
BURO HAPPOLD

Luminaire Specification Document

Project: Rochdale Town Square
Job No. : 042509
Ref No: LS 001
First Issue: 16/04/2020
Revision: C05
Date: 25/05/2023

BURO HAPPOLD

Project: Rochdale Town Square

Issue Details & Revisions:

Revision	Date	Revision Details	Initials
01	16/04/2020	Stage 3 - For costing	AR/LK
02	11/12/2020	Stage 4 - Detailed Design	AR/LK
03	18/01/2021	Stage 4 - Historic lighting columns restoration note for contractor proposals	AR
04	03/05/2021	Stage 4 - Approval from PFI contract. Following fixture types revised: X1 - Specification revised X1a - New addition. X2a - Specification revised X2b - Specification revised	AR
05	26/05/2021	Stage 4 - Detailed Design for Tender Notes added: Full details of the replacement optics for the Historical lanterns type X11 and X12 shall be submitted to the Authority with revised design calculations, with the proposed lantern included for review by the contractor.	AR
06	01/10/2021	Reference X5 specification change	AR
07	25/11/2021	Reference X5 and X5a specification revised.	AR
08	29/03/2022	New Reference X13	AR
09	07/06/2022	X4 luminaire changed	AR
C01	06/07/2022	C1 - Construction issue	AR
C02	13/03/2023	Update to historic lantern Ref X11 and X12	AR
C03	24/03/2023	Updated information to X11 and X12	AR
C04	22/05/2023	Revised manufacturer for historic globes to Metcraft X11 and X12	AR
C05	25/05/2023	Revised handrail lighting manufacturer	AR

NOTES:

It is assumed the control protocol shall be DALI 2 for all luminaires unless otherwise stated.

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PREAMBLE

LUMINAIRES AND LAMPS

A All lamps and luminaires to be supplied and installed as specified in the luminaire schedule referenced above.

B Equipment selected as a standard item from a particular manufacturer's range has been specified with a view to providing the correct performance, optics, maintenance, quality, aesthetics and control.

C All luminaires have been selected to provide high quality light, through efficient optical systems which give good control of the distribution of light. In the selection of luminaires we have considered not only the performance of the unit and the lit effect but also the appearance of the fixture in the context of the space

D Luminaires must have a designed method of removal to prevent damage to site and or luminaire during routine maintenance, installation or replacement.

E Luminaires should be supplied with sufficient packaging material to protect luminaire during transportation and any reasonable on site storage.

F Any delicate part of the luminaire at risk of damage during installation should have additional protective material to be removed as required or during final finishing and clean-up on site i.e. shades or diffusers.

G All lighting equipment should be made from durable materials suitable for their installed environment, finishes should be scratch, rust, stain resistant and UV stable.

H Luminaire finished must match those stated in the luminaire schedule.

I The manufacturers shall remain responsible for ensuring compliance with relevant standards, the accuracy of the information shown on his drawings at all times and for ensuring that the equipment shown fulfils the requirements of this specification.

J Any damage to lighting equipment caused by the contractor or on site must be made good by the contractor prior to hand over.

K All in ground luminaire to be rated IP67 or IP68 and are to feature integrated return pressure valve to ensure longevity.

ALTERNATIVE SPECIFICATIONS

A Alternative luminaires must be approved by local authority agreement. To facilitate the review process the Technical data including but not limited to the following must be provided to the lighting consultant and local authority; photometric data, technical drawings, working physical samples, rated input power, luminous flux, luminous intensity distribution, Correlated colour temperature, colour rendering index, rated chromaticity co-ordinate values, rated life of the LED module in hours, lumen maintenance in Lux, failure fraction, ambient temperature, power factor and driver current. If requested by the lighting designer lighting calculations demonstrating the site specific performance should be provided for review.

BESPOKE PRODUCTS

A Working drawings and technical information of proposed bespoke elements or variants, dimensioned in mm, shall be supplied to the lighting consultant for approval prior to fabrication.

B If any variants of standard luminaires are specified, these shall be developed by the manufacturer of the standard luminaire, unless otherwise specifically stated.

C Any bespoke or variation of a product will be subject to the same quality control tests and conformance criteria as an equivalent standard luminaire and is required to meet all relevant safety standards. Thermal operating conditions must be within the constraints and tolerances of the technology specified.

D The manufacturers shall remain responsible for ensuring compliance with relevant standards, the accuracy of the information shown on his drawings at all times and for ensuring that the equipment shown fulfils the requirements of this specification.

E Samples or prototypes of bespoke or variant luminaires ordered will be included in the tender price or invoiced as agreed to the client or their nominated representative.

F Any samples or prototypes will be supplied to the specialist lighting consultant for review prior to fabrication of final product/s.

G Technical information and or samples will be provided in a timely fashion to the specialist lighting consultant allowing a minimum period of 2 weeks for review prior to final date of order required for manufacturing and shipping to meet site installation deadlines.

LUMINAIRE STANDARDS

A The luminaires will be manufactured in accordance with but not limited to;

- 31. BS EN 60598-a:2015 – Luminaires general requirements and tests
- 32. BS EN 62717 LED modules for general lighting.
- 33. BS EN 62031 LED modules for general lighting Safety specifications

CONTROL GEAR

A All lighting control gear shall be of good quality construction, shall comply with all relevant statutory regulations, and shall be compatible with the lamps and control method specified.

B The manufacturers shall remain responsible for ensuring compliance of luminaires and control gear with relevant standards and contractors should contain written statements of compliance and compatibility

C Where appropriate, the electrical installer shall also liaise with the selected lighting control system manufacturer to ensure compatibility between control gear and the control system. He shall also check and confirm all necessary data regarding circuit load of luminaires, to enable dimmers/contactors be sized correctly.

D Electrical supply connections shall be designed to facilitate the easy installation of the luminaires. The Contractor must ensure that suppliers liaise with the electrical installer to ensure any specific requirements of Thiers' in this respect are met.

E Transformers shall have a stable output voltage of 11.4V or 22.8V, under varying loads, where the output voltage is nominally quoted at 12V or 24V.

F Lamps, ballasts, and capacitors/ignitors, when applicable shall be from same manufacturer to ensure proper and consistent lamp performance.

G All necessary control gear and transformers shall be mounted within the luminaire or column unless shown as being located remotely. All necessary control gear, drivers and transformers shall be mounted as described in the specification, manufacturer's installation instructions and lighting drawings.

