



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GH-4-L540-840-FA-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 13326828.05  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUE DATE] 4/22/2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] GH-4-L540-840-FA-DIM-UNV  
 [LUMINAIRE] Formed white steel housing, frosted lens enclosure  
 [LAMP] 1008 White LEDs  
 [BALLAST] Six Everline D21CC80UNVPW-C Drivers

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	54031
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	372.2
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)	3.73 ft
Luminous Width (90-270)	1.96 ft
Luminous Height	0.27 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	20327	22083	24288
55	17327	20333	23212
65	14041	18100	20305
75	10443	14314	14000
85	5842	8051	9013

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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	18252.452	18252.452	18252.452	18252.452	18252.452
0.5	18252.452	18252.452	18260.586	18244.318	18252.452
1.0	18252.452	18252.452	18252.452	18236.184	18252.452
1.5	18252.452	18252.452	18252.452	18236.184	18252.452
2.0	18236.184	18244.318	18244.318	18228.050	18252.452
2.5	18236.184	18228.050	18244.318	18228.050	18252.452
3.0	18219.916	18219.916	18228.050	18219.916	18236.184
3.5	18203.649	18203.649	18219.916	18203.649	18228.050
4.0	18187.381	18187.381	18203.649	18211.782	18236.184
4.5	18171.113	18179.247	18187.381	18187.381	18219.916
5.0	18146.711	18162.979	18179.247	18179.247	18195.515
5.5	18138.577	18138.577	18154.845	18162.979	18187.381
6.0	18097.908	18122.310	18138.577	18146.711	18187.381
6.5	18089.774	18097.908	18114.176	18130.444	18162.979
7.0	18057.239	18065.372	18097.908	18106.042	18138.577
7.5	18032.837	18040.971	18073.506	18089.774	18114.176
8.0	18008.435	18016.569	18057.239	18073.506	18097.908
8.5	17967.766	17984.033	18016.569	18049.105	18081.640
9.0	17935.230	17951.498	18000.301	18024.703	18049.105
9.5	17894.561	17910.828	17967.766	17992.167	18024.703
10.0	17862.025	17878.293	17935.230	17975.900	18000.301
10.5	17805.088	17845.757	17902.695	17951.498	17984.033
11.0	17772.552	17796.954	17870.159	17918.962	17959.632
11.5	17723.749	17756.285	17837.623	17902.695	17927.096
12.0	17674.946	17707.481	17796.954	17870.159	17902.695
12.5	17626.142	17666.812	17756.285	17837.623	17878.293
13.0	17569.205	17618.008	17715.615	17805.088	17845.757
13.5	17520.402	17569.205	17683.080	17764.418	17813.222
14.0	17463.464	17520.402	17634.276	17723.749	17772.552
14.5	17406.527	17455.331	17593.607	17691.213	17740.017
15.0	17341.456	17406.527	17544.803	17650.544	17699.347
15.5	17292.653	17341.456	17487.866	17618.008	17666.812
16.0	17219.448	17292.653	17447.197	17569.205	17618.008
16.5	17162.510	17227.582	17390.259	17528.536	17593.607
17.0	17089.305	17162.510	17341.456	17479.732	17544.803
17.5	17024.234	17097.439	17284.519	17439.063	17504.134
18.0	16942.895	17032.368	17235.716	17382.126	17455.331
18.5	16869.690	16967.297	17178.778	17341.456	17414.661
19.0	16796.485	16894.092	17113.707	17292.653	17373.992
19.5	16715.146	16812.753	17056.770	17243.849	17308.921
20.0	16633.808	16747.682	16991.699	17186.912	17276.385
20.5	16544.335	16666.343	16934.762	17138.109	17211.314
21.0	16462.996	16585.004	16861.557	17081.172	17170.644
21.5	16381.657	16503.665	16796.485	17032.368	17121.841
22.0	16284.050	16422.326	16731.414	16967.297	17081.172
22.5	16202.711	16332.854	16658.209	16910.360	17016.100
23.0	16105.105	16259.649	16585.004	16853.423	16959.163
23.5	16007.498	16170.176	16511.799	16796.485	16902.226
24.0	15918.025	16072.569	16430.460	16731.414	16845.289
24.5	15820.418	15991.230	16357.255	16666.343	16788.351
25.0	15730.946	15893.623	16292.184	16601.272	16731.414
25.5	15625.205	15804.151	16202.711	16544.335	16674.477
26.0	15527.598	15706.544	16121.372	16471.130	16609.406
26.5	15421.858	15608.937	16040.033	16406.059	16544.335

