

A nighttime photograph of a street scene, likely in Bratton, Wiltshire. The street is dimly lit by a single street lamp, with buildings and parked cars visible in the background. The image is dark and grainy, with the text overlaid in white.

Land Opposite 38
Westbury Rd, Bratton
Wiltshire, BA13 4TB.
Lighting Strategy (Ph.2)

December 2025

Project No: 1034

Doc Ref: 1034/201

Rev: A

Client: Ashford Home (South Western)
Limited

Land Opposite 38 Westbury Road,
Bratton, Wiltshire, BA13 4TB
Lighting Strategy (Phase 2)

	Name	Date
Prepared by	Jakob Sparrow edsighting.co.uk	15/12/2025

Issue Register

Prepared by	Rev	Date	Description/Comments
	A	2/2/2026	Specification for all lighting changed to downward only. Bat boxes added.

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Appendix B	Proposed Lighting Drawing & Calculations
Appendix C	Manufacturer’s literature

1. Introduction

1.1 Background

Ashford Homes is proposing to build a new six dwelling residential development opposite 38 Westbury Road, Bratton Land, Wiltshire BA13 4TB. A general layout of the site masterplan is included in Appendix A.

EDS was subsequently appointed to assess the potential impact of artificial light and develop a lighting strategy to support the planning application.

1.2 Objective

This report forms the lighting strategy and describes the exterior lighting proposals and how environmental impact is minimised.

The key objectives of the lighting strategy are to:

- Discharge Planning Condition:

No external light fixture or fitting will be installed within the application site unless details of existing and proposed new lighting have been submitted to and approved by the Local Planning Authority in writing. The submitted details will demonstrate how the proposed lighting will impact on bat habitat compared to the existing situation. The plans will be in accordance with the appropriate Environmental Zone standards set out by the Institution of Lighting Professionals (ILP) Guidance Notes on the Avoidance of Obtrusive Light (GN01/2021) and Guidance note GN08/23 “Bats and artificial lighting at night”, issued by the Bat Conservation Trust and Institution of Lighting Professionals.

REASON: Hedgerow/Scrub habitats between Phase 1 (adjoining development to the east) and this Phase 2 development are known to be well used by light-sensitive/Annex II bats

In addressing these objectives there is also a need to provide a sustainable solution that minimises energy usage and carbon emissions.

1.3 Scope

The study will consider the potential impact of artificial light at the sensitive locations advised by the project team.

The strategy will include a proposed lighting layout supported with a luminaire specification, positions and lux contours suitable for planning.

2. Environmental Considerations

In order to minimise obtrusive light and its impact on the local ecology within and beyond the development special considerations are necessary, the key objectives being to:

- Keep the number and wattage of light sources to a minimum;
- Keep the height of light sources to a minimum;
- Avoid direct upward light above the horizontal to maintain a 'dark sky';
- Maintain 'dark corridors' and minimise light trespass at environmentally sensitive locations, e.g. bat roosts and flight lines; and
- Follow the principles described in the Institution of Lighting Professionals Guidance Notes for the Avoidance of Obtrusive Light (GN01:2021).

3. Lighting Proposals

The proposed lighting design is outlined on drawing in Appendix B. The drawing shows indicative luminaire locations positions, details of a suitable luminaire and projected lux contours (horizontal).

The proposed lighting in vicinity of proposed Bat Boxes, lux values have also been shown in vertical illuminance.

It should be noted that the lux values representing horizontal illuminance exclude the screening effect of rear shields, buildings, trees etc. The 0.2 lux contour is of particular significance as the generally accepted threshold for illuminance in the vicinity of bat habitats.

Private Property mounted lighting proposals;

The preferred luminaire specified is a downward directional LED light source (Figure 1). Properties with porch roofs will incorporate 2no. PIR controlled downlighters (Figure 2). Manufacturer's literature is included in Appendix C.