WARRANTIES AND GUARANTEES

A All LED light sources, lighting equipment and associated electronic components must be guaranteed for a period of not Less than 5 years, from date of delivery to the project site, against failure due to mechanical defect, material or manufacturing fault.

B Conventional lamps shall be covered only by their manufacturer's normal assurances as to life expectancy and performance.

LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION	General lighting - 8mtr column
MANUFACTURER	Holophane
SUPPLIER	Holophane
PRODUCT NAME	Signature post top on 8mtr column
CATALOGUE NUMBER	SIG.1.LA143.AY.VB1.TSZB.LRD.CL7 100Wx2225lm

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	100 W @1050mA
LUMEN OUTPUT (lm)	12225 lm
LUMINAIRE EFFICACY (lm/w)	147
IP RATING	IP65
OPTICAL DISTRIBUTION	Asymmetric
MOUNTING TYPE	8 mtr root mounted cylindrical column
FINISH	Graphite (Architect to confirm final finish)
DIMENSIONS (mm)	611 x 667mm (Post top only)
CUTOUT	NA
WEIGHT (kg)	17.2 Kg per post top (exc. column)

CONTACT:	John Pryde
TEL:	jpryde@holophane.co.uk
EMAIL:	

COLOUR TEMPERATURE	3000 K
COLOUR RENDERING	70
COLOUR CONSISTENCY	5 Step MacAdam

DRIVER DETAILS:

TYPE	Integral
IP RATING	NA
DIMMING RANGE	100% - 0%
CONTROL PROTOCOL	DALI
RATED LIFE	100.000 hours at L70 B50 @25°

LUMINAIRE ACCESSORIES:	Contractor to confirm suitability with overall control system with PFI contract. Currently specified as Dali dimmable with miniature 35lux factory fitted photocell.
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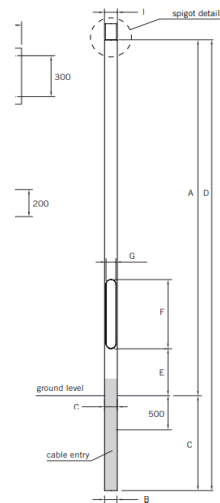
COLUMN INFORMATION:

8m heavy duty column
for signature post top
(.VB1)
Windage 0.11m2

IMPORTANT REQUIREMENTS:	Signature post top mounted on top of cylindrical column to match post top detail. Root mounted column to be detailed by contractor.
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IMPORTANT NOTES	All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.
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Luminaire must have sufficient glare control to suit application



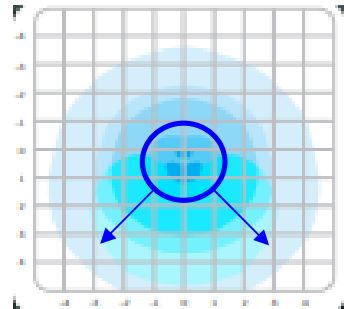
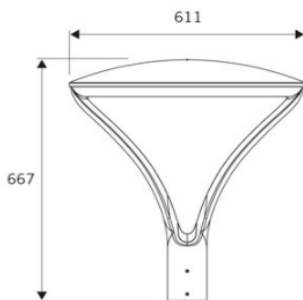
REFERENCE IMAGES



.VB1 Signature post top
Product image



Product dimensions



Polar curve

LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION	General lighting - 8mtr column
MANUFACTURER	Holophane
SUPPLIER	Holophane
PRODUCT NAME	Signature post top on 5mtr column
CATALOGUE NUMBER	SIG.1.LA143.SY.VB1.TSZB.LRD.CL7 100Wx2225lm

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	100 W @1050mA
LUMEN OUTPUT (lm)	12225 lm
LUMINAIRE EFFICACY (lm/w)	147
IP RATING	IP65
OPTICAL DISTRIBUTION	Symmetric
MOUNTING TYPE	8 mtr root mounted cylindrical column
FINISH	Graphite (Architect to confirm final finish)
DIMENSIONS (m)	611 x 667mm (Post top only)
CUTOUT	NA
WEIGHT (kg)	17.2 Kg per post top (exc. column)

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	John Pryde
TEL:	jpryde@holophane.co.uk
EMAIL:	

COLOUR TEMPERATURE	3000 K
COLOUR RENDERING	70
COLOUR CONSISTENCY	5 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	Integral
IP RATING	NA
DIMMING RANGE	100% - 3%
CONTROL PROTOCOL	DALI
RATED LIFE	100.000 hours at L70 B50 @25°

LUMINAIRE ACCESSORIES:	Contractor to confirm suitability with overall control system with PFI contract. Currently specified as Dali dimmable with miniature 35lux factory fitted photocell.
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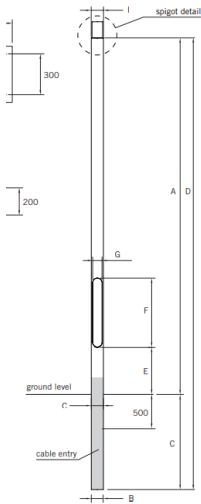
COLUMN INFORMATION:

8m heavy duty column
for signature post top
(.VB1)
Windage 0.11m2

IMPORTANT REQUIREMENTS:	Signature post top mounted on top of cylindrical column to match post top detail. Root mounted column to be detailed by contractor.
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IMPORTANT NOTES	All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.
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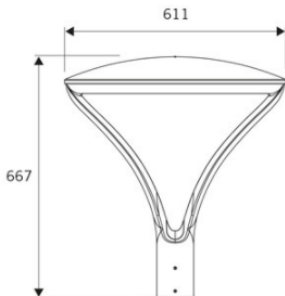
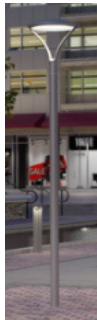
Luminaire must have sufficient glare control to suit application



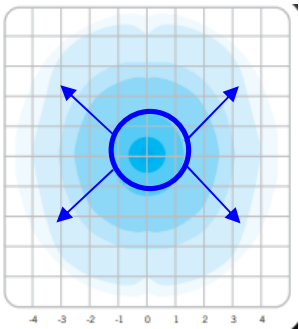
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION	General lighting - 6mtr column
MANUFACTURER	Holophane
SUPPLIER	Holophane
PRODUCT NAME	Signature post top on 6mtr column
CATALOGUE NUMBER	SIG.1.LA073.AY.VB1.TSZB.LRD.CL7 54Wx6600lm

