Exterior 1

Table, Residential Vertical Reference Plane 2 (E)

[m]	(0.01)	0.02	0.03	0.03	0.04	0.06	0.07	0.08	0.09
55	(0.01)	0.02	0.02	0.03	0.04	0.05	0.07	0.08	0.09
	(0.01)	0.02	0.02	0.03	0.04	0.05	0.07	0.08	0.09
	(0.01)	0.02	0.02	0.03	0.04	0.06	0.07	0.08	0.1
	(0.01)	0.02	0.02	0.03	0.04	0.06	0.07	0.09	0.1
	(0.01)	0.02	0.02	0.03	0.05	0.06	0.07	0.09	0.1
	(0.01)	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11
	(0.01)	0.02	0.03	0.04	0.05	0.06	0.08	0.1	0.11
50	(0.01)	0.02	0.03	0.04	0.05	0.07	0.08	0.1	0.11
	(0.01)	0.02	0.03	0.04	0.05	0.07	0.08	0.1	0.11
	(0.01)	0.02	0.03	0.04	0.05	0.07	0.09	0.1	0.11
	(0.01)	0.02	0.03	0.04	0.05	0.07	0.09	0.1	0.11
	(0.01)	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.12
	(0.01)	0.02	0.03	0.04	0.05	0.07	0.09	0.1	0.12
	(0.01)	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.12
45	(0.01)	0.03	0.03	0.04	0.06	0.07	0.09	0.11	0.12
	(0.01)	0.03	0.03	0.04	0.06	0.08	0.09	0.11	0.13
	(0.01)	0.03	0.03	0.04	0.06	0.08	0.09	0.11	0.13
	(0.01)	0.03	0.03	0.04	0.06	0.08	0.1	0.12	0.13
	(0.01)	0.03	0.04	0.05	0.06	0.08	0.1	0.12	0.13
	(0.01)	0.03	0.04	0.05	0.06	0.08	0.1	0.12	0.13
	(0.01)	0.03	0.04	0.05	0.06	0.08	0.1	0.12	0.13
40	(0.01)	0.03	0.04	0.05	0.06	0.08	0.1	0.12	0.14
	(0.01)	0.03	0.04	0.05	0.06	0.08	0.1	0.12	0.14
	0.02	0.03	0.04	0.05	0.07	0.08	0.11	0.12	0.14
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.14
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.14
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.14
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15
35	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.14	0.15
	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.14	0.15
	0.02	0.03	0.04	0.05	0.07	0.09	0.12	0.14	0.15



Part1

Average illuminance	$\bar{E}_m$	: 0.08 lx
Minimum illuminance	E_{min}	: 0.01 lx
Maximum illuminance	E_{max}	: 0.18 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 12.41 (0.08)

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, Residential Vertical Reference Plane 2 (E)

	0.02	0.03	0.04	0.05	0.07	0.09	0.12	0.14	0.15
	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.16
	0.02	0.03	0.04	0.06	0.07	0.1	0.12	0.14	0.16
30	0.02	0.03	0.04	0.06	0.08	0.1	0.12	0.14	0.16
	0.02	0.03	0.04	0.06	0.08	0.1	0.12	0.14	0.16
	0.02	0.03	0.04	0.06	0.08	0.1	0.12	0.15	0.16
	0.02	0.03	0.04	0.06	0.08	0.1	0.12	0.15	0.16
	0.02	0.03	0.04	0.06	0.08	0.1	0.12	0.15	0.16
	0.02	0.03	0.05	0.06	0.08	0.1	0.12	0.15	0.17
	0.02	0.04	0.05	0.06	0.08	0.1	0.12	0.15	0.17
25	0.02	0.04	0.05	0.06	0.08	0.1	0.13	0.15	0.17
	0.02	0.04	0.05	0.06	0.08	0.1	0.13	0.15	0.17
	0.02	0.04	0.05	0.06	0.08	0.1	0.13	0.15	0.17
	0.02	0.04	0.05	0.06	0.08	0.1	0.13	0.15	0.17
	0.02	0.04	0.05	0.06	0.08	0.1	0.13	0.15	0.17
	0.02	0.04	0.05	0.06	0.08	0.1	0.13	0.16	0.17
20	0.02	0.04	0.05	0.06	0.08	0.11	0.13	0.16	0.17
	0.02	0.04	0.05	0.06	0.08	0.11	0.13	0.16	0.17
	0.02	0.04	0.05	0.06	0.08	0.11	0.13	0.16	0.17
	0.02	0.04	0.05	0.06	0.08	0.11	0.13	0.16	0.17
	0.02	0.04	0.05	0.06	0.08	0.11	0.13	0.16	0.17
	0.02	0.04	0.05	0.06	0.08	0.11	0.13	0.16	[0.18]
	0.02	0.04	0.05	0.07	0.08	0.11	0.13	0.16	[0.18]
15	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
10	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	[0.18]
	0.03	0.04	0.05	0.07	0.09	0.11	0.14	0.16	[0.18]

