IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-01-LED-12L-CPW-50-80CRI.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-12L-CPW-50-80CRI
[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] 5000

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12668
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	160
Total Luminaire Watts	79
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.38
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	36963	34524	36836
55	34268	34310	33899
65	24341	28709	28151
75	19512	18161	17501
85	14276	11570	5785

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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	4610	4610	4610	4610	4610	4610	4610	4610	4610	4610
2.5	4577	4601	4614	4600	4637	4600	4616	4605	4584	4605
5.0	4562	4587	4599	4585	4624	4586	4601	4592	4574	4592
7.5	4535	4567	4576	4563	4601	4565	4580	4571	4553	4571
10.0	4501	4535	4546	4533	4568	4534	4549	4539	4525	4539
12.5	4453	4491	4505	4491	4530	4493	4512	4496	4483	4496
15.0	4389	4438	4459	4444	4482	4446	4462	4439	4426	4439
17.5	4310	4367	4399	4387	4426	4391	4400	4363	4349	4363
20.0	4212	4279	4330	4323	4359	4326	4328	4270	4256	4270
22.5	4088	4170	4241	4250	4283	4252	4237	4161	4147	4161
25.0	4001	4050	4136	4164	4195	4164	4128	4049	4027	4049
27.5	3878	3950	4044	4068	4101	4083	4029	3943	3930	3943
30.0	3746	3815	3925	4004	4026	4000	3915	3811	3806	3811
32.5	3641	3684	3782	3890	3926	3886	3771	3687	3691	3687
35.0	3541	3558	3628	3761	3804	3755	3620	3571	3594	3571
37.5	3468	3448	3468	3620	3670	3611	3465	3468	3523	3468
40.0	3402	3354	3309	3463	3524	3455	3310	3387	3466	3387
42.5	3319	3266	3151	3296	3367	3288	3164	3308	3397	3308
45.0	3214	3167	3002	3112	3203	3105	3024	3210	3301	3210
47.5	3087	3054	2863	2917	3021	2912	2892	3097	3190	3097
50.0	2920	2918	2723	2710	2818	2701	2760	2958	3047	2958
52.5	2686	2744	2575	2483	2606	2482	2614	2777	2854	2777
55.0	2417	2523	2420	2253	2391	2250	2457	2552	2602	2552
57.5	2137	2264	2235	2025	2170	2029	2271	2291	2314	2291
60.0	1845	1976	2016	1809	1948	1817	2046	2000	2019	2000
62.5	1534	1677	1761	1591	1706	1602	1785	1702	1721	1702
65.0	1265	1393	1492	1378	1463	1396	1499	1409	1444	1409
67.5	1047	1136	1219	1170	1221	1188	1233	1158	1200	1158
70.0	906	936	959	969	988	981	981	958	1002	958
72.5	777	792	743	765	762	772	762	814	868	814
75.0	621	650	578	569	557	577	596	674	723	674
77.5	449	498	451	399	374	405	467	521	567	521
80.0	320	345	326	264	229	269	341	364	406	364
82.5	247	247	209	165	127	170	222	258	298	258
85.0	153	165	124	89	62	95	134	177	226	177
87.5	51	65	46	34	27	37	56	81	126	81
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	4610	4610	4610	4610	4610	4610	4610
2.5	4616	4600	4637	4600	4614	4601	4577
5.0	4601	4586	4624	4585	4599	4587	4562
7.5	4580	4565	4601	4563	4576	4567	4535
10.0	4549	4534	4568	4533	4546	4535	4501
12.5	4512	4493	4530	4491	4505	4491	4453
15.0	4462	4446	4482	4444	4459	4438	4389
17.5	4400	4391	4426	4387	4399	4367	4310
20.0	4328	4326	4359	4323	4330	4279	4212
22.5	4237	4252	4283	4250	4241	4170	4088
25.0	4128	4164	4195	4164	4136	4050	4001
27.5	4029	4083	4101	4068	4044	3950	3878
30.0	3915	4000	4026	4004	3925	3815	3746
32.5	3771	3886	3926	3890	3782	3684	3641
35.0	3620	3755	3804	3761	3628	3558	3541
37.5	3465	3611	3670	3620	3468	3448	3468
40.0	3310	3455	3524	3463	3309	3354	3402
42.5	3164	3288	3367	3296	3151	3266	3319
45.0	3024	3105	3203	3112	3002	3167	3214
47.5	2892	2912	3021	2917	2863	3054	3087
50.0	2760	2701	2818	2710	2723	2918	2920
52.5	2614	2482	2606	2483	2575	2744	2686
55.0	2457	2250	2391	2253	2420	2523	2417
57.5	2271	2029	2170	2025	2235	2264	2137
60.0	2046	1817	1948	1809	2016	1976	1845
62.5	1785	1602	1706	1591	1761	1677	1534
65.0	1499	1396	1463	1378	1492	1393	1265
67.5	1233	1188	1221	1170	1219	1136	1047
70.0	981	981	988	969	959	936	906
72.5	762	772	762	765	743	792	777
75.0	596	577	557	569	578	650	621
77.5	467	405	374	399	451	498	449
80.0	341	269	229	264	326	345	320

