



IES INDOOR REPORT

PHOTOMETRIC FILENAME : GH-4-L400-840-FA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13326828.04
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 05-MAY-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] GH-4-L400-840-FA-DIM-UNV
 [LUMINAIRE] White steel housing, frosted lens enclosure
 [LAMP] 672 white LEDs

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	40295
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	293.2
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)	1.42 ft
Luminous Height	0.27 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	20636	21693	23646
55	17600	19861	22363
65	14278	17551	19280
75	10671	13766	12863
85	5913	7603	8130

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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	13481.16113481.16113481.16113481.16113481.161				
0.5	13532.81313481.16113468.24813468.24813468.248				
1.0	13532.81313481.16113468.24813468.24813468.248				
1.5	13532.81313481.16113455.33513468.24813455.335				
2.0	13519.90013481.16113455.33513468.24813455.335				
2.5	13519.90013468.24813455.33513455.33513455.335				
3.0	13506.98713455.33513442.42213455.33513455.335				
3.5	13494.07413442.42213442.42213442.42213442.422				
4.0	13481.16113442.42213429.50913442.42213442.422				
4.5	13468.24813429.50913416.59613429.50913429.509				
5.0	13468.24813416.59613416.59613416.59613429.509				
5.5	13442.42213416.59613403.68313416.59613416.596				
6.0	13429.50913390.77013390.77013403.68313403.683				
6.5	13403.68313377.85713377.85713390.77013403.683				
7.0	13390.77013352.03213352.03213377.85713377.857				
7.5	13364.94413339.11913339.11913364.94413377.857				
8.0	13339.11913313.29313326.20613352.03213364.944				
8.5	13313.29313287.46713300.38013339.11913352.032				
9.0	13287.46713261.64113287.46713326.20613339.119				
9.5	13261.64113235.81513261.64113313.29313313.293				
10.0	13235.81513222.90213235.81513300.38013300.380				
10.5	13197.07613184.16313222.90213274.55413287.467				
11.0	13171.25013158.33713197.07613248.72813274.554				
11.5	13132.51113119.59813171.25013235.81513261.641				
12.0	13093.77213093.77213145.42413209.98913222.902				
12.5	13067.94613055.03313119.59813184.16313209.989				
13.0	13029.20713029.20713080.85913158.33713197.076				
13.5	12990.46812990.46813055.03313145.42413171.250				
14.0	12951.72912951.72913029.20713119.59813145.424				
14.5	12907.82512903.95113003.38113080.85913119.598				
15.0	12863.92012867.79412964.64213055.03313093.772				
15.5	12830.34712821.30812925.90313029.20713067.946				
16.0	12777.40312782.56912892.32913003.38113042.120				
16.5	12728.33412739.95612854.88112964.64213016.294				
17.0	12680.55612696.05212816.14212938.81612977.555				
17.5	12630.19512648.27412778.69512906.53312951.729				
18.0	12583.70912600.49612742.53812871.66812925.903				
18.5	12529.47412554.00912694.76012841.96812896.203				
19.0	12476.53112504.93912650.85612804.52112860.047				
19.5	12422.29612457.16112614.70012768.36412826.473				
20.0	12365.47912397.76212564.33912732.20812792.899				
20.5	12312.53612349.98312521.72612692.17812756.743				
21.0	12257.01012290.58412476.53112652.14712721.878				
21.5	12200.19312233.76712426.17012610.82612680.556				
22.0	12136.91912184.69712380.97512575.96112646.982				
22.5	12064.60612122.71512329.32312528.18312609.535				
23.0	12006.49812065.89812277.67112485.57012572.087				
23.5	11930.31112006.49812223.43612441.66612535.931				
24.0	11865.74611940.64212176.94912404.21812493.318				
24.5	11784.39511879.95112113.67612359.02312453.287				
25.0	11706.91711814.09412064.60612309.95312406.801				
25.5	11628.14711735.32512005.20712260.88412362.896				
26.0	11546.79611660.43011944.51612211.81512320.284				
26.5	11462.86111590.70011891.57212161.45412281.545				

