HOLOPHANE®

AcuityBrands.
Expanding the boundaries of lighting™



FACTOR™

FACTOR™ SMALL

factor™ & factor™small

FACTOR™
FACTOR™ SMALL









Optical Performance

Heat Management

Long System Life

Reduced Maintenance

energyefficient









FACTOR™ and **FACTOR**™ **Small** from Holophane, are dedicated LED luminaires that deliver a variety of efficient lumen per watt packages with excellent optical performance. With their precision engineered optics and sleek body design - perfect for dissipating heat away from the LEDs and extending the luminaire life, FACTOR & FACTOR Small give the complete cost saving solution for street lighting environments. With a range of delivered lumen packages equivalent from 35W to 100W ceramic metal halide lamps, FACTOR & FACTOR Small deliver efficient sustainable lighting solutions that have the flexibility to meet today's and tomorrow's lighting requirements.

FACTOR & FACTOR Small's design ensures cool operation that keeps it running for the long haul.

optics / light source

> Lumen package of between 2000 - 11000 lumens.
> Two dedicated street lighting optics

applications

> S-Class, ME-Class, Pedestrian Areas, Residential Areas and Car Parks

approvals

Complies with EN60598

CE

IP65 light engines

TA: Rated for -40°C to 40°C

For further information please visit the Holophane website www.holophane.co.uk

Typical Luminaire Performance

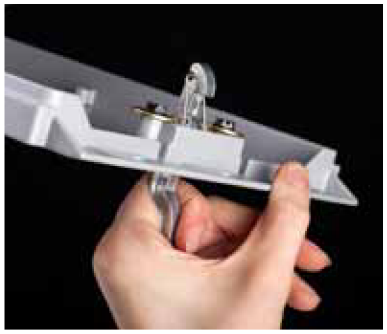
Configuration	Delivered Lumens	Power Consumption	Drive Current	Rated Life of LED Module (L70F50 @Tq 20°C)*
FACTOR				
FTR.L034	c.3000	38W	350mA	100,000+ hrs
FTR,L064	c.6000	73W	700mA	100,000+ hrs
FTR.L074	c.7000	70W	350mA	100,000+ hrs
FTR.L114	c.14000	140W	700mA	100,000+ hrs
FACTOR Small				
FTS.L024	c.2000	25W	350mA	100,000+ hrs
FTS.L034	c.3000	37W	525mA	100,000+ hrs
FTS.L044	c.4000	50W	700mA	95,000 hrs

Note: Data is correct at time of print.

* For other life metric data in line with IEC PAS62722-2-1 and 62717 contact your Holophane Representative for details.



Two sizes to deliver a variety of lumen packages



Tool less trigger latch entry



Range of lumen packages



External fins to dissipate heat

specification

The 'finned' luminaire body, designed to dissipate heat, is manufactured from high pressure die cast aluminium that conforms to EN1706 AC-46500. A die cast aluminium door with tool less trigger latch allows access to the gear compartment concealing the IP65 control gear and connectors. The IP65 LED optical modules, with individual lenses, are mounted directly to the cast aluminium housing and wired in series. A thermal transfer interface is sandwiched between the LED module(s) and high grade aluminium housing to transfer heat away from the LEDs and dissipate through the 'finned' housing for cooling. FACTOR & FACTOR Small have been specifically designed for side entry mounting suitable for 42mm side entry. Option of 60mm version is available with code .SE60.

features and benefits

Sleek Design with tool-less access

> FACTOR & FACTOR Small's diecast aluminium housing acts as its primary heat sink. Its longitudinal fins employ conductive cooling techniques to dissipate heat away from the key LED components and extend luminaire life.

> A die-cast trigger latch allows easy tool less access into the luminaire during installation and maintenance visits.

Exceptional Performance

> Offering four lumen packages ranging from 2000 lm to 11000 lm with efficiencies of up to 90 lpw (Lumens Per Watts).

