



IES INDOOR REPORT

PHOTOMETRIC FILENAME : GH-4-L480-840-HA-FA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13326828.05
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 06-MAY-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] GH-4-L480-840-HA-FA-DIM-UNV
 [LUMINAIRE] Formed white steel housing, frosted lens enclosure
 [_SEARCH_SOURCE] 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	48002
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	146
Total Luminaire Watts	327.9
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)	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	18059	19619	21578
55	15394	18064	20622
65	12474	16081	18039
75	9278	12717	12438
85	5190	7153	8007

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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	16215.768	16215.768	16215.768	16215.768	16215.768
0.5	16215.768	16215.768	16222.995	16208.542	16215.768
1.0	16215.768	16215.768	16215.768	16201.316	16215.768
1.5	16215.768	16215.768	16215.768	16201.316	16215.768
2.0	16201.316	16208.542	16208.542	16194.089	16215.768
2.5	16201.316	16194.089	16208.542	16194.089	16215.768
3.0	16186.863	16186.863	16194.089	16186.863	16201.316
3.5	16172.411	16172.411	16186.863	16172.411	16194.089
4.0	16157.958	16157.958	16172.411	16179.637	16201.316
4.5	16143.505	16150.732	16157.958	16157.958	16186.863
5.0	16121.827	16136.279	16150.732	16150.732	16165.184
5.5	16114.600	16114.600	16129.053	16136.279	16157.958
6.0	16078.469	16100.148	16114.600	16121.827	16157.958
6.5	16071.243	16078.469	16092.922	16107.374	16136.279
7.0	16042.338	16049.564	16078.469	16085.695	16114.600
7.5	16020.659	16027.885	16056.790	16071.243	16092.922
8.0	15998.980	16006.206	16042.338	16056.790	16078.469
8.5	15962.849	15977.301	16006.206	16035.111	16064.016
9.0	15933.943	15948.396	15991.754	16013.432	16035.111
9.5	15897.812	15912.265	15962.849	15984.527	16013.432
10.0	15868.907	15883.359	15933.943	15970.075	15991.754
10.5	15818.323	15854.454	15905.038	15948.396	15977.301
11.0	15789.418	15811.097	15876.133	15919.491	15955.622
11.5	15746.060	15774.965	15847.228	15905.038	15926.717
12.0	15702.702	15731.608	15811.097	15876.133	15905.038
12.5	15659.345	15695.476	15774.965	15847.228	15883.359
13.0	15608.761	15652.119	15738.834	15818.323	15854.454
13.5	15565.403	15608.761	15709.929	15782.192	15825.549
14.0	15514.819	15565.403	15666.571	15746.060	15789.418
14.5	15464.235	15507.593	15630.440	15717.155	15760.513
15.0	15406.425	15464.235	15587.082	15681.024	15724.381
15.5	15363.067	15406.425	15536.498	15652.119	15695.476
16.0	15298.031	15363.067	15500.367	15608.761	15652.119
16.5	15247.447	15305.257	15449.783	15572.629	15630.440
17.0	15182.410	15247.447	15406.425	15529.272	15587.082
17.5	15124.600	15189.637	15355.841	15493.140	15550.951
18.0	15052.337	15131.827	15312.483	15442.556	15507.593
18.5	14987.301	15074.016	15261.900	15406.425	15471.462
19.0	14922.264	15008.980	15204.089	15363.067	15435.330
19.5	14850.002	14936.717	15153.505	15319.710	15377.520
20.0	14777.739	14878.907	15095.695	15269.126	15348.615
20.5	14698.250	14806.644	15045.111	15225.768	15290.805
21.0	14625.987	14734.381	14980.075	15175.184	15254.673
21.5	14553.724	14662.118	14922.264	15131.827	15211.316
22.0	14467.009	14589.856	14864.454	15074.016	15175.184
22.5	14394.746	14510.367	14799.418	15023.432	15117.374
23.0	14308.031	14445.330	14734.381	14972.848	15066.790
23.5	14221.315	14365.841	14669.345	14922.264	15016.206
24.0	14141.826	14279.126	14597.082	14864.454	14965.622
24.5	14055.111	14206.863	14532.045	14806.644	14915.038
25.0	13975.622	14120.148	14474.235	14748.834	14864.454
25.5	13881.680	14040.659	14394.746	14698.250	14813.870
26.0	13794.965	13953.943	14322.483	14633.213	14756.060
26.5	13701.023	13867.228	14250.221	14575.403	14698.250

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CANDELA TABULATION - (Cont.)

