



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GH-2-L180-840-FA-DIM-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] GEN FROM 13309242.03A  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 06-MAY-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] GH-2-L180-840-FA-DIM-UNV  
 [LUMINAIRE] Formed white steel housing, lens enclosures  
 [LAMP] 336 White LEDs  
 [\_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	18009
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	125.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	1.83 ft
Luminous Width (90-270)	1.42 ft
Luminous Height	0.21 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	17655	19517	22255
55	14815	17844	21518
65	11742	15794	19218
75	8471	12495	13871
85	4231	7270	9980

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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	6034.719	6034.719	6034.719	6034.719	6034.719
0.5	6043.160	6034.719	6037.021	6033.952	6024.743
1.0	6040.091	6033.184	6037.021	6034.719	6021.673
1.5	6037.789	6032.417	6037.789	6033.952	6021.673
2.0	6033.952	6029.347	6035.486	6031.649	6020.139
2.5	6029.347	6027.812	6033.184	6029.347	6018.604
3.0	6030.115	6020.906	6030.882	6027.045	6015.534
3.5	6022.441	6017.836	6027.045	6024.743	6016.302
4.0	6018.604	6014.767	6023.976	6022.441	6010.163
4.5	6015.534	6008.628	6021.673	6018.604	6007.860
5.0	6008.628	6004.024	6014.767	6012.465	6007.093
5.5	6001.721	5994.815	6010.163	6008.628	5999.419
6.0	5990.211	5990.211	6003.256	6005.558	5996.350
6.5	5981.769	5984.072	5997.117	6000.954	5990.211
7.0	5973.328	5974.096	5989.443	5993.280	5984.072
7.5	5961.817	5965.654	5981.002	5987.141	5979.467
8.0	5953.376	5954.911	5973.328	5978.700	5972.561
8.5	5942.633	5943.400	5964.120	5971.793	5967.189
9.0	5928.820	5931.122	5954.911	5964.887	5958.748
9.5	5912.705	5919.611	5942.633	5954.911	5951.074
10.0	5900.427	5903.496	5934.191	5946.470	5941.098
10.5	5887.381	5891.985	5921.913	5934.959	5935.726
11.0	5869.731	5879.707	5911.170	5926.518	5928.820
11.5	5857.453	5864.359	5898.892	5918.076	5919.611
12.0	5838.268	5848.244	5885.846	5908.100	5909.635
12.5	5822.921	5832.129	5872.801	5898.124	5899.659
13.0	5802.969	5815.247	5859.755	5887.381	5890.451
13.5	5784.551	5798.364	5844.407	5876.638	5879.707
14.0	5765.367	5780.714	5829.827	5862.057	5870.498
14.5	5746.949	5762.297	5815.247	5849.779	5856.686
15.0	5726.230	5743.113	5799.132	5837.501	5845.175
15.5	5705.511	5723.160	5783.017	5824.455	5832.897
16.0	5684.024	5703.208	5766.134	5810.642	5821.386
16.5	5661.002	5682.489	5748.484	5796.062	5808.340
17.0	5637.213	5661.002	5730.834	5781.482	5795.295
17.5	5612.657	5638.748	5712.417	5766.134	5781.482
18.0	5587.333	5615.727	5694.000	5750.786	5766.901
18.5	5562.777	5591.938	5674.815	5734.671	5753.089
19.0	5535.918	5567.381	5654.863	5717.789	5737.741
19.5	5508.293	5542.825	5634.911	5700.906	5722.393
20.0	5480.667	5517.501	5614.192	5683.256	5707.045
20.5	5452.273	5492.177	5593.472	5666.374	5690.930
21.0	5423.113	5465.319	5572.753	5648.724	5675.583
21.5	5393.952	5438.460	5550.499	5631.074	5659.467
22.0	5364.791	5410.835	5527.477	5612.657	5642.585
22.5	5334.863	5383.209	5505.223	5593.472	5626.470
23.0	5304.168	5354.815	5481.434	5575.055	5609.587
23.5	5272.705	5325.655	5456.878	5555.870	5591.938
24.0	5240.475	5295.727	5432.321	5536.686	5575.055
24.5	5207.477	5265.799	5406.998	5516.734	5557.405
25.0	5174.480	5235.103	5380.907	5496.014	5538.988
25.5	5139.948	5203.641	5354.815	5475.295	5520.571
26.0	5105.415	5171.410	5327.957	5453.808	5501.386
26.5	5070.115	5138.413	5300.331	5432.321	5482.201

