

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 Wirefield will not be held responsible for inaccurate, incomplete or out of date information which the design is based on.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 :
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1 Exterior 1

1.1 Description, Exterior 1

1.1.1 Luminaire data/Room elements

Product data:

Type No.\Make

		Wirefield	
2	6 3E 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

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

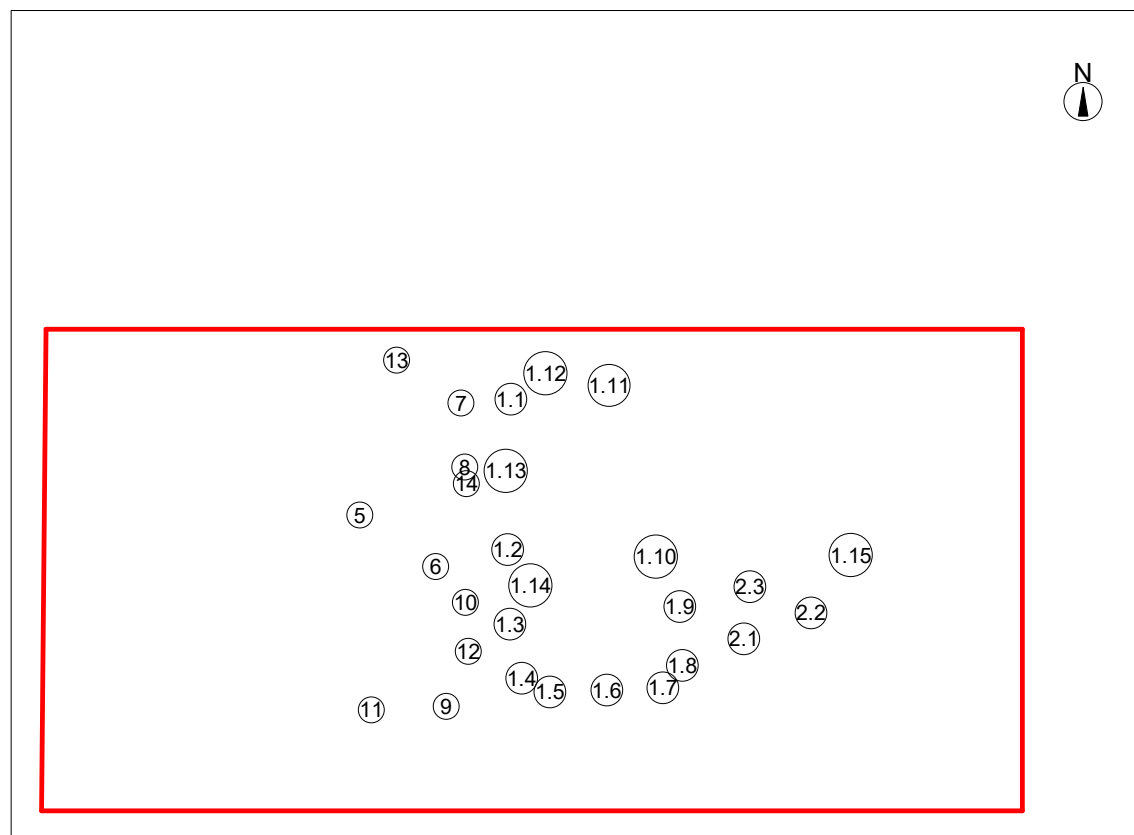
Object :
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1 Exterior 1

1.1 Description, Exterior 1

1.1.1 Luminaire data/Room elements

Floor with luminaire and sensor positions:



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wirefield

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1 Exterior 1

1.1 Description, Exterior 1

1.1.1 Luminaire data/Room elements

No.	Centre point			Rotation angle			Target coordinates		
	X [m]	Y [m]	Z [m]	Z [°]	C0 [°]	C90 [°]	Xa [m]	Ya [m]	Za [m]
Wirefield WBL1117/4K !									
E 2.1	93.22	19.63	1.09	0.00	0.00	0.00	91.67	19.63	0.00
E 2.2	100.87	22.58	1.09	0.00	0.00	0.00	99.31	22.58	0.00
E 2.3	93.91	25.57	1.09	0.00	0.00	0.00	92.35	25.57	0.00
7	60.90	46.55	1.09	86.45	0.00	0.00	60.80	45.00	0.00
8	61.36	39.24	1.09	86.45	0.00	0.00	61.27	37.69	0.00
9	59.22	11.92	1.09	86.45	0.00	0.00	59.12	10.36	0.00
12	61.76	18.19	1.09	86.45	0.00	0.00	61.66	16.64	0.00
11	50.67	11.50	1.09	86.45	0.00	0.00	50.57	9.94	0.00
10	61.43	23.80	1.09	86.45	0.00	0.00	61.33	22.24	0.00
Wirefield CTY434KA/AOA1									
5	49.34	33.77	5.95	269.22	0.00	0.00	54.51	33.70	0.00
13	53.58	51.46	5.95	179.22	0.00	0.00	53.51	46.29	0.00
6	58.02	27.87	5.95	86.45	0.00	0.00	52.86	28.19	0.00
14	61.52	37.37	5.95	91.72	0.00	0.00	56.35	37.21	0.00
Wirefield FN184K									
E 1.1	66.61	47.01	2.37	90.51	0.00	0.00	66.61	47.01	0.00
E 1.2	66.25	29.82	2.37	90.51	0.00	0.00	66.25	29.82	0.00
E 1.3	66.51	21.31	2.37	90.51	0.00	0.00	66.51	21.31	0.00
E 1.4	67.84	15.11	2.37	90.51	0.00	0.00	67.84	15.11	0.00
E 1.5	71.08	13.56	2.37	185.52	0.00	0.00	71.08	13.56	0.00
E 1.6	77.59	13.78	2.37	185.52	0.00	0.00	77.59	13.78	0.00
E 1.7	83.97	14.03	2.37	185.52	0.00	0.00	83.97	14.03	0.00
E 1.8	86.20	16.59	2.37	272.88	0.00	0.00	86.20	16.58	0.00
E 1.15	105.42	29.21	2.37	103.68	0.00	0.00	105.43	29.21	0.00
E 1.9	85.91	23.30	2.37	272.88	0.00	0.00	85.91	23.30	0.00
E 1.10	83.16	29.02	2.37	272.88	0.00	0.00	83.16	29.02	0.00
E 1.11	77.83	48.57	2.37	9.72	0.00	0.00	77.83	48.57	0.00
E 1.12	70.54	49.94	2.37	9.72	0.00	0.00	70.54	49.94	0.00
E 1.13	66.03	38.82	2.37	90.51	0.00	0.00	66.03	38.82	0.00
E 1.14	68.84	25.73	2.37	357.14	0.00	0.00	68.84	25.73	0.00

E : Active in Emergency

Structural elements

Measuring surface

No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle	
							L axis	Q axis
Ref. plane 1.1								
	125.00	0.00	0.00	112.00	55.00	90.00	0.00	0.00
M 1	22.81	25.13	0.00	6.76	39.80	1.57	0.00	0.00
M 2	45.78	34.10	0.00	5.08	16.60	1.35	0.00	0.00
M 3	56.58	34.34	0.00	5.08	16.60	1.35	0.00	0.00
M 4	57.15	11.99	0.00	5.01	13.66	1.35	0.00	0.00
M 6	39.42	35.45	0.00	5.15	11.77	357.71	0.00	0.00
M 5	86.40	15.01	0.00	29.51	29.41	314.40	0.00	0.00

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1 Exterior 1

1.1 Description, Exterior 1

1.1.1 Luminaire data/Room elements

Others

No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle		rho[%]
							L axis	Q axis	
A 1	68.08	13.63	0.00	51.30	38.79	2.11	0.00	0.00	50
A 2	23.49	33.87	0.00	10.60	17.44	357.29	0.00	0.00	50
A 3	39.93	50.89	0.00	5.05	4.17	87.43	0.00	0.00	50
A 4	24.83	19.82	0.00	24.28	12.28	271.20	0.00	0.00	50

