



IES INDOOR REPORT

PHOTOMETRIC FILENAME : IHB4-LED-12L-LL-40.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 3590

[TESTLAB] TUV SUD America

[TESTDATE] 12/4/2018 9:33:55 AM

[ISSUEDATE] 04/19/21

[MANUFAC] LSI INDUSTRIES, INC

[LUMCAT] IHB4-LED-12L-LL-40

[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	11530
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	154
Total Luminaire Watts	75
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.60 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	17274	17829	18102
55	16836	17442	17524
65	7935	16463	16260
75	6837	7139	13197
85	3166	5786	7323

IES INDOOR REPORT
PHOTOMETRIC FILENAME : IHB4-LED-12L-LL-40.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046
2.5	4012.071	3998.134	3957.761	3935.980	3923.126	3938.095	3962.477	4004.399	4023.619	4004.399
5.0	3993.610	3981.960	3947.316	3923.855	3916.213	3931.142	3958.064	4000.239	4018.568	4000.239
7.5	3969.835	3961.688	3923.480	3907.226	3902.722	3918.875	3944.836	3989.207	4008.761	3989.207
10.0	3962.295	3939.593	3894.311	3880.121	3879.757	3896.568	3924.756	3971.900	3992.699	3971.900
12.5	3919.655	3926.446	3860.274	3845.396	3848.199	3871.620	3900.546	3959.279	3984.561	3959.279
15.0	3854.535	3871.326	3843.382	3809.840	3814.698	3840.457	3879.372	3937.842	3962.781	3937.842
17.5	3787.796	3805.640	3798.059	3768.698	3778.515	3803.666	3857.460	3883.907	3911.892	3883.907
20.0	3719.185	3743.334	3738.081	3723.385	3735.440	3765.520	3815.589	3824.445	3855.284	3824.445
22.5	3651.100	3675.239	3664.055	3670.948	3687.891	3717.090	3755.328	3764.751	3800.043	3764.751
25.0	3584.382	3605.393	3587.236	3632.659	3632.002	3663.276	3687.516	3712.870	3752.372	3712.870
27.5	3514.313	3534.930	3512.127	3578.248	3569.220	3610.565	3610.484	3639.481	3665.492	3639.481
30.0	3416.553	3460.054	3433.394	3498.220	3494.749	3544.778	3539.747	3545.749	3575.151	3545.749
32.5	3321.920	3354.561	3351.403	3408.608	3413.061	3466.653	3464.213	3454.477	3482.867	3454.477
35.0	3216.468	3254.200	3274.159	3310.898	3324.471	3371.767	3364.814	3354.733	3392.131	3354.733
37.5	3110.034	3151.399	3180.892	3206.165	3230.121	3266.578	3255.870	3250.374	3289.269	3250.374
40.0	2993.509	3043.245	3054.550	3096.229	3112.534	3154.203	3141.562	3144.446	3185.538	3144.446
42.5	2865.285	2926.548	2933.167	2968.824	2980.939	3022.770	3023.488	3029.713	3079.155	3029.713
45.0	2726.068	2803.627	2813.576	2829.658	2856.712	2886.620	2902.247	2908.553	2958.399	2908.553
47.5	2594.726	2673.884	2688.114	2701.687	2713.326	2768.375	2776.947	2778.051	2833.019	2778.051
50.0	2455.126	2530.214	2547.511	2556.296	2559.596	2614.189	2638.531	2633.501	2693.934	2633.501
52.5	2303.814	2380.391	2391.231	2413.416	2407.819	2454.316	2479.710	2480.793	2539.819	2480.793
55.0	2155.165	2228.705	2232.754	2256.235	2243.179	2284.989	2321.132	2325.251	2396.170	2325.251
57.5	1939.848	2078.791	2072.071	2071.696	2074.773	2112.798	2158.283	2174.284	2249.403	2174.284
60.0	1153.385	1875.650	1908.695	1895.892	1898.746	1939.119	1996.759	2015.291	2085.896	2015.291
62.5	844.488	1229.162	1736.089	1709.643	1717.517	1760.309	1828.303	1726.717	1562.147	1726.717
65.0	748.438	802.546	1552.795	1529.132	1533.586	1576.236	1645.515	1042.569	887.978	1042.569
67.5	644.200	698.288	1129.398	1345.494	1345.383	1390.078	1419.541	747.375	782.141	747.375
70.0	549.021	604.323	605.487	1159.012	1151.219	1201.562	914.820	654.129	681.396	654.129
72.5	469.338	517.858	505.500	971.245	952.956	1014.219	548.950	565.671	588.504	565.671
75.0	394.897	436.383	412.356	783.093	762.314	825.602	450.694	481.625	509.255	481.625
77.5	323.006	356.720	326.548	492.788	583.018	589.668	361.163	402.002	427.628	402.002
80.0	235.742	273.291	254.526	231.531	416.090	320.526	284.981	323.897	353.450	323.897
82.5	123.771	192.200	186.057	153.892	268.888	167.110	216.218	238.646	262.553	238.646
85.0	61.587	71.243	112.547	95.746	142.445	106.930	140.745	135.360	129.045	135.360
87.5	16.993	32.469	39.199	48.460	40.444	49.634	58.065	57.559	67.609	57.559
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : IHB4-LED-12L-LL-40.IES