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**CANDELA TABULATION - (Cont.)**

27.0	5033.281	5105.415	5272.705	5410.067	5462.249
27.5	4996.446	5070.883	5244.312	5387.813	5441.530
28.0	4958.077	5036.351	5215.919	5364.024	5420.043
28.5	4919.708	5001.051	5185.991	5341.003	5397.789
29.0	4879.804	4964.984	5156.063	5315.679	5375.535
29.5	4839.132	4928.149	5126.135	5291.122	5351.746
30.0	4798.461	4890.547	5094.672	5265.031	5327.957
30.5	4757.022	4852.945	5063.209	5238.940	5303.401
31.0	4715.583	4813.809	5030.979	5212.082	5277.310
31.5	4672.610	4773.905	4998.749	5184.456	5251.218
32.0	4629.636	4734.001	4964.984	5156.063	5224.360
32.5	4586.663	4693.329	4931.219	5126.902	5196.734
33.0	4542.154	4652.658	4897.454	5096.974	5168.341
33.5	4496.879	4610.452	4862.154	5067.046	5139.948
34.0	4452.370	4567.478	4826.854	5036.351	5110.020
34.5	4406.327	4524.504	4790.020	5004.120	5079.324
35.0	4360.284	4480.763	4753.185	4971.123	5048.629
35.5	4312.706	4435.488	4714.816	4938.125	5016.399
36.0	4265.128	4390.979	4677.214	4904.360	4984.936
36.5	4216.783	4345.704	4638.077	4870.595	4952.706
37.0	4166.903	4299.661	4598.941	4836.830	4920.475
37.5	4117.790	4253.617	4559.804	4801.531	4885.943
38.0	4067.143	4206.807	4519.133	4765.463	4852.945
38.5	4016.495	4160.764	4478.461	4730.164	4818.413
39.0	3965.848	4113.953	4437.023	4694.097	4783.113
39.5	3914.433	4067.143	4395.584	4658.797	4748.581
40.0	3863.786	4019.565	4354.912	4622.730	4713.281
40.5	3811.603	3971.987	4314.241	4586.663	4677.982
41.0	3760.189	3925.176	4272.802	4549.828	4642.682
41.5	3709.541	3879.901	4231.363	4512.994	4607.382
42.0	3658.894	3831.555	4190.692	4476.927	4571.315
42.5	3607.479	3783.978	4149.253	4440.092	4536.015
43.0	3556.831	3736.400	4108.582	4404.025	4500.716
43.5	3506.951	3689.589	4067.910	4367.958	4465.416
44.0	3456.304	3642.779	4028.006	4331.891	4429.349
44.5	3406.424	3596.735	3987.335	4295.056	4394.049
45.0	3357.311	3550.692	3946.663	4258.989	4358.749
45.5	3308.199	3503.882	3905.224	4221.387	4323.449
46.0	3259.086	3457.071	3864.553	4185.320	4288.150
46.5	3209.973	3411.028	3823.882	4148.486	4252.083
47.0	3160.861	3364.985	3783.210	4111.651	4216.016
47.5	3112.515	3318.942	3742.539	4074.817	4179.948
48.0	3063.403	3272.899	3701.867	4037.215	4143.881
48.5	3015.057	3226.856	3661.196	3998.845	4107.814
49.0	2965.945	3181.580	3619.757	3961.244	4070.980
49.5	2916.832	3135.537	3579.086	3923.642	4035.680
50.0	2868.487	3090.261	3538.414	3885.272	3998.078
50.5	2819.374	3044.985	3496.975	3846.136	3960.476
51.0	2771.029	2999.710	3456.304	3806.999	3922.874
51.5	2721.916	2954.434	3415.633	3767.862	3884.505
52.0	2672.803	2909.158	3374.194	3728.726	3846.136
52.5	2624.458	2863.115	3331.988	3688.822	3807.766
53.0	2576.113	2817.839	3289.781	3648.918	3769.397
53.5	2528.535	2772.564	3248.342	3608.246	3730.261
54.0	2480.190	2727.288	3206.136	3567.575	3689.589
54.5	2432.612	2682.012	3164.697	3526.903	3648.150

