MIKE STOANE LIGHTING | EQUIPMENT DESIGN + MANUFACTURE

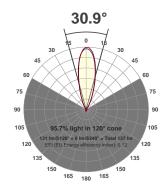
Fitting name:

MSL_Module Star_Oslon MSL Star_95CRI_3000K_181Im_Flood

Date: 17/11/2017

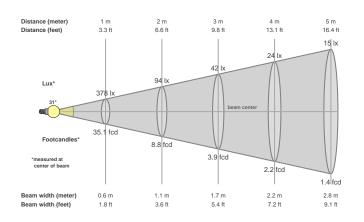
Delivered Output: 131 Lumen

LOR: 72% *





Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%				
30.9°	57.7°	76.5°				

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone				
386 cd	95.7%	94.1%				

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
378lx	94lx	42lx	24lx	15lx	10lx	8lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx
35.1fcd	8.8fcd	3.9fcd	2.2fcd	1.4fcd	1fcd	0.7fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

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 please 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. Eventually we will have manually calculated these numbers and entered them into all the

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 30												
Room size	p Walls		50	30	50	30	30	50	30	50	30	30	
X Y	p Floor		20	20	20	20	20	20	20	20	20	20	
3H 13.3 13.9 13.6 14.1 14.3 13.8 14.4 14.1 14.6 14.9 4H 13.2 13.8 13.5 14.0 14.3 13.7 14.3 14.0 14.5 14.8 6H 13.1 13.7 13.5 13.9 14.2 13.7 14.2 14.0 14.4 14.7 8H 13.1 13.6 13.4 13.9 14.2 13.6 14.1 13.9 14.4 14.7 12H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.3 14.7 4H 2H 13.3 13.8 13.6 14.1 14.3 13.8 14.4 14.1 14.6 14.9 3H 13.1 13.6 13.5 13.9 14.2 13.6 14.1 14.0 14.4 14.7 4H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.3 14.6 6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.2 14.6 8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H			View	•		-	es to						
Harmonian	2H	2H	13.4	14.1	13.7	14.3	14.5	13.9	14.6	14.2	14.8	15.0	
6H 13.1 13.7 13.5 13.9 14.2 13.7 14.2 14.0 14.4 14.7 12H 13.1 13.6 13.4 13.9 14.2 13.6 14.1 13.9 14.4 14.7 14.6 14.9 13.1 13.5 13.4 13.8 14.1 14.3 13.8 14.4 14.1 14.6 14.9 14.7 14.1 14.6 14.9 14.7 14.1 14.6 14.9 14.7 14.1 14.1 14.1 14.1 14.1 14.1 14.1		3H	13.3	13.9	13.6	14.1	14.3	13.8	14.4	14.1	14.6	14.9	
8H 13.1 13.6 13.4 13.9 14.2 13.6 14.1 13.9 14.4 14.7 4H 2H 13.3 13.8 13.6 14.1 14.3 13.6 14.0 13.9 14.3 14.7 4H 2H 13.3 13.8 13.6 14.1 14.3 13.8 14.4 14.1 14.0 14.4 14.7 4H 13.1 13.6 13.5 13.9 14.2 13.6 14.1 14.0 14.4 14.7 4H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.2 14.6 6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.1 13.3 13.5 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 12.8 13.0 13.		4H	13.2	13.8	13.5	14.0	14.3	13.7	14.3	14.0	14.5	14.8	
12H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.3 14.7 4H 2H 13.3 13.8 13.6 14.1 14.3 13.8 14.4 14.1 14.6 14.9 3H 13.1 13.6 13.5 13.9 14.2 13.6 14.1 14.0 14.4 14.7 4H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.2 14.6 6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.2 14.6 8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.1 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 12.8 13.0 13.3		6H	13.1	13.7	13.5	13.9	14.2	13.7	14.2	14.0	14.4	14.7	