CANDELA TABULATION - (Cont.)

135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046	3974.046
2.5	3962.477	3938.095	3923.126	3935.980	3957.761	3998.134	4012.071
5.0	3958.064	3931.142	3916.213	3923.855	3947.316	3981.960	3993.610
7.5	3944.836	3918.875	3902.722	3907.226	3923.480	3961.688	3969.835
10.0	3924.756	3896.568	3879.757	3880.121	3894.311	3939.593	3962.295
12.5	3900.546	3871.620	3848.199	3845.396	3860.274	3926.446	3919.655
15.0	3879.372	3840.457	3814.698	3809.840	3843.382	3871.326	3854.535
17.5	3857.460	3803.666	3778.515	3768.698	3798.059	3805.640	3787.796
20.0	3815.589	3765.520	3735.440	3723.385	3738.081	3743.334	3719.185
22.5	3755.328	3717.090	3687.891	3670.948	3664.055	3675.239	3651.100
25.0	3687.516	3663.276	3632.002	3632.659	3587.236	3605.393	3584.382
27.5	3610.484	3610.565	3569.220	3578.248	3512.127	3534.930	3514.313
30.0	3539.747	3544.778	3494.749	3498.220	3433.394	3460.054	3416.553
32.5	3464.213	3466.653	3413.061	3408.608	3351.403	3354.561	3321.920
35.0	3364.814	3371.767	3324.471	3310.898	3274.159	3254.200	3216.468
37.5	3255.870	3266.578	3230.121	3206.165	3180.892	3151.399	3110.034
40.0	3141.562	3154.203	3112.534	3096.229	3054.550	3043.245	2993.509
42.5	3023.488	3022.770	2980.939	2968.824	2933.167	2926.548	2865.285
45.0	2902.247	2886.620	2856.712	2829.658	2813.576	2803.627	2726.068
47.5	2776.947	2768.375	2713.326	2701.687	2688.114	2673.884	2594.726
50.0	2638.531	2614.189	2559.596	2556.296	2547.511	2530.214	2455.126
52.5	2479.710	2454.316	2407.819	2413.416	2391.231	2380.391	2303.814
55.0	2321.132	2284.989	2243.179	2256.235	2232.754	2228.705	2155.165
57.5	2158.283	2112.798	2074.773	2071.696	2072.071	2078.791	1939.848
60.0	1996.759	1939.119	1898.746	1895.892	1908.695	1875.650	1153.385
62.5	1828.303	1760.309	1717.517	1709.643	1736.089	1229.162	844.488
65.0	1645.515	1576.236	1533.586	1529.132	1552.795	802.546	748.438
67.5	1419.541	1390.078	1345.383	1345.494	1129.398	698.288	644.200
70.0	914.820	1201.562	1151.219	1159.012	605.487	604.323	549.021
72.5	548.950	1014.219	952.956	971.245	505.500	517.858	469.338
75.0	450.694	825.602	762.314	783.093	412.356	436.383	394.897
77.5	361.163	589.668	583.018	492.788	326.548	356.720	323.006
80.0	284.981	320.526	416.090	231.531	254.526	273.291	235.742

IES INDOOR REPORT
PHOTOMETRIC FILENAME : IHB4-LED-12L-LL-40.IES

CANDELA TABULATION - (Cont.)

