

FOR:
23-LP-052 – HEYWOOD BUSINESS
PARK, HEYWOOD

A PROJECT FOR:
INDURENT

AUTHOR:
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STATUS:
FOR PLANNING

DOCUMENT MANAGEMENT

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1.0 INTRODUCTION

This External Artificial Lighting Assessment report has been prepared by MBA Consulting Engineers Limited on behalf of Indurent Management Limited to assist the local planning authority in its consideration for the artificial lighting proposed on the new site.

The sites use is for Light industrial (E(g)(iii)), industrial (B2) and storage and distribution (B8) units with associated infrastructure.

The external lighting design shall give consideration to all external areas surrounding the building including service yard, car parking, cycle parking, walkways and the access road to the development area.

The proposed lighting design requires that all the luminaires be mounted horizontally with a zero-degree tilt to the finished road surface, in addition to the use of full cut-off luminaires. The proposed lighting design also ensures that the column mounted luminaires parallel to the central estate road is orientated so that the peak intensity is not directed towards the receptors further reducing source intensity glare.

The scheme is based on the use of LED luminaires fixed to the building façades, on lighting columns and low level lighting bollards to parking areas adjacent to main building entrances.

2.0 LIGHTING STANDARDS AND GUIDES

The following lighting standards, policies and guidance documents will form the basis within this report for assessment and were consulted during and post completion of the theoretical lighting design: -

- Clean Neighborhoods and Environment Act 2005 (CNEA)
- Environmental Protection Act (1990)
- HSE Executive Lighting at Work (ISBN 978 0 7176 1232 1) 1997
- British Standards, Lighting of Outdoor Work Places (BS EN 12464-2:2021)
- British Standards, Accessible & Inclusive Built Environment (BS 8300-1:2018)
- British Standards, Roads (BS 5489-1:2020)
- British Standards, Photobiological Safety of Lamp Systems (BS EN 62471:2008)
- CIBSE Lighting Guide LG1, The Industrial Environment (2018)
- CIBSE Lighting Guide LG6, The Outdoor Environment (2016)
- ILP Guidance Notes for the Reduction of Obtrusive Light (2021)
- ILP Technical Report TR12 Lighting of Pedestrian Crossings (2015)
- ILP Professional Lighting Guide PLG23 Lighting for Cycling Infrastructure (2020)

3.0 LIGHTING SOLUTION

1. Care has been taken when selecting the luminaires that ensures the appropriate products will greatly reduce spill light and glare to and around site boundaries and prevent sky glow.
2. Full cut-off luminaires, horizontal, “flat” floodlights and LED modules that are housed in the luminaires canopy have been generally selected.
3. The proposed luminaires, all have a total ULR of less than 2% as per ILP guidance which drastically reduce the upward spread of light near to and above the horizontal. All luminaires are installed at a tilt of 0% to achieve this. The overall site ULR is 0.01% as result of these actions which is well within ILP guidance tolerances with the site being an E3 classification.

4. Best lighting practice design guide lines have been followed in order to achieve the criteria outlined in The Institution of Lighting Professionals: Guidance Notes for the Reduction of Obtrusive Light 01/21, covering Environmental Zones E0 to E4.
5. The most sensitive/critical zones for minimising sky glow are those between 85 - 100° as shown in Table 1.

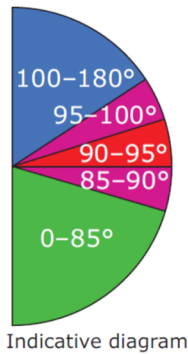


Table 1: The effect on the ability to view the night sky at various angles

Angle of light emitted (degrees)	Sky glow effect	Glare effect
100 – 180	Local	Little
95 – 100	Significant	Some
90 – 95	High	High
85 – 90	Significant	High
0 – 85	Minimal	Some

Table 1: Critical Luminaire Angles for Minimising Sky Glow - [1]

6. With the proposed luminaires being strategically placed and having zero or minimal upward light ratio (ULR), the proposed design solution meets the criteria of environmental zone E3, Lighting Environment classification of Medium District Brightness and Upward Light Ratio of Luminaires as indicated respectively in Tables 2 & 3.

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

Table 2: Environmental Zones - [1]

Light technical parameter	Environmental zones				
	E0	E1	E2	E3	E4
Upward light ratio (ULR)/%	0	0	2.5	5	15

Table 3: Maximum Values of Upward Light Ratio (ULR) of Luminaires - [1]

7. Glare has been kept to a minimum by ensuring that the main beam angle of all the luminaires directed towards any potential observer is not more than 70 degrees as indicated in Figure 1.

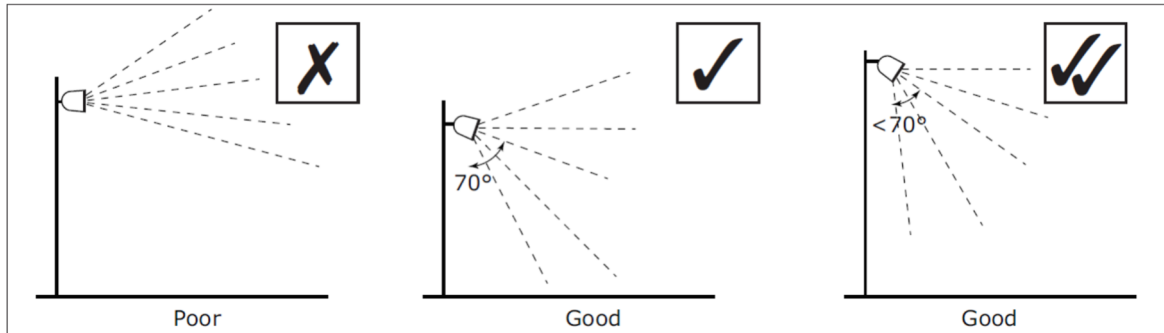


Figure 1: Luminaire Aiming Angles - [1]

In addition, the designed mounting heights and chosen luminaires ensure that greater spacing between luminaires is achieved thus reducing the number of overall lighting points and also reducing the spill and glare as indicated in Figures 2 and 3.

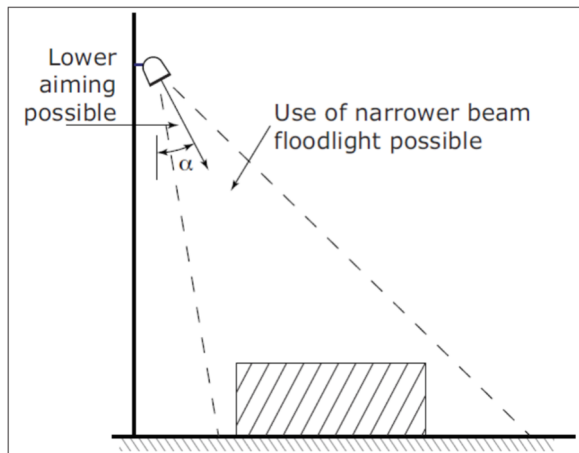


Figure 2: Higher Mounting Height – Less Spill and Glare - [1]

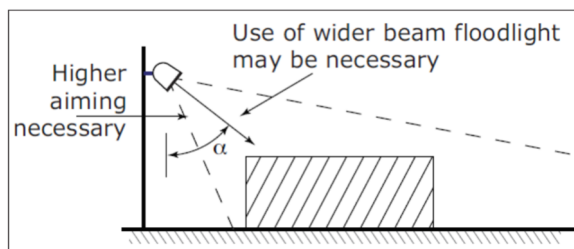


Figure 3: Lower Mounting Height – More Spill and Glare - [1]

8. Lighting pollution on adjacent properties has been kept to a minimum and in accordance with the respective environmental zone category indicated Table 4.

Light technical parameter	Application conditions	Environmental zone				
		E0	E1	E2	E3	E4
Illuminance in the vertical plane (E_v)	Pre-curfew	n/a	2 lx	5 lx	10 lx	25 lx
	Post-curfew	n/a	<0.1 lx*	1 lx	2 lx	5 lx

Table 4: Maximum Values of Vertical Illumination on Properties – [1]

4.0 DESIGN STATISTICS

- The following table details the design statistics achieved within the various areas of the development and should be read in conjunction with the external lighting drawings provided.

Statistics				
Description	Symbol	Avg	Min	Min/Avg
Car Park - 20/0.40Uo	+	20 lux	8 lux	0.40
Cycles - 20/0.40Uo	+	21 lux	14 lux	0.67
Dock Doors (50/0.40Uo)	✕	55 lux	30 lux	0.55
Entrance Area - 50/0.40Uo	+	50 lux	21 lux	0.42
Fire Track	+	19 lux	6 lux	0.32
Open Storage Area - 20/0.40Uo	+	20 lux	8 lux	0.40
Rear Pedestrian	+	20 lux	8 lux	0.40
Service Yard - 20/0.40Uo	+	22 lux	10 lux	0.45
SPILL	+	1 lux	0 lux	0.00
Access Road - 20/0.40Uo	+	21 lux	9 lux	0.43

Table 5: Designed Lux Levels

- The results obtained fall in line with the respective guidelines, Environmental Zones E3 inclusive as detailed elsewhere in this report.
- As further detailed on the drawing any potential light spill over the boundaries into adjoining areas including adjacent areas has been kept to the minimum.