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27.0	11377.63511513.22211827.00712113.67612222.145
27.5	11292.41011435.74411770.19012063.31512182.115
28.0	11203.31011347.93511709.49912011.66312136.919
28.5	11119.37611274.33111650.09911954.84612081.393
29.0	11028.98511185.23211581.66111904.48512037.489
29.5	10945.05011111.62811517.09611850.25111981.963
30.0	10858.53311025.11111449.94811792.14211925.146
30.5	10774.59910942.46811384.09211734.03411877.368
31.0	10681.62510849.49411316.94411677.21711821.842
31.5	10591.23410764.26811243.34011619.10811763.734
32.0	10496.96910676.46011165.86211553.25211704.334
32.5	10400.12210589.94311090.96711488.68711646.226
33.0	10314.89610494.38711013.48911426.70511586.826
33.5	10210.30110409.16110934.72011362.14011528.717
34.0	10112.16210312.31410859.82411293.70111460.278
34.5	10007.56710225.79710772.01611225.26211397.005
35.0	9902.972 10131.53210691.95611155.53211323.401
35.5	9795.794 10039.85010609.31211080.63711248.505
36.0	9687.325 9943.002 10529.25211013.48911180.067
36.5	9577.565 9842.281 10447.90010933.42911109.045
37.0	9467.804 9744.142 10367.84010861.11611039.315
37.5	9360.626 9646.003 10277.44910777.18110964.420
38.0	9249.575 9546.573 10189.64010706.16010893.398
38.5	9142.397 9444.561 10104.41510624.80810812.046
39.0	9032.636 9342.548 10017.89810548.62110738.442
39.5	8921.585 9239.244 9931.380 10468.56110659.673
40.0	8811.824 9135.940 9843.572 10385.91810582.195
40.5	8700.773 9031.345 9751.890 10308.44010502.135
41.0	8589.721 8926.750 9662.790 10224.50510422.074
41.5	8477.378 8820.863 9573.691 10147.02710340.722
42.0	8365.035 8714.977 9484.591 10066.96710264.536
42.5	8255.274 8610.382 9394.200 9984.324 10187.058
43.0	8144.223 8504.495 9303.809 9904.263 10112.162
43.5	8033.171 8398.609 9214.710 9826.785 10034.684
44.0	7919.537 8294.013 9124.319 9745.433 9953.333
44.5	7805.902 8189.418 9033.928 9666.664 9868.107
45.0	7690.977 8086.114 8943.537 9581.438 9786.755
45.5	7577.342 7985.393 8851.855 9498.795 9705.403
46.0	7462.417 7883.380 8761.464 9417.444 9624.051
46.5	7350.074 7781.368 8671.073 9334.800 9541.408
47.0	7235.148 7679.355 8580.682 9250.866 9462.639
47.5	7120.223 7577.342 8489.000 9166.931 9383.870
48.0	7005.297 7474.039 8398.609 9081.706 9302.518
48.5	6892.954 7372.026 8308.218 8997.771 9218.583
49.0	6784.485 7268.722 8217.827 8911.254 9134.649
49.5	6677.307 7162.835 8126.145 8824.737 9048.132
50.0	6570.129 7055.658 8035.754 8736.929 8960.324
50.5	6461.660 6952.354 7942.780 8647.829 8871.224
51.0	6351.900 6850.341 7849.807 8558.730 8782.124
51.5	6239.557 6749.620 7755.542 8469.630 8693.025
52.0	6125.922 6647.607 7659.986 8377.948 8602.634
52.5	6010.997 6545.595 7564.429 8287.557 8513.534
53.0	5899.945 6442.291 7470.165 8195.875 8420.561
53.5	5791.476 6341.569 7375.900 8104.192 8325.005
54.0	5684.298 6239.557 7280.344 8011.219 8226.866
54.5	5579.703 6137.544 7184.788 7914.371 8126.145