***Figure 1 - Proposed (Lux Layout Unit Ref A)
Ansell Reef Directional (No upward lighting)***



***Figure 2 - Proposed (Lux Layout Unit Ref C)
Lotus Recessed Downlight (No upward lighting)***

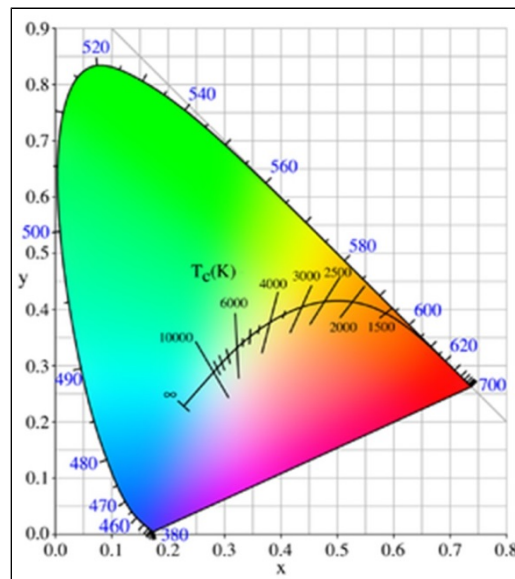


White light sources such as LED have the benefit of excellent colour rendering properties with the ability to improve the night-time environment for users. LEDs also emit virtually no ultra violet light given that other light sources with a high UV content, particularly at the blue end of the spectrum can be detrimental to ecology and have a negative impact on bats and invertebrates.

LED luminaires are predominantly available in 'neutral' white with colour temperatures of 4000°K.

With reference to the chromaticity diagram below it can be seen that the proposed 'warm' white 3000°K LEDs are nearer the yellow/orange end of the colour spectrum.

Figure 3 - Chromaticity Diagram with Black Body Locus



4. Summary

The proposed exterior lighting scheme for the development is optimised to minimize light spill and the potential effects of artificial light on local ecology. An LED light source is specified with no UV content and a warm colour temperature with a lower blue light content that is more sympathetic to bats.

Due to the sensitivity of bats to artificial light sources, illuminance levels close to natural moonlight ≤ 0.5 lux are normally preferred. The projected horizontal illuminance contours indicate that the impact on the environment and local ecology will be low. The key features are:

- An environmentally sensitive lighting scheme with low lighting levels and a directional LED light source to reduce lightspill and maintain dark corridors throughout the site.
- The proposals follow the principles and guidance set out in Institute of Lighting Engineers (ILP) in their publications, "Guidance Notes for the Avoidance of Obtrusive Light (GN01/2021)", and GN08/23 "Bats and Artificial at Night in the UK" issued by the Bat Conservation Trust and ILP.

In summary, the sympathetic lighting design and control measures will ensure that any adverse impacts in all sensitive receptors are minimal, including ecological receptors (primarily bats), the night sky and viewpoints in the surrounding area.

Appendix A

Proposed Site Legal Plan



**ASHFORD
HOMES**
[SOUTH WESTERN] LIMITED

DORIS HOUSE, MOOLETON DRIVE
BRADFORD ON AVON
WILTSHIRE BA15 1GB
TEL: 01225 791155
FAX: 01225 791168
WEB SITE: www.ashford-homes.co.uk
E-MAIL: ahhm@ashford-homes.co.uk



B 29-04-24 ownership boundary shown
A 29-04-24 first issue
revisions

Only figured dimensions are to be
worked from. Discrepancies must be
reported to Ashford Homes.

THIS DRAWING IS COPYRIGHT ©

project
LAND OPP 38 WESTBURY RD
BRATTON
BA13 4TB

drawing name
SITE PLAN INC. PHASE 2

drawing no.
BRA-057

revision
B

scale
1:500

paper size
A1

date
29-04-2024

drawn by
PRN

approved by

Appendix B

Proposed Lighting Drawing & Calculations

	Luminaire A	Luminaire C
Supplier		
Type	Reef LED Directional Wall Light	
Lamp(s)	LY4RCS 30K	
Lamp Flux (klm)	0.44	0.60
Maintenance Factor	1.00	1.00
No. in Project	24	8



PROJECT NAME:
Land Op. 38 Westbury Road, Bratton, BA13 4TB
(Phase 2) (Rev A)

