IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-01-LED-24L-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-24L-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	23899
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	162
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	69716	65139	69474
55	64651	64722	63956
65	45931	54166	53089
75	36824	34279	33054
85	27058	21833	11010

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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	8696	8696	8696	8696	8696	8696	8696	8696	8696	8696
2.5	8635	8679	8704	8677	8747	8677	8708	8687	8648	8687
5.0	8606	8654	8675	8650	8723	8652	8679	8662	8629	8662
7.5	8555	8615	8633	8608	8679	8611	8640	8623	8588	8623
10.0	8490	8555	8575	8552	8617	8553	8581	8563	8536	8563
12.5	8401	8472	8498	8472	8546	8476	8511	8482	8457	8482
15.0	8280	8372	8411	8384	8455	8387	8416	8374	8350	8374
17.5	8132	8238	8300	8277	8350	8284	8302	8232	8205	8232
20.0	7946	8072	8168	8155	8224	8161	8165	8056	8029	8056
22.5	7713	7867	8000	8018	8080	8022	7993	7850	7823	7850
25.0	7549	7641	7804	7856	7914	7856	7788	7639	7597	7639
27.5	7315	7452	7630	7674	7736	7703	7601	7439	7414	7439
30.0	7066	7197	7404	7555	7595	7547	7387	7190	7180	7190
32.5	6869	6950	7136	7338	7406	7331	7114	6956	6964	6956
35.0	6680	6713	6844	7095	7176	7084	6829	6736	6780	6736
37.5	6543	6504	6543	6829	6923	6811	6537	6543	6645	6543
40.0	6418	6327	6242	6533	6647	6518	6244	6389	6539	6389
42.5	6261	6161	5946	6217	6352	6203	5969	6240	6408	6240
45.0	6062	5975	5664	5870	6041	5859	5704	6055	6226	6055
47.5	5824	5762	5401	5504	5700	5494	5455	5843	6018	5843
50.0	5509	5505	5137	5112	5316	5096	5206	5581	5749	5581
52.5	5067	5177	4857	4685	4917	4683	4932	5239	5384	5239
55.0	4560	4760	4565	4251	4511	4245	4635	4814	4909	4814
57.5	4031	4270	4216	3820	4094	3828	4283	4322	4365	4322
60.0	3481	3728	3803	3414	3673	3427	3859	3772	3809	3772
62.5	2895	3165	3323	3001	3219	3022	3368	3211	3248	3211
65.0	2387	2628	2815	2599	2759	2634	2829	2659	2725	2659
67.5	1976	2144	2300	2207	2304	2240	2325	2184	2263	2184
70.0	1709	1765	1810	1827	1864	1850	1850	1808	1891	1808
72.5	1466	1493	1400	1443	1437	1456	1437	1536	1638	1536
75.0	1172	1225	1091	1073	1052	1089	1125	1271	1364	1271
77.5	847	940	851	753	707	764	882	983	1069	983
80.0	604	651	616	498	432	508	643	687	766	687
82.5	465	465	394	311	239	320	419	486	562	486
85.0	290	311	234	168	118	180	253	334	427	334
87.5	97	124	87	64	50	69	106	153	237	153
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	8696	8696	8696	8696	8696	8696	8696
2.5	8708	8677	8747	8677	8704	8679	8635
5.0	8679	8652	8723	8650	8675	8654	8606
7.5	8640	8611	8679	8608	8633	8615	8555
10.0	8581	8553	8617	8552	8575	8555	8490
12.5	8511	8476	8546	8472	8498	8472	8401
15.0	8416	8387	8455	8384	8411	8372	8280
17.5	8302	8284	8350	8277	8300	8238	8132
20.0	8165	8161	8224	8155	8168	8072	7946
22.5	7993	8022	8080	8018	8000	7867	7713
25.0	7788	7856	7914	7856	7804	7641	7549
27.5	7601	7703	7736	7674	7630	7452	7315
30.0	7387	7547	7595	7555	7404	7197	7066
32.5	7114	7331	7406	7338	7136	6950	6869
35.0	6829	7084	7176	7095	6844	6713	6680
37.5	6537	6811	6923	6829	6543	6504	6543
40.0	6244	6518	6647	6533	6242	6327	6418
42.5	5969	6203	6352	6217	5946	6161	6261
45.0	5704	5859	6041	5870	5664	5975	6062
47.5	5455	5494	5700	5504	5401	5762	5824
50.0	5206	5096	5316	5112	5137	5505	5509
52.5	4932	4683	4917	4685	4857	5177	5067
55.0	4635	4245	4511	4251	4565	4760	4560
57.5	4283	3828	4094	3820	4216	4270	4031
60.0	3859	3427	3673	3414	3803	3728	3481
62.5	3368	3022	3219	3001	3323	3165	2895
65.0	2829	2634	2759	2599	2815	2628	2387
67.5	2325	2240	2304	2207	2300	2144	1976
70.0	1850	1850	1864	1827	1810	1765	1709
72.5	1437	1456	1437	1443	1400	1493	1466
75.0	1125	1089	1052	1073	1091	1225	1172
77.5	882	764	707	753	851	940	847
80.0	643	508	432	498	616	651	604

