STOANE LIGHTING

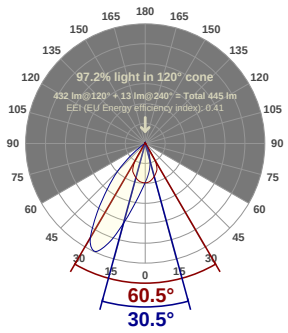
EQUIPMENT DESIGN + MANUFACTURE

Fitting name:
MSL_GTX2.50_9mm Xicato XTM_98CRI_3000K_930lm_Wall Washer

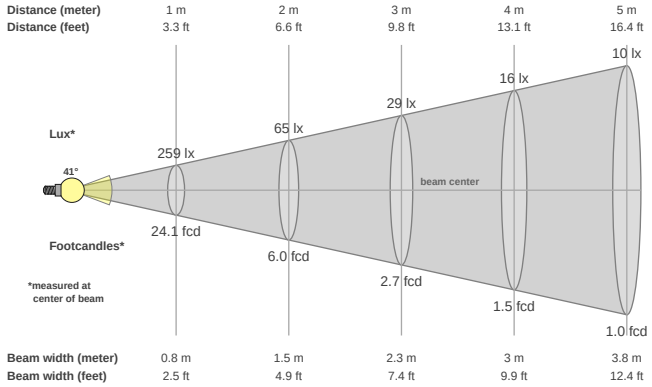
Date:
25/05/2018

Delivered Output: 432 Lumen

LOR: 46% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
41.3°	73.5°	90.5°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
782 cd	97.2%	90.8%

Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
259lx	65lx	29lx	16lx	10lx	7lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
24.1fcd	6fcd	2.7fcd	1.5fcd	1fcd	0.7fcd	0.5fcd	0.4fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

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MSL advise that lighting designers apply a +/- 5% tolerance allowance on the files we provide as subtle variations in system components (eg slight variations in output of LED light sources through a bin) and ambient temperature variations can effect output and distribution slightly.

Glare Evaluation According to UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	19.6	20.4	19.8	20.6	20.8	3.9	4.7	4.1	4.9	5.1
	3H	19.4	20.1	19.7	20.4	20.6	3.8	4.4	4.0	4.7	4.9
	4H	19.4	20.0	19.7	20.3	20.5	3.7	4.3	4.0	4.6	4.8
	6H	19.3	19.9	19.6	20.2	20.5	3.6	4.2	3.9	4.5	4.8
	8H	19.3	19.8	19.6	20.1	20.4	3.6	4.1	3.9	4.4	4.7
	12H	19.2	19.8	19.6	20.1	20.4	3.5	4.1	3.9	4.4	4.7
4H	2H	19.4	20.1	19.7	20.3	20.6	4.3	4.9	4.6	5.2	5.4
	3H	19.3	19.8	19.6	20.1	20.4	4.1	4.7	4.5	5.0	5.3
	4H	19.2	19.7	19.6	20.0	20.3	4.0	4.5	4.4	4.8	5.2
	6H	19.1	19.5	19.5	19.9	20.3	4.0	4.4	4.4	4.7	5.1
	8H	19.1	19.4	19.5	19.8	20.2	3.9	4.3	4.3	4.7	5.1
	12H	19.0	19.4	19.5	19.8	20.2	3.9	4.2	4.3	4.6	5.0
8H	4H	19.1	19.4	19.5	19.8	20.2	3.9	4.3	4.3	4.7	5.1
	6H	19.0	19.3	19.4	19.7	20.1	3.8	4.1	4.3	4.5	5.0
	8H	19.0	19.2	19.4	19.6	20.1	3.8	4.0	4.3	4.5	4.9
	12H	18.9	19.1	19.4	19.6	20.1	3.7	3.9	4.2	4.4	4.9
12H	4H	19.0	19.4	19.5	19.8	20.2	3.9	4.2	4.3	4.6	5.0
	6H	19.0	19.2	19.4	19.6	20.1	3.8	4.0	4.3	4.5	4.9
	8H	18.9	19.1	19.4	19.6	20.1	3.7	3.9	4.2	4.4	4.9
Variation of the observer position for the luminaire distance S											
S = 1.0H		+5.5 / -12.2					+2.5 / -3.7				
S = 1.5H		+7.0 / -20.0					+4.0 / -10.9				
S = 2.0H		+8.6 / -105.3					+5.7 / -87.7				
Standard table		BK00					BK01				
Correction summand		0.9					-13.9				
Corrected glare indices referring to 432lm total luminous flux											

