

Installation : Elm Grove Exterior

Project number : WF-288-A

Customer :

Processed by : Nick Weatherstone

Date : 12.07.2024

Lighting Design Service:

The Wirefield lighting design service is free of charge. Lighting designs are undertaken in accordance with any information supplied to us. Wirefield will not be held responsible for inaccurate, incomplete or out of date information which the design is based on.

It remains the responsibility of the client to check the design meets the requirements of the project and any applicable standards.

Where an emergency design has been requested it will be designed in accordance with BS5266-1,7_8. However this will be subject to a risk assessment by the relevant party, in addition to coverage of related points such as firefighting equipment and alarm call points. As a result, the design is limited until this information is provided.

In addition to the above, any assumptions will be outlined in any correspondence with the customer; if any assumptions are incorrect the lighting designer will need to be notified.

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.

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1 Exterior 1

1.1 Description, Exterior 1

1.1.1 Floor plan

wirefield

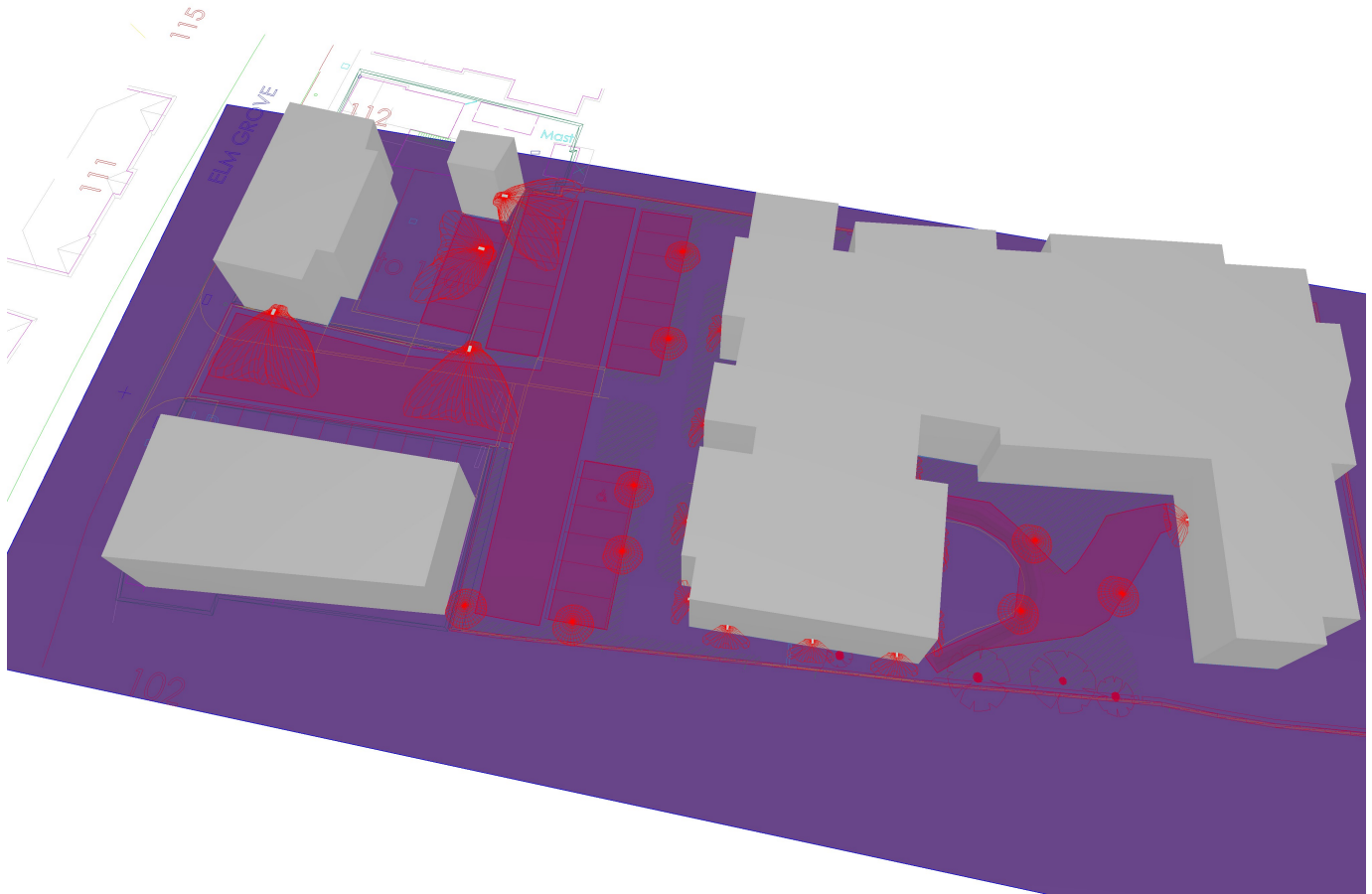


Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

wirefield

1.1 Description, Exterior 1

1.1.2 3D view, View 1



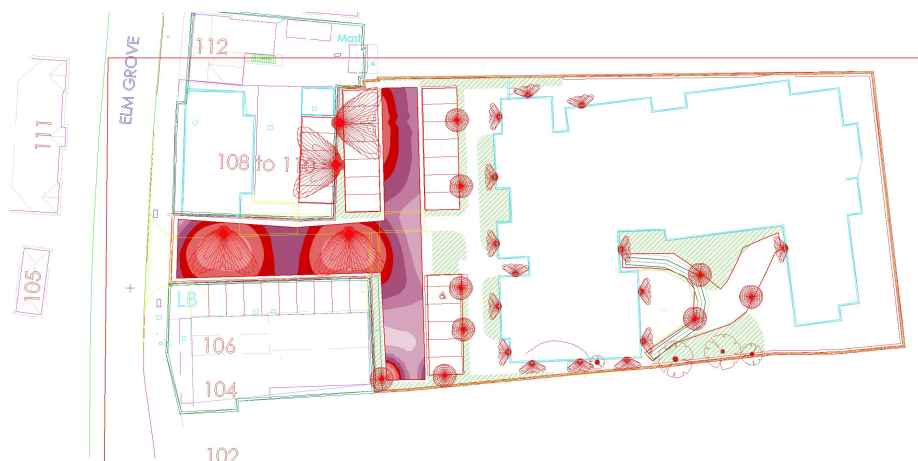
Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1 Exterior 1

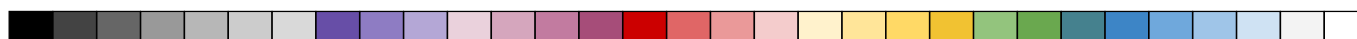
1.2 Summary, Exterior 1

1.2.1 Result overview, Measuring area 1

wirefield



13 23 33 43 53 63 73 83 93 103 113 123 x [m]



0 0.10.150.2 0.3 0.50.75 1 1.5 2 3 5 7.5 10 15 20 30 50 75 1001502003005007501000150020003000500

Illuminance [lx]

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 (6146.25 m²)

78544 lm
587.2 W
0.10 W/m²

Illuminance

Average illuminance
Minimum illuminance
Maximum illuminance
Uniformity U₀
Diversity U_d

$\bar{E}_m$ 17.8 lx
 E_{min} 4.5 lx
 E_{max} 61.8 lx
 $E_{min}/\bar{E}_m$ 1:4 (0.25)
 E_{min}/E_{max} 1:13.9 (0.07)

Type No. \Make

2 9 x



Wirefield

Order No. : !
Luminaire name : WBL1117/4K
Equipment : 1 x LED1x1650 T840 16 W / 1627 lm
Emergency : 285 lm (17.5 %)

4 4 x



Order No. :
Luminaire name : CTY434KA/AOA1
Equipment : 1 x LED 43.3 W / 6469 lm

Unit 38 Standard Way, Fareham, PO168XG

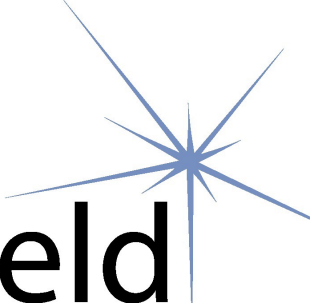
Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1 Exterior 1