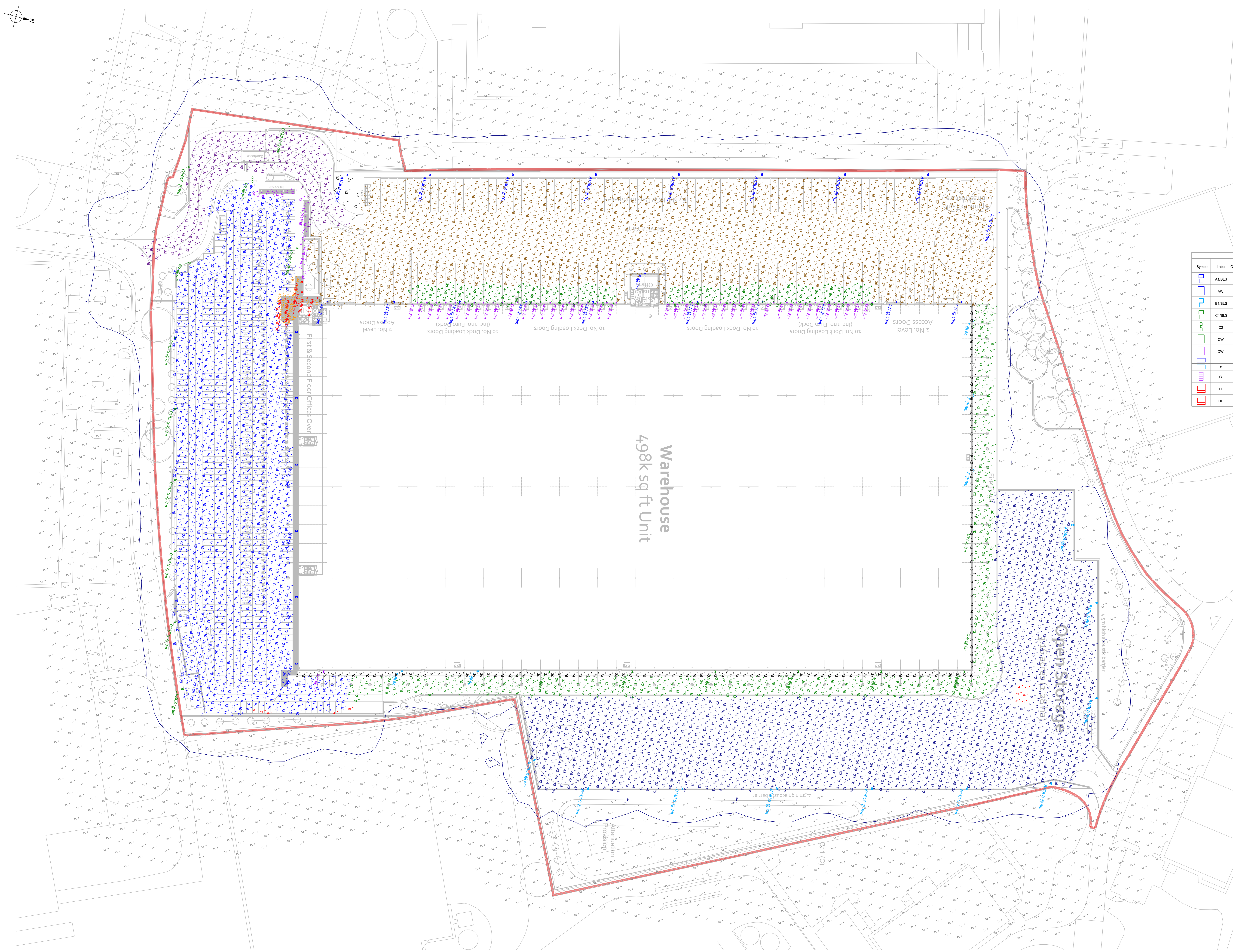
5.0 CONCLUSION

- All external lighting shall be controlled by photocell and time clock.
- The total lighting solution has been carefully generated to ensure the immediate environment has been protected.
- The illumination that would normally be free flowing from site boundaries has been restricted and has been further designed to mitigate any potential impact for both ecological and visual amenity aspects to the surrounding areas adjacent to the proposed site.
- Careful consideration has also been taken to ensure no loss of amenity due to glare through shielding of the lamps, choice of luminaires and efficient mounting heights.

6.0 REFERENCES

- [1] – 2021/01 - Institute of Lighting Professionals – GN01-21 Guidance Note for the reduction of obtrusive light.

7.0 APPENDIX - EXTERNAL LIGHTING DRAWING



- NOTES
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER MAE SERVICES DRAWINGS, SCHEDULES & SPECIFICATIONS, TOGETHER WITH THE ARCHITECTS & STRUCTURAL DRAWINGS.
 2. MBA CONSULTS LIMITED HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DRAWING OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.
 3. DO NOT SCALE FROM THIS DRAWING, WORK TO MEASURED DIMENSIONS ONLY.
 4. ANY DISCREPANCIES, ERRORS OR OMISSIONS ARE TO BE CLARIFIED WITH THE RELEVANT ENGINEER AT THE EARLIEST OPPORTUNITY.
 5. ALL WORKS ARE TO BE IN ACCORDANCE WITH THE CURRENT RELEVANT STATUTORY REGULATIONS, BUILDING REGULATIONS, BRITISH STANDARDS, ACCEPTED CODES OF PRACTICE AND TRADE ASSOCIATION REQUIREMENTS.
 6. FOR DETAILS OF SYMBOLS AND LINE STYLES USED IN THE DRAWINGS, PLEASE REFER TO THE LEGEND SHEETS.

Statistics				
Description	Symbol	Avg	Min	Min/Avg
Car Park - 200.40Uo	+	20 lux	8 lux	0.40
Cycles - 200.40Uo	+	21 lux	14 lux	0.67
Dock Doors - 500.40Uo	X	55 lux	30 lux	0.55
Entrance Area - 500.40Uo	+	50 lux	21 lux	0.42
Fire Track	+	19 lux	6 lux	0.32
Open Storage Area - 200.40Uo	+	20 lux	8 lux	0.40
Rear Pedestrian	+	20 lux	8 lux	0.40
Service Yard - 200.40Uo	+	22 lux	10 lux	0.45
SPILL	+	1 lux	0 lux	0.00
Access Road - 200.40Uo	+	21 lux	9 lux	0.43

Schedule					
Symbol	Label	Quantity	Catalog Number	Description	Wattage
	A1/BL	9	DSX0.4 LA224 FWE (DSX0.4 0LED BL)	D-Series 0 - Area luminaire with Back Light Shield on 10m Column	169
	AW	16	DSX0.4 LA224 FWE	D-Series 0 - Area luminaire on Wall Bracket at 10m AFFL	169
	B1/BL	10	DSX1.4 LA336 FWE (DSX1.6 0LED BL)	D-Series 1 - Area luminaire with Back Light Shield on 8m Column	213
	C1/BL	9	DSX0.4 LA224 FWE (DSX0.4 0LED BL)	D-Series 0 - Area luminaire with Back Light Shield on 8m Column	169
	C2	2	DSX0.4 LA224 FWE	D-Series 0 - Area luminaire on 8m Column	336
	CW	8	DSX0.4 LA224 FWE	D-Series 0 - Area luminaire on Wall Bracket at 8m AFFL	169
	DW	1	DSX0.4 LA164 FWE (TZ)	D-Series 0 - Area luminaire on Wall Bracket at 6m AFFL	114
	E	1	DWL 1 LA044 FM W025	Denver ID Wall at 5m AFFL	25
	F	5	WAP 1 LA064 HA	WALLPACK at 5m AFFL	63
	G	42	TBHF POL1 7026AR4030GL	7026 - POLAR 1 30W MOD AR 4000K at 5m Zero Tilt	30
	H	4	DBD 1 LA014 DO AY W011	Denver ID Bollard	11
	HE	4	DBD 1 LA014 DO AY W011	Denver ID Bollard With Integral 3hr Emergency	11

T1	27/06/25	TENDER ISSUE	GD
P1	20/06/25	PRELIMINARY ISSUE	GD
REV	DATE	AMENDMENTS	APPROV

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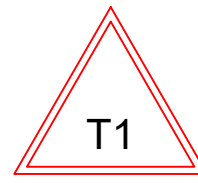
CLIENT: INDURENT

PROJECT: HEYWOOD H4 DEVELOPMENT

TITLE: INDICATIVE EXTERNAL LIGHTING LAYOUT

DRAWING NUMBER: 23LP052-MBA-EX-SP-DR-E-0001

REV:	STATUS:	FLOOR:
T1	TENDER	SITE
SCALE @A0	DATE:	PROJECT No:
1:500	JUN 2025	23-LP-052



INDICATIVE EXTERNAL LIGHTING LAYOUT

Scale 1:500 @ A0

8.0 APPENDIX – BREEAM UPWARD LIGHT ASSESSMENT

BREEAM P109-4075 - Indurent Plot H4 Heywood Distribution Park

Total Lumens

1,507,125

Installation ULR

0.01%

Complies with environmental zones

E2 & E3 & E4

Total Upward Lumens

193.86

CATALOGUE	ITEM REF	QUANTITY	LUMENS	POWER (W)	LLM/TcW	TOTAL LUMENS	TILT (°)	ULOR (%)	TOTAL UPWARD LUMENS
DSX0.4.LA224.FWE.C9	Als	9	21,795	169	129	196,155	-	0	0
DSX0.4.LA224.FWE.C9	AW	16	21,795	169	129	348,720	-	0	0
DSX1.4.LA304.FWE.C9	Bls	10	29,720	213	140	297,200	-	0	0
DSX0.4.LA224.FWE.C9	Cls	9	21,795	169	129	196,155	-	0	0
DSX0.4.LA224.FWE.C9	C2	4	21,795	169	129	87,180	-	0	0
DSX0.4.LA224.FWE.C9	CW	8	21,795	169	129	174,360	-	0	0
DSX0.4.LA164.FWE.C9	DW	1	15,851	114	139	15,851	-	0	0
DWL.1.LA044.FW.C9.W025	E	1	3,823	25	153	3,823	-	0	0
WAP.1.LA084.HA.C9.CTR	F	5	7,359	63	117	36,795	-	0	0
TBHF.POL1.7026AR4030GL	G	42	3,415	30	114	143,430	-	0	0
DBD.1.LA014.DO.AY.H100.C9.W011	H	4	932	11	85	3,728	-	2.6	96.93
DBD.1.LA014.DO.AY.H100.C9.W011	HE	4	932	11	85	3,728	-	2.6	96.93

Required LLM/TcW: 70
Permissible ULR %: E0: 0% E1: 0% E2: up to 2.5% E3: up to 5% E4: up to 15%

Environmental zone level is based solely on the ULR.
The information provided is based on the latest the Institute of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light and the latest BREEAM UK New construction V6.1. This assumes that all external lighting (except safety and security lighting) can automatically be switched off between 23:00 and 07:00. If safety or security lighting is required to be on during these hours, then it should comply with the levels recommended in the ILP guidance notes.
All values shown are the result of calculations derived from product specific photometry of luminaires positioned in a fixed relationship to each other and the statistical zone. In practice the values may vary due to tolerances in column installation, luminaire orientation, and surface reflectance, the substitution of alternative luminaires will not produce comparable results.

