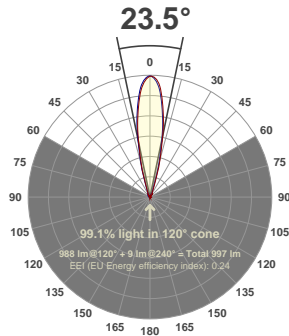


Fitting name:
MSL_BBX.70_9mm Xicato
XIM_80CRI_3000K_XIM_1300lm_Medium

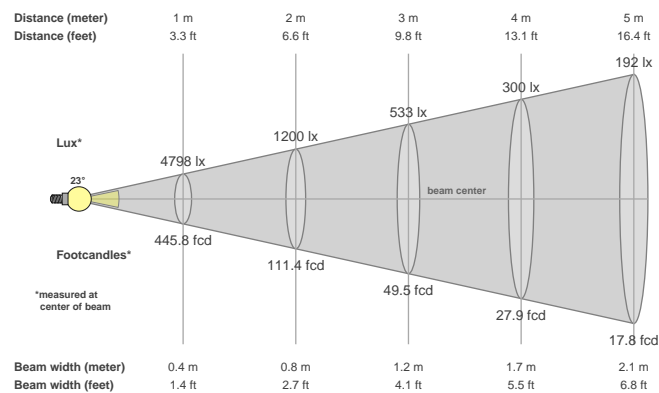
Date:
13/03/2018

Delivered Output: 988 Lumen

LOR: 76% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
23.5°	39.6°	77°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
4813 cd	99.1%	95.7%

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
4798lx	1200lx	533lx	300lx	192lx	133lx	98lx	75lx	59lx	48lx	40lx	33lx	28lx	24lx	21lx	19lx	17lx	15lx	13lx	12lx
445.8fcd	111.4fcd	49.5fcd	27.9fcd	17.8fcd	12.4fcd	9.1fcd	7fcd	5.5fcd	4.5fcd	3.7fcd	3.1fcd	2.6fcd	2.3fcd	2fcd	1.7fcd	1.5fcd	1.4fcd	1.2fcd	1.1fcd

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.

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Glare Evaluation According to UGR

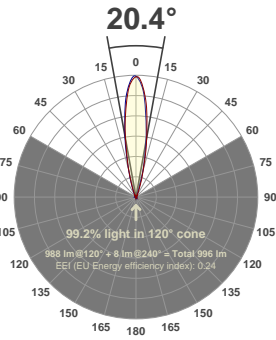
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	14.3	15.0	14.6	15.2	15.4	20.9	21.6	21.2	21.8	22.0
	3H	14.2	14.8	14.5	15.1	15.3	20.8	21.4	21.1	21.7	21.9
	4H	14.1	14.7	14.4	15.0	15.2	20.7	21.3	21.0	21.6	21.8
	6H	14.1	14.6	14.4	14.9	15.2	20.7	21.2	21.0	21.5	21.8
	8H	14.0	14.5	14.4	14.8	15.1	20.6	21.2	21.0	21.4	21.7
	12H	14.0	14.5	14.3	14.8	15.1	20.6	21.1	20.9	21.4	21.7
4H	2H	14.7	15.3	15.0	15.5	15.8	20.8	21.4	21.2	21.7	21.9
	3H	14.5	15.0	14.9	15.3	15.6	20.7	21.2	21.0	21.5	21.8
	4H	14.4	14.9	14.8	15.2	15.5	20.6	21.1	21.0	21.4	21.7
	6H	14.4	14.7	14.8	15.1	15.5	20.6	20.9	21.0	21.3	21.6
	8H	14.3	14.6	14.7	15.0	15.4	20.5	20.8	20.9	21.2	21.6
	12H	14.3	14.6	14.7	15.0	15.4	20.5	20.7	20.9	21.1	21.6
8H	4H	14.3	14.6	14.7	15.0	15.4	20.5	20.8	20.9	21.2	21.6
	6H	14.2	14.5	14.7	14.9	15.3	20.4	20.7	20.9	21.1	21.5
	8H	14.2	14.4	14.7	14.8	15.3	20.4	20.6	20.8	21.0	21.5
	12H	14.1	14.3	14.6	14.8	15.3	20.3	20.5	20.8	21.0	21.4
12H	4H	14.3	14.6	14.7	15.0	15.4	20.5	20.7	20.9	21.1	21.6
	6H	14.2	14.4	14.7	14.8	15.3	20.4	20.6	20.8	21.0	21.5
	8H	14.1	14.3	14.6	14.8	15.3	20.3	20.5	20.8	21.0	21.4
Variation of the observer position for the luminaire distance S											
S = 1.0H		+2.7 / -3.5					+0.7 / -0.7				
S = 1.5H		+5.1 / -23.1					+2.2 / -7.1				
S = 2.0H		+7.7 / -94.2					+4.2 / -101.6				
Standard table		BK00					BK00				
Correction summand		-4.0					2.3				
Corrected glare indices referring to 988lm total luminous flux											