STOANE LIGHTING

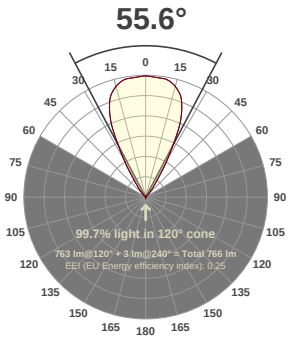
EQUIPMENT DESIGN + MANUFACTURE

Fitting name:
MSL_GTX2.50_9mm Xicato XTM_98CRI_3000K_930lm_ Extra Wide Flood

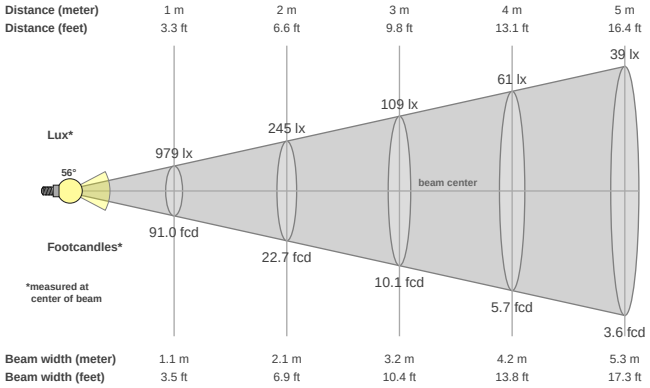
Date:
30/10/2018

Delivered Output: 763 Lumen

LOR: 82% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
55.6°	75.4°	89.3°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
979 cd	99.7%	98.3%

Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
979lx	245lx	109lx	61lx	39lx	27lx	20lx	15lx	12lx	10lx	8lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	3lx	2lx
91fcd	22.7fcd	10.1fcd	5.7fcd	3.6fcd	2.5fcd	1.9fcd	1.4fcd	1.1fcd	0.9fcd	0.8fcd	0.6fcd	0.5fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd	0.3fcd	0.2fcd

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Glare Evaluation According to UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	18.1	18.8	18.4	19.0	19.2	18.1	18.8	18.4	19.0	19.2
	3H	18.0	18.6	18.3	18.8	19.0	18.0	18.6	18.3	18.8	19.0
	4H	17.9	18.5	18.2	18.7	19.0	17.9	18.5	18.2	18.7	19.0
	6H	17.8	18.4	18.2	18.6	18.9	17.8	18.4	18.2	18.6	18.9
	8H	17.8	18.3	18.1	18.6	18.9	17.8	18.3	18.1	18.6	18.9
	12H	17.8	18.2	18.1	18.5	18.8	17.8	18.2	18.1	18.5	18.8
4H	2H	17.9	18.5	18.2	18.7	19.0	17.9	18.5	18.2	18.7	19.0
	3H	17.8	18.2	18.1	18.5	18.8	17.8	18.2	18.1	18.5	18.8
	4H	17.7	18.1	18.1	18.4	18.8	17.7	18.1	18.1	18.4	18.8
	6H	17.6	17.9	18.0	18.3	18.7	17.6	17.9	18.0	18.3	18.7
	8H	17.6	17.9	18.0	18.2	18.6	17.6	17.9	18.0	18.2	18.6
	12H	17.5	17.8	18.0	18.2	18.6	17.5	17.8	18.0	18.2	18.6
8H	4H	17.6	17.9	18.0	18.2	18.6	17.6	17.9	18.0	18.2	18.6
	6H	17.5	17.7	17.9	18.1	18.6	17.5	17.7	17.9	18.1	18.6
	8H	17.4	17.6	17.9	18.1	18.5	17.4	17.6	17.9	18.1	18.5
	12H	17.4	17.5	17.9	18.0	18.5	17.4	17.5	17.9	18.0	18.5
12H	4H	17.5	17.8	18.0	18.2	18.6	17.5	17.8	18.0	18.2	18.6
	6H	17.4	17.6	17.9	18.1	18.5	17.4	17.6	17.9	18.1	18.5
	8H	17.4	17.5	17.9	18.0	18.5	17.4	17.5	17.9	18.0	18.5
Variation of the observer position for the luminaire distance S											
S = 1.0H		+5.8 / -13.7					+5.8 / -13.7				
S = 1.5H		+8.6 / -22.7					+8.6 / -22.7				
S = 2.0H		+10.6 / -99.6					+10.6 / -99.6				
Standard table		BK00					BK00				
Correction summand		-0.6					-0.6				
Corrected glare indices referring to 763lm total luminous flux											