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**CANDELA TABULATION - (Cont.)**

27.0	15299.84915511.33115958.69516340.98716471.130
27.5	15202.24315413.72415869.22216267.78216414.192
28.0	15088.36815307.98315787.88316202.71116340.987
28.5	14974.49415210.37715690.27616121.37216275.916
29.0	14844.35115096.50215608.93716048.16716202.711
29.5	14722.34314990.76215511.33115966.82816121.372
30.0	14600.33514876.88715429.99215893.62316048.167
30.5	14478.32614763.01315332.38515812.28515974.962
31.0	14356.31814649.13815242.91215739.08015901.757
31.5	14226.17614535.26415145.30515657.74115836.686
32.0	14104.16714421.38915047.69915576.40215755.347
32.5	13982.15914299.38114958.22615495.06315674.008
33.0	13852.01714185.50614860.61915405.59015600.803
33.5	13730.00814063.49814763.01315324.25115503.197
34.0	13599.86613949.62314665.40615234.77815421.858
34.5	13469.72413827.61514559.66515153.43915340.519
35.0	13339.58213705.60714462.05915063.96715259.180
35.5	13209.43913583.59814356.31814982.62815161.573
36.0	13079.29713461.59014250.57714893.15515080.234
36.5	12941.02113339.58214144.83714795.54814990.762
37.0	12802.74513209.43914039.09614697.94114901.289
37.5	12656.33513087.43113933.35614608.46914803.682
38.0	12518.05912957.28913819.48114510.86214714.209
38.5	12371.64912827.14613713.74114413.25514624.736
39.0	12225.23912697.00413599.86614315.64914527.130
39.5	12078.82812566.86213485.99214218.04214429.523
40.0	11932.41812436.72013380.25114120.43514331.916
40.5	11786.00812298.44413266.37714014.69514226.176
41.0	11639.59812160.16713144.36813917.08814128.569
41.5	11493.18812030.02513030.49413811.34714022.828
42.0	11346.77811891.74912916.61913705.60713925.222
42.5	11200.36811753.47312794.61113599.86613819.481
43.0	11053.95811615.19712672.60313494.12613713.741
43.5	10915.68211476.92112550.59413388.38513599.866
44.0	10769.27211338.64412428.58613274.51013494.126
44.5	10614.72811200.36812306.57713160.63613388.385
45.0	10468.31811062.09212184.56913054.89513274.510
45.5	10313.77410923.81612062.56112941.02113168.770
46.0	10167.36410785.54011932.41812827.14613054.895
46.5	10012.82010639.13011810.41012713.27212932.887
47.0	9858.276 10500.85411680.26812591.26412819.013
47.5	9703.732 10362.57711558.25912477.38912697.004
48.0	9549.188 10216.16711436.25112355.38112583.130
48.5	9394.644 10077.89111306.10912241.50612461.121
49.0	9248.234 9931.481 11184.10012119.49812339.113
49.5	9093.690 9793.205 11053.95811997.49012217.105
50.0	8939.146 9646.795 10923.81611875.48112095.096
50.5	8792.736 9500.385 10793.67411753.47311981.222
51.0	8638.192 9362.109 10663.53111623.33111859.213
51.5	8491.782 9215.699 10533.38911501.32211737.205
52.0	8337.239 9077.423 10403.24711371.18011615.197
52.5	8190.828 8931.013 10273.10511241.03811485.054
53.0	8039.538 8792.736 10142.96211110.89511363.046
53.5	7889.061 8654.460 10004.68610980.75311232.904
54.0	7741.024 8516.184 9874.544 10850.61111094.628
54.5	7595.428 8377.908 9736.268 10712.33510964.485