1.2 Summary, Exterior 1

1.2.1 Result overview, Measuring area 1

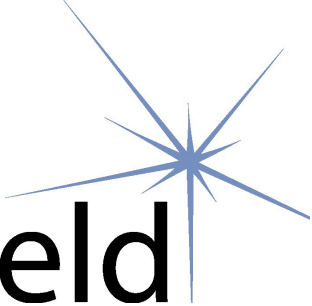
5	15 x	Order No.	:
		Luminaire name	: FN184K
		Equipment	: 1 x LEDx2550 18 W / 2535 lm
		Emergency	: 253 lm (10.0 %)



wirefield

1.2.2 Result overview, Measuring area 2

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024



wirefield

1.2 Summary, Exterior 1

1.2.2 Result overview, Measuring area 2

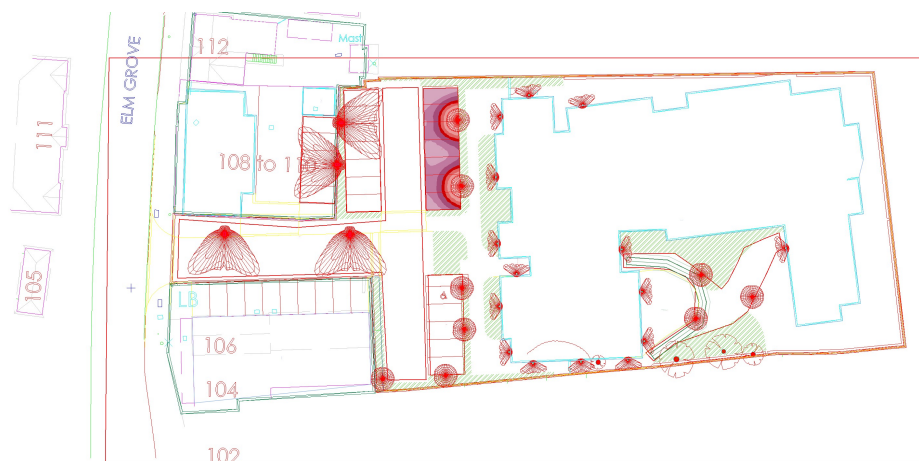
5	15 x	Order No.	:	
		Luminaire name	:	FN184K
		Equipment	:	1 x LEDx2550 18 W / 2535 lm
		Emergency	:	253 lm (10.0 %)

Object :
 Installation : Elm Grove Exterior
 Project number : WF-288-A
 Date : 12.07.2024

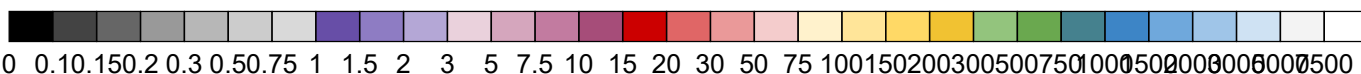
wirefield

1.2 Summary, Exterior 1

1.2.3 Result overview, Measuring area 3



13 23 33 43 53 63 73 83 93 103 113 123 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	78544 lm
Total power	587.2 W
Total power per area (6146.25 m ²)	0.10 W/m ²

Illuminance

Average illuminance	$\bar{E}_m$	16.4 lx
Minimum illuminance	E_{min}	5.7 lx
Maximum illuminance	E_{max}	72.3 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:2.85 (0.35)
Diversity U_d	E_{min}/E_{max}	1:12.6 (0.08)

