IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-01-LED-18L-CPW-40-80CRI.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 3829
[TESTLAB] TUV SUD America
[TESTDATE] 1/27/2020 2:14:46 PM
[ISSUEDATE] 04/05/2022
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MHB-01-LED-18L-CPW-40-80CRI
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED
[OTHER] SCALED FROM ORIGINAL TEST DATA
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor
[_SEARCH_COLORTEMP] 4000

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	18596
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	154
Total Luminaire Watts	121
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.14 ft
Luminous Width (90-270)	1.16 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	54259	50683	54064
55	50303	50360	49764
65	35733	42159	41313
75	28623	26644	25701
85	20994	16981	8584

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5
0.0	6767	6767	6767	6767	6767	6767	6767	6767	6767	6767
2.5	6719	6754	6773	6752	6806	6752	6776	6760	6730	6760
5.0	6696	6734	6751	6731	6788	6733	6754	6740	6714	6740
7.5	6657	6704	6718	6698	6754	6701	6724	6710	6683	6710
10.0	6606	6657	6672	6654	6705	6656	6677	6663	6642	6663
12.5	6537	6593	6612	6593	6650	6596	6623	6600	6581	6600
15.0	6443	6515	6545	6524	6579	6527	6549	6516	6497	6516
17.5	6327	6410	6458	6440	6497	6446	6459	6405	6384	6405
20.0	6183	6281	6356	6345	6399	6350	6353	6269	6248	6269
22.5	6001	6121	6225	6239	6287	6242	6219	6108	6087	6108
25.0	5874	5946	6072	6112	6157	6112	6060	5944	5911	5944
27.5	5692	5799	5937	5971	6019	5994	5914	5788	5769	5788
30.0	5498	5600	5761	5878	5910	5872	5748	5594	5587	5594
32.5	5345	5408	5552	5710	5763	5704	5536	5413	5419	5413
35.0	5198	5224	5326	5521	5584	5512	5314	5242	5276	5242
37.5	5091	5061	5091	5314	5387	5300	5087	5091	5171	5091
40.0	4994	4923	4857	5084	5173	5072	4859	4971	5088	4971
42.5	4872	4794	4626	4838	4943	4827	4644	4856	4986	4856
45.0	4718	4648	4407	4567	4701	4558	4438	4712	4845	4712
47.5	4531	4483	4203	4282	4435	4275	4245	4546	4683	4546
50.0	4287	4284	3997	3977	4137	3965	4051	4342	4473	4342
52.5	3943	4028	3779	3646	3826	3644	3838	4076	4189	4076
55.0	3548	3704	3552	3308	3510	3303	3606	3746	3820	3746
57.5	3137	3323	3281	2973	3186	2979	3333	3363	3396	3363
60.0	2709	2901	2959	2656	2859	2667	3003	2935	2964	2935
62.5	2252	2462	2586	2335	2504	2351	2620	2498	2527	2498
65.0	1857	2045	2191	2022	2147	2049	2201	2069	2120	2069
67.5	1537	1668	1790	1718	1793	1743	1809	1700	1761	1700
70.0	1330	1374	1408	1422	1450	1440	1440	1407	1471	1407
72.5	1141	1162	1090	1123	1119	1134	1119	1195	1275	1195
75.0	911	953	848	835	818	847	875	989	1062	989
77.5	659	731	662	586	550	595	686	764	832	764
80.0	470	506	479	387	336	395	500	535	596	535
82.5	362	362	306	242	186	249	326	378	437	378
85.0	225	242	182	131	92	140	197	260	332	260
87.5	75	96	68	50	39	54	83	119	185	119
90.0	0	0	0	0	0	0	0	0	0	0
92.5	0	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	0	0
97.5	0	0	0	0	0	0	0	0	0	0
100.0	0	0	0	0	0	0	0	0	0	0
102.5	0	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0	0	0	0
110.0	0	0	0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0	0	0	0

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CANDELA TABULATION - (Cont.)

135.0	0	0	0	0	0	0	0	0	0	0
137.5	0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**						
	225.0	**247.5**	**270.0**	**292.5**	**315.0**	**337.5**	**360.0**
0.0	6767	6767	6767	6767	6767	6767	6767
2.5	6776	6752	6806	6752	6773	6754	6719
5.0	6754	6733	6788	6731	6751	6734	6696
7.5	6724	6701	6754	6698	6718	6704	6657
10.0	6677	6656	6705	6654	6672	6657	6606
12.5	6623	6596	6650	6593	6612	6593	6537
15.0	6549	6527	6579	6524	6545	6515	6443
17.5	6459	6446	6497	6440	6458	6410	6327
20.0	6353	6350	6399	6345	6356	6281	6183
22.5	6219	6242	6287	6239	6225	6121	6001
25.0	6060	6112	6157	6112	6072	5946	5874
27.5	5914	5994	6019	5971	5937	5799	5692
30.0	5748	5872	5910	5878	5761	5600	5498
32.5	5536	5704	5763	5710	5552	5408	5345
35.0	5314	5512	5584	5521	5326	5224	5198
37.5	5087	5300	5387	5314	5091	5061	5091
40.0	4859	5072	5173	5084	4857	4923	4994
42.5	4644	4827	4943	4838	4626	4794	4872
45.0	4438	4558	4701	4567	4407	4648	4718
47.5	4245	4275	4435	4282	4203	4483	4531
50.0	4051	3965	4137	3977	3997	4284	4287
52.5	3838	3644	3826	3646	3779	4028	3943
55.0	3606	3303	3510	3308	3552	3704	3548
57.5	3333	2979	3186	2973	3281	3323	3137
60.0	3003	2667	2859	2656	2959	2901	2709
62.5	2620	2351	2504	2335	2586	2462	2252
65.0	2201	2049	2147	2022	2191	2045	1857
67.5	1809	1743	1793	1718	1790	1668	1537
70.0	1440	1440	1450	1422	1408	1374	1330
72.5	1119	1134	1119	1123	1090	1162	1141
75.0	875	847	818	835	848	953	911
77.5	686	595	550	586	662	731	659
80.0	500	395	336	387	479	506	470

