



Integra 61 DC3 – External Lighting Strategy

Presented to



Document Reference: 3537-18-220121 Integra
61 DC3 External Lighting Strategy_Rev B

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Revision Schedule

Revision	Description	Purpose of Issue	Document Reference	Date of Issue
-	External Lighting Strategy for Planning	Issue for Information	3537-18-220121 Integra 61 DC3 External Lighting Strategy	21/01/2022
A	External Lighting Strategy for Planning	Issue for Information	3537-18-220121 Integra 61 DC3 External Lighting Strategy_Rev A	26/01/2022
B	External Lighting Strategy for Planning	Issue for Information	3537-18-220121 Integra 61 DC3 External Lighting Strategy_Rev B	02/02/2022

ESP QMS DOC622 V2 MAR17

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1.0 INTRODUCTION

- 1.1 This External Lighting Strategy has been prepared by Engineering Services Partnership Limited on behalf of Integra 61 (Durham) Ltd in support of a full planning application for the proposed site located in Integra 61, Bowburn, DC3.
- 1.2 The purpose of this report is to provide an overview of the indicative proposed design for the development's external lighting arrangements. Within this report it will be demonstrated that negligible light pollution/nuisance glare to neighbouring properties land and highways will be present.
- 1.3 There is requirement to achieve a mean illuminance of 20 lux and maintain dark zones which have been highlighted by local authority from ecology specialist advice as detailed within document reference DM_18_01597 VOC-PARAMETERS PLAN 6 - DARK ZONES - 2265777 & DM_18_01597 VOC-PARAMETERS PLAN 7 - LIGHTING_LEVELS-2265784.
- 1.4 This report details how the lighting design shall comply with these requirements and the indicative design will be in full compliance with the above and the criteria set down in section 4.0 of this report.
- 1.5 Please also refer to ESP drawings:
- 3537-E-100 External Lighting Layout
 - 3537-E-101 External Lighting Lux Layout

2.0 SITE LOCATION

2.1 The site is located in Integra 61, Bowburn, Durham, DH65NP (nearest post code), adjacent to A688 main road. With the sites proximity to the A1 (M), it is ideal location for the proposed distribution centre.



Site location: Adjacent A6195

2.2 The local authority provided lighting parameters to ensure mean lighting value of 20 lux is not exceeded and to maintain dark zones which is indicated by green hatches in the image below:



Site location: 'Dark Zones' shown in green

3.0 PROPOSED DEVELOPMENT

3.1 The proposed development is an Integra 61 (Durham) Ltd site, located within 8.28 hectares. The site shall consist of 4 No. warehouses with offices, hub office, gatehouse, loading docks, HGV/car and motor cycle parking facilities, cycle storage, services yards and substation.



Proposed Site layout

4.0 EXTERNAL LIGHTING DESIGN PRINCIPLES

4.1 The external lighting for the development will be designed to satisfy the following requirements:

- Provide adequate illumination for safe vehicular access to the site parking and loading bay areas.
- Provide adequate illumination for safe pedestrian access to the site and buildings.
- Comply with CIBSE Guidance and British Standards documents to ensure adequate safety, amenity use and security while minimising energy use and light pollution.
- Comply with ecological requirements to ensure no light spill or illumination is present in identified restricted areas as indicated in document DM_18_01597 VOC-PARAMETERS PLAN 6 - DARK ZONES - 2265777
- Comply with lighting parameters to ensure mean illumination level across the site does not exceed 20 lux as indicated in DM_18_01597 VOC-PARAMETERS PLAN 7 - LIGHTING_LEVELS-2265784.
- Designed to focus lighting on the areas where light is required and avoid light nuisance, pollution and/or glare to neighbouring properties, highways and on to adjacent land.
- Provide emergency lighting at each escape door from the buildings to allow compliance with BS5266 and Building Regulations.
- All relevant BREEAM credits relating to external lighting shall be achieved

4.2 The following illumination levels have been set as targets in order to meet the above criteria;

Location	Lighting Levels (lux)
Estate Roads	20
Loading bays	50
Lorry Parking	20
Main Car Park	20

4.3 The above illumination levels are in line with industry standards found throughout the UK and in accordance with BS5489-1:2003.

4.4 For a comparison, please note the typical light levels experienced in rural and urban environments;

Description	Lighting Levels (Lux)
Moonlight clear night	1
Town centre car park lighting	20
Motor way lighting	20-25
Outside working area	50

5.0 METHOD OF CONTROL

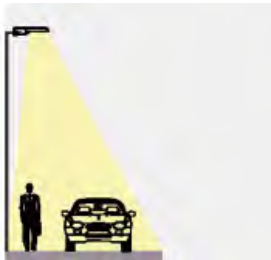
5.1 Dedicated external lighting distribution boards and associated controls (i.e. photocells, timers and contacts) will serve the proposed installation, which will operate from dusk to dawn. The external lighting installation will be arranged to optimise energy saving and efficient illumination.

5.2 Where practical and safe, illumination levels will be reduced during periods of site inactivity.

6.0 INDICATIVE LUMINAIRES

6.1 Unless otherwise indicated the external LED (light emitting diode) luminaires shall be mounted on 6m or 10m columns and building mounted respectively.

6.2 The light distribution of the external luminaires shall be a mixture of asymmetric, asymmetric or forward throw to suit the areas of illumination.



Asymmetric Distribution



Symmetric Distribution



Forward Throw Distribution

Light Distribution of indicative external light fittings

6.3 All external luminaires will be strategically placed to reduce/limit lighting pollution and glare outside the site boundary.

7.0 CALCULATED RESULTS

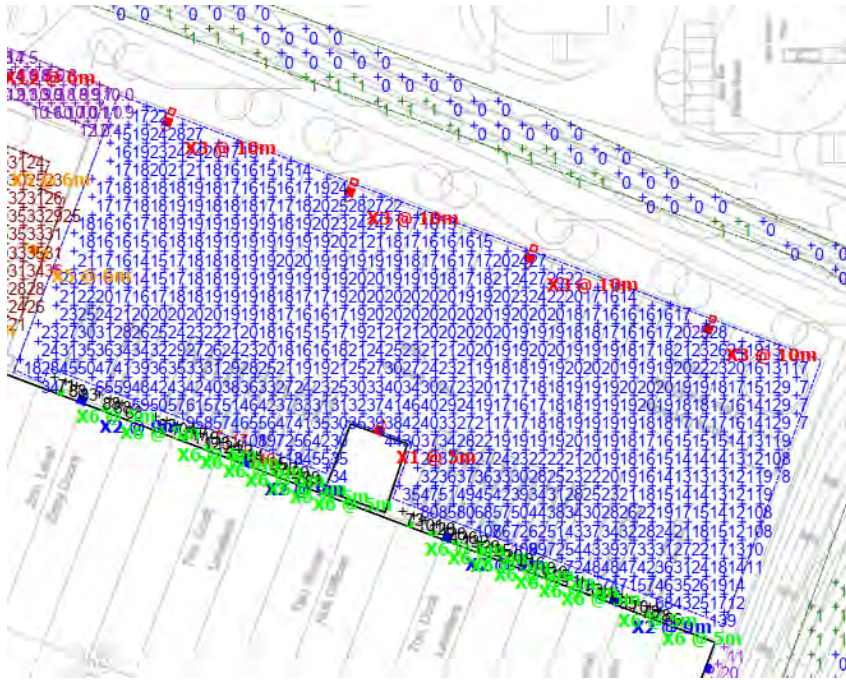
7.1 The calculated results are as detailed below. These calculations have been based on an indicative layout, design illumination levels and proposed luminaires detailed with section 8.0 of this report. The results to be read in conjunction with drawings No. 3364/E/100 & 3537/E/101.

Statistics				
Description	Symbol	Avg	Min	Min/Avg
Dark Zone	+	0 lux	0 lux	N/A
Darkzone 2	+	0 lux	0 lux	N/A
DC3a Car Park	+	20 lux	9 lux	0.45
DC3a Loading Doors	+	102 lux	51 lux	0.50
DC3a Yard	+	25 lux	7 lux	0.28
DC3b Car Park	+	21 lux	6 lux	0.29
DC3b Loading Doors	+	75 lux	31 lux	0.41
DC3b Yard	+	25 lux	8 lux	0.32
DC3c Car Park	+	19 lux	7 lux	0.37
DC3c Loading Doors	+	82 lux	30 lux	0.37
DC3c Yard Area	+	21 lux	5 lux	0.24
DC3d Car Park	+	22 lux	5 lux	0.23
DC3d Rear & Side of Building	+	11 lux	3 lux	0.27
DC3d Yard Area	+	21 lux	5 lux	0.24
Roadway to DC3 b,c & d	+	8.8 lux	1.7 lux	0.19
Roadway to DC3a	+	7.5 lux	1.4 lux	0.19
Walkway Around DC3a	+	11 lux	5 lux	0.45
Walkway Between DC3 b&c	+	7 lux	4 lux	0.57
Walkway to side of DC3b	+	15 lux	8 lux	0.53
Walkway to side of DC3c	+	12 lux	6 lux	0.50