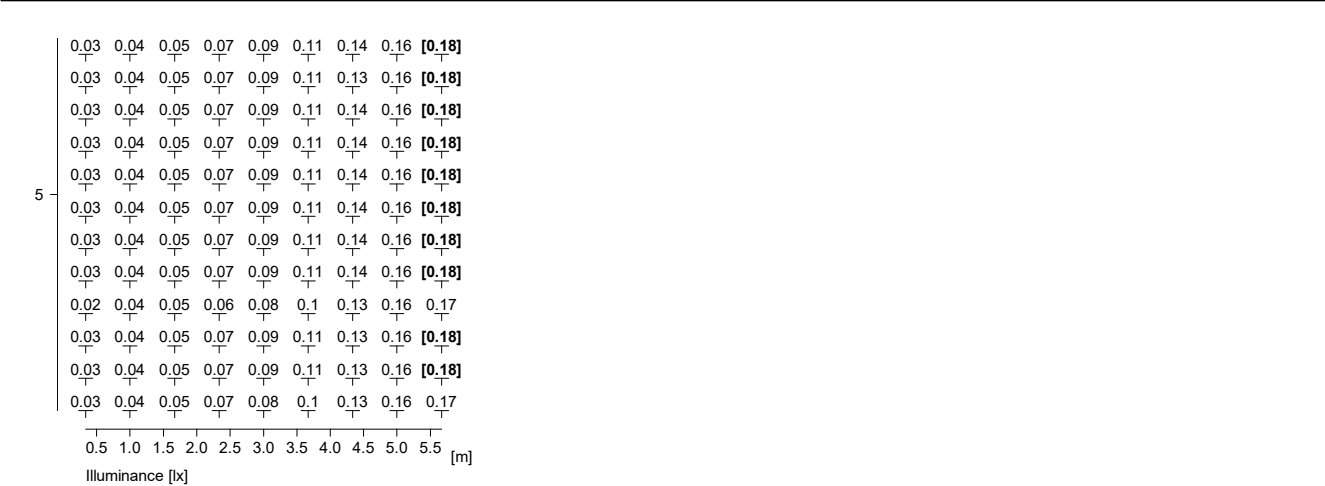
Part2

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, Residential Vertical Reference Plane 2 (E)

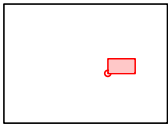
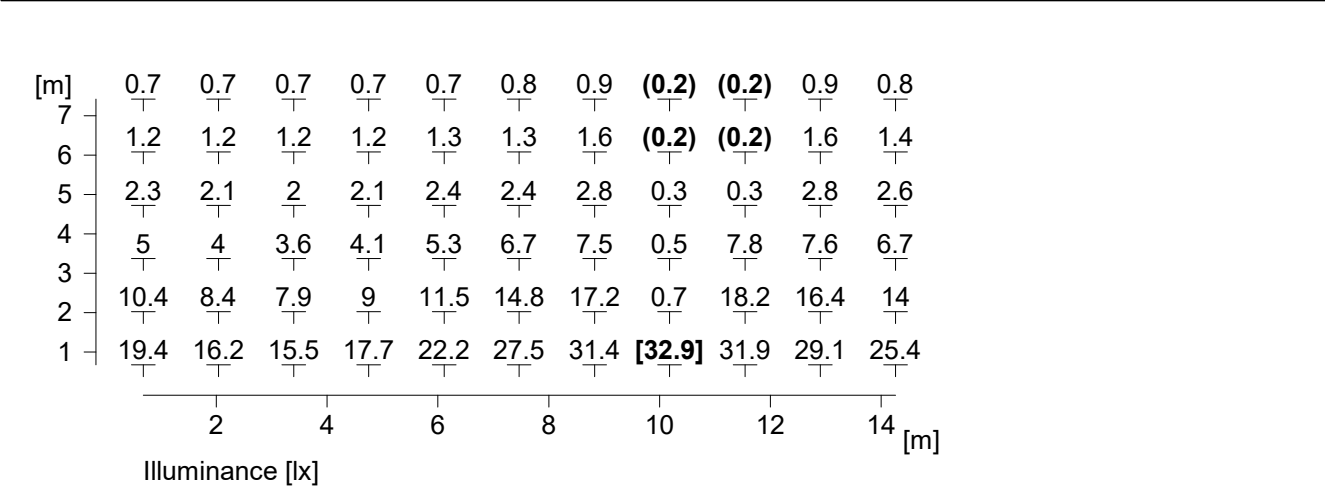


Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, Residential Reference Plane 1 (E)



Height reference plane		: 0.00 m
Average illuminance	$\bar{E}_m$	: 7.5 lx
Minimum illuminance	E_{min}	: 0.2 lx
Maximum illuminance	E_{max}	: 32.9 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 47.93 (0.02)



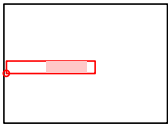
**EDMUNDSON
LIGHTING
CONSULTANCY**

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1
Table, Non-residential Reference Plane 1 (E)

0.1	0.1	1.4	1.3	1.2	1.1	1.1	1	1	1	1	1	1	1	1	1.1	1.2	1.3	1.4	0.2	0.2	0.2	1.3	1.2	1.1	1.1	1	1	1	1
0.2	0.2	1.9	1.8	1.6	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.8	1.9	0.2	0.2	0.2	1.7	1.6	1.5	1.5	1.4	1.4	1.4	1.4
0.2	0.2	2.6	2.4	2.2	2.2	2.1	2	1.9	1.9	1.8	1.8	1.9	2	2	2.1	2.2	2.4	2.6	0.3	0.2	0.3	2.4	2.2	2.1	2.1	2.1	2	1.9	1.9
0.3	0.3	3.8	4.1	3.9	3.7	3.5	3.1	2.8	2.6	2.5	2.5	2.6	2.9	3.1	3.3	3.5	3.7	3.6	0.4	0.3	0.3	3.7	3.7	3.5	3.4	3.2	2.9	2.7	2.6
0.4	0.4	7.7	7.4	7	6.2	5.5	4.7	4.1	3.7	3.5	3.6	3.9	4.5	5.2	5.9	6.5	6.7	6.8	0.5	0.4	6.8	6.8	6.6	6.1	5.5	4.8	4.3	3.9	3.7
0.6	13.3	12.9	11.9	10.9	9.7	8.4	7.1	6.2	5.6	5.4	5.6	6.1	7.1	8.2	9.4	10.5	11.5	12.3	0.7	0.5	12	11.5	10.5	9.6	8.4	7.3	6.5	5.9	5.8
0.7	19.7	19	17.7	16.2	14.4	12.4	10.7	9.4	8.5	8.3	8.6	9.5	10.8	12.6	14.4	16.1	17.4	18.4	1	0.6	17.8	17	15.8	14.3	12.5	11	9.8	9.1	8.9
0.9	27.4	26.5	24.8	22.7	20.2	17.7	15.4	13.6	12.6	12.3	12.8	14.1	16.1	18.5	21.1	23.3	25.1	26.2	1.2	0.7	24.9	24.1	22.3	20.2	18	15.9	14.4	13.4	13.2
1.1	35.3	34.1	31.9	29.3	26.4	23.4	20.7	18.7	17.5	17.2	18.1	19.8	22.3	25.3	28.4	31.1	33.1	34.4	34.8	1.5	32.4	31.3	29.1	26.7	24	21.6	19.8	18.7	18.6
		25				30				35				40															



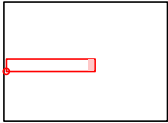
Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024



Calculation results, Exterior 1

Table, Non-residential Reference Plane 1 (E)

1	1	1.1	1.1	1.1
1.4	1.4	1.4	1.5	1.5
1.9	2	2.1	2.1	2.1
2.6	2.8	3	3.3	3.4
3.8	4.2	4.8	5.4	6.1
6	6.5	7.5	8.6	9.8
9.3	10.1	11.4	13.1	14.9
13.8	15.1	17	19.3	21.7
19.4	21.1	23.5	26.4	29.3
45 [m]				

