



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GH-4-L240-840-FA-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM 13326828.01  
[TESTLAB] UL Verification Services Inc.  
[ISSUE DATE] 06-MAY-2020  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] GH-4-L240-840-FA-DIM-UNV  
[LUMINAIRE] White steel housing, frosted lens enclosure  
[SEARCH\_SOURCETYPE] LED  
[SEARCH\_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, High Bay  
[SEARCH\_MOUNTING] Pendant, Suspended

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	23510
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	178
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.73 ft
Luminous Width (90-270)	0.88 ft
Luminous Height	0.27 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	18586	18365	19751
55	15689	16488	18456
65	12605	14306	15978
75	9275	11265	11204
85	4938	6910	7514

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	7690.106	7690.106	7690.106	7690.106	7690.106
0.5	7786.196	7675.547	7684.282	7675.547	7666.811
1.0	7786.196	7675.547	7684.282	7672.635	7663.899
1.5	7783.284	7672.635	7681.370	7672.635	7660.988
2.0	7780.372	7669.723	7678.458	7669.723	7660.988
2.5	7774.548	7666.811	7675.547	7666.811	7658.076
3.0	7771.637	7660.988	7672.635	7663.899	7655.164
3.5	7765.813	7655.164	7666.811	7660.988	7652.252
4.0	7757.078	7649.340	7663.899	7658.076	7649.340
4.5	7748.342	7643.517	7658.076	7652.252	7646.429
5.0	7739.607	7634.781	7652.252	7646.429	7640.605
5.5	7730.871	7626.046	7643.517	7640.605	7634.781
6.0	7722.136	7617.310	7637.693	7634.781	7628.958
6.5	7707.577	7605.663	7626.046	7628.958	7623.134
7.0	7695.929	7594.016	7617.310	7620.222	7617.310
7.5	7681.370	7582.369	7608.575	7614.399	7608.575
8.0	7669.723	7570.721	7596.928	7602.751	7602.751
8.5	7652.252	7556.162	7588.192	7596.928	7594.016
9.0	7634.781	7541.603	7573.633	7585.280	7585.280
9.5	7620.222	7527.044	7561.986	7576.545	7576.545
10.0	7599.839	7509.573	7550.339	7564.898	7567.809
10.5	7582.369	7495.014	7535.780	7553.250	7559.074
11.0	7564.898	7477.543	7521.220	7544.515	7547.427
11.5	7544.515	7460.072	7506.661	7532.868	7535.780
12.0	7521.220	7439.690	7492.102	7518.309	7524.132
12.5	7500.838	7419.307	7474.631	7506.661	7512.485
13.0	7477.543	7398.924	7457.160	7492.102	7500.838
13.5	7454.249	7378.541	7439.690	7477.543	7486.279
14.0	7428.042	7355.247	7419.307	7462.984	7474.631
14.5	7404.748	7331.952	7401.836	7445.513	7460.072
15.0	7378.541	7308.658	7381.453	7430.954	7445.513
15.5	7349.423	7282.452	7358.159	7413.483	7430.954
16.0	7323.217	7256.245	7337.776	7396.012	7413.483
16.5	7291.187	7230.039	7314.481	7378.541	7398.924
17.0	7262.069	7203.832	7294.099	7358.159	7381.453
17.5	7227.127	7174.714	7270.804	7340.688	7363.982
18.0	7195.097	7145.596	7244.598	7320.305	7346.511
18.5	7160.155	7113.566	7221.303	7299.922	7326.129
19.0	7125.213	7081.536	7195.097	7279.540	7308.658
19.5	7090.272	7046.594	7168.891	7259.157	7288.275
20.0	7055.330	7014.564	7142.684	7235.862	7267.892
20.5	7014.564	6982.534	7116.478	7212.568	7247.510
21.0	6979.623	6947.593	7090.272	7192.185	7227.127
21.5	6938.857	6912.651	7061.154	7168.891	7206.744
22.0	6901.004	6877.709	7032.035	7145.596	7183.450
22.5	6860.238	6839.856	7002.917	7119.390	7163.067
23.0	6819.473	6804.914	6973.799	7096.095	7139.773
23.5	6778.707	6767.060	6941.769	7072.801	7119.390
24.0	6737.942	6729.207	6909.739	7046.594	7096.095
24.5	6694.265	6691.353	6877.709	7020.388	7072.801
25.0	6650.587	6650.587	6845.679	6994.182	7049.506
25.5	6606.910	6612.734	6813.649	6967.975	7023.300
26.0	6560.321	6571.968	6778.707	6941.769	7000.005
26.5	6516.644	6531.203	6743.766	6912.651	6973.799