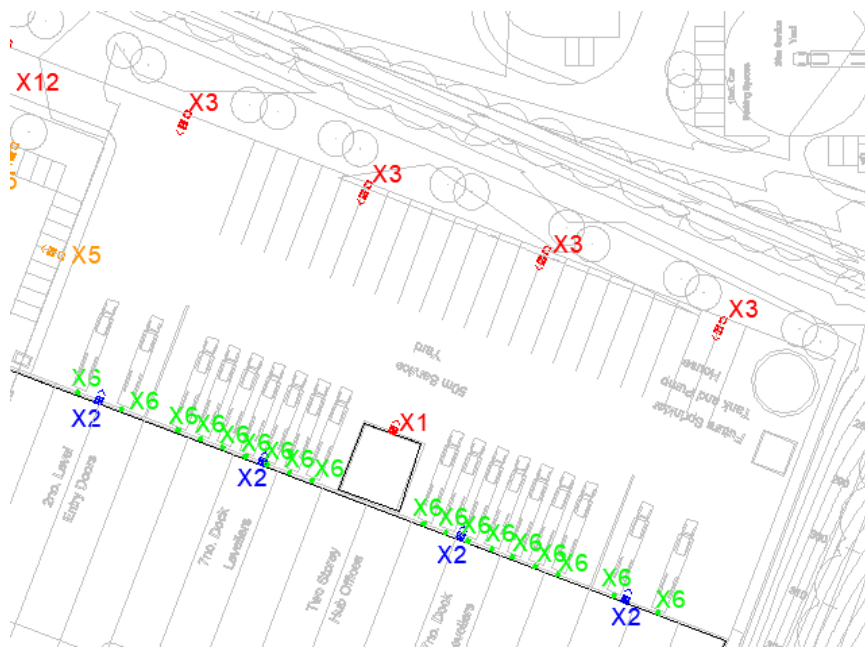
Resultant Lighting Levels by Area



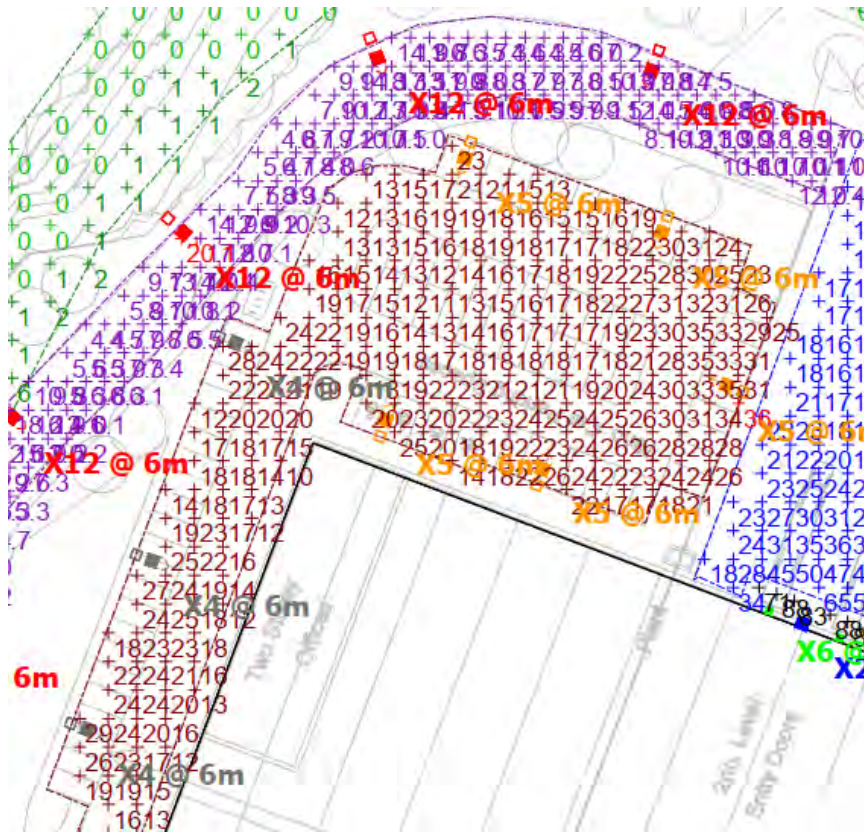
Site Layout – Lux Levels



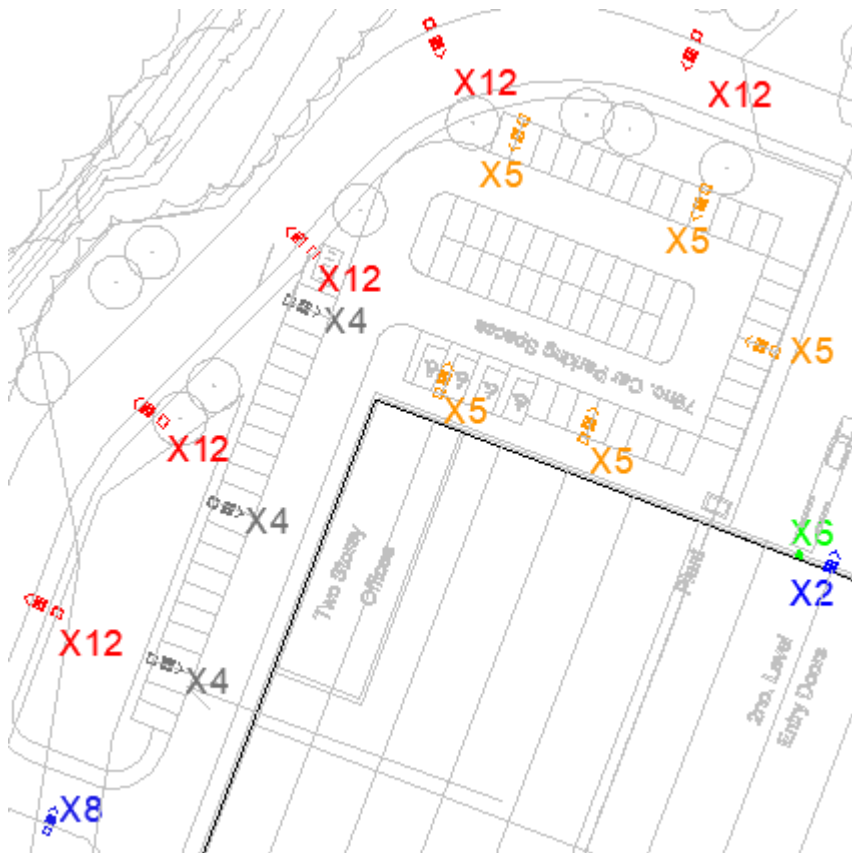
DC3a Loading Area & Service Yard – Lux Levels



DC3a Loading Area & Service Yard – Lighting Layout



DC3a Car Park – Lux Levels



DC3a Car Park – Lighting Layout



DC3b Loading Area, Service Yard & Car Park – Lux Levels

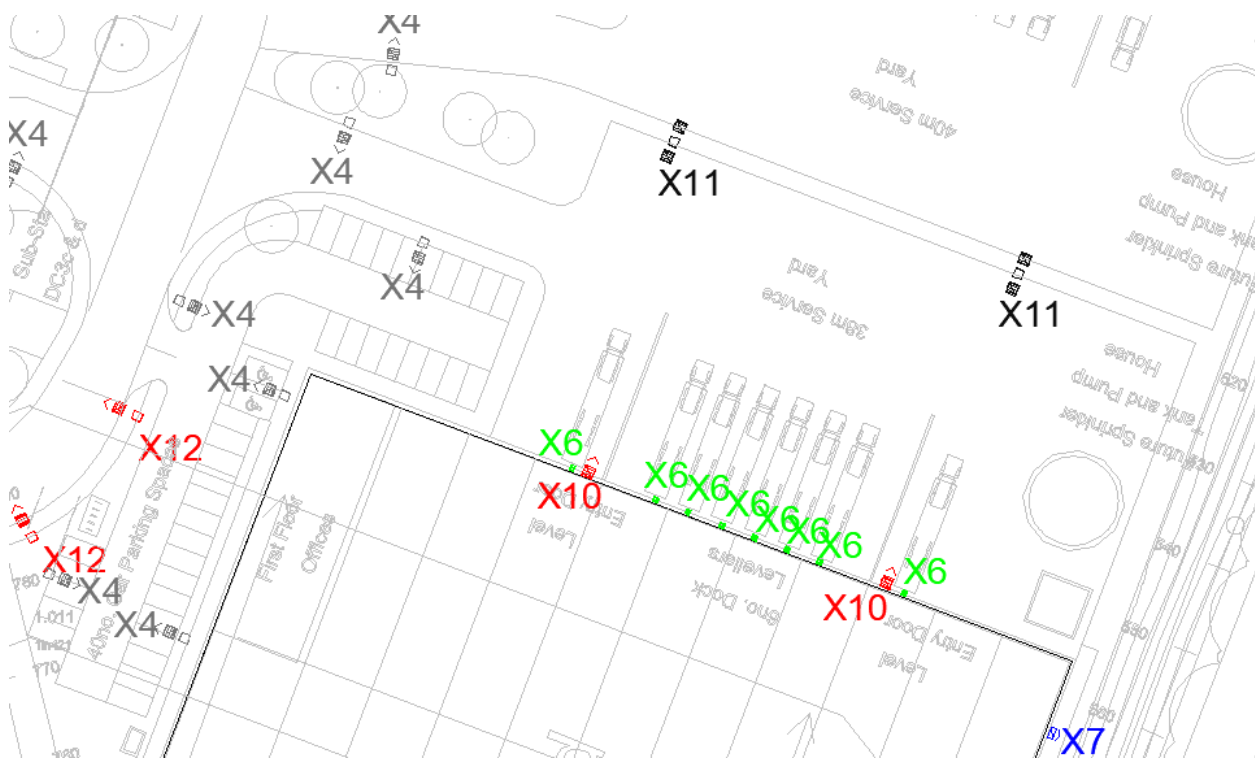


DC3b Loading Area, Service Yard & Car Park – Lighting Layout

DC3c Loading Area, Service Yard & Car Park – Lighting Layouts



DC3d Loading Area, Service Yard & Car Park – Lux Levels



DC3d Loading Area, Service Yard & Car Park – Lighting Layouts

7.2 The BREEAM credits available for external lighting have been achieved as highlighted in the table below to be used as part of the overall project BREEAM Assessment. This relates to minimum lighting efficiency, provision of suitable control and no upward light pollution.

BREEAM Calculator

Job Name and Number :										Integra Bowburn DC3 a, b, c & d										
BREEAM information can be found at; http://www.breeam.org/page.jsp?id=301																				
Fitting		Quantity		Lumens		LOR		Circuit		Luminaire		Automatic Controls?		BREEAM		Lumens		Upward fitting		
														ACHIEVED!						
Green = Insert Correct Information																				
X1	DSX0.1.LA103FW	1	9007	100%	81	9007	111	YES	YES	9007	0.0%	0								
X2	DSX1.2.LA303.FW	6	28154	100%	286	28154	98	YES	YES	168924	0.0%	0								
X3	DSX1.2.LA303.FW	4	28154	100%	286	28154	98	YES	YES	112616	0.0%	0								
X4	DSX0.1.LA083.AY	19	7257	100%	64	7257	113	YES	YES	137883	0.0%	0								
X5	DSX0.1.LA083.FW	5	7471	100%	64	7471	117	YES	YES	37355	0.0%	0								
X6	POLAR 1 7026.AR.GL	40	4000	100%	30	4000	133	YES	YES	160000	0.0%	0								
X7	DWL.1.LA013.NR	44	854	100%	7	854	122	YES	YES	37576	0.0%	0								
X8	DSX0.1.LA053.AY	1	4551	100%	37	4551	123	YES	YES	4551	0.0%	0								
X9	DSX1.2.LA303.FW	1	28154	100%	286	28154	98	YES	YES	28154	0.0%	0								
X10	DSX1.2.LA163.FW	4	15821	100%	131	15821	121	YES	YES	63284	0.0%	0								
X11	DSX1.2.LA163.FW	4	15821	100%	131	15821	121	YES	YES	63284	0.0%	0								
X12	VMX.2.LA033.V1.L2L3.W018	11	2814	100%	18	2814	156	YES	YES	30954	0.0%	0								
Total Circuit Watts of Installation										7554		Total LLM/Tcw		113.0		Average Initial luminous efficacy above 70LLM/Tcw				
Total Lumens out of fittings:										853588		Total upward Lumens (above fittings)		0						
"Automatic controls" based on Site controls or remote photocell?										YES										
Installation ULR :										0.00%										
Installation ULR = (Total Upward Lumens / Total Lumens out of fittings)																				

* Permissible ULR % (for each environmental Zone): E0 and E1 -- 0% E2 up to 2.5% E3 up to 5% E4 up to 15%

The above ULR means that scheme complies to environmental zone(s):

E0 & E1 & E2 & E3 & E4

Note: this Environmental Zone level is based solely on the ULR.

