IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-02-LED-30L-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-30L-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	28347
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	160
Total Luminaire Watts	177
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	41356	38636	41200
55	38344	38394	37933
65	27237	32125	31499
75	21821	20329	19575
85	16048	12969	6578

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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	10313	10313	10313	10313	10313	10313	10313	10313	10313	10313
2.5	10242	10296	10324	10293	10375	10292	10327	10305	10258	10305
5.0	10205	10265	10291	10260	10347	10263	10296	10274	10234	10274
7.5	10149	10218	10238	10208	10294	10212	10249	10227	10189	10227
10.0	10072	10148	10171	10143	10221	10145	10180	10157	10125	10157
12.5	9965	10050	10081	10050	10137	10054	10095	10061	10032	10061
15.0	9820	9930	9974	9946	10029	9949	9983	9933	9902	9933
17.5	9644	9770	9844	9816	9902	9826	9848	9763	9731	9763
20.0	9424	9572	9687	9672	9753	9678	9684	9556	9521	9556
22.5	9149	9330	9489	9507	9583	9512	9480	9309	9276	9309
25.0	8953	9063	9256	9318	9386	9318	9238	9059	9012	9059
27.5	8677	8838	9049	9102	9175	9138	9015	8822	8793	8822
30.0	8381	8536	8783	8960	9010	8949	8762	8527	8515	8527
32.5	8146	8241	8465	8704	8785	8696	8438	8250	8259	8250
35.0	7924	7962	8118	8415	8512	8402	8101	7991	8042	7991
37.5	7762	7714	7761	8099	8213	8080	7754	7762	7884	7762
40.0	7612	7504	7404	7749	7886	7732	7407	7577	7758	7577
42.5	7428	7308	7052	7374	7536	7358	7079	7402	7601	7402
45.0	7192	7087	6719	6963	7165	6950	6765	7182	7385	7182
47.5	6907	6833	6405	6525	6759	6514	6471	6929	7138	6929
50.0	6532	6528	6093	6061	6304	6045	6173	6620	6819	6620
52.5	6010	6141	5761	5558	5831	5555	5849	6214	6387	6214
55.0	5409	5647	5416	5042	5351	5035	5496	5710	5821	5710
57.5	4782	5065	5002	4533	4857	4542	5080	5127	5178	5127
60.0	4129	4422	4510	4048	4358	4066	4576	4475	4519	4475
62.5	3433	3752	3942	3558	3818	3585	3992	3808	3854	3808
65.0	2831	3119	3339	3082	3274	3124	3356	3155	3232	3155
67.5	2346	2542	2728	2617	2732	2657	2757	2593	2685	2593
70.0	2027	2095	2146	2167	2211	2195	2194	2145	2243	2145
72.5	1740	1773	1663	1712	1705	1729	1705	1821	1942	1821
75.0	1389	1453	1294	1274	1246	1291	1333	1509	1618	1509
77.5	1004	1114	1009	893	838	905	1046	1164	1267	1164
80.0	718	771	732	590	514	601	762	815	908	815
82.5	552	552	467	369	284	381	497	577	665	577
85.0	344	369	278	198	141	212	298	398	508	398
87.5	115	146	104	74	58	82	125	180	282	180
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	10313	10313	10313	10313	10313	10313	10313
2.5	10327	10292	10375	10293	10324	10296	10242
5.0	10296	10263	10347	10260	10291	10265	10205
7.5	10249	10212	10294	10208	10238	10218	10149
10.0	10180	10145	10221	10143	10171	10148	10072
12.5	10095	10054	10137	10050	10081	10050	9965
15.0	9983	9949	10029	9946	9974	9930	9820
17.5	9848	9826	9902	9816	9844	9770	9644
20.0	9684	9678	9753	9672	9687	9572	9424
22.5	9480	9512	9583	9507	9489	9330	9149
25.0	9238	9318	9386	9318	9256	9063	8953
27.5	9015	9138	9175	9102	9049	8838	8677
30.0	8762	8949	9010	8960	8783	8536	8381
32.5	8438	8696	8785	8704	8465	8241	8146
35.0	8101	8402	8512	8415	8118	7962	7924
37.5	7754	8080	8213	8099	7761	7714	7762
40.0	7407	7732	7886	7749	7404	7504	7612
42.5	7079	7358	7536	7374	7052	7308	7428
45.0	6765	6950	7165	6963	6719	7087	7192
47.5	6471	6514	6759	6525	6405	6833	6907
50.0	6173	6045	6304	6061	6093	6528	6532
52.5	5849	5555	5831	5558	5761	6141	6010
55.0	5496	5035	5351	5042	5416	5647	5409
57.5	5080	4542	4857	4533	5002	5065	4782
60.0	4576	4066	4358	4048	4510	4422	4129
62.5	3992	3585	3818	3558	3942	3752	3433
65.0	3356	3124	3274	3082	3339	3119	2831
67.5	2757	2657	2732	2617	2728	2542	2346
70.0	2194	2195	2211	2167	2146	2095	2027
72.5	1705	1729	1705	1712	1663	1773	1740
75.0	1333	1291	1246	1274	1294	1453	1389
77.5	1046	905	838	893	1009	1114	1004
80.0	762	601	514	590	732	771	718

