IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-02-LED-60L-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-60L-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	59100
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	159
Total Luminaire Watts	371
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	86219	80549	85897
55	79942	80048	79084
65	56783	66972	65673
75	45496	42385	40814
85	33450	27058	13716

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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	21501	21501	21501	21501	21501	21501	21501	21501	21501	21501
2.5	21353	21466	21524	21460	21631	21458	21531	21485	21387	21485
5.0	21276	21401	21455	21391	21572	21397	21466	21420	21337	21420
7.5	21159	21303	21345	21282	21462	21291	21368	21322	21243	21322
10.0	20999	21157	21205	21147	21310	21151	21224	21176	21109	21176
12.5	20776	20953	21018	20953	21134	20961	21047	20976	20915	20976
15.0	20473	20703	20795	20736	20909	20742	20813	20709	20644	20709
17.5	20107	20369	20524	20465	20644	20486	20532	20355	20288	20355
20.0	19648	19956	20196	20165	20334	20177	20190	19923	19850	19923
22.5	19075	19452	19783	19821	19979	19831	19765	19408	19339	19408
25.0	18666	18895	19298	19427	19569	19427	19260	18887	18789	18887
27.5	18090	18426	18866	18977	19129	19052	18795	18393	18332	18393
30.0	17473	17797	18311	18680	18785	18658	18268	17778	17753	17778
32.5	16983	17181	17648	18147	18316	18130	17592	17200	17219	17200
35.0	16521	16600	16925	17544	17746	17517	16890	16660	16767	16660
37.5	16183	16083	16181	16885	17123	16846	16166	16183	16437	16183
40.0	15870	15645	15436	16156	16441	16120	15443	15797	16174	15797
42.5	15486	15236	14703	15374	15712	15341	14759	15432	15847	15432
45.0	14994	14776	14008	14517	14938	14490	14104	14974	15397	14974
47.5	14400	14246	13354	13604	14092	13581	13491	14446	14882	14446
50.0	13618	13610	12703	12636	13143	12603	12870	13802	14217	13802
52.5	12530	12803	12011	11588	12157	11581	12194	12955	13316	12955
55.0	11277	11773	11292	10512	11156	10497	11458	11905	12136	11905
57.5	9970	10560	10429	9451	10126	9470	10591	10689	10795	10689
60.0	8608	9219	9403	8440	9086	8477	9540	9330	9422	9330
62.5	7157	7822	8219	7418	7960	7474	8323	7939	8035	7939
65.0	5902	6503	6961	6426	6826	6513	6997	6578	6738	6578
67.5	4891	5300	5688	5456	5696	5540	5748	5406	5598	5406
70.0	4226	4368	4474	4518	4610	4576	4574	4472	4676	4472
72.5	3628	3696	3467	3569	3555	3605	3555	3797	4049	3797
75.0	2896	3029	2698	2656	2598	2692	2779	3146	3373	3146
77.5	2093	2323	2104	1862	1747	1887	2181	2427	2642	2427
80.0	1497	1607	1526	1230	1072	1253	1589	1699	1893	1699
82.5	1151	1151	974	769	592	794	1036	1203	1386	1203
85.0	717	769	580	413	294	442	621	830	1059	830
87.5	240	304	217	154	121	171	261	375	588	375
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	21501	21501	21501	21501	21501	21501	21501
2.5	21531	21458	21631	21460	21524	21466	21353
5.0	21466	21397	21572	21391	21455	21401	21276
7.5	21368	21291	21462	21282	21345	21303	21159
10.0	21224	21151	21310	21147	21205	21157	20999
12.5	21047	20961	21134	20953	21018	20953	20776
15.0	20813	20742	20909	20736	20795	20703	20473
17.5	20532	20486	20644	20465	20524	20369	20107
20.0	20190	20177	20334	20165	20196	19956	19648
22.5	19765	19831	19979	19821	19783	19452	19075
25.0	19260	19427	19569	19427	19298	18895	18666
27.5	18795	19052	19129	18977	18866	18426	18090
30.0	18268	18658	18785	18680	18311	17797	17473
32.5	17592	18130	18316	18147	17648	17181	16983
35.0	16890	17517	17746	17544	16925	16600	16521
37.5	16166	16846	17123	16885	16181	16083	16183
40.0	15443	16120	16441	16156	15436	15645	15870
42.5	14759	15341	15712	15374	14703	15236	15486
45.0	14104	14490	14938	14517	14008	14776	14994
47.5	13491	13581	14092	13604	13354	14246	14400
50.0	12870	12603	13143	12636	12703	13610	13618
52.5	12194	11581	12157	11588	12011	12803	12530
55.0	11458	10497	11156	10512	11292	11773	11277
57.5	10591	9470	10126	9451	10429	10560	9970
60.0	9540	8477	9086	8440	9403	9219	8608
62.5	8323	7474	7960	7418	8219	7822	7157
65.0	6997	6513	6826	6426	6961	6503	5902
67.5	5748	5540	5696	5456	5688	5300	4891
70.0	4574	4576	4610	4518	4474	4368	4226
72.5	3555	3605	3555	3569	3467	3696	3628
75.0	2779	2692	2598	2656	2698	3029	2896
77.5	2181	1887	1747	1862	2104	2323	2093
80.0	1589	1253	1072	1230	1526	1607	1497