82.5	216.218	167.110	268.888	153.892	186.057	192.200	123.771
85.0	140.745	106.930	142.445	95.746	112.547	71.243	61.587
87.5	58.065	49.634	40.444	48.460	39.199	32.469	16.993
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : IHB4-LED-12L-LL-40.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1467.2	N.A.	12.70
0-30	3149.78	N.A.	27.30
0-40	5226.63	N.A.	45.30
0-60	9452.1	N.A.	82.00
0-80	11390.98	N.A.	98.80
0-90	11529.83	N.A.	100.00
10-90	11153.2	N.A.	96.70
20-40	3759.43	N.A.	32.60
20-50	5962.59	N.A.	51.70
40-70	5559.85	N.A.	48.20
60-80	1938.88	N.A.	16.80
70-80	604.50	N.A.	5.20
80-90	138.85	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	11529.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	376.63
10-20	1090.58
20-30	1682.57
30-40	2076.86
40-50	2203.16
50-60	2022.3
60-70	1334.38
70-80	604.50
80-90	138.85
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

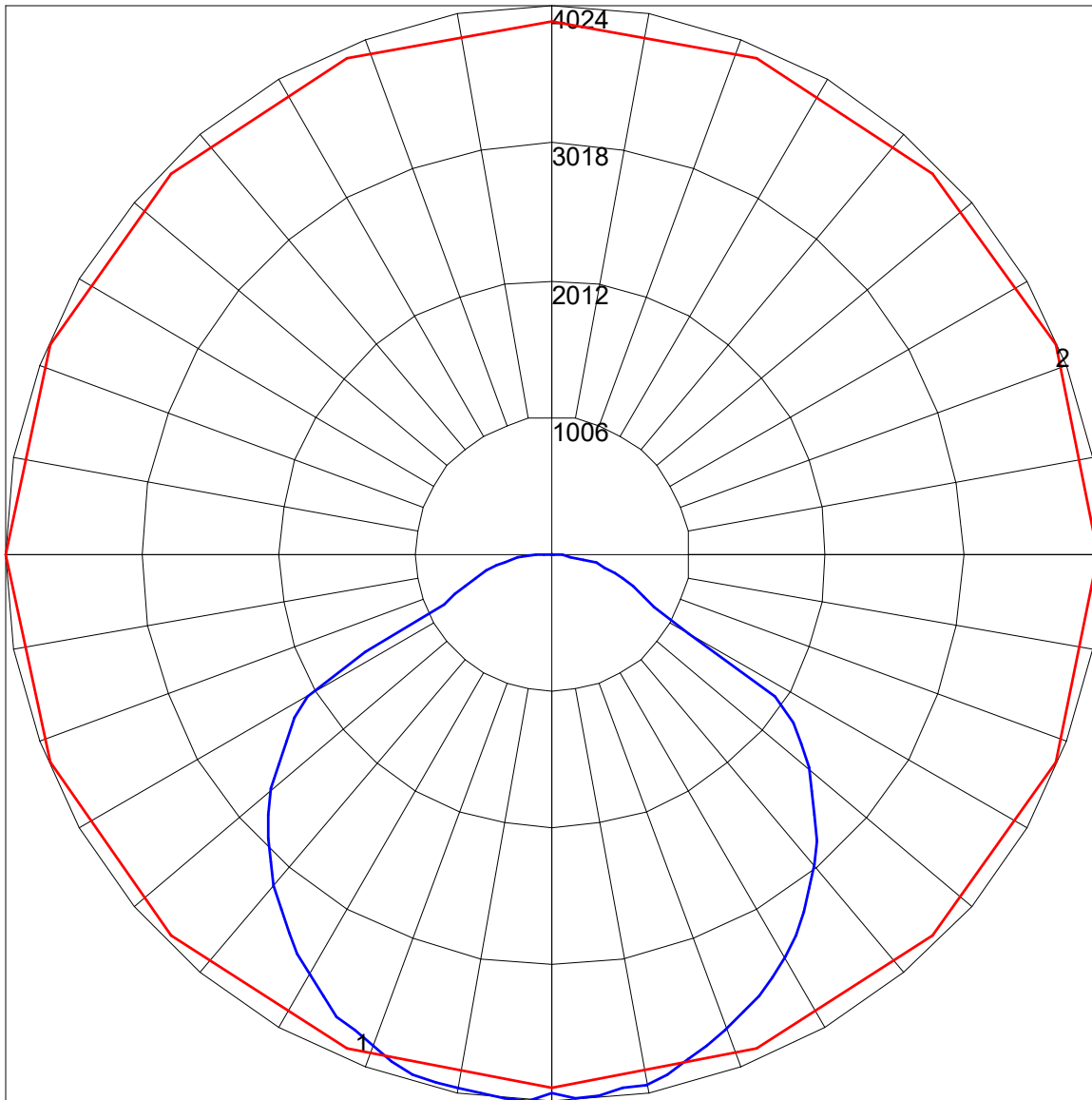
IES INDOOR REPORT
PHOTOMETRIC FILENAME : IHB4-LED-12L-LL-40.IES

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	102	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	31	26	24

POLAR GRAPH



Maximum Candela = 4023.619 Located At Horizontal Angle = 180, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)