27.0	13592.62913780.51314177.95814517.59314633.213
27.5	13505.91413693.79714098.46914452.55614582.629
28.0	13404.74613599.85614026.20614394.74614517.593
28.5	13303.57813513.14013939.49114322.48314459.783
29.0	13187.95813411.97213867.22814257.44714394.746
29.5	13079.56413318.03113780.51314185.18414322.483
30.0	12971.16913216.86313708.25014120.14814257.447
30.5	12862.77513115.69513621.53414047.88514192.410
31.0	12754.38113014.52713542.04513982.84814127.374
31.5	12638.76112913.35913455.33013910.58614069.564
32.0	12530.36612812.19113368.61513838.32313997.301
32.5	12421.97212703.79713289.12613766.06013925.038
33.0	12306.35212602.62913202.41013686.57113860.002
33.5	12197.95812494.23513115.69513614.30813773.286
34.0	12082.33712393.06713028.98013534.81913701.023
34.5	11966.71712284.67312935.03813462.55613628.761
35.0	11851.09612176.27912848.32313383.06713556.498
35.5	11735.47612067.88512754.38113310.80413469.783
36.0	11619.85511959.49012660.43913231.31513397.520
36.5	11497.00911851.09612566.49813144.60013318.031
37.0	11374.16211735.47612472.55613057.88513238.542
37.5	11244.08911627.08212378.61512978.39613151.826
38.0	11121.24211511.46112277.44712891.68013072.337
38.5	10991.16911395.84112183.50512804.96512992.848
39.0	10861.09611280.22012082.33712718.25012906.133
39.5	10731.02311164.60011981.16912631.53412819.418
40.0	10600.95011048.97911887.22812544.81912732.702
40.5	10470.87710926.13311786.06012450.87712638.761
41.0	10340.80410803.28611677.66612364.16212552.045
41.5	10210.73110687.66511576.49812270.22012458.104
42.0	10080.65810564.81911475.33012176.27912371.388
42.5	9950.585 10441.97211366.93612082.33712277.447
43.0	9820.512 10319.12511258.54111988.39612183.505
43.5	9697.665 10196.27911150.14711894.45412082.337
44.0	9567.592 10073.43211041.75311793.28611988.396
44.5	9430.293 9950.585 10933.35911692.11811894.454
45.0	9300.220 9827.738 10824.96511598.17611793.286
45.5	9162.921 9704.892 10716.57111497.00911699.344
46.0	9032.848 9582.045 10600.95011395.84111598.176
46.5	8895.548 9451.972 10492.55611294.67311489.782
47.0	8758.249 9329.125 10376.93511186.27911388.614
47.5	8620.950 9206.278 10268.54111085.111 11280.220
48.0	8483.651 9076.205 10160.14710976.71711179.052
48.5	8346.351 8953.359 10044.52710875.54911070.658
49.0	8216.278 8823.286 9936.133 10767.15410962.264
49.5	8078.979 8700.439 9820.512 10658.76010853.870
50.0	7941.680 8570.366 9704.892 10550.36610745.476
50.5	7811.607 8440.293 9589.271 10441.97210644.308
51.0	7674.307 8317.446 9473.651 10326.35210535.914
51.5	7544.234 8187.373 9358.030 10217.95710427.519
52.0	7406.935 8064.526 9242.410 10102.33710319.125
52.5	7276.862 7934.453 9126.789 9986.716 10203.505
53.0	7142.453 7811.607 9011.169 9871.096 10095.111
53.5	7008.767 7688.760 8888.322 9755.476 9979.490
54.0	6877.249 7565.913 8772.702 9639.855 9856.643
54.5	6747.899 7443.067 8649.855 9517.008 9741.023