> Two optimised roadway distributions (asymmetric and long & narrow) delivered by quality LEDs and bespoke UV stabilised optics

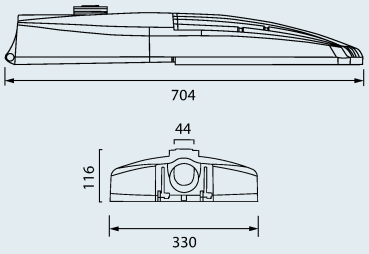
> LED light engines with 0% ULOR ensuring night time friendly.

Fully Maintainable Performance

> Single tool-less latch access to the luminaire ensures straightforward entry to the luminaire at installation and maintenance.

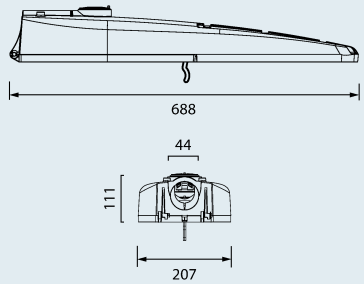
> Unique IP65 rated LED light engines that are interchangeable ensuring a futureproof and maintainable LED luminaire.

Factor (FTR) dimensions in mm



Factor is suitable for 42mm side entry as standard. The option of 60mm side entry is available with option code .SE60.

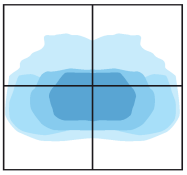
Factor Small (FTS)



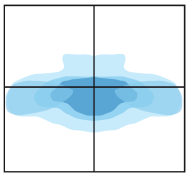
Factor Small is suitable for 42mm side entry as standard. The option of 34mm or 60mm side entry is available with option codes .SE34 or .SE60.

light distribution

Asymmetric



Long & Narrow



weight

Factor	12.0 kg
Factor Small	6.3 kg

windage (effective projected area)

Factor	0.084 m^2
Factor Small	0.071 m^2

Note: The specifications of the Holophane luminaire and columns represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue 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.

Factor (FTR)



Typical spacing
36m spacing mounted **at** 6m

typical spacing

> Designed to S4, BSEN13201 P2, 2003
> 6m mounting height, 2 lanes, 10m road width with 2m setback.
> Achieving 36m max spacing with 0.22 uniformity.

Factor Small (FTS)

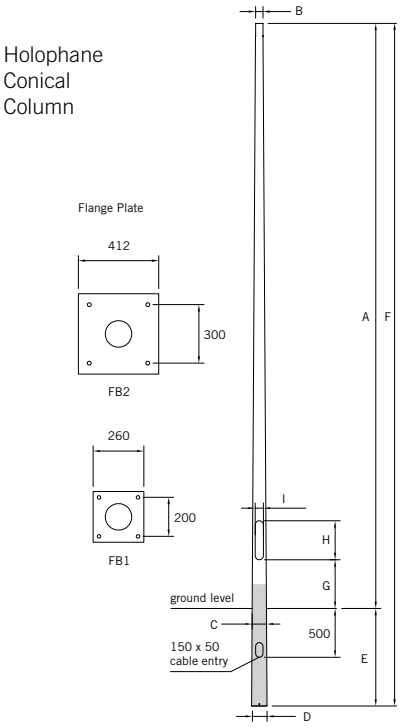


Typical spacing
32m spacing mounted **at** 6m

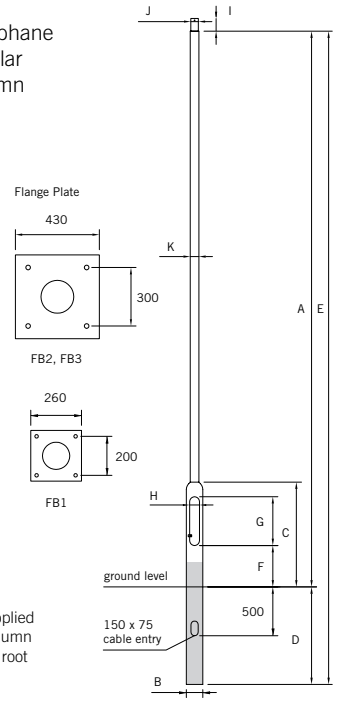
typical spacing

> Designed to S4, BSEN13201 P2, 2003
> 6m mounting height, 2 lanes, 10m road width with 2m setback.
> Achieving 32m max spacing with 0.25 uniformity.