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**CANDELA TABULATION - (Cont.)**

55.0	2385.034	2636.736	3121.724	3485.465	3605.944
55.5	2336.689	2591.461	3078.750	3443.258	3562.203
56.0	2289.878	2546.952	3035.777	3401.820	3519.997
56.5	2243.068	2501.676	2992.036	3358.846	3477.023
57.0	2196.257	2457.168	2949.062	3315.105	3432.515
57.5	2150.981	2411.892	2906.089	3270.597	3386.472
58.0	2104.171	2367.384	2862.348	3225.321	3338.894
58.5	2058.128	2322.876	2817.839	3180.045	3288.247
59.0	2012.852	2279.135	2774.098	3134.002	3238.366
59.5	1966.809	2234.626	2730.357	3087.959	3189.254
60.0	1922.300	2190.885	2686.616	3040.381	3140.141
60.5	1877.025	2147.912	2642.108	2992.036	3087.192
61.0	1833.284	2104.938	2598.367	2942.156	3035.009
61.5	1788.775	2062.732	2554.626	2892.276	2981.292
62.0	1745.034	2020.526	2510.885	2842.396	2925.273
62.5	1702.061	1979.087	2467.912	2791.748	2869.254
63.0	1658.320	1937.648	2424.171	2740.333	2814.002
63.5	1615.346	1896.977	2379.662	2687.384	2756.448
64.0	1573.140	1856.305	2335.921	2633.667	2698.127
64.5	1531.701	1816.401	2292.948	2579.182	2639.038
65.0	1490.262	1776.497	2248.439	2524.698	2579.182
65.5	1448.824	1736.593	2204.698	2469.446	2517.792
66.0	1408.920	1697.457	2159.423	2414.195	2457.168
66.5	1368.248	1659.087	2114.147	2358.943	2397.312
67.0	1329.112	1620.718	2068.104	2302.156	2335.921
67.5	1289.975	1582.349	2022.828	2243.835	2273.763
68.0	1250.838	1543.979	1976.785	2187.048	2210.070
68.5	1212.469	1505.610	1929.974	2130.262	2147.144
69.0	1174.867	1467.241	1883.931	2073.475	2083.451
69.5	1138.033	1428.872	1837.121	2015.154	2019.758
70.0	1101.198	1390.502	1790.310	1956.833	1956.065
70.5	1064.364	1352.133	1742.732	1896.977	1891.605
71.0	1028.296	1314.531	1694.387	1836.353	1826.377
71.5	992.997	1276.929	1647.577	1777.265	1761.917
72.0	956.930	1239.327	1599.999	1717.409	1698.224
72.5	922.397	1202.493	1553.955	1658.320	1636.833
73.0	887.865	1165.658	1507.145	1599.231	1576.210
73.5	854.100	1128.057	1459.567	1540.143	1514.819
74.0	820.335	1091.989	1412.757	1481.821	1456.498
74.5	786.570	1055.155	1365.179	1422.733	1398.944
75.0	753.803	1018.320	1317.601	1366.713	1342.157
75.5	721.419	983.021	1270.790	1311.462	1286.905
76.0	689.266	946.186	1223.980	1257.745	1234.723
76.5	657.726	910.119	1177.169	1205.562	1184.843
77.0	626.877	874.052	1130.359	1154.915	1134.963
77.5	596.642	838.752	1083.548	1104.268	1087.385
78.0	566.561	804.220	1037.505	1056.690	1042.109
78.5	537.477	769.688	991.462	1009.879	997.601
79.0	508.546	735.309	946.186	966.138	955.395
79.5	480.613	701.390	901.678	923.165	914.723
80.0	452.834	667.932	857.937	881.726	876.354
80.5	425.899	634.858	814.963	841.822	838.752
81.0	399.194	601.707	772.757	802.685	804.220
81.5	373.717	569.016	731.779	765.620	769.688
82.0	347.856	536.402	691.951	729.784	736.767
82.5	323.146	503.942	652.815	695.558	704.997