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55.0	6617.103	7312.994	8534.235	9394.162	9618.176
55.5	6491.366	7193.037	8411.388	9271.315	9495.330
56.0	6364.183	7069.468	8295.767	9148.468	9365.257
56.5	6236.278	6945.899	8172.921	9025.621	9235.184
57.0	6106.205	6823.774	8050.074	8902.775	9105.111
57.5	5974.687	6700.928	7934.453	8772.702	8967.811
58.0	5845.336	6578.804	7811.607	8649.855	8837.738
58.5	5717.431	6455.957	7688.760	8519.782	8700.439
59.0	5588.804	6333.833	7565.913	8382.483	8563.140
59.5	5464.512	6211.709	7443.067	8252.410	8425.840
60.0	5339.497	6090.307	7320.220	8115.110	8281.315
60.5	5215.928	5970.351	7200.986	7985.037	8136.789
61.0	5090.913	5850.395	7079.585	7847.738	7992.264
61.5	4964.453	5731.161	6958.906	7703.213	7840.512
62.0	4841.606	5613.373	6837.504	7565.913	7681.534
62.5	4720.205	5497.030	6713.935	7421.388	7522.556
63.0	4602.417	5380.687	6591.088	7269.636	7370.804
63.5	4487.519	5265.066	6467.519	7123.665	7209.658
64.0	4371.176	5150.891	6342.504	6974.081	7047.066
64.5	4253.387	5038.161	6218.212	6823.052	6881.585
65.0	4137.044	4925.431	6091.030	6669.132	6712.490
65.5	4023.592	4813.424	5963.125	6513.767	6543.395
66.0	3912.307	4702.862	5834.497	6356.234	6372.855
66.5	3801.022	4591.577	5705.869	6195.811	6202.315
67.0	3689.015	4481.015	5575.796	6035.388	6028.884
67.5	3579.176	4371.898	5446.446	5874.964	5854.731
68.0	3470.781	4262.059	5316.373	5711.650	5676.242
68.5	3361.665	4152.219	5187.022	5546.169	5496.307
69.0	3252.548	4043.825	5056.949	5379.964	5314.205
69.5	3145.599	3935.431	4926.154	5213.760	5134.271
70.0	3040.095	3827.037	4795.358	5047.555	4953.614
70.5	2935.314	3720.088	4665.285	4880.628	4775.125
71.0	2832.701	3613.862	4535.212	4714.424	4598.803
71.5	2732.256	3507.635	4403.694	4548.942	4426.818
72.0	2632.533	3402.132	4271.453	4382.738	4259.168
72.5	2534.978	3298.796	4139.935	4219.424	4092.241
73.0	2440.314	3195.460	4006.971	4057.555	3929.650
73.5	2344.927	3093.570	3874.008	3897.854	3768.504
74.0	2251.708	2993.124	3743.212	3741.044	3612.416
74.5	2162.102	2894.124	3610.971	3586.402	3463.555
75.0	2072.497	2795.847	3479.453	3434.650	3314.694
75.5	1985.781	2698.292	3347.935	3286.511	3173.781
76.0	1899.789	2602.183	3216.416	3144.154	3035.037
76.5	1814.518	2506.796	3087.066	3003.964	2897.738
77.0	1732.139	2410.686	2957.716	2868.110	2766.219
77.5	1648.314	2316.022	2829.811	2735.869	2639.037
78.0	1567.380	2222.081	2701.905	2607.241	2514.745
78.5	1487.891	2127.416	2576.168	2482.949	2397.679
79.0	1409.847	2033.475	2451.154	2362.270	2284.227
79.5	1331.080	1938.810	2328.307	2246.650	2176.555
80.0	1253.759	1844.869	2206.183	2135.365	2073.219
80.5	1178.606	1750.205	2086.949	2026.248	1974.219
81.0	1104.898	1656.986	1971.329	1922.190	1878.832
81.5	1031.913	1565.212	1856.431	1820.299	1785.613
82.0	959.650	1471.993	1746.591	1722.022	1696.007
82.5	889.555	1380.219	1638.920	1627.358	1610.737

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CANDELA TABULATION - (Cont.)

