IES INDOOR REPORT
PHOTOMETRIC FILENAME : MHB-01-LED-24L-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-01-LED-24L-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	23909
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	69750	65162	69509
55	64679	64750	63984
65	45950	54186	53108
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	8700	8700	8700	8700	8700	8700	8700	8700	8700	8700
2.5	8639	8683	8708	8681	8751	8681	8712	8691	8652	8691
5.0	8610	8658	8679	8654	8727	8656	8683	8666	8633	8666
7.5	8559	8619	8637	8612	8683	8615	8644	8627	8592	8627
10.0	8494	8559	8579	8556	8621	8557	8585	8567	8540	8567
12.5	8405	8476	8502	8476	8550	8480	8515	8486	8461	8486
15.0	8283	8376	8415	8388	8459	8391	8420	8378	8353	8378
17.5	8135	8241	8303	8280	8353	8287	8305	8235	8208	8235
20.0	7949	8075	8171	8158	8227	8164	8168	8059	8032	8059
22.5	7716	7870	8003	8021	8083	8025	7996	7853	7826	7853
25.0	7552	7644	7807	7859	7917	7859	7791	7642	7600	7642
27.5	7318	7455	7633	7677	7739	7706	7604	7442	7417	7442
30.0	7069	7200	7407	7558	7598	7550	7390	7193	7183	7193
32.5	6872	6953	7139	7341	7409	7334	7117	6959	6967	6959
35.0	6683	6716	6847	7098	7179	7087	6832	6739	6783	6739
37.5	6546	6507	6546	6832	6926	6814	6540	6546	6648	6546
40.0	6421	6330	6245	6536	6650	6521	6247	6392	6542	6392
42.5	6264	6164	5948	6220	6355	6206	5971	6243	6411	6243
45.0	6065	5977	5666	5872	6044	5861	5706	6058	6229	6058
47.5	5826	5764	5403	5506	5702	5496	5457	5845	6021	5845
50.0	5511	5507	5139	5114	5318	5098	5208	5583	5751	5583
52.5	5069	5179	4859	4687	4919	4685	4934	5241	5386	5241
55.0	4562	4762	4567	4253	4513	4247	4637	4816	4911	4816
57.5	4033	4272	4218	3822	4096	3830	4285	4324	4367	4324
60.0	3482	3730	3805	3415	3675	3428	3861	3774	3811	3774
62.5	2896	3166	3324	3002	3220	3023	3369	3212	3249	3212
65.0	2388	2629	2816	2600	2760	2635	2830	2660	2726	2660
67.5	1977	2145	2301	2208	2305	2241	2326	2185	2264	2185
70.0	1710	1766	1811	1828	1865	1851	1851	1809	1892	1809
72.5	1467	1494	1401	1444	1438	1457	1438	1537	1639	1537
75.0	1172	1226	1091	1073	1052	1089	1125	1272	1365	1272
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	8700	8700	8700	8700	8700	8700	8700
2.5	8712	8681	8751	8681	8708	8683	8639
5.0	8683	8656	8727	8654	8679	8658	8610
7.5	8644	8615	8683	8612	8637	8619	8559
10.0	8585	8557	8621	8556	8579	8559	8494
12.5	8515	8480	8550	8476	8502	8476	8405
15.0	8420	8391	8459	8388	8415	8376	8283
17.5	8305	8287	8353	8280	8303	8241	8135
20.0	8168	8164	8227	8158	8171	8075	7949
22.5	7996	8025	8083	8021	8003	7870	7716
25.0	7791	7859	7917	7859	7807	7644	7552
27.5	7604	7706	7739	7677	7633	7455	7318
30.0	7390	7550	7598	7558	7407	7200	7069
32.5	7117	7334	7409	7341	7139	6953	6872
35.0	6832	7087	7179	7098	6847	6716	6683
37.5	6540	6814	6926	6832	6546	6507	6546
40.0	6247	6521	6650	6536	6245	6330	6421
42.5	5971	6206	6355	6220	5948	6164	6264
45.0	5706	5861	6044	5872	5666	5977	6065
47.5	5457	5496	5702	5506	5403	5764	5826
50.0	5208	5098	5318	5114	5139	5507	5511
52.5	4934	4685	4919	4687	4859	5179	5069
55.0	4637	4247	4513	4253	4567	4762	4562
57.5	4285	3830	4096	3822	4218	4272	4033
60.0	3861	3428	3675	3415	3805	3730	3482
62.5	3369	3023	3220	3002	3324	3166	2896
65.0	2830	2635	2760	2600	2816	2629	2388
67.5	2326	2241	2305	2208	2301	2145	1977
70.0	1851	1851	1865	1828	1811	1766	1710
72.5	1438	1457	1438	1444	1401	1494	1467
75.0	1125	1089	1052	1073	1091	1226	1172
77.5	882	764	707	753	851	940	847
80.0	643	508	432	498	616	651	604

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CANDELA TABULATION - (Cont.)