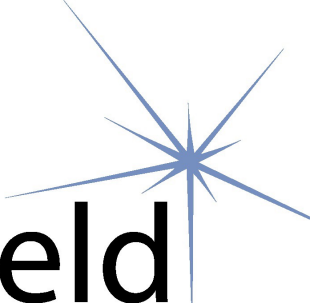
Type No. \Make

2	9 x	Wirefield
		Order No. : !
		Luminaire name : WBL1117/4K
		Equipment : 1 x LED1x1650 T840 16 W / 1627 lm
		Emergency : 285 lm (17.5 %)

4	4 x	Order No. :
		Luminaire name : CTY434KA/AOA1
		Equipment : 1 x LED 43.3 W / 6469 lm

Unit 38 Standard Way, Fareham, PO168XG

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024



wirefield

1.2 Summary, Exterior 1

1.2.3 Result overview, Measuring area 3

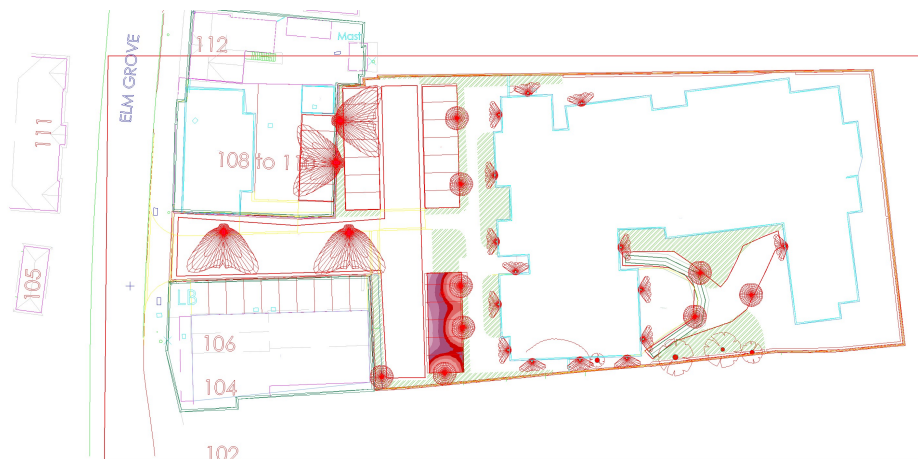
5	15 x	Order No.	:
		Luminaire name	: FN184K
		Equipment	: 1 x LEDx2550 18 W / 2535 lm
		Emergency	: 253 lm (10.0 %)

Object :
 Installation : Elm Grove Exterior
 Project number : WF-288-A
 Date : 12.07.2024

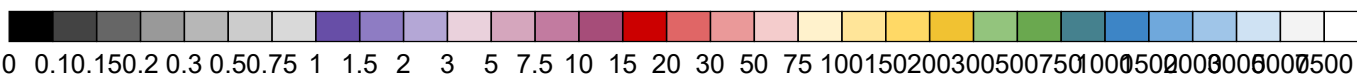
wirefield

1.2 Summary, Exterior 1

1.2.4 Result overview, Measuring area 4



13 23 33 43 53 63 73 83 93 103 113 123 x [m]



0 0.10.150.2 0.3 0.50.75 1 1.5 2 3 5 7.5 10 15 20 30 50 75 10015020030050075010001500200030005000

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	78544 lm
Total power	587.2 W
Total power per area (6146.25 m²)	0.10 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	24.5 lx
Minimum illuminance	E_{min}	6.8 lx
Maximum illuminance	E_{max}	73.3 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:3.6 (0.28)
Diversity U_d	E_{min}/E_{max}	1:10.8 (0.09)

Type No. \ Make

Wirefield

2	9 x	Order No.	: !
		Luminaire name	: WBL1117/4K
		Equipment	: 1 x LED1x1650 T840 16 W / 1627 lm
		Emergency	: 285 lm (17.5 %)

4	4 x	Order No.	:
		Luminaire name	: CTY434KA/AOA1
		Equipment	: 1 x LED 43.3 W / 6469 lm