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	54W @550mA
LUMEN OUTPUT (lm)	6600 lm
LUMINAIRE EFFICACY (lm/w)	140
IP RATING	IP65
OPTICAL DISTRIBUTION	Asymmetric
MOUNTING TYPE	6 mtr root mounted cylindrical column
FINISH	Graphite (Architect to confirm final finish)
DIMENSIONS (m)	611 x 667mm (Post top only)
CUTOUT	NA
WEIGHT (kg)	17.2 Kg per post top (exc. column)

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	John Pryde
TEL:	jpryde@holophane.co.uk
EMAIL:	

COLOUR TEMPERATURE	3000 K
COLOUR RENDERING	70
COLOUR CONSISTENCY	5 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	Integral
IP RATING	NA
DIMMING RANGE	100% - 3%
CONTROL PROTOCOL	DALI
RATED LIFE	100.000 hours at L70 B50 @25°

LUMINAIRE ACCESSORIES:	Contractor to confirm suitability with overall control system with PFI contract. Currently specified as Dali dimmable with miniature 35lux factory fitted photocell.
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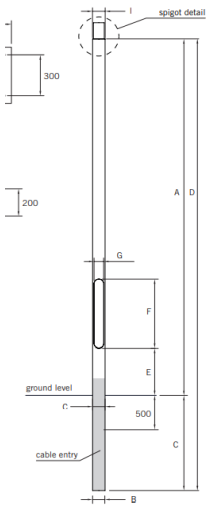
COLUMN INFORMATION:

6m heavy duty column
for signature post top
(.VB1)
Windage 0.11m2

IMPORTANT REQUIREMENTS:	Signature post top mounted on top of cylindrical column to match post top detail. Root mounted column to be detailed by contractor.
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IMPORTANT NOTES	All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.
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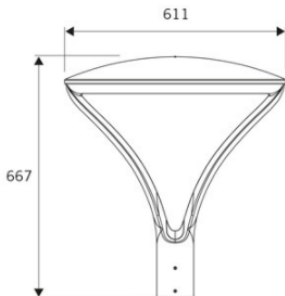
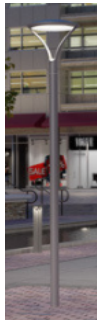
Luminaire must have sufficient glare control to suit application



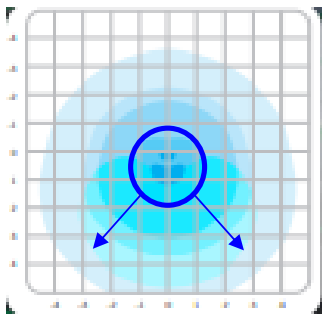
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

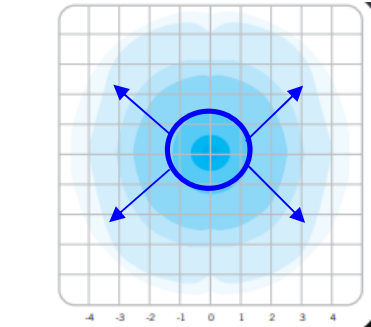
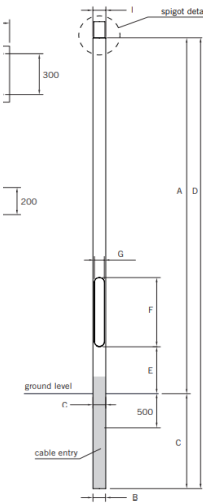
MANUFACTURER/SUPPLIER INFORMATION

CONTACT: John Pryde
TEL:
EMAIL: jpryde@holophane.co.uk

COLOUR TEMPERATURE 3000 K
COLOUR RENDERING 70
COLOUR CONSISTENCY 5 Step MacAdam
UGR -

DRIVER DETAILS:
TYPE Integral
IP RATING NA
DIMMING RANGE 100% - 3%
CONTROL PROTOCOL DALI
RATED LIFE 100.000 hours at L70 B50 @25°

COLUMN INFORMATION:
6m heavy duty column
for signature post top
(.VB1)
Windage 0.11m2



Polar curve

LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION General lighting - 6mtr column
MANUFACTURER Holophane
SUPPLIER Holophane
PRODUCT NAME Signature post top on 6mtr column
CATALOGUE NUMBER SIG.1.LA073.SY.VB1.TSZB.LRD.CL7 54Wx6966lm

DESCRIPTION:
LUMINAIRE DETAILS:
LAMP TYPE/SOURCE LED
WATTAGE (W) 54W @550mA
LUMEN OUTPUT (lm) 6600 lm
LUMINAIRE EFFICACY (lm/w) 140
IP RATING IP65
OPTICAL DISTRIBUTION Symmetric
MOUNTING TYPE 6 mtr root mounted cylindrical column
FINISH Graphite (Architect to confirm final finish)
DIMENSIONS (mm) 611 x 667mm (Post top only)
CUTOUT NA
WEIGHT (kg) 17.2 Kg per post top (exc. column)

LUMINAIRE ACCESSORIES: Contractor to confirm suitability with overall control system with PFI contract. Currently specified as Dali dimmable with miniature 35lux factory fitted photocell.

IMPORTANT REQUIREMENTS: Signature post top mounted on top of cylindrical column to match post top detail. Root mounted column to be detailed by contractor.

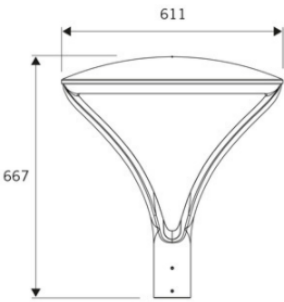
IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

Luminaire must have sufficient glare control to suit application

REFERENCE IMAGES



Product image



Product dimensions

Luminaire reference:

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:Paul Aitken

TEL:(0)7971 089 341

EMAIL:Paul.aitken@zumtobelgroup.co

COLOUR TEMPERATURE2700 K

COLOUR RENDERING80

COLOUR CONSISTENCY2 Step MacAdam

UGR-

DRIVER DETAILS:

TYPERemote

IP RATINGTo suit installation application

DIMMING RANGE100% - 0.1%

CONTROL PROTOCOLDALI

RATED LIFE50.000 hours at L80

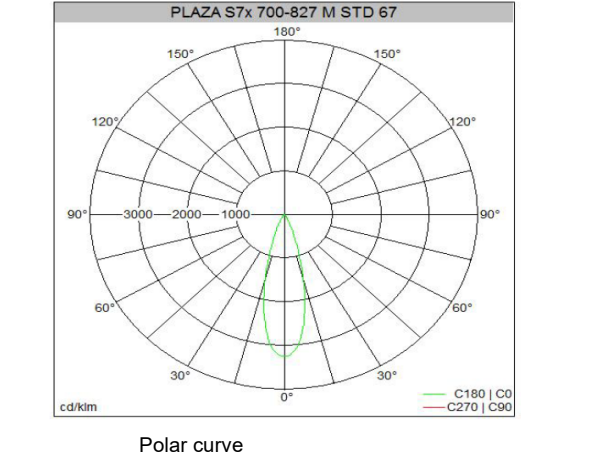
IMPORTANT REQUIREMENTS:

35 max distance from luminaire to driver (cable max 0.75mm). 2 luminaires per driver. Contractor to agree on site. Driver to be located in accessible, well-ventilated location indoors or in IP67 rated housing. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance for concealed cable route.