Fitting name:
MSL_BBX.70_9mm Xicato
XIM_80CRI_3000K_XIM_1300lm_Narrow

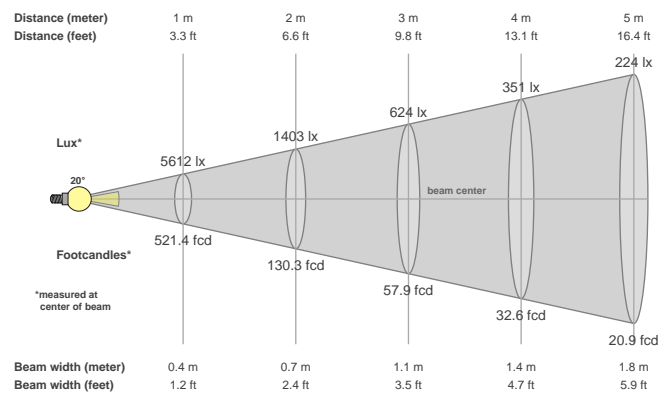
Date:
13/03/2018

Delivered Output: 988 Lumen

LOR: 76% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
20.4°	39°	56.8°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
5776 cd	99.2%	96.4%

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
5612lx	1403lx	624lx	351lx	224lx	156lx	115lx	88lx	69lx	56lx	46lx	39lx	33lx	29lx	25lx	22lx	19lx	17lx	16lx	14lx
521.4fcd	130.3fcd	57.9fcd	32.6fcd	20.9fcd	14.5fcd	10.6fcd	8.1fcd	6.4fcd	5.2fcd	4.3fcd	3.6fcd	3.1fcd	2.7fcd	2.3fcd	2fcd	1.8fcd	1.6fcd	1.4fcd	1.3fcd

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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	12.9	13.6	13.2	13.8	14.0	19.4	20.1	19.7	20.3	20.5
	3H	12.8	13.4	13.1	13.6	13.9	19.3	19.9	19.6	20.2	20.4
	4H	12.7	13.3	13.0	13.6	13.8	19.2	19.8	19.5	20.1	20.3
	6H	12.7	13.2	13.0	13.5	13.7	19.2	19.7	19.5	20.0	20.3
	8H	12.6	13.1	12.9	13.4	13.7	19.1	19.6	19.5	19.9	20.2
	12H	12.6	13.1	12.9	13.4	13.7	19.1	19.6	19.4	19.9	20.2
4H	2H	13.2	13.8	13.5	14.1	14.3	19.3	19.9	19.6	20.2	20.4
	3H	13.1	13.6	13.4	13.9	14.2	19.2	19.7	19.5	20.0	20.3
	4H	13.0	13.4	13.4	13.8	14.1	19.1	19.5	19.5	19.9	20.2
	6H	12.9	13.3	13.3	13.6	14.0	19.0	19.4	19.4	19.8	20.1
	8H	12.9	13.2	13.3	13.6	14.0	19.0	19.3	19.4	19.7	20.1
	12H	12.9	13.1	13.3	13.5	13.9	19.0	19.2	19.4	19.6	20.1
8H	4H	12.9	13.2	13.3	13.6	14.0	19.0	19.3	19.4	19.7	20.1
	6H	12.8	13.0	13.3	13.5	13.9	18.9	19.2	19.4	19.6	20.0
	8H	12.8	13.0	13.2	13.4	13.9	18.9	19.1	19.3	19.5	20.0
	12H	12.7	12.9	13.2	13.3	13.8	18.8	19.0	19.3	19.4	19.9
12H	4H	12.9	13.1	13.3	13.5	13.9	19.0	19.2	19.4	19.6	20.1
	6H	12.8	13.0	13.2	13.4	13.9	18.9	19.1	19.3	19.5	20.0
	8H	12.7	12.9	13.2	13.3	13.8	18.8	19.0	19.3	19.4	19.9
Variation of the observer position for the luminaire distance S											
S = 1.0H		+2.9 / -3.9					+0.8 / -0.7				
S = 1.5H		+5.3 / -27.8					+2.2 / -7.0				
S = 2.0H		+7.9 / -92.8					+4.1 / -100.1				
Standard table		BK00					BK00				
Correction summand		-5.5					0.8				
Corrected glare indices referring to 988lm total luminous flux											