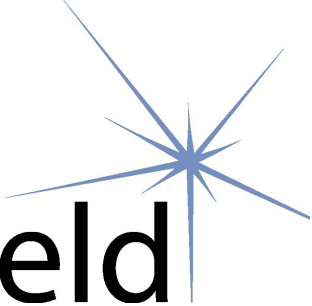
Unit 38 Standard Way, Fareham, PO168XG

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1.2 Summary, Exterior 1

1.2.4 Result overview, Measuring area 4

5	15 x	Order No.	:
		Luminaire name	: FN184K
		Equipment	: 1 x LEDx2550 18 W / 2535 lm
		Emergency	: 253 lm (10.0 %)



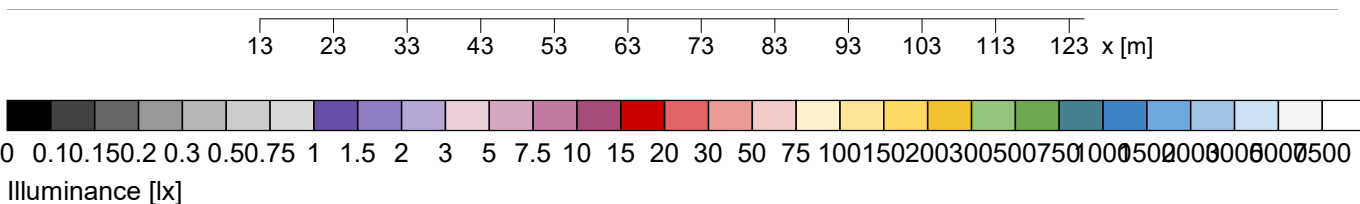
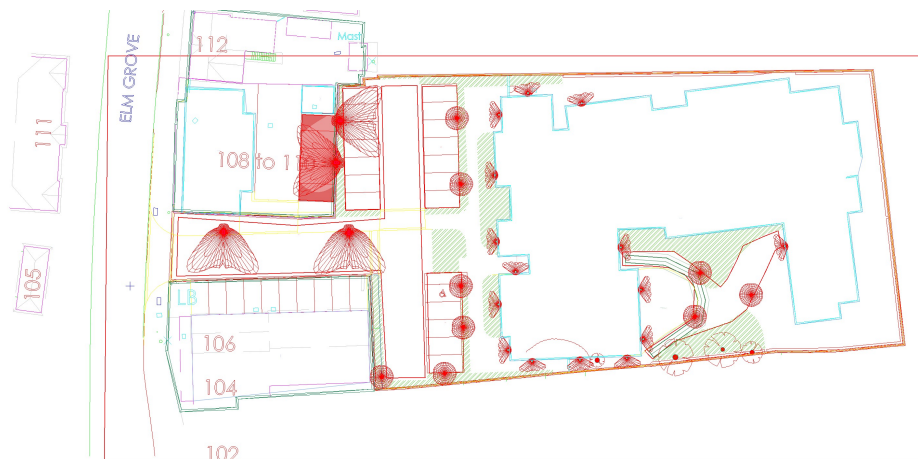
wirefield

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

wirefield

1.2 Summary, Exterior 1

1.2.5 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	78544 lm
Total power	587.2 W
Total power per area (6146.25 m²)	0.10 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	37.2 lx
Minimum illuminance	E_{min}	21.1 lx
Maximum illuminance	E_{max}	48.9 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:1.76 (0.57)
Diversity U_d	E_{min}/E_{max}	1:2.32 (0.43)

Type No. \Make

2	9 x	Wirefield
	Order No.	: !
	Luminaire name	: WBL1117/4K
	Equipment	: 1 x LED1x1650 T840 16 W / 1627 lm
	Emergency	: 285 lm (17.5 %)

4	4 x	Order No.	:
	Luminaire name	: CTY434KA/AOA1	
	Equipment	: 1 x LED 43.3 W / 6469 lm	