IMPORTANT NOTES

All wiring, couduits, containment routes etc. to Electrical Engineers drawings and specifications.

Luminaire must have sufficient glare control to suit application



Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Uplighting to tree canopy
MANUFACTURER	WE EF
SUPPLIER	WE EF
PRODUCT NAME	ETC 120-GB
CATALOGUE NUMBER	185-3449

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	7.7W
LUMEN OUTPUT (lm)	699lm
LUMINAIRE EFFICACY (lm/w)	90
IP RATING	IP67
OPTICAL DISTRIBUTION	Symmetric medium beam
MOUNTING TYPE	Recessed
FINISH	stainless Steel
DIMENSIONS (mm)	Ø160x 195
CUTOUT	NA
WEIGHT (kg)	3.80 Kg

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	Steven Edwards
TEL:	07716 085929
EMAIL:	steven.edwards@fagerhult.co.uk

COLOUR TEMPERATURE	2700K
COLOUR RENDERING	80
COLOUR CONSISTENCY	3 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	Integral
IP RATING	NA
DIMMING RANGE	100% -1%
CONTROL PROTOCOL	DALI
RATED LIFE	90.000 hours at L90

LUMINAIRE ACCESSORIES: Installation housing and anti slip ceramic coating ASC to DIN 51130

IMPORTANT REQUIREMENTS: Allowance to be made for drainage. Refer to manufacturer's drainage requirements.

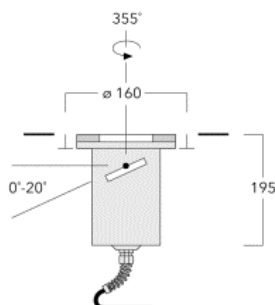
IMPORTANT NOTES: All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

Luminaire must have sufficient glare control to suit application - Slight frosting to luminaire glass on one side

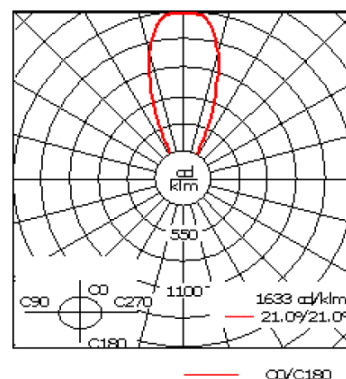
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Pavement lighting
MANUFACTURER	SIMES
SUPPLIER	Zumtobel
PRODUCT NAME	Mini Suit
CATALOGUE NUMBER	S.5696W (24V)

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	4.3W
LUMEN OUTPUT (lm)	76lm
LUMINAIRE EFFICACY (lm/w)	18
IP RATING	IP65
OPTICAL DISTRIBUTION	Asymmetric
MOUNTING TYPE	Surface
FINISH	TBC by Architect
DIMENSIONS (mm)	Diameter 185mm, height: 41mm
CUTOUT	NA
WEIGHT (kg)	1.93

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	Paul Aitken
TEL:	(0)7971 089 341
EMAIL:	Paul.aitken@zumtobelgroup.co

COLOUR TEMPERATURE	3000K
COLOUR RENDERING	90
COLOUR CONSISTENCY	3 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	NA
IP RATING	NA
DIMMING RANGE	NA
CONTROL PROTOCOL	SWITCHED
RATED LIFE	50.000 hours at L70

LUMINAIRE ACCESSORIES: S.5699 Anchor flange to be cemented to ground

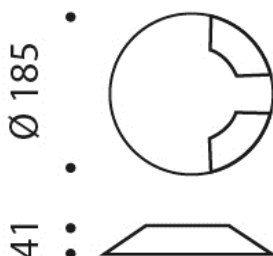
IMPORTANT REQUIREMENTS: Driver to be located in accessible, well-ventilated location indoors or in IP67 rated housing. 15m max distance from driver to luminaire. 120W driver can utilise 6 fittings. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance for concealed cable route.

IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

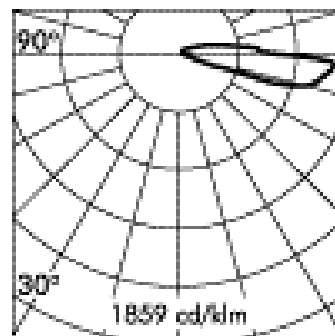
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Bollard
MANUFACTURER	SIMES
SUPPLIER	Zumtobel
PRODUCT NAME	Skill Rectangular Bollard
CATALOGUE NUMBER	S.6350W (24V)

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	18W
LUMEN OUTPUT (lm)	1330lm
LUMINAIRE EFFICACY (lm/w)	14
IP RATING	IP65
OPTICAL DISTRIBUTION	Asymmetric
MOUNTING TYPE	Ground recessed
FINISH	Aluminium Grey - TBC by Architect
DIMENSIONS (mm)	320 x 80 x 220
CUTOUT	NA
WEIGHT (kg)	0.61 Kg

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	Paul Aitken
TEL:	(0)7971 089 341
EMAIL:	Paul.aitken@zumtobelgroup.co

COLOUR TEMPERATURE	3000K
COLOUR RENDERING	90
COLOUR CONSISTENCY	3 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	Remote
IP RATING	NA
DIMMING RANGE	100% - 0%
CONTROL PROTOCOL	DALI
RATED LIFE	50.000 hours at L70

