IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-01-LED-15L-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-15L-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	16513
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	157
Total Luminaire Watts	105
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	48175	44990	48003
55	44660	44717	44192
65	31730	37426	36695
75	25419	23659	22811
85	18661	15115	7651

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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	6008	6008	6008	6008	6008	6008	6008	6008	6008	6008
2.5	5966	5997	6014	5995	6043	5995	6016	6002	5976	6002
5.0	5946	5980	5994	5977	6028	5978	5997	5985	5962	5985
7.5	5911	5953	5964	5947	5997	5950	5970	5958	5934	5958
10.0	5866	5911	5924	5909	5954	5910	5928	5917	5898	5917
12.5	5805	5854	5871	5854	5905	5857	5880	5861	5844	5861
15.0	5721	5784	5812	5792	5843	5796	5815	5786	5769	5786
17.5	5619	5691	5734	5718	5769	5724	5735	5687	5669	5687
20.0	5490	5577	5643	5634	5682	5638	5641	5566	5547	5566
22.5	5329	5435	5528	5540	5582	5542	5522	5423	5405	5423
25.0	5216	5279	5391	5427	5467	5427	5381	5278	5249	5278
27.5	5054	5149	5272	5302	5344	5322	5251	5140	5122	5140
30.0	4882	4973	5115	5220	5247	5215	5103	4967	4961	4967
32.5	4746	4802	4930	5070	5116	5065	4916	4806	4812	4806
35.0	4615	4639	4729	4903	4958	4894	4718	4654	4685	4654
37.5	4521	4494	4521	4718	4784	4706	4517	4521	4592	4521
40.0	4434	4372	4313	4514	4593	4504	4314	4415	4518	4415
42.5	4327	4257	4108	4296	4389	4286	4123	4311	4428	4311
45.0	4189	4127	3912	4056	4174	4047	3941	4183	4302	4183
47.5	4024	3981	3731	3802	3938	3796	3769	4037	4158	4037
50.0	3806	3804	3549	3532	3673	3521	3597	3855	3972	3855
52.5	3501	3577	3356	3237	3397	3235	3408	3620	3720	3620
55.0	3150	3290	3154	2937	3117	2933	3203	3326	3392	3326
57.5	2785	2950	2913	2640	2829	2645	2960	2987	3015	2987
60.0	2405	2576	2628	2359	2539	2368	2667	2606	2632	2606
62.5	2000	2187	2295	2073	2224	2088	2326	2219	2244	2219
65.0	1649	1816	1945	1796	1907	1820	1955	1837	1882	1837
67.5	1366	1481	1590	1525	1592	1548	1607	1509	1564	1509
70.0	1181	1220	1251	1262	1288	1279	1279	1249	1306	1249
72.5	1014	1032	968	997	993	1006	993	1062	1132	1062
75.0	809	847	753	742	726	752	777	879	943	879
77.5	585	650	588	520	488	528	610	678	739	678
80.0	417	449	426	344	299	351	444	475	529	475
82.5	321	321	272	215	166	221	289	335	388	335
85.0	200	215	162	116	82	124	175	230	295	230
87.5	66	85	60	44	35	48	74	105	164	105
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	6008	6008	6008	6008	6008	6008	6008
2.5	6016	5995	6043	5995	6014	5997	5966
5.0	5997	5978	6028	5977	5994	5980	5946
7.5	5970	5950	5997	5947	5964	5953	5911
10.0	5928	5910	5954	5909	5924	5911	5866
12.5	5880	5857	5905	5854	5871	5854	5805
15.0	5815	5796	5843	5792	5812	5784	5721
17.5	5735	5724	5769	5718	5734	5691	5619
20.0	5641	5638	5682	5634	5643	5577	5490
22.5	5522	5542	5582	5540	5528	5435	5329
25.0	5381	5427	5467	5427	5391	5279	5216
27.5	5251	5322	5344	5302	5272	5149	5054
30.0	5103	5215	5247	5220	5115	4973	4882
32.5	4916	5065	5116	5070	4930	4802	4746
35.0	4718	4894	4958	4903	4729	4639	4615
37.5	4517	4706	4784	4718	4521	4494	4521
40.0	4314	4504	4593	4514	4313	4372	4434
42.5	4123	4286	4389	4296	4108	4257	4327
45.0	3941	4047	4174	4056	3912	4127	4189
47.5	3769	3796	3938	3802	3731	3981	4024
50.0	3597	3521	3673	3532	3549	3804	3806
52.5	3408	3235	3397	3237	3356	3577	3501
55.0	3203	2933	3117	2937	3154	3290	3150
57.5	2960	2645	2829	2640	2913	2950	2785
60.0	2667	2368	2539	2359	2628	2576	2405
62.5	2326	2088	2224	2073	2295	2187	2000
65.0	1955	1820	1907	1796	1945	1816	1649
67.5	1607	1548	1592	1525	1590	1481	1366
70.0	1279	1279	1288	1262	1251	1220	1181
72.5	993	1006	993	997	968	1032	1014
75.0	777	752	726	742	753	847	809
77.5	610	528	488	520	588	650	585
80.0	444	351	299	344	426	449	417

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CANDELA TABULATION - (Cont.)