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1.2 Summary, Exterior 1

1.2.5 Result overview, Measuring area 6

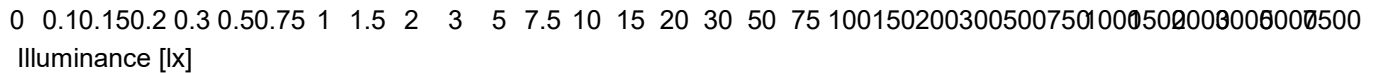
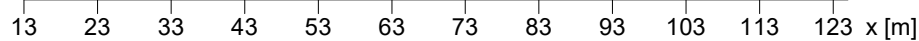
5	15 x	Order No.	:
		Luminaire name	: FN184K
		Equipment	: 1 x LEDx2550 18 W / 2535 lm
		Emergency	: 253 lm (10.0 %)



wirefield

wirefield

1.2.6 Result overview, Measuring area 5



78544 lm
587.2 W
0.10 W/m²

Average illuminance	$\bar{E}_m$	26.6 lx
Minimum illuminance	E_{min}	4.1 lx
Maximum illuminance	E_{max}	86.6 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:6.57 (0.15)
Diversity U_d	E_{min}/E_{max}	1:21.4 (0.05)

Order No. :
Luminaire name : CTY434KA/AOA1
Equipment : 1 x LED 43.3 W / 6469 lm

Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1.2 Summary, Exterior 1

1.2.6 Result overview, Measuring area 5

5	15 x	Order No.	:
		Luminaire name	: FN184K
		Equipment	: 1 x LEDx2550 18 W / 2535 lm
		Emergency	: 253 lm (10.0 %)



wirefield

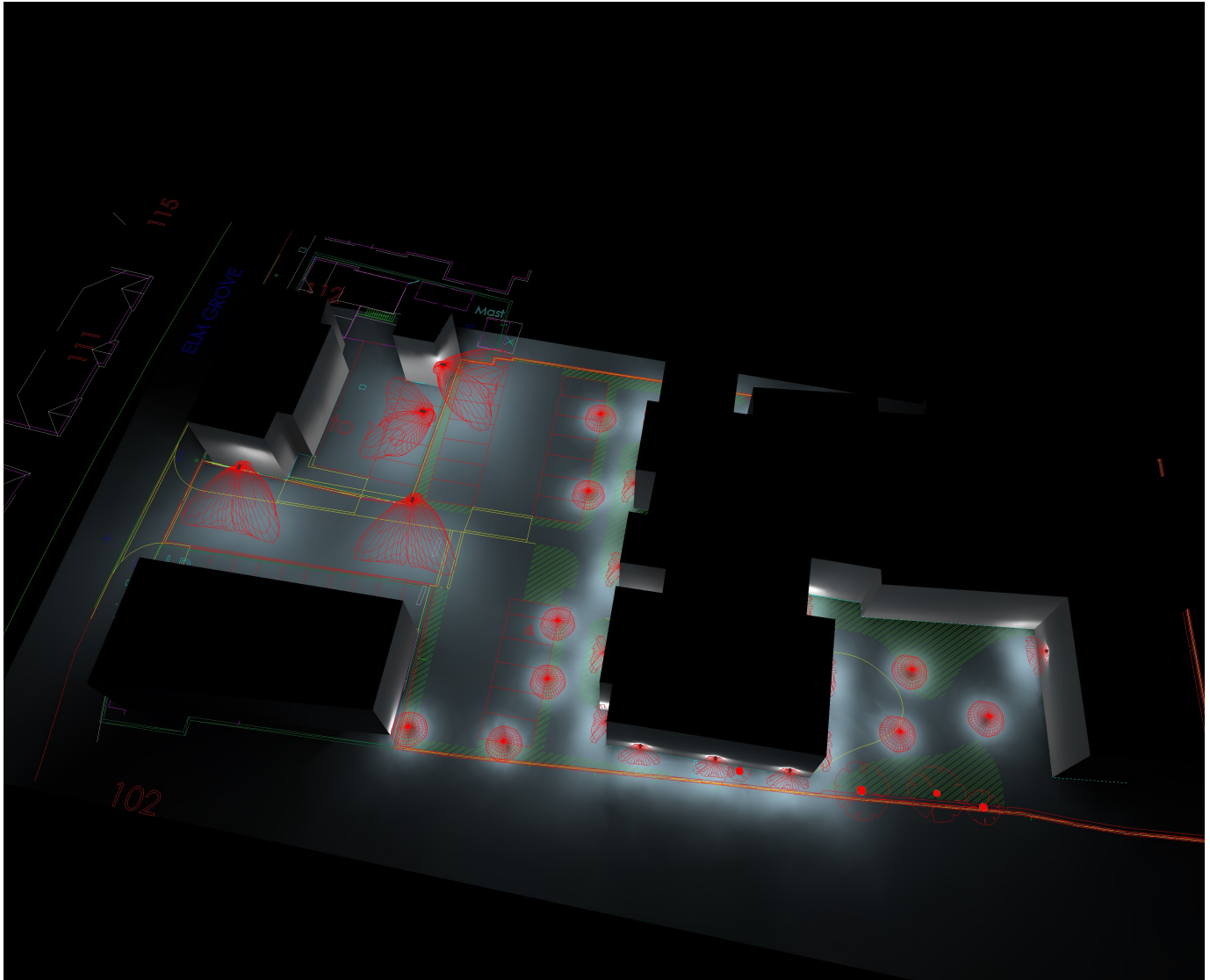
Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1 Exterior 1