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55.0	5475.108	6034.240	7089.231	7818.815	8024.132
55.5	5369.221	5930.936	6993.675	7720.677	7920.828
56.0	5262.043	5827.632	6896.828	7619.955	7813.650
56.5	5153.574	5726.911	6801.272	7519.234	7705.181
57.0	5042.523	5628.772	6703.133	7415.930	7596.712
57.5	4934.053	5528.051	6604.994	7312.626	7486.952
58.0	4829.458	5429.912	6506.856	7208.031	7382.356
58.5	4726.154	5331.774	6408.717	7100.853	7273.887
59.0	4626.724	5233.635	6309.287	6992.384	7158.962
59.5	4523.420	5135.496	6212.439	6882.624	7040.162
60.0	4418.825	5038.649	6114.301	6768.989	6918.780
60.5	4311.647	4941.801	6013.579	6656.646	6794.815
61.0	4207.052	4846.245	5914.149	6541.721	6669.559
61.5	4107.622	4749.398	5813.428	6425.504	6546.886
62.0	4010.775	4655.133	5711.415	6309.287	6424.212
62.5	3913.927	4562.159	5610.694	6191.779	6302.830
63.0	3813.206	4467.894	5508.681	6074.270	6181.448
63.5	3711.193	4373.630	5407.960	5955.471	6056.192
64.0	3613.055	4280.656	5307.239	5835.380	5923.188
64.5	3518.790	4187.683	5205.226	5712.707	5785.019
65.0	3427.108	4097.292	5103.214	5590.033	5645.559
65.5	3332.843	4006.901	4998.618	5466.069	5502.225
66.0	3238.578	3915.219	4895.314	5339.521	5360.182
66.5	3146.896	3824.828	4790.719	5212.974	5219.430
67.0	3056.505	3735.728	4686.124	5085.135	5079.970
67.5	2964.822	3645.337	4581.529	4954.714	4940.510
68.0	2877.014	3556.237	4476.934	4824.293	4798.467
68.5	2787.915	3467.138	4371.047	4692.581	4651.259
69.0	2701.397	3379.329	4266.452	4558.285	4501.468
69.5	2616.172	3291.521	4161.857	4423.990	4347.804
70.0	2530.946	3203.713	4055.970	4287.113	4194.139
70.5	2445.720	3117.196	3947.501	4146.361	4043.057
71.0	2361.786	3030.679	3841.614	4005.609	3893.266
71.5	2279.143	2944.162	3733.145	3867.440	3748.641
72.0	2196.500	2857.645	3625.968	3726.689	3607.889
72.5	2116.439	2772.419	3518.790	3588.520	3469.720
73.0	2035.087	2687.193	3409.029	3452.933	3334.134
73.5	1957.609	2603.259	3300.560	3318.638	3198.548
74.0	1877.549	2518.033	3189.508	3184.343	3065.544
74.5	1802.653	2434.099	3079.748	3053.922	2932.540
75.0	1725.175	2350.164	2969.988	2923.501	2803.410
75.5	1651.571	2266.230	2860.227	2796.954	2676.863
76.0	1577.967	2184.878	2749.176	2674.280	2558.063
76.5	1504.363	2102.235	2639.415	2554.189	2445.720
77.0	1433.342	2022.174	2528.363	2439.264	2338.542
77.5	1363.612	1940.822	2418.603	2329.503	2236.530
78.0	1295.173	1862.053	2310.134	2222.326	2140.974
78.5	1228.025	1784.575	2204.247	2119.022	2046.709
79.0	1160.878	1705.806	2099.652	2018.300	1956.318
79.5	1097.604	1629.619	1997.640	1924.035	1865.927
80.0	1034.330	1552.141	1895.627	1831.062	1779.410
80.5	971.057	1475.955	1797.488	1743.254	1696.767
81.0	910.366	1399.768	1700.641	1658.028	1617.998
81.5	850.966	1323.581	1605.085	1577.967	1545.685
82.0	791.566	1246.104	1513.402	1499.198	1477.246
82.5	733.458	1169.917	1423.011	1424.303	1411.390