4H 2H 13.3 13.8 13.6 14.1 14.3 13.8 14.4 14.1 14.6 14.9 3H 13.1 13.6 13.5 13.9 14.2 13.6 14.1 14.0 14.4 14.7 4H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.2 14.6 6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.2 14.6 8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 12.8 13.0 13.3 13.5 13.9 13.4 13.6 13.8 14.0 14.5 8H 12.8 13.0 13.3 13.5		8H	13.1	13.6	13.4	13.9	14.2	13.6	14.1	13.9	14.4	14.7	
3H 13.1 13.6 13.5 13.9 14.2 13.6 14.1 14.0 14.4 14.7 4H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.3 14.6 6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.1 14.6 8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 4H 12.8 13.0 13.3 13.5 13.9 13.4 13.6 13.8 14.0 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 </td <td></td> <td>12H</td> <td>13.1</td> <td>13.5</td> <td>13.4</td> <td>13.8</td> <td>14.1</td> <td>13.6</td> <td>14.0</td> <td>13.9</td> <td>14.3</td> <td>14.7</td>		12H	13.1	13.5	13.4	13.8	14.1	13.6	14.0	13.9	14.3	14.7	
4H 13.1 13.5 13.4 13.8 14.1 13.6 14.0 13.9 14.3 14.6 6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.2 14.6 8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.4 13.8 14.0 14.5 12H 14H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 14H 12.7 12.9	4H	2H	13.3	13.8	13.6	14.1	14.3	13.8	14.4	14.1	14.6	14.9	
6H 13.0 13.3 13.4 13.7 14.0 13.5 13.8 13.9 14.2 14.6 8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 12.8 13.0 13.3 13.5 14.0 13.4 13.7 13.8 13.9 14.4 12H 12.8 13.0 13.3 1		3H	13.1	13.6	13.5	13.9	14.2	13.6	14.1	14.0	14.4	14.7	
8H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 12H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 6H 12.8 13.1 13.3 13.5 13.9 13.4 13.6 13.8 14.0 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 4H 12.9 13.2		4H	13.1	13.5	13.4	13.8	14.1	13.6	14.0	13.9	14.3	14.6	
12H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 6H 12.8 13.1 13.3 13.5 13.9 13.4 13.6 13.8 14.0 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.3 13.3 13.3 13.3 13.3 13.3 13.3 13.4 <td colspan="2">6H</td> <td>13.0</td> <td>13.3</td> <td>13.4</td> <td>13.7</td> <td>14.0</td> <td>13.5</td> <td>13.8</td> <td>13.9</td> <td>14.2</td> <td>14.6</td>	6H		13.0	13.3	13.4	13.7	14.0	13.5	13.8	13.9	14.2	14.6	
8H 4H 12.9 13.2 13.3 13.6 14.0 13.5 13.8 13.9 14.1 14.5 6H 12.8 13.1 13.3 13.5 13.9 13.4 13.6 13.8 14.0 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H +4.7 / -6.0 +4.5 / -5.0 +7.3 / -103.1 +9.2 / -101.4 +9.3 / -101.0 BK00 Correction summand -5.2 -4.7	8H		12.9	13.2	13.3	13.6	14.0	13.5	13.8	13.9	14.1	14.5	
6H 12.8 13.1 13.3 13.5 13.9 13.4 13.6 13.8 14.0 14.5 8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 8H 12.7 12.9 13.2 13.4 13.9 13.3 13.5 13.8 13.9 14.4 8H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H	12H		12.9	13.1	13.3	13.5	14.0	13.4	13.7	13.8	14.1	14.5	