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**CANDELA TABULATION - (Cont.)**

55.0	7448.204	8231.498	9606.126	10574.059	10826.209
55.5	7306.674	8096.475	9467.849	10435.782	10687.933
56.0	7163.518	7957.386	9337.707	10297.506	10541.523
56.5	7019.548	7818.296	9199.431	10159.230	10395.113
57.0	6873.138	7680.833	9061.155	10020.954	10248.703
57.5	6725.101	7542.557	8931.013	9874.544	10094.159
58.0	6579.505	7405.095	8792.736	9736.268	9947.749
58.5	6435.535	7266.818	8654.460	9589.858	9793.205
59.0	6290.751	7129.356	8516.184	9435.314	9638.661
59.5	6150.849	6991.893	8377.908	9288.904	9484.117
60.0	6010.132	6855.244	8239.632	9134.360	9321.439
60.5	5871.043	6720.221	8105.423	8987.950	9158.762
61.0	5730.326	6585.198	7968.773	8833.406	8996.084
61.5	5587.983	6450.989	7832.937	8670.728	8825.272
62.0	5449.707	6318.407	7696.288	8516.184	8646.326
62.5	5313.058	6187.451	7557.198	8353.506	8467.381
63.0	5180.475	6056.495	7418.922	8182.695	8296.569
63.5	5051.146	5926.353	7279.833	8018.390	8115.183
64.0	4920.191	5797.838	7139.116	7850.018	7932.171
64.5	4787.608	5670.949	6999.213	7680.020	7745.905
65.0	4656.653	5544.060	6856.057	7506.768	7555.572
65.5	4528.951	5417.985	6712.087	7331.890	7365.239
66.0	4403.689	5293.536	6567.304	7154.571	7173.279
66.5	4278.427	5168.274	6422.521	6973.998	6981.319
67.0	4152.351	5043.826	6276.110	6793.426	6786.105
67.5	4028.716	4921.004	6130.514	6612.854	6590.079
68.0	3906.708	4797.369	5984.104	6429.028	6389.172
68.5	3783.886	4673.734	5838.507	6242.762	6186.638
69.0	3661.064	4551.726	5692.097	6055.682	5981.664
69.5	3540.683	4429.717	5544.874	5868.603	5779.130
70.0	3421.928	4307.709	5397.650	5681.523	5575.782
70.5	3303.987	4187.327	5251.240	5493.630	5374.875
71.0	3188.485	4067.759	5104.830	5306.551	5176.408
71.5	3075.424	3948.191	4956.793	5120.285	4982.822
72.0	2963.177	3829.436	4807.943	4933.205	4794.115
72.5	2853.369	3713.121	4659.906	4749.379	4606.223
73.0	2746.815	3596.807	4510.243	4567.180	4423.210
73.5	2639.448	3482.119	4360.579	4387.421	4241.824
74.0	2534.521	3369.058	4213.356	4210.915	4066.132
74.5	2433.660	3257.623	4064.505	4036.850	3898.574
75.0	2332.800	3147.003	3916.469	3866.038	3731.016
75.5	2235.193	3037.195	3768.432	3699.294	3572.405
76.0	2138.400	2929.014	3620.395	3539.056	3416.234
76.5	2042.420	2821.647	3474.798	3381.259	3261.690
77.0	1949.694	2713.466	3329.202	3228.341	3113.654
77.5	1855.341	2606.912	3185.232	3079.491	2970.497
78.0	1764.241	2501.172	3041.262	2934.708	2830.594
78.5	1674.768	2394.618	2899.732	2794.805	2698.825
79.0	1586.922	2288.877	2759.016	2658.969	2571.123
79.5	1498.263	2182.323	2620.740	2528.827	2449.928
80.0	1411.230	2076.582	2483.277	2403.565	2333.613
80.5	1326.638	1970.028	2349.068	2280.743	2222.179
81.0	1243.672	1865.101	2218.926	2163.615	2114.812
81.5	1161.520	1761.801	2089.597	2048.927	2009.885
82.0	1080.181	1656.874	1965.962	1938.306	1909.024
82.5	1001.282	1553.573	1844.767	1831.752	1813.044