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**CANDELA TABULATION - (Cont.)**

27.0	6470.055	6487.526	6708.824	6886.445	6947.593
27.5	6417.642	6443.849	6673.882	6857.326	6921.386
28.0	6368.141	6400.171	6636.028	6828.208	6895.180
28.5	6318.640	6353.582	6598.175	6796.178	6866.062
29.0	6266.228	6306.993	6563.233	6767.060	6836.944
29.5	6213.815	6260.404	6522.468	6735.030	6807.826
30.0	6158.491	6210.903	6481.702	6700.088	6775.796
30.5	6106.078	6161.402	6440.937	6665.147	6743.766
31.0	6050.753	6111.902	6397.259	6630.205	6708.824
31.5	5992.517	6059.489	6356.494	6595.263	6676.794
32.0	5937.193	6007.076	6312.817	6560.321	6641.852
32.5	5878.956	5954.663	6269.140	6522.468	6606.910
33.0	5820.720	5902.251	6222.551	6481.702	6569.057
33.5	5762.484	5846.926	6175.961	6443.849	6531.203
34.0	5701.335	5791.602	6132.284	6403.083	6493.349
34.5	5640.187	5736.277	6082.783	6362.318	6452.584
35.0	5579.039	5680.953	6036.194	6321.552	6414.730
35.5	5517.891	5622.716	5986.693	6280.787	6376.877
36.0	5456.743	5567.392	5937.193	6237.110	6336.111
36.5	5389.771	5506.244	5890.604	6193.432	6295.346
37.0	5325.711	5448.008	5838.191	6149.755	6251.669
37.5	5261.651	5392.683	5788.690	6106.078	6210.903
38.0	5197.591	5331.535	5736.277	6059.489	6167.226
38.5	5133.531	5273.299	5683.865	6012.900	6123.549
39.0	5066.560	5212.150	5634.364	5969.223	6079.872
39.5	4999.588	5151.002	5579.039	5922.634	6036.194
40.0	4935.528	5089.854	5526.627	5876.044	5989.605
40.5	4868.556	5028.706	5474.214	5829.455	5943.016
41.0	4801.584	4967.558	5421.801	5779.955	5899.339
41.5	4734.613	4906.410	5366.477	5736.277	5855.662
42.0	4667.641	4845.262	5314.064	5689.688	5811.984
42.5	4603.581	4787.025	5264.563	5643.099	5765.395
43.0	4536.609	4725.877	5212.150	5596.510	5718.806
43.5	4472.549	4664.729	5156.826	5549.921	5675.129
44.0	4405.577	4603.581	5107.325	5506.244	5631.452
44.5	4341.517	4545.345	5054.912	5459.655	5590.686
45.0	4277.458	4487.108	5005.412	5413.066	5549.921
45.5	4213.398	4425.960	4952.999	5369.388	5503.332
46.0	4149.338	4367.724	4903.498	5322.799	5459.655
46.5	4085.278	4309.488	4851.085	5279.122	5415.978
47.0	4021.218	4251.251	4798.673	5232.533	5375.212
47.5	3957.158	4190.103	4749.172	5185.944	5331.535
48.0	3896.010	4131.867	4699.671	5139.355	5284.946
48.5	3831.950	4073.630	4647.258	5092.766	5241.269
49.0	3767.890	4015.394	4597.757	5049.089	5197.591
49.5	3703.830	3954.246	4545.345	5002.500	5153.914
50.0	3639.770	3896.010	4495.844	4955.911	5107.325
50.5	3575.710	3837.773	4443.431	4906.410	5063.648
51.0	3514.562	3779.537	4393.930	4859.821	5017.059
51.5	3447.590	3721.301	4341.517	4813.232	4970.470
52.0	3386.442	3663.064	4289.105	4763.731	4923.881
52.5	3322.382	3604.828	4236.692	4717.142	4880.203
53.0	3261.234	3546.592	4184.279	4667.641	4830.703
53.5	3197.174	3488.355	4134.779	4618.140	4784.113
54.0	3136.026	3430.119	4082.366	4568.639	4731.701
54.5	3071.966	3371.883	4029.953	4519.138	4682.200