1.1 Description, Exterior 1

1.1.2 Floor plan



Object :
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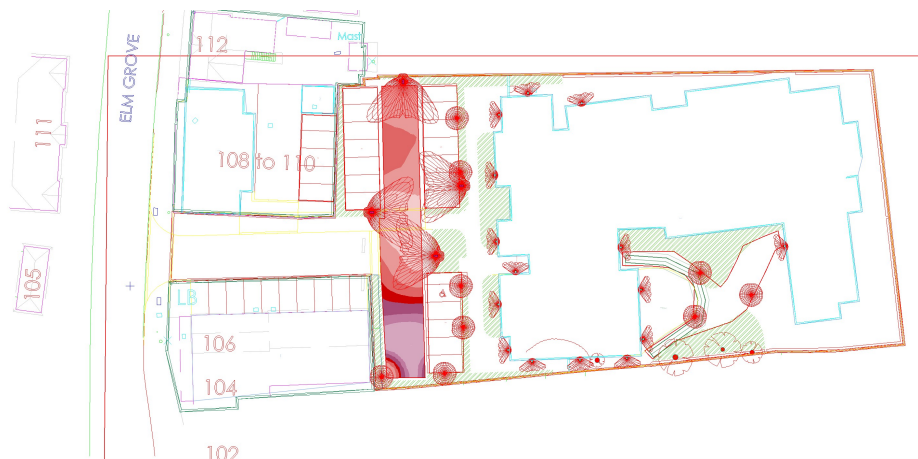
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1 Exterior 1

1.2 Summary, Exterior 1

1.2.1 Result overview, Measuring area 1



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 100150200300500750100050000000000500

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	$\bar{E}_m$	32.6 lx
Minimum illuminance	E_{min}	5 lx
Maximum illuminance	E_{max}	66.9 lx
Uniformity U_0	$E_{min}/\bar{E}_m$	1:6.52 (0.15)
Diversity U_d	E_{min}/E_{max}	1:13.4 (0.07)

Type No. \Make

2 9E 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
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1 Exterior 1

1.2 Summary, Exterior 1

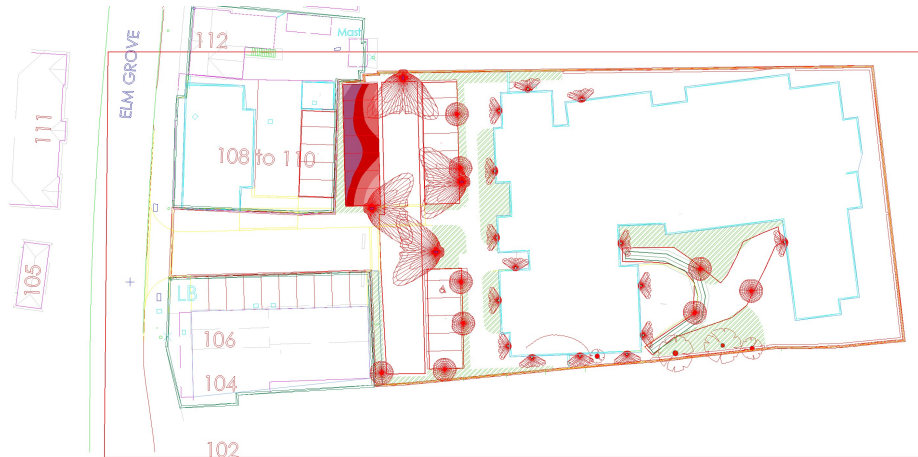
1.2.1 Result overview, Measuring area 1

5	15E x	Order No.	:	-- Emergency Lighting --
		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
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1.2 Summary, Exterior 1

1.2.2 Result overview, Measuring area 2



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 100150200300500750100050000000000500
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	$\bar{E}_m$	19.5 lx
Minimum illuminance	E_{min}	8.7 lx
Maximum illuminance	E_{max}	49 lx
Uniformity U_0	$E_{min}/\bar{E}_m$	1:2.26 (0.44)
Diversity U_d	E_{min}/E_{max}	1:5.66 (0.18)

Type No. \Make

2	9E 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
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wirefield

EST. 1991

1.2 Summary, Exterior 1

1.2.2 Result overview, Measuring area 2

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

Object :
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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]