83.0	822.350	1288.445	1533.416	1537.029	1527.635
83.5	755.146	1196.672	1432.248	1449.591	1448.146
84.0	690.110	1107.066	1333.971	1365.767	1371.548
84.5	624.350	1018.183	1238.584	1284.110	1297.117
85.0	562.204	930.022	1145.365	1206.066	1223.409
85.5	499.336	841.861	1055.759	1129.467	1151.869
86.0	438.635	757.314	969.044	1056.482	1081.774
86.5	378.657	672.766	885.219	985.664	1016.737
87.0	318.679	591.110	805.007	919.183	953.146
87.5	257.978	519.569	734.912	857.759	896.058
88.0	198.000	454.533	672.044	804.285	845.475
88.5	138.745	395.277	617.847	758.759	802.117
89.0	93.942	347.584	570.153	716.847	761.650
89.5	62.869	303.504	527.518	676.380	722.628
90.0	32.518	262.314	487.051	639.526	687.219
90.5	28.905	182.102	380.825	525.350	573.766
91.0	27.460	175.599	384.438	533.299	575.934
91.5	27.460	171.263	383.715	536.190	575.934
92.0	28.182	168.372	383.715	532.577	571.599
92.5	30.350	168.372	381.547	526.073	562.204
93.0	32.518	164.037	375.044	516.679	554.978
93.5	34.686	159.701	367.818	508.007	545.584
94.0	36.854	155.365	360.591	499.336	536.912
94.5	39.022	152.474	353.365	491.387	528.241
95.0	40.467	148.861	346.861	482.715	519.569
95.5	41.912	145.248	340.358	474.766	511.620
96.0	41.912	143.080	333.854	466.818	503.672
96.5	42.635	140.912	328.073	458.869	495.723
97.0	42.635	139.467	322.292	450.920	487.774
97.5	43.358	137.299	316.511	443.693	479.825
98.0	43.358	135.131	310.730	436.467	472.599
98.5	43.358	133.686	305.672	429.241	464.650
99.0	43.358	132.964	300.613	422.737	456.701
99.5	44.080	132.241	295.555	416.234	449.475
100.0	44.080	131.518	291.219	410.453	442.248
100.5	44.080	130.796	287.606	404.672	436.467
101.0	44.080	130.796	283.993	398.168	430.686
101.5	44.080	131.518	279.657	392.387	424.905
102.0	44.080	131.518	276.044	386.606	419.124
102.5	43.358	132.241	272.431	381.547	412.620
103.0	43.358	132.964	268.818	376.489	406.839
103.5	43.358	133.686	265.204	372.153	401.781
104.0	44.080	133.686	262.314	367.818	397.445
104.5	44.080	135.131	259.423	362.759	393.110
105.0	44.080	135.854	256.533	358.423	388.774
105.5	44.080	136.577	254.365	353.365	383.715
106.0	44.080	138.022	251.474	348.307	378.657
106.5	44.803	138.745	249.307	343.971	373.599
107.0	44.803	140.190	247.861	339.635	368.540
107.5	44.803	141.635	245.693	335.299	364.204
108.0	44.803	143.080	244.248	331.686	359.869
108.5	44.803	144.526	242.803	328.796	355.533
109.0	45.526	145.971	242.080	325.183	351.197
109.5	45.526	147.416	240.635	322.292	348.307
110.0	45.526	148.861	239.912	320.124	344.693
110.5	45.526	151.029	239.190	317.234	341.803

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CANDELA TABULATION - (Cont.)