Site: BREEAM Calculator

8.0 LUMINAIRE DETAILS

8.1 The selected LED luminaires listed below have a power consumption range of between 6.5W to 286W, with a rated operational life per LED module of 50,000+ hours. The D-series luminaires have a die cast aluminium housing acts as its primary heat sink, with longitudinal fins employed to dissipate the heat away from the key LED components and driver to extend the life of the luminaire. The luminaires are available with DALI (Digital Addressable Lighting Interface) compatible driver and photocell options.

schedule						
Symbol	Label	Quantity	Catalog Number	Description	Lumens Per Lamp	Wattage
	X1	1	DSX0.1.LA103.FW	D-Series 0 Area luminaire Building mount at 5m	8979	81
	X2	6	DSX1.2.LA303.FW	D-Series 1 Luminaire Building mount at 9m	28154	286
	X3	4	DSX1.2.LA303.FW.BLS	D-Series 1 Luminaire with Back light shield Column mount t 10m	21982	286
	X4	19	DSX0.1.LA083.AY	D-Series 0 Area luminaire Column mount at 6m	7242	64
	X5	5	DSX0.1.LA083.FW	D-Series 0 Area luminaire Column mount at 6m	7448	64
	X6	40	7026AR4030GL	7026 - POLAR 1 30W MOD. AR 4000K Building mount at 5m	3415	30
	X7	44	DWL.1.LA013.NR.W007	Denver iD Wall Building mount at 3m	854	6.5
	X8	1	DSX0.1.LA053.AY	D-Series 0 Area luminaire Column mount at 6m	4541	37
	X9	1	DSX1.2.LA303.FW	D-Series 1 Luminaire Column mount at 10m	28154	286
	X10	4	DSX1.2.LA163.FW	D-Series 1 Luminaire Building mount at 9m	15821	131
	X11	2	DSX1.2.LA163.FW	D-Series 1 Luminaire Column mount at 10m	15821	262
	X12	11	VMX.2.LA033.V1.L2L3.W01 8	V-Max Streetlighting luminaire with a Type II - Short distribution Column mount at 6m	2618	18

Luminaire Schedule

8.2 Manufacturer’s data sheets of all proposed luminaires are provided within Appendix A of this report.

9.0 SUMMARY

- 9.1 The calculated illumination levels detailed in this report and drawings No. 3537/E/100 & 3537/E/101 show that the design proposed for the development will meet the recognised appropriate UK criteria set down in section 4 of this report and complying with ecological requirement to maintain dark zones.
- 9.2 Dark zones have been identified by the local authority in line with ecology specialist recommendation and the proposed lighting design has ensured that no light spill will be present in identified areas (refer to drawing DM_18_01597 VOC-PARAMETERS PLAN 6 - DARK ZONES - 2265777).
- 9.3 Lighting parameters have been identified by the local authority and the proposed lighting design has ensured that the mean lighting levels will not exceed 20 lux (refer to drawing DM_18_01597 VOC-PARAMETERS PLAN 7 - LIGHTING_LEVELS-2265784).

APPENDIX A – LIGHTING DATA SHEETS

> DATASHEET - AMENITY - DSX0

DSX0.1.LA103.FW.C6.LRD



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

 www.holophane.co.uk **DSXO HOLOPHANE WEBSITE**

DSXO.1.LA103.FW.C6.LRD

Holophane D-Series O 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 PMMA lenses. 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 1
- LED light engine producing c.10,000 lm with a nominal 3000°K colour temperature
- Forward throw light distribution
- Smooth Grey (RAL7035)
- DALI enabled (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party control systems)



HAWA.AU.GV6

Holophane D-Series wall bracket .

- Bracket galvanised and painted grey (RAL7035)

Please note that it is the responsibility of the installing contractor to confirm that the bracket offered within this quotation suits the application.

PERFORMANCE

Lumens:	9,007
CCT:	3000K
CRI:	70
Power:	81W
Fitting Current:	0.36A
Fitting Inrush:	43A - 0.26ms
Number of Drivers:	1
1x Driver 1 Inrush:	43A - 0.26ms

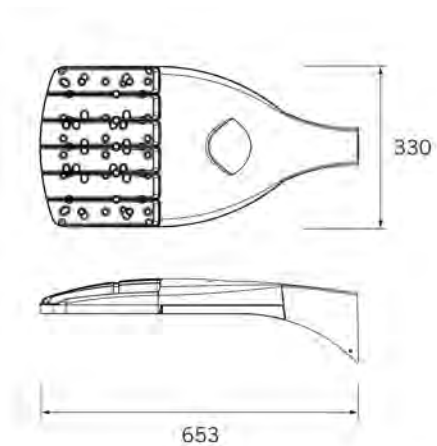


8Kg



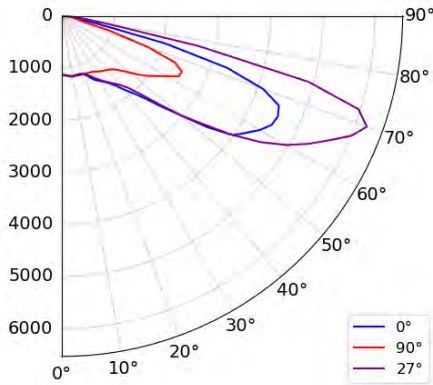
[Installation Guide](#)

DIMENSIONS

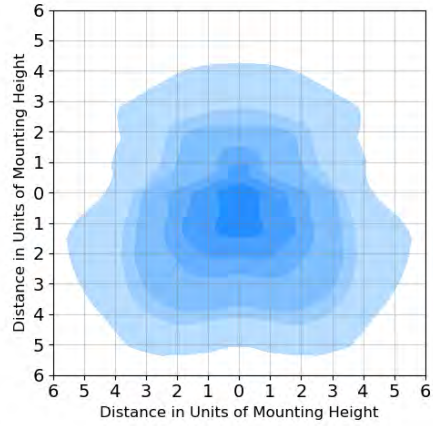


PHOTOMETRY [↓ IES FILE](#)

Polar Plot

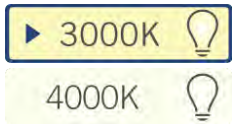


Isoilluminance Plot



IES File: DSX0.1.LA103.FW

COLOUR TEMPERATURES

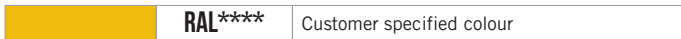


COLOURS

Selected Colour



Custom Colour Available



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

Standard Colours Available



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 - DSX1

DSX1.2.LA303.FW.C6.D2



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

 [DSX1 HOLOPHANE WEBSITE](#)

DSX1.2.LA303.FW.C6.D2

Holophane D-Series 1 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 PMMA lenses. 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 2
- LED light engine producing c.30,000 lumen with a nominal 3000K colour temperature, 70CRI
- Forward throw light distribution
- Smooth Grey (RAL7035)
- DALI HF electronic control gear (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations))



HAWA.AU.GV6

Holophane D-Series wall bracket .

- Bracket galvanised and painted grey (RAL7035)

Please note that it is the responsibility of the installing contractor to confirm that the bracket offered within this quotation suits the application.

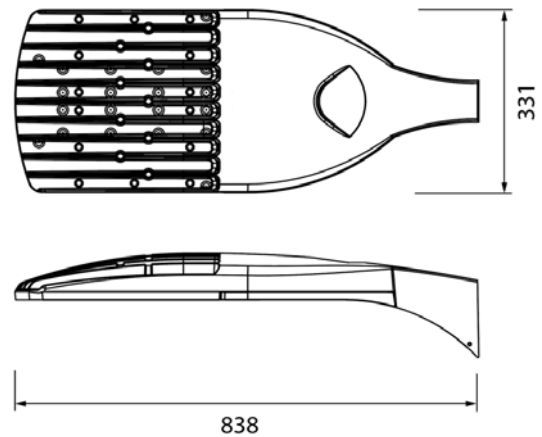
PERFORMANCE

Drive Current from Driver:	700mA
Lumens:	28,154
CCT:	3000K
CRI:	70
Power:	286W
Fitting Current:	1.28A
Fitting Inrush:	13A - 1.32ms
Number of Drivers:	1
1x Driver 1 Inrush:	13A - 1.32ms

 12.2Kg

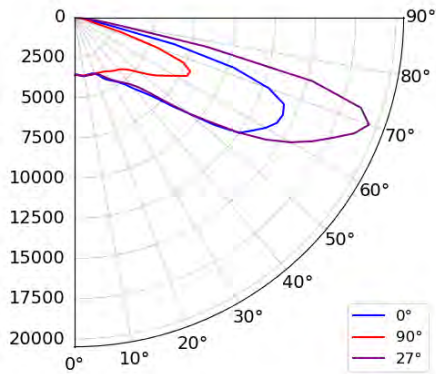
 [Installation Guide](#)

DIMENSIONS

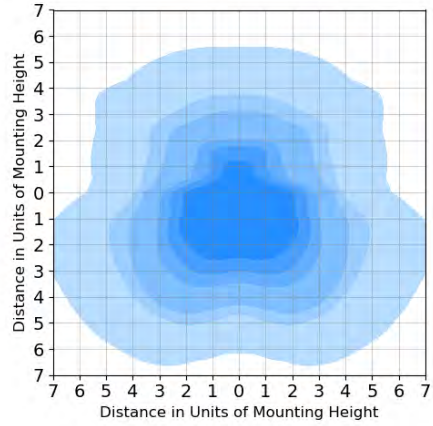


PHOTOMETRY [↓ IES FILE](#)

Polar Plot



Isoilluminance Plot



IES File: DSX1.2.LA303.FW

COLOUR TEMPERATURES

▶ 3000K

4000K

COLOURS

Selected Colour

C6 Smooth Grey (RAL7035)

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 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured 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.

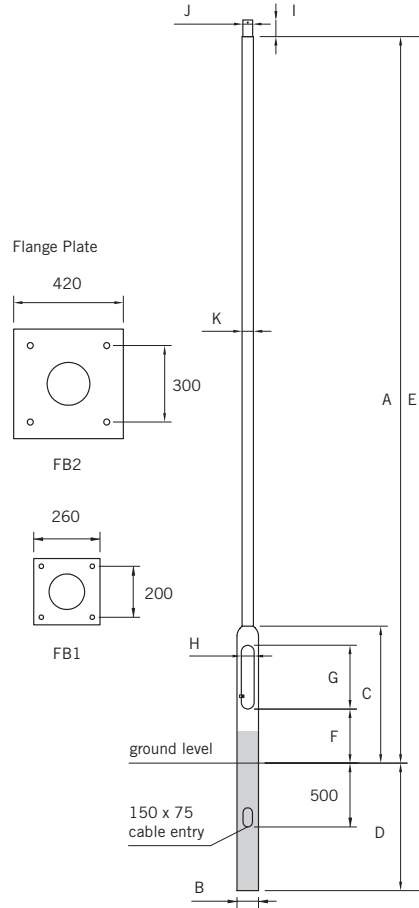
> DATASHEET

DSX1B.10.1A.HVZ.GV6



Holophane products that are suitable

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



description	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
	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 and design.

