

External Lighting

Installation : Lighting Calcs

Project number : SY0326-74 Markfield Care Home

Customer :

Processed by : EP

Date : 14.04.2026

Project description:

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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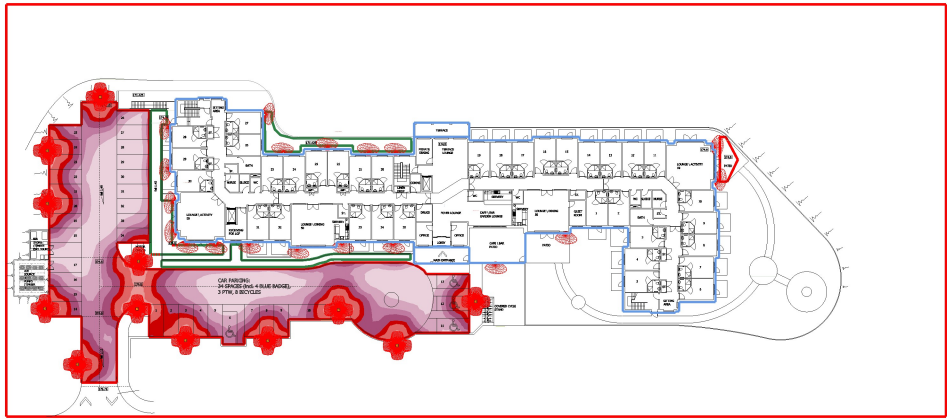
Object : External Lighting
Installation : Lighting Calcs
Project number : SY0326-74 Markfield Care Home
Date : 14.04.2026



1 Exterior 1

1.1 Summary, Exterior 1

1.1.1 Result overview, Car Park



0 20 40 60 80 100 120 140 160 x [m]



3 5 7.5 10 15 20 30

Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	101190 lm
Total power	1005 W
Total power per area (11200.00 m²)	0.09 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	10.9 lx
Minimum illuminance	E_{min}	2.8 lx
Maximum illuminance	E_{max}	45.3 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:3.94 (0.25)
Diversity U_d	E_{min}/E_{max}	1:16.4 (0.06)

Type No. Make

FUMAGALLI

3	12 x	Order No.	: Q45.000.H1L-ext
		Luminaire name	: ELIA(PIETRO) HIP 50W 4000K
		Equipment	: 1 x ELIA HIP 50W 60 W / 5345 lm

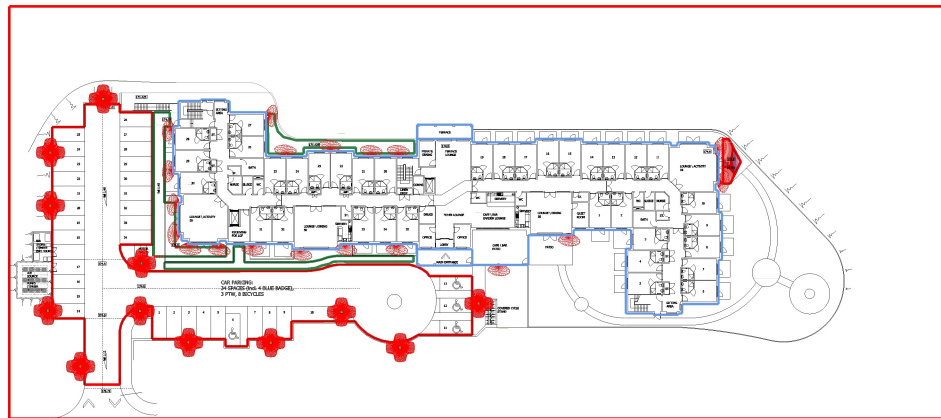
OVIA

4	19E x	Order No.	: OV2071AG15EM 4000K	-- Emergency Lighting --
		Luminaire name	: Inceptor Murus	
		Equipment	: 1 x LED 15 W / 1950 lm	
		Emergency	: 450 lm (23.1 %)	

Object : External Lighting
 Installation : Lighting Calcs
 Project number : SY0326-74 Markfield Care Home
 Date : 14.04.2026