PROJECT No:
1034

SCALE:
1:250

DATE:
2 February 2026

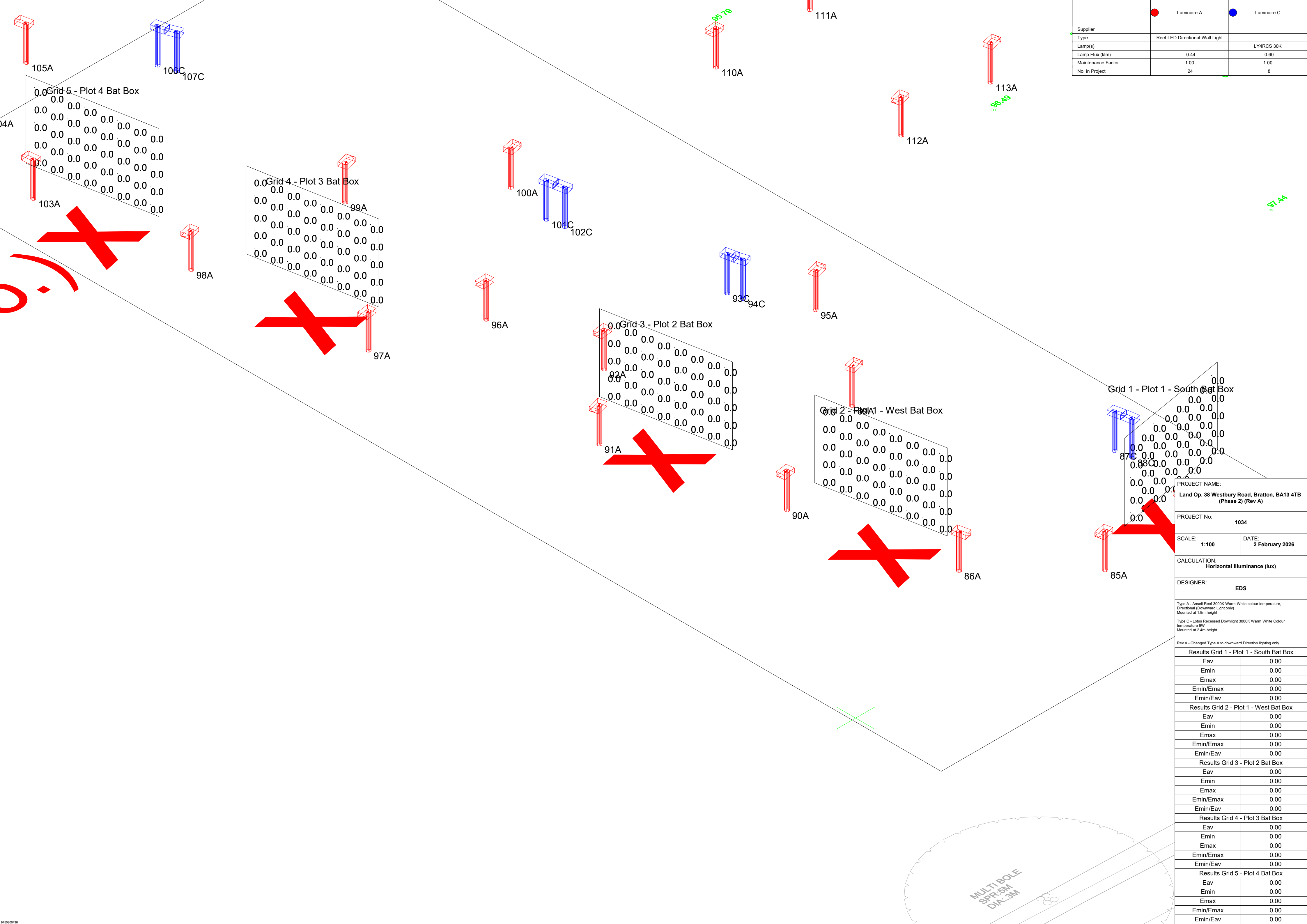
CALCULATION:
Horizontal Illuminance (lux)

DESIGNER:
EDS

Type A - Ansell Reef 3000K Warm White colour temperature,
Directional (Downward Light only)
Mounted at 1.8m height
Type C - Lotus Recessed Downlight 3000K Warm White colour
temperature 9W
Mounted at 2.4m height

Rev A - Changed Type A to downward Direction lighting only

Results Grid 1	
Eav	1.05
Emin	0.00
Emax	122.66
Emin/Emax	0.00
Emin/Eav	0.00



	Luminaire A	Luminaire C
Supplier	Reef LED Directional Wall Light	
Type	LY4RCS 30K	
Lamp(s)	LY4RCS 30K	
Lamp Flux (klm)	0.44	0.60
Maintenance Factor	1.00	1.00
No. in Project	24	8

PROJECT NAME:
Land Op. 38 Westbury Road, Bratton, BA13 4TB
(Phase 2) (Rev A)

PROJECT No: 1034

SCALE: 1:100 DATE: 2 February 2026

CALCULATION:
Horizontal Illuminance (lux)

DESIGNER: EDS

Type A - Ansell Reef 3000K Warm White colour temperature,
Directional (Downward Light only)
Mounted at 1.8m height

Type C - Lotus Recessed Downlight 3000K Warm White Colour
temperature 9W
Mounted at 2.4m height