LUMINAIRE ACCESSORIES:	S.6359 Steel flange with stainless steel screws
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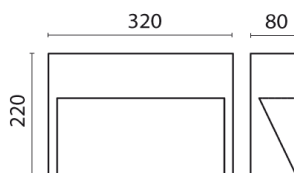
IMPORTANT REQUIREMENTS:	Driver to be located in accessible, well-ventilated location indoors or in IP67 rated housing. 15m max distance from driver to luminaire. 120W driver can utilise 6 fittings. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance for concealed cable route.
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IMPORTANT NOTES	All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.
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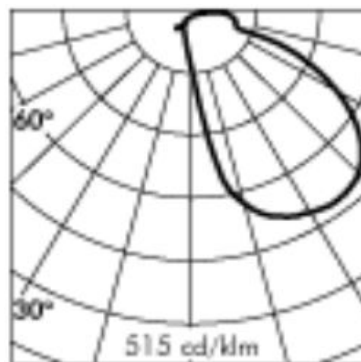
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Uplighting Gracie statue
MANUFACTURER	Weef
SUPPLIER	Fagerhult
PRODUCT NAME	ETC120-GB LED
CATALOGUE NUMBER	185-3449

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	7.7W
LUMEN OUTPUT (lm)	699 lm
LUMINAIRE EFFICACY (lm/w)	90.78 lm/W
IP RATING	IP67
OPTICAL DISTRIBUTION	Symmetrical medium
MOUNTING TYPE	Inground flush
FINISH	Stainless steel
DIMENSIONS (mm)	Ø160 x 195
CUTOUT	NA
WEIGHT (kg)	3.8 Kg

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	Stuart Cain
TEL:	+44 (0) 7795 195214
EMAIL:	Stuart.cain@fagerhult.co.uk

COLOUR TEMPERATURE	2700 K
COLOUR RENDERING	80 Ra
COLOUR CONSISTENCY	3 Step MacAdam
UGR	NA

DRIVER DETAILS:

TYPE	Integral
IP RATING	NA
DIMMING RANGE	100% - 0%
CONTROL PROTOCOL	DALI
RATED LIFE	60.000 hours at L70

LUMINAIRE ACCESSORIES: 185-3449 Honeycomb louvre, 185-0923 Installation blackout

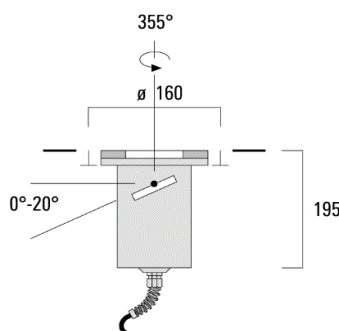
IMPORTANT REQUIREMENTS: Allowance to be made for drainage. Refer to manufacturer's drainage requirements.

IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

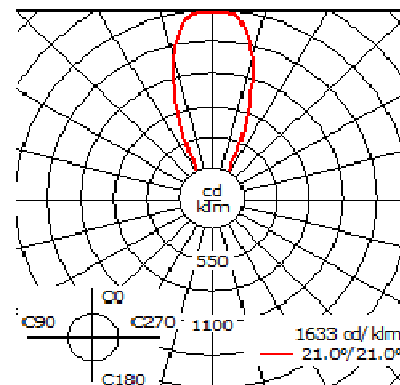
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Markers in landscape paving
MANUFACTURER	Lec Lyon
SUPPLIER	All Urban
PRODUCT NAME	Pyramid
CATALOGUE NUMBER	2852H

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	2.64W
LUMEN OUTPUT (lm)	Manufacturer to confirm
LUMINAIRE EFFICACY (lm/w)	Manufacturer to confirm
IP RATING	IP68
OPTICAL DISTRIBUTION	Homogeneous
MOUNTING TYPE	Flush recessed
FINISH	NA
DIMENSIONS (mm)	150 x 150 x 239
CUTOUT	NA
WEIGHT (kg)	0.88 Kg

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	Alice Skelton
TEL:	+44 (0) 1926 314 313
EMAIL:	alice@allurban.co.uk

COLOUR TEMPERATURE	2700 K
COLOUR RENDERING	80
COLOUR CONSISTENCY	-
UGR	-

DRIVER DETAILS:

TYPE	Remote
IP RATING	NA
DIMMING RANGE	100% - 0%
CONTROL PROTOCOL	DALI
RATED LIFE	TBC

LUMINAIRE ACCESSORIES:	Flat homogeneous window
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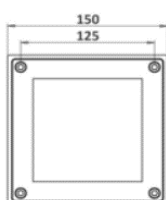
IMPORTANT REQUIREMENTS: A natural soakaway system or a mechanical type is required to allow natural soakaway of any excess water rainfall or flooding. Driver to be located in accessible, well-ventilated location indoors or in IP65 rated housing. Based on 1.5mm/2.5mm cable size driver distance from the luminaire is 20m/30m. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance for concealed cable route.

IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

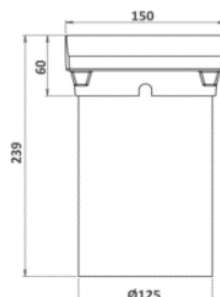
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:Kevin Mitchell

TEL:07850 921075

EMAIL:KevinMitchell@dwwindsor.com

COLOUR TEMPERATURE2700 K

COLOUR RENDERING80

COLOUR CONSISTENCY -

UGR

NA

DRIVER DETAILS:

TYPERemote

IP RATINGNA

DIMMING RANGE100% - 0%

CONTROL PROTOCOLDALI

RATED LIFE

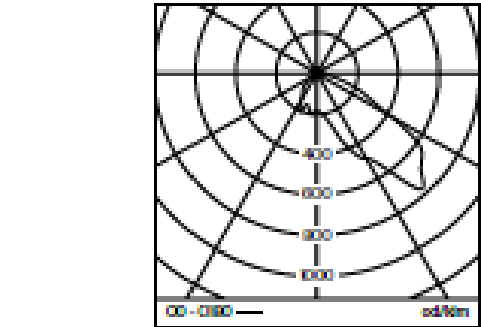
TBC

LUMINAIRE ACCESSORIES: DW Winsdor will also supply the handrail. Lightig will be integrated into the handrail and be delivered as a package.

IMPORTANT REQUIREMENTS: Luminaire to be suitably mounted within handrail. Driver to be located in an accessible, well-ventilated location indoors or in IP67 rated housing with suitable soak away. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance to be made for concealed cable route within handrail uprights and through internal handrail.

IMPORTANT NOTES All wiring, couduits, containment routes etc. to Electrical Engineers drawings and specifications.

REFERENCE IMAGES



Luminaire reference:

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:Kevin Mitchell

TEL:07850 921075

EMAIL:KevinMitchell@dwwindsor.com

COLOUR TEMPERATURE2700 K

COLOUR RENDERING80

COLOUR CONSISTENCY -

UGR

NA

DRIVER DETAILS:

TYPERemote

IP RATINGNA

DIMMING RANGE100% - 0%

CONTROL PROTOCOLDALI

RATED LIFE

TBC

LUMINAIRE ACCESSORIES: DW Winsdor will also supply the handrail. Lightig will be integrated into the handrail and be delivered as a package.