STOANE LIGHTING

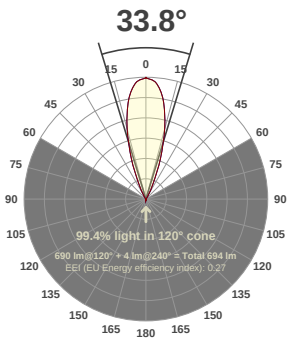
EQUIPMENT DESIGN + MANUFACTURE

Fitting name:
MSL_GTX2.50_9mm Xicato XTM_98CRI_3000K_930lm_Flood

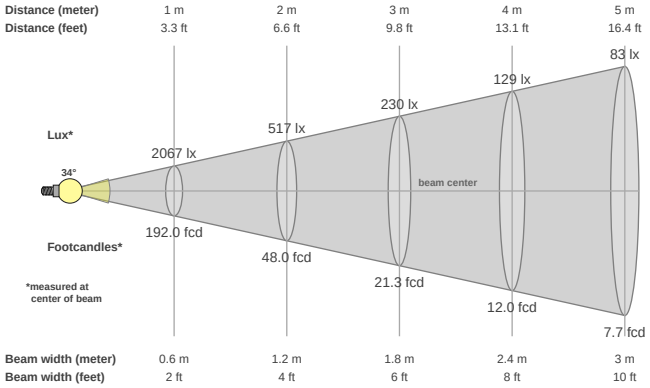
Date:
13/03/2018

Delivered Output: 690 Lumen

LOR: 74% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
33.8°	54°	66.6°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
2067 cd	99.4%	98.8%

Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
2067lx	517lx	230lx	129lx	83lx	57lx	42lx	32lx	26lx	21lx	17lx	14lx	12lx	11lx	9lx	8lx	7lx	6lx	6lx	5lx
192fcd	48fcd	21.3fcd	12fcd	7.7fcd	5.3fcd	3.9fcd	3fcd	2.4fcd	1.9fcd	1.6fcd	1.3fcd	1.1fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd