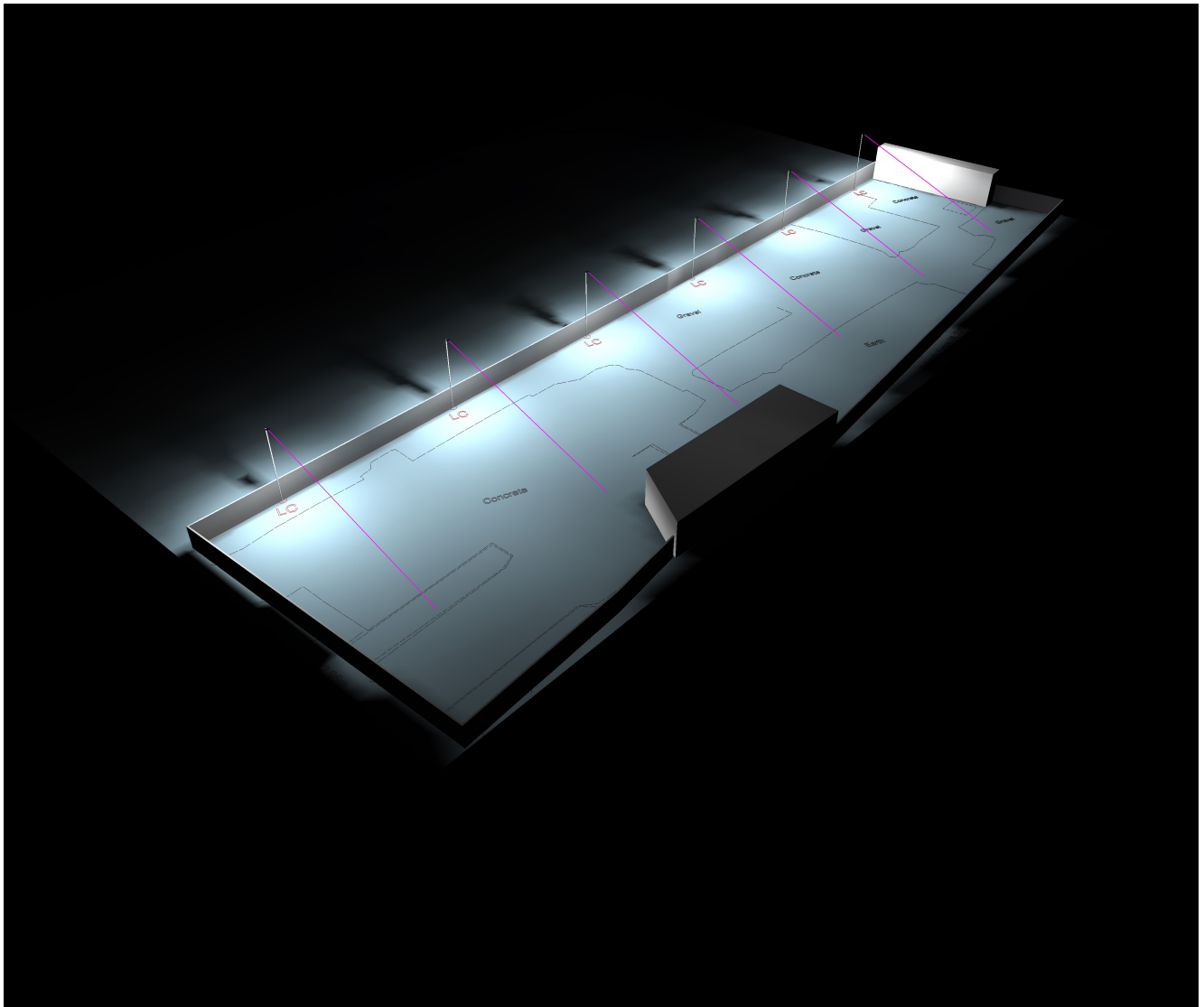


Part3

Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Calculation results, Exterior 1

3D luminance, View 1



Object :
Installation : LED Lighting
Project number : Glebe Farm
Date : 10.04.2024

Calculation results, Exterior 1

3D pseudo colours, View 1 (E)