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	3192.08	N.A.	13.40
0-30	6774.31	N.A.	28.30
0-40	11099.57	N.A.	46.40
0-60	19717.75	N.A.	82.50
0-80	23627.5	N.A.	98.80
0-90	23909.17	N.A.	100.00
10-90	23084.93	N.A.	96.60
20-40	7907.49	N.A.	33.10
20-50	12466.91	N.A.	52.10
40-70	11294.7	N.A.	47.20
60-80	3909.75	N.A.	16.40
70-80	1233.23	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	23909.17	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	824.24
10-20	2367.84
20-30	3582.23
30-40	4325.26
40-50	4559.41
50-60	4058.77
60-70	2676.52
70-80	1233.23
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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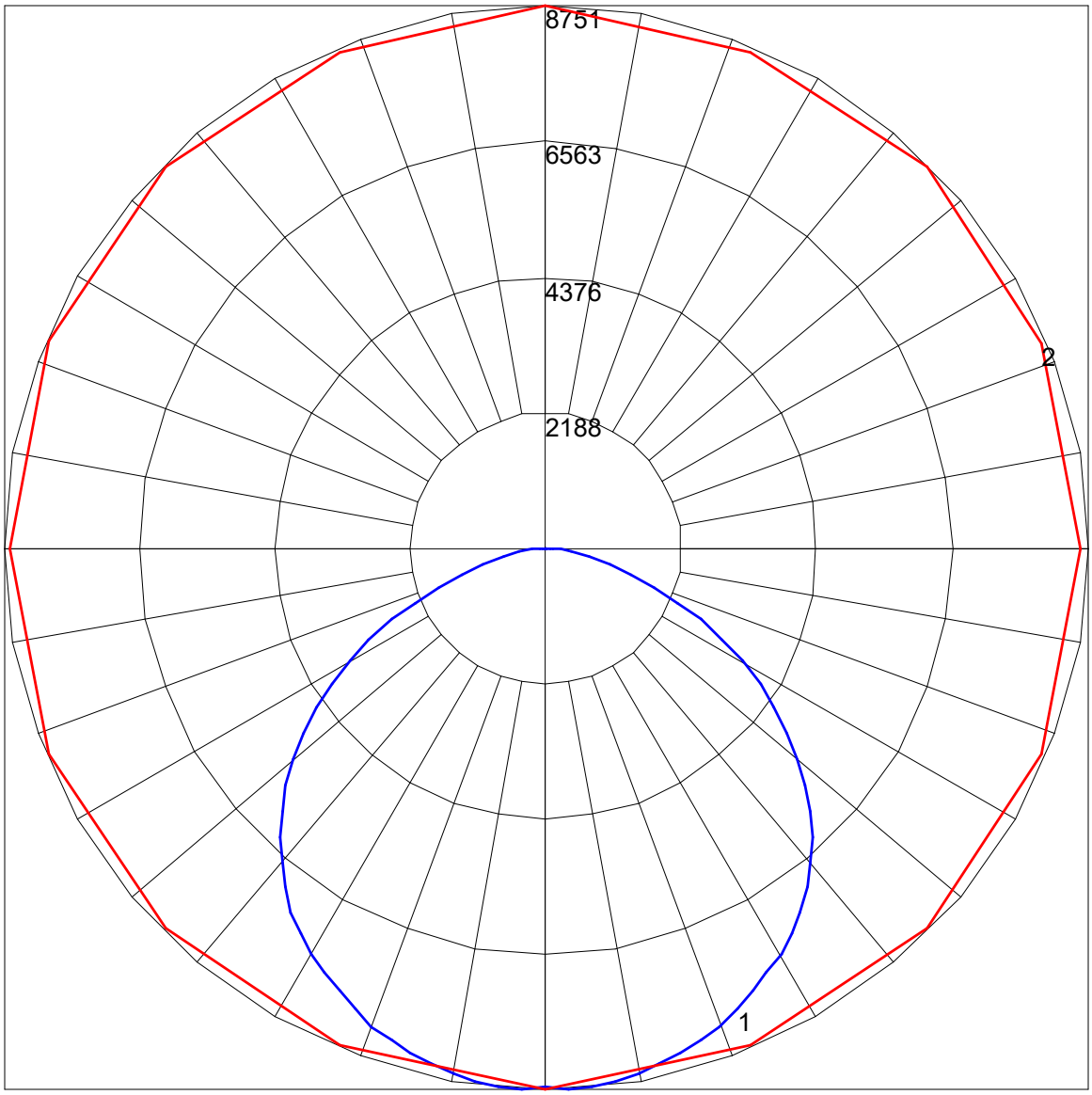
POLAR GRAPH



Maximum Candela = 8751 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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