Rev A - Changed Type A to downward Direction lighting only

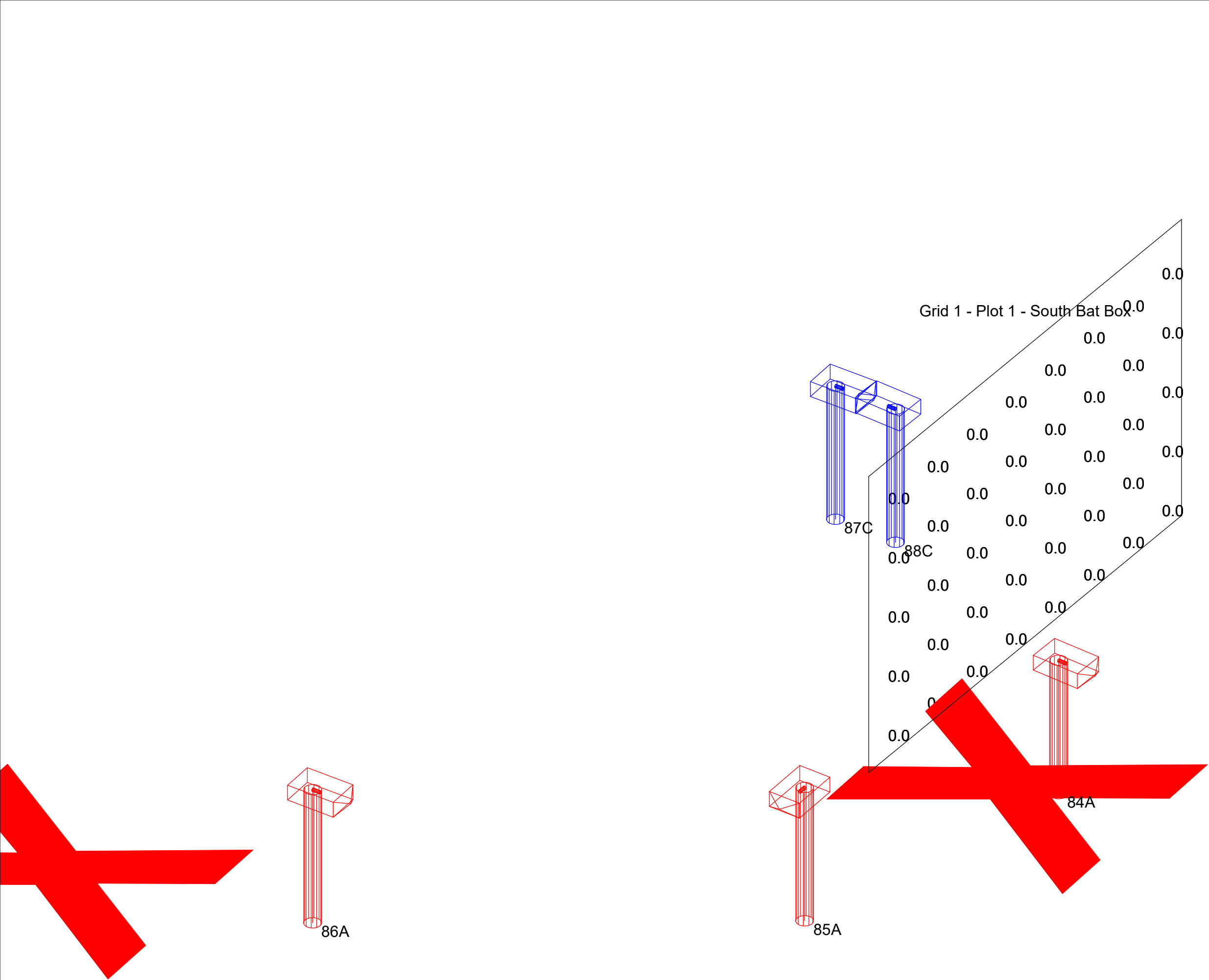
Results Grid 1 - Plot 1 - South Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00
Results Grid 2 - Plot 1 - West Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00
Results Grid 3 - Plot 2 Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00
Results Grid 4 - Plot 3 Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00
Results Grid 5 - Plot 4 Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00

Supplier		
Type	Reef LED Directional Wall Light	
Lamp(s)		LY4RCS 30K
Lamp Flux (klm)	0.44	0.60
Maintenance Factor	1.00	1.00
No. in Project	24	8

82A

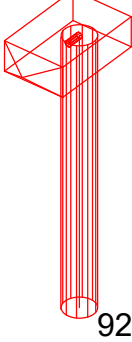
83A

98.75

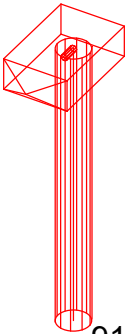


PROJECT NAME: Land Op. 38 Westbury Road, Bratton, BA13 4TB (Phase 2) (Rev A)	
PROJECT No: 1034	
SCALE: 1:50	DATE: 2 February 2026
CALCULATION: Horizontal Illuminance (lux)	
DESIGNER: EDS	
Type A - Ansell Reef 3000K Warm White colour temperature, Directional (Downward Light only) Mounted at 1.8m height Type C - Lotus Recessed Downlight 3000K Warm White Colour temperature 9W Mounted at 2.4m height Rev A - Changed Type A to downward Direction lighting only	
Results Grid 1 - Plot 1 - South Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00