Fitting name:

MSL_BBX.70_9mm Xicato

XIM_80CRI_3000K_XIM_1300lm_Very

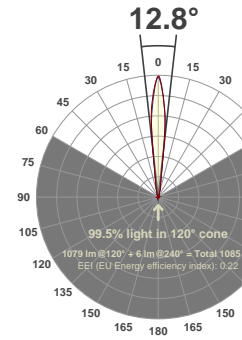
Narrow

Date:

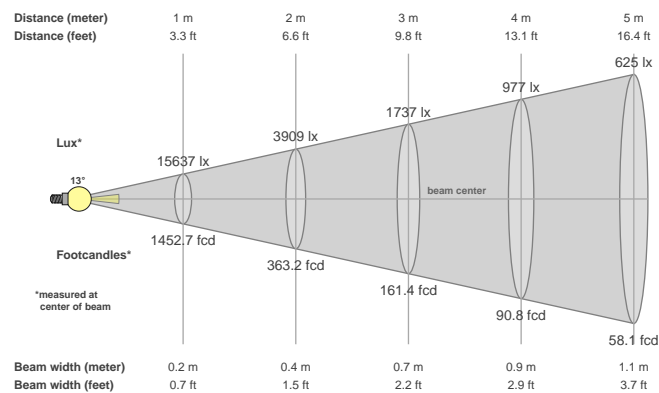
13/03/2018

Delivered Output: 1079 Lumen

LOR: 83% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
12.8°	22.5°	41.5°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
15884 cd	99.5%	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
15637lx	3909lx	1737lx	977lx	625lx	434lx	319lx	244lx	193lx	156lx	129lx	109lx	93lx	80lx	69lx	61lx	54lx	48lx	43lx	39lx
1452.7fcd	363.2fcd	161.4fcd	90.8fcd	58.1fcd	40.4fcd	29.6fcd	22.7fcd	17.9fcd	14.5fcd	12fcd	10.1fcd	8.6fcd	7.4fcd	6.5fcd	5.7fcd	5fcd	4.5fcd	4fcd	3.6fcd

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.

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Glare Evaluation According to UGR

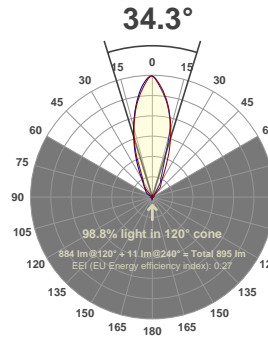
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	10.5	11.2	10.8	11.4	11.6	14.4	15.1	14.7	15.3	15.5
	3H	10.4	11.0	10.7	11.2	11.5	14.3	14.9	14.6	15.1	15.3
	4H	10.3	10.9	10.6	11.1	11.4	14.2	14.8	14.5	15.0	15.3
	6H	10.3	10.8	10.6	11.0	11.3	14.1	14.7	14.5	14.9	15.2
	8H	10.2	10.7	10.5	11.0	11.3	14.1	14.6	14.4	14.9	15.2
	12H	10.2	10.6	10.5	10.9	11.3	14.1	14.5	14.4	14.8	15.1
4H	2H	10.5	11.0	10.8	11.3	11.5	14.3	14.8	14.6	15.1	15.3
	3H	10.3	10.8	10.7	11.1	11.4	14.1	14.6	14.5	14.9	15.2
	4H	10.3	10.7	10.6	11.0	11.3	14.1	14.5	14.4	14.8	15.1
	6H	10.2	10.5	10.6	10.9	11.3	14.0	14.3	14.4	14.7	15.1
	8H	10.2	10.4	10.6	10.8	11.2	13.9	14.2	14.4	14.6	15.0
	12H	10.1	10.4	10.5	10.8	11.2	13.9	14.2	14.3	14.6	15.0
8H	4H	10.2	10.4	10.6	10.8	11.2	13.9	14.2	14.4	14.6	15.0
	6H	10.1	10.3	10.5	10.7	11.1	13.9	14.1	14.3	14.5	14.9
	8H	10.0	10.2	10.5	10.6	11.1	13.8	14.0	14.3	14.4	14.9
	12H	10.0	10.1	10.4	10.6	11.1	13.8	13.9	14.2	14.4	14.9
12H	4H	10.1	10.4	10.5	10.8	11.2	13.9	14.2	14.3	14.6	15.0
	6H	10.0	10.2	10.5	10.6	11.1	13.8	14.0	14.3	14.4	14.9
	8H	10.0	10.1	10.4	10.6	11.1	13.8	13.9	14.2	14.4	14.9
Variation of the observer position for the luminaire distance S											
S = 1.0H		+5.0 / -7.4					+2.7 / -1.8				
S = 1.5H		+7.9 / -25.1					+4.6 / -8.6				
S = 2.0H		+10.2 / -90.1					+6.6 / -94.8				
Standard table		BK00					BK00				
Correction summand		-8.0					-4.2				
Corrected glare indices referring to 1079lm total luminous flux											