111.0	46.248	153.197	238.467	315.066	338.912
111.5	46.248	155.365	237.022	312.175	336.022
112.0	46.248	158.255	236.299	310.007	333.854
112.5	46.248	160.423	234.854	307.839	330.964
113.0	46.248	163.314	234.131	305.672	328.796
113.5	46.248	166.204	233.409	303.504	325.905
114.0	46.248	169.818	232.686	302.058	323.737
114.5	46.248	173.431	231.964	299.891	322.292
115.0	46.971	177.044	231.964	298.445	320.847
115.5	46.971	180.657	231.241	297.000	318.679
116.0	46.971	184.270	231.241	295.555	317.234
116.5	46.971	187.883	231.241	294.110	315.788
117.0	47.693	191.496	231.241	292.664	314.343
117.5	47.693	195.110	231.241	291.219	312.898
118.0	47.693	198.723	231.241	289.774	311.453
118.5	47.693	202.336	231.241	288.328	309.285
119.0	48.416	206.672	231.964	286.883	307.839
119.5	48.416	210.285	231.964	286.161	306.394
120.0	48.416	213.175	232.686	284.715	304.949
120.5	49.139	216.788	232.686	283.993	303.504
121.0	49.139	219.679	233.409	283.270	302.058
121.5	49.139	222.569	233.409	282.547	301.336
122.0	49.861	224.737	234.131	281.102	300.613
122.5	49.861	227.628	234.854	281.102	299.891
123.0	49.861	229.796	235.577	280.380	298.445
123.5	50.584	231.241	237.022	279.657	297.723
124.0	50.584	232.686	237.745	278.934	297.000
124.5	50.584	233.409	239.190	278.212	295.555
125.0	51.307	234.131	240.635	278.212	294.832
125.5	51.307	234.854	242.080	277.489	294.110
126.0	52.029	234.854	244.248	277.489	293.387
126.5	52.029	234.131	245.693	276.766	292.664
127.0	52.752	233.409	247.861	276.044	292.664
127.5	52.752	232.686	250.029	276.044	292.664
128.0	53.474	231.241	252.920	276.044	291.942
128.5	53.474	230.518	255.810	276.044	291.942
129.0	54.197	229.073	258.701	276.044	291.219
129.5	54.197	226.905	261.591	276.044	291.219
130.0	54.920	225.460	264.482	276.766	291.219
130.5	55.642	224.015	268.095	276.766	290.496
131.0	55.642	221.847	270.985	276.766	290.496
131.5	55.642	220.401	274.599	277.489	290.496
132.0	56.365	218.234	278.212	278.212	290.496
132.5	56.365	216.788	281.102	279.657	290.496
133.0	57.088	214.620	284.715	280.380	290.496
133.5	57.088	213.175	288.328	281.825	291.219
134.0	57.088	211.007	291.219	283.270	291.942
134.5	57.088	209.562	294.832	284.715	292.664
135.0	57.088	207.394	298.445	286.161	293.387
135.5	57.810	205.226	301.336	288.328	294.110
136.0	57.088	203.781	304.949	290.496	295.555
136.5	57.088	201.613	307.839	292.664	296.277
137.0	57.088	199.445	310.730	295.555	298.445
137.5	57.088	198.000	313.620	297.723	299.891
138.0	57.088	195.832	316.511	300.613	302.058
138.5	57.088	193.664	318.679	303.504	304.226