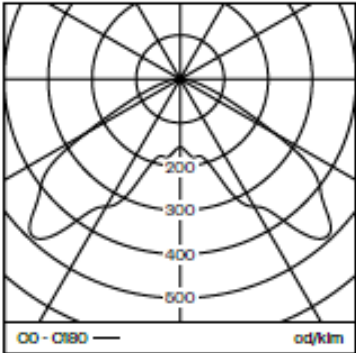
IMPORTANT REQUIREMENTS: Luminaire to be suitably mounted within handrail. Driver to be located in an accessible, well-ventilated location indoors or in IP67 rated housing with suitable soak away. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance to be made for concealed cable route within handrail uprights and through internal handrail.

IMPORTANT NOTES All wiring, couduits, containment routes etc. to Electrical Engineers drawings and specifications.

REFERENCE IMAGES



Product image



Polar curve

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Integrated bench lighting
MANUFACTURER	LED Linear
SUPPLIER	Architectural FX
PRODUCT NAME	VarioLED Flex Hydra HD6
CATALOGUE NUMBER	VENUSW8201040SV IP67

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	6.2W/m
LUMEN OUTPUT (lm)	198lm/m
LUMINAIRE EFFICACY (lm/w)	32lm/m
IP RATING	IP67
OPTICAL DISTRIBUTION	Symmetrical
MOUNTING TYPE	Integrated into bench detail
Finish	NA
DIMENSIONS (mm)	L: refer to lighting layout, W: 18mm, H:17mm
CUTOUT	NA
WEIGHT (kg)	NA

CONTACT:	James Hamilton
TEL:	+44 (0) 1344 291536
EMAIL:	jh@architecturalfx.co.uk

COLOUR TEMPERATURE	2200 K
COLOUR RENDERING	95
COLOUR CONSISTENCY	3 Step MacAdam
UGR	NA

DRIVER DETAILS:

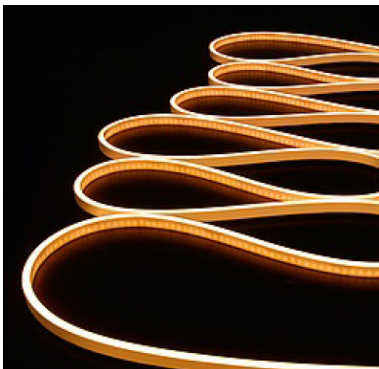
TYPE	Remote
IP RATING	IP67
DIMMING RANGE	100% - 0.1%
CONTROL PROTOCOL	DALI
RATED LIFE	>60.000 hours at L80

LUMINAIRE ACCESSORIES:	Mounting channel, mounting clips
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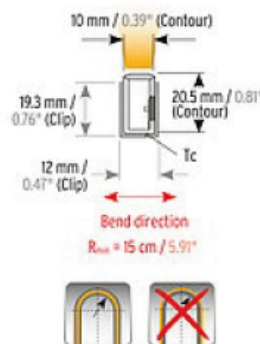
IMPORTANT REQUIREMENTS: 5m max series luminaire length. Max distance from luminaire to driver (based on 5m length of product) is 25m in 1.5mm CSA cable and 44m in 2.5mm CSA cable. Driver to be located in accessible, well-ventilated location indoors or in IP67 rated housing. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance for concealed cable route.

IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

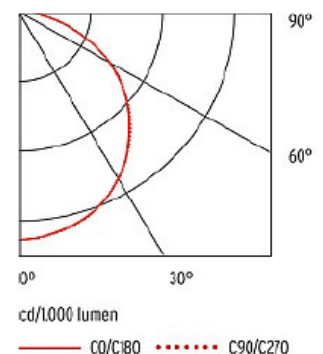
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:
TEL:
EMAIL:

COLOUR TEMPERATURE
COLOUR RENDERING
COLOUR CONSISTENCY
UGR

DRIVER DETAILS:
TYPE
IP RATING
DIMMING RANGE
CONTROL PROTOCOL
RATED LIFE

COLOUR TEMPERATURE
COLOUR RENDERING
COLOUR CONSISTENCY
UGR

DRIVER DETAILS:
TYPE
IP RATING
DIMMING RANGE
CONTROL PROTOCOL
RATED LIFE

LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION
MANUFACTURER
SUPPLIER
PRODUCT NAME
CATALOGUE NUMBER

DESCRIPTION:
LUMINAIRE DETAILS:
LAMP TYPE/SOURCE
WATTAGE (W)
LUMEN OUTPUT (lm)
LUMINAIRE EFFICACY (lm/w)
IP RATING
OPTICAL DISTRIBUTION
MOUNTING TYPE
FINISH
DIMENSIONS
CUTOUT
WEIGHT (kg)

LUMINAIRE ACCESSORIES:

IMPORTANT REQUIREMENTS: **OMITTED**

IMPORTANT NOTES

REFERENCE IMAGES

Product image

Product dimensions

Polar curve

Luminaire reference:

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:
TEL:
EMAIL:

COLOUR TEMPERATURE
COLOUR RENDERING
COLOUR CONSISTENCY
UGR

DRIVER DETAILS:
TYPE
IP RATING
DIMMING RANGE
CONTROL PROTOCOL
RATED LIFE



LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION
MANUFACTURER
SUPPLIER
PRODUCT NAME
CATALOGUE NUMBER

DESCRIPTION:
LUMINAIRE DETAILS:
LAMP TYPE/SOURCE
WATTAGE (W)
LUMEN OUTPUT (lm)
LUMINAIRE EFFICACY (lm/w)
IP RATING
OPTICAL DISTRIBUTION
MOUNTING TYPE
FINISH
DIMENSIONS
CUTOUT
WEIGHT (kg)

LUMINAIRE ACCESSORIES:

IMPORTANT REQUIREMENTS: **OMITTED**

IMPORTANT NOTES

REFERENCE IMAGES

Product image

Product dimensions

Polar curve

**LUMINAIRE SPECIFICATION
ORDERING INFORMATION****MANUFACTURER/SUPPLIER INFORMATION****For attention of:**

contractor / landscape architect / conservation architect / heritage consultant / electrical installer

Historic street light In the context of Rochdale

The grounds of Rochdale Town Hall are home to 2 no types of historic street light. These contribute to the atmosphere and setting of the public realm both at night and during the day through their decorative form and the contribution of a gently glowing light source. For the Benefit of the project and success of the public realm it is proposed that these are kept and restored.