Graphical location info@holophane.co.uk

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Bond Avenue, Milton Keynes
Buckinghamshire MK1 1JG
United Kingdom



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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

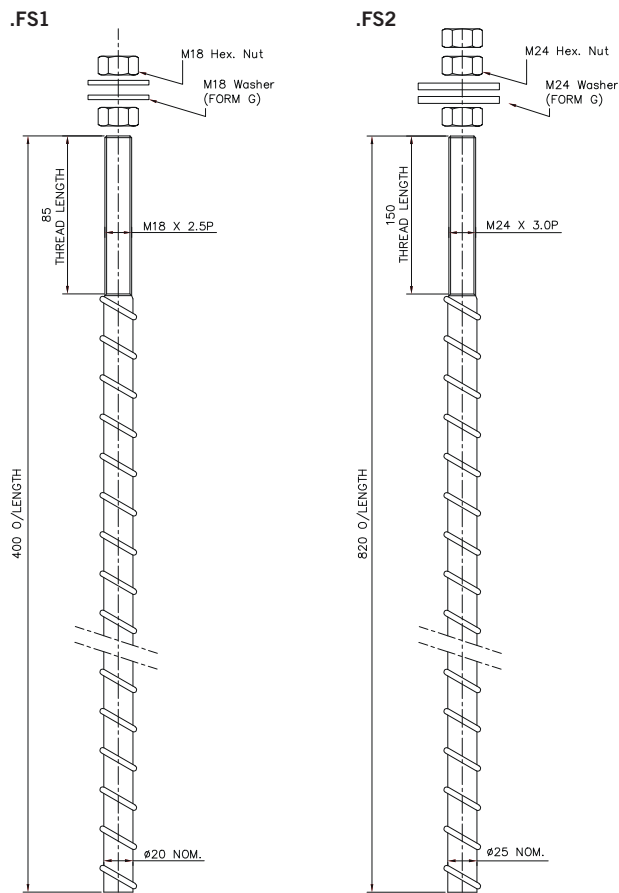
	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
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

DSX0.1.LA083.AY.C6.LRD



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION



DSXO HOLOPHANE WEBSITE

DSX0.1.LA083.AY.C6.LRD

Holophane D-Series 0 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 PMMA lenses. 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 1
- LED light engine producing c.8,000 lm with a nominal 3000°K colour temperature
- Asymmetric light distribution
- Smooth Grey (RAL7035)
- DALI enabled (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party control systems)



DSX1B.6.1A.HVZ.GV6

Holophane tubular base compartment column for use with DSX1 Luminaires. 6 metre, Single head, For heavy area wind zones (compliant to EN40).

- Bracket galvanised and painted grey (RAL7035)
- Direct embedment

PERFORMANCE

Lumens:	7,257
CCT:	3000K
CRI:	70
Power:	64W
Fitting Current:	0.29A
Fitting Inrush:	43A - 0.26ms
Number of Drivers:	1
1x Driver 1 Inrush:	43A - 0.26ms

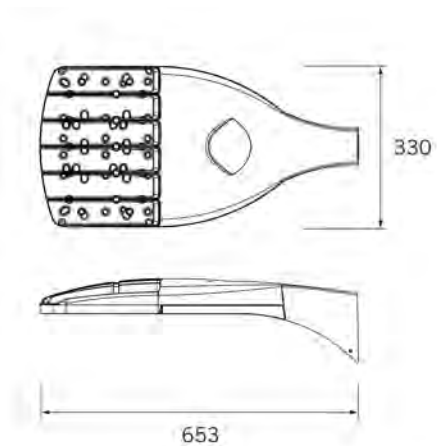


8Kg



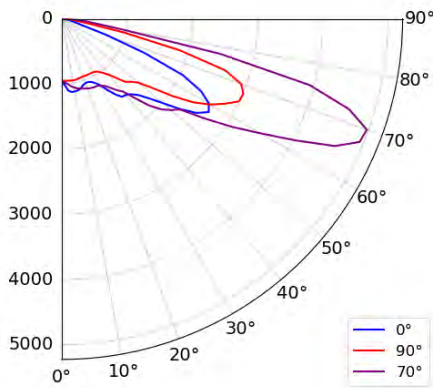
[Installation Guide](#)

DIMENSIONS

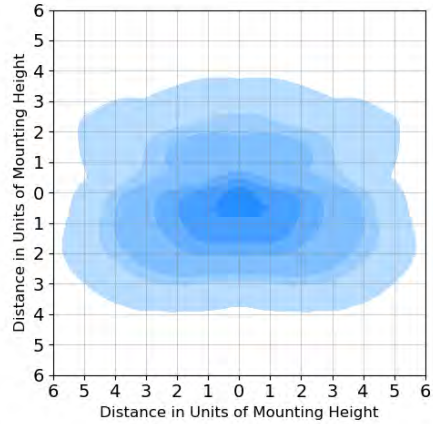


PHOTOMETRY [↓ IES FILE](#)

Polar Plot



Isoilluminance Plot



IES File: DSX0.1.LA083.AY

COLOUR TEMPERATURES

▶ 3000K

4000K

COLOURS

Selected Colour

C6 Smooth Grey (RAL7035)

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 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured 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.

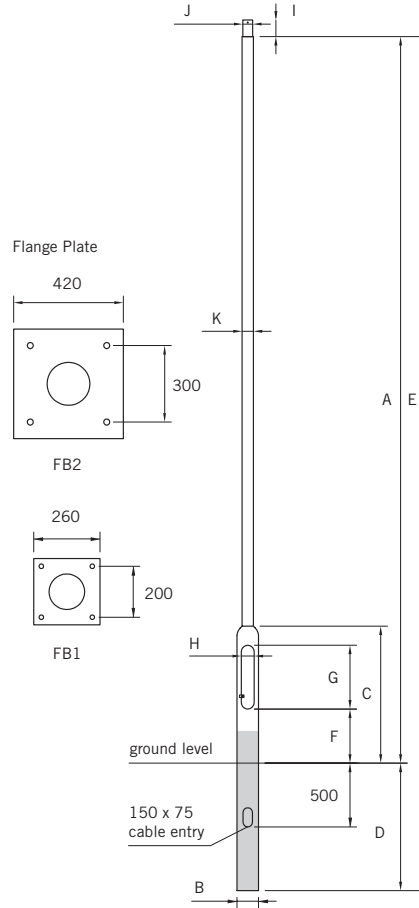
> DATASHEET

DSX1B.6.1A.HVZ.GV6



Holophane products that are suitable

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



description	Nominal Height A	Base Diameter* B	Base Height C	Planting Depth D	Overall Length E	Door to Ground F	Door Opening Length G	Door Opening Width H	Spigot Length* I	Spigot Diameter* J	Shaft Diameter* K	Weight kg*	Bending Moment (ULS) Nm
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.

<https://www.holophane.co.uk> T +44 (0)1908 363 789 F Intl +44 (0)1908 363 789
Column type to be confirmed at time of order as this is based on luminaire weight and design
graphical location. E info@holophane.co.uk

Holophane Europe Limited
Bond Avenue, Milton Keynes
Buckinghamshire MK1 1JG
United Kingdom



F +44 (0)1908 367 618

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

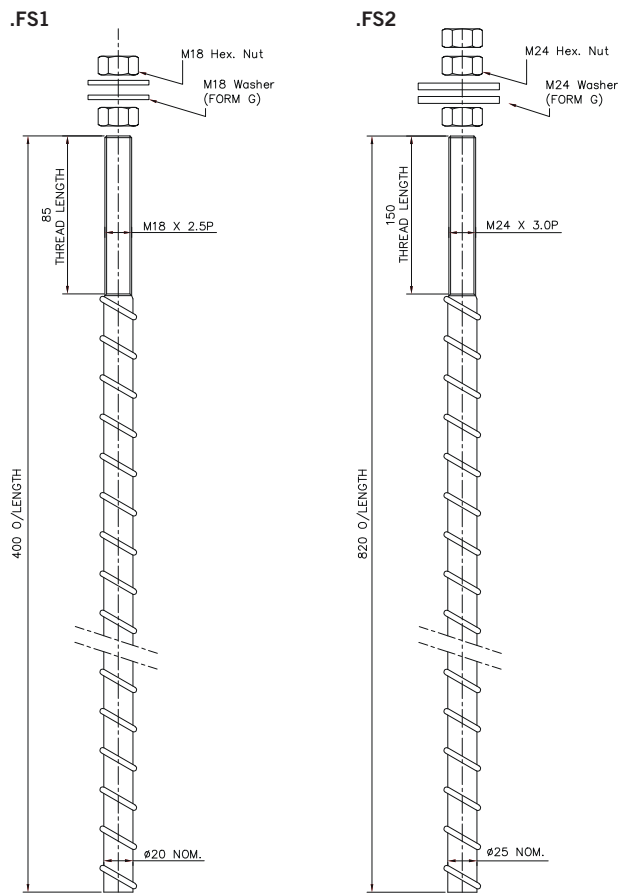
	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
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

DSX0.1.LA083.FW.C6.LRD



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION



DSXO HOLOPHANE WEBSITE

DSX0.1.LA083.FW.C6.LRD

Holophane D-Series 0 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 PMMA lenses. 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 1
- LED light engine producing c.8,000 lm with a nominal 3000°K colour temperature
- Forward throw light distribution
- Smooth Grey (RAL7035)
- DALI enabled (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party control systems)



DSX1B.6.1A.HVZ.GV6

Holophane tubular base compartment column for use with DSX1 Luminaires. 6 metre, Single head, For heavy area wind zones (compliant to EN40).