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**CANDELA TABULATION - (Cont.)**

83.0	925.637	1450.273	1726.012	1730.079	1719.505
83.5	849.992	1346.972	1612.137	1631.659	1630.032
84.0	776.787	1246.112	1501.516	1537.305	1543.813
84.5	702.768	1146.065	1394.149	1445.392	1460.033
85.0	632.817	1046.832	1289.222	1357.546	1377.068
85.5	562.052	947.598	1188.362	1271.327	1296.542
86.0	493.727	852.432	1090.755	1189.175	1217.644
86.5	426.216	757.265	996.402	1109.463	1144.438
87.0	358.705	665.352	906.115	1034.631	1072.860
87.5	290.380	584.827	827.217	965.493	1008.603
88.0	222.869	511.622	756.452	905.302	951.665
88.5	156.171	444.924	695.448	854.059	902.862
89.0	105.741	391.240	641.764	806.882	857.312
89.5	70.765	341.623	593.774	761.332	813.389
90.0	36.603	295.260	548.224	719.849	773.533
90.5	32.536	204.974	428.656	591.334	645.831
91.0	30.909	197.654	432.723	600.281	648.271
91.5	30.909	192.773	431.910	603.535	648.271
92.0	31.722	189.520	431.910	599.468	643.391
92.5	34.162	189.520	429.469	592.147	632.817
93.0	36.603	184.639	422.149	581.573	624.683
93.5	39.043	179.759	414.015	571.813	614.109
94.0	41.483	174.879	405.881	562.052	604.348
94.5	43.923	171.625	397.747	553.105	594.587
95.0	45.550	167.558	390.427	543.344	584.827
95.5	47.177	163.491	383.106	534.397	575.879
96.0	47.177	161.051	375.786	525.449	566.932
96.5	47.990	158.611	369.279	516.502	557.985
97.0	47.990	156.984	362.772	507.555	549.038
97.5	48.803	154.544	356.264	499.421	540.090
98.0	48.803	152.104	349.757	491.287	531.956
98.5	48.803	150.477	344.064	483.153	523.009
99.0	48.803	149.664	338.370	475.833	514.062
99.5	49.617	148.850	332.676	468.512	505.928
100.0	49.617	148.037	327.796	462.005	497.794
100.5	49.617	147.223	323.729	455.498	491.287
101.0	49.617	147.223	319.662	448.177	484.780
101.5	49.617	148.037	314.782	441.670	478.273
102.0	49.617	148.037	310.715	435.163	471.766
102.5	48.803	148.850	306.648	429.469	464.445
103.0	48.803	149.664	302.581	423.776	457.938
103.5	48.803	150.477	298.514	418.895	452.244
104.0	49.617	150.477	295.260	414.015	447.364
104.5	49.617	152.104	292.007	408.321	442.484
105.0	49.617	152.917	288.753	403.441	437.603
105.5	49.617	153.731	286.313	397.747	431.910
106.0	49.617	155.357	283.059	392.054	426.216
106.5	50.430	156.171	280.619	387.173	420.522
107.0	50.430	157.797	278.992	382.293	414.828
107.5	50.430	159.424	276.552	377.413	409.948
108.0	50.430	161.051	274.926	373.346	405.068
108.5	50.430	162.678	273.299	370.092	400.187
109.0	51.244	164.305	272.485	366.025	395.307
109.5	51.244	165.931	270.859	362.772	392.054
110.0	51.244	167.558	270.045	360.331	387.987
110.5	51.244	169.998	269.232	357.078	384.733

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**CANDELA TABULATION - (Cont.)**