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82.5	222	170	127	165	209	247	247
85.0	134	95	62	89	124	165	153
87.5	56	37	27	34	46	65	51
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	1691.34	N.A.	13.40
0-30	3589.41	N.A.	28.30
0-40	5881.15	N.A.	46.40
0-60	10447.57	N.A.	82.50
0-80	12519.16	N.A.	98.80
0-90	12668.46	N.A.	100.00
10-90	12231.73	N.A.	96.60
20-40	4189.81	N.A.	33.10
20-50	6605.68	N.A.	52.10
40-70	5984.57	N.A.	47.20
60-80	2071.59	N.A.	16.40
70-80	653.44	N.A.	5.20
80-90	149.30	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	12668.46	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	436.73
10-20	1254.61
20-30	1898.07
30-40	2291.74
40-50	2415.87
50-60	2150.54
60-70	1418.15
70-80	653.44
80-90	149.30
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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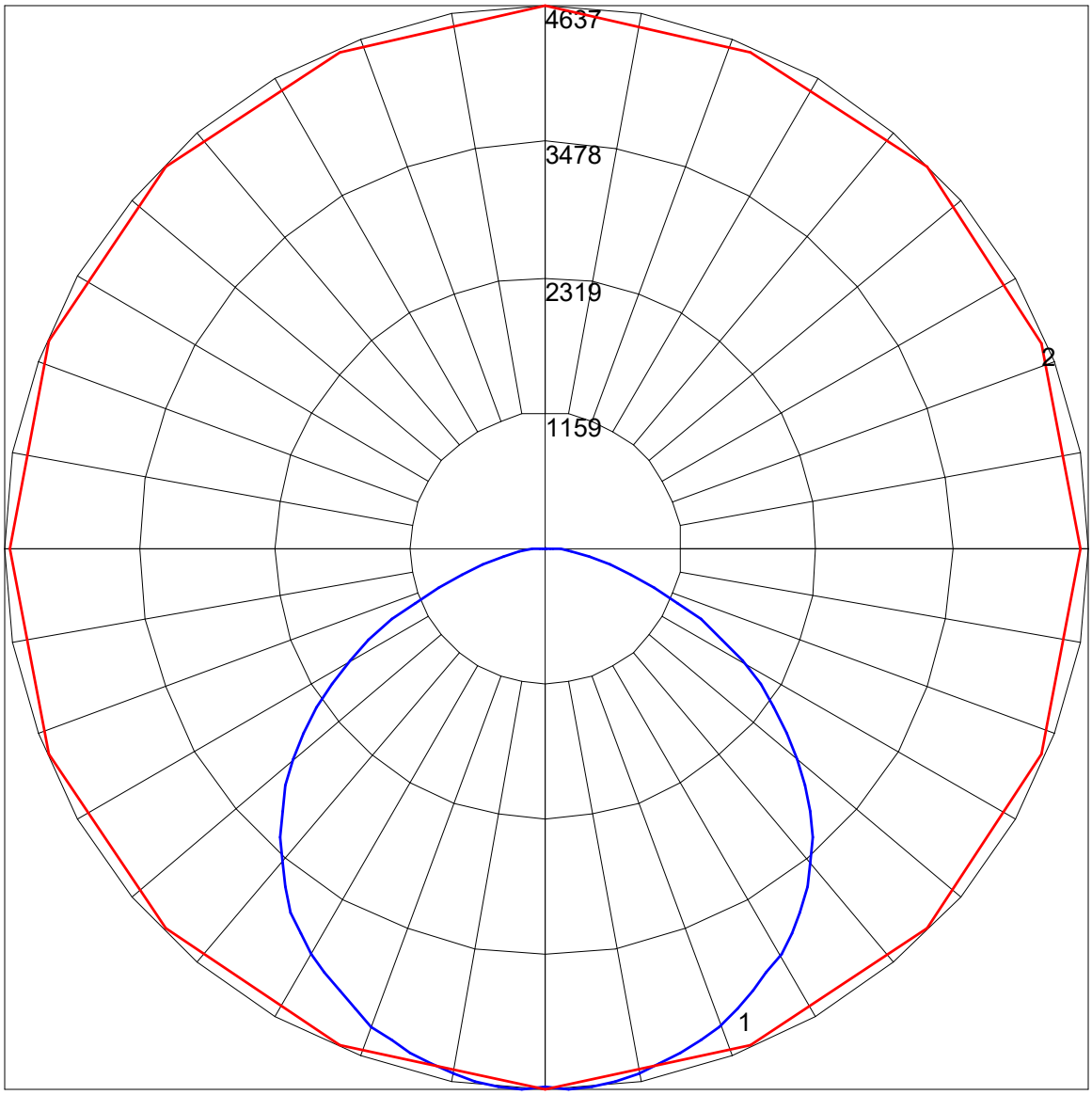
POLAR GRAPH



Maximum Candela = 4637 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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