- Bracket galvanised and painted grey (RAL7035)
- Direct embedment

PERFORMANCE

Lumens:	7,471
CCT:	3000K
CRI:	70
Power:	64W
Fitting Current:	0.29A
Fitting Inrush:	43A - 0.26ms
Number of Drivers:	1
1x Driver 1 Inrush:	43A - 0.26ms

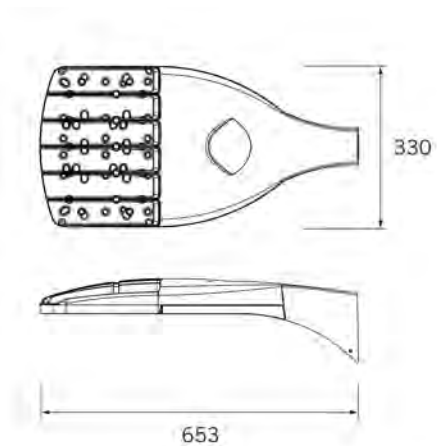


8Kg



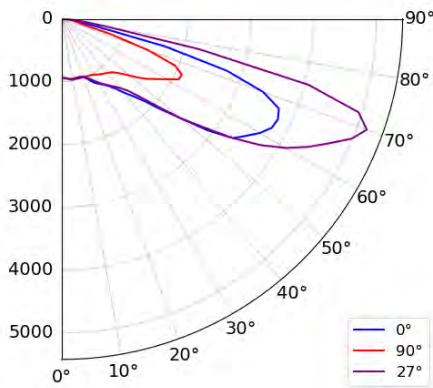
[Installation Guide](#)

DIMENSIONS

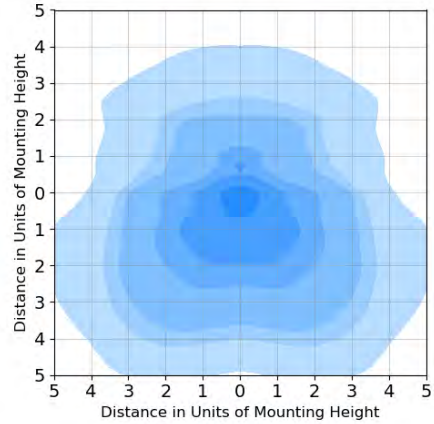


PHOTOMETRY [↓ IES FILE](#)

Polar Plot

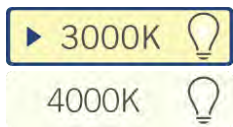


Isoilluminance Plot



IES File: DSX0.1.LA083.FW

COLOUR TEMPERATURES

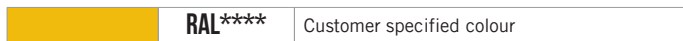


COLOURS

Selected Colour



Custom Colour Available



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

Standard Colours Available



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> DATASHEET - FLOODLIGHT - POLAR 1

TBHF.POL 1.7026AR4030GL



POLAR 1/AR

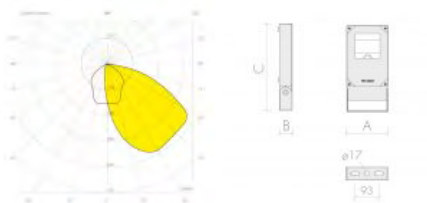
Mod	AR	Insulation class	Class I
Material	Silver oxidized drawn aluminum body, galvanized bracket, transparent tempered glass.	Optics	55° asymmetric beam matt satin aluminium reflector
Installation	Luminaire suitable for ground, ceiling, wall, 60mm pole installation.	Protection index	IP66
Impact degree	IK08	Ambient temperature (Ta)	-25 / +45 °C
Power supply	220-240Vac 50/60Hz	Photobiological safety class	risk group: Exempt
Trademarks and certifications	CE/ UNI EN 60598-1:2015		
Luminous flux maintenance	L80-B20 (50.000h)-L80-B50 (75.000h)		
Beam angle	55°		

PERFORMANCE

W tot.	N°led	LUMEN LED	LUMEN OUTPUT	Lm/W	A(mm)	B(mm)	C(mm)	Kg
30	1	4518	3415	114	155	45	325	2
40	1	6763	5111	128	155	45	325	2
50	1	8459	6392	128	155	45	325	2
68	1	9895	7555	111	155	45	325	2

The luminous flux and the total power absorbed by the system have a tolerance of $\pm 10\%$ with respect to the indicated values.

- 3000K - CRI80 = -4,5% lm
- 3000K - CRI90 = -19,9% lm
- 4000K - CRI80 = standard
- 4000K - CRI90 = -13,73% lm



> DATASHEET - EXTERNAL - DWL

DWL.1.LA013.NR.C6.W007.LRD



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

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:



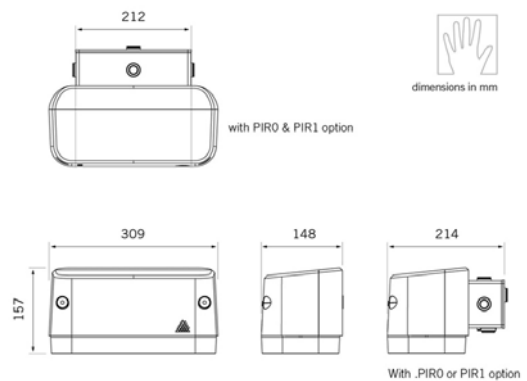
- Series 1
- LED light engine producing c.1,000 lm with a nominal 3000°K colour temperature
- Long and Narrow light distribution
- Smooth Grey (RAL7035)
- 7W
- DALI enabled (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party control systems)

PERFORMANCE

Drive Current from Driver:	200mA
Lumens:	854
CCT:	3000K
CRI:	70
Power:	7W
Fitting Current:	0.03A
Fitting Inrush:	15A - 0.295ms
Number of Drivers:	1
1x Driver 1 Inrush:	15A - 0.295ms

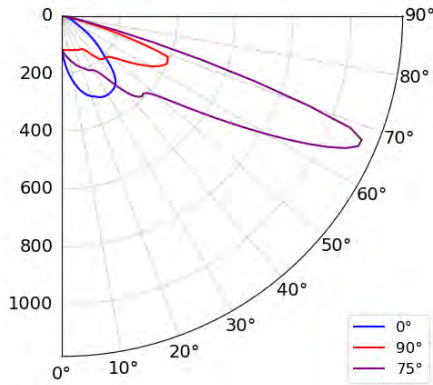


DIMENSIONS

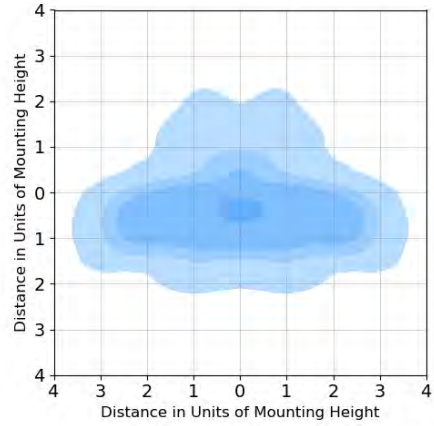


PHOTOMETRY [↓ IES FILE](#)

Polar Plot



Isoillumance Plot



IES File: DWL.1.LA013.NR.W007

COLOUR TEMPERATURES

- 2700K
- 3000K**
- 4000K

COLOURS

Selected Colour

C6 Smooth Grey (RAL7035)

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 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured 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 - EXTERNAL - DWL

DWL.1.LA013.NR.C6.W007.EM3.LRD



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

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.1,000 lm with a nominal 3000°K colour temperature
- Long and Narrow light distribution
- Smooth Grey (RAL7035)
- 7W
- Self contained (self-test) 3hr maintained emergency battery and inverter
- DALI enabled (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party control systems)

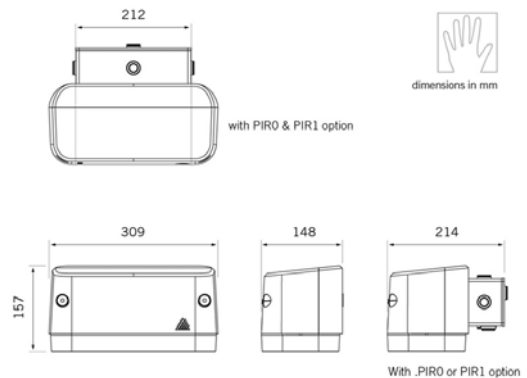
PERFORMANCE

Drive Current from Driver:	200mA
Lumens:	854
CCT:	3000K
CRI:	70
Power:	7W
Fitting Current:	0.03A
Fitting Inrush:	15A - 0.295ms
Number of Drivers:	1
1x Driver 1 Inrush:	15A - 0.295ms



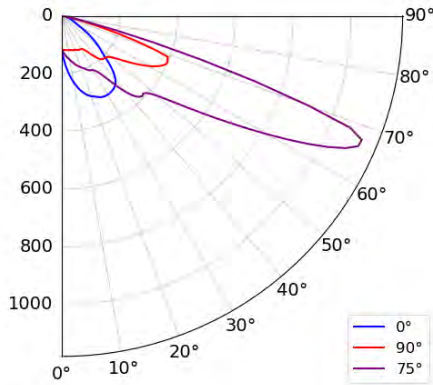
6.5Kg

DIMENSIONS

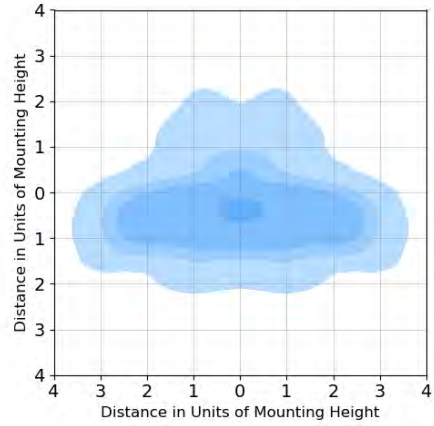


PHOTOMETRY [↓ IES FILE](#)

Polar Plot



Isoillumance Plot



IES File: DWL.1.LA013.NR.W007

COLOUR TEMPERATURES

- 2700K
- 3000K**
- 4000K

COLOURS

Selected Colour

C6 Smooth Grey (RAL7035)

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 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured Black (RAL9005)

C9 Metallic Silver (RAL9006)

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> DATASHEET - AMENITY - DSX0

DSX0.1.LA053.AY.C6.LRD



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

www.dsx.holophane.co.uk **DSXO HOLOPHANE WEBSITE**

DSXO.1.LA053.AY.C6.LRD

Holophane D-Series O 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 PMMA lenses. 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 1
- LED light engine producing c.5,000 lm with a nominal 3000°K colour temperature
- Asymmetric light distribution
- Smooth Grey (RAL7035)
- DALI enabled (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party control systems)



DSX1B.6.1A.HVZ.GV6

Holophane tubular base compartment column for use with DSX1 Luminaires. 6 metre, Single head, For heavy area wind zones (compliant to EN40).