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Glare Evaluation According to UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	9.2	9.9	9.5	10.0	10.2	9.2	9.9	9.5	10.0	10.2
	3H	9.1	9.7	9.4	9.9	10.1	9.1	9.7	9.4	9.9	10.1
	4H	9.0	9.6	9.3	9.8	10.1	9.0	9.6	9.3	9.8	10.1
	6H	8.9	9.4	9.3	9.7	10.0	8.9	9.4	9.3	9.7	10.0
	8H	8.9	9.4	9.2	9.7	10.0	8.9	9.4	9.2	9.7	10.0
	12H	8.9	9.3	9.2	9.6	9.9	8.9	9.3	9.2	9.6	9.9
4H	2H	9.0	9.6	9.3	9.8	10.1	9.0	9.6	9.3	9.8	10.1
	3H	8.9	9.3	9.2	9.6	9.9	8.9	9.3	9.2	9.6	9.9
	4H	8.8	9.2	9.2	9.5	9.9	8.8	9.2	9.2	9.5	9.9
	6H	8.7	9.1	9.1	9.4	9.8	8.7	9.1	9.1	9.4	9.8
	8H	8.7	9.0	9.1	9.4	9.8	8.7	9.0	9.1	9.4	9.8
	12H	8.7	8.9	9.1	9.3	9.7	8.7	8.9	9.1	9.3	9.7
8H	4H	8.7	9.0	9.1	9.4	9.8	8.7	9.0	9.1	9.4	9.8
	6H	8.6	8.8	9.1	9.2	9.7	8.6	8.8	9.1	9.2	9.7
	8H	8.6	8.7	9.0	9.2	9.6	8.6	8.7	9.0	9.2	9.6
	12H	8.5	8.6	9.0	9.1	9.6	8.5	8.6	9.0	9.1	9.6
12H	4H	8.7	8.9	9.1	9.3	9.7	8.7	8.9	9.1	9.3	9.7
	6H	8.6	8.7	9.0	9.2	9.6	8.6	8.7	9.0	9.2	9.6
	8H	8.5	8.6	9.0	9.1	9.6	8.5	8.6	9.0	9.1	9.6
Variation of the observer position for the luminaire distance S											
S = 1.0H		+5.6 / -9.5					+5.6 / -9.5				
S = 1.5H		+8.4 / -17.8					+8.4 / -17.8				
S = 2.0H		+10.4 / -91.0					+10.4 / -91.0				
Standard table		BK00					BK00				
Correction summand		-9.5					-9.5				
Corrected glare indices referring to 690lm total luminous flux											

STOANE LIGHTING

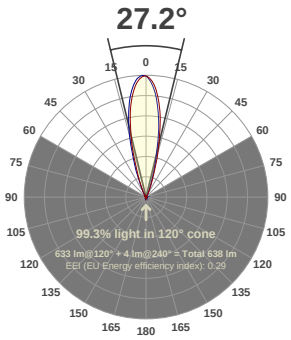
EQUIPMENT DESIGN + MANUFACTURE

Fitting name:
MSL_GTX2.50_9mm Xicato XTM_98CRI_3000K_930lm_Medium

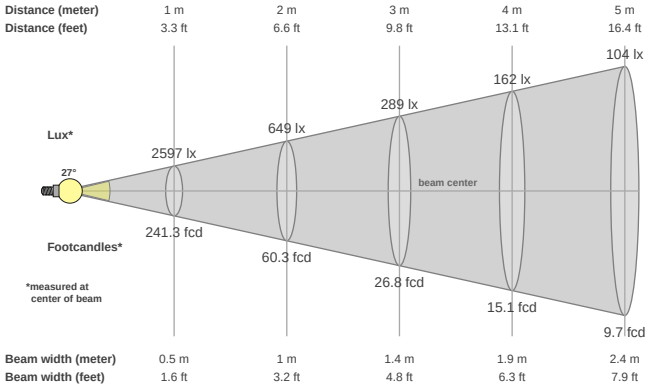
Date:
13/03/2018

Delivered Output: 633 Lumen

LOR: 68% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
27.2°	46.5°	63.2°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
2610 cd	99.3%	98.6%

Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
2597lx	649lx	289lx	162lx	104lx	72lx	53lx	41lx	32lx	26lx	21lx	18lx	15lx	13lx	12lx	10lx	9lx	8lx	7lx	6lx
241.3fcd	60.3fcd	26.8fcd	15.1fcd	9.7fcd	6.7fcd	4.9fcd	3.8fcd	3fcd	2.4fcd	2fcd	1.7fcd	1.4fcd	1.2fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.7fcd	0.6fcd