1.3 Calculation results, Exterior 1

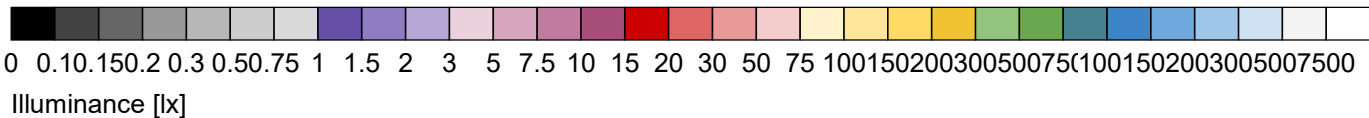
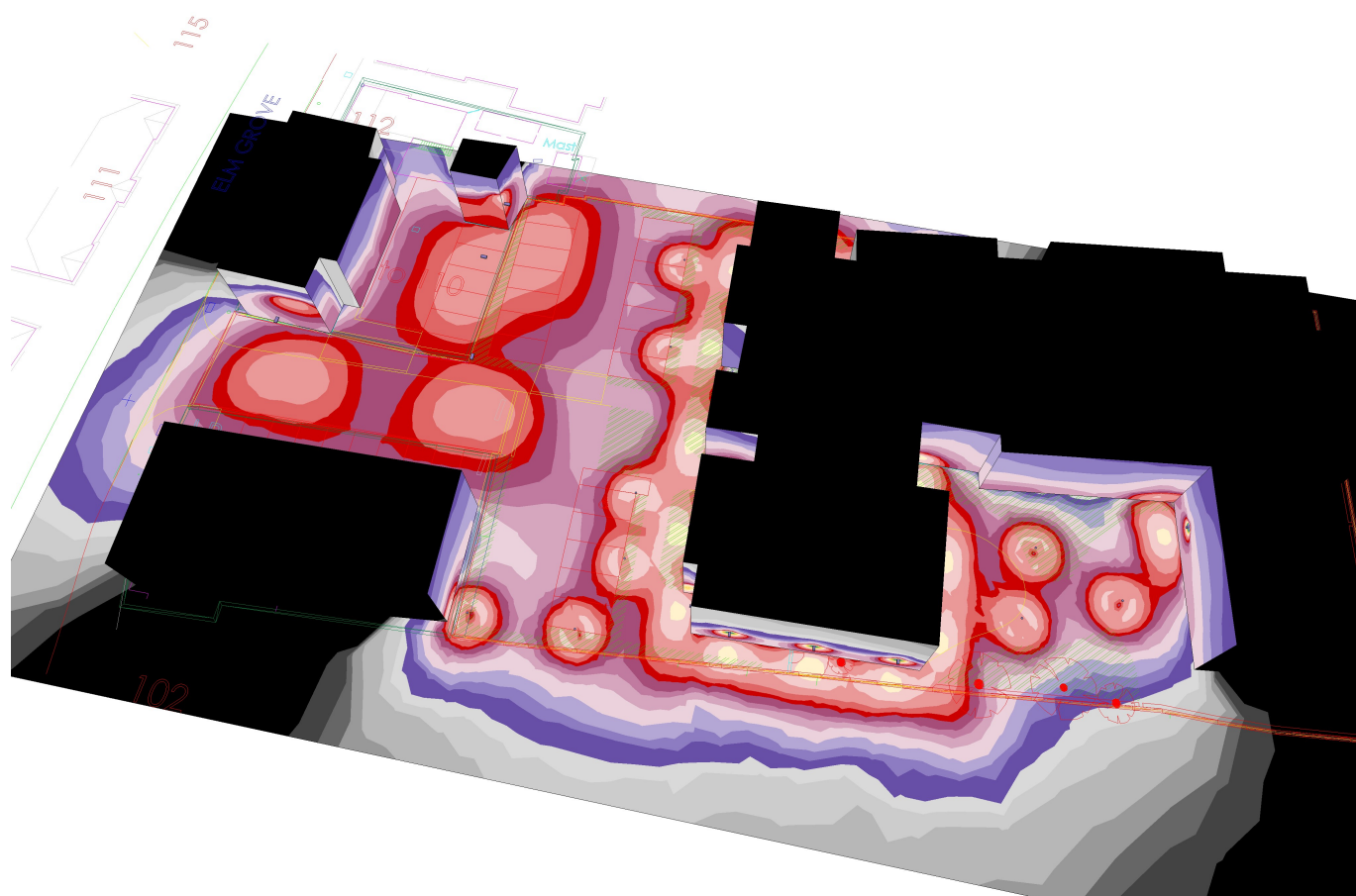
1.3.1 3D luminance, View 1