- Bracket galvanised and painted grey (RAL7035)
- Direct embedment

PERFORMANCE

Lumens:	4,551
CCT:	3000K
CRI:	70
Power:	37W
Fitting Current:	0.17A
Fitting Inrush:	22A - 0.29ms
Number of Drivers:	1
1x Driver 1 Inrush:	22A - 0.29ms

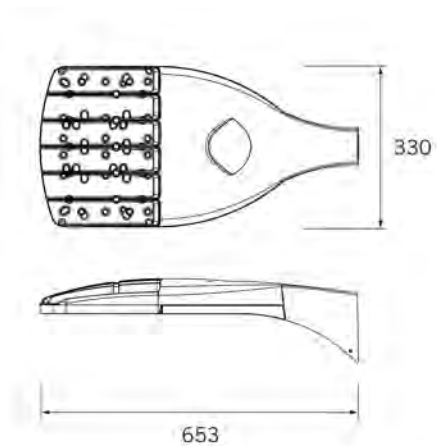


8Kg



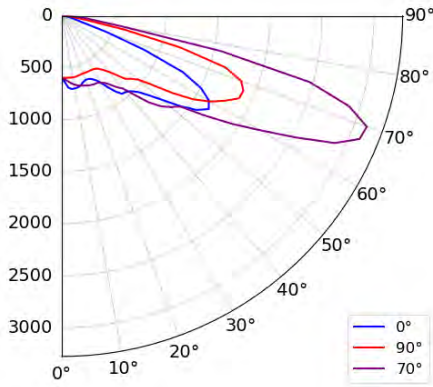
[Installation Guide](#)

DIMENSIONS

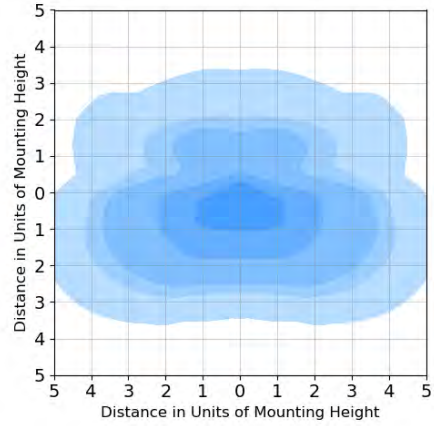


PHOTOMETRY [↓ IES FILE](#)

Polar Plot

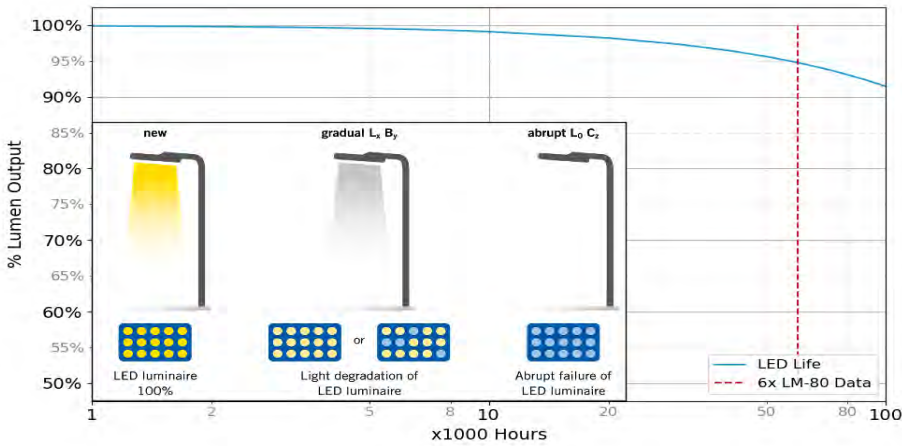


Isoilluminance Plot



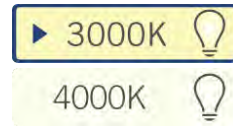
IES File: DSX0.1.LA053.AY

LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on. Graph shows data for LxxB50.

COLOUR TEMPERATURES



COLOURS

Selected Colour

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

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 Smooth Graphite (RAL7011)
---	-------------------------------------

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

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

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

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> DATASHEET - EXTERNAL - DSX1

DSX1.2.LA163.FW.C6.D2



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

 [DSX1 HOLOPHANE WEBSITE](#)

DSX1.2.LA163.FW.C6.D2

Holophane D-Series 1 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 PMMA lenses. 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 2
- LED light engine producing c.16,000 lm with a nominal 3000°K colour temperature
- Forward throw light distribution
- Smooth Grey (RAL7035)
- DALI HF electronic control gear (any on site controls wiring should be completed in compliance with the respective control system's installation instructions (and limitations))



HAWA.AU.GV6

Holophane D-Series wall bracket .

- Bracket galvanised and painted grey (RAL7035)

Please note that it is the responsibility of the installing contractor to confirm that the bracket offered within this quotation suits the application.

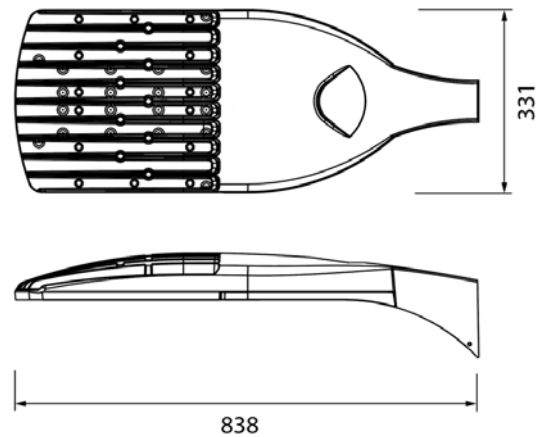
PERFORMANCE

Drive Current from Driver:	700mA
Lumens:	15,821
CCT:	3000K
CRI:	70
Power:	131W
Fitting Current:	0.59A
Fitting Inrush:	53A - 0.3ms
Number of Drivers:	1
1x Driver 1 Inrush:	53A - 0.3ms

 12.2Kg

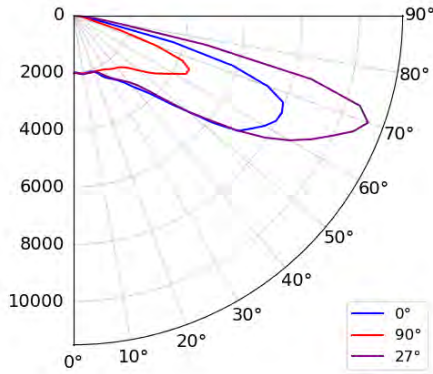
 [Installation Guide](#)

DIMENSIONS

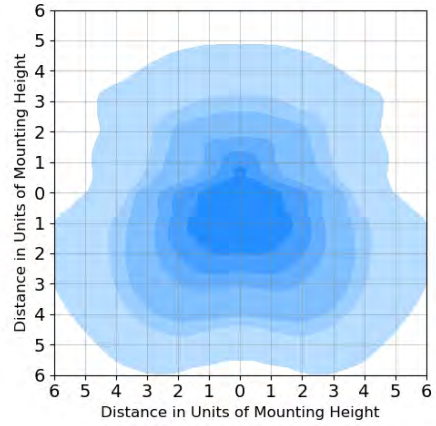


PHOTOMETRY [↓ IES FILE](#)

Polar Plot

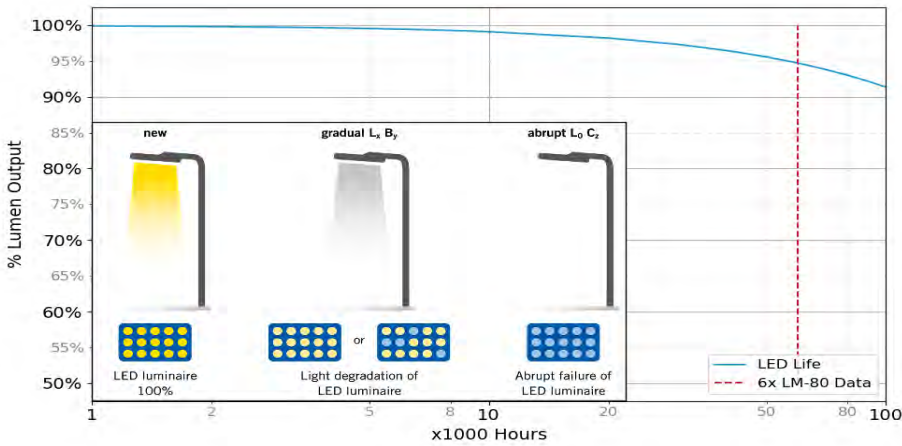


Isoilluminance Plot



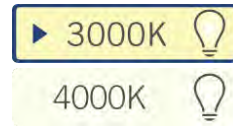
IES File: DSX1.2.LA163.FW

LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on. Graph shows data for LxB50.

COLOUR TEMPERATURES



COLOURS

Selected Colour

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

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	Smooth Graphite (RAL7011)
---	-----------	---------------------------

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

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

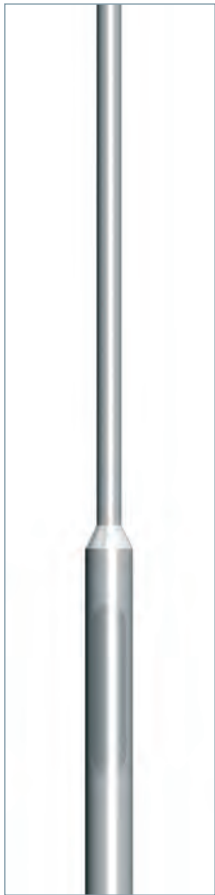
	C9	Metallic Silver (RAL9006)
---	-----------	---------------------------

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.

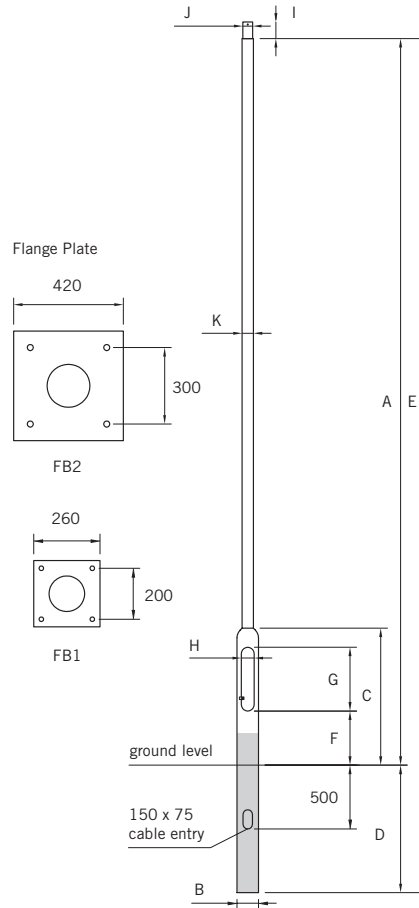
> DATASHEET

DSX1B.10.2A.HVZ.GV6



Holophane products that are suitable

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



description	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
	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.
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 Buckinghamshire MK11 1JG
 United Kingdom