Summary P109-4075 - Indurent Plot H4 Heywood Distribution Park

Line No.	Item Ref	Quantity	Catalogue
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
10	A1s	9	DSX0.4.LA224.FWE.C9
11	A1s	9	DSX1B.10.1A.LMZ.GV
ACCESSORY			
20	bls	9	DSX0.40LED.BLS
LUMINAIRE AND BRACKET PACKAGE			
30	AW	16	DSX0.4.LA224.FWE.C9
31	AW	16	HAWA.AU.GV9
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
40	B1s	10	DSX1.4.LA304.FWE.C9
41	B1s	10	DSX1B.8.1A.LMZ.GV
ACCESSORY			
50		10	DSX1.60LED.BLS
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
60	C1s	9	DSX0.4.LA224.FWE.C9
61	C1s	9	DSX1B.8.1A.LMZ.GV
ACCESSORY			
70		9	DSX0.40LED.BLS
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
80	C2	4	DSX0.4.LA224.FWE.C9
81	C2	2	DSX1B.8.2A.LMZ.GV
LUMINAIRE AND BRACKET PACKAGE			
90	CW	8	DSX0.4.LA224.FWE.C9
91	CW	8	HAWA.AU.GV9
LUMINAIRE AND BRACKET PACKAGE			
100	DW	1	DSX0.4.LA164.FWE.C9
101	DW	1	HAWA.AU.GV9
LUMINAIRE			
110	E	1	DWL.1.LA044.FW.C9.W025
LUMINAIRE			
120	F	5	WAP.1.LA084.HA.C9.CTR
LUMINAIRE			
130	G	42	TBHF.POL1.7026AR4030GL
LUMINAIRE			
140	H	4	DBD.1.LA014.DO.AY.H100.C9.W011
LUMINAIRE			
150	HE	4	DBD.1.LA014.DO.AY.H100.C9.W011
ACCESSORY			

160	8	DBD.ROOT
ACCESSORY		
170	30	HEL.CBEPAC2

9.0 APPENDIX – LUMINAIRE DATA SHEETS

> Datasheet - AMENITY - DSX0

DSX0.4.LA224.FWE.C9



Product image may not represent the final configuration stated above.

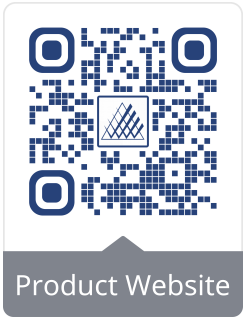


Product Specification **DSX0 Holophane Website**

DSX0.4.LA224.FWE.C9

Holophane DSX0 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual lenses (PMMA or silicone). Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).
This specific SKU includes:

- Series 4
- LED light engine producing c.22,000 lm with a nominal 4000°K colour temperature
- Forward throw extra light distribution
- Metallic Silver (RAL9006)



DSX1B.10.1A.LMZ.GV

Holophane tubular base compartment column for use with DSX1 Luminaires. 10 metre, Single head, For light & medium area wind zones (compliant to EN40).
• Bracket galvanised
• Direct embedment

Performance

Drive Current from Driver:	1,385mA
Power:	169W
Fitting Current:	0.76A
Fitting Inrush:	83.2A - 0.261ms
Number of Drivers:	1
1x Driver 1 Inrush:	83.2A - 0.261ms
Max Drivers per 16A Type B MCB:	5
Max Fittings per 16A Type B MCB:	5
Total Number of LEDs:	40
Minimum Dim Level:	5%
Optical Risk Group:	1
SDCM/MacAdam Ellipse:	5



8Kg₂

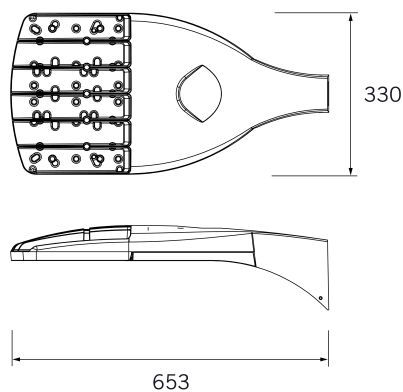


0.09M



[Installation Guide](#)

Dimensions



CIBSE TM66 - CEAM Rating

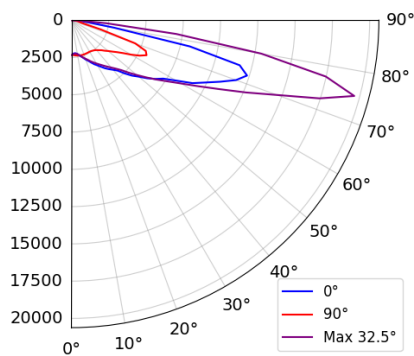


2.5 to 4.0	1.5 to 2.5	0.5 to 1.5	0 to 0.5
Excellent circularity	Definite/ substantial progress to circularity	Some circular economy functionality	Very poor circular economy performance

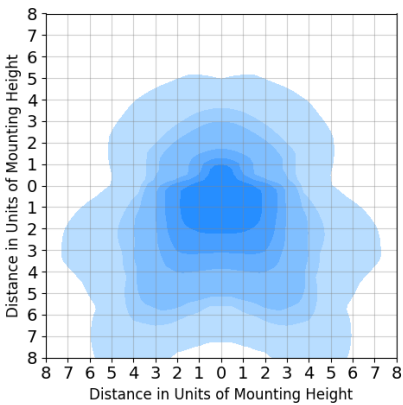
Assured Score

Photometry [↓ IES File](#)

Polar Plot

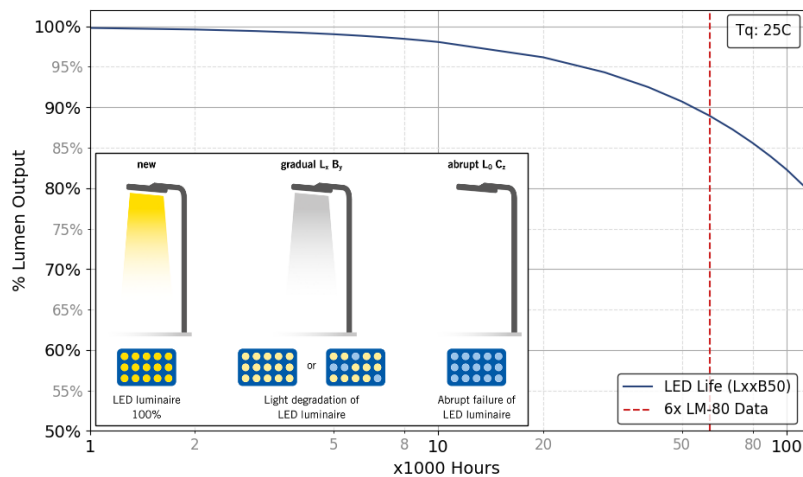


Isoilluminance Plot



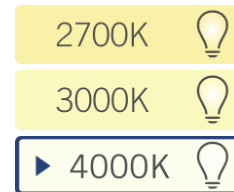
Lumens:	21,795
CCT:	4000K
CRI:	70
IES File:	DSX0.4.LA224.FWE

LLMF Graph



For reference purposes, the graph extrapolates beyond the recommended 6x LM-80 data in TM-21, which our calculations are based on.

Colour Temperatures



Colours

Selected Colour

C9 Metallic Silver (RAL9006)

Custom Colour Available

RAL**** Customer specified colour

*Choosing a custom colour may increase the cost and lead time.

Standard Colours Available

C1 Smooth White (RAL9016)

C4 graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Black (RAL9005)

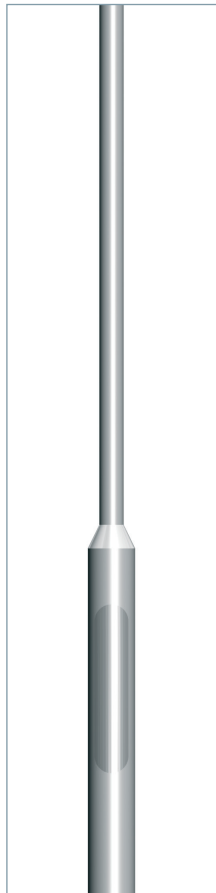
C9 Metallic Silver (RAL9006)

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

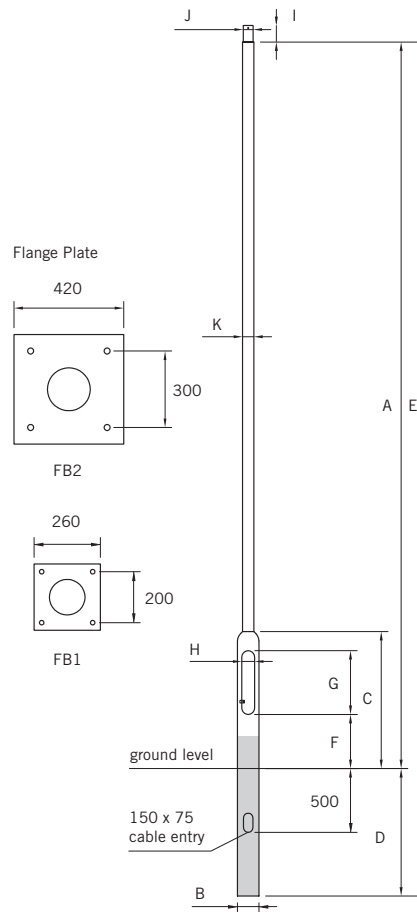
> Datasheet

DSX1B.10.1A.LMZ.GV



Holophane products that are suitable

CityMax
Denver Elite pole
D-Series
Factor
Factor small
V-Max



	Nominal Height	Base Diameter*	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length*	Spigot Diameter*	Shaft Diameter*	Weight kg*	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
2.5m standard duty	2500	140	1075	800	3300	400	500	100	-	-	76	27	2100
3m standard duty	3000	140	1075	800	3800	400	500	100	-	-	76	30	4666
3.5m standard duty	3500	140	1075	800	4300	400	500	100	-	-	76	32	2100
4m standard duty	4000	140	1075	800	4800	400	500	100	-	-	76	34	6484
4.5m standard duty	4500	140	1075	800	5300	400	500	100	-	-	76	37	5108
5m standard duty	5000	140	1075	800	5800	400	500	100	-	-	76	39	6149
5.5m standard duty	5500	140	1075	1000	6500	400	500	100	-	-	76	44	6003
6m standard duty	6000	140	1075	1000	7000	400	500	100	-	-	76	46	5999
6m heavy duty	5700	168	1200	1000	6700	400	600	115	130	76	89	71	10404
8m standard duty	7700	168	1200	1200	8900	400	600	115	130	76	89	89	10072
8m heavy duty	7700	168	1300	1200	9000	500	600	115	250	101	114	107	15699
8m extra heavy duty	7700	194	1300	1200	9000	500	600	115	250	127	140	136	18973
10m standard duty	9700	168	1300	1500	11200	500	600	115	250	101	114	150	18067
10m heavy duty	9700	194	1300	1500	11200	500	600	115	250	127	140	168	23193
10m extra heavy duty	9700	194	1300	1500	11200	500	600	115	250	152	168	220	28317
12m standard duty	11700	194	1300	1700	13400	500	600	115	250	127	140	213	26251
12m heavy duty	11700	194	1300	1700	13400	500	600	115	250	127	168	260	40390

* Exclusion TBC

2.5-6m std Poles	Flange Plate FB1	Bolts	M18 x 400
8-12m std Poles	Flange Plate FB2	Bolts	M24 x 820

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring the correct plate and Anchor Bolts are supplied.

Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.

stepped steel - CityMax Large only

post top

	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
6m	6000	140	1075	1000	7000	400	500	115	-	-	-	46	5999
8m	7700	168	1300	1200	9000	500	600	115	100	76	114	107	15699
10m	9700	168	1300	1500	11200	500	600	115	100	76	114	150	18067
12m	11700	194	1300	1700	13400	500	600	115	100	76	140	168	26251
15m	14700	194	1200	2000	17000	400	600	115	100	76	168	306	40300

twin head

	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
10m	9400	194	1200	1500	11100	400	600	115	200	152.4	168.3	208	39131
12m	11400	194	2500	1700	13300	1000	600	115	200	152.4	168.3	295	41585

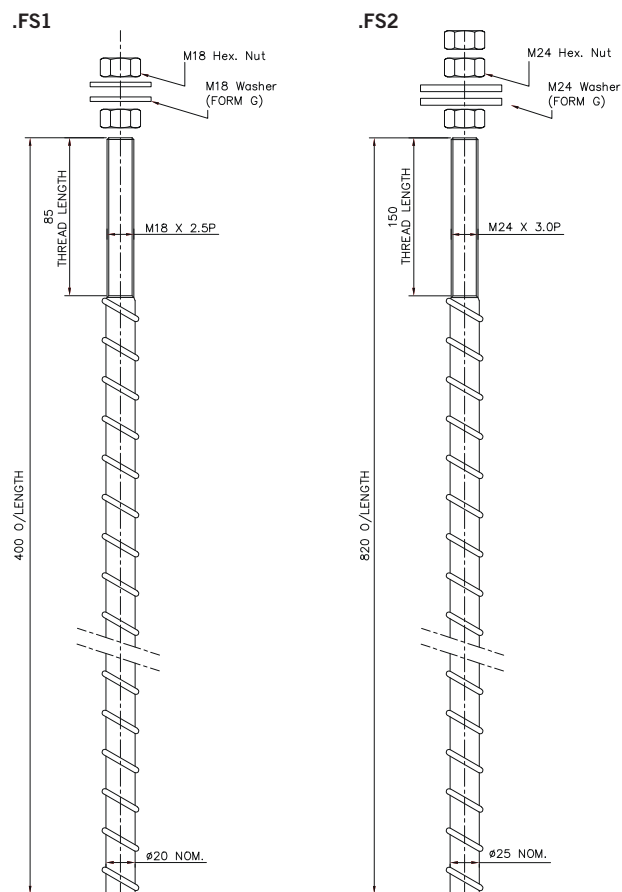
Note: For Terrain Category 2 locations LMZ, HVZ & HEZ

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

Note: The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm² and minimum UTS 550 N/mm².

HEL.FS1 M18 Bolts (FS1) x 400 mm long

HEL.FS2 M24 Bolts (FS2) x 820 mm long



› Datasheet - AMENITY - DSX1

DSX1.4.LA304.FWE.C9



Product image may not represent the final configuration stated above.

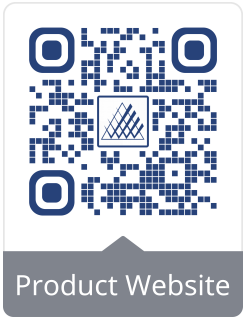


Product Specification **DSX1 Holophane Website**

DSX1.4.LA304.FWE.C9

Holophane DSX1 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual lenses (PMMA or silicone). Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).
This specific SKU includes:

- Series 4
- LED light engine producing c.30,000 lumen with a nominal 4000K colour temperature
- Forward throw extra light distribution
- Metallic Silver (RAL9006)



DSX1B.8.1A.LMZ.GV

Holophane tubular base compartment column for use with DSX1 Luminaires. 8 metre, Single head, For light & medium area wind zones (compliant to EN40).
• Bracket galvanised
• Direct embedment

Performance

Drive Current from Driver:	575mA
Power:	213W
Fitting Current:	0.95A
Fitting Inrush:	13A - 1.32ms
Number of Drivers:	1
1x Driver 1 Inrush:	13A - 1.32ms
Max Drivers per 16A Type B MCB:	7
Max Fittings per 16A Type B MCB:	7
Total Number of LEDs:	60
Minimum Dim Level:	9%
Optical Risk Group:	1
SDCM/MacAdam Ellipse:	5



12.2Kg₂

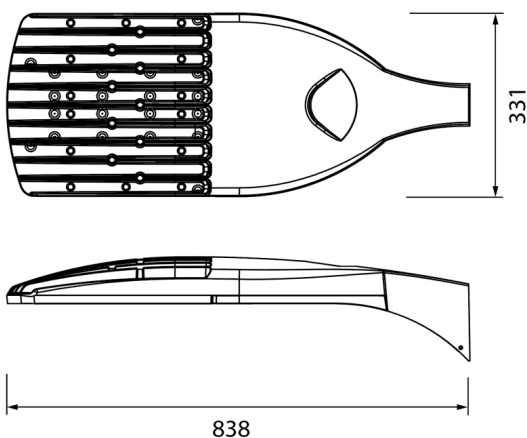


0.09M



[Installation Guide](#)

Dimensions



CIBSE TM66 - CEAM Rating

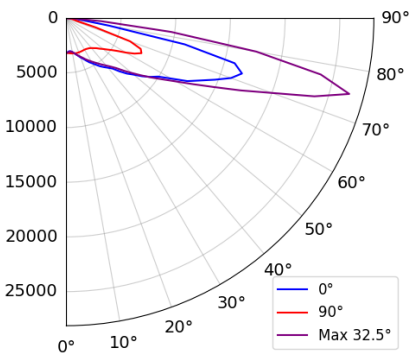


2.5 to 4.0	1.5 to 2.5	0.5 to 1.5	0 to 0.5
Excellent circularity	Definite/ substantial progress to circularity	Some circular economy functionality	Very poor circular economy performance

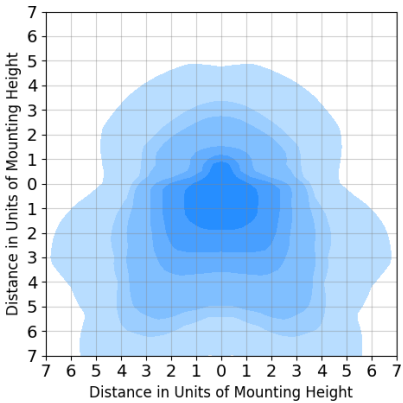
Assured Score

Photometry [↓ IES File](#)

Polar Plot

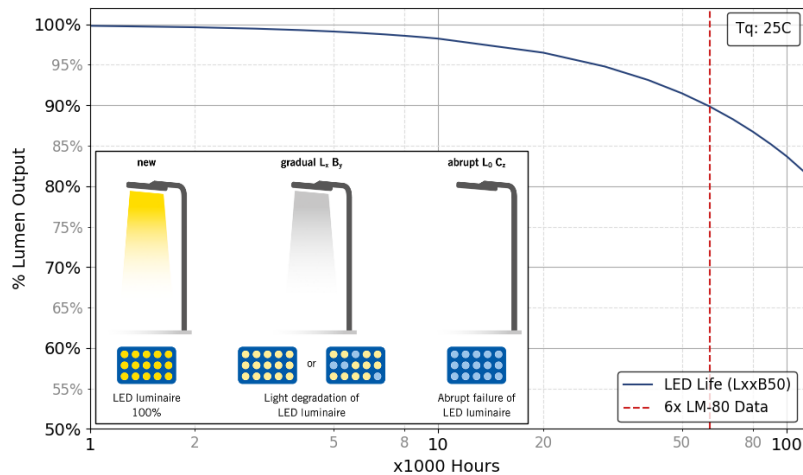


Isoilluminance Plot



Lumens:	29,720
CCT:	4000K
CRI:	70
IES File:	DSX1.4.LA304.FWE

LLMF Graph



For reference purposes, the graph extrapolates beyond the recommended 6x LM-80 data in TM-21, which our calculations are based on.

Colour Temperatures



Colours

Selected Colour

C9 Metallic Silver (RAL9006)

Custom Colour Available

RAL**** Customer specified colour

*Choosing a custom colour may increase the cost and lead time.