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**CANDELA TABULATION - (Cont.)**

55.0	3013.729	3313.646	3977.540	4469.637	4632.699
55.5	2949.669	3258.322	3925.128	4417.225	4580.286
56.0	2889.395	3200.086	3872.715	4364.812	4527.874
56.5	2828.538	3144.761	3820.302	4312.399	4472.549
57.0	2768.555	3086.525	3764.978	4259.987	4414.313
57.5	2708.862	3031.200	3712.565	4204.662	4358.988
58.0	2649.170	2975.876	3657.241	4152.249	4300.752
58.5	2588.313	2920.551	3604.828	4094.013	4239.604
59.0	2528.912	2864.644	3552.415	4038.689	4181.368
59.5	2470.385	2811.358	3497.091	3977.540	4120.219
60.0	2411.566	2756.034	3441.766	3919.304	4056.160
60.5	2354.203	2702.165	3386.442	3861.068	3995.011
61.0	2297.423	2648.297	3334.029	3802.832	3930.951
61.5	2240.642	2595.301	3281.616	3741.683	3866.891
62.0	2189.394	2541.433	3226.292	3677.623	3802.832
62.5	2137.564	2489.894	3170.967	3616.475	3738.772
63.0	2083.404	2438.355	3118.555	3555.327	3674.712
63.5	2028.662	2387.689	3063.230	3491.267	3607.740
64.0	1974.794	2338.188	3007.906	3430.119	3543.680
64.5	1920.634	2288.105	2955.493	3366.059	3479.620
65.0	1868.221	2240.060	2898.130	3299.087	3409.736
65.5	1816.100	2193.762	2841.641	3237.939	3339.853
66.0	1764.852	2152.705	2785.443	3173.879	3269.969
66.5	1713.895	2106.699	2729.245	3109.819	3205.909
67.0	1663.229	2058.363	2673.047	3045.759	3133.114
67.5	1613.728	2010.900	2615.684	2978.788	3057.407
68.0	1564.810	1964.311	2557.448	2910.651	2981.699
68.5	1516.183	1917.722	2499.212	2844.262	2910.360
69.0	1467.846	1871.424	2443.014	2777.581	2834.944
69.5	1420.093	1824.544	2386.815	2708.862	2756.616
70.0	1372.048	1777.955	2330.326	2637.523	2675.668
70.5	1325.167	1731.075	2273.255	2564.436	2594.137
71.0	1279.161	1684.485	2222.298	2493.970	2515.227
71.5	1232.572	1637.314	2166.682	2422.340	2435.443
72.0	1186.856	1589.269	2115.434	2348.380	2353.621
72.5	1142.014	1542.389	2060.983	2274.711	2276.458
73.0	1097.463	1494.926	2003.621	2202.498	2196.674
73.5	1053.495	1448.046	1945.675	2128.829	2118.055
74.0	1010.691	1401.457	1889.477	2061.566	2047.298
74.5	967.888	1354.286	1833.279	1988.479	1972.464
75.0	925.957	1306.823	1777.372	1914.519	1896.757
75.5	884.901	1260.234	1719.718	1842.888	1824.253
76.0	844.718	1213.645	1661.191	1773.878	1755.825
76.5	805.408	1167.929	1602.955	1707.780	1689.436
77.0	766.390	1121.923	1545.592	1643.429	1626.249
77.5	728.245	1076.207	1489.685	1579.660	1563.645
78.0	690.974	1031.656	1432.905	1516.765	1503.662
78.5	654.285	988.270	1375.542	1457.655	1447.172
79.0	618.761	946.631	1319.344	1402.039	1394.177
79.5	583.528	905.284	1264.893	1348.171	1342.347
80.0	549.168	864.518	1212.189	1295.176	1292.555
80.5	515.391	824.917	1160.359	1244.801	1245.092
81.0	482.197	785.317	1108.237	1196.465	1200.251
81.5	449.876	746.881	1056.698	1150.167	1157.738
82.0	418.137	707.571	1008.071	1106.490	1116.681
82.5	386.689	668.553	961.482	1064.269	1077.081