8H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H +4.7 -6.0 +4.5 -5.0 S = 1.5H +7.3 -103.3 +7.3 -103.1 S = 2.0H +9.2 -101.4 +9.3 -101.0 BK00 -5.2 -4.7	8H	4H	12.9	13.2	13.3	13.6	14.0	13.5	13.8	13.9	14.1	14.5	
12H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H +4.7 / -6.0 +4.5 / -5.0 S = 1.5H +7.3 / -103.3 +7.3 / -103.1 S = 2.0H +9.2 / -101.4 BK00 BK00 Correction summand -5.2 -4.7		6H	12.8	13.1	13.3	13.5	13.9	13.4	13.6	13.8	14.0	14.5	
12H 4H 12.9 13.1 13.3 13.5 14.0 13.4 13.7 13.8 14.1 14.5 6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H +4.7 / -6.0 +4.5 / -5.0 +7.3 / -103.1 +7.3 / -103.1 +7.3 / -103.1 +9.3 / -101.0 Standard table BK00 BK00 Correction summand -5.2 -4.7		8H	12.8	13.0	13.3	13.4	13.9	13.3	13.5	13.8	13.9	14.4	
6H 12.8 13.0 13.3 13.4 13.9 13.3 13.5 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H +4.7 / -6.0 +4.5 / -5.0 S = 1.5H +7.3 / -103.3 +7.3 / -103.1 S = 2.0H +9.2 / -101.4 +9.3 / -101.0 Standard table BK00 Correction summand -5.2 -4.7		12H	12.7	12.9	13.2	13.4	13.9	13.3	13.4	13.8	13.9	14.4	
8H 12.7 12.9 13.2 13.4 13.9 13.3 13.4 13.8 13.9 14.4 Variation of the observer position for the luminaire distance S S = 1.0H +4.7 / -6.0 +4.5 / -5.0 S = 1.5H +7.3 / -103.3 +7.3 / -103.1 S = 2.0H +9.2 / -101.4 +9.3 / -101.0 Standard table BK00 BK00 Correction summand -5.2 -4.7	12H	4H	12.9	13.1	13.3	13.5	14.0	13.4	13.7	13.8	14.1	14.5	
Variation of the observer position for the luminaire distance S S = 1.0H +4.7 / -6.0 +4.5 / -5.0 S = 1.5H +7.3 / -103.3 +7.3 / -103.1 S = 2.0H +9.2 / -101.4 +9.3 / -101.0 Standard table BK00 BK00 Correction summand -5.2 -4.7		6H	12.8	13.0	13.3	13.4	13.9	13.3	13.5	13.8	13.9	14.4	
S = 1.0H +4.7 / -6.0 +4.5 / -5.0 S = 1.5H +7.3 / -103.3 +7.3 / -103.1 S = 2.0H +9.2 / -101.4 +9.3 / -101.0 Standard table BK00 BK00 Correction summand -5.2 -4.7		8H	12.7	12.9	13.2	13.4	13.9	13.3	13.4	13.8	13.9	14.4	
S = 1.5H +7.3 / -103.3 +7.3 / -103.1 S = 2.0H +9.2 / -101.4 +9.3 / -101.0 Standard table BK00 BK00 Correction summand -5.2 -4.7	Variation of	of the obse	erver pos	sition for	the lumii	naire dis	tance S						
S = 2.0H +9.2 / -101.4 +9.3 / -101.0 Standard table BK00 BK00 Correction summand -5.2 -4.7	S = 1	1.0H		+4	1.7 / -6	3.0		+4.5 / -5.0					
Standard table BK00 BK00 Correction summand -5.2 -4.7	S = 1	1.5H		+7.	3 / -10)3.3		+7.3 / -103.1					
Correction summand -5.2 -4.7	S = 2	2.0H		+9.	2 / -10)1.4		+9.3 / -101.0					
summand -5.2 -4.7	Standar	d table			BK00				BK00				
Corrected glare indices referring to 131lm total luminous flux					-5.2					-4.7			
	Corrected	glare indic	es refer	ring to 1	31lm tota	al lumino	us flux						

UGR data could be incorrect as lamp output is not symmetrical. Goto Edit->Photometric->Corrections and select Correct asymmetry.