SP029233

PROJECT

EXTERIOR LIGHTING

CLIENT

GOODFELLOWS SCHOOL

CONSULTANT/ARCHITECT

TBA

ELECTRICAL CONTRACTOR

TBA

ELECTRICAL WHOLESALER

CEF RETFORD

PROJECT NUMBER:

UKT-988

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EXTERIOR LIGHTING

Installation : GOODFELLOWS SCHOOL

Project number : UKT-988
Customer : CEF RETFORD
Processed by : pd
Date : 21.12.2018

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

1 Luminaire data

1.1 ENLITE, EN-BH25/40... (ORBITAL ROUND LED BULKHEAD ...)

1.1.1 Data sheet

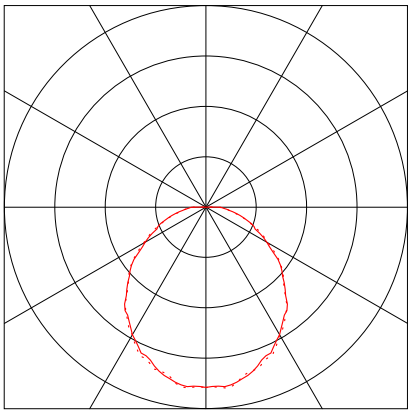
Manufacturer: ENLITE

ORBITAL ROUND LED BULKHEAD IP65 25W 4000K **EN-BH25/40**

Luminaire data

Luminaire efficiency	:	100%
Luminaire efficacy	:	72 lm/W
Classification	:	A40 ↓99.6% ↑0.4%
CIE Flux Codes	:	47 76 93 100 100
UGR 4H 8H	:	23.1 / 23.2
Power	:	25 W
Luminous flux	:	1800 lm

Dimensions : Ø360 mm x 105 mm



Equipped with

Quantity	:	1
Designation	:	LED
Colour	:	4000K
Luminous flux	:	1800 lm
Colour reproduction	:	80

1 Luminaire data

1.2 ENLITE, EN-BH25/40EM... (ORBITAL ROUND LED BULKHEA...)

1.2.1 Data sheet

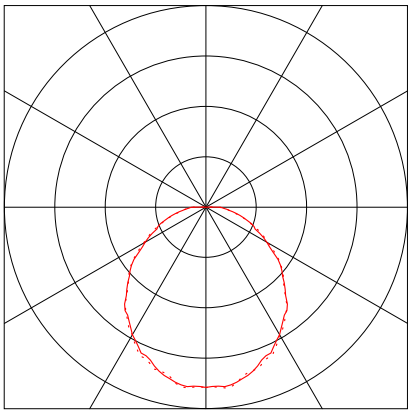
Manufacturer: ENLITE

ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3 **EN-BH25/40EM**

Luminaire data		
Luminaire efficiency	:	100%
Luminaire efficacy	:	72 lm/W
Classification	:	A40 ↓99.6% ↑0.4%
CIE Flux Codes	:	47 76 93 100 100
UGR 4H 8H	:	23.1 / 23.2
Power	:	25 W
Luminous flux	:	1800 lm

Equipped with		
Quantity	:	1
Designation	:	LED
Colour	:	4000K
Luminous flux	:	1800 lm
Colour reproduction	:	80