Holophane Conical Column



Holophane Tubular Column



All columns are supplied with Earthing on column doors and Bitumen root as a standard.

Holophane Conical Column

Height (m)	Nominal Height	Top Diameter	Base Diameter	Root End Diameter	Planting Depth	Overall Length	Door to Ground	Door Opening Length	Door Opening Width	Weight kg*	Bending Moment Nm
drawing ref	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**		
3m std	3000	76	127	141	800	3800	425	400	85	33.68	5040
4m std	4000	76	118	126	800	4800	425	400	85	39.08	3890
4m hd	4000	76	133	144	800	4800	425	400	85	40.08	5640
5m std	5000	76	128	136	800	5800	425	400	85	49.45	4900
5m hd	5000	76	147	158	800	5800	425	400	85	51.65	6960
6m std	6000	76	138	148	1000	7000	425	400	85	65.84	5800
6m hd	6000	76	161	175	1000	7000	425	400	85	67.39	8070
8m std	8000	76	158	170	1200	9200	425	500	100	119	11920
8m hd	8000	76	189	206	1200	9200	425	400	85	124.45	18000

Code	Height	Flange Plate	Bolt
HELC.FS1	3-5m Poles	FB1	M18 x 400
HELC.FS2	6-8m Poles	FB2	M24 x 500

* Exclusion TBC

Holophane Tubular Column

Height (m)	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 Nm
drawing ref	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**		
3m std	3000	140	1075	800	3800	425	500	100	–	–	76	28.42	TBC
4m std	4000	140	1075	800	4800	425	500	100	–	–	76	32.96	6500
4m hd	4000	168	1250	800	4800	425	500	100	130	76	89	51.6	9865
5m std	4700	140	1075	800	5500	425	500	100	–	–	76	36.13	6200
5m hd	4700	168	1075	800	5500	425	500	100	130	76	89	50.7	9865
6m std	5700	140	1075	1000	6700	425	500	100	–	–	76	42.69	6000
6m hd	5700	168	1075	1000	6700	425	500	100	130	76	89	60.07	9550
8m std	7700	168	1250	1200	8900	500	600	115	130	76	89	77.30	10100
8m hd	7700	168	1250	1200	8900	500	600	115	250	102	114	96.32	14000

Code	Height	Flange Plate	Bolt
HELB.FS1	3-5m Poles	FB1	M18 x 400
HELB.FS2	6-8m Poles	FB2	M24 x 500

* Exclusion TBC

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

std = Standard **hd** = Heavy Duty
Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.

Code						
FTR	Factor Luminaire					
	Code	**Lamp Type** (required)				
	.L034	LED light engine producing c.3,000 lm with a nominal 4000˚K colour temperature				
	.L064	LED light engine producing c.6,000 lm with a nominal 4000˚K colour temperature				
	.L074	LED light engine producing c.7,000 lm with a nominal 4000˚K colour temperature				
	.L114	LED light engine producing c.11,000 lm with a nominal 4000˚K colour temperature				
		Code	**Light Distribution** (required)			
		.AY	Asymmetric			
		.NR	Long and Narrow			
			Code	**Colour** (required)		
			.C1	White (RAL9016)		
			.C4	Graphite (RAL7011)		
			.C6	Grey (RAL7035)		
			.C7	Black (RAL9005)		
			.C9	Metallic Silver (RAL9006)		
			.RAL****	(customer choice)		
				Code	**Options**	
				.T1	Complete with NEMA socket. (To accept standard NEMA Photocell, available from Holophane)	
				.TSZ	Complete with miniature 70 lux factory fitted photocell. (Zodion SS12)	
				.TSZA	Complete with miniature 55 lux factory fitted photocell. (Zodion SS12A)	
				.TSZB	Complete with miniature 35 lux factory fitted photocell. (Zodion SS12B)	
					Code	**Fixing Method** (optional)
					.SE60	60mm side entry mounting
Example	FTR	.L034	.AY	.C1	.TSZ	.SE60