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

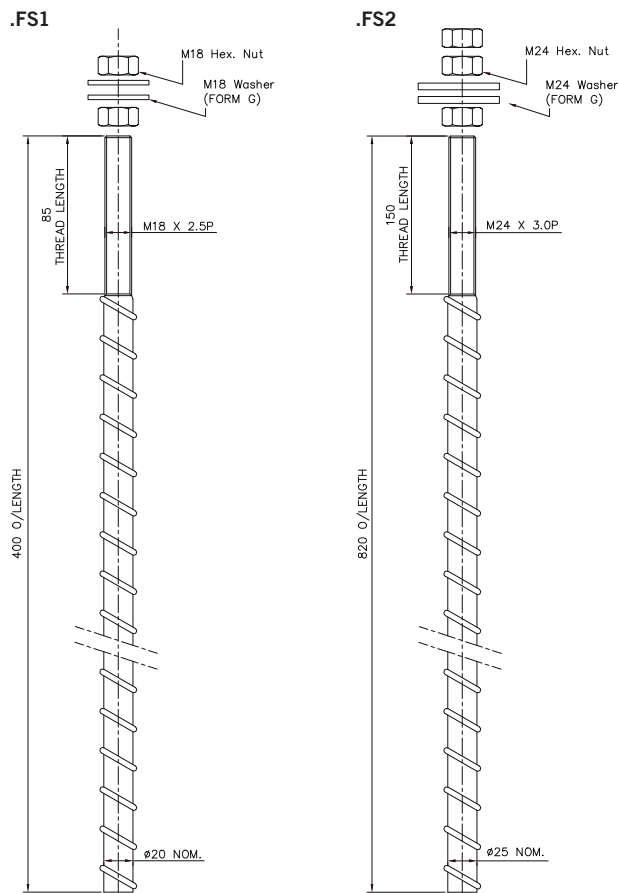
	Nominal Height	Base Diameter	Base Height	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Spigot Length	Spigot Diameter	Shaft Diameter	Weight kg	Bending Moment (ULS) Nm
description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
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 - ROADWAY - VMX

VMX.2.LA033.V1.L2L3.PT1.C6.T7T.W018



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

 [VMX HOLOPHANE WEBSITE](#)

VMX.2.LA033.V1.L2L3.PT1.C6.T7T.W018

Holophane V-Max LED street light. Ultra-low profile design and patented modular chevron light engine concept. High pressure die cast LM6 aluminium housing ((EN AC-44100) (AL.Si12)) sealed to IP66 with a close cell gasket and single M5 stainless steel fastener that also allows access to the gear cover for electrical termination. Metal core LED boards are mounted directly to aluminium ((EN AC-44100)(AL.Si12)) chevron to aid heat dissipation.

This specific SKU includes:

- Series 2
- LED light engine producing c.3,000 lm with a nominal 3000°K colour temperature
- 1 LED chevron
- L2L3 optical setting
- 60/76mm post top mounting only
- Smooth Grey (RAL7035)
- Complete with 7-pin dimming NEMA ANSI C136.41 socket (photocell/node supplied by others) with weather proof locking top
- 18W. If not supplied with factory fitted flying lead, only use flex cable diameter from 6mm to 10mm.



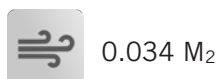
VMXB.6.PT76.HVZ.GV

Holophane tubular base compartment column for use with V-Max Luminaires. 6 metre, 76mm post top mounting. For heavy area wind zones (compliant to EN40).

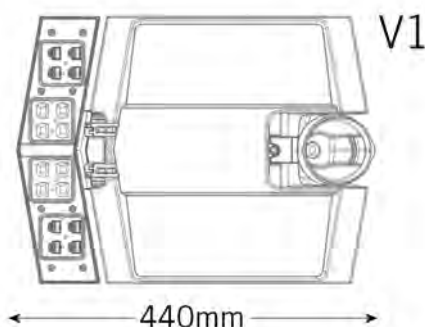
- Bracket galvanised
- Direct embedment

PERFORMANCE

Drive Current from Driver:	337mA
Lumens:	2,814
CCT:	3000K
CRI:	70
Power:	18W
Fitting Current:	0.08A
Fitting Inrush:	15A - 0.295ms
Number of Drivers:	1
1x Driver 1 Inrush:	15A - 0.295ms

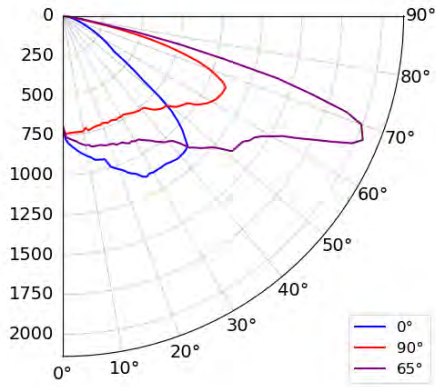


DIMENSIONS

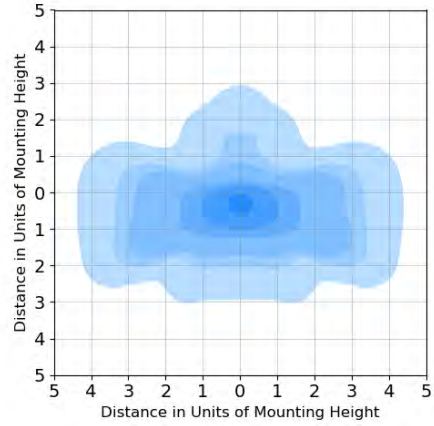


PHOTOMETRY [↓ IES FILE](#)

Polar Plot

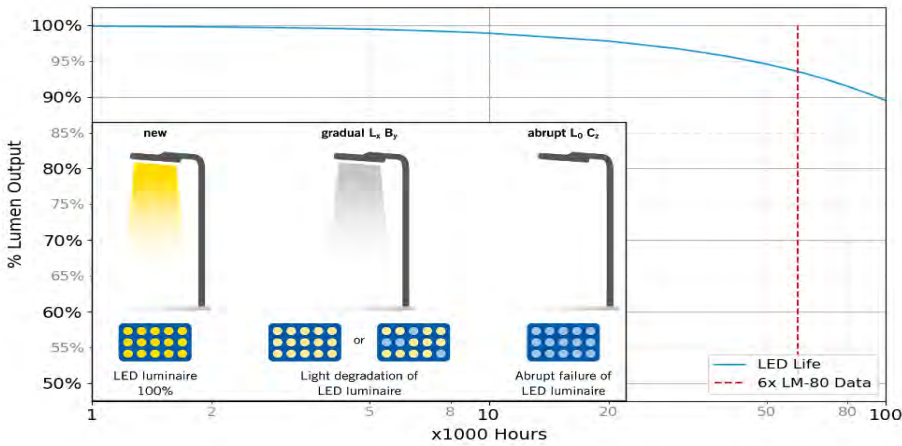


Isoilluminance Plot



IES File: VMX.2.LA034.V1.L2L3.W018

LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on. Graph shows data for LxxB50.

COLOUR TEMPERATURES



COLOURS

Selected Colour

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


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)
---	----------------------------------

	C3 Green (RAL6013)
---	---------------------------

	C4 Smooth Graphite (RAL7011)
---	-------------------------------------

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

	C7 Textured 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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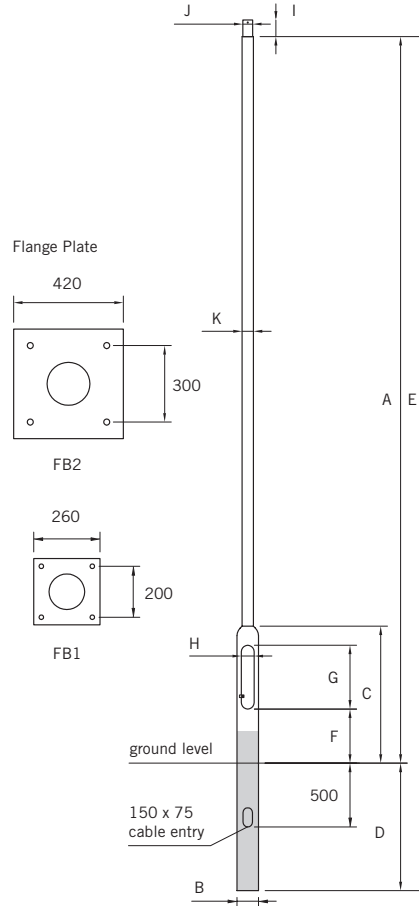
> DATASHEET

VMXB.6.PT76.HVZ.GV



Holophane products that are suitable

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



description	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
	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
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4.5m standard duty	4500	140	1075	800	5300	400	500	100	-	-	76	37	5108
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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.



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Buckinghamshire MK1 1JG
United Kingdom

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

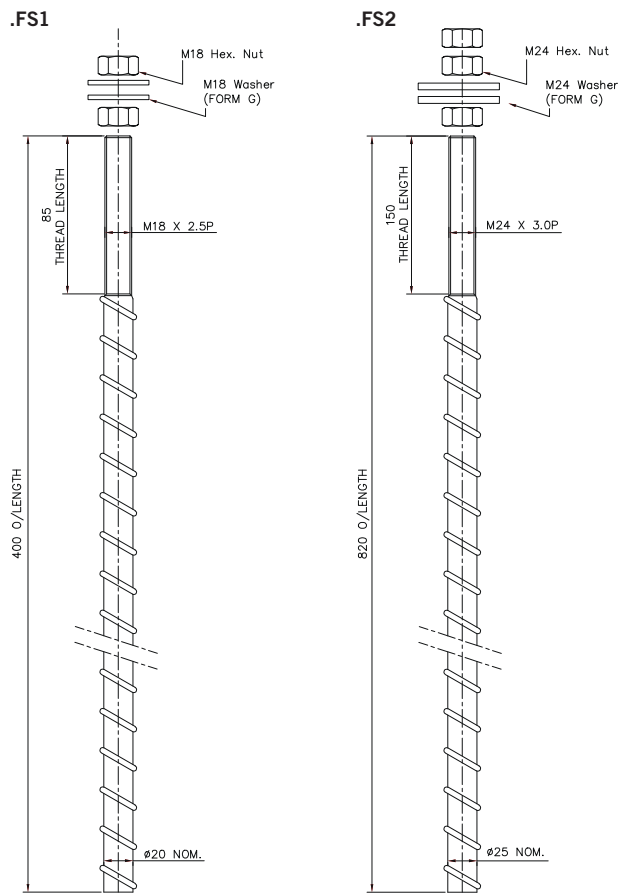
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description	A	B	C	D	E	F	G	H	I	J	K		
8m	7400	194	1200	1200	8800	400	600	115	200	127	139.7	125	22610
10m	9400	194	1200	1500	11100	400	600	115	200	152.4	168.3	208	39131
12m	11400	194	2500	1700	13300	1000	600	115	200	152.4	168.3	295	41585