Standard Colours Available

C1 Smooth White (RAL9016)

C4 graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Black (RAL9005)

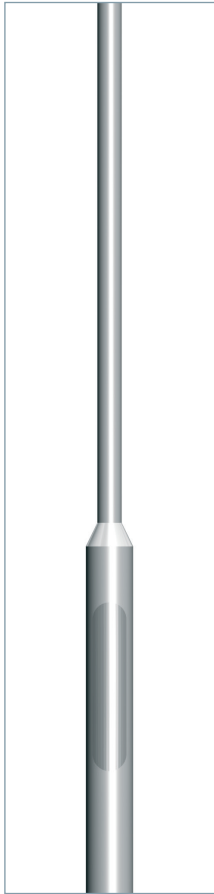
C9 Metallic Silver (RAL9006)

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

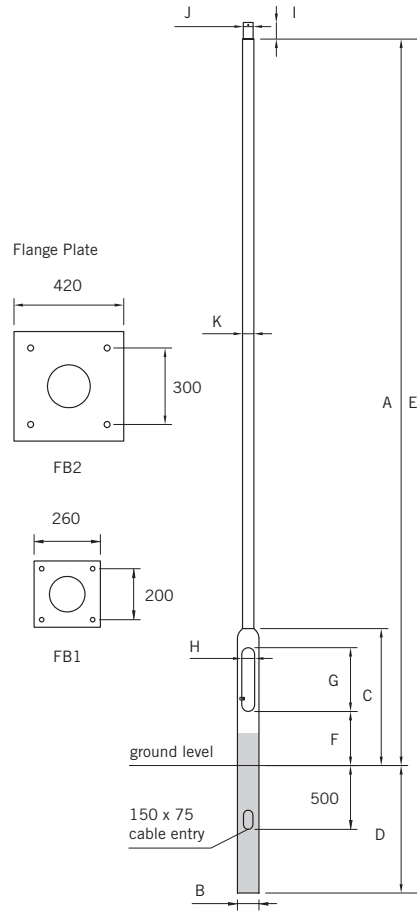
> Datasheet

DSX1B.8.1A.LMZ.GV



Holophane products that are suitable

CityMax
Denver Elite pole
D-Series
Factor
Factor small
V-Max



	Nominal Height	Base Diameter*	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length*	Spigot Diameter*	Shaft Diameter*	Weight kg*	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
2.5m standard duty	2500	140	1075	800	3300	400	500	100	-	-	76	27	2100
3m standard duty	3000	140	1075	800	3800	400	500	100	-	-	76	30	4666
3.5m standard duty	3500	140	1075	800	4300	400	500	100	-	-	76	32	2100
4m standard duty	4000	140	1075	800	4800	400	500	100	-	-	76	34	6484
4.5m standard duty	4500	140	1075	800	5300	400	500	100	-	-	76	37	5108
5m standard duty	5000	140	1075	800	5800	400	500	100	-	-	76	39	6149
5.5m standard duty	5500	140	1075	1000	6500	400	500	100	-	-	76	44	6003
6m standard duty	6000	140	1075	1000	7000	400	500	100	-	-	76	46	5999
6m heavy duty	5700	168	1200	1000	6700	400	600	115	130	76	89	71	10404
8m standard duty	7700	168	1200	1200	8900	400	600	115	130	76	89	89	10072
8m heavy duty	7700	168	1300	1200	9000	500	600	115	250	101	114	107	15699
8m extra heavy duty	7700	194	1300	1200	9000	500	600	115	250	127	140	136	18973
10m standard duty	9700	168	1300	1500	11200	500	600	115	250	101	114	150	18067
10m heavy duty	9700	194	1300	1500	11200	500	600	115	250	127	140	168	23193
10m extra heavy duty	9700	194	1300	1500	11200	500	600	115	250	152	168	220	28317
12m standard duty	11700	194	1300	1700	13400	500	600	115	250	127	140	213	26251
12m heavy duty	11700	194	1300	1700	13400	500	600	115	250	127	168	260	40390

* Exclusion TBC

2.5-6m std Poles	Flange Plate FB1	Bolts	M18 x 400
8-12m std Poles	Flange Plate FB2	Bolts	M24 x 820

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring the correct plate and Anchor Bolts are supplied.

Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.

stepped steel - CityMax Large only

post top

	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
6m	6000	140	1075	1000	7000	400	500	115	-	-	-	46	5999
8m	7700	168	1300	1200	9000	500	600	115	100	76	114	107	15699
10m	9700	168	1300	1500	11200	500	600	115	100	76	114	150	18067
12m	11700	194	1300	1700	13400	500	600	115	100	76	140	168	26251
15m	14700	194	1200	2000	17000	400	600	115	100	76	168	306	40300

twin head

	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
10m	9400	194	1200	1500	11100	400	600	115	200	152.4	168.3	208	39131
12m	11400	194	2500	1700	13300	1000	600	115	200	152.4	168.3	295	41585

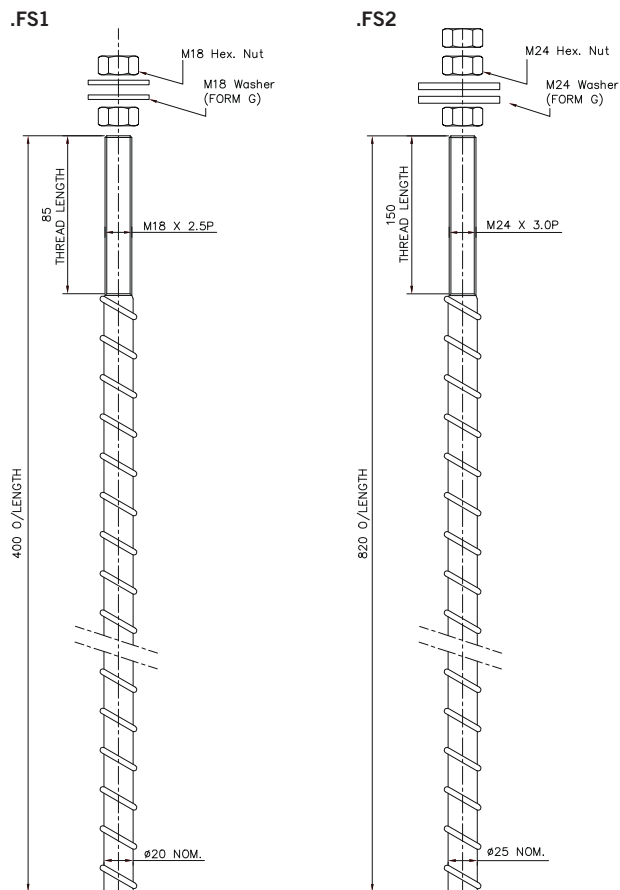
Note: For Terrain Category 2 locations LMZ, HVZ & HEZ

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

Note: The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm² and minimum UTS 550 N/mm².

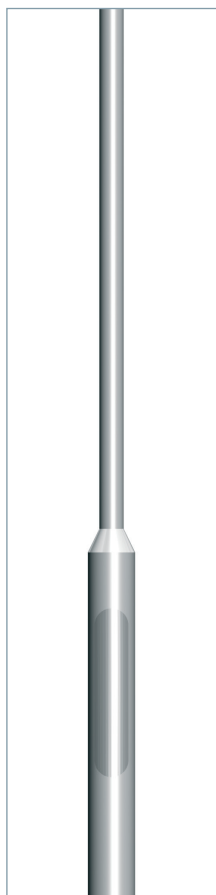
HEL.FS1 M18 Bolts (FS1) x 400 mm long

HEL.FS2 M24 Bolts (FS2) x 820 mm long



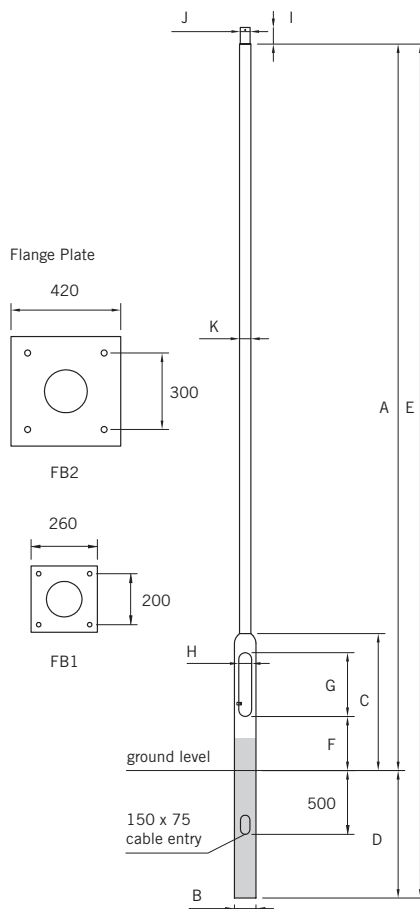
> Datasheet

DSX1B.8.2A.LMZ.GV



Holophane products that are suitable

CityMax
Denver Elite pole
D-Series
Factor
Factor small
V-Max



	Nominal Height	Base Diameter*	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length*	Spigot Diameter*	Shaft Diameter*	Weight kg*	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
2.5m standard duty	2500	140	1075	800	3300	400	500	100	-	-	76	27	2100
3m standard duty	3000	140	1075	800	3800	400	500	100	-	-	76	30	4666
3.5m standard duty	3500	140	1075	800	4300	400	500	100	-	-	76	32	2100
4m standard duty	4000	140	1075	800	4800	400	500	100	-	-	76	34	6484
4.5m standard duty	4500	140	1075	800	5300	400	500	100	-	-	76	37	5108
5m standard duty	5000	140	1075	800	5800	400	500	100	-	-	76	39	6149
5.5m standard duty	5500	140	1075	1000	6500	400	500	100	-	-	76	44	6003
6m standard duty	6000	140	1075	1000	7000	400	500	100	-	-	76	46	5999
6m heavy duty	5700	168	1200	1000	6700	400	600	115	130	76	89	71	10404
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8m heavy duty	7700	168	1300	1200	9000	500	600	115	250	101	114	107	15699
8m extra heavy duty	7700	194	1300	1200	9000	500	600	115	250	127	140	136	18973
10m standard duty	9700	168	1300	1500	11200	500	600	115	250	101	114	150	18067
10m heavy duty	9700	194	1300	1500	11200	500	600	115	250	127	140	168	23193
10m extra heavy duty	9700	194	1300	1500	11200	500	600	115	250	152	168	220	28317
12m standard duty	11700	194	1300	1700	13400	500	600	115	250	127	140	213	26251
12m heavy duty	11700	194	1300	1700	13400	500	600	115	250	127	168	260	40390

* Exclusion TBC

2.5-6m std Poles	Flange Plate FB1	Bolts	M18 x 400
8-12m std Poles	Flange Plate FB2	Bolts	M24 x 820

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring the correct plate and Anchor Bolts are supplied.

Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.

stepped steel - CityMax Large only

post top

	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
6m	6000	140	1075	1000	7000	400	500	115	-	-	-	46	5999
8m	7700	168	1300	1200	9000	500	600	115	100	76	114	107	15699
10m	9700	168	1300	1500	11200	500	600	115	100	76	114	150	18067
12m	11700	194	1300	1700	13400	500	600	115	100	76	140	168	26251
15m	14700	194	1200	2000	17000	400	600	115	100	76	168	306	40300

twin head

	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
10m	9400	194	1200	1500	11100	400	600	115	200	152.4	168.3	208	39131
12m	11400	194	2500	1700	13300	1000	600	115	200	152.4	168.3	295	41585

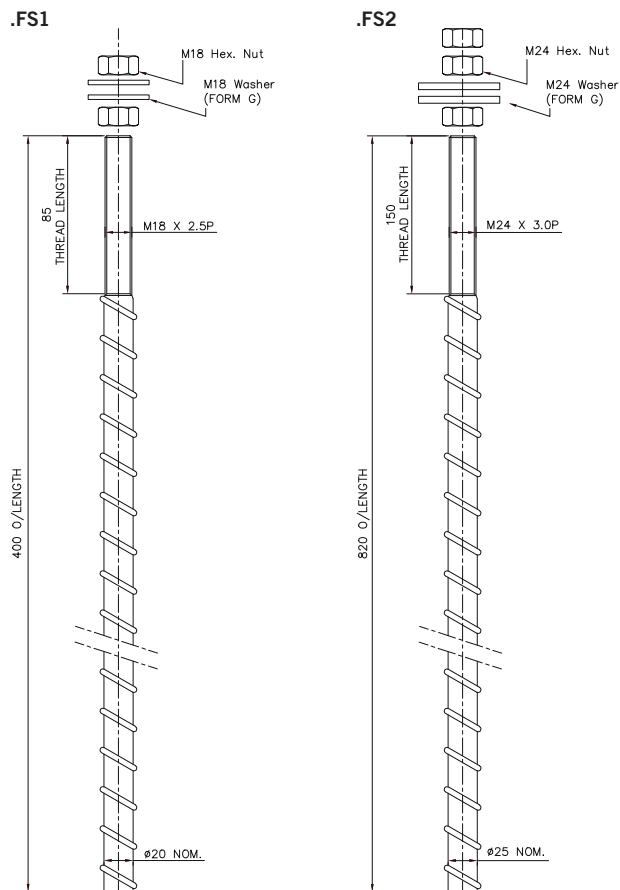
Note: For Terrain Category 2 locations LMZ, HVZ & HEZ

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

Note: The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm² and minimum UTS 550 N/mm².

HEL.FS1 M18 Bolts (FS1) x 400 mm long

HEL.FS2 M24 Bolts (FS2) x 820 mm long



> Datasheet - AMENITY - DSX0
DSX0.4.LA164.FWE.C9



Product image may not represent the final configuration stated above.

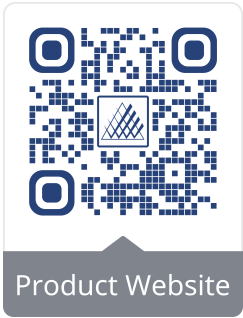


Product Specification **DSX0 Holophane Website**

DSX0.4.LA164.FWE.C9

Holophane DSX0 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual lenses (PMMA or silicone). Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).
This specific SKU includes:

- Series 4
- LED light engine producing c.16,000 lm with a nominal 4000°K colour temperature
- Forward throw extra light distribution
- Metallic Silver (RAL9006)



HAWA.AU.GV9

Holophane D-Series wall bracket .
• Bracket galvanised and painted metallic silver (RAL9006)
Please note that it is the responsibility of the installing contractor to confirm that the bracket offered within this quotation suits the application.

Performance

Drive Current from Driver:	932mA
Power:	114W
Fitting Current:	0.51A
Fitting Inrush:	53A - 0.3ms
Number of Drivers:	1
1x Driver 1 Inrush:	53A - 0.3ms
Max Drivers per 16A Type B MCB:	8
Max Fittings per 16A Type B MCB:	8
Total Number of LEDs:	40
Minimum Dim Level:	8%
Optical Risk Group:	1
SDCM/MacAdam Ellipse:	5



8Kg₂

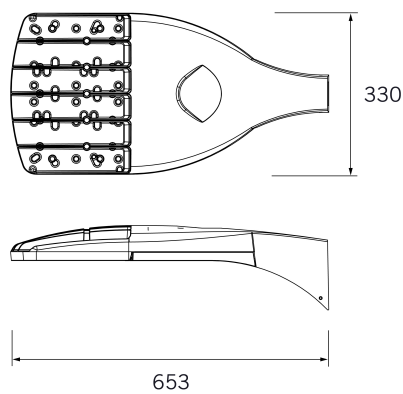


0.09M



[Installation Guide](#)

Dimensions



CIBSE TM66 - CEAM Rating

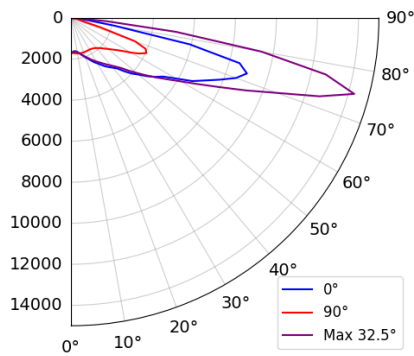


2.5 to 4.0	1.5 to 2.5	0.5 to 1.5	0 to 0.5
Excellent circularity	Definite/ substantial progress to circularity	Some circular economy functionality	Very poor circular economy performance

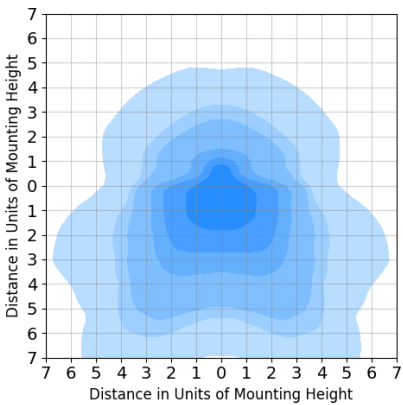
Assured Score

Photometry [↓ IES File](#)

Polar Plot

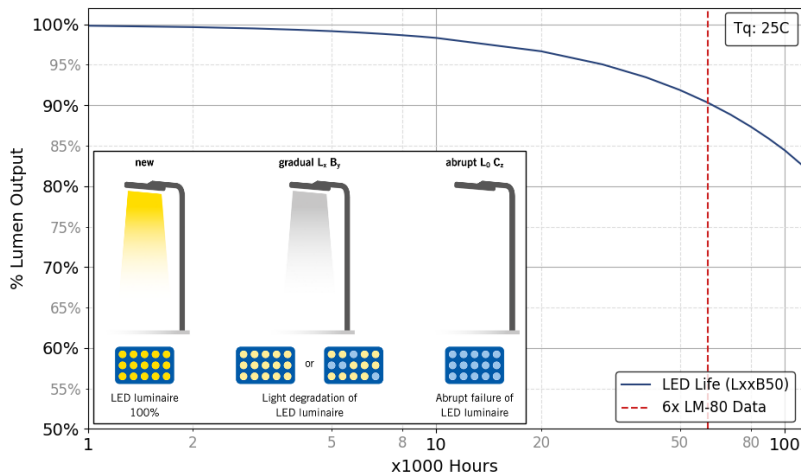


Isoilluminance Plot



Lumens:	15,851
CCT:	4000K
CRI:	70
IES File:	DSX0.4.LA164.FWE (TZ)

LLMF Graph



For reference purposes, the graph extrapolates beyond the recommended 6x LM-80 data in TM-21, which our calculations are based on.

Colour Temperatures



Colours

Selected Colour

C9 Metallic Silver (RAL9006)

Custom Colour Available

RAL**** Customer specified colour

*Choosing a custom colour may increase the cost and lead time.

Standard Colours Available

C1 Smooth White (RAL9016)

C4 graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Black (RAL9005)

C9 Metallic Silver (RAL9006)

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

> Datasheet - EXTERNAL - DWL

DWL.1.LA044.FW.C9.W025



Product image may not represent the final configuration stated above.



Product Specification

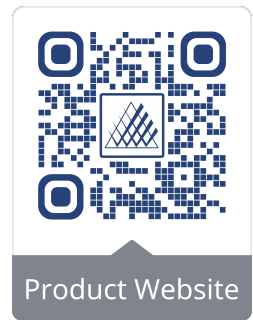


www.holophane.co.uk **DWL Holophane Website**

Holophane Denver iD: Wall consists of a 2-part body and a removable LED module manufactured from LM6 marine grade die-cast aluminum with integrated thermal management properties. The LED module optical arrangement consists of LEDs with individual PMMA optical lenses surrounded by a patented white Transition Zone to reduce perceived glare. This is sealed behind high-transparency 'hydrophilic' glass. Both luminaire body and LED module are sealed to IP65 and rated IK10. Drivers and LED are mounted separately from each other to promote low operating temperatures and long system life. Mounting of the luminaire is facilitated by mounting the back casting of luminaire to suitable surface. Cable entry and termination to the luminaire is via an 2 x IP65 M20 cable gland. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).