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p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	10.0	10.6	10.2	10.8	11.0	8.4	9.1	8.7	9.3	9.4
	3H	9.9	10.4	10.1	10.7	10.9	8.3	8.9	8.6	9.1	9.3
	4H	9.8	10.3	10.1	10.6	10.8	8.2	8.8	8.5	9.0	9.3
	6H	9.7	10.2	10.0	10.5	10.8	8.1	8.6	8.5	8.9	9.2
	8H	9.7	10.2	10.0	10.5	10.7	8.1	8.6	8.4	8.9	9.2
	12H	9.6	10.1	10.0	10.4	10.7	8.1	8.5	8.4	8.8	9.1
4H	2H	9.8	10.4	10.1	10.6	10.9	8.2	8.8	8.5	9.0	9.3
	3H	9.7	10.1	10.0	10.4	10.7	8.1	8.5	8.4	8.8	9.1
	4H	9.6	10.0	10.0	10.3	10.7	8.0	8.4	8.4	8.7	9.1
	6H	9.5	9.8	9.9	10.2	10.6	7.9	8.2	8.3	8.6	9.0
	8H	9.5	9.8	9.9	10.2	10.6	7.9	8.2	8.3	8.6	8.9
	12H	9.4	9.7	9.9	10.1	10.5	7.8	8.1	8.3	8.5	8.9
8H	4H	9.5	9.8	9.9	10.2	10.6	7.9	8.2	8.3	8.6	8.9
	6H	9.4	9.6	9.8	10.0	10.5	7.8	8.0	8.2	8.4	8.9
	8H	9.4	9.5	9.8	10.0	10.4	7.7	7.9	8.2	8.4	8.8
	12H	9.3	9.4	9.8	9.9	10.4	7.7	7.8	8.2	8.3	8.8
12H	4H	9.4	9.7	9.9	10.1	10.5	7.8	8.1	8.3	8.5	8.9
	6H	9.4	9.5	9.8	10.0	10.4	7.7	7.9	8.2	8.4	8.8
	8H	9.3	9.4	9.8	9.9	10.4	7.7	7.8	8.2	8.3	8.8
Variation of the observer position for the luminaire distance S											
S = 1.0H		+5.1 / -11.2					+6.1 / -17.5				
S = 1.5H		+7.6 / -17.6					+8.8 / -24.3				
S = 2.0H		+9.5 / -92.5					+10.8 / -90.7				
Standard table		BK00					BK00				
Correction summand		-8.7					-10.3				
Corrected glare indices referring to 633lm total luminous flux											

STOANE LIGHTING

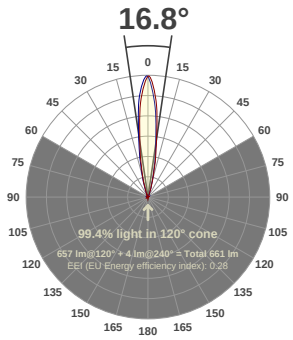
EQUIPMENT DESIGN + MANUFACTURE

Fitting name:
MSL_GTX2.50_9mm Xicato XTM_98CRI_3000K_930lm_Narrow

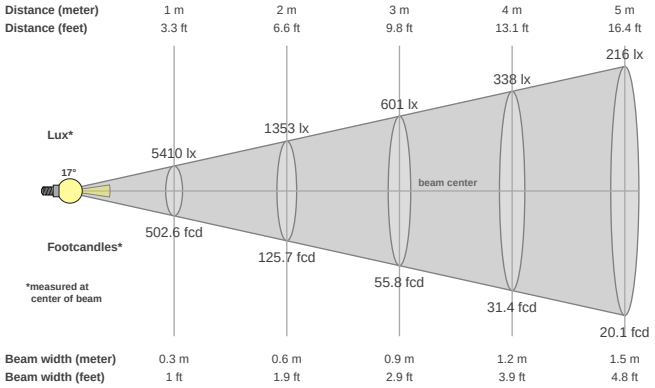
Date:
13/03/2018

Delivered Output: 657 Lumen

LOR: 71% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
16.8°	**34.9°**	**47.9°**

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
5510 cd	**99.4%**	**98.8%**

Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
5410lx	1353lx	601lx	338lx	216lx	150lx	110lx	85lx	67lx	54lx	45lx	38lx	32lx	28lx	24lx	21lx	19lx	17lx	15lx	14lx
502.6fcd	125.7fcd	55.8fcd	31.4fcd	20.1fcd	14fcd	10.3fcd	7.9fcd	6.2fcd	5fcd	4.2fcd	3.5fcd	3fcd	2.6fcd	2.2fcd	2fcd	1.7fcd	1.6fcd	1.4fcd	1.3fcd

Files are generated using the highest CRI and highest output 3000K light source available in the luminaire, other lower outputs and colour temperatures are of course available. Other outputs and colour temperatures are available on request, these may take some time as they must be tested.