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**CANDELA TABULATION - (Cont.)**

83.0	298.359	471.482	614.906	663.021	673.841
83.5	274.187	438.868	578.148	630.791	644.374
84.0	250.858	407.558	542.618	600.095	616.210
84.5	227.376	375.942	507.932	570.321	589.045
85.0	204.585	344.633	474.935	541.774	562.570
85.5	181.717	313.784	442.935	514.378	536.940
86.0	158.772	283.242	412.086	487.750	512.076
86.5	135.750	253.698	382.925	462.196	487.290
87.0	113.036	224.921	354.532	437.410	463.654
87.5	90.245	196.451	327.367	413.544	440.633
88.0	67.837	169.208	301.889	390.676	417.841
88.5	45.276	144.268	278.868	369.343	397.122
89.0	27.472	123.319	259.760	352.076	380.239
89.5	15.424	108.125	243.722	337.419	366.043
90.0	7.137	98.609	231.213	323.683	351.386
90.5	11.894	105.209	235.280	327.136	351.002
91.0	12.508	102.446	231.136	319.156	339.108
91.5	13.583	99.376	225.151	310.791	330.052
92.0	14.273	97.688	220.547	304.038	324.681
92.5	14.811	96.077	217.170	299.050	320.230
93.0	15.578	94.312	213.947	294.829	316.009
93.5	16.422	92.316	210.724	290.762	311.789
94.0	17.266	90.321	207.348	286.695	307.338
94.5	18.187	88.249	203.818	282.551	302.734
95.0	19.261	86.254	200.211	278.407	298.283
95.5	20.566	84.259	196.758	274.187	293.985
96.0	21.947	82.340	193.458	270.043	289.918
96.5	23.329	80.575	190.158	266.053	286.005
97.0	24.556	78.964	186.858	262.062	282.091
97.5	25.707	77.506	183.635	258.072	278.177
98.0	26.552	76.201	180.489	254.388	274.340
98.5	27.089	74.897	177.496	250.705	270.350
99.0	27.396	73.976	174.580	247.098	266.359
99.5	27.703	73.132	171.587	243.491	262.523
100.0	27.933	72.057	168.595	239.808	258.532
100.5	28.086	71.137	165.679	236.201	254.772
101.0	28.240	70.369	162.916	232.441	250.935
101.5	28.470	69.679	160.077	228.681	247.252
102.0	28.623	69.065	157.314	224.997	243.491
102.5	28.777	68.604	154.628	221.314	239.808
103.0	28.930	68.297	152.019	217.707	236.201
103.5	29.007	68.067	149.794	214.407	232.441
104.0	29.237	67.914	147.645	211.184	228.758
104.5	29.314	67.760	145.650	207.885	225.151
105.0	29.468	67.683	143.731	204.662	221.621
105.5	29.698	67.683	141.890	201.439	218.168
106.0	29.775	67.683	140.278	198.292	214.868
106.5	30.005	67.837	138.667	195.146	211.645
107.0	30.158	67.990	137.055	192.153	208.422
107.5	30.312	68.144	135.290	189.314	205.199
108.0	30.465	68.221	133.679	186.705	201.976
108.5	30.619	68.374	132.221	184.326	198.830
109.0	30.695	68.604	130.762	182.101	195.837
109.5	30.849	68.834	129.151	179.798	193.074
110.0	31.002	69.141	127.693	177.420	190.619
110.5	31.079	69.602	126.312	175.041	188.316

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**CANDELA TABULATION - (Cont.)**