This specific SKU includes:

- Series 1
- LED light engine producing c.4,000 lm with a nominal 4000K colour temperature
- Forward throw light distribution
- Metallic Silver (RAL9006)
- 25W



Performance

Drive Current from Driver:	475mA
Power:	25W
Fitting Current:	0.11A
Power Factor:	0.99
Fitting Inrush:	15A - 0.295ms
Number of Drivers:	1
1x Driver 1 Inrush:	15A - 0.295ms
Max Drivers per 16A Type B MCB:	29
Max Fittings per 16A Type B MCB:	29
Total Number of LEDs:	16
Minimum Dim Level:	11%
THDi:	7
SVM:	0.07
Pst LM:	0.05
Optical Risk Group:	1
SDCM/MacAdam Ellipse:	5

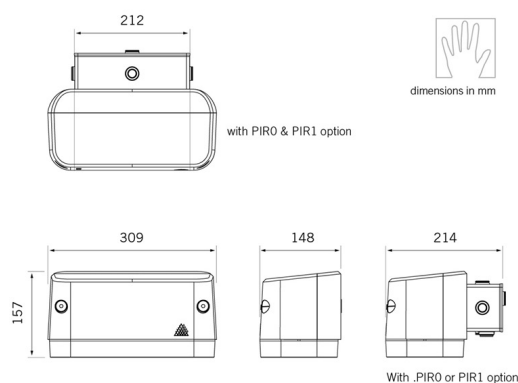


6.5Kg



[Installation Guide](#)

Dimensions



CIBSE TM66 - CEAM Rating



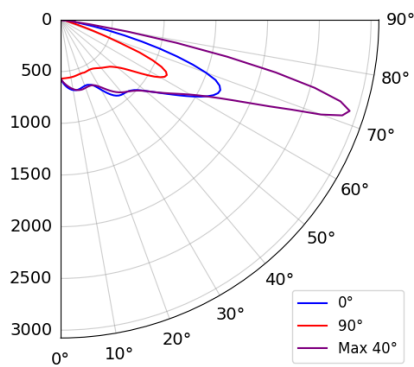
2.5 to 4.0	1.5 to 2.5	0.5 to 1.5	0 to 0.5
Excellent circularity	Definite/ substantial progress to circularity	Some circular economy functionality	Very poor circular economy performance

Assured Score

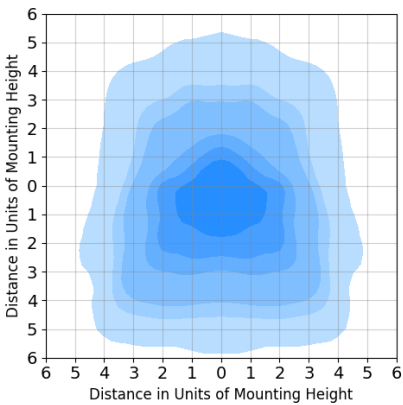
Photometry

↓ IES File

Polar Plot

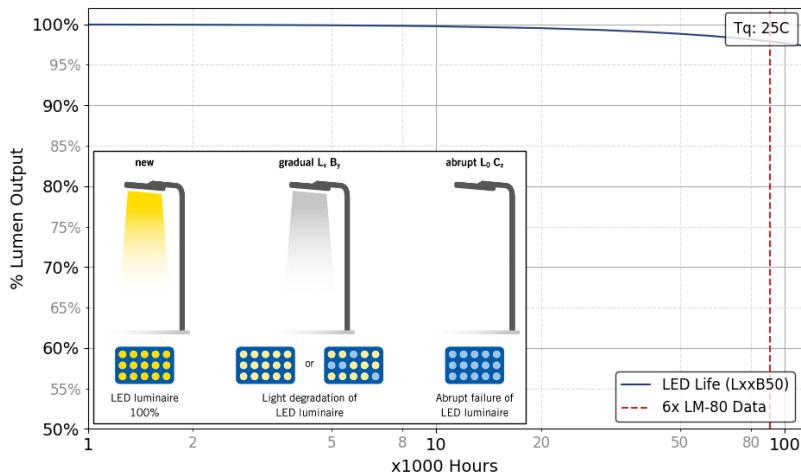


Isoilluminance Plot



Lumens:	3,823
CCT:	4000K
CRI:	70
IES File:	DWL.1.LA044.FW.W025
G-Class:	G*1 Imax @ 70°: 766 Imax @ 80°: 174 Imax @ 90°: 0

LLMF Graph



For reference purposes, the graph extrapolates beyond the recommended 6x LM-80 data in TM-21, which our calculations are based on.

Colour Temperatures



Colours

Selected Colour

C9 Metallic Silver (RAL9006)

Custom Colour Available

RAL**** Customer specified colour

*Choosing a custom colour may increase the cost and lead time.

Standard Colours Available

C1 Smooth White (RAL9016)

C4 graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Black (RAL9005)

C9 Metallic Silver (RAL9006)

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

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> Datasheet - AMENITY - WAP

WAP.1.LA084.HA.C9.CTR



Product image may not represent the final configuration stated above.



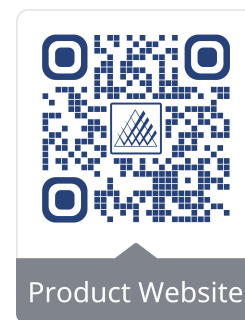
Product Specification

[WAP Holophane Website](#)

Holophane Wallpack LED bulkhead luminaire, manufactured from marine grade die-cast aluminium with integrated thermal management design. LED light engine modules are IP65 with individual PMMA lenses. Luminaire housing sealed to IP65 and suitable for wall mounting with rear, top, bottom and side via threaded 3/4 inch cable entry/exit points. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA)

This specific SKU includes:

- Series 1
- LED light engine producing c.8,000 lm with a nominal 4000°K colour temperature
- High beam asymmetric distribution
- Metallic Silver (RAL9006)
- Conduit Thread Reducer Adapter from 3/4 inch NPT to 20mm (2 supplied in box)



Performance

Drive Current from Driver:	975mA
Power:	63W
Fitting Current:	0.28A
Power Factor:	0.97
Fitting Inrush:	43A - 0.26ms
Number of Drivers:	1
1x Driver 1 Inrush:	43A - 0.26ms
Max Drivers per 16A Type B MCB:	10
Max Fittings per 16A Type B MCB:	10
Total Number of LEDs:	20
Minimum Dim Level:	10%
SDCM/MacAdam Ellipse:	7
Energy Class:	D

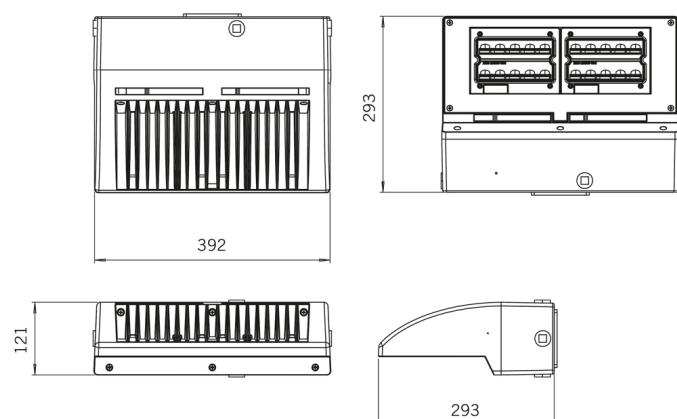


10Kg



[Installation Guide](#)

Dimensions



CIBSE TM66 - CEAM Rating

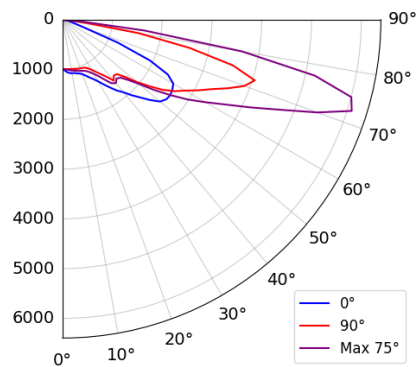
2.4*

2.5 to 4.0	1.5 to 2.5	0.5 to 1.5	0 to 0.5
Excellent circularity	Definite/ substantial progress to circularity	Some circular economy functionality	Very poor circular economy performance

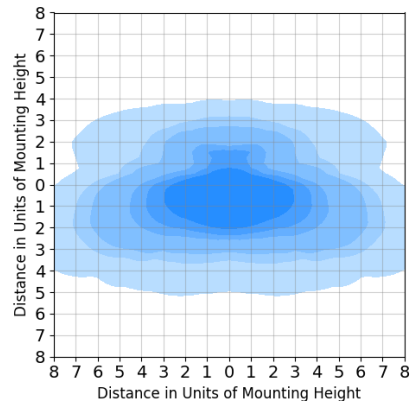
*Preliminary Score

Photometry IES File

Polar Plot

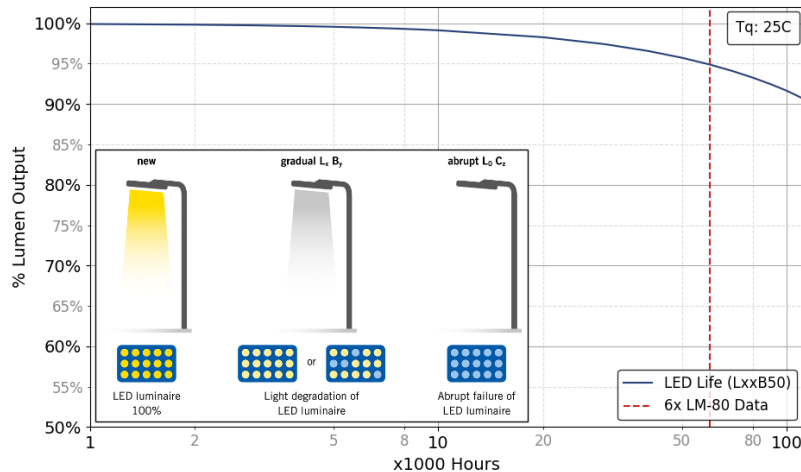


Isoilluminance Plot



Lumens:	7,359
CCT:	4000K
CRI:	70
IES File:	WAP.1.LA084.HA

LLMF Graph



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

Colour Temperatures



Colours

Selected Colour

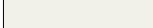
	C9	Metallic Silver (RAL9006)
--	-----------	---------------------------

Custom Colour Available

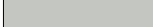
	RAL ****	Customer specified colour
--	-----------------	---------------------------

*Choosing a custom colour may increase the cost and lead time.

Standard Colours Available

	C1	Smooth White (RAL9016)
---	-----------	------------------------

	C4	graphite (RAL7011)
---	-----------	--------------------

	C6	Smooth Grey (RAL7035)
---	-----------	-----------------------

	C7	Black (RAL9005)
---	-----------	-----------------

	C9	Metallic Silver (RAL9006)
---	-----------	---------------------------

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

> Datasheet

TBHF.POL1.7026AR4030GL

7026

Indoor and outdoor led floodlight. Die cast aluminium body, coated with polyester anticorrosion powder, white, silver, anthracite or dark brown color. 4 mm thick tempered transparent glass, silicon gasket, electronic driver 220-240V 50/60Hz. Manufactured in accordance with EN / IEC 60598-1.