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**CANDELA TABULATION - (Cont.)**

83.0	356.115	629.826	916.348	1023.212	1038.645
83.5	326.415	591.681	871.506	983.903	1002.247
84.0	297.005	554.119	827.829	946.631	967.596
84.5	267.887	516.556	786.190	911.398	934.402
85.0	239.060	479.576	747.463	877.039	902.081
85.5	210.524	443.470	710.483	843.844	870.633
86.0	181.697	408.237	674.377	811.814	840.350
86.5	153.162	374.168	639.144	781.240	811.523
87.0	124.043	340.974	606.531	752.413	783.861
87.5	94.925	308.944	575.957	724.460	755.907
88.0	66.098	278.952	547.130	697.089	728.245
88.5	37.271	250.416	520.633	670.882	703.204
89.0	11.647	226.830	497.921	649.917	682.821
89.5	0.000	208.486	478.411	630.408	663.020
90.0	0.000	196.548	463.561	613.811	645.841
90.5	7.571	251.581	574.210	781.531	837.729
91.0	7.862	242.554	559.942	763.478	818.220
91.5	8.153	233.819	547.421	747.754	801.623
92.0	8.153	225.375	535.483	732.904	785.317
92.5	8.444	216.930	522.962	718.927	770.758
93.0	8.735	208.777	510.733	704.659	755.907
93.5	9.318	201.498	498.503	689.809	741.057
94.0	10.191	194.509	486.273	675.541	725.042
94.5	11.356	187.230	473.752	661.856	710.483
95.0	12.521	180.533	462.105	648.170	696.506
95.5	13.977	174.418	450.458	633.902	682.530
96.0	15.141	168.594	439.684	619.634	668.262
96.5	16.306	162.771	429.784	606.240	652.829
97.0	17.471	157.238	420.175	593.137	639.144
97.5	18.927	151.706	410.857	580.325	625.749
98.0	19.800	147.047	401.248	568.095	612.646
98.5	20.674	142.679	391.057	557.322	599.834
99.0	21.256	138.602	380.866	546.839	588.478
99.5	21.839	134.817	371.839	536.356	577.995
100.0	22.421	131.032	362.812	525.583	567.513
100.5	22.712	127.538	354.368	515.100	556.739
101.0	23.003	124.335	346.506	503.162	545.965
101.5	23.295	121.714	338.062	490.641	535.774
102.0	23.586	119.093	329.909	479.285	522.671
102.5	23.877	116.764	321.756	469.385	509.859
103.0	24.459	114.726	313.311	459.485	498.503
103.5	24.750	112.687	305.158	449.584	488.894
104.0	25.042	110.649	297.296	440.849	478.994
104.5	25.333	108.902	290.017	432.405	468.511
105.0	25.624	107.155	283.029	423.669	460.067
105.5	25.915	105.699	277.205	414.351	451.914
106.0	26.206	104.534	271.381	405.616	443.470
106.5	26.498	103.078	264.975	396.007	433.861
107.0	26.789	101.914	259.152	386.107	425.125
107.5	27.080	101.040	253.910	377.371	416.098
108.0	27.371	100.166	248.669	368.345	405.616
108.5	27.662	99.293	243.719	359.609	396.007
109.0	27.662	98.419	238.478	350.874	387.272
109.5	27.953	97.546	233.236	343.594	377.954
110.0	28.245	96.963	229.160	337.188	369.509
110.5	28.536	96.381	225.375	331.073	360.483

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**CANDELA TABULATION - (Cont.)**