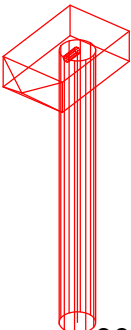
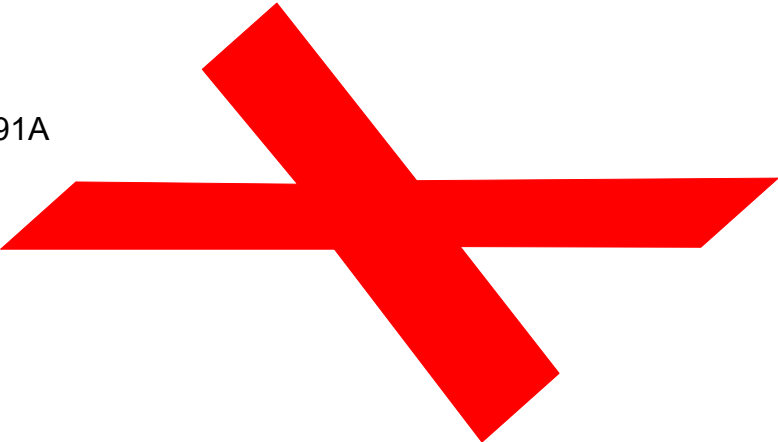
	Luminaire A	Luminaire C
Supplier		
Type	Reef LED Directional Wall Light	
Lamp(s)		LY4RCS 30K
Lamp Flux (klm)	0.44	0.60
Maintenance Factor	1.00	1.00
No. in Project	24	8



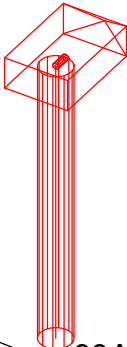
92A



91A

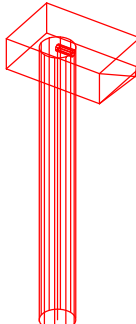
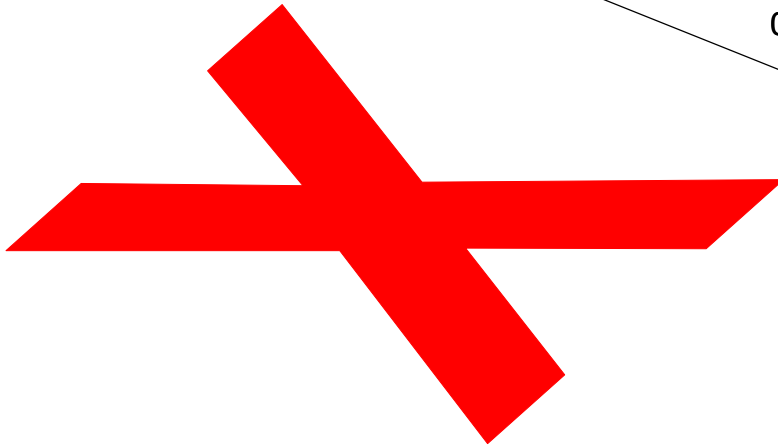


90A

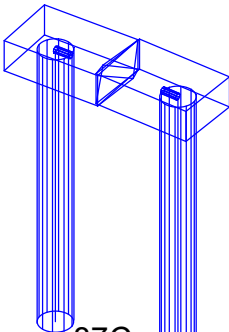


89A

Grid 2 - Plot 1 - West Bat Box									
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

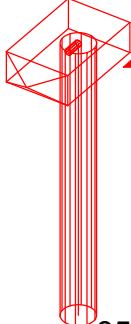
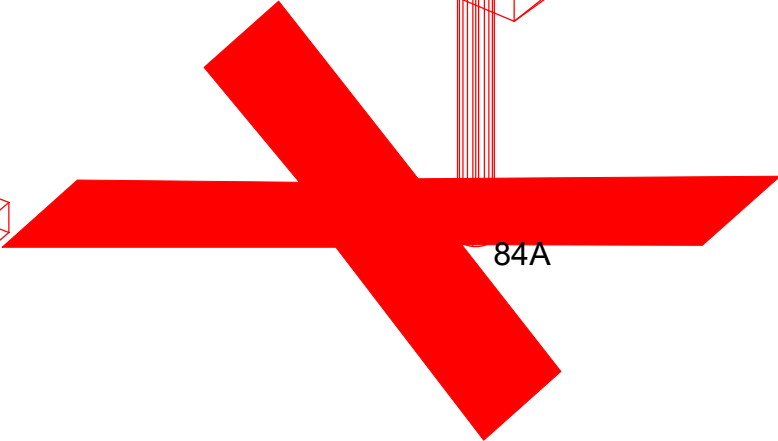