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83.0	677.932	1093.730	1336.494	1353.281	1349.407
83.5	622.406	1017.544	1252.560	1284.842	1288.716
84.0	568.172	941.357	1171.208	1217.695	1226.734
84.5	515.228	866.462	1093.730	1154.421	1167.334
85.0	463.576	792.858	1020.126	1092.439	1109.226
85.5	410.633	720.545	949.105	1033.039	1053.700
86.0	360.272	648.232	880.666	976.222	999.465
86.5	309.912	578.502	813.518	919.405	949.105
87.0	259.551	510.063	748.953	865.170	897.453
87.5	209.190	444.207	686.971	812.227	849.675
88.0	158.830	380.933	627.571	761.866	803.188
88.5	107.178	318.951	573.337	716.671	760.575
89.0	61.982	267.299	529.433	683.097	727.001
89.5	32.282	232.434	497.150	654.689	699.884
90.0	10.330	202.734	467.450	626.280	672.767
90.5	21.952	222.103	479.072	639.193	675.349
91.0	21.952	216.938	472.615	628.863	665.019
91.5	21.952	211.773	463.576	618.532	654.689
92.0	23.243	205.317	454.537	609.493	644.358
92.5	24.535	200.151	445.498	599.163	634.028
93.0	27.117	193.695	436.459	588.832	624.989
93.5	29.700	188.530	427.420	579.793	614.658
94.0	32.282	183.364	419.672	569.463	605.619
94.5	33.574	178.199	410.633	559.132	595.289
95.0	34.865	173.034	402.885	550.093	586.250
95.5	36.156	167.869	395.137	541.054	577.211
96.0	36.156	163.995	387.390	530.724	568.172
96.5	37.448	160.121	379.642	521.685	559.132
97.0	37.448	156.247	373.185	513.937	550.093
97.5	37.448	152.373	366.729	504.898	541.054
98.0	38.739	149.791	358.981	497.150	532.015
98.5	38.739	147.208	352.525	489.402	524.267
99.0	40.030	145.917	346.068	481.655	516.520
99.5	40.030	144.625	339.612	473.907	508.772
100.0	40.030	144.625	334.446	466.159	501.024
100.5	40.030	143.334	327.990	458.411	493.276
101.0	41.322	142.043	321.533	450.663	485.528
101.5	41.322	140.752	316.368	442.916	477.781
102.0	41.322	139.460	311.203	436.459	470.033
102.5	41.322	138.169	304.747	428.711	462.285
103.0	41.322	138.169	299.581	422.255	455.829
103.5	42.613	136.878	295.707	414.507	448.081
104.0	42.613	136.878	290.542	408.050	441.624
104.5	42.613	136.878	286.668	401.594	433.876
105.0	42.613	136.878	282.794	395.137	427.420
105.5	43.904	136.878	280.212	388.681	420.963
106.0	43.904	136.878	277.629	383.516	414.507
106.5	43.904	136.878	275.047	377.059	408.050
107.0	45.195	138.169	272.464	371.894	402.885
107.5	45.195	138.169	271.173	366.729	396.429
108.0	45.195	139.460	268.590	361.564	391.264
108.5	46.487	139.460	266.008	357.690	384.807
109.0	46.487	140.752	263.425	352.525	379.642
109.5	47.778	142.043	259.551	348.651	375.768
110.0	47.778	143.334	256.968	346.068	370.603
110.5	49.069	144.625	254.386	342.194	366.729

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CANDELA TABULATION - (Cont.)

