



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HBULED180DMVWH40.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]
 [ISSUE DATE] 2018-1-9 11:25
 [MANUFAC] MOBERN LIGHTING CO.
 [LUMCAT]
 [LUMINAIRE] HBULED180DMVWH40
 [LAMPCAT] L130-4070-Q
 [LAMP] DIM100A12S-2270
 [VOLTAGE] 120.9 V
 [CURRENT] 1.486 A
 [POWERFACTOR] 0.996
 [TESTLAB]
 [TESTINST] GPM-1800B
 [TESTDIST] 11.672 m

CHARACTERISTICS

Lumens Per Lamp	23556.9 (1 lamp)
Total Lamp Lumens	23556.9
Luminaire Lumens	23557
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	178.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Point
Luminous Length (0-180)	0.00 m
Luminous Width (90-270)	0.00 m
Luminous Height	0.00 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>	<u>30</u>	<u>60</u>	<u>90</u>	<u>120</u>	<u>150</u>	<u>180</u>	<u>210</u>	<u>240</u>	<u>270</u>
0	7387.356	7387.356	7387.356	7387.356	7387.356	7387.356	7387.356	7387.356	7387.356	7387.356
1	7389.790	7390.030	7387.670	7382.930	7382.220	7388.140	7401.390	7398.310	7391.690	7380.090
2	7384.830	7386.480	7384.590	7384.350	7385.770	7393.580	7408.250	7403.050	7392.160	7378.440
3	7378.910	7382.700	7381.040	7385.770	7389.790	7397.130	7412.280	7407.310	7392.870	7377.020
4	7371.100	7376.780	7377.490	7385.540	7391.450	7401.860	7417.720	7413.220	7393.340	7374.180
5	7361.160	7366.370	7372.990	7382.220	7392.870	7404.940	7421.510	7415.350	7392.160	7370.860
6	7348.140	7355.720	7364.240	7377.730	7391.450	7404.470	7422.690	7417.010	7390.270	7362.820
7	7332.530	7337.500	7352.400	7368.020	7387.190	7399.970	7420.800	7415.830	7386.720	7354.060
8	7315.010	7320.220	7336.080	7356.430	7377.490	7393.580	7417.010	7411.800	7379.380	7342.230
9	7292.060	7297.270	7315.960	7341.280	7363.530	7381.510	7407.540	7403.050	7367.790	7326.140
10	7268.870	7273.360	7295.140	7321.170	7346.490	7366.600	7392.630	7390.270	7353.820	7305.790
11	7243.310	7248.520	7271.470	7299.870	7326.370	7348.140	7373.700	7371.100	7336.550	7286.620
12	7214.680	7221.300	7245.680	7276.680	7307.200	7327.790	7352.640	7350.750	7312.410	7261.300
13	7182.020	7193.610	7216.100	7250.170	7282.120	7303.890	7329.210	7326.850	7288.980	7236.210
14	7148.890	7158.590	7185.800	7223.430	7257.040	7277.860	7304.370	7301.050	7264.140	7205.450
15	7115.990	7126.410	7155.990	7194.320	7224.850	7247.810	7276.680	7271.710	7235.970	7175.390
16	7081.680	7092.090	7124.280	7161.430	7195.270	7217.520	7245.440	7239.290	7201.900	7144.390
17	7044.050	7057.540	7091.860	7128.770	7166.640	7188.410	7215.620	7207.340	7171.610	7114.570
18	7006.430	7020.860	7058.720	7098.250	7134.450	7160.250	7186.510	7177.290	7138.710	7081.680
19	6962.170	6979.450	7018.260	7060.620	7099.900	7127.830	7157.170	7144.630	7105.110	7043.580
20	6922.420	6940.160	6981.580	7023.940	7066.300	7093.280	7121.440	7107.470	7070.320	7009.030
21	6880.290	6900.410	6945.840	6987.490	7031.980	7062.040	7090.910	7072.920	7030.800	6972.350
22	6836.990	6857.340	6902.540	6948.680	6996.960	7027.960	7058.720	7036.720	6992.940	6932.590