0 0.10.150.2 0.3 0.50.75 1 1.5 2 3 5 7.5 10 15 20 30 50 75 10015020030050075010005000006000500

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	$\bar{E}_m$	48 lx
Minimum illuminance	E_{min}	14 lx
Maximum illuminance	E_{max}	113 lx
Uniformity U_0	$E_{min}/\bar{E}_m$	1:3.45 (0.29)
Diversity U_d	E_{min}/E_{max}	1:8.17 (0.12)

Type No. \Make

2	9E 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
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1.2 Summary, Exterior 1

1.2.3 Result overview, Measuring area 3

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

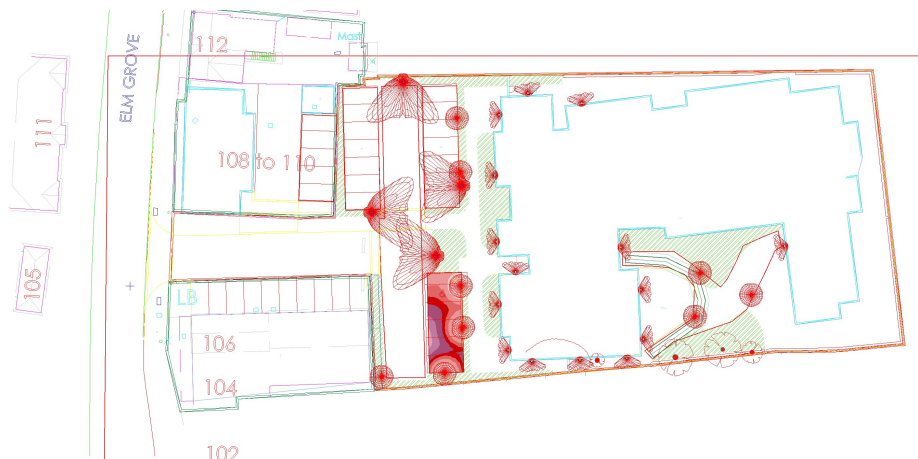
Object :
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wirefield

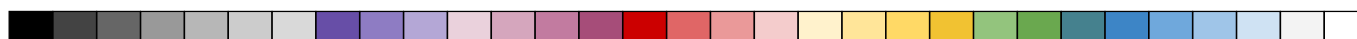
EST. 1991

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 10015020030050075010005000000000500

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	$\bar{E}_m$	29.6 lx
Minimum illuminance	E_{min}	7.1 lx
Maximum illuminance	E_{max}	84.2 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:4.16 (0.24)
Diversity U_d	E_{min}/E_{max}	1:11.8 (0.08)

Type No. \Make

2 9E 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 :
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wirefield

EST. 1991

1.2 Summary, Exterior 1

1.2.4 Result overview, Measuring area 4

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

Object :
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1.2 Summary, Exterior 1

1.2.5 Result overview, Measuring area 6



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 10015020030050075010005000006000500
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	$\bar{E}_m$	5.94 lx
Minimum illuminance	E_{min}	1.66 lx
Maximum illuminance	E_{max}	9.85 lx
Uniformity U_0	$E_{min}/\bar{E}_m$	1:3.58 (0.28)
Diversity U_d	E_{min}/E_{max}	1:5.93 (0.17)

Type No. \Make

2 9E 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 :
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wirefield

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1.2 Summary, Exterior 1

1.2.5 Result overview, Measuring area 6

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

Object :
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wirefield

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1 Exterior 1

1.3 Summary, Exterior 1

1.3.1.1 Result overview (emergency lighting)



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 10015020030050075010005000000000500

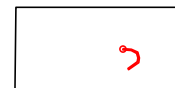
Illuminance [lx]

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 3E x **Wirefield**
Order No. : ! -- Emergency Lighting --
Luminaire name : WBL1117/4K
Equipment : 1 x LED1x1650 T840 16 W / 1627 lm
Emergency : 285 lm (17.5 %)

Object :
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1 Exterior 1

1.3 Summary, Exterior 1

1.3.1.1 Result overview (emergency lighting)

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