111.0	31.233	69.986	125.084	172.738	186.014
111.5	31.386	70.446	123.856	170.590	183.712
112.0	31.540	70.983	122.705	168.671	181.256
112.5	31.693	71.597	121.631	166.753	178.878
113.0	31.846	72.364	120.556	164.834	176.729
113.5	32.000	73.055	119.635	162.993	174.810
114.0	32.077	73.822	118.715	161.074	172.815
114.5	32.230	74.667	117.717	159.232	170.897
115.0	32.384	75.434	116.950	157.314	168.748
115.5	32.460	76.278	116.182	155.472	166.676
116.0	32.614	77.122	115.415	153.631	164.681
116.5	32.767	77.890	114.724	151.866	162.686
117.0	32.998	78.734	114.033	150.254	160.844
117.5	33.074	79.424	113.343	148.796	159.079
118.0	33.228	80.269	112.806	147.415	157.314
118.5	33.381	81.113	112.192	146.033	155.626
119.0	33.611	81.880	111.655	144.729	153.938
119.5	33.688	82.647	111.117	143.501	152.403
120.0	33.842	83.492	110.734	142.273	150.945
120.5	33.918	84.259	110.273	140.969	149.563
121.0	34.072	85.103	109.890	139.741	148.259
121.5	34.149	85.947	109.429	138.590	147.031
122.0	34.302	86.791	109.045	137.515	145.803
122.5	34.456	87.712	108.739	136.441	144.652
123.0	34.532	88.556	108.432	135.520	143.501
123.5	34.686	89.170	108.278	134.599	142.350
124.0	34.763	89.554	108.048	133.755	141.122
124.5	34.993	89.784	107.971	132.834	140.125
125.0	35.223	89.938	107.894	131.914	139.204
125.5	35.376	90.014	107.971	131.146	138.360
126.0	35.607	90.168	108.201	130.302	137.439
126.5	35.837	90.091	108.432	129.611	136.518
127.0	35.990	89.938	108.815	128.997	135.674
127.5	36.221	89.707	109.352	128.384	134.906
128.0	36.451	89.400	109.813	127.693	134.062
128.5	36.681	89.170	110.273	127.079	133.295
129.0	36.911	88.863	110.657	126.465	132.527
129.5	37.065	88.556	111.117	125.774	131.760
130.0	37.295	88.249	111.578	125.161	131.069
130.5	37.525	87.789	112.038	124.623	130.379
131.0	37.755	87.252	112.499	124.086	129.765
131.5	37.986	86.715	112.959	123.549	129.074
132.0	38.139	86.101	113.343	123.165	128.384
132.5	38.139	85.640	113.803	122.858	127.770
133.0	38.216	85.026	114.264	122.705	127.156
133.5	38.293	84.566	114.724	122.628	126.542
134.0	38.369	84.105	115.261	122.705	126.081
134.5	38.446	83.722	115.798	122.782	125.621
135.0	38.599	83.261	116.259	123.089	125.391
135.5	38.906	82.801	116.643	123.319	125.314
136.0	39.137	82.340	117.103	123.703	125.237
136.5	39.290	81.727	117.640	124.086	125.314
137.0	39.520	80.959	118.254	124.470	125.468
137.5	39.827	80.269	118.868	124.854	125.698
138.0	40.058	79.424	119.635	125.237	126.005
138.5	40.211	78.350	120.249	125.621	126.388