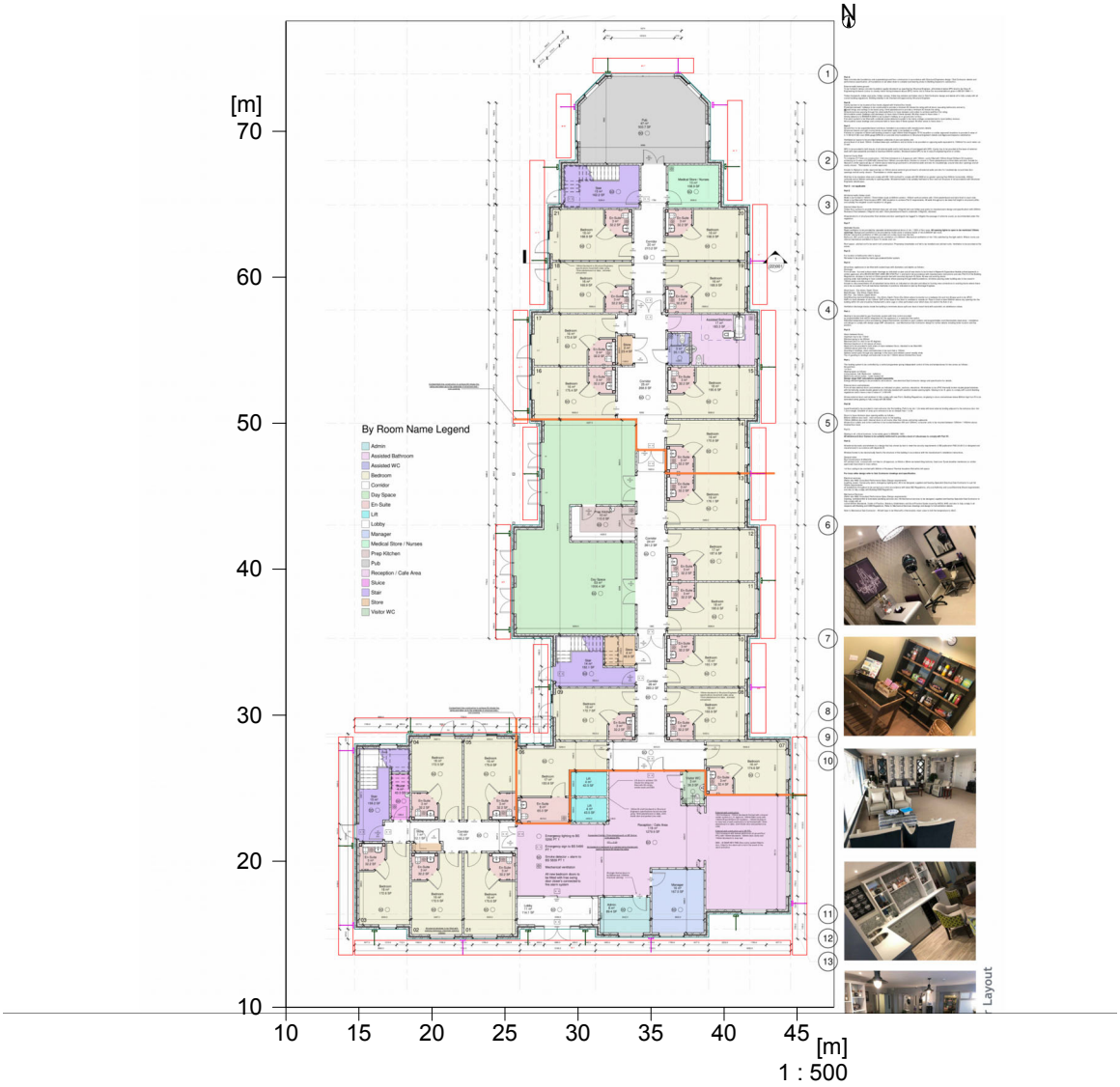
Dimensions : Ø360 mm x 105 mm



2 EXTERIOR LIGHTING

2.1 Description, EXTERIOR LIGHTING

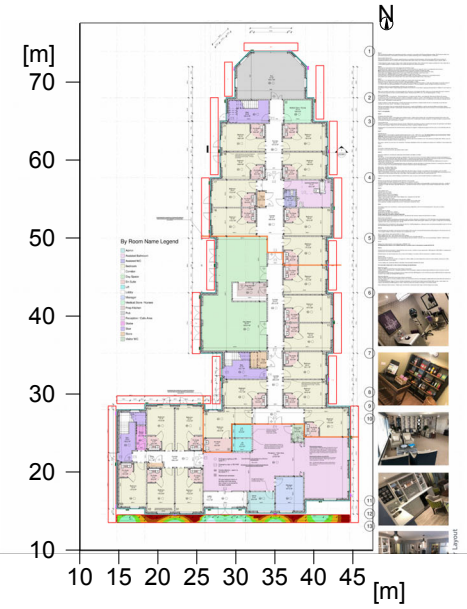
2.1.1 Floor plan

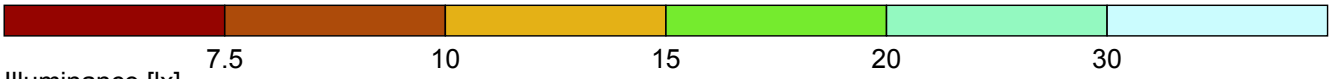


2 EXTERIOR LIGHTING

2.2 Summary, EXTERIOR LIGHTING

2.2.1 Result overview, Measuring area 1





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	15.7 lx
Minimum illuminance	Emin	1.7 lx
Maximum illuminance	Emax	32.6 lx
Uniformity Uo	Emin/Em	1:9.5 (0.11)
Diversity Ud	Emin/Emax	1:19.7 (0.05)