111.0	49.069	145.917	251.803	339.612	362.855
111.5	50.361	147.208	249.221	337.029	358.981
112.0	50.361	148.499	247.929	334.446	356.399
112.5	50.361	149.791	245.347	331.864	353.816
113.0	50.361	151.082	242.764	329.281	351.233
113.5	51.652	152.373	240.182	325.407	348.651
114.0	51.652	153.665	238.890	321.533	346.068
114.5	51.652	154.956	236.308	317.660	343.486
115.0	52.943	157.538	235.016	315.077	339.612
115.5	52.943	158.830	233.725	311.203	335.738
116.0	54.235	161.412	232.434	307.329	333.155
116.5	54.235	162.704	231.143	304.747	329.281
117.0	54.235	163.995	229.851	300.873	325.407
117.5	55.526	166.578	228.560	298.290	321.533
118.0	55.526	167.869	227.269	294.416	318.951
118.5	55.526	170.451	227.269	291.834	315.077
119.0	55.526	171.743	225.977	289.251	311.203
119.5	56.817	174.325	225.977	286.668	308.620
120.0	56.817	175.617	224.686	284.086	304.747
120.5	56.817	176.908	224.686	281.503	302.164
121.0	56.817	179.491	224.686	280.212	299.581
121.5	58.108	180.782	224.686	277.629	296.999
122.0	58.108	182.073	223.395	276.338	294.416
122.5	58.108	183.364	223.395	273.755	293.125
123.0	58.108	184.656	223.395	272.464	290.542
123.5	59.400	185.947	224.686	271.173	289.251
124.0	59.400	187.238	224.686	269.881	287.960
124.5	59.400	187.238	224.686	267.299	285.377
125.0	59.400	188.530	224.686	266.008	284.086
125.5	60.691	188.530	225.977	266.008	282.794
126.0	60.691	188.530	225.977	264.716	281.503
126.5	60.691	187.238	227.269	263.425	280.212
127.0	61.982	187.238	227.269	262.134	278.921
127.5	61.982	187.238	228.560	260.842	277.629
128.0	61.982	185.947	228.560	260.842	276.338
128.5	63.274	185.947	229.851	259.551	275.047
129.0	63.274	184.656	229.851	259.551	273.755
129.5	63.274	184.656	231.143	258.260	272.464
130.0	64.565	183.364	232.434	258.260	272.464
130.5	64.565	183.364	232.434	258.260	271.173
131.0	64.565	183.364	233.725	256.968	271.173
131.5	65.856	182.073	235.016	256.968	269.881
132.0	65.856	182.073	236.308	256.968	269.881
132.5	65.856	182.073	237.599	256.968	268.590
133.0	67.148	180.782	238.890	256.968	268.590
133.5	67.148	180.782	240.182	256.968	268.590
134.0	67.148	179.491	241.473	256.968	267.299
134.5	68.439	179.491	242.764	256.968	267.299
135.0	68.439	178.199	244.056	256.968	267.299
135.5	68.439	176.908	246.638	256.968	267.299
136.0	68.439	175.617	247.929	258.260	267.299
136.5	69.730	175.617	249.221	258.260	267.299
137.0	69.730	174.325	250.512	258.260	267.299
137.5	69.730	173.034	250.512	259.551	267.299
138.0	71.021	171.743	251.803	260.842	268.590
138.5	71.021	171.743	253.095	260.842	268.590