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

139.0	40.058	77.352	120.863	126.158	126.772
139.5	39.981	76.278	121.554	126.695	127.233
140.0	39.520	75.204	122.168	127.233	127.693
140.5	39.137	73.746	122.705	127.770	128.153
141.0	38.830	72.518	123.089	128.307	128.691
141.5	38.369	71.290	123.242	128.844	129.228
142.0	37.909	70.523	122.858	129.304	129.842
142.5	37.372	69.832	122.321	129.918	130.379
143.0	36.067	68.988	121.707	130.379	130.993
143.5	35.760	68.681	121.017	130.839	131.530
144.0	35.530	68.297	120.096	131.300	132.144
144.5	34.763	67.990	118.868	131.760	132.681
145.0	34.686	67.760	117.563	132.297	133.295
145.5	34.916	67.530	116.336	132.758	133.832
146.0	35.146	67.300	115.108	133.141	134.216
146.5	35.376	67.069	113.803	133.602	134.676
147.0	35.683	66.839	112.422	134.062	135.137
147.5	35.990	66.609	110.964	134.446	135.674
148.0	36.374	66.225	109.659	134.599	136.211
148.5	36.681	65.842	108.278	134.446	136.748
149.0	37.141	65.381	106.897	133.985	137.285
149.5	37.525	64.921	105.439	133.141	137.899
150.0	37.986	64.307	103.981	132.144	138.436
150.5	38.446	63.770	102.523	130.916	138.283
151.0	38.983	63.156	101.141	129.381	137.899
151.5	39.444	62.542	99.683	127.770	137.285
152.0	39.827	61.928	98.149	126.005	136.134
152.5	40.058	61.161	96.614	124.163	134.753
153.0	40.288	60.470	95.233	122.244	133.295
153.5	40.364	59.703	93.851	120.403	131.760
154.0	40.364	59.012	92.470	118.484	129.918
154.5	40.364	58.245	91.165	116.489	127.846
155.0	40.441	57.477	89.784	114.417	125.851
155.5	40.364	56.710	88.403	112.422	123.933
156.0	40.288	56.019	87.098	110.504	122.014
156.5	40.288	55.328	85.717	108.508	119.942
157.0	40.211	54.561	84.412	106.590	117.947
157.5	39.981	53.794	83.108	104.748	115.952
158.0	39.751	53.026	81.957	103.060	113.803
158.5	39.367	52.182	81.036	101.448	111.578
159.0	38.983	51.415	80.192	99.837	109.506
159.5	38.523	50.571	79.194	98.302	107.971
160.0	37.986	49.727	78.120	96.691	106.513
160.5	37.525	48.959	76.969	95.079	105.132
161.0	36.988	48.192	75.664	93.391	104.134
161.5	36.528	47.501	74.129	91.703	102.983
162.0	36.221	46.811	72.595	90.014	101.602
162.5	36.144	46.197	71.060	88.326	100.221
163.0	36.374	45.659	69.525	86.791	98.686
163.5	36.528	45.122	68.144	85.487	96.691
164.0	36.835	44.662	66.609	84.105	94.542
164.5	36.988	44.125	65.074	82.417	92.393
165.0	37.141	43.664	63.540	80.345	90.782
165.5	37.218	43.281	62.005	78.043	88.863
166.0	37.218	42.897	60.547	75.587	86.177
166.5	37.295	42.513	59.089	73.439	82.801

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

167.0	37.295	42.283	57.707	71.367	79.348
167.5	37.218	41.976	56.249	69.448	76.048
168.0	37.218	41.746	54.791	67.453	72.902
168.5	37.218	41.592	53.333	65.381	69.832
169.0	37.141	41.362	51.875	63.156	66.763
169.5	37.218	41.209	50.571	60.854	63.846
170.0	37.295	40.978	49.420	58.628	61.084
170.5	37.448	40.748	48.345	56.403	58.321
171.0	37.525	40.595	47.424	54.101	55.789
171.5	37.602	40.518	46.734	51.952	53.640
172.0	37.755	40.441	46.120	49.957	51.492
172.5	37.832	40.364	45.583	48.038	49.343
173.0	37.986	40.288	45.122	46.504	47.424
173.5	38.139	40.288	44.585	45.199	45.736
174.0	38.293	40.364	44.125	44.125	44.508
174.5	38.523	40.518	43.664	43.204	43.434
175.0	38.830	40.595	43.204	42.360	42.206
175.5	39.137	40.902	42.897	41.669	41.285
176.0	39.520	41.209	42.667	41.055	40.288
176.5	39.981	41.592	42.590	40.518	39.213
177.0	40.441	41.976	42.513	40.288	38.599
177.5	41.055	42.283	42.513	40.058	38.216
178.0	41.516	42.667	42.436	39.904	38.139
178.5	41.899	42.974	42.436	39.827	38.369
179.0	42.129	43.127	42.513	39.904	38.676
179.5	42.283	43.204	42.667	40.058	38.983
180.0	41.746	41.746	41.746	41.746	41.746