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

139.0	57.088	191.496	320.847	306.394	306.394
139.5	57.088	189.328	321.569	309.285	309.285
140.0	57.088	187.883	323.015	312.175	311.453
140.5	57.088	185.715	323.015	315.066	314.343
141.0	57.810	183.547	323.737	317.956	317.234
141.5	57.810	181.380	323.015	321.569	320.124
142.0	57.810	179.212	322.292	324.460	323.015
142.5	58.533	177.044	320.847	328.073	325.905
143.0	58.533	174.876	318.679	330.964	328.796
143.5	58.533	172.708	316.511	333.854	331.686
144.0	58.533	171.263	313.620	336.745	335.299
144.5	59.255	169.095	310.730	339.635	338.912
145.0	59.255	167.650	307.117	342.526	342.526
145.5	59.255	166.204	303.504	345.416	345.416
146.0	59.255	164.759	299.891	347.584	348.307
146.5	59.255	163.314	295.555	349.752	351.920
147.0	59.255	161.869	291.942	350.474	355.533
147.5	59.255	160.423	287.606	350.474	358.423
148.0	59.255	159.701	283.993	349.752	361.314
148.5	59.255	158.255	279.657	349.029	363.482
149.0	59.255	156.810	276.044	347.584	364.204
149.5	59.255	155.365	272.431	346.139	364.927
150.0	59.255	153.197	268.818	343.248	364.204
150.5	59.255	151.752	265.204	340.358	362.759
151.0	59.255	150.307	260.869	336.022	361.314
151.5	59.255	148.861	257.256	331.686	359.146
152.0	59.255	146.693	253.642	326.628	356.256
152.5	59.255	144.526	249.307	321.569	352.642
153.0	59.978	142.358	245.693	316.511	348.307
153.5	59.978	140.190	241.358	310.730	343.248
154.0	59.978	138.022	237.745	304.949	337.467
154.5	59.978	135.854	233.409	299.168	330.964
155.0	60.701	133.686	229.796	294.110	324.460
155.5	60.701	130.796	225.460	288.328	317.956
156.0	60.701	128.628	221.847	282.547	310.730
156.5	61.423	126.460	217.511	277.489	304.226
157.0	61.423	124.292	213.175	271.708	297.000
157.5	62.146	122.124	209.562	265.927	290.496
158.0	62.146	119.234	205.226	260.146	283.270
158.5	62.146	117.788	201.613	254.365	276.044
159.0	62.869	115.620	198.000	248.584	269.540
159.5	62.869	113.453	194.387	242.803	262.314
160.0	62.869	111.285	190.774	236.299	255.810
160.5	62.869	109.839	187.883	230.518	249.307
161.0	63.591	107.672	184.993	224.737	242.080
161.5	63.591	105.504	182.102	218.956	234.854
162.0	63.591	104.058	178.489	212.453	228.350
162.5	63.591	101.891	174.876	206.672	221.124
163.0	64.314	99.723	171.263	200.891	214.620
163.5	63.591	98.277	166.927	195.110	207.394
164.0	64.314	96.832	162.591	190.051	200.891
164.5	64.314	94.664	158.255	185.715	194.387
165.0	64.314	93.219	153.920	180.657	188.606
165.5	64.314	91.774	148.861	176.321	183.547
166.0	64.314	90.328	144.526	171.263	178.489
166.5	64.314	88.161	139.467	166.204	172.708

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

167.0	64.314	86.715	135.131	161.146	167.650
167.5	64.314	85.270	130.796	155.365	161.869
168.0	65.037	84.547	126.460	149.584	156.088
168.5	65.037	83.102	122.124	143.803	150.307
169.0	65.037	81.657	117.788	138.022	144.526
169.5	65.037	80.212	113.453	132.241	138.022
170.0	65.037	79.489	109.839	126.460	131.518
170.5	65.037	78.044	106.226	120.679	125.015
171.0	65.037	77.321	102.613	114.898	119.234
171.5	65.037	75.876	99.000	109.839	113.453
172.0	65.759	75.153	96.109	104.781	106.949
172.5	65.759	74.431	92.496	100.445	101.168
173.0	65.759	73.708	89.606	96.109	96.109
173.5	66.482	72.985	86.715	91.774	91.774
174.0	66.482	72.263	83.825	88.161	87.438
174.5	66.482	71.540	81.657	84.547	83.102
175.0	66.482	71.540	79.489	80.934	79.489
175.5	66.482	70.818	77.321	78.044	76.599
176.0	66.482	70.095	75.876	75.153	73.708
176.5	66.482	70.095	74.431	72.985	70.818
177.0	66.482	70.095	72.985	70.818	67.927
177.5	67.204	69.372	72.263	69.372	65.759
178.0	67.204	69.372	71.540	67.927	64.314
178.5	67.204	69.372	70.818	67.204	62.869
179.0	67.204	68.650	70.095	66.482	62.146
179.5	67.204	68.650	70.095	66.482	61.423
180.0	67.204	67.204	67.204	67.204	67.204

