IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-02-LED-48L-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-02-LED-48L-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	47820
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	324
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)	2.28 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	69768	65179	69503
55	64686	64771	63992
65	45950	54195	53137
75	36808	34295	33022
85	27058	21880	11103

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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	17398	17398	17398	17398	17398	17398	17398	17398	17398	17398
2.5	17278	17369	17416	17364	17502	17362	17421	17384	17305	17384
5.0	17215	17317	17360	17308	17455	17313	17369	17332	17264	17332
7.5	17121	17237	17271	17220	17365	17227	17290	17252	17188	17252
10.0	16991	17119	17158	17111	17242	17114	17173	17134	17080	17134
12.5	16810	16954	17006	16954	17101	16961	17030	16972	16923	16972
15.0	16566	16751	16826	16778	16918	16783	16841	16756	16704	16756
17.5	16269	16482	16606	16559	16704	16576	16613	16470	16416	16470
20.0	15898	16147	16341	16316	16453	16326	16336	16121	16061	16121
22.5	15434	15739	16007	16038	16166	16046	15992	15704	15648	15704
25.0	15103	15289	15614	15719	15834	15719	15584	15282	15203	15282
27.5	14638	14909	15265	15355	15478	15415	15208	14882	14833	14882
30.0	14138	14400	14816	15115	15199	15097	14781	14385	14364	14385
32.5	13742	13902	14280	14683	14820	14670	14234	13917	13933	13917
35.0	13367	13432	13695	14196	14359	14174	13666	13480	13566	13480
37.5	13094	13013	13092	13663	13855	13631	13081	13094	13300	13094
40.0	12841	12659	12490	13072	13303	13044	12495	12782	13087	12782
42.5	12531	12328	11896	12440	12713	12413	11942	12487	12823	12487
45.0	12133	11955	11335	11746	12087	11724	11412	12116	12458	12116
47.5	11652	11527	10805	11007	11402	10989	10916	11689	12041	11689
50.0	11019	11012	10279	10225	10635	10198	10414	11168	11503	11168
52.5	10139	10360	9719	9376	9837	9371	9867	10483	10775	10483
55.0	9125	9526	9137	8506	9027	8494	9271	9632	9820	9632
57.5	8067	8544	8438	7647	8194	7662	8570	8649	8735	8649
60.0	6965	7460	7608	6829	7352	6859	7719	7549	7623	7549
62.5	5791	6329	6650	6002	6441	6048	6734	6424	6502	6424
65.0	4776	5262	5633	5199	5523	5270	5661	5322	5452	5322
67.5	3958	4288	4602	4415	4609	4482	4651	4374	4529	4374
70.0	3419	3534	3620	3656	3730	3703	3701	3619	3784	3619
72.5	2935	2991	2805	2888	2876	2917	2876	3072	3276	3072
75.0	2343	2451	2183	2149	2102	2178	2249	2546	2729	2546
77.5	1694	1879	1702	1506	1414	1527	1765	1964	2137	1964
80.0	1211	1301	1235	995	867	1014	1285	1375	1532	1375
82.5	931	931	788	622	479	643	838	973	1122	973
85.0	580	622	469	334	238	358	503	671	857	671
87.5	194	246	175	125	98	138	211	304	476	304
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	17398	17398	17398	17398	17398	17398	17398
2.5	17421	17362	17502	17364	17416	17369	17278
5.0	17369	17313	17455	17308	17360	17317	17215
7.5	17290	17227	17365	17220	17271	17237	17121
10.0	17173	17114	17242	17111	17158	17119	16991
12.5	17030	16961	17101	16954	17006	16954	16810
15.0	16841	16783	16918	16778	16826	16751	16566
17.5	16613	16576	16704	16559	16606	16482	16269
20.0	16336	16326	16453	16316	16341	16147	15898
22.5	15992	16046	16166	16038	16007	15739	15434
25.0	15584	15719	15834	15719	15614	15289	15103
27.5	15208	15415	15478	15355	15265	14909	14638
30.0	14781	15097	15199	15115	14816	14400	14138
32.5	14234	14670	14820	14683	14280	13902	13742
35.0	13666	14174	14359	14196	13695	13432	13367
37.5	13081	13631	13855	13663	13092	13013	13094
40.0	12495	13044	13303	13072	12490	12659	12841
42.5	11942	12413	12713	12440	11896	12328	12531
45.0	11412	11724	12087	11746	11335	11955	12133
47.5	10916	10989	11402	11007	10805	11527	11652
50.0	10414	10198	10635	10225	10279	11012	11019
52.5	9867	9371	9837	9376	9719	10360	10139
55.0	9271	8494	9027	8506	9137	9526	9125
57.5	8570	7662	8194	7647	8438	8544	8067
60.0	7719	6859	7352	6829	7608	7460	6965
62.5	6734	6048	6441	6002	6650	6329	5791
65.0	5661	5270	5523	5199	5633	5262	4776
67.5	4651	4482	4609	4415	4602	4288	3958
70.0	3701	3703	3730	3656	3620	3534	3419
72.5	2876	2917	2876	2888	2805	2991	2935
75.0	2249	2178	2102	2149	2183	2451	2343
77.5	1765	1527	1414	1506	1702	1879	1694
80.0	1285	1014	867	995	1235	1301	1211

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CANDELA TABULATION - (Cont.)