**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	2205.19	N.A.	12.20
0-30	4677.82	N.A.	26.00
0-40	7631.62	N.A.	42.40
0-60	13379.32	N.A.	74.30
0-80	16764.37	N.A.	93.10
0-90	17255.88	N.A.	95.80
10-90	16684.84	N.A.	92.60
20-40	5426.43	N.A.	30.10
20-50	8440.17	N.A.	46.90
40-70	7869.31	N.A.	43.70
60-80	3385.04	N.A.	18.80
70-80	1263.44	N.A.	7.00
80-90	491.51	N.A.	2.70
90-110	343.23	N.A.	1.90
90-120	455.55	N.A.	2.50
90-130	549.29	N.A.	3.10
90-150	691.01	N.A.	3.80
90-180	753.48	N.A.	4.20
110-180	410.25	N.A.	2.30
0-180	18009.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	571.04
10-20	1634.15
20-30	2472.63
30-40	2953.8
40-50	3013.73
50-60	2733.97
60-70	2121.6
70-80	1263.44
80-90	491.51
90-100	198.70
100-110	144.52
110-120	112.32
120-130	93.75
130-140	78.65
140-150	63.07
150-160	40.19
160-170	18.05
170-180	4.23

**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	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	107	102	98	94	104	100	96	92	95	91	88	90	87	85	86	84	82	79
2	97	89	82	76	94	87	80	75	83	77	73	79	74	70	75	71	68	66
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55
4	81	69	60	54	79	68	59	53	65	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	60	52	46	58	50	45	55	49	44	53	47	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	43	38	48	42	38	36
7	64	50	42	35	62	49	41	35	47	40	35	46	39	34	44	38	34	31
8	59	46	37	32	58	45	37	31	43	36	31	42	35	30	40	34	30	28
9	56	42	34	28	54	41	34	28	40	33	28	39	32	27	37	31	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	29	25	35	29	25	23

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GH-2-L180-840-FA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