wirefield



1.3 Calculation results, Exterior 1

1.3.2 3D pseudo colours, View 1 (E)



1 Exterior 1

1.4 Summary, Exterior 1

1.4.1.1 Result overview (emergency lighting)

wirefield



13 23 33 43 53 63 73 83 93 103 113 123 x [m]



0 0.10.150.2 0.3 0.50.75 1 1.5 2 3 5 7.5 10 15 20 30 50 75 10015020030050075010005000000000000500
 Illuminance [lx]

General

Calculation algorithm used : Direct component
 Maintenance factor : 0.8
 Height (phot. centre) : -variable-
 Maximum I : 120 cd

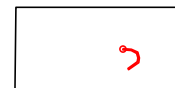
Escape routes:

No.	Central axis		Ud	Surface	
	Emin [lx]	Emax [lx]		Emin [lx]	Emax [lx]

Escape route 1

Calculation field: 23.94m x 1m (120 x 9 pts), Height = 0.00m

1	1.03 lx	12.39 lx	1: 12.03	0.37 lx	12.46 lx
	>= 1 lx	< 1 : 40		>= 0.5 lx	



Type No. Make

2 3 x



Wirefield

Order No. : !
 Luminaire name : WBL1117/4K
 Equipment : 1 x LED1x1650 T840 16 W / 1627 lm
 Emergency : 285 lm (17.5 %)

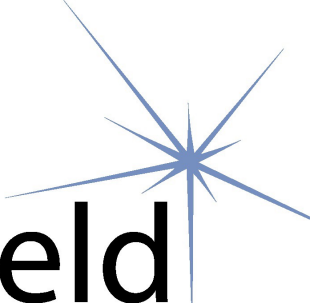
Object :
Installation : Elm Grove Exterior
Project number : WF-288-A
Date : 12.07.2024

1 Exterior 1

1.4 Summary, Exterior 1

1.4.1.1 Result overview (emergency lighting)

5	15 x	Order No.	:
		Luminaire name	: FN184K
		Equipment	: 1 x LEDx2550 18 W / 2535 lm
		Emergency	: 253 lm (10.0 %)



wirefield