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GH-4-L480-840-HA-FA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	5929.4	N.A.	12.40
0-30	12581.99	N.A.	26.20
0-40	20573.06	N.A.	42.90
0-60	36276.7	N.A.	75.60
0-80	45287.35	N.A.	94.30
0-90	46475.2	N.A.	96.80
10-90	44940.97	N.A.	93.60
20-40	14643.66	N.A.	30.50
20-50	22894.8	N.A.	47.70
40-70	21411.51	N.A.	44.60
60-80	9010.65	N.A.	18.80
70-80	3302.78	N.A.	6.90
80-90	1187.85	N.A.	2.50
90-110	603.03	N.A.	1.30
90-120	825.38	N.A.	1.70
90-130	1032.74	N.A.	2.20
90-150	1379.01	N.A.	2.90
90-180	1526.56	N.A.	3.20
110-180	923.52	N.A.	1.90
0-180	48001.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1534.23
10-20	4395.16
20-30	6652.59
30-40	7991.07
40-50	8251.14
50-60	7452.5
60-70	5707.87
70-80	3302.78
80-90	1187.85
90-100	345.34
100-110	257.69
110-120	222.35
120-130	207.36
130-140	187.55
140-150	158.72
150-160	98.95
160-170	40.44
170-180	8.15

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GH-4-L480-840-HA-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	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-L480-840-HA-FA-DIM-UNV_.IES