23	6783.500	6808.830	6859.700	6908.450	6955.070	6989.150	7023.940	6999.800	6953.180	6886.920
24	6734.750	6761.500	6814.500	6859.940	6914.840	6950.340	6987.260	6962.170	6914.130	6841.960
25	6682.690	6711.090	6768.360	6815.450	6871.540	6909.870	6945.840	6919.580	6868.220	6794.860
26	6626.610	6655.710	6712.980	6764.340	6824.920	6863.960	6903.720	6878.160	6822.080	6745.400
27	6560.350	6592.060	6657.840	6712.040	6777.590	6817.340	6857.810	6833.910	6775.220	6693.340
28	6498.110	6530.760	6598.920	6656.900	6718.660	6765.990	6807.640	6786.580	6722.690	6633.230
29	6431.370	6468.290	6535.970	6589.690	6662.580	6705.880	6748.480	6730.730	6660.920	6574.310
30	6365.820	6400.840	6471.130	6528.630	6604.600	6648.610	6690.970	6676.540	6604.120	6509.700
31	6294.830	6333.640	6396.580	6463.790	6541.180	6588.270	6632.520	6617.610	6543.540	6444.860
32	6215.550	6254.830	6327.480	6390.670	6469.950	6517.040	6567.920	6555.610	6478.230	6369.130
33	6140.770	6180.290	6254.360	6322.280	6402.500	6451.010	6493.370	6484.380	6411.730	6297.900
34	6063.620	6104.090	6179.340	6248.440	6330.800	6382.150	6423.800	6414.570	6334.580	6225.020
35	5973.930	6015.820	6094.150	6171.530	6259.090	6309.500	6351.860	6343.100	6261.930	6148.580
36	5891.580	5933.470	6013.690	6085.630	6175.560	6228.330	6278.970	6269.270	6186.920	6062.440
37	5804.490	5850.170	5928.970	6005.410	6095.810	6153.070	6194.720	6187.860	6110.000	5982.690
38	5717.170	5763.790	5844.490	5919.980	6015.820	6073.090	6115.920	6110.950	6020.790	5898.680
39	5615.880	5664.160	5749.830	5833.840	5931.810	5990.730	6034.510	6026.700	5938.440	5812.780
40	5519.810	5569.970	5656.350	5745.570	5842.590	5907.430	5950.500	5943.880	5852.530	5713.150
41	5421.360	5473.660	5563.350	5652.800	5745.090	5818.930	5856.080	5849.690	5763.320	5624.400
42	5321.020	5373.560	5466.090	5549.390	5653.510	5720.250	5766.630	5759.770	5663.210	5528.560
43	5215.950	5271.800	5365.980	5452.120	5559.560	5626.530	5675.990	5668.420	5572.100	5433.670
44	5112.060	5167.440	5255.710	5352.730	5462.300	5533.290	5581.100	5572.580	5473.660	5332.850
45	4994.210	5051.240	5149.690	5240.320	5354.390	5425.150	5482.890	5463.720	5374.740	5217.610
46	4883.460	4941.680	5042.010	5135.250	5250.030	5325.990	5373.080	5363.850	5261.860	5112.530
47	4770.340	4830.920	4932.450	5026.160	5145.670	5222.100	5268.720	5262.100	5157.500	5003.440
48	4643.970	4706.920	4811.760	4915.880	5039.170	5116.790	5162.700	5155.600	5049.590	4882.040
49	4527.540	4592.150	4697.930	4794.240	4916.120	4996.810	5043.200	5036.100	4938.600	4769.870
50	4407.560	4477.140	4579.370	4678.760	4802.290	4885.120	4932.920	4925.820	4816.490	4654.860
51	4291.600	4358.100	4464.830	4562.800	4689.410	4770.820	4817.670	4809.150	4701.240	4537.240
52	4169.730	4239.780	4344.610	4444.480	4570.380	4654.620	4700.060	4694.380	4582.920	4407.800
53	4049.510	4105.840	4212.560	4323.790	4452.050	4534.400	4574.400	4568.480	4455.840	4290.180