These include –

4 x Historic lantern - diffuse globe lantern - reference X11

2 x Mayoral Column - diffuse globe lantern - reference X12

It is understood that these have been refurbished in the past by a local company. The paintwork is now visibly in disrepair and the quality and technology of the lighting is currently unknown. It is anticipated that not only the paintwork requires restoration but that the lighting technology and glass shade would benefit from replacement or repair.

Lighting intent and further design requirements:

For the restoration of the historic lanterns to be completed services are required to be carried out by the contractor and other specialists in order to achieve the design intent.

The lighting design provided for Rochdale Town Hall Landscape includes a contribution of artificial light provided by the historic lanterns. The lighting calculations undertaken by Buro Happold estimate the requirements based on a similar opal globe luminaire type with close matching distribution and scale. The details of the technical requirements needed to achieve the design intent including lumen output, and colour temperature are included in this luminaire schedule on the following pages. In order to establish the best course of action beyond the lighting design technical requirements we recommend the following.

1. Historic lighting survey both structural, and electrical is undertaken to establish condition and lighting technology
2. Conservation architect reviews the historic lighting column and provides advice on the appropriate colouration for the columns to be restored.
3. Column manufacturer provides fixing details for globe lantern top and cable route and accessible door to base of columns for maintenance.

The contractor will need to ensure that adequate cabling routes are provided through the plinth and if required space is allocated within the base of the column for remote LED DALI driver with suitable access. Requirement for driver enclosure to be established through survey and discussion with the restoration company on their electrical requirements.

Historic lighting restoration implementation:

3. Contractor appoints a restoration company (Columns by Great British Lighting and Calibre Metal)
4. Restoration company provides contractor with a proposal for restoration based on the survey and technical lighting requirements, landscape proposal and conservation architect requirements
5. Buro Happold to review lighting upgrade proposal for compliance with design intent. Contractor to provide the technical proposal to BH for review.
5. Restoration company undertakes lamp / luminaire replacement and column restoration in conjunction with relevant parties to ensure fixing methods, electrical requirements and lighting performance are met.

LUMINAIRE SPECIFICATION

ORDERING INFORMATION

LUMINAIRE FUNCTION	Feature historic lantern (performance only)	CONTACT:
MANUFACTURER	METCRAFT Lighting	TEL:
SUPPLIER	METCRAFT Lighting	EMAIL:
PRODUCT NAME	Light globe	
CATALOGUE NUMBER	KEATS/400/OP/IP65/STELLA-HB-WWW/20W/2.7K/DALI/861mA/60/9005	

MANUFACTURER/SUPPLIER INFORMATION

CONTACT: **Shane Footlight**
TEL: 0161 683 4298/07970381022
EMAIL: Shane.Lightfoot@metcraftlighti

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED	COLOUR TEMPERATURE	2700 K
WATTAGE (W)	20 W	COLOUR RENDERING	80 Ra
LUMEN OUTPUT (lm)	2400 lm	COLOUR CONSISTENCY	3 Step MacAdam
LUMINAIRE EFFICACY (lm/w)	-	UGR	-
IP RATING	IP67 globe		
OPTICAL DISTRIBUTION	Symmetrical 360 degrees	DRIVER DETAILS:	
MOUNTING TYPE	pole top	TYPE	Integral
FINISH	Frosted	IP RATING	NA
DIMENSIONS	400 diameter	DIMMING RANGE	NA
CUTOUT	NA	CONTROL PROTOCOL	Dali
WEIGHT (kg)	3 Kg	RATED LIFE	50.000 hours

LUMINAIRE ACCESSORIES:

LED integral to globe.

Polycarbonate globe - To be determined by globe manufacturer specialist

RAL finish of spigot to be confirmed by landscape architect and contractor to provide to manufacturer

IMPORTANT REQUIREMENTS:

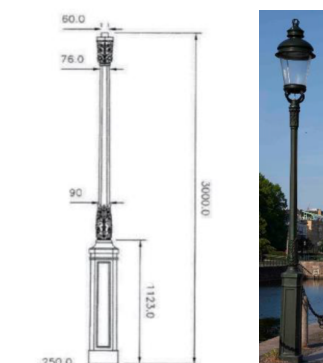
Full details of the replacement optics for the Historical lanterns shall be submitted to the Authority with revised design calculations, with the proposed lantern included for review and provide approval acceptance. Landscape architect and lighting designer to review. Contractor to provide relevant technical submittal for review.

IMPORTANT NOTES

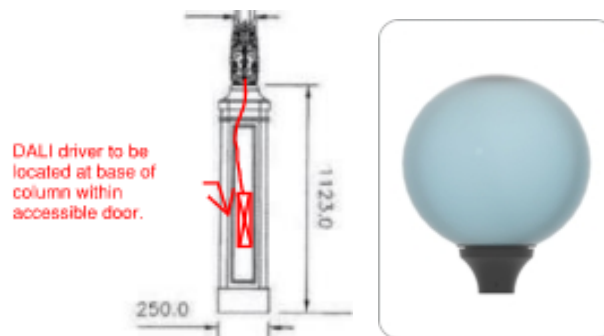
All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

Calibre are producing the historic column. Coordination between Calibre and the electrical requirements including dali driver locations within the base of the column. Bespoke Spigot Adaptor to fit onto the Rochdale Town Hall Columns and to accept a Keats Globe, made from stainless steel and painted.

REFERENCE IMAGES



Historic lantern images



lantern with spigit

Dimensions to be determined following site survey and manufacturers detailing and fixing arrangements on new calibre column

LUMINAIRE SPECIFICATION
ORDERING INFORMATION

LUMINAIRE FUNCTION	Feature historic lantern (performance only)	CONTACT:
MANUFACTURER	METCRAFT Lighting	TEL:
SUPPLIER	METCRAFT Lighting	EMAIL:
PRODUCT NAME	Light globe	
CATALOGUE NUMBER	KEATS/400/OP/IP65/STELLA-HB-WWW/20W/2.7K/DALI/861mA/60/9005	

MANUFACTURER/SUPPLIER INFORMATION

CONTACT: **Shane Footlight**
TEL: 0161 683 4298/07970381022
EMAIL: Shane.Lightfoot@metcraftlighti

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED	COLOUR TEMPERATURE	2700 K
WATTAGE (W)	20 W	COLOUR RENDERING	80 Ra
LUMEN OUTPUT (lm)	2400 lm	COLOUR CONSISTENCY	3 Step MacAdam
LUMINAIRE EFFICACY (lm/w)	-	UGR	-
IP RATING	IP67 globe		
OPTICAL DISTRIBUTION	Symmetrical 360 degrees	DRIVER DETAILS:	
MOUNTING TYPE	pole top	TYPE	Integral
FINISH	Frosted white	IP RATING	NA
DIMENSIONS	400 diameter	DIMMING RANGE	NA
CUTOUT	NA	CONTROL PROTOCOL	Dali
WEIGHT (kg)	3 Kg	RATED LIFE	50.000 hours

LUMINAIRE ACCESSORIES:

LED integral to globe.