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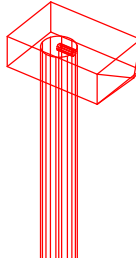


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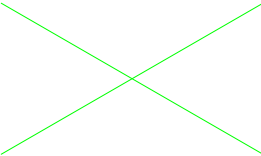
88C



85A



84A



PROJECT NAME: Land Op. 38 Westbury Road, Bratton, BA13 4TB (Phase 2) (Rev A)	
PROJECT No: 1034	
SCALE: 1:50	DATE: 2 February 2026
CALCULATION: Horizontal Illuminance (lux)	
DESIGNER: EDS	
Type A - Ansell Reef 3000K Warm White colour temperature, Directional (Downward Light only) Mounted at 1.8m height Type C - Lotus Recessed Downlight 3000K Warm White Colour temperature 9W Mounted at 2.4m height Rev A - Changed Type A to downward Direction lighting only	
Results Grid 2 - Plot 1 - West Bat Box	
Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00
Emin/Eav	0.00

DATE: 2 February 2026

DESIGNER: EDS

PROJECT No: 1034

PROJECT NAME: Land Op. 38 Westbury Road, Bratton, BA13 4TB (Phase 2) (Rev A)

**LIGHTING
REALITY**

Type A - Ansell Reef 3000K Warm White colour temperature,
Directional (Downward Light only)
Mounted at 1.8m height

Type C - Lotus Recessed Downlight 3000K Warm White Colour
temperature 9W
Mounted at 2.4m height

Rev A - Changed Type A to downward Direction lighting only

Outdoor Lighting Report

Layout Report

General Data

Dimensions in Metres Angles in Degrees
Grid Origin -143.5m x 12.1m
Area 136.0m x 106.6m
Sample Spacing 1.50m x 1.48m

Luminaires

Luminaire A Data

Supplier	
Type	Reef LED Directional Wall Light
Lamp(s)	
Lamp Flux (klm)	0.44
File Name	AREELEDWLD (3000K).ldt
Maintenance Factor	1.00
I _{max} 70,80,90(cd/klm)	81.3, 35.8, 2.8
No. in Project	24

Luminaire C Data

Supplier	
Type	
Lamp(s)	LY4RCS 30K
Lamp Flux (klm)	0.60
File Name	LY4RCS-30K.ies
Maintenance Factor	1.00
I _{max} 70,80,90(cd/klm)	91.5, 34.3, 0.1
No. in Project	8

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
82	A	-78.04	42.53	1.80	190.00	0.00	0.00	0.10			
83	A	-78.24	45.84	1.80	99.00	0.00	0.00	0.10			
84	A	-92.30	40.07	1.80	279.00	0.00	0.00	0.10			
85	A	-96.00	40.34	1.80	191.00	0.00	0.00	0.10			
86	A	-99.87	44.15	1.80	282.00	0.00	0.00	0.10			
87	C	-90.34	45.52	1.80	282.00	0.00	0.00	0.10			
88	C	-90.18	44.74	1.80	99.00	0.00	0.00	0.10			
89	A	-95.17	54.45	1.80	13.00	0.00	0.00	0.10			
90	A	-101.63	51.41	1.80	188.00	0.00	0.00	0.10			
91	A	-103.55	59.33	1.80	194.00	0.00	0.00	0.10			
92	A	-100.02	62.61	1.80	187.00	0.00	0.00	0.10			
93	C	-93.33	62.84	1.80	282.00	0.00	0.00	0.10			
94	C	-93.18	62.18	1.80	108.00	0.00	0.00	0.10			
95	A	-91.78	59.76	1.80	14.00	0.00	0.00	0.10			
96	A	-100.86	67.97	1.80	184.00	0.00	0.00	0.10			
97	A	-105.36	69.65	1.80	188.00	0.00	0.00	0.10			
98	A	-106.33	77.97	1.80	191.00	0.00	0.00	0.10			
99	A	-99.24	76.99	1.80	14.00	0.00	0.00	0.10			
100	A	-94.22	73.32	1.80	11.00	0.00	0.00	0.10			
101	C	-94.74	70.94	1.80	282.00	0.00	0.00	0.10			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
102	C	-94.58	70.12	1.80	101.00	0.00	0.00	0.10			
103	A	-107.25	85.35	1.80	96.00	0.00	0.00	0.10			
104	A	-104.84	90.21	1.80	184.00	0.00	0.00	0.10			
105	A	-101.25	91.71	1.80	101.00	0.00	0.00	0.10			
106	C	-97.93	88.14	1.80	282.00	0.00	0.00	0.10			
107	C	-97.69	87.36	1.80	111.00	0.00	0.00	0.10			
108	A	-86.49	93.54	1.80	191.00	0.00	0.00	0.10			
109	A	-82.58	90.53	1.80	279.00	0.00	0.00	0.10			
110	A	-83.37	73.40	1.80	185.00	0.00	0.00	0.10			
111	A	-78.29	73.56	1.80	8.00	0.00	0.00	0.10			
112	A	-81.60	65.44	1.80	192.00	0.00	0.00	0.10			
113	A	-76.86	65.51	1.80	12.00	0.00	0.00	0.10			