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



SUMMARY P155-2283 - INTEGRA 61 BOWBURN DC3 A,B,C&D

Line No.	Item Ref	Quantity	Catalogue
LUMINAIRE AND BRACKET PACKAGE			
10	X1	1	DSX0.1.LA103.FW.C6.LRD
11	X1	1	HAWA.AU.GV6
LUMINAIRE AND BRACKET PACKAGE			
20	X2	6	DSX1.2.LA303.FW.C6.D2
21	X2	6	HAWA.AU.GV6
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
30	X3	4	DSX1.2.LA303.FW.C6.D2
31	X3	4	DSX1B.10.1A.HVZ.GV6
ACCESSORY			
40	X3/BLS	4	DSX2.80LED.BLS
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
50	X4	19	DSX0.1.LA083.AY.C6.LRD
51	X4	19	DSX1B.6.1A.HVZ.GV6
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
60	X5	5	DSX0.1.LA083.FW.C6.LRD
61	X5	5	DSX1B.6.1A.HVZ.GV6
LUMINAIRE			
70	X6	40	TBHF.POL1.7026AR4030GL
LUMINAIRE			
80	X7	22	DWL.1.LA013.NR.C6.W007.LRD
LUMINAIRE			
90	X7/E	22	DWL.1.LA013.NR.C6.W007.EM3.LRD
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
100	X8	1	DSX0.1.LA053.AY.C6.LRD
101	X8	1	DSX1B.6.1A.HVZ.GV6
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
110	X9	1	DSX1.2.LA303.FW.C6.D2
111	X9	1	DSX1B.10.1A.HVZ.GV6
LUMINAIRE AND BRACKET PACKAGE			
120	X10	4	DSX1.2.LA163.FW.C6.D2
121	X10	4	HAWA.AU.GV6
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
130	X11	4	DSX1.2.LA163.FW.C6.D2
131	X11	2	DSX1B.10.2A.HVZ.GV6
LUMINAIRE, COLUMN AND BRACKET PACKAGE			
140	X12	11	VMX.2.LA033.V1.L2L3.PT1.C6.T7T.W018
141	X12	11	VMXB.6.PT76.HVZ.GV

ACCESSORY

150	CUT OUTS	43	HEL.CBEPAC2
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APPENDIX B – LIGHTING DRAWINGS



Schedule							
Symbol	Picture	Label	Quantity	Catalog Number	Description	Lumens / Lamp	Wattage
[Symbol]	[Image]	X1	1	DSX0.1.LA103.FW	D-Series 0 Area luminaire Building mount at 5m	8979	81
[Symbol]	[Image]	X2	6	DSX1.2.LA303.FW	D-Series 1 Luminaire Building mount at 9m	28154	286
[Symbol]	[Image]	X3	4	DSX1.2.LA303.FW.BLS	D-Series 1 Luminaire with Back light shield Column mount t 10m	21982	286
[Symbol]	[Image]	X4	19	DSX0.1.LA083.AY	D-Series 0 Area luminaire Column mount at 6m	7242	64
[Symbol]	[Image]	X5	5	DSX0.1.LA083.FW	D-Series 0 Area luminaire Column mount at 6m	7448	64
[Symbol]	[Image]	X6	40	7026AR4030GL	7026 - POLAR 1 30W MOD. AR Building mount at 5m	3415	30
[Symbol]	[Image]	X7	44	DWL.1.LA013.NR.W007	Denver ID Wall Building mount at 3m	854	6.5
[Symbol]	[Image]	X8	1	DSX0.1.LA053.AY	D-Series 0 Area luminaire Column mount at 6m	4541	37
[Symbol]	[Image]	X9	1	DSX1.2.LA303.FW	D-Series 1 Luminaire Column mount at 10m	28154	286
[Symbol]	[Image]	X10	4	DSX1.2.LA163.FW	D-Series 1 Luminaire Building mount at 9m	15821	131
[Symbol]	[Image]	X11	2	DSX1.2.LA163.FW	D-Series 1 Luminaire Column mount at 10m	15821	262
[Symbol]	[Image]	X12	11	VMX.2.LA033.V1.L2L3.W018	V-Max Streetlighting luminaire with a Type II - Short distribution Column mount at 6m	2618	18

NOTES:
 1. DO NOT SCALE FROM THIS DRAWING. ALWAYS WORK FROM ANY DIMENSIONS GIVEN UPON THE DRAWING WITHIN THE NOTES AND SPECIFICATIONS. IF IN DOUBT ASK.
 2. LIGHTING DESIGN IS BASED ON HOLOPHANE LUMINAIRES.

P1	ISSUED FOR INFORMATION	CC	DR	JAN 2022
Rev	Drawing Revision	Drawn	Checked	Date

Status: PRELIMINARY

ESP Services Consultants

Engineering Services Partnership Limited
 e-mail: esp@esp.co.uk Web: www.esp.co.uk

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Manchester Office
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Peterborough Office
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 Tel: +44 (0)1733 312373

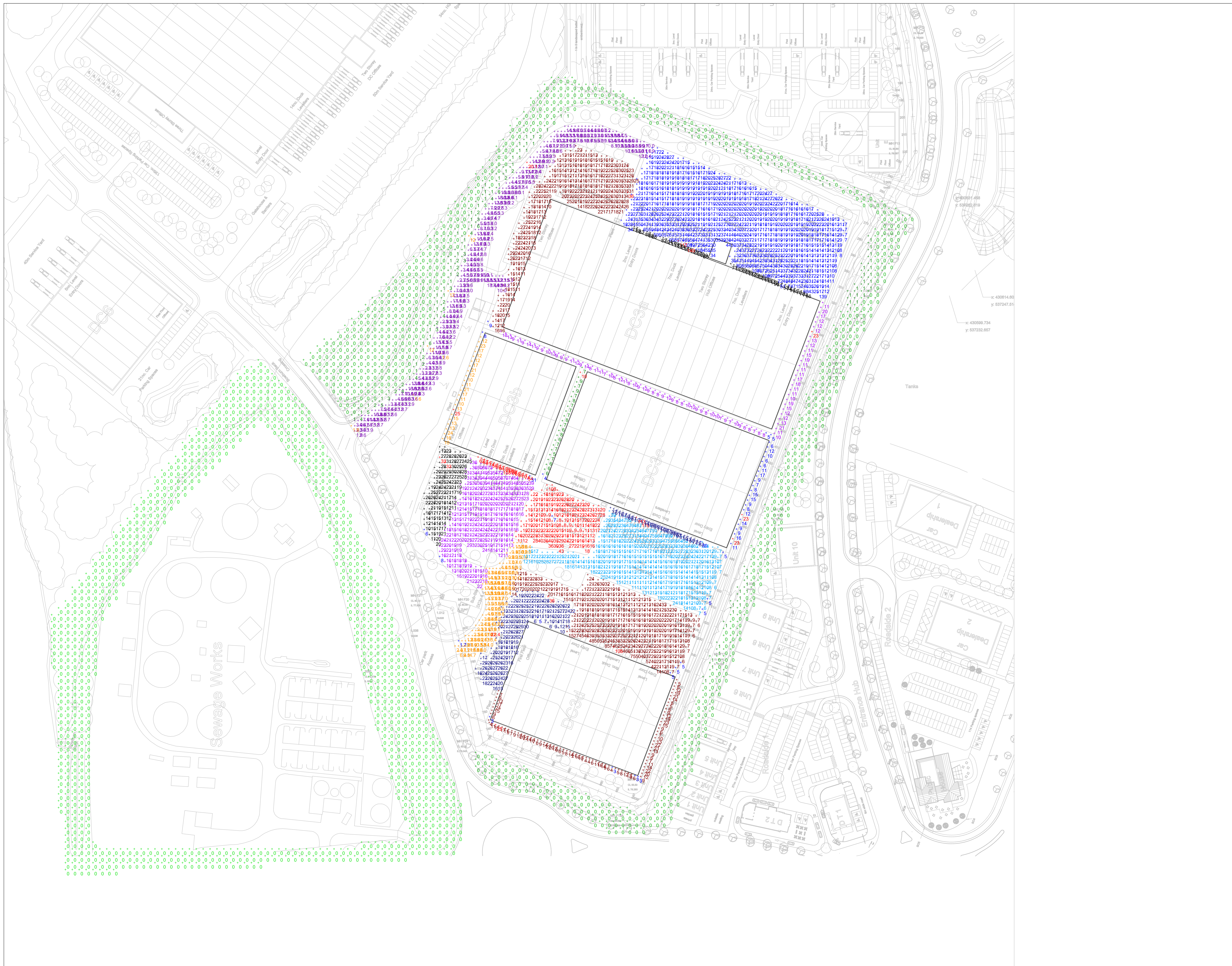
Client: INTEGRA 61 (DURHAM) Ltd

Job Title: INTEGRA 61, BOWBURN DC3

Drawing Title: EXTERNAL LIGHTING LAYOUT

Drawing Number:	3537/E/100	Revision:	P1
Designed:	CC	Cad:	KDT
Date:	January 2022	Checked By:	DJR
Scale:	NTS AD		

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Statistics				
Description	Symbol	Avg	Min	Min/Avg
Dark Zone	+	0 lux	0 lux	N/A
Darkzone 2	+	0 lux	0 lux	N/A
DC3a Car Park	+	20 lux	9 lux	0.45
DC3a Loading Doors	+	102 lux	51 lux	0.50
DC3a Yard	+	25 lux	7 lux	0.28
DC3b Car Park	+	21 lux	6 lux	0.29
DC3b Loading Doors	+	75 lux	31 lux	0.41
DC3b Yard	+	25 lux	8 lux	0.32
DC3c Car Park	+	19 lux	7 lux	0.37
DC3c Loading Doors	+	82 lux	30 lux	0.37
DC3c Yard Area	+	21 lux	5 lux	0.24
DC3d Car Park	+	22 lux	5 lux	0.23
DC3d Rear & Side of Building	+	11 lux	3 lux	0.27
DC3d Yard Area	+	21 lux	5 lux	0.24
Roadway to DC3 b,c & d	+	8.8 lux	1.7 lux	0.19
Roadway to DC3a	+	7.5 lux	1.4 lux	0.19
Walkway Around DC3a	+	11 lux	5 lux	0.45
Walkway between DC3 b&c	+	7 lux	4 lux	0.57
Walkway to side of DC3b	+	15 lux	8 lux	0.53
Walkway to side of DC3c	+	12 lux	6 lux	0.50

NOTES:
 1. DO NOT SCALE FROM THIS DRAWING. ALWAYS WORK FROM ANY DIMENSIONS GIVEN UPON THE DRAWING WITHIN THE NOTES AND SPECIFICATIONS. IF IN DOUBT ASK.
 2. LIGHTING DESIGN IS BASED ON HOLOPHANE LUMINAIRE.

P1	ISSUED FOR INFORMATION	CC	DR	JAN 2022
Rev	Drawing Revision	Drawn	Checked	Date

Status: **PRELIMINARY**

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Client: **INTEGRA 61 (DURHAM) Ltd**

Job Title: **INTEGRA 61, BOWBURN DC3**

Drawing Title: **EXTERNAL LIGHTING LUX LAYOUT**

Drawing Number:	3537/E/101	Revision:	P1
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