Type No.\Make

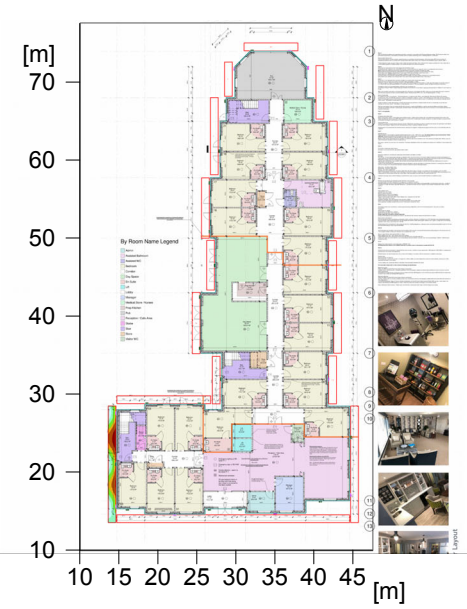
ENLITE

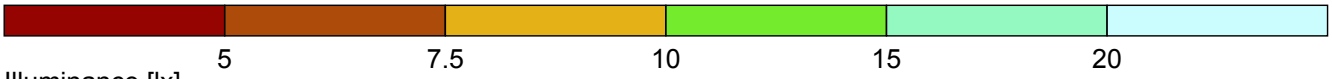
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.2 Result overview, Measuring area 2





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	12.3 lx
Minimum illuminance	Emin	3.2 lx
Maximum illuminance	Emax	27 lx
Uniformity Uo	Emin/Em	1:3.78 (0.26)
Diversity Ud	Emin/Emax	1:8.33 (0.12)

Type No.\Make

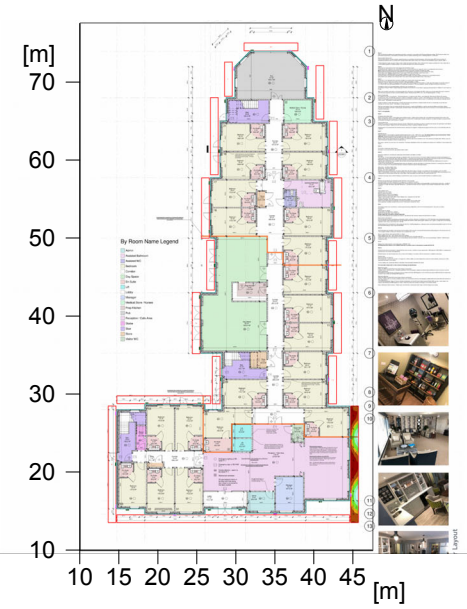
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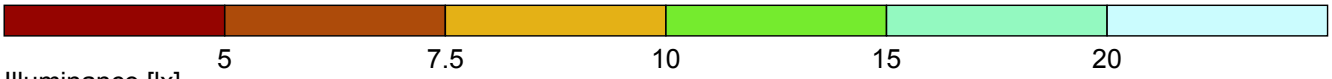
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.3 Result overview, Measuring area 3





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	8.6 lx
Minimum illuminance	Emin	1.4 lx
Maximum illuminance	Emax	25.2 lx
Uniformity Uo	Emin/Em	1:6.16 (0.16)
Diversity Ud	Emin/Emax	1:18.1 (0.06)

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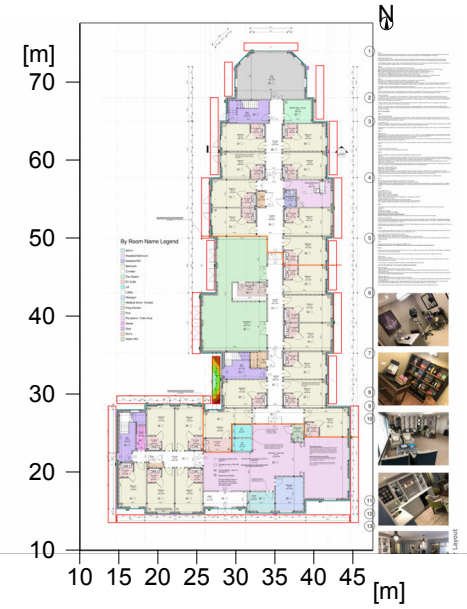
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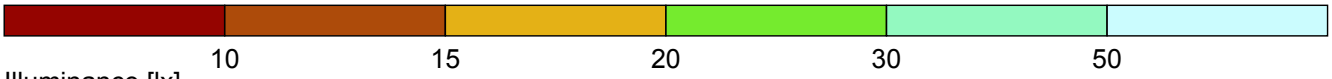
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.4 Result overview, Measuring area 4





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	20.3 lx
Minimum illuminance	Emin	5.6 lx
Maximum illuminance	Emax	40.1 lx
Uniformity Uo	Emin/Em	1:3.62 (0.28)
Diversity Ud	Emin/Emax	1:7.15 (0.14)