UGR TABLE - CORRECTED

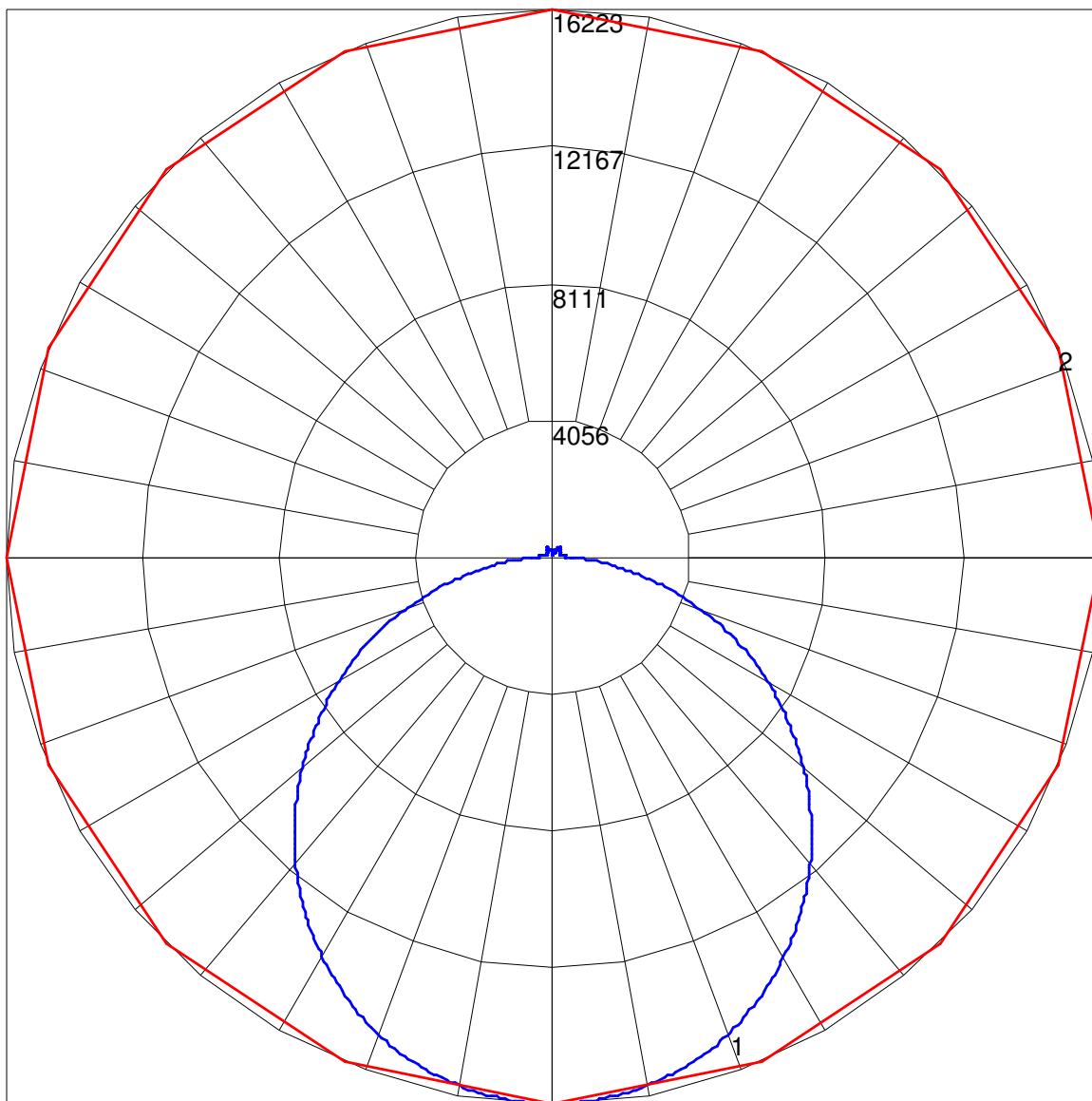
Reflectances

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	20.7	22.3	21.1	22.7	23.1	23.0	24.5	23.4	24.9	25.3
	3H	22.2	23.6	22.6	24.0	24.4	24.7	26.1	25.1	26.5	27.0
	4H	22.6	24.0	23.1	24.4	24.8	25.3	26.6	25.7	27.0	27.5
	6H	23.0	24.2	23.4	24.6	25.1	25.7	26.9	26.1	27.3	27.8
	8H	23.0	24.2	23.5	24.7	25.2	25.8	27.0	26.3	27.4	27.9
	12H	23.1	24.2	23.5	24.7	25.2	25.9	27.1	26.4	27.5	28.0
4H	2H	21.7	23.0	22.1	23.4	23.9	23.4	24.8	23.9	25.2	25.6
	3H	23.4	24.5	23.8	24.9	25.4	25.4	26.5	25.8	27.0	27.4
	4H	24.0	25.0	24.4	25.5	26.0	26.1	27.1	26.5	27.6	28.1
	6H	24.4	25.3	24.9	25.8	26.3	26.6	27.5	27.1	28.0	28.5
	8H	24.5	25.3	25.0	25.8	26.4	26.8	27.6	27.3	28.1	28.6
	12H	24.6	25.3	25.1	25.9	26.4	26.9	27.7	27.5	28.2	28.8
8H	4H	24.4	25.3	24.9	25.8	26.3	26.3	27.1	26.8	27.6	28.2
	6H	25.0	25.7	25.5	26.2	26.8	26.9	27.6	27.4	28.2	28.7
	8H	25.2	25.8	25.7	26.4	26.9	27.1	27.8	27.7	28.3	28.9
	12H	25.3	25.9	25.9	26.4	27.1	27.4	28.0	28.0	28.5	29.1
12H	4H	24.5	25.2	25.0	25.8	26.3	26.3	27.1	26.8	27.6	28.1
	6H	25.1	25.7	25.7	26.3	26.9	26.9	27.6	27.5	28.1	28.7
	8H	25.3	25.9	25.9	26.5	27.1	27.2	27.8	27.8	28.3	29.0

Maximum UGR = 29.1

POLAR GRAPH



Maximum Candela = 16222.995 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.)