* These files are absolute measurements, not relative, as such the LOR is not generated when testing a fitting. To get an idea of LOR we use the measured delivered output in the files and documentation and calculate a ratio using the light source output mentioned in the file and product names. Note that the source output files will be nominal figures provided to us by the light source manufacturers and assuming a max 35°C ambient temperature so this LOR is as stated an indication only.

The power figures in the files have been generated based on the voltage and current to the light source only, not allowing for any driver losses. This is because our fittings are used with a number of different drivers (sometimes integral) and loaded differently, these variations effect the driver power factor and efficiency which in turn skews the power consumption figure.

Files are not always available for the specific combination of beam, accessory, driver selected, so these can be specifically requested. As with requests for specific colour temperatures this can take some time to generate as these combinations must be made then scheduled in to testing. MSL will advise on how long requests for specific data are likely to take.

MSL advise that lighting designers apply a +/- 5% tolerance allowance on the files we provide as subtle variations in system components (eg slight variations in output of LED light sources through a bin) and ambient temperature variations can effect output and distribution slightly.

Glare Evaluation According to UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	6.8	7.4	7.0	7.6	7.8	1.9	2.6	2.2	2.8	3.0
	3H	6.6	7.2	6.9	7.4	7.7	1.8	2.4	2.1	2.6	2.8
	4H	6.5	7.1	6.8	7.3	7.6	1.7	2.3	2.0	2.5	2.8
	6H	6.5	7.0	6.8	7.3	7.5	1.7	2.2	2.0	2.4	2.7
	8H	6.4	6.9	6.8	7.2	7.5	1.6	2.1	2.0	2.4	2.7
	12H	6.4	6.9	6.7	7.2	7.5	1.6	2.0	1.9	2.3	2.7
4H	2H	6.6	7.1	6.9	7.4	7.7	1.8	2.3	2.1	2.6	2.8
	3H	6.5	6.9	6.8	7.2	7.5	1.6	2.1	2.0	2.4	2.7
	4H	6.4	6.8	6.7	7.1	7.4	1.5	1.9	1.9	2.3	2.6
	6H	6.3	6.6	6.7	7.0	7.4	1.5	1.8	1.9	2.1	2.5
	8H	6.3	6.5	6.7	6.9	7.3	1.4	1.7	1.8	2.1	2.5
	12H	6.2	6.5	6.7	6.9	7.3	1.4	1.6	1.8	2.0	2.4
8H	4H	6.3	6.5	6.7	6.9	7.3	1.4	1.7	1.8	2.1	2.5
	6H	6.2	6.4	6.6	6.8	7.3	1.3	1.5	1.8	2.0	2.4
	8H	6.1	6.3	6.6	6.7	7.2	1.3	1.5	1.7	1.9	2.4
	12H	6.1	6.2	6.6	6.7	7.2	1.2	1.4	1.7	1.8	2.3
12H	4H	6.2	6.5	6.7	6.9	7.3	1.4	1.6	1.8	2.0	2.4
	6H	6.1	6.3	6.6	6.7	7.2	1.3	1.5	1.7	1.9	2.4
	8H	6.1	6.2	6.6	6.7	7.2	1.2	1.4	1.7	1.8	2.3
Variation of the observer position for the luminaire distance S											
S = 1.0H		+5.0 / -10.8					+5.8 / -13.1				
S = 1.5H		+7.4 / -18.4					+8.6 / -18.1				
S = 2.0H		+9.2 / -89.8					+10.6 / -83.9				
Standard table		BK00					BK00				
Correction summand		-11.9					-16.7				
Corrected glare indices referring to 657lm total luminous flux											