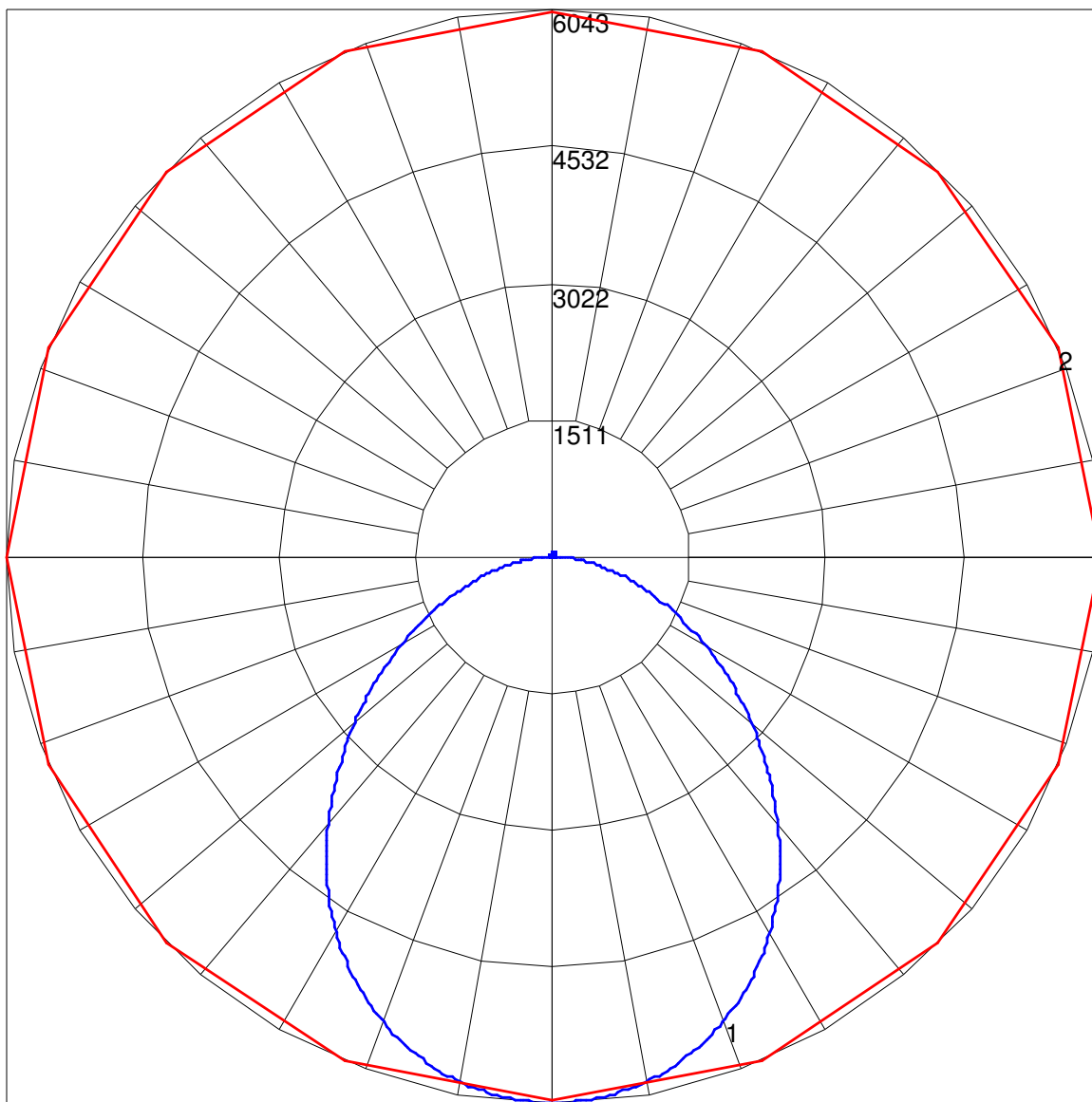
Reflectances

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	20.4	22.0	20.8	22.4	22.8	22.8	24.4	23.2	24.8	25.2
	3H	21.8	23.3	22.3	23.7	24.1	24.6	26.0	25.0	26.4	26.9
	4H	22.3	23.7	22.8	24.1	24.6	25.2	26.5	25.7	27.0	27.4
	6H	22.6	23.9	23.1	24.3	24.8	25.6	26.9	26.1	27.3	27.8
	8H	22.7	23.9	23.2	24.4	24.9	25.8	27.0	26.3	27.4	27.9
	12H	22.8	23.9	23.3	24.4	24.9	25.9	27.1	26.4	27.5	28.1
4H	2H	21.4	22.7	21.8	23.1	23.6	23.2	24.6	23.7	25.0	25.5
	3H	23.0	24.2	23.5	24.6	25.1	25.3	26.4	25.7	26.9	27.4
	4H	23.7	24.7	24.1	25.2	25.7	26.0	27.0	26.5	27.5	28.0
	6H	24.1	25.0	24.6	25.5	26.0	26.6	27.5	27.1	28.0	28.5
	8H	24.2	25.0	24.7	25.5	26.1	26.8	27.6	27.3	28.1	28.7
	12H	24.3	25.0	24.8	25.6	26.1	27.0	27.7	27.5	28.3	28.8
8H	4H	24.1	25.0	24.7	25.5	26.1	26.2	27.0	26.7	27.6	28.1
	6H	24.7	25.4	25.3	26.0	26.5	26.9	27.6	27.4	28.1	28.7
	8H	24.9	25.5	25.5	26.1	26.7	27.2	27.8	27.7	28.4	29.0
	12H	25.0	25.6	25.6	26.1	26.8	27.5	28.0	28.0	28.6	29.2
12H	4H	24.2	25.0	24.7	25.5	26.1	26.2	27.0	26.8	27.5	28.1
	6H	24.8	25.5	25.4	26.0	26.6	26.9	27.6	27.5	28.1	28.7
	8H	25.1	25.6	25.6	26.2	26.8	27.3	27.8	27.8	28.4	29.0

Maximum UGR = 29.2

POLAR GRAPH



Maximum Candela = 6043.16 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.)