111.0	28.827	95.508	221.880	323.794	353.494
111.5	28.827	94.925	218.095	316.806	347.380
112.0	29.118	94.343	214.601	310.691	341.556
112.5	29.409	94.052	211.398	304.867	335.150
113.0	29.701	93.469	208.195	299.335	327.579
113.5	29.701	92.887	204.992	294.093	321.173
114.0	29.701	92.596	202.080	288.561	315.641
114.5	29.701	92.305	199.168	281.864	309.817
115.0	29.701	92.013	196.256	276.623	304.576
115.5	29.409	91.431	193.345	272.546	299.626
116.0	29.409	91.431	190.724	268.469	293.802
116.5	29.409	91.140	188.103	264.684	287.105
117.0	29.409	90.849	185.774	260.899	282.446
117.5	29.409	90.849	183.444	257.405	278.370
118.0	29.701	90.557	181.115	253.619	274.584
118.5	29.992	90.266	179.077	250.125	270.508
119.0	30.283	89.975	176.747	246.631	267.014
119.5	30.283	89.684	175.000	243.428	263.228
120.0	30.574	89.102	172.671	240.225	259.734
120.5	30.574	88.810	170.632	237.022	256.531
121.0	30.574	88.519	168.885	233.819	253.037
121.5	30.574	88.519	166.847	230.907	249.834
122.0	30.574	88.228	165.100	227.704	246.631
122.5	30.574	87.937	163.353	224.792	243.719
123.0	30.574	87.646	161.606	221.880	240.807
123.5	30.865	87.646	160.150	219.260	237.895
124.0	31.448	87.354	158.403	216.639	234.984
124.5	31.739	87.063	156.947	213.727	232.363
125.0	32.030	86.772	155.200	211.398	229.451
125.5	32.030	86.772	153.744	208.777	226.830
126.0	32.321	86.772	152.579	206.448	224.501
126.5	32.612	86.772	151.414	204.118	221.880
127.0	32.904	86.772	149.959	201.789	219.260
127.5	33.195	86.772	148.794	199.459	216.930
128.0	33.486	86.772	147.629	197.421	214.601
128.5	33.777	87.063	146.464	195.092	211.980
129.0	34.359	87.063	145.300	193.053	209.651
129.5	34.651	87.354	144.426	191.015	207.321
130.0	34.942	87.354	143.261	188.977	204.992
130.5	35.524	87.646	142.097	186.939	202.662
131.0	35.815	87.646	141.223	184.900	200.333
131.5	36.398	87.646	140.058	183.153	198.295
132.0	36.689	87.646	139.185	181.115	196.256
132.5	37.271	87.646	138.602	179.368	194.218
133.0	37.562	87.646	137.729	177.330	192.180
133.5	37.854	87.646	136.855	175.582	190.433
134.0	37.854	87.646	136.273	173.835	188.394
134.5	38.145	87.646	135.399	172.380	186.356
135.0	38.145	87.646	134.526	170.632	184.609
135.5	38.145	87.646	133.652	169.177	182.571
136.0	38.145	87.646	132.779	167.429	180.824
136.5	37.854	87.646	131.905	165.974	179.077
137.0	37.562	87.354	130.741	164.809	177.330
137.5	37.271	87.063	129.867	163.353	175.874
138.0	36.689	87.063	128.702	162.188	174.418
138.5	36.107	86.772	127.538	161.023	172.962