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82.5	1036	794	592	769	974	1151	1151
85.0	621	442	294	413	580	769	717
87.5	261	171	121	154	217	304	240
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	7890.15	N.A.	13.40
0-30	16744.52	N.A.	28.30
0-40	27436.03	N.A.	46.40
0-60	48738.78	N.A.	82.50
0-80	58403.48	N.A.	98.80
0-90	59099.74	N.A.	100.00
10-90	57062.41	N.A.	96.60
20-40	19545.88	N.A.	33.10
20-50	30815.78	N.A.	52.10
40-70	27918.91	N.A.	47.20
60-80	9664.7	N.A.	16.40
70-80	3048.54	N.A.	5.20
80-90	696.25	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	59099.74	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	2037.33
10-20	5852.82
20-30	8854.37
30-40	10691.51
40-50	11269.9
50-60	10032.85
60-70	6616.16
70-80	3048.54
80-90	696.25
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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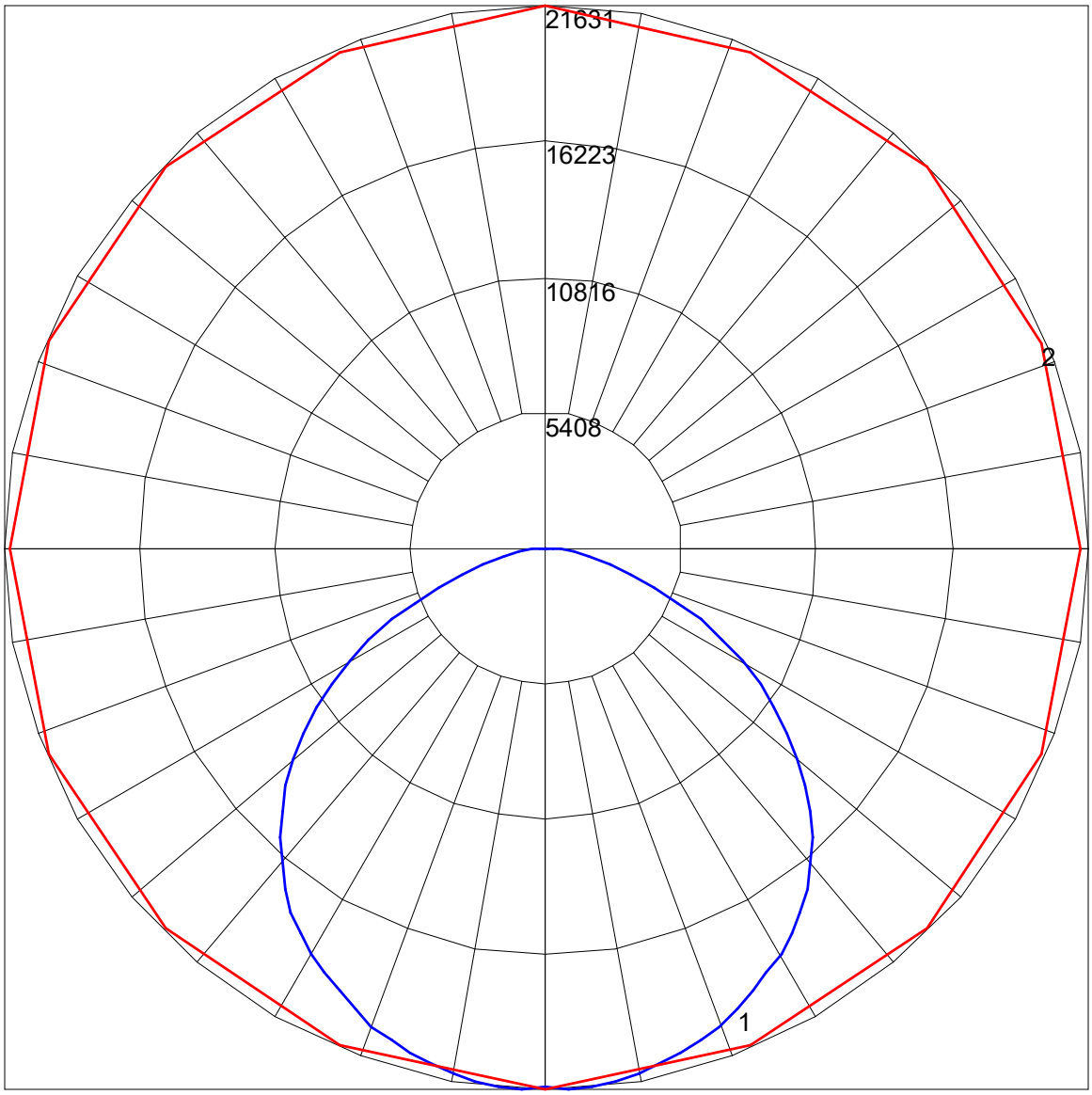
POLAR GRAPH



Maximum Candela = 21631 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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