1.1 Summary, Exterior 1

1.1.2 Result overview, Patio 2



0 20 40 60 80 100 120 140 160 x [m]



3 5 7.5 10 15 20 30

Illuminance [lx]

General

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

Total luminous flux	101190 lm
Total power	1005 W
Total power per area (11200.00 m ²)	0.09 W/m ²

Illuminance

Average illuminance	$\bar{E}_m$	25.3 lx
Minimum illuminance	E_{min}	6 lx
Maximum illuminance	E_{max}	59.6 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:4.19 (0.24)
Diversity U_d	E_{min}/E_{max}	1:9.88 (0.1)

Type No.\Make

FUMAGALLI

3	12 x	Order No.	: Q45.000.H1L-ext
		Luminaire name	: ELIA(PIETRO) HIP 50W 4000K
		Equipment	: 1 x ELIA HIP 50W 60 W / 5345 lm

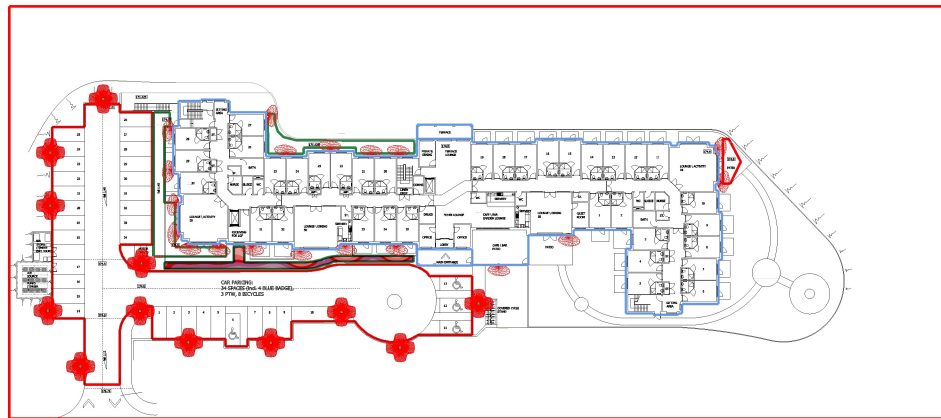
OVIA

4	19E x	Order No.	: OV2071AG15EM 4000K	-- Emergency Lighting --
		Luminaire name	: Inceptor Murus	
		Equipment	: 1 x LED 15 W / 1950 lm	
		Emergency	: 450 lm (23.1 %)	

Object : External Lighting
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1.1 Summary, Exterior 1

1.1.3 Result overview, Building Perimeter 1



0 20 40 60 80 100 120 140 160 x [m]



3 5 7.5 10 15 20 30

Illuminance [lx]

General

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

Total luminous flux	101190 lm
Total power	1005 W
Total power per area (11200.00 m²)	0.09 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	16.6 lx
Minimum illuminance	E_{min}	6.7 lx
Maximum illuminance	E_{max}	44.6 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:2.49 (0.4)
Diversity U_d	E_{min}/E_{max}	1:6.66 (0.15)

Type No.\Make

FUMAGALLI

3	12 x	Order No.	: Q45.000.H1L-ext
		Luminaire name	: ELIA(PIETRO) HIP 50W 4000K
		Equipment	: 1 x ELIA HIP 50W 60 W / 5345 lm