**IES INDOOR REPORT**  
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**CANDELA TABULATION - (Cont.)**

139.0	35.233	86.772	126.955	159.859	171.506
139.5	34.651	86.772	126.082	158.985	170.341
140.0	33.777	86.481	125.208	158.112	169.177
140.5	33.195	86.481	124.335	157.238	168.012
141.0	32.612	86.481	123.461	156.365	166.847
141.5	32.030	86.481	122.587	155.491	165.974
142.0	31.739	86.481	121.423	154.617	164.809
142.5	31.448	86.481	120.549	153.744	163.644
143.0	31.156	86.481	119.676	152.870	162.771
143.5	31.156	86.772	119.093	151.706	162.188
144.0	30.865	86.772	118.511	150.541	161.315
144.5	31.156	87.063	117.929	149.667	160.441
145.0	31.448	87.063	117.637	148.503	159.568
145.5	31.739	87.354	117.055	147.338	158.985
146.0	32.030	87.646	116.764	146.173	158.112
146.5	32.321	87.937	116.473	145.300	157.238
147.0	32.904	87.937	116.181	144.426	156.656
147.5	33.195	88.228	116.181	143.553	156.365
148.0	33.486	88.228	115.890	142.388	155.782
148.5	33.777	88.228	115.890	141.514	154.909
149.0	34.068	88.228	115.890	140.350	154.617
149.5	34.359	88.228	115.890	139.185	154.326
150.0	34.651	88.228	115.890	138.020	153.744
150.5	34.942	88.228	115.890	137.147	153.162
151.0	35.233	88.228	115.890	136.564	152.288
151.5	35.524	87.937	115.599	135.691	151.706
152.0	35.815	87.646	115.308	134.817	151.123
152.5	35.815	87.646	115.017	134.235	150.250
153.0	36.107	87.063	114.434	133.361	149.667
153.5	36.398	86.772	113.270	132.488	149.085
154.0	36.398	86.190	112.396	131.905	148.503
154.5	36.689	85.607	111.231	131.032	147.629
155.0	36.689	84.734	110.358	130.449	146.756
155.5	36.980	84.151	109.484	129.576	145.882
156.0	36.980	83.278	108.611	128.993	144.717
156.5	37.271	82.404	108.028	127.829	143.553
157.0	37.271	81.531	107.446	126.955	142.388
157.5	37.562	80.657	106.864	125.499	140.932
158.0	37.562	79.784	106.572	123.752	139.185
158.5	37.854	78.910	105.990	121.714	137.438
159.0	37.854	78.037	105.699	119.384	135.108
159.5	38.145	77.163	105.408	116.764	132.488
160.0	38.436	76.290	105.117	114.143	129.285
160.5	38.436	75.416	104.825	111.814	125.790
161.0	38.436	74.542	104.243	109.775	121.714
161.5	38.727	73.669	103.952	108.028	117.637
162.0	38.727	72.795	103.078	106.281	113.852
162.5	39.018	71.922	102.205	105.117	110.649
163.0	39.018	71.048	101.331	103.661	107.737
163.5	39.018	70.175	100.458	102.496	104.825
164.0	39.018	69.010	99.584	101.331	102.496
164.5	39.310	68.136	98.419	100.458	100.166
165.0	39.310	67.263	96.963	99.584	98.128
165.5	39.310	66.098	94.925	98.711	95.799
166.0	39.310	65.225	92.887	97.255	94.052
166.5	39.601	64.060	90.849	95.508	92.013

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

167.0	39.601	62.895	88.810	93.760	89.393
167.5	39.601	62.022	86.772	92.305	86.481
168.0	39.601	60.857	84.443	90.557	83.569
168.5	39.892	59.692	82.404	88.228	81.240
169.0	39.892	58.819	80.366	85.607	78.619
169.5	39.892	57.654	78.328	82.696	75.416
170.0	40.183	56.780	76.290	79.493	71.922
170.5	40.183	55.616	74.542	76.581	68.136
171.0	40.474	54.742	72.504	73.669	64.642
171.5	40.474	53.577	70.466	71.048	61.148
172.0	40.474	52.704	68.428	68.136	57.363
172.5	40.765	51.539	66.389	65.516	53.869
173.0	40.765	50.666	64.060	62.895	50.374
173.5	41.057	49.792	62.022	59.983	47.463
174.0	41.348	48.919	59.983	57.363	44.842
174.5	41.639	48.045	57.654	54.742	42.221
175.0	41.930	47.463	55.616	52.122	39.601
175.5	42.221	46.589	53.577	49.501	37.854
176.0	42.221	46.007	51.539	47.171	37.271
176.5	42.804	45.424	49.792	44.842	36.689
177.0	43.095	45.133	48.336	42.513	35.524
177.5	43.677	45.133	46.880	40.474	34.359
178.0	44.260	44.842	45.716	39.018	33.777
178.5	44.260	44.551	44.551	37.854	33.486
179.0	44.260	44.260	43.677	36.689	34.359
179.5	43.968	43.968	43.095	36.107	35.233
180.0	40.474	40.474	40.474	40.474	40.474