Type No.\Make

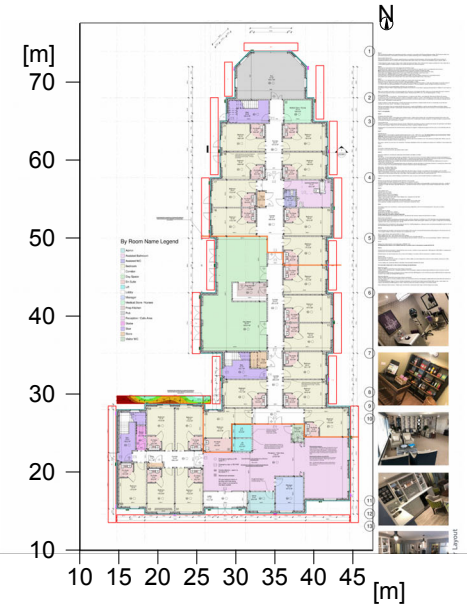
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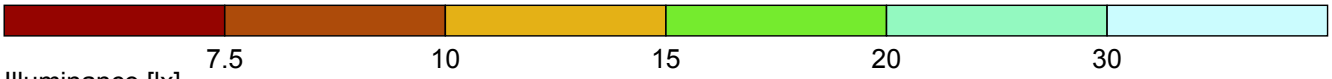
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.5 Result overview, Measuring area 5





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	14.5 lx
Minimum illuminance	Emin	3.2 lx
Maximum illuminance	Emax	36.5 lx
Uniformity Uo	Emin/Em	1:4.58 (0.22)
Diversity Ud	Emin/Emax	1:11.6 (0.09)

Type No.\Make

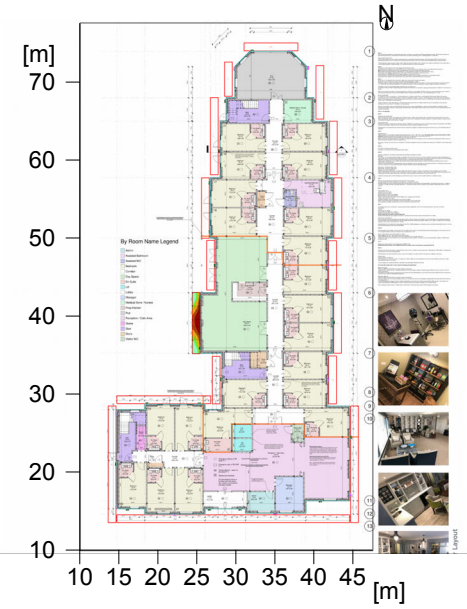
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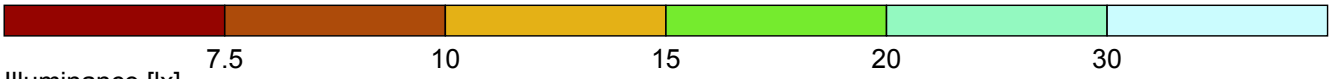
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.6 Result overview, Measuring area 6





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	13.4 lx
Minimum illuminance	Emin	4.6 lx
Maximum illuminance	Emax	31.2 lx
Uniformity Uo	Emin/Em	1:2.92 (0.34)
Diversity Ud	Emin/Emax	1:6.77 (0.15)

Type No.\Make

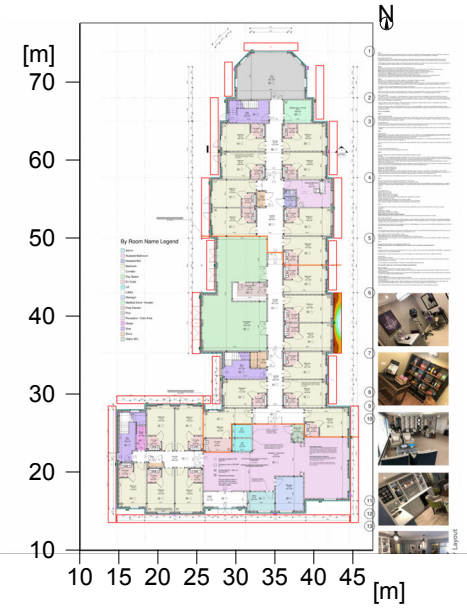
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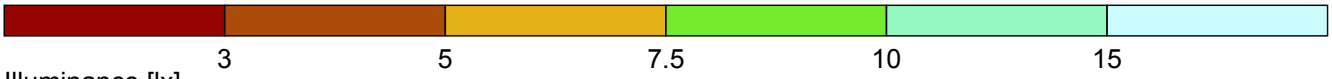
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Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.7 Result overview, Measuring area 7





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	7.9 lx
Minimum illuminance	Emin	1.7 lx
Maximum illuminance	Emax	23.4 lx
Uniformity Uo	Emin/Em	1:4.53 (0.22)
Diversity Ud	Emin/Emax	1:13.5 (0.07)

