IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-02-LED-48L-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-02-LED-48L-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	47798
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	69733	65150	69469
55	64658	64743	63963
65	45931	54166	53108
75	36793	34279	33007
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	17390	17390	17390	17390	17390	17390	17390	17390	17390	17390
2.5	17270	17361	17408	17356	17494	17354	17413	17376	17297	17376
5.0	17207	17309	17352	17300	17447	17305	17361	17324	17256	17324
7.5	17113	17229	17263	17212	17357	17219	17282	17244	17180	17244
10.0	16983	17111	17150	17103	17234	17106	17165	17126	17072	17126
12.5	16802	16946	16998	16946	17093	16953	17022	16964	16915	16964
15.0	16558	16743	16818	16770	16910	16775	16833	16748	16696	16748
17.5	16262	16474	16598	16551	16696	16568	16605	16462	16408	16462
20.0	15891	16140	16333	16308	16445	16318	16328	16114	16054	16114
22.5	15427	15732	16000	16031	16159	16039	15985	15697	15641	15697
25.0	15096	15282	15607	15712	15827	15712	15577	15275	15196	15275
27.5	14631	14902	15258	15348	15471	15408	15201	14875	14826	14875
30.0	14131	14393	14809	15108	15192	15090	14774	14378	14357	14378
32.5	13736	13896	14273	14676	14813	14663	14227	13911	13927	13911
35.0	13361	13426	13689	14189	14352	14167	13660	13474	13560	13474
37.5	13088	13007	13086	13657	13849	13625	13075	13088	13294	13088
40.0	12835	12653	12484	13066	13297	13038	12489	12776	13081	12776
42.5	12525	12322	11891	12434	12707	12407	11937	12481	12817	12481
45.0	12127	11949	11330	11741	12081	11719	11407	12110	12452	12110
47.5	11647	11522	10800	11002	11397	10984	10911	11684	12035	11684
50.0	11014	11007	10274	10220	10630	10193	10409	11163	11498	11163
52.5	10134	10355	9715	9372	9832	9367	9862	10478	10770	10478
55.0	9121	9522	9133	8502	9023	8490	9267	9628	9815	9628
57.5	8063	8540	8434	7643	8190	7658	8566	8645	8731	8645
60.0	6962	7457	7604	6826	7349	6856	7715	7546	7619	7546
62.5	5788	6326	6647	5999	6438	6045	6731	6421	6499	6421
65.0	4774	5260	5630	5197	5520	5268	5658	5320	5449	5320
67.5	3956	4286	4600	4413	4607	4480	4649	4372	4527	4372
70.0	3417	3532	3618	3654	3728	3701	3699	3617	3782	3617
72.5	2934	2990	2804	2887	2875	2916	2875	3071	3274	3071
75.0	2342	2450	2182	2148	2101	2177	2248	2545	2728	2545
77.5	1693	1878	1701	1505	1413	1526	1764	1963	2136	1963
80.0	1210	1300	1234	995	867	1014	1284	1374	1531	1374