Fitting name:
MSL_BBX.70_9mm Xicato
XIM_80CRI_3000K_XIM_1300lm_Flood

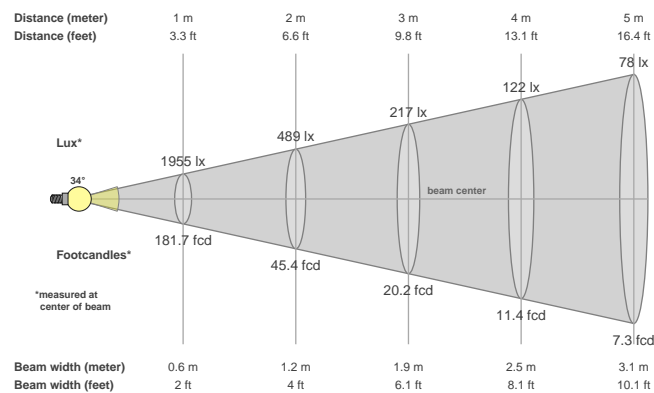
Date:
13/03/2018

Delivered Output: 884 Lumen

LOR: 68% *



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
34.3°	73.1°	92.5°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
1968 cd	98.8%	93.7%

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
1955lx	489lx	217lx	122lx	78lx	54lx	40lx	31lx	24lx	20lx	16lx	14lx	12lx	10lx	9lx	8lx	7lx	6lx	5lx	5lx
181.7fcd	45.4fcd	20.2fcd	11.4fcd	7.3fcd	5fcd	3.7fcd	2.8fcd	2.2fcd	1.8fcd	1.5fcd	1.3fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.6fcd	0.5fcd	0.5fcd

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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.

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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	17.8	18.5	18.1	18.7	18.9	23.1	23.8	23.4	24.0	24.2
	3H	17.7	18.3	17.9	18.5	18.8	23.0	23.6	23.3	23.9	24.1
	4H	17.6	18.2	17.9	18.5	18.7	22.9	23.5	23.2	23.8	24.0
	6H	17.5	18.1	17.8	18.4	18.6	22.8	23.4	23.2	23.7	24.0
	8H	17.5	18.0	17.8	18.3	18.6	22.8	23.3	23.1	23.6	23.9
	12H	17.4	18.0	17.8	18.3	18.6	22.8	23.3	23.1	23.6	23.9
4H	2H	17.9	18.5	18.2	18.8	19.0	23.0	23.6	23.3	23.9	24.1
	3H	17.8	18.3	18.1	18.6	18.9	22.8	23.4	23.2	23.7	24.0
	4H	17.7	18.1	18.1	18.5	18.8	22.8	23.2	23.1	23.5	23.9
	6H	17.6	18.0	18.0	18.3	18.7	22.7	23.1	23.1	23.4	23.8
	8H	17.6	17.9	18.0	18.3	18.7	22.7	23.0	23.1	23.4	23.8
	12H	17.5	17.8	18.0	18.2	18.6	22.6	22.9	23.1	23.3	23.7
8H	4H	17.6	17.9	18.0	18.3	18.7	22.7	23.0	23.1	23.4	23.8
	6H	17.5	17.7	17.9	18.2	18.6	22.6	22.8	23.0	23.2	23.7
	8H	17.4	17.6	17.9	18.1	18.6	22.5	22.7	23.0	23.2	23.6
	12H	17.4	17.6	17.9	18.0	18.5	22.5	22.6	23.0	23.1	23.6
12H	4H	17.5	17.8	18.0	18.2	18.6	22.6	22.9	23.1	23.3	23.7
	6H	17.4	17.6	17.9	18.1	18.6	22.5	22.7	23.0	23.2	23.6
	8H	17.4	17.6	17.9	18.0	18.5	22.5	22.6	23.0	23.1	23.6
Variation of the observer position for the luminaire distance S											
S = 1.0H		+3.5 / -5.0					+0.9 / -0.7				
S = 1.5H		+6.3 / -24.8					+1.9 / -8.3				
S = 2.0H		+8.8 / -98.0					+3.9 / -104.1				
Standard table		BK00					BK00				
Correction summand		-0.7					4.5				
Corrected glare indices referring to 884lm total luminous flux											