IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-02-LED-60L-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-60L-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	60740
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	166
Total Luminaire Watts	367
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	88611	82786	88283
55	82160	82267	81281
65	58361	68829	67492
75	46753	43564	41946
85	34383	27805	14089

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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	22098	22098	22098	22098	22098	22098	22098	22098	22098	22098
2.5	21946	22062	22121	22056	22231	22053	22128	22081	21980	22081
5.0	21866	21995	22050	21985	22171	21991	22062	22014	21929	22014
7.5	21746	21894	21937	21873	22058	21882	21961	21914	21832	21914
10.0	21582	21744	21793	21734	21901	21738	21813	21764	21695	21764
12.5	21353	21534	21601	21534	21720	21543	21631	21558	21495	21558
15.0	21041	21277	21372	21311	21489	21318	21391	21284	21217	21284
17.5	20665	20934	21094	21033	21217	21054	21102	20920	20851	20920
20.0	20193	20510	20756	20725	20898	20737	20750	20476	20401	20476
22.5	19604	19992	20332	20371	20533	20381	20313	19947	19876	19947
25.0	19184	19419	19834	19966	20112	19966	19794	19411	19310	19411
27.5	18592	18937	19390	19504	19660	19581	19317	18903	18841	18903
30.0	17958	18291	18819	19198	19306	19176	18775	18271	18246	18271
32.5	17454	17658	18138	18651	18824	18633	18080	17677	17697	17677
35.0	16979	17061	17395	18031	18238	18003	17359	17122	17232	17122
37.5	16632	16529	16630	17354	17598	17313	16615	16632	16893	16632
40.0	16310	16079	15864	16604	16897	16567	15872	16235	16623	16235
42.5	15916	15659	15111	15801	16148	15767	15169	15860	16287	15860
45.0	15410	15186	14397	14920	15353	14892	14495	15390	15824	15390
47.5	14800	14641	13725	13982	14483	13958	13865	14847	15295	14847
50.0	13996	13988	13056	12987	13508	12953	13227	14185	14612	14185
52.5	12878	13158	12344	11910	12494	11902	12532	13314	13686	13314
55.0	11590	12100	11605	10804	11466	10788	11776	12235	12473	12235
57.5	10247	10853	10718	9713	10407	9733	10885	10986	11095	10986
60.0	8847	9475	9664	8674	9338	8712	9805	9589	9683	9589
62.5	7356	8039	8447	7624	8181	7681	8554	8159	8258	8159
65.0	6066	6683	7154	6604	7015	6694	7191	6761	6925	6761
67.5	5027	5447	5846	5607	5854	5694	5908	5556	5753	5556
70.0	4343	4489	4598	4643	4738	4703	4701	4596	4806	4596
72.5	3729	3799	3563	3668	3654	3705	3654	3902	4161	3902
75.0	2976	3113	2773	2730	2670	2767	2856	3233	3467	3233
77.5	2151	2387	2162	1914	1795	1939	2242	2494	2715	2494
80.0	1539	1652	1568	1264	1102	1288	1633	1746	1946	1746
82.5	1183	1183	1001	790	608	816	1065	1236	1424	1236
85.0	737	790	596	424	302	454	638	853	1088	853
87.5	247	312	223	158	124	176	268	385	604	385
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	22098	22098	22098	22098	22098	22098	22098
2.5	22128	22053	22231	22056	22121	22062	21946
5.0	22062	21991	22171	21985	22050	21995	21866
7.5	21961	21882	22058	21873	21937	21894	21746
10.0	21813	21738	21901	21734	21793	21744	21582
12.5	21631	21543	21720	21534	21601	21534	21353
15.0	21391	21318	21489	21311	21372	21277	21041
17.5	21102	21054	21217	21033	21094	20934	20665
20.0	20750	20737	20898	20725	20756	20510	20193
22.5	20313	20381	20533	20371	20332	19992	19604
25.0	19794	19966	20112	19966	19834	19419	19184
27.5	19317	19581	19660	19504	19390	18937	18592
30.0	18775	19176	19306	19198	18819	18291	17958
32.5	18080	18633	18824	18651	18138	17658	17454
35.0	17359	18003	18238	18031	17395	17061	16979
37.5	16615	17313	17598	17354	16630	16529	16632
40.0	15872	16567	16897	16604	15864	16079	16310
42.5	15169	15767	16148	15801	15111	15659	15916
45.0	14495	14892	15353	14920	14397	15186	15410
47.5	13865	13958	14483	13982	13725	14641	14800
50.0	13227	12953	13508	12987	13056	13988	13996
52.5	12532	11902	12494	11910	12344	13158	12878
55.0	11776	10788	11466	10804	11605	12100	11590
57.5	10885	9733	10407	9713	10718	10853	10247
60.0	9805	8712	9338	8674	9664	9475	8847
62.5	8554	7681	8181	7624	8447	8039	7356
65.0	7191	6694	7015	6604	7154	6683	6066
67.5	5908	5694	5854	5607	5846	5447	5027
70.0	4701	4703	4738	4643	4598	4489	4343
72.5	3654	3705	3654	3668	3563	3799	3729
75.0	2856	2767	2670	2730	2773	3113	2976
77.5	2242	1939	1795	1914	2162	2387	2151
80.0	1633	1288	1102	1264	1568	1652	1539

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CANDELA TABULATION - (Cont.)