82.5	931	931	788	622	479	643	838	973	1121	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	17390	17390	17390	17390	17390	17390	17390
2.5	17413	17354	17494	17356	17408	17361	17270
5.0	17361	17305	17447	17300	17352	17309	17207
7.5	17282	17219	17357	17212	17263	17229	17113
10.0	17165	17106	17234	17103	17150	17111	16983
12.5	17022	16953	17093	16946	16998	16946	16802
15.0	16833	16775	16910	16770	16818	16743	16558
17.5	16605	16568	16696	16551	16598	16474	16262
20.0	16328	16318	16445	16308	16333	16140	15891
22.5	15985	16039	16159	16031	16000	15732	15427
25.0	15577	15712	15827	15712	15607	15282	15096
27.5	15201	15408	15471	15348	15258	14902	14631
30.0	14774	15090	15192	15108	14809	14393	14131
32.5	14227	14663	14813	14676	14273	13896	13736
35.0	13660	14167	14352	14189	13689	13426	13361
37.5	13075	13625	13849	13657	13086	13007	13088
40.0	12489	13038	13297	13066	12484	12653	12835
42.5	11937	12407	12707	12434	11891	12322	12525
45.0	11407	11719	12081	11741	11330	11949	12127
47.5	10911	10984	11397	11002	10800	11522	11647
50.0	10409	10193	10630	10220	10274	11007	11014
52.5	9862	9367	9832	9372	9715	10355	10134
55.0	9267	8490	9023	8502	9133	9522	9121
57.5	8566	7658	8190	7643	8434	8540	8063
60.0	7715	6856	7349	6826	7604	7457	6962
62.5	6731	6045	6438	5999	6647	6326	5788
65.0	5658	5268	5520	5197	5630	5260	4774
67.5	4649	4480	4607	4413	4600	4286	3956
70.0	3699	3701	3728	3654	3618	3532	3417
72.5	2875	2916	2875	2887	2804	2990	2934
75.0	2248	2177	2101	2148	2182	2450	2342
77.5	1764	1526	1413	1505	1701	1878	1693
80.0	1284	1014	867	995	1234	1300	1210

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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	6381.19	N.A.	13.40
0-30	13542.27	N.A.	28.30
0-40	22189.18	N.A.	46.40
0-60	39418.18	N.A.	82.50
0-80	47234.52	N.A.	98.80
0-90	47797.75	N.A.	100.00
10-90	46150.04	N.A.	96.60
20-40	15808.00	N.A.	33.10
20-50	24922.69	N.A.	52.10
40-70	22579.85	N.A.	47.20
60-80	7816.34	N.A.	16.40
70-80	2465.49	N.A.	5.20
80-90	563.23	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	47797.75	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1647.71
10-20	4733.47
20-30	7161.08
30-40	8646.92
40-50	9114.69
50-60	8114.31
60-70	5350.85
70-80	2465.49
80-90	563.23
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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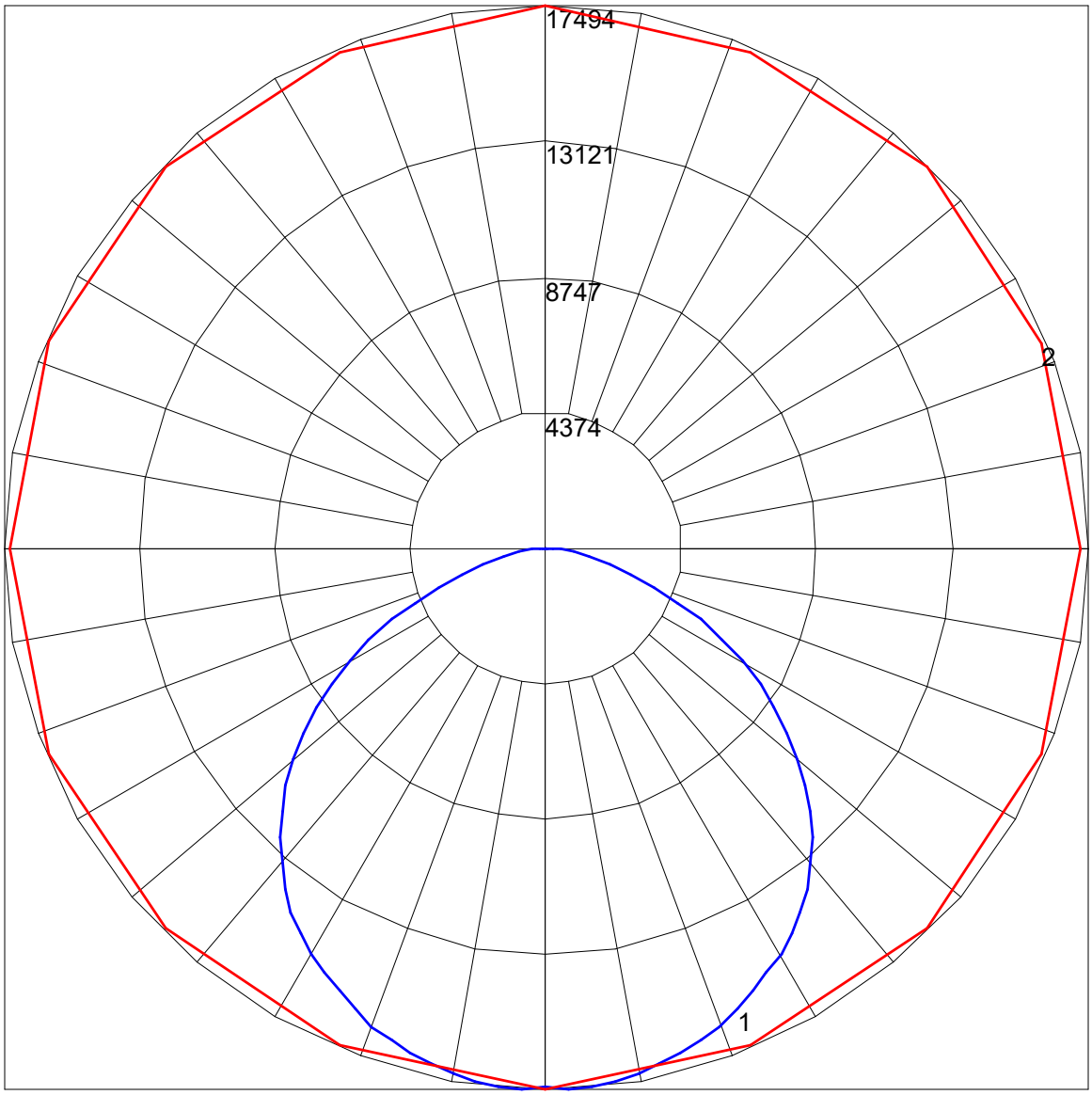
POLAR GRAPH



Maximum Candela = 17494 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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