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

139.0	71.021	170.451	254.386	262.134	268.590
139.5	71.021	169.160	254.386	263.425	269.881
140.0	71.021	167.869	255.677	263.425	269.881
140.5	71.021	166.578	255.677	264.716	271.173
141.0	71.021	165.286	256.968	266.008	272.464
141.5	72.313	163.995	256.968	267.299	272.464
142.0	72.313	162.704	255.677	268.590	273.755
142.5	72.313	161.412	254.386	269.881	275.047
143.0	72.313	160.121	253.095	271.173	276.338
143.5	72.313	158.830	251.803	272.464	277.629
144.0	72.313	157.538	250.512	273.755	278.921
144.5	72.313	156.247	247.929	273.755	280.212
145.0	72.313	154.956	245.347	275.047	281.503
145.5	72.313	153.665	244.056	276.338	282.794
146.0	72.313	152.373	241.473	277.629	284.086
146.5	73.604	152.373	240.182	277.629	284.086
147.0	73.604	151.082	238.890	278.921	285.377
147.5	73.604	151.082	236.308	278.921	286.668
148.0	73.604	151.082	235.016	278.921	286.668
148.5	73.604	151.082	233.725	278.921	286.668
149.0	73.604	149.791	231.143	278.921	287.960
149.5	74.895	149.791	229.851	276.338	287.960
150.0	74.895	148.499	227.269	275.047	287.960
150.5	74.895	148.499	225.977	272.464	287.960
151.0	74.895	147.208	223.395	269.881	286.668
151.5	74.895	145.917	220.812	266.008	284.086
152.0	74.895	144.625	219.521	263.425	281.503
152.5	74.895	143.334	216.938	260.842	278.921
153.0	76.187	142.043	214.356	258.260	276.338
153.5	76.187	140.752	211.773	255.677	272.464
154.0	76.187	139.460	209.190	253.095	269.881
154.5	76.187	138.169	206.608	250.512	266.008
155.0	77.478	136.878	204.025	247.929	263.425
155.5	77.478	135.586	201.443	245.347	260.842
156.0	77.478	134.295	198.860	242.764	256.968
156.5	77.478	133.004	196.277	238.890	254.386
157.0	77.478	130.421	193.695	236.308	251.803
157.5	78.769	129.130	191.112	232.434	249.221
158.0	78.769	127.839	187.238	228.560	246.638
158.5	78.769	126.547	184.656	224.686	244.056
159.0	78.769	125.256	182.073	220.812	240.182
159.5	80.061	122.673	179.491	218.230	236.308
160.0	80.061	121.382	176.908	214.356	231.143
160.5	80.061	120.091	175.617	210.482	227.269
161.0	81.352	118.800	175.617	206.608	223.395
161.5	81.352	117.508	174.325	202.734	219.521
162.0	81.352	116.217	173.034	198.860	215.647
162.5	82.643	114.926	170.451	193.695	210.482
163.0	82.643	113.634	169.160	189.821	206.608
163.5	82.643	112.343	165.286	184.656	201.443
164.0	82.643	111.052	162.704	180.782	196.277
164.5	82.643	109.760	158.830	178.199	189.821
165.0	83.934	108.469	154.956	176.908	184.656
165.5	83.934	107.178	152.373	175.617	180.782
166.0	83.934	107.178	148.499	173.034	178.199
166.5	85.226	105.887	144.625	170.451	175.617

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

167.0	85.226	104.595	142.043	166.578	173.034
167.5	85.226	103.304	138.169	161.412	167.869
168.0	85.226	103.304	135.586	157.538	162.704
168.5	85.226	102.013	131.712	152.373	156.247
169.0	85.226	100.721	129.130	147.208	151.082
169.5	86.517	99.430	126.547	142.043	144.625
170.0	86.517	99.430	123.965	138.169	139.460
170.5	86.517	98.139	121.382	133.004	134.295
171.0	86.517	98.139	118.800	129.130	129.130
171.5	87.808	96.847	116.217	125.256	123.965
172.0	87.808	96.847	113.634	121.382	118.800
172.5	87.808	95.556	111.052	117.508	114.926
173.0	87.808	95.556	108.469	113.634	111.052
173.5	89.100	94.265	105.887	109.760	105.887
174.0	89.100	94.265	104.595	107.178	103.304
174.5	89.100	94.265	102.013	103.304	99.430
175.0	90.391	92.974	100.721	100.721	95.556
175.5	90.391	92.974	99.430	96.847	92.974
176.0	90.391	92.974	96.847	95.556	90.391
176.5	90.391	92.974	95.556	92.974	87.808
177.0	91.682	91.682	94.265	90.391	85.226
177.5	91.682	91.682	92.974	89.100	83.934
178.0	91.682	91.682	92.974	86.517	82.643
178.5	91.682	91.682	91.682	86.517	82.643
179.0	91.682	91.682	91.682	85.226	81.352
179.5	91.682	91.682	90.391	85.226	81.352
180.0	87.808	87.808	87.808	87.808	87.808