Type No.\Make

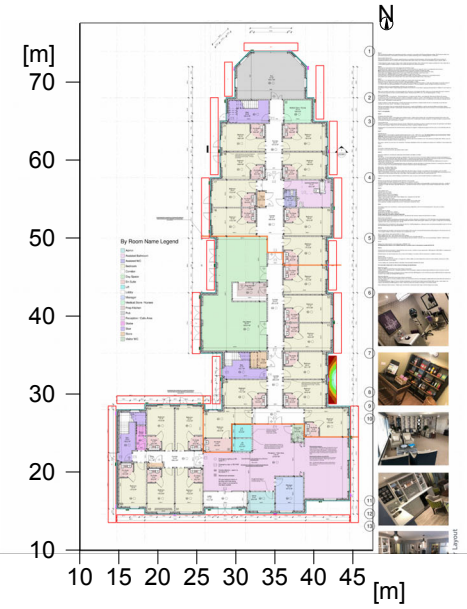
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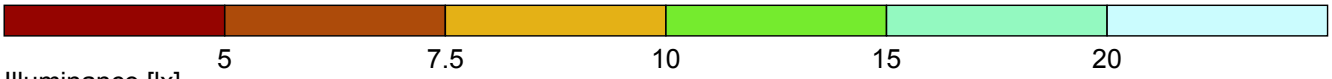
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.8 Result overview, Measuring area 8





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	9.8 lx
Minimum illuminance	Emin	2.2 lx
Maximum illuminance	Emax	25.6 lx
Uniformity Uo	Emin/Em	1:4.45 (0.22)
Diversity Ud	Emin/Emax	1:11.7 (0.09)

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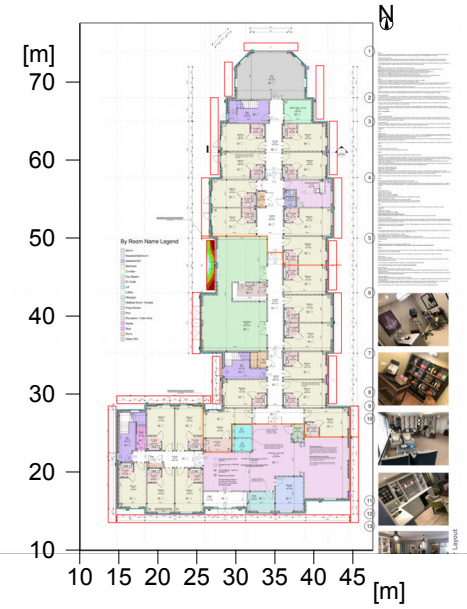
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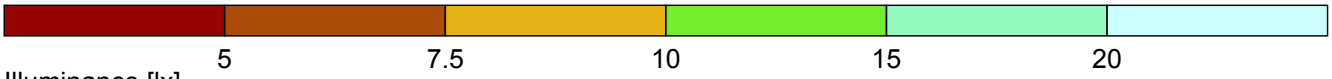
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Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.9 Result overview, Measuring area 9





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	10.1 lx
Minimum illuminance	Emin	2.1 lx
Maximum illuminance	Emax	25.1 lx
Uniformity Uo	Emin/Em	1:4.74 (0.21)
Diversity Ud	Emin/Emax	1:11.8 (0.08)

Type No.\Make

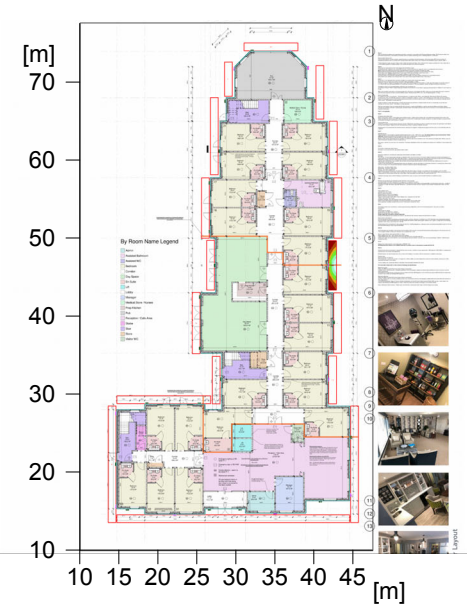
ENLITE

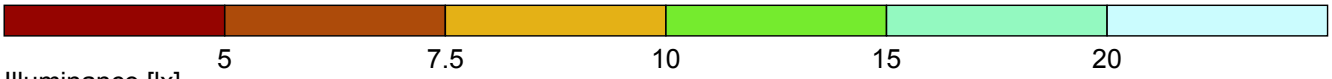
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.10 Result overview, Measuring area 10





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	9.6 lx
Minimum illuminance	Emin	2 lx
Maximum illuminance	Emax	25.6 lx
Uniformity Uo	Emin/Em	1:4.79 (0.21)
Diversity Ud	Emin/Emax	1:12.8 (0.08)