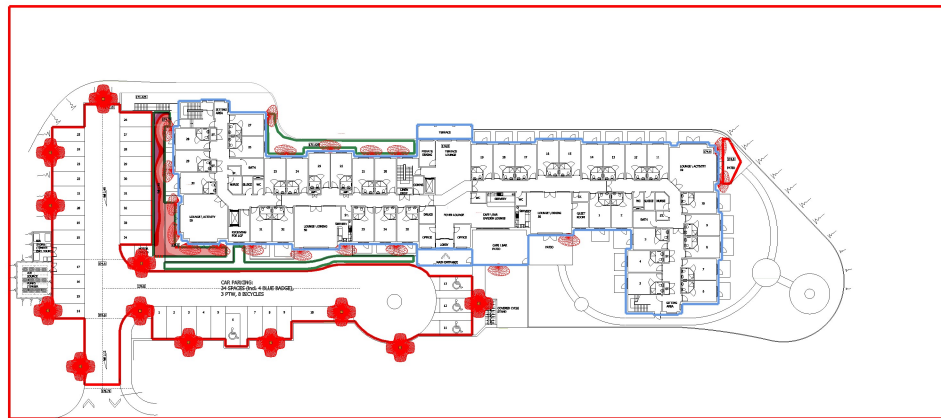
OVIA

4	19E x	Order No.	: OV2071AG15EM 4000K	-- Emergency Lighting --
		Luminaire name	: Inceptor Murus	
		Equipment	: 1 x LED 15 W / 1950 lm	
		Emergency	: 450 lm (23.1 %)	

Object : External Lighting
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 Date : 14.04.2026

1.1 Summary, Exterior 1

1.1.4 Result overview, Building Perimeter 2



0 20 40 60 80 100 120 140 160 x [m]



3 5 7.5 10 15 20 30

Illuminance [lx]

General

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

Total luminous flux	101190 lm
Total power	1005 W
Total power per area (11200.00 m²)	0.09 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	31.1 lx
Minimum illuminance	E_{min}	8.2 lx
Maximum illuminance	E_{max}	69.4 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:3.81 (0.26)
Diversity U_d	E_{min}/E_{max}	1:8.5 (0.12)

Type No.\Make

FUMAGALLI

3	12 x	Order No.	: Q45.000.H1L-ext
		Luminaire name	: ELIA(PIETRO) HIP 50W 4000K
		Equipment	: 1 x ELIA HIP 50W 60 W / 5345 lm

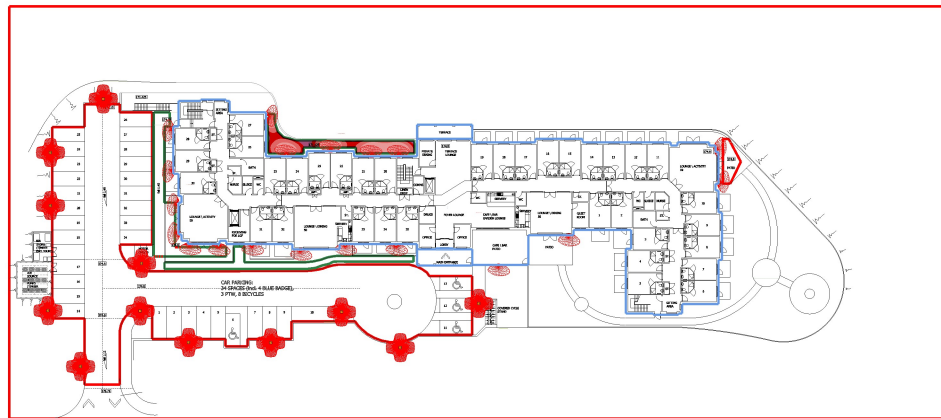
OVIA

4	19E x	Order No.	: OV2071AG15EM 4000K	-- Emergency Lighting --
		Luminaire name	: Inceptor Murus	
		Equipment	: 1 x LED 15 W / 1950 lm	
		Emergency	: 450 lm (23.1 %)	

Object : External Lighting
 Installation : Lighting Calcs
 Project number : SY0326-74 Markfield Care Home
 Date : 14.04.2026

1.1 Summary, Exterior 1

1.1.5 Result overview, Building Perimeter 4



0 20 40 60 80 100 120 140 160 x [m]



3 5 7.5 10 15 20 30

Illuminance [lx]

General

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

Total luminous flux	101190 lm
Total power	1005 W
Total power per area (11200.00 m²)	0.09 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	33.2 lx
Minimum illuminance	E_{min}	10.2 lx
Maximum illuminance	E_{max}	68.8 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:3.25 (0.31)
Diversity U_d	E_{min}/E_{max}	1:6.72 (0.15)