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82.5	419	320	239	311	394	465	465
85.0	253	180	118	168	234	311	290
87.5	106	69	50	64	87	124	97
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	3190.7	N.A.	13.40
0-30	6771.54	N.A.	28.30
0-40	11094.92	N.A.	46.40
0-60	19709.48	N.A.	82.50
0-80	23617.68	N.A.	98.80
0-90	23899.35	N.A.	100.00
10-90	23075.49	N.A.	96.60
20-40	7904.22	N.A.	33.10
20-50	12461.77	N.A.	52.10
40-70	11290.00	N.A.	47.20
60-80	3908.2	N.A.	16.40
70-80	1232.75	N.A.	5.20
80-90	281.67	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	23899.35	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	823.86
10-20	2366.84
20-30	3580.84
30-40	4323.37
40-50	4557.55
50-60	4057.01
60-70	2675.45
70-80	1232.75
80-90	281.67
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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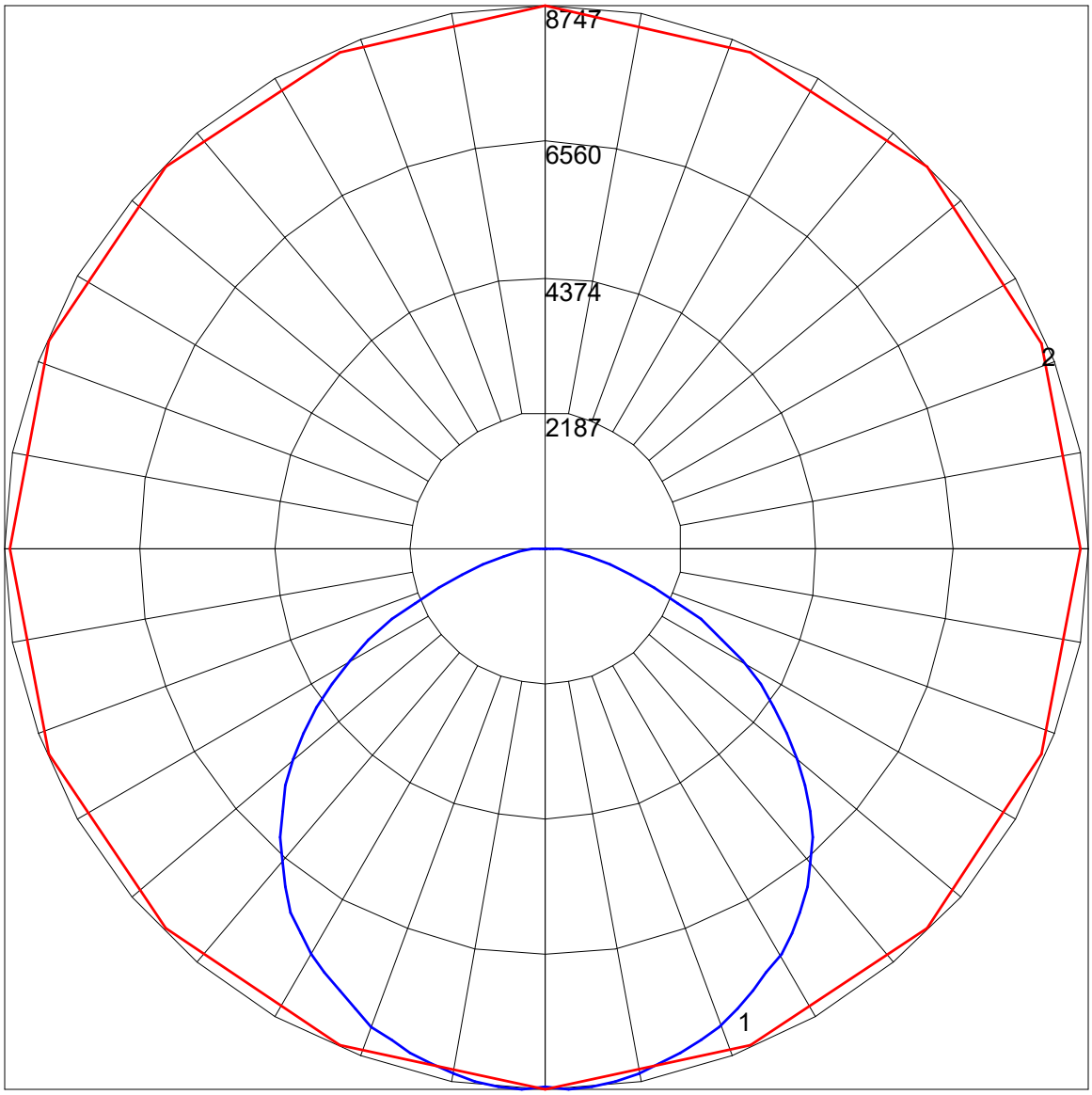
POLAR GRAPH



Maximum Candela = 8747 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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