82.5	838	643	479	622	788	931	931
85.0	503	358	238	334	469	622	580
87.5	211	138	98	125	175	246	194
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	6384.2	N.A.	13.40
0-30	13548.55	N.A.	28.30
0-40	22199.45	N.A.	46.40
0-60	39436.43	N.A.	82.50
0-80	47256.42	N.A.	98.80
0-90	47819.75	N.A.	100.00
10-90	46171.28	N.A.	96.60
20-40	15815.26	N.A.	33.10
20-50	24934.16	N.A.	52.10
40-70	22590.32	N.A.	47.20
60-80	7819.99	N.A.	16.40
70-80	2466.65	N.A.	5.20
80-90	563.33	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	47819.75	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1648.47
10-20	4735.72
20-30	7164.35
30-40	8650.91
40-50	9118.9
50-60	8118.07
60-70	5353.35
70-80	2466.65
80-90	563.33
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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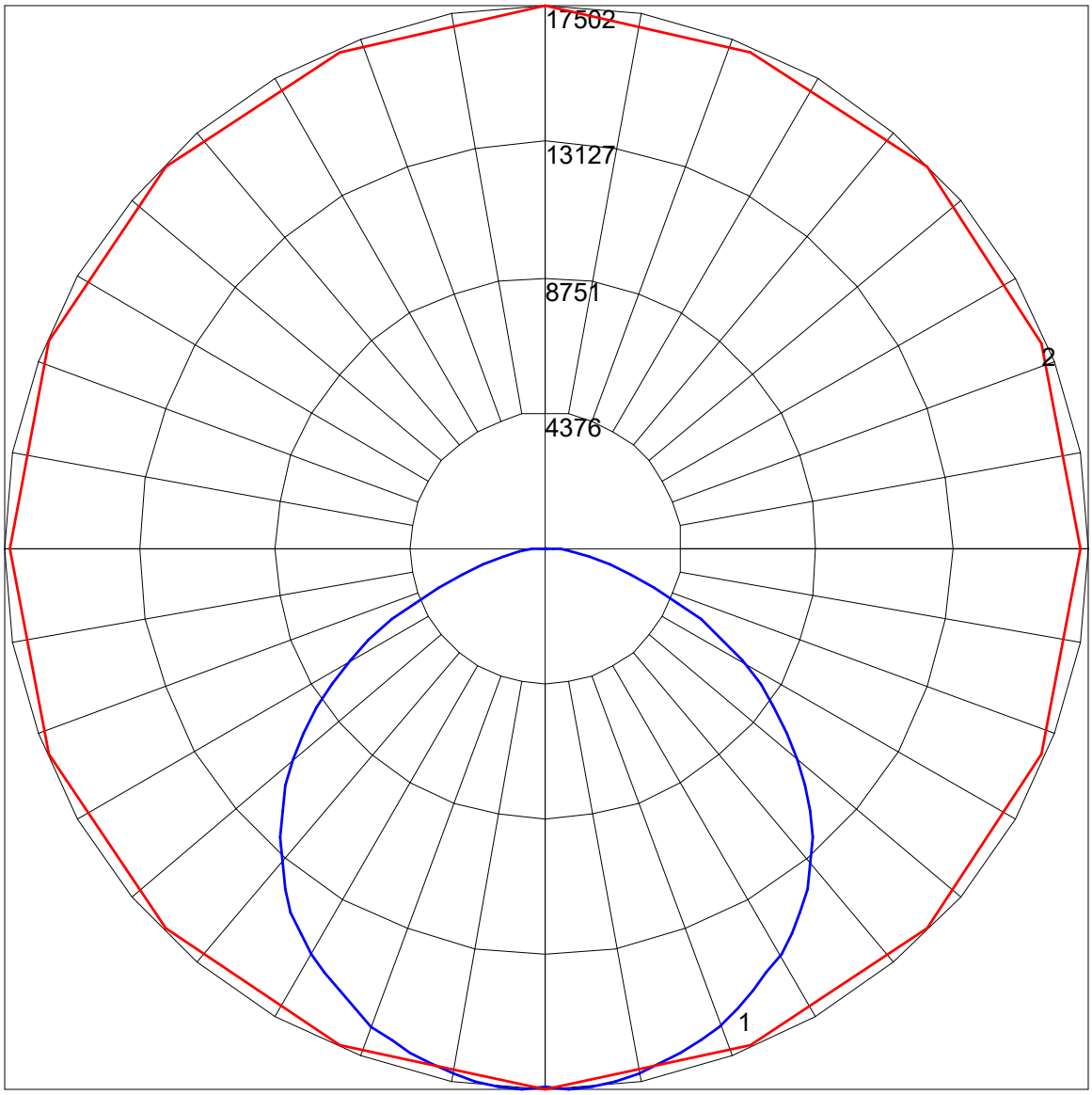
POLAR GRAPH



Maximum Candela = 17502 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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