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82.5	326	249	186	242	306	362	362
85.0	197	140	92	131	182	242	225
87.5	83	54	39	50	68	96	75
90.0	0	0	0	0	0	0	0
92.5	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0
97.5	0	0	0	0	0	0	0
100.0	0	0	0	0	0	0	0
102.5	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0
110.0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0
137.5	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2482.78	N.A.	13.40
0-30	5269.00	N.A.	28.30
0-40	8633.16	N.A.	46.40
0-60	15336.3	N.A.	82.50
0-80	18377.29	N.A.	98.80
0-90	18596.44	N.A.	100.00
10-90	17955.35	N.A.	96.60
20-40	6150.39	N.A.	33.10
20-50	9696.63	N.A.	52.10
40-70	8784.9	N.A.	47.20
60-80	3040.98	N.A.	16.40
70-80	959.22	N.A.	5.20
80-90	219.16	N.A.	1.20
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	18596.44	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	641.09
10-20	1841.69
20-30	2786.22
30-40	3364.17
40-50	3546.24
50-60	3156.89
60-70	2081.76
70-80	959.22
80-90	219.16
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	74	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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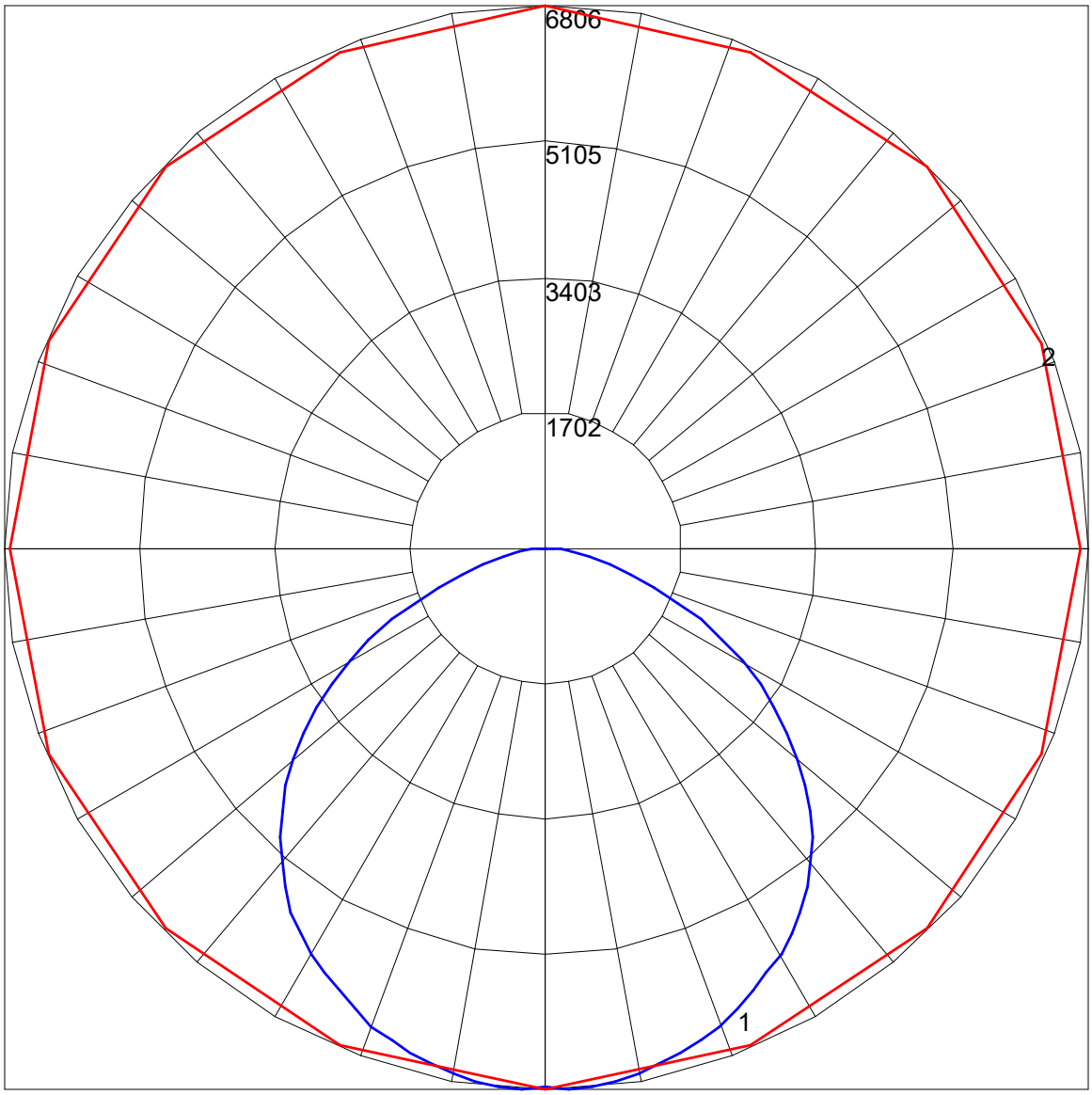
POLAR GRAPH



Maximum Candela = 6806 Located At Horizontal Angle = 90, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

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