111.0	52.057	172.438	268.418	354.638	381.479
111.5	52.057	174.879	266.792	351.384	378.226
112.0	52.057	178.132	265.978	348.944	375.786
112.5	52.057	180.572	264.351	346.504	372.532
113.0	52.057	183.826	263.538	344.064	370.092
113.5	52.057	187.079	262.725	341.623	366.838
114.0	52.057	191.146	261.911	339.997	364.398
114.5	52.057	195.213	261.098	337.556	362.772
115.0	52.870	199.280	261.098	335.930	361.145
115.5	52.870	203.347	260.285	334.303	358.705
116.0	52.870	207.414	260.285	332.676	357.078
116.5	52.870	211.481	260.285	331.049	355.451
117.0	53.684	215.548	260.285	329.423	353.824
117.5	53.684	219.615	260.285	327.796	352.197
118.0	53.684	223.682	260.285	326.169	350.571
118.5	53.684	227.749	260.285	324.542	348.131
119.0	54.497	232.629	261.098	322.915	346.504
119.5	54.497	236.696	261.098	322.102	344.877
120.0	54.497	239.950	261.911	320.475	343.250
120.5	55.310	244.017	261.911	319.662	341.623
121.0	55.310	247.270	262.725	318.849	339.997
121.5	55.310	250.524	262.725	318.035	339.183
122.0	56.124	252.964	263.538	316.408	338.370
122.5	56.124	256.218	264.351	316.408	337.556
123.0	56.124	258.658	265.165	315.595	335.930
123.5	56.937	260.285	266.792	314.782	335.116
124.0	56.937	261.911	267.605	313.968	334.303
124.5	56.937	262.725	269.232	313.155	332.676
125.0	57.751	263.538	270.859	313.155	331.863
125.5	57.751	264.351	272.485	312.341	331.049
126.0	58.564	264.351	274.926	312.341	330.236
126.5	58.564	263.538	276.552	311.528	329.423
127.0	59.377	262.725	278.992	310.715	329.423
127.5	59.377	261.911	281.433	310.715	329.423
128.0	60.191	260.285	284.686	310.715	328.609
128.5	60.191	259.471	287.940	310.715	328.609
129.0	61.004	257.844	291.193	310.715	327.796
129.5	61.004	255.404	294.447	310.715	327.796
130.0	61.818	253.777	297.700	311.528	327.796
130.5	62.631	252.151	301.767	311.528	326.982
131.0	62.631	249.710	305.021	311.528	326.982
131.5	62.631	248.084	309.088	312.341	326.982
132.0	63.444	245.644	313.155	313.155	326.982
132.5	63.444	244.017	316.408	314.782	326.982
133.0	64.258	241.577	320.475	315.595	326.982
133.5	64.258	239.950	324.542	317.222	327.796
134.0	64.258	237.510	327.796	318.849	328.609
134.5	64.258	235.883	331.863	320.475	329.423
135.0	64.258	233.443	335.930	322.102	330.236
135.5	65.071	231.003	339.183	324.542	331.049
136.0	64.258	229.376	343.250	326.982	332.676
136.5	64.258	226.936	346.504	329.423	333.490
137.0	64.258	224.495	349.757	332.676	335.930
137.5	64.258	222.869	353.011	335.116	337.556
138.0	64.258	220.428	356.264	338.370	339.997
138.5	64.258	217.988	358.705	341.623	342.437