Polycarbonate globe - To be determined by globe manufacturer specialist

RAL finish of spigot to be confirmed by landscape architect and contractor to provide to manufacturer

IMPORTANT REQUIREMENTS:

Full details of the replacement optics for the Historical lanterns shall be submitted to the Authority with revised design calculations, with the proposed lantern included for review and provide approval acceptance. Landscape architect and lighting designer to review. Contractor to provide relevant technical submittal for review.

IMPORTANT NOTES

All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

Location for dali driver locations within the base of the column required to be accessible and coordination with Great British lighting. Bespoke Spigot Adaptor to fit onto the Rochdale Town Hall Columns and to accept a Keats Globe, made from stainless steel and painted.

REFERENCE IMAGES



Existing historic lantern images



lantern with spigit

Dimensions to be determined following site survey and manufacturers detailing and fixing arrangements on existing column

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Lighting to terrace ramps
MANUFACTURER	Simes
SUPPLIER	Simes
PRODUCT NAME	NanoLED
CATALOGUE NUMBER	S.3317W

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	3.1W
LUMEN OUTPUT (lm)	89lm
LUMINAIRE EFFICACY (lm/w)	29lm/w
IP RATING	IP67
OPTICAL DISTRIBUTION	Asymmetric
MOUNTING TYPE	Recessed to wall
FINISH	Stainless steel
DIMENSIONS	85 x 125
CUTOUT	NA
WEIGHT (kg)	1.09 Kg

MANUFACTURER/SUPPLIER INFORMATION

CONTACT:	Paul Aitken
TEL:	44 (0)7971 089 341
EMAIL:	paul.aitken@zumtobelgroup.co

COLOUR TEMPERATURE	3000 K
COLOUR RENDERING	90 Ra
COLOUR CONSISTENCY	3 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	Remote
IP RATING	NA
DIMMING RANGE	NA
CONTROL PROTOCOL	Switched
RATED LIFE	70.000 hours

LUMINAIRE ACCESSORIES: Remote power supply, cable gland

Half moon glare shield to be included if not as standard.

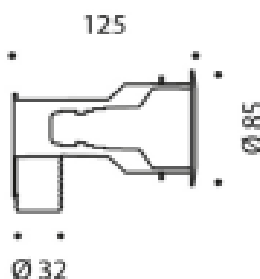
IMPORTANT REQUIREMENTS: Driver to be located in accessible, well-ventilated location indoors or in IP67 rated housing. 15m max distance from driver to luminaire. 120W driver can utilise 6 fittings. All required accessories to be supplied to enable luminaire installation as per design intent and including IP68 connectors. Allowance for concealed cable route.

IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

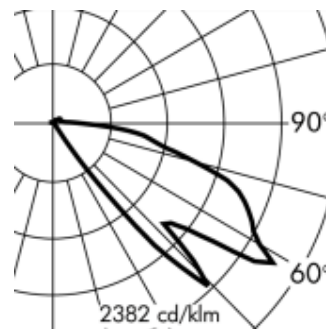
REFERENCE IMAGES



Product image



Product dimensions



Polar curve

Luminaire reference:

LUMINAIRE SPECIFICATION ORDERING INFORMATION

LUMINAIRE FUNCTION	Store lighting
MANUFACTURER	Thorn
SUPPLIER	Thorn
PRODUCT NAME	Aquaforce Pro
CATALOGUE NUMBER	92903544

DESCRIPTION:

LUMINAIRE DETAILS:

LAMP TYPE/SOURCE	LED
WATTAGE (W)	21.5W
LUMEN OUTPUT (lm)	2900lm
LUMINAIRE EFFICACY (lm/w)	135
IP RATING	IP66
OPTICAL DISTRIBUTION	General lighting
MOUNTING TYPE	Wall mounted
FINISH	Aluminium Grey
DIMENSIONS (mm)	1100 x 92 x 90
CUTOUT	NA
WEIGHT (kg)	1.74 Kg

CONTACT:	Paul Aitken
TEL:	(0)7971 089 341
EMAIL:	Paul.aitken@zumtobelgroup.co

COLOUR TEMPERATURE	4000K
COLOUR RENDERING	80
COLOUR CONSISTENCY	3 Step MacAdam
UGR	-

DRIVER DETAILS:

TYPE	Integral
IP RATING	NA
DIMMING RANGE	100% - 0%
CONTROL PROTOCOL	DALI
RATED LIFE	50.000 hours at L80

LUMINAIRE ACCESSORIES: Wall mounted brackets

IMPORTANT REQUIREMENTS: Contractor to include presence detector to enable lighting to automatically switch on as people approach the bin store. Luminaire to switch off after 10minutes after presence undetected.

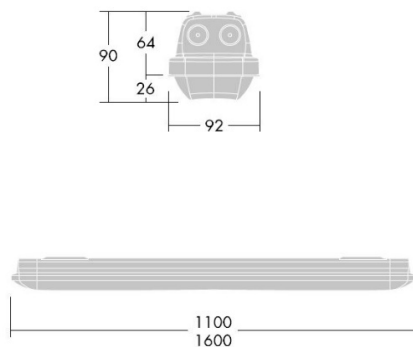
IMPORTANT NOTES All wiring, conduits, containment routes etc. to Electrical Engineers drawings and specifications.

Luminaire must have sufficient glare control to suit application

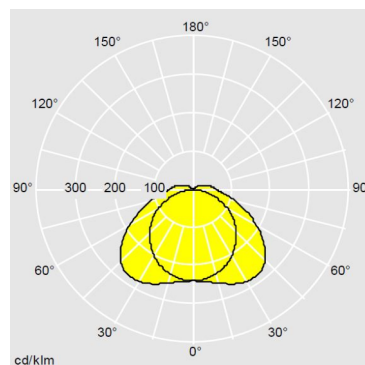
REFERENCE IMAGES



Product image



Product dimensions



Polar curve