Type No.\Make

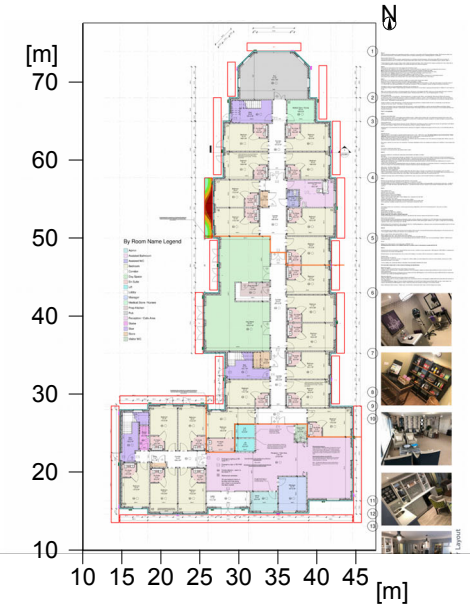
ENLITE

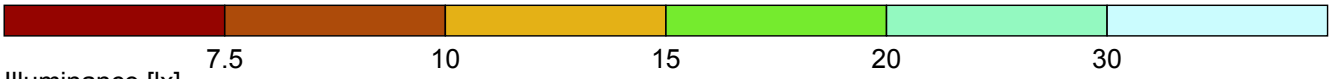
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.11 Result overview, Measuring area 11





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	12.5 lx
Minimum illuminance	Emin	3.7 lx
Maximum illuminance	Emax	27.4 lx
Uniformity Uo	Emin/Em	1:3.43 (0.29)
Diversity Ud	Emin/Emax	1:7.49 (0.13)

Type No.\Make

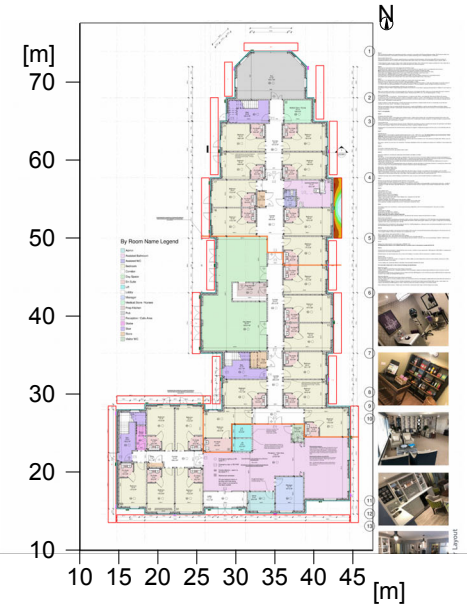
ENLITE

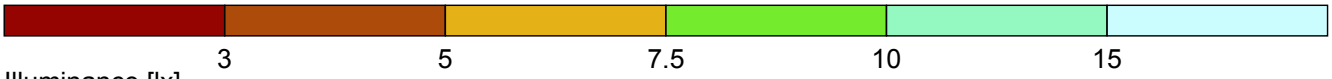
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.12 Result overview, Measuring area 12





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	8.2 lx
Minimum illuminance	Emin	2 lx
Maximum illuminance	Emax	23.8 lx
Uniformity Uo	Emin/Em	1:4.19 (0.24)
Diversity Ud	Emin/Emax	1:12.1 (0.08)

Type No.\Make

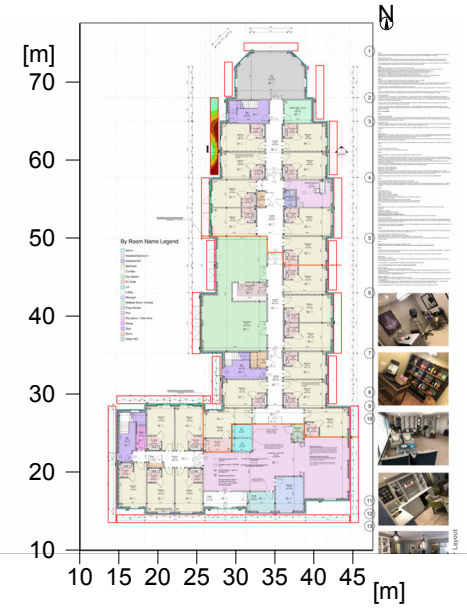
ENLITE

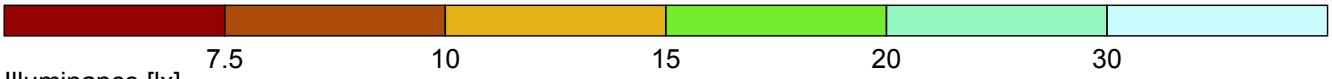
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.13 Result overview, Measuring area 13





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	13.5 lx
Minimum illuminance	Emin	2.7 lx
Maximum illuminance	Emax	29.4 lx
Uniformity Uo	Emin/Em	1:5.08 (0.2)
Diversity Ud	Emin/Emax	1:11.1 (0.09)