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GH-4-L400-840-FA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	4936.05	N.A.	12.20
0-30	10490.35	N.A.	26.00
0-40	17145.62	N.A.	42.60
0-60	30152.49	N.A.	74.80
0-80	37723.17	N.A.	93.60
0-90	38765.5	N.A.	96.20
10-90	37489.52	N.A.	93.00
20-40	12209.57	N.A.	30.30
20-50	19031.92	N.A.	47.20
40-70	17781.1	N.A.	44.10
60-80	7570.67	N.A.	18.80
70-80	2796.45	N.A.	6.90
80-90	1042.33	N.A.	2.60
90-110	675.61	N.A.	1.70
90-120	900.48	N.A.	2.20
90-130	1091.64	N.A.	2.70
90-150	1389.71	N.A.	3.40
90-180	1529.36	N.A.	3.80
110-180	853.75	N.A.	2.10
0-180	40294.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1275.98
10-20	3660.07
20-30	5554.3
30-40	6655.27
40-50	6822.35
50-60	6184.52
60-70	4774.22
70-80	2796.45
80-90	1042.33
90-100	394.21
100-110	281.40
110-120	224.87
120-130	191.16
130-140	164.22
140-150	133.85
150-160	88.14
160-170	41.57
170-180	9.94

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GH-4-L400-840-FA-DIM-UNV_.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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	108	103	98	94	104	100	96	92	95	92	89	90	88	85	86	84	82	80
2	98	89	82	76	95	87	81	75	83	78	73	79	75	71	75	72	69	66
3	89	78	70	63	86	76	69	63	73	66	61	70	64	59	67	62	58	56
4	81	69	60	54	79	68	59	53	65	58	52	62	56	51	59	54	50	47
5	75	62	53	46	72	61	52	46	58	51	45	56	49	44	53	48	43	41
6	69	56	47	40	67	55	46	40	52	45	39	50	44	39	48	43	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	37	32	58	45	37	31	44	36	31	42	35	31	41	35	30	28
9	56	42	34	28	54	41	34	28	40	33	28	39	32	28	37	32	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-4-L400-840-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

X=2H	Y=2H	20.8	22.3	21.2	22.7	23.1	23.2	24.8	23.7	25.2	25.6
	3H	22.2	23.6	22.7	24.0	24.5	25.0	26.4	25.5	26.8	27.3
	4H	22.7	24.0	23.1	24.4	24.9	25.6	26.9	26.1	27.3	27.8
	6H	23.0	24.2	23.5	24.6	25.1	26.0	27.2	26.5	27.7	28.2
	8H	23.0	24.2	23.5	24.7	25.2	26.1	27.3	26.6	27.8	28.3
	12H	23.1	24.2	23.6	24.7	25.2	26.3	27.4	26.8	27.9	28.4