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GH-4-L240-840-FA-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	2810.36	N.A.	12.00
0-30	5959.64	N.A.	25.30
0-40	9714.91	N.A.	41.30
0-60	17022.92	N.A.	72.40
0-80	21464.78	N.A.	91.30
0-90	22215.29	N.A.	94.50
10-90	21487.79	N.A.	91.40
20-40	6904.55	N.A.	29.40
20-50	10730.94	N.A.	45.60
40-70	10048.92	N.A.	42.70
60-80	4441.86	N.A.	18.90
70-80	1700.95	N.A.	7.20
80-90	750.51	N.A.	3.20
90-110	732.79	N.A.	3.10
90-120	916.87	N.A.	3.90
90-130	1048.88	N.A.	4.50
90-150	1217.59	N.A.	5.20
90-180	1294.77	N.A.	5.50
110-180	561.98	N.A.	2.40
0-180	23510.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	727.49
10-20	2082.87
20-30	3149.28
30-40	3755.27
40-50	3826.39
50-60	3481.63
60-70	2740.9
70-80	1700.95
80-90	750.51
90-100	450.09
100-110	282.70
110-120	184.08
120-130	132.00
130-140	97.83
140-150	70.89
150-160	48.19
160-170	23.71
170-180	5.28

**IES INDOOR REPORT**  
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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	107	102	97	93	104	99	95	91	94	90	87	89	86	84	84	82	80	78
2	97	88	81	76	94	86	80	74	82	76	72	77	73	69	74	70	67	64
3	88	78	69	63	85	76	68	62	72	65	60	68	63	58	65	60	56	54
4	81	69	60	53	78	67	59	52	64	57	51	61	55	50	58	53	48	46
5	74	61	52	45	72	60	51	45	57	50	44	54	48	43	52	46	42	40
6	69	55	46	40	66	54	45	39	51	44	38	49	43	38	47	41	37	35
7	64	50	41	35	61	49	41	35	47	39	34	45	38	33	43	37	33	31
8	59	46	37	31	57	45	37	31	43	36	30	41	35	30	40	34	29	27
9	55	42	34	28	54	41	33	28	39	32	27	38	32	27	37	31	26	25
10	52	39	31	25	50	38	30	25	36	30	25	35	29	24	34	28	24	22

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GH-4-L240-840-FA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