Type No.\Make

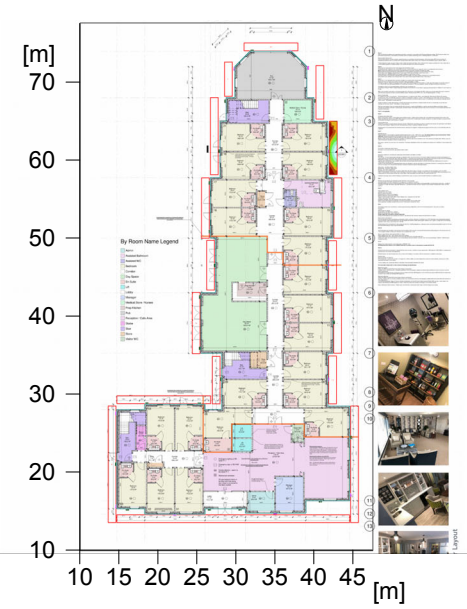
ENLITE

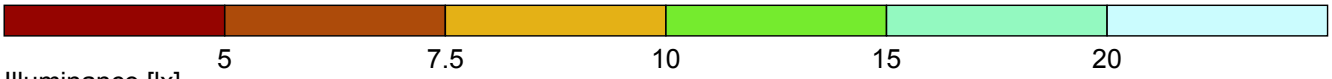
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.14 Result overview, Measuring area 14





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	10.5 lx
Minimum illuminance	Emin	2.1 lx
Maximum illuminance	Emax	25.9 lx
Uniformity Uo	Emin/Em	1:5.05 (0.2)
Diversity Ud	Emin/Emax	1:12.5 (0.08)

Type No.\Make

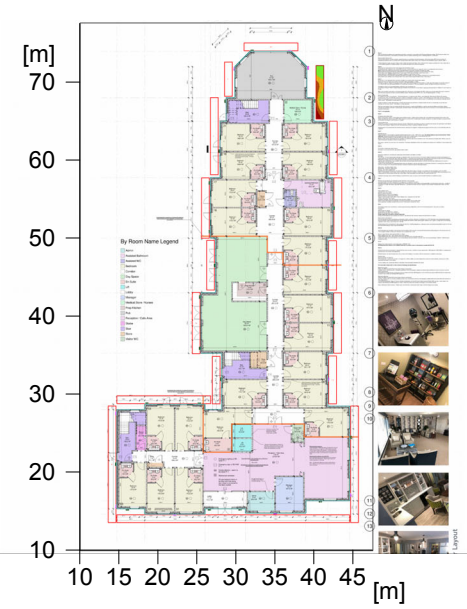
ENLITE

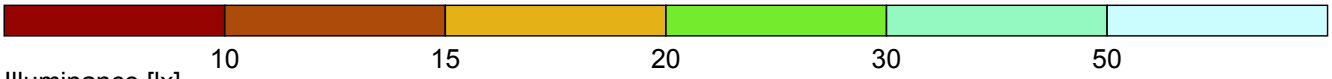
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Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.15 Result overview, Measuring area 15





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	17.6 lx
Minimum illuminance	Emin	4.8 lx
Maximum illuminance	Emax	27.7 lx
Uniformity Uo	Emin/Em	1:3.69 (0.27)
Diversity Ud	Emin/Emax	1:5.82 (0.17)

Type No.\Make

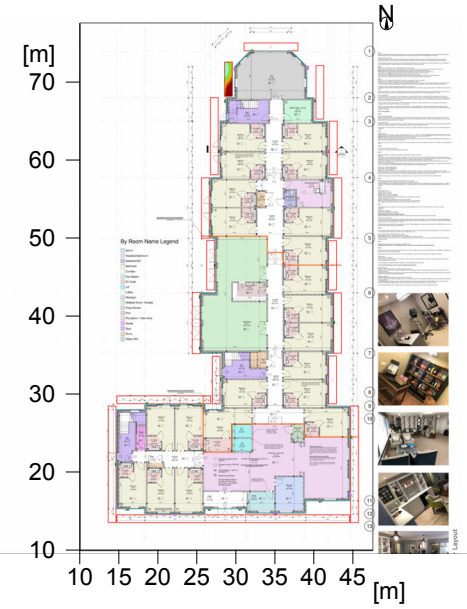
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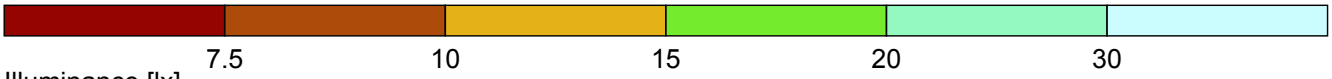
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Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.16 Result overview, Measuring area 16