UGR Viewed Endwise

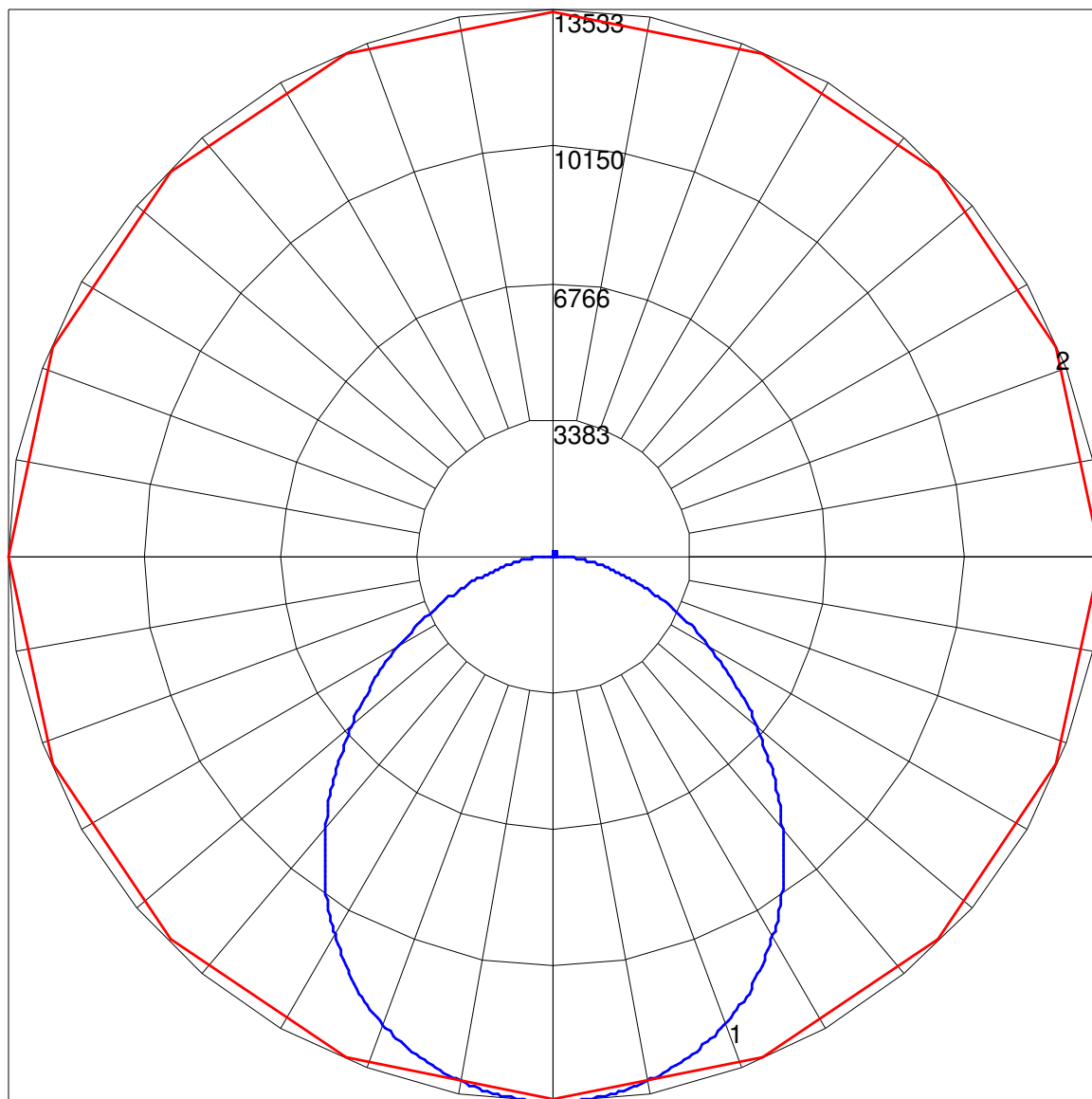
4H	2H	21.8	23.1	22.2	23.5	24.0	23.7	25.0	24.1	25.4	25.9
	3H	23.4	24.5	23.9	25.0	25.5	25.7	26.8	26.1	27.3	27.8
	4H	24.0	25.0	24.5	25.5	26.0	26.4	27.4	26.9	27.9	28.4
	6H	24.4	25.3	24.9	25.8	26.4	26.9	27.8	27.4	28.3	28.8
	8H	24.5	25.4	25.1	25.9	26.4	27.1	27.9	27.6	28.4	29.0
	12H	24.6	25.3	25.1	25.9	26.4	27.3	28.0	27.8	28.6	29.1

8H	4H	24.5	25.3	25.0	25.9	26.4	26.6	27.4	27.1	27.9	28.5
	6H	25.0	25.7	25.6	26.3	26.9	27.2	27.9	27.8	28.5	29.0
	8H	25.2	25.9	25.8	26.4	27.0	27.5	28.1	28.1	28.7	29.3
	12H	25.3	25.9	25.9	26.5	27.1	27.7	28.3	28.3	28.9	29.5

12H	4H	24.6	25.3	25.1	25.9	26.4	26.6	27.3	27.1	27.9	28.4
	6H	25.2	25.8	25.8	26.3	27.0	27.3	27.9	27.8	28.4	29.0
	8H	25.4	25.9	26.0	26.5	27.2	27.5	28.1	28.1	28.7	29.3

Maximum UGR = 29.5

POLAR GRAPH



Maximum Candela = 13532.813 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.)