Horizontal Illuminance (lux)

Grid 1



Results

Eav	1.05
Emin	0.00
Emax	122.66
Emin/Emax	0.00
Emin/Eav	0.00

Appendix C

Manufacturer's Literature



@ansell_lighting



ansellighting



Ansell Lighting



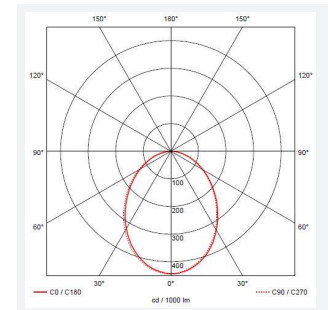
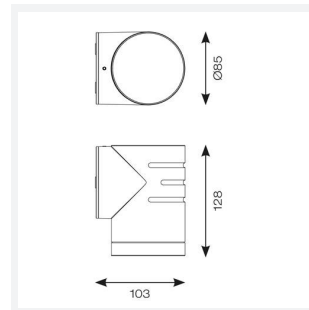
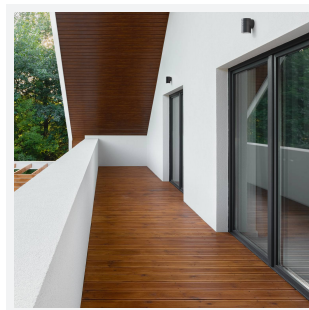
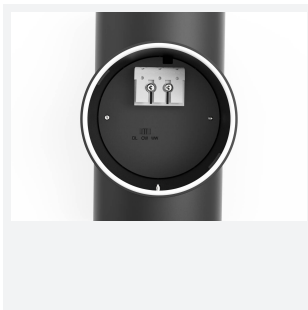
ansell_lighting

Reef Directional

Reef CCT Directional Wall Light Black

Code: AREELEDWLD

Category	Wall Lights
Application	Hospitality, Outdoor, Residential, Retail
Specification	Architectural



PRODUCT FEATURES

- Durable outdoor directional wall light suitable for residential and hospitality applications
- Choice of matt white or black finishes
- CCT selectable between 3000K, 4000K and 6000K
- Non-dimmable
- Installation in either upward or downward orientation
- Polycarbonate construction ideal for coastal applications
- Unique lockable installation base plate with push fit loop-in loop-out terminals for ease of installation

GENERAL INFORMATION	
Wattage	5W
Lumens Delivered	430lm - 410lm (3000K - 6000K)
Lm/W	85lm/W - 82lm/W (3000K - 6000K)
Beam Angle	90
CRI	80
CCT	3000/4000/6000K
Input	220/240V
Operating Temp	-20°C - 40°C
SDCM	6

TECHNICAL INFORMATION	
Light Source	LED
Colour / Finish	Black
IP Rating	IP65
Class Protection	2
Internal / External	Internal / External
Surface / Recessed / Suspended	Wall
Lumen Depreciation	L80 54,000h
Warranty (Years)	3
CE Mark	Yes
Diameter	85 mm
Height	128 mm





DESCRIPTION

2" Round Recessed Economy LED With Integral Driver In Connection Box
Available with White & Black trims and 4 Smooth & 2 Baffle Reflectors

FEATURES & BENEFITS

- 5 CCT User Selectable
- CRI 90+ for True Color Rendering
- Type IC Rated - No Housing Required
- Fast & Easy To Install - Save On Labor
- 2 3/4" Deep - Install Where Ceiling Space Is Limited
- 120V Triac Dimmable Driver with Wiring Compartment Included