82.5	1065	816	608	790	1001	1183	1183
85.0	638	454	302	424	596	790	737
87.5	268	176	124	158	223	312	247
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	8109.1	N.A.	13.40
0-30	17209.17	N.A.	28.30
0-40	28197.35	N.A.	46.40
0-60	50091.31	N.A.	82.50
0-80	60024.15	N.A.	98.80
0-90	60739.59	N.A.	100.00
10-90	58645.72	N.A.	96.60
20-40	20088.25	N.A.	33.10
20-50	31670.96	N.A.	52.10
40-70	28693.7	N.A.	47.20
60-80	9932.84	N.A.	16.40
70-80	3133.11	N.A.	5.20
80-90	715.44	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	60739.59	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	2093.87
10-20	6015.23
20-30	9100.07
30-40	10988.17
40-50	11582.71
50-60	10311.26
60-70	6799.73
70-80	3133.11
80-90	715.44
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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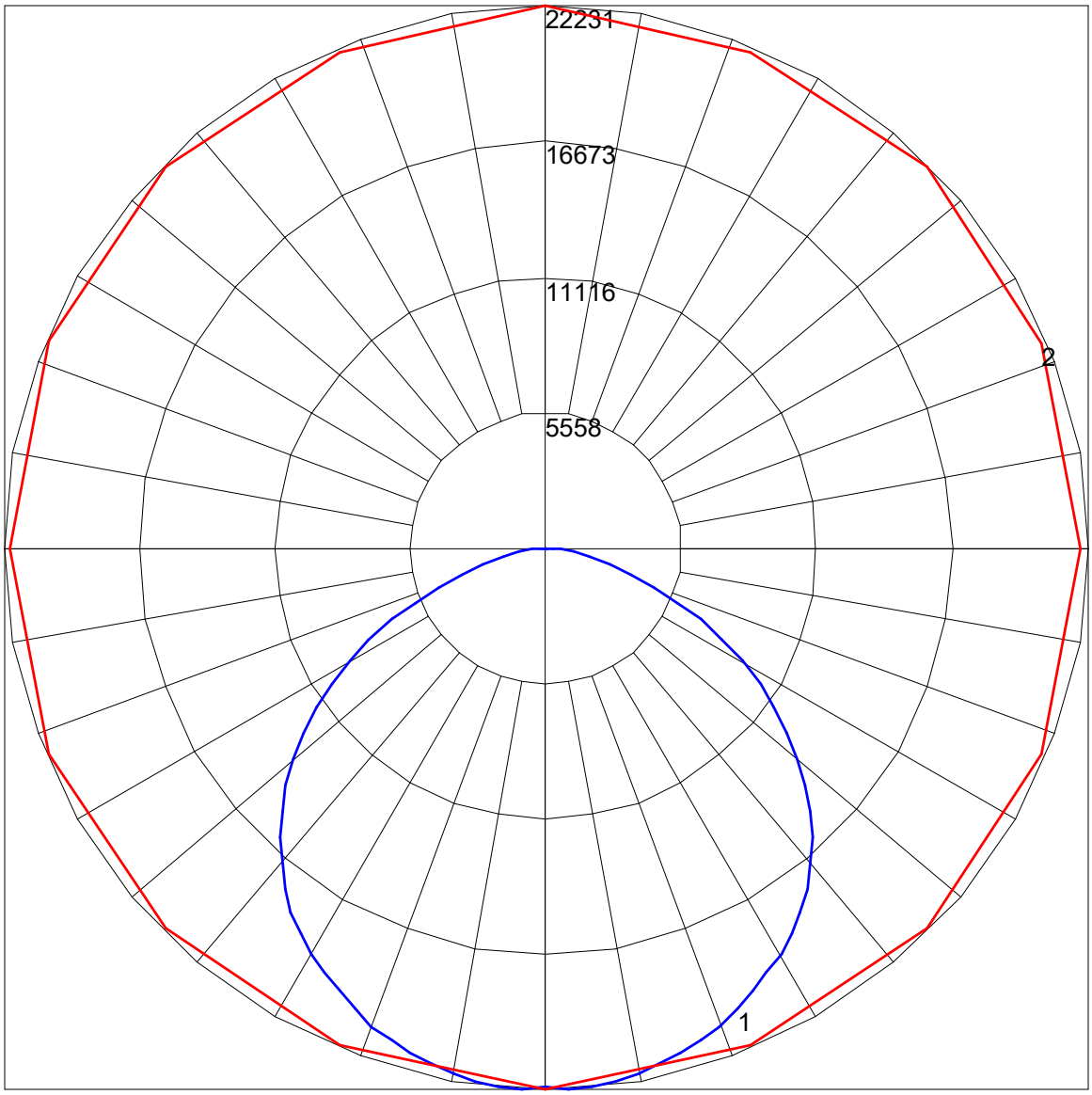
POLAR GRAPH



Maximum Candela = 22231 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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