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

139.0	64.258	215.548	361.145	344.877	344.877
139.5	64.258	213.108	361.958	348.131	348.131
140.0	64.258	211.481	363.585	351.384	350.571
140.5	64.258	209.041	363.585	354.638	353.824
141.0	65.071	206.601	364.398	357.891	357.078
141.5	65.071	204.161	363.585	361.958	360.331
142.0	65.071	201.721	362.772	365.212	363.585
142.5	65.885	199.280	361.145	369.279	366.838
143.0	65.885	196.840	358.705	372.532	370.092
143.5	65.885	194.400	356.264	375.786	373.346
144.0	65.885	192.773	353.011	379.039	377.413
144.5	66.698	190.333	349.757	382.293	381.479
145.0	66.698	188.706	345.690	385.546	385.546
145.5	66.698	187.079	341.623	388.800	388.800
146.0	66.698	185.453	337.556	391.240	392.054
146.5	66.698	183.826	332.676	393.680	396.121
147.0	66.698	182.199	328.609	394.494	400.187
147.5	66.698	180.572	323.729	394.494	403.441
148.0	66.698	179.759	319.662	393.680	406.695
148.5	66.698	178.132	314.782	392.867	409.135
149.0	66.698	176.505	310.715	391.240	409.948
149.5	66.698	174.879	306.648	389.613	410.762
150.0	66.698	172.438	302.581	386.360	409.948
150.5	66.698	170.812	298.514	383.106	408.321
151.0	66.698	169.185	293.633	378.226	406.695
151.5	66.698	167.558	289.567	373.346	404.254
152.0	66.698	165.118	285.500	367.652	401.001
152.5	66.698	162.678	280.619	361.958	396.934
153.0	67.511	160.238	276.552	356.264	392.054
153.5	67.511	157.797	271.672	349.757	386.360
154.0	67.511	155.357	267.605	343.250	379.853
154.5	67.511	152.917	262.725	336.743	372.532
155.0	68.325	150.477	258.658	331.049	365.212
155.5	68.325	147.223	253.777	324.542	357.891
156.0	68.325	144.783	249.710	318.035	349.757
156.5	69.138	142.343	244.830	312.341	342.437
157.0	69.138	139.903	239.950	305.834	334.303
157.5	69.951	137.463	235.883	299.327	326.982
158.0	69.951	134.209	231.003	292.820	318.849
158.5	69.951	132.582	226.936	286.313	310.715
159.0	70.765	130.142	222.869	279.806	303.394
159.5	70.765	127.702	218.802	273.299	295.260
160.0	70.765	125.262	214.735	265.978	287.940
160.5	70.765	123.635	211.481	259.471	280.619
161.0	71.578	121.195	208.228	252.964	272.485
161.5	71.578	118.755	204.974	246.457	264.351
162.0	71.578	117.128	200.907	239.136	257.031
162.5	71.578	114.688	196.840	232.629	248.897
163.0	72.392	112.248	192.773	226.122	241.577
163.5	71.578	110.621	187.893	219.615	233.443
164.0	72.392	108.994	183.013	213.921	226.122
164.5	72.392	106.554	178.132	209.041	218.802
165.0	72.392	104.927	173.252	203.347	212.295
165.5	72.392	103.300	167.558	198.467	206.601
166.0	72.392	101.674	162.678	192.773	200.907
166.5	72.392	99.233	156.984	187.079	194.400

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

167.0	72.392	97.607	152.104	181.386	188.706
167.5	72.392	95.980	147.223	174.879	182.199
168.0	73.205	95.167	142.343	168.372	175.692
168.5	73.205	93.540	137.463	161.864	169.185
169.0	73.205	91.913	132.582	155.357	162.678
169.5	73.205	90.286	127.702	148.850	155.357
170.0	73.205	89.473	123.635	142.343	148.037
170.5	73.205	87.846	119.568	135.836	140.716
171.0	73.205	87.033	115.501	129.329	134.209
171.5	73.205	85.406	111.434	123.635	127.702
172.0	74.018	84.592	108.181	117.941	120.382
172.5	74.018	83.779	104.114	113.061	113.874
173.0	74.018	82.966	100.860	108.181	108.181
173.5	74.832	82.152	97.607	103.300	103.300
174.0	74.832	81.339	94.353	99.233	98.420
174.5	74.832	80.526	91.913	95.167	93.540
175.0	74.832	80.526	89.473	91.100	89.473
175.5	74.832	79.712	87.033	87.846	86.219
176.0	74.832	78.899	85.406	84.592	82.966
176.5	74.832	78.899	83.779	82.152	79.712
177.0	74.832	78.899	82.152	79.712	76.459
177.5	75.645	78.085	81.339	78.085	74.018
178.0	75.645	78.085	80.526	76.459	72.392
178.5	75.645	78.085	79.712	75.645	70.765
179.0	75.645	77.272	78.899	74.832	69.951
179.5	75.645	77.272	78.899	74.832	69.138
180.0	75.645	75.645	75.645	75.645	75.645