Code						
FTS	Factor Small					
	Code	**Lamp Type** (required)				
	.L024	LED light engine producing c.2,000 lm with a nominal 4000˚K colour temperature				
	.L034	LED light engine producing c.3,000 lm with a nominal 4000˚K colour temperature				
	.L044	LED light engine producing c.4,000 lm with a nominal 4000˚K colour temperature				
		Code	**Light Distribution** (required)			
		.AY	Asymmetric			
		.NR	Long and Narrow			
			Code	**Colour** (required)		
			.C1	Smooth White (RAL9016)		
			.C4	Graphite (RAL7011)		
			.C6	Grey (RAL7035)		
			.C7	Black (RAL9005)		
			.C9	Metallic Silver (RAL9006)		
			.RAL****	(customer choice)		
				Code	**Options**	
				.T1	Complete with NEMA socket. (To accept standard NEMA Photocell, available from Holophane)	
				.TSZ	Complete with miniature 70 lux factory fitted photocell. (Zodion SS12)	
				.TSZA	Complete with miniature 55 lux factory fitted photocell. (Zodion SS12A)	
				.TSZB	Complete with miniature 35 lux factory fitted photocell. (Zodion SS12B)	
					Code	**Fixing Method** (optional)
					.SE60	60mm side entry mounting
					.SE34	34mm side entry mounting
Example	FTS	.L024	.AY	.C1	.T1	.SE60

Note: Factor and Factor Small are offered with 42mm side entry as standard

	Code								
	FTSB	Factor Small Tubular Compartment Column							
	FTSC	Factor Small Conical Steel Column							
	FTRB	Factor Tubular Compartment Column							
	FTRC	Factor Conical Steel Column							
		Code	**Luminaire Mounting Height**						
		.3	3 metres						
		.4	4 metres						
		.5	5 metres						
		.6	6 metres						
		.8	8 metres (available with FTRB & FTRC only)						
			Code	**Brackets**					
			.1S	Single head short bracket					
			.1L	Single head long bracket					
			.2S	Twin head short bracket					
			.2L	Twin head long bracket					
				Code	**Column Category**				
				.LMZ	For light & medium area wind zones				
				.HVZ	For heavy area wind zones				
				.HEZ	For extra heavy area wind zones				
					Code	**Bracket Angle**			
					.A0	Angle of 0°			
					.A5	Angle of 5°			
						Code	**Colour**		
						.C1	White (RAL9016)		
						.C4	Graphite (RAL7011)		
						.C6	Grey (RAL7035)		
						.C7	Black (RAL9005)		
						.C9	Metallic Silver (RAL9006)		
						.RAL****	(customer choice)		
							Code	**Optional Base Type**	
							.FB1	Flange Base	
							.FB2	Flange Base (only applicable to FTRB & FTRC)	
								Code	**Optional Column Finish**
								.P1	Black undercoat primed
								.P2	Undercoat primed to match specified RAL colour
									Code **Optional Paint Finish** (Bracket Only)
									.C Enhanced Paint Finish
Example	FTRB	.3	.1S	.LMZ	.A0	.C1	.FB1	.P1	.C

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Holophane Europe Limited
Bond Avenue, Bletchley, Milton Keynes MK1 1JG United Kingdom
Telephone: +44 (0) 1908 649292 UK Fax: +44 (0) 1908 367618
International Fax: +44 (0) 1908 272029
E-mail: info@holophane.co.uk

www.holophane.co.uk

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