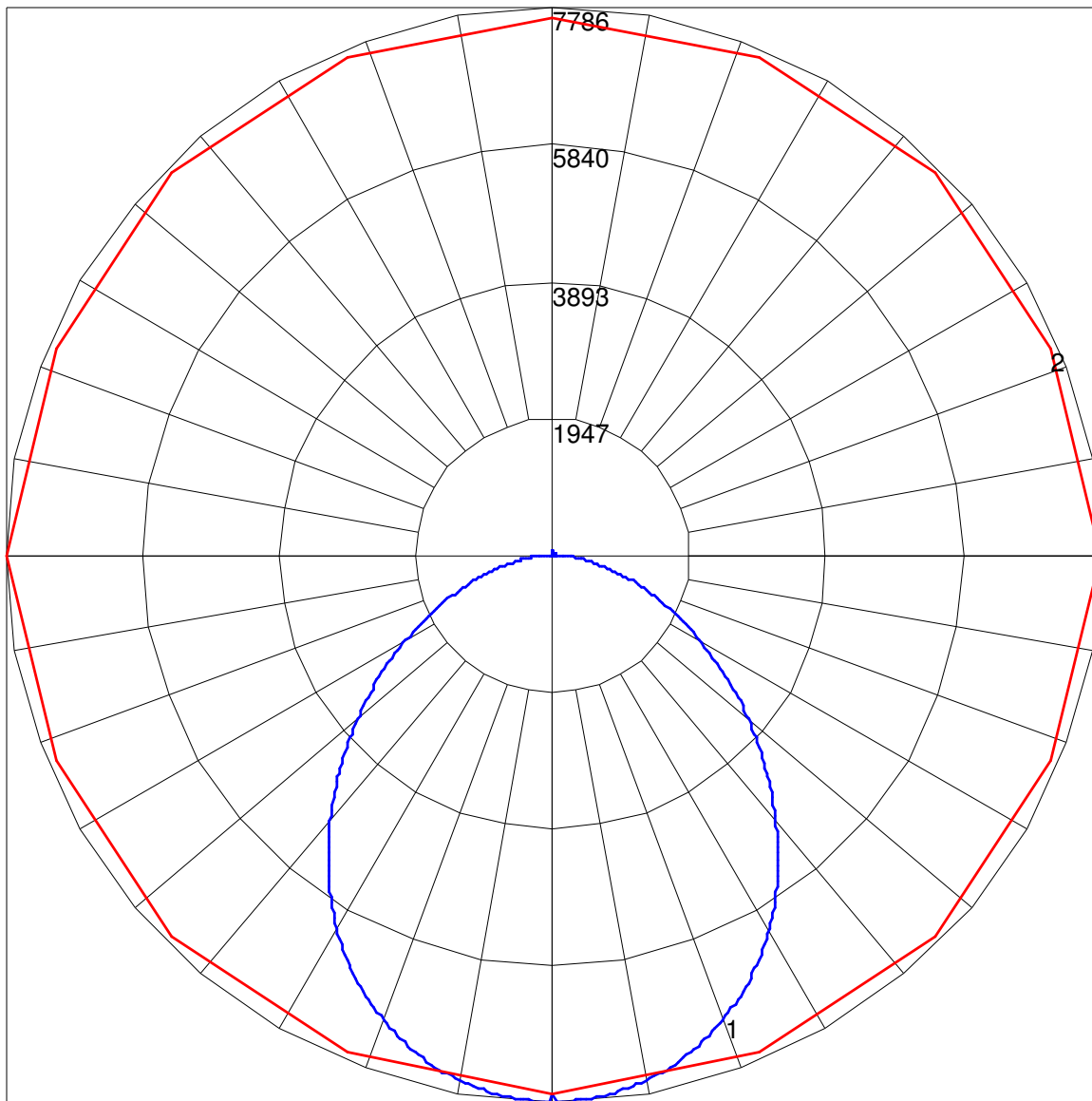
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	19.7	21.2	20.2	21.7	22.1	22.8	24.3	23.3	24.7	25.2
	3H	21.1	22.5	21.6	22.9	23.4	24.8	26.2	25.3	26.6	27.1
	4H	21.5	22.8	22.0	23.3	23.8	25.5	26.8	26.0	27.3	27.8
	6H	21.8	23.0	22.3	23.4	24.0	26.1	27.3	26.6	27.7	28.3
	8H	21.8	23.0	22.3	23.5	24.0	26.3	27.4	26.8	27.9	28.5
	12H	21.8	22.9	22.4	23.4	24.0	26.5	27.6	27.0	28.1	28.7
4H	2H	20.8	22.1	21.3	22.5	23.1	23.2	24.5	23.7	24.9	25.4
	3H	22.4	23.5	22.9	24.0	24.5	25.4	26.5	25.9	27.0	27.5
	4H	22.9	23.9	23.4	24.4	25.0	26.2	27.2	26.7	27.7	28.3
	6H	23.3	24.1	23.8	24.7	25.3	26.9	27.8	27.5	28.3	28.9
	8H	23.4	24.2	23.9	24.7	25.3	27.2	28.0	27.8	28.6	29.2
	12H	23.4	24.1	24.0	24.7	25.3	27.5	28.3	28.1	28.8	29.4
8H	4H	23.5	24.3	24.1	24.9	25.5	26.4	27.2	27.0	27.8	28.4
	6H	24.0	24.7	24.6	25.3	25.9	27.2	27.9	27.8	28.5	29.1
	8H	24.2	24.8	24.8	25.4	26.0	27.6	28.2	28.2	28.8	29.4
	12H	24.2	24.8	24.8	25.4	26.1	28.0	28.6	28.6	29.1	29.8
12H	4H	23.6	24.3	24.2	24.9	25.5	26.4	27.1	27.0	27.7	28.3
	6H	24.2	24.8	24.8	25.3	26.0	27.3	27.9	27.9	28.4	29.1
	8H	24.4	24.9	25.0	25.5	26.2	27.7	28.2	28.3	28.8	29.5

Maximum UGR = 29.8

POLAR GRAPH



Maximum Candela = 7786.196 Located At Horizontal Angle = 0, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)