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

Zone	Lumens	%Lamp	%Fixt
0-20	6674.12	N.A.	12.40
0-30	14162.27	N.A.	26.20
0-40	23157.01	N.A.	42.90
0-60	40833.02	N.A.	75.60
0-80	50975.39	N.A.	94.30
0-90	52312.44	N.A.	96.80
10-90	50585.51	N.A.	93.60
20-40	16482.89	N.A.	30.50
20-50	25770.37	N.A.	47.70
40-70	24100.77	N.A.	44.60
60-80	10142.38	N.A.	18.80
70-80	3717.61	N.A.	6.90
80-90	1337.05	N.A.	2.50
90-110	678.77	N.A.	1.30
90-120	929.05	N.A.	1.70
90-130	1162.45	N.A.	2.20
90-150	1552.21	N.A.	2.90
90-180	1718.29	N.A.	3.20
110-180	1039.52	N.A.	1.90
0-180	54030.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1726.93
10-20	4947.19
20-30	7488.15
30-40	8994.74
40-50	9287.48
50-60	8388.53
60-70	6424.77
70-80	3717.61
80-90	1337.05
90-100	388.72
100-110	290.05
110-120	250.28
120-130	233.40
130-140	211.10
140-150	178.66
150-160	111.38
160-170	45.52
170-180	9.17

**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	104	104	104	99	99	99	97
1	108	103	98	95	105	100	96	93	95	92	89	91	88	86	87	85	83	80
2	98	89	83	77	95	87	81	76	83	78	73	79	75	71	76	72	69	67
3	89	78	70	64	86	77	69	63	73	67	61	70	65	60	67	62	58	56
4	82	69	61	54	79	68	60	53	65	58	52	62	56	51	60	55	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	49	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	36	31	41	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GH-4-L540-840-FA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