MAIN FEATURES

	Class I		CRI >80 CRI >90		EN / IEC 60598-1
	Ground		Mac Adams 3		RG0/RG1
	Wall		IK 08		L90-B10 >100.000 h
	Pole		IP 66		Ball Test DIN 18032-3
	Ceiling		10 kV Surge Protection		
			☐ Silver ☐ Matt white ☒ Anthracite ☐ Dark brown		
			100% regenerable		



CODING

Art.	+	Mod.	+ °K (CRI)	+ W. tot.	+ Options	○ Silver	Options ○ Bianco opaco	Options ● Antracite	Options ● Marrone scuro
7026		PR	22 = ambra (CRI >80)	30	GL	= on/off	BL = on/off	EL = on/off	CL = on/off
		CR	30 = 3000°K (CRI >80)	40	GD	= dali 2	BD = dali 2	LD = dali 2	CD = dali 2
		AR	40 = 4000°K (CRI >80)	50	GV	= shatterproof glass	BV = shatterproof glass	VI = shatterproof glass	CV = shatterproof glass
		RR	50 = 5000°K (CRI >80)	54	GA	= acid-etched glass	BA = acid-etched glass	VA = acid-etched glass	CA = acid-etched glass
			57 = 5700°K (CRI >80)	68					
			65 = 6500°K (CRI >80)	73					
			93 = 3000°K (CRI >90)						
			94 = 4000°K (CRI >90)						

Δ LUMEN

	°K	CRI	% Lm
22	ambra	> 80	-19.85%
30	3000	> 80	-5.28%
40	4000	> 80	standard
50	5000	> 80	+0.90%
57	5700	> 80	+1.00%
65	6500	> 80	0.00%
93	3000	> 90	-18.15%
94	4000	> 90	-14.33%

STANDARD EQUIPMENT



- 1000 mm long H07RN-F 3x1mm² neoprene cable.

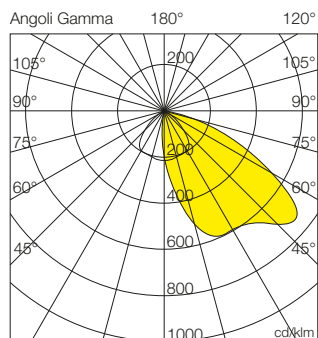


- 10kV Surge Protection.

- Cable gland with integrated anti-condensation valve.

POL1

mod.AR

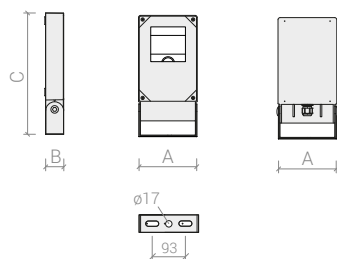


Optic

45° asymmetric beam matt satin aluminium reflector.

DIMENSIONS

	A (mm)	B (mm)	C (mm)	Kg	Flux
D1	155	45	325	2,6	0,051 m²



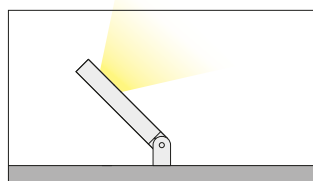
EXAMPLE OF ARTICLE CODING 4000K - CRI>80 - ON/OFF

PERFORMANCE

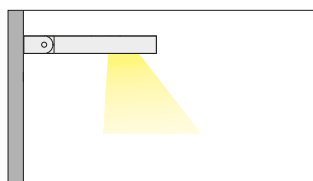
Code	W tot.	°K - CRI	Lm OUTPUT	Lm/W	dimension	Color
7026AR4030GL	30	4000K - CRI>80	3872	129	D1	○
7026AR4040GL	40	4000K - CRI>80	5727	143	D1	○
7026AR4050GL	50	4000K - CRI>80	7152	143	D1	○
7026AR4054GL	54	4000K - CRI>80	7614	141	D1	○
7026AR4068GL	68	4000K - CRI>80	8294	122	D1	○
7026AR4073GL	73	4000K - CRI>80	11052	151	D1	○

INSTALLATION

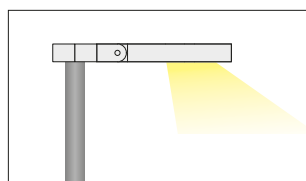
Ground installation



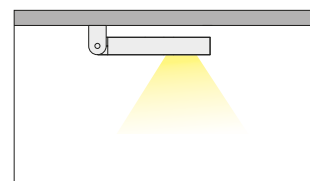
Wall installation



Pole installation



Ceiling installation



Ground installation

Wall installation

Top pole installation Ø60 mm

Ceiling installation

<https://holophane.co.uk>



Generated: 27 Jun 2025 15:20

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Bond Avenue, Milton Keynes
Buckinghamshire, MK11JG
United Kingdom

> Datasheet - EXTERNAL - DBD

DBD.1.LA014.DO.AY.H100.C9.W011



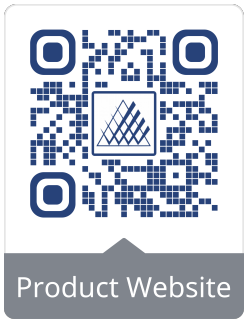
Product image may not represent the final configuration stated above.



Product Specification DBD Holophane Website

Holophane Denver iD: Bollard luminaire. Extruded marine grade aluminium body with die-cast aluminium top and base secured by stainless steel nuts and sealed to IP65. The optical arrangement consists of individual opitcal modules with a patented transition zone to minimise glare. Suitable for flange base mounting (bolts available as an accessory).
This specific SKU includes:

- Series 1
- LED light engine producing c.1,000 lm with a nominal 4000°K colour temperature
- Double sided
- Asymmetric light distribution
- 1 metre high
- Metallic Silver (RAL9006)
- 11W



Performance

Drive Current from Driver:	304mA
Power:	11W
Fitting Current:	0.05A
Power Factor:	0.96
Fitting Inrush:	15A - 0.295ms
Number of Drivers:	1
1x Driver 1 Inrush:	15A - 0.295ms
Max Drivers per 16A Type B MCB:	29
Max Fittings per 16A Type B MCB:	29
Total Number of LEDs:	10
Minimum Dim Level:	17%
THDi:	8.2
SVM:	0.07
Pst LM:	0.05
Optical Risk Group:	1
SDCM/MacAdam Ellipse:	5

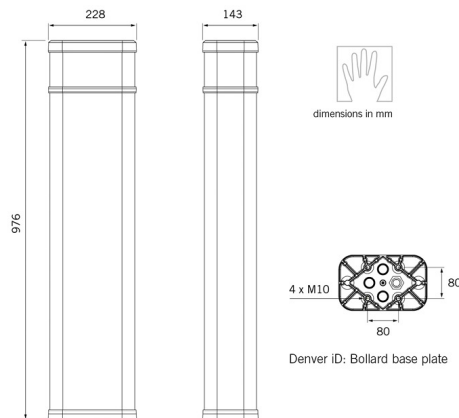


9.5Kg



[Installation Guide](#)

Dimensions



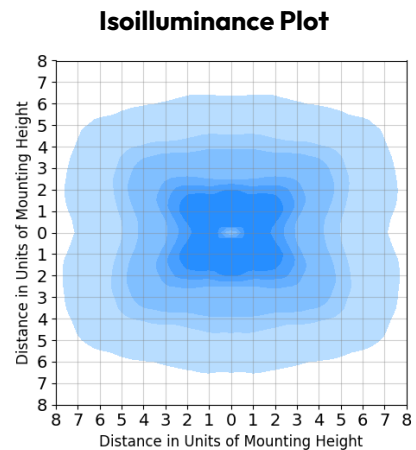
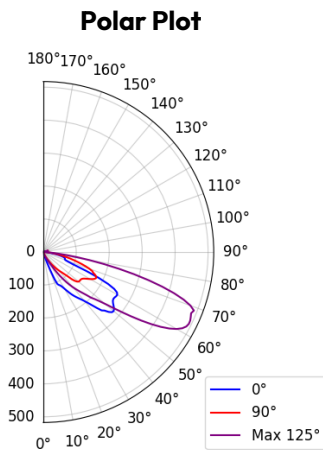
CIBSE TM66 - CEAM Rating

2.4*

2.5 to 4.0	1.5 to 2.5	0.5 to 1.5	0 to 0.5
Excellent circularity	Definite/ substantial progress to circularity	Some circular economy functionality	Very poor circular economy performance

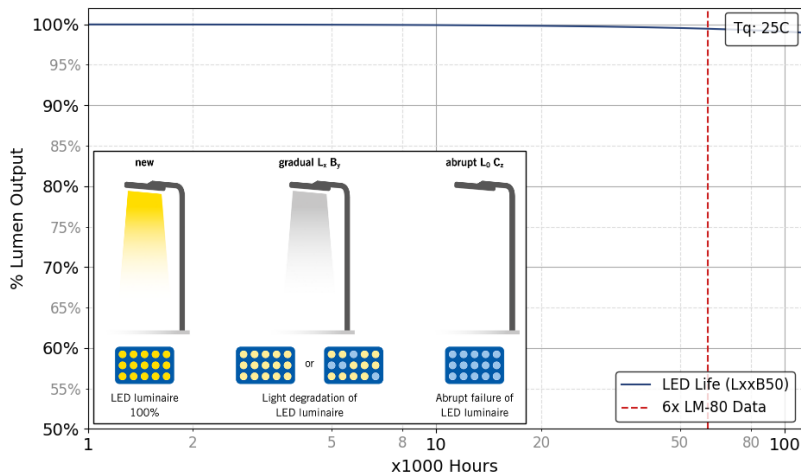
*Preliminary Score

Photometry [↓ IES File](#)



Lumens:	931
CCT:	4000K
CRI:	70
IES File:	DBD.1.LA014.DO.AY.W011
G-Class:	G*1 Imax @ 70°: 510 Imax @ 80°: 165 Imax @ 90°: 19

LLMF Graph



For reference purposes, the graph extrapolates beyond the recommended 6x LM-80 data in TM-21, which our calculations are based on.

Colour Temperatures



Colours

Selected Colour

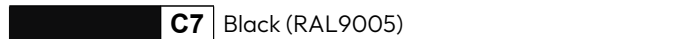


Custom Colour Available



*Choosing a custom colour may increase the cost and lead time.

Standard Colours Available



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