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	-0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	12.6 lx
Minimum illuminance	Emin	2.4 lx
Maximum illuminance	Emax	27.6 lx
Uniformity Uo	Emin/Em	1:5.23 (0.19)
Diversity Ud	Emin/Emax	1:11.5 (0.09)

Type No.\Make

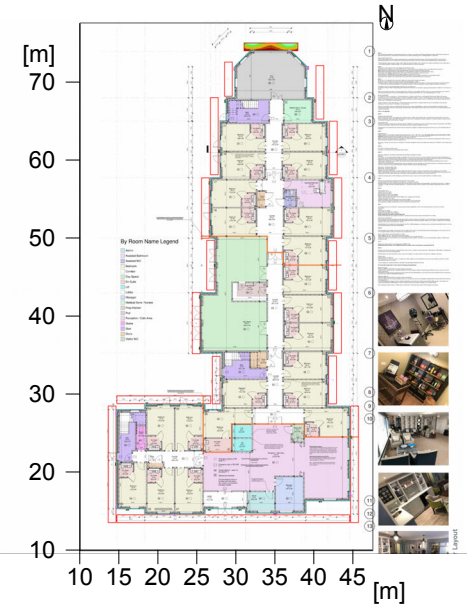
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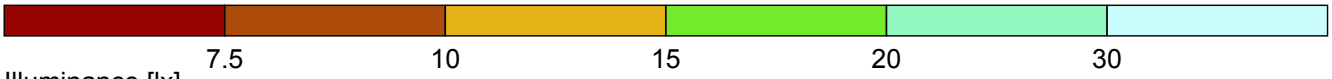
1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

2.2 Summary, EXTERIOR LIGHTING

2.2.17 Result overview, Measuring area 17





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	55800 lm
Total power	775 W
Total power per area (2531.25 m²)	0.31 W/m²

Illuminance

Average illuminance	Eav	13 lx
Minimum illuminance	Emin	4.3 lx
Maximum illuminance	Emax	26.1 lx
Uniformity Uo	Emin/Em	1:3.05 (0.33)
Diversity Ud	Emin/Emax	1:6.1 (0.16)

Type No.\Make

ENLITE

1 11 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K
Luminaire name : EN-BH25/40
Equipment : 1 x LED 25 W / 1800 lm

2 20 Order No. : ORBITAL ROUND LED BULKHEAD IP65 25W 4000K M3
Luminaire name : EN-BH25/40EM
Equipment : 1 x LED 25 W / 1800 lm

Orbital™

IP66 round/eyelid LED bulkheads

make smart with AONE control

See pg.218-219 for compatibility table

- Polycarbonate body and diffuser
- Rear entry access wiring compartment allows for easy installation
- Separate 20mm conduit side entry
- IP66 rated
- IK10 rated impact resistance
- Adjustable hold time 5 seconds to 30 minutes for microwave option
- Adjustable light detector from 2-50 lux for microwave option

- 3 Year Warranty
- L70 25,000hrs
- Microwave sensing option
- Emergency option
- Black or White finish options

make smart with AONE control works with .control

16A On/Off Relay
See pg.37

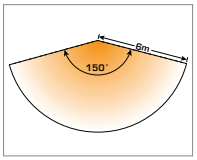




IP66 Round

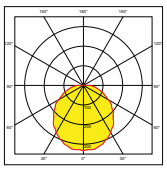


Eyelid Accessory



Microwave version detection range

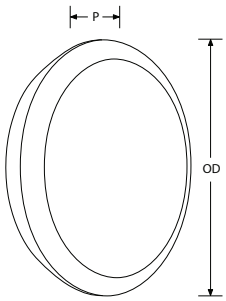
EN-BH15



Cat. No.	Watts	Colour	Lumens	lm/W
Non-Dimmable				
EN-BH15*/40†	15W	4000K	1150lm	77
EN-BH15*/40EM	17W	4000K	1150lm	68
EN-BH25*/40†	25W	4000K	1800lm	72
EN-BH25*/40EM	27W	4000K	1800lm	67
Accessories				
EN-BZE15W	Orbital™ 300mm Eyelid Bezel Accessory for EN-BH15 - White			
EN-BZE15BLK	Orbital™ 300mm Eyelid Bezel Accessory for EN-BH15 - Black			
EN-BZE25W	Orbital™ 360mm Eyelid Bezel Accessory for EN-BH25 - White			
EN-BZE25BLK	Orbital™ 360mm Eyelid Bezel Accessory for EN-BH25 - Black			

*Add suffix **W** or **BLK** for White or Black finishes
†Add suffix **MS** for Microwave Sensor
27W EMMS (Emergency & Microwave Sensor) available to special order.

CRI 80 | IP66 | IK10 | L1 | L2



EN-BH15
(OD) 300mm Overall Ø
(P) 95mm Projection

EN-BH25
(OD) 360mm Overall Ø
(P) 105mm Projection





Paul Davidson

Aurora Lighting

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