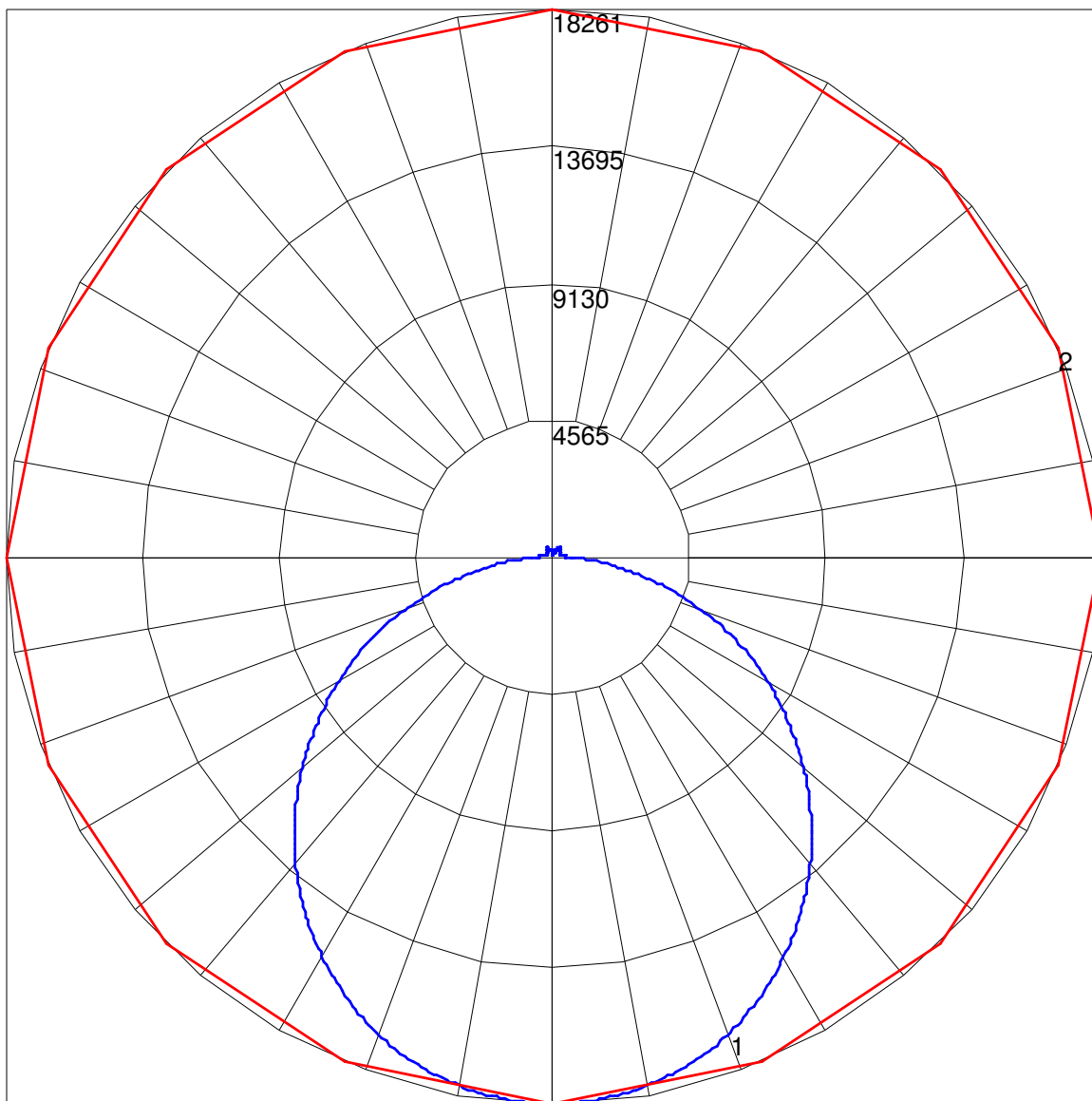
Reflectances

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	21.1	22.7	21.5	23.1	23.5	23.4	24.9	23.8	25.3	25.7
	3H	22.6	24.0	23.0	24.4	24.8	25.1	26.5	25.5	26.9	27.4
	4H	23.0	24.4	23.5	24.8	25.2	25.7	27.0	26.1	27.4	27.9
	6H	23.4	24.6	23.8	25.0	25.5	26.1	27.3	26.5	27.7	28.2
	8H	23.4	24.6	23.9	25.1	25.6	26.2	27.4	26.7	27.8	28.3
	12H	23.5	24.6	23.9	25.1	25.6	26.3	27.5	26.8	27.9	28.4
4H	2H	22.1	23.4	22.5	23.8	24.3	23.8	25.2	24.3	25.6	26.0
	3H	23.8	24.9	24.2	25.3	25.8	25.8	26.9	26.2	27.4	27.8
	4H	24.4	25.4	24.8	25.9	26.4	26.5	27.5	26.9	28.0	28.5
	6H	24.8	25.7	25.3	26.2	26.7	27.0	27.9	27.5	28.4	28.9
	8H	24.9	25.7	25.4	26.2	26.8	27.2	28.0	27.7	28.5	29.0
	12H	25.0	25.7	25.5	26.3	26.8	27.3	28.1	27.9	28.6	29.2
8H	4H	24.8	25.7	25.3	26.2	26.7	26.7	27.5	27.2	28.0	28.6
	6H	25.4	26.1	25.9	26.6	27.2	27.3	28.0	27.8	28.6	29.1
	8H	25.6	26.2	26.1	26.8	27.3	27.5	28.2	28.1	28.7	29.3
	12H	25.7	26.3	26.3	26.8	27.5	27.8	28.4	28.4	28.9	29.5
12H	4H	24.9	25.6	25.4	26.2	26.7	26.7	27.5	27.2	28.0	28.5
	6H	25.5	26.1	26.1	26.7	27.3	27.3	28.0	27.9	28.5	29.1
	8H	25.7	26.3	26.3	26.9	27.5	27.6	28.2	28.2	28.7	29.4

Maximum UGR = 29.5

POLAR GRAPH



Maximum Candela = 18260.586 Located At Horizontal Angle = 45, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)