DIMENSIONS	Fixture: OD 3 1/8" ID 2 1/16" Depth 2 3/4"
Driver: 5 1/4" x 1 3/4" x 1 1/8"	Cut Out: 2 1/2" to 2 3/4"

TRIM & REFLECTOR OPTIONS





2RR-SM-WH

Smooth White

2RR-BF-WH

Baffle White

2RR-SM-BK

Smooth Black

2RR-BF-BK

Baffle Black

2RR-SM-AZ

Alzak

2RR-SM-BC

Black Chrome

ORDERING GUIDE	Trim	Reflector	Beam
JXL-COB02-R09W-5CCT-WH-2RR-SM-WH	White	Smooth White	blank for 36°
JXL-COB02-R09W-5CCT-WH-2RR-BF-WH	White	Baffle White	-24D for 24°
JXL-COB02-R09W-5CCT-WH-2RR-SM-BK	White	Smooth Black	
JXL-COB02-R09W-5CCT-WH-2RR-BF-BK	White	Baffle Black	
JXL-COB02-R09W-5CCT-WH-2RR-SM-AZ	White	Alzak	
JXL-COB02-R09W-5CCT-WH-2RR-SM-BC	White	Black Chrome	
JXL-COB02-R09W-5CCT-BK-2RR-SM-WH	Black	Smooth White	
JXL-COB02-R09W-5CCT-BK-2RR-BF-WH	Black	Baffle White	
JXL-COB02-R09W-5CCT-BK-2RR-SM-BK	Black	Smooth Black	
JXL-COB02-R09W-5CCT-BK-2RR-BF-BK	Black	Baffle Black	
JXL-COB02-R09W-5CCT-BK-2RR-SM-AZ	Black	Alzak	
JXL-COB02-R09W-5CCT-BK-2RR-SM-BC	Black	Black Chrome	

JXL-COB02-R09W-5CCT
2" Round Recessed Economy LED 9W 5CCT

Project:

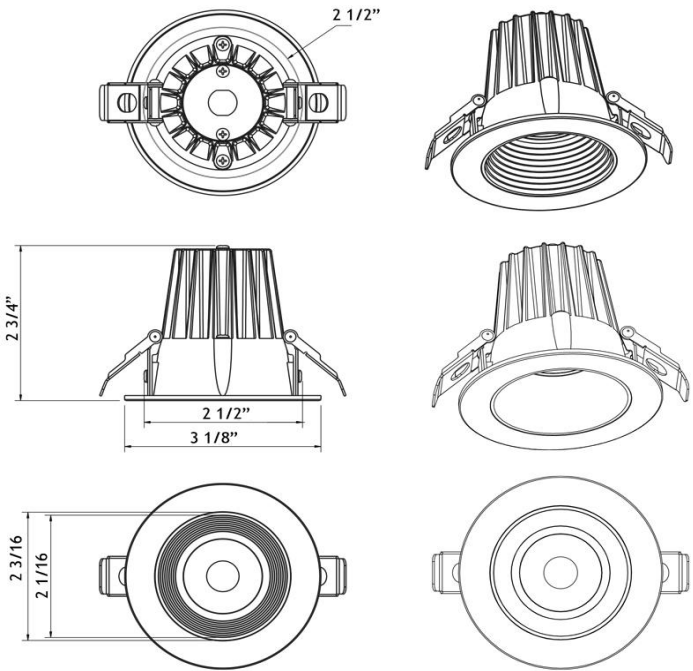
Location:

Model:Qty:

Notes:

SPECIFICATION	
Applications	Residential Recessed
Power	9 W
Color Temperature (K)	2700 3000 3500 4000 5000
Light Output WH Reflector (lm)	560 590 630 660 690
Light Output BK Reflector (lm)	510 550 580 610 620
Beam Angle	36° standard, 24° custom
CRI	90 +
Driver Input	120V AC 50/60 Hz
J-Box Volume	3.88 in ³
Dimming	TRIAC Dimmers 20% - 100%
Approved Location	Insulated Ceiling & Damp Locations
Air Tight	Yes
Ambient Temperature	-4°F (-20°C) to +104°F (+40°C)
Projected Life	70% Light Output at 30,000 Hours
Certification	c ETL us
Warranty	3 Year

INSTALLATION INSTRUCTIONS



ACCESSORIES

Sold Separately

[Flanged Mounting Plate with bars model FRP212](#)

[Flat Mounting Plate 26" model RIP212](#)

[Flat Mounting Plate 13" model MP234](#)

[Jumper Cables 10 ft model JC-5CCT-10](#)

[Goof Ring OD 4 1/2" White GR3 / Black GR3-BK](#)