Type No.\Make

FUMAGALLI
 3 12 x Order No. : Q45.000.H1L-ext
 Luminaire name : ELIA(PIETRO) HIP 50W 4000K
 Equipment : 1 x ELIA HIP 50W 60 W / 5345 lm

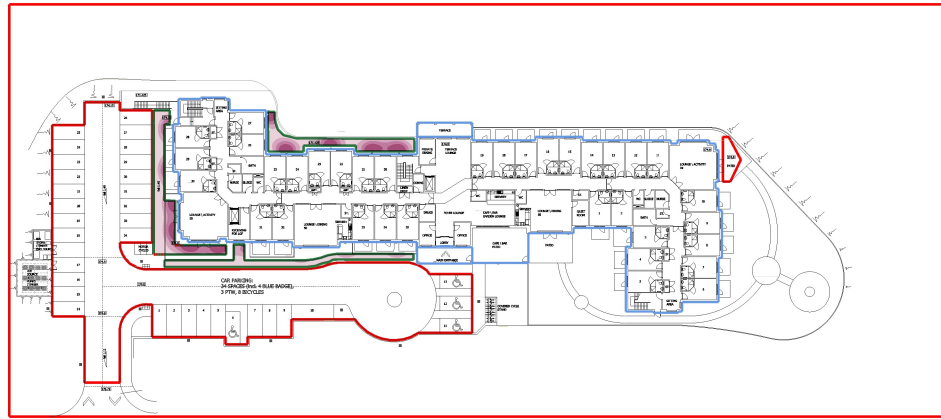
OVIA
 4 19E x Order No. : OV2071AG15EM 4000K -- Emergency Lighting --
 Luminaire name : Inceptor Murus
 Equipment : 1 x LED 15 W / 1950 lm
 Emergency : 450 lm (23.1 %)

Object : External Lighting
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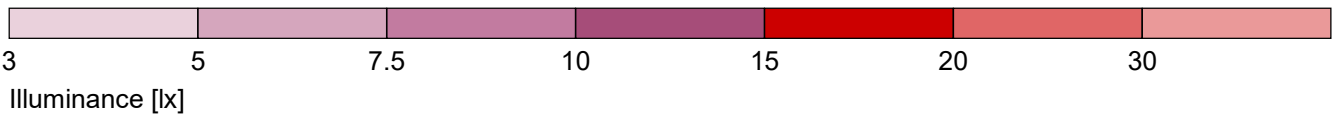
1 Exterior 1

1.2 Summary, Exterior 1

1.2.1.1 Result overview (emergency lighting)



0 20 40 60 80 100 120 140 160 x [m]



General

Calculation algorithm used : Direct component
 Maintenance factor : 0.8
 Height (phot centre) : 1.83 m
 Maximum I : 120 cd <= 500 cd

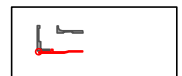
Anti panic area:

No.	Emin [lx]	Surface Emax [lx]	Ud
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13 Building Perimeter 1

Calculation field: 42.43m x 3.84m (171 x 15 pts), Height = 0.00m

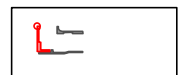
1	0.53 lx >= 0.5 lx	9.83 lx	1: 18.43 >= 1 : 40
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14 Building Perimeter 2

Calculation field: 12.34m x 24.49m (25 x 50 pts), Height = 0.00m

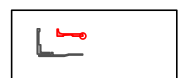
2	0.73 lx >= 0.5 lx	14.96 lx	1: 20.46 >= 1 : 40
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16 Building Perimeter 4

Calculation field: 25m x 6.8m (77 x 21 pts), Height = 0.00m

3	1.92 lx >= 0.5 lx	14.95 lx	1: 7.77 >= 1 : 40
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1 Exterior 1

1.2 Summary, Exterior 1

1.2.1.1 Result overview (emergency lighting)

Type No. Make

4	19E x	OVIA	
		Order No.	: OV2071AG15EM 4000K
		Luminaire name	: Inceptor Murus
		Equipment	: 1 x LED 15 W / 1950 lm
		Emergency	: 450 lm (23.1 %)
		Maintenance factor:	0.80

-- Emergency Lighting --