82.5	289	221	166	215	272	321	321
85.0	175	124	82	116	162	215	200
87.5	74	48	35	44	60	85	66
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	2204.54	N.A.	13.40
0-30	4678.48	N.A.	28.30
0-40	7665.68	N.A.	46.40
0-60	13617.71	N.A.	82.50
0-80	16318.2	N.A.	98.80
0-90	16512.74	N.A.	100.00
10-90	15943.5	N.A.	96.60
20-40	5461.14	N.A.	33.10
20-50	8609.95	N.A.	52.10
40-70	7800.69	N.A.	47.20
60-80	2700.48	N.A.	16.40
70-80	851.83	N.A.	5.20
80-90	194.54	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	16512.74	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	569.24
10-20	1635.29
20-30	2473.95
30-40	2987.19
40-50	3148.81
50-60	2803.22
60-70	1848.65
70-80	851.83
80-90	194.54
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	66	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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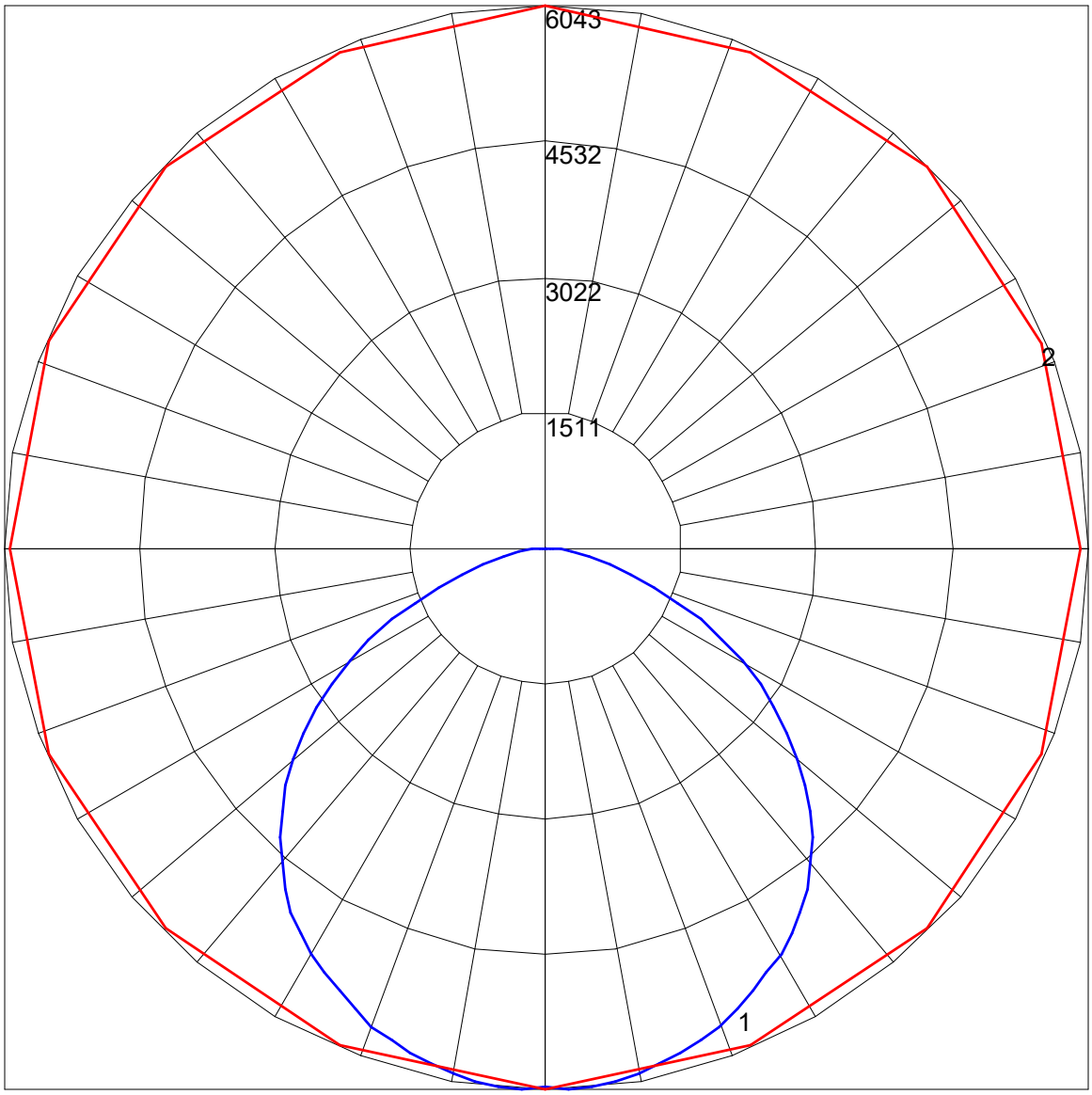
POLAR GRAPH



Maximum Candela = 6043 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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