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82.5	497	381	284	369	467	552	552
85.0	298	212	141	198	278	369	344
87.5	125	82	58	74	104	146	115
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	3784.48	N.A.	13.40
0-30	8031.42	N.A.	28.30
0-40	13159.56	N.A.	46.40
0-60	23377.32	N.A.	82.50
0-80	28012.9	N.A.	98.80
0-90	28346.87	N.A.	100.00
10-90	27369.67	N.A.	96.60
20-40	9375.08	N.A.	33.10
20-50	14780.62	N.A.	52.10
40-70	13391.16	N.A.	47.20
60-80	4635.58	N.A.	16.40
70-80	1462.19	N.A.	5.20
80-90	333.97	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	28346.87	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	977.20
10-20	2807.28
20-30	4246.94
30-40	5128.14
40-50	5405.54
50-60	4812.23
60-70	3173.4
70-80	1462.19
80-90	333.97
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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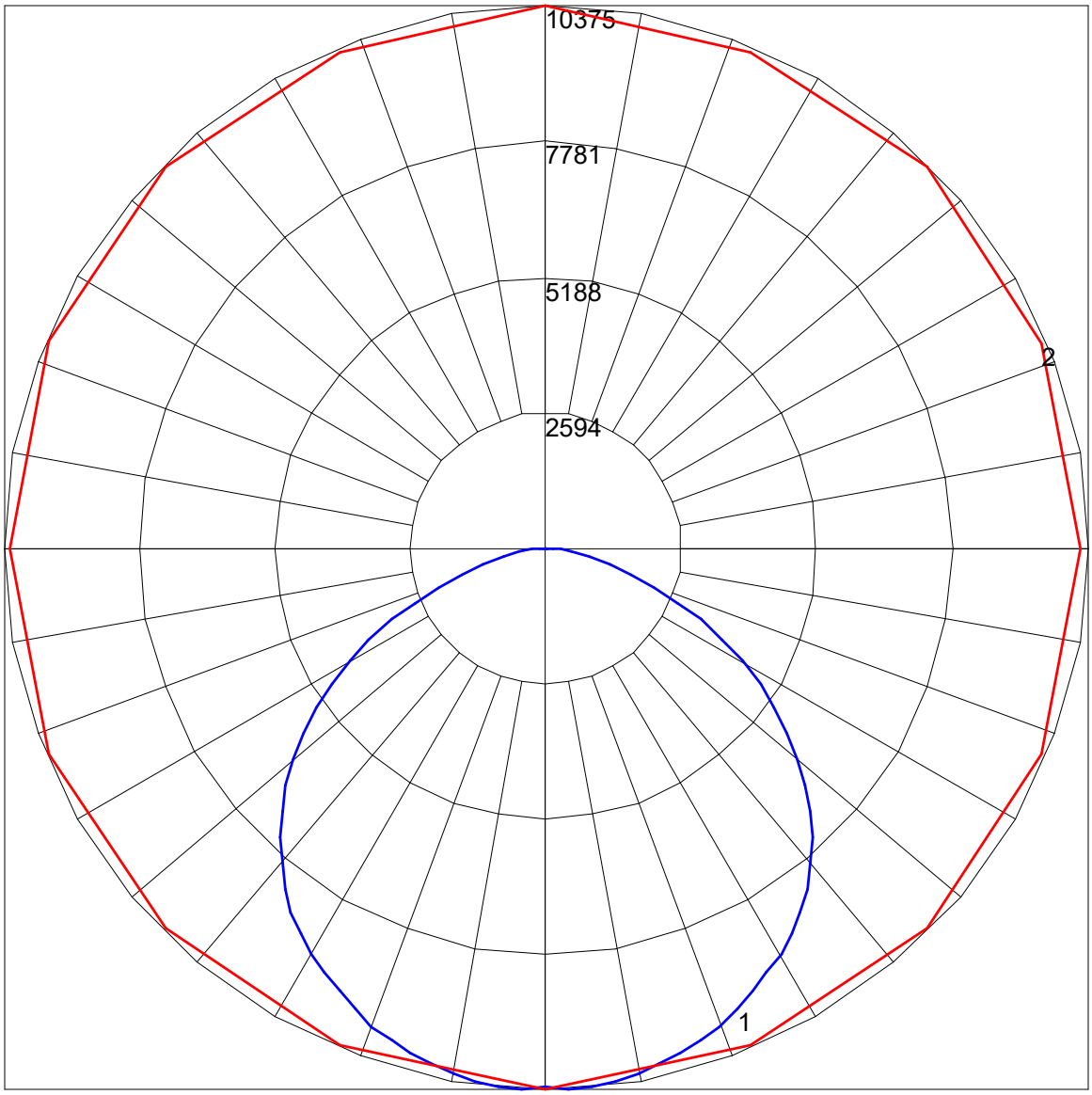
POLAR GRAPH



Maximum Candela = 10375 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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