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CANDELA TABULATION - (Cont.)

54	3916.280	3984.440	4094.480	4205.230	4322.130	4405.670	4454.650	4447.790	4337.040	4169.020
55	3793.460	3863.750	3972.370	4072.940	4200.260	4286.160	4335.860	4326.390	4214.690	4047.860
56	3672.060	3741.870	3850.730	3950.120	4078.860	4163.810	4213.980	4202.620	4091.160	3912.260
57	3540.960	3620.000	3717.020	3829.190	3959.110	4043.600	4087.850	4078.380	3966.920	3788.490
58	3422.870	3485.820	3596.570	3696.200	3823.520	3910.840	3953.200	3943.970	3832.980	3668.980
59	3304.780	3368.680	3476.830	3575.040	3702.120	3787.310	3829.190	3818.310	3708.030	3544.740
60	3185.510	3249.640	3356.610	3454.110	3580.240	3665.200	3707.560	3693.600	3585.210	3424.530
61	3056.070	3119.730	3222.900	3322.940	3458.370	3532.680	3583.320	3570.780	3461.680	3292.240
62	2940.580	3001.640	3106.470	3200.420	3325.140	3410.090	3449.140	3435.410	3327.030	3173.440
63	2825.810	2885.920	2988.150	3083.050	3204.450	3290.350	3327.980	3311.410	3206.340	3053.940
64	2710.800	2772.330	2870.540	2966.610	3083.280	3168.710	3205.390	3192.380	3086.590	2939.160
65	2588.450	2645.250	2744.880	2848.290	2966.610	3046.840	3078.310	3061.980	2957.150	2813.270
66	2479.830	2535.210	2630.810	2734.230	2837.400	2920.940	2961.410	2941.290	2840.720	2699.440
67	2373.100	2425.870	2519.590	2609.510	2723.100	2804.040	2846.870	2823.440	2725.470	2587.270
68	2267.790	2317.490	2401.030	2496.160	2609.750	2690.920	2729.730	2706.070	2610.220	2464.920
69	2153.260	2202.480	2290.990	2388.960	2496.630	2577.330	2605.250	2580.880	2496.630	2356.060
70	2048.190	2099.300	2184.970	2271.580	2376.650	2455.690	2495.690	2470.130	2375.000	2251.230
71	1949.740	1995.890	2080.610	2165.800	2268.500	2347.540	2387.060	2358.670	2266.370	2146.390
72	1850.580	1895.310	1968.430	2061.910	2164.140	2240.110	2279.150	2249.340	2161.540	2043.450
73	1743.860	1787.400	1868.570	1959.210	2058.120	2135.510	2171.950	2142.840	2056.700	1933.170
74	1649.430	1690.140	1768.700	1845.850	1942.400	2022.630	2059.070	2028.070	1945.010	1833.070
75	1557.610	1596.190	1671.920	1747.880	1843.010	1921.110	1956.600	1925.360	1846.560	1735.340
76	1464.610	1503.900	1576.310	1650.380	1743.860	1820.060	1856.970	1826.920	1748.830	1642.570
77	1373.270	1402.610	1473.600	1555.480	1648.490	1721.370	1748.350	1720.900	1644.460	1540.340
78	1275.290	1313.630	1383.440	1463.900	1545.310	1617.490	1652.980	1624.590	1552.170	1451.600
79	1184.180	1224.890	1291.390	1364.040	1453.250	1525.430	1559.270	1531.820	1462.010	1360.960
80	1096.390	1133.310	1202.170	1273.400	1363.560	1433.850	1466.510	1440.240	1371.610	1271.510
81	1001.260	1035.100	1103.960	1180.160	1271.740	1342.270	1372.560	1342.270	1280.260	1173.300
82	915.120	946.830	1012.850	1090.710	1181.820	1252.340	1273.640	1251.390	1183.950	1087.630
83	823.060	850.510	924.350	995.810	1084.560	1154.370	1182.760	1162.410	1094.970	1001.490
84	727.930	749.700	826.610	909.440	997.230	1064.440	1092.600	1072.960	1009.780	919.380
85	628.300	646.760	717.520	812.650	908.020	976.170	996.050	975.700	922.450	820.690
86	543.580	559.910	625.930	713.260	802.240	873.940	908.730	886.720	821.400	726.740
87	460.750	476.130	538.140	612.920	705.920	775.260	812.880	790.880	724.850	636.110
88	374.140	387.160	451.520	527.010	612.920	677.050	714.910	696.450	636.350	544.530
89	342.900	346.690	368.700	437.800	527.250	589.020	616.470	602.740	547.600	461.940
90	314.500	317.580	338.410	363.250	431.650	495.540	531.510	519.910	465.010	379.110
91	290.840	293.680	312.370	332.730	363.730	405.610	447.740	435.430	384.320	343.380
92	269.780	270.960	288.240	307.410	336.040	355.680	372.720	370.350	353.790	317.580
93	248.240	251.080	264.100	283.500	310.010	329.650	344.090	342.430	326.810	293.440
94	228.840	229.550	244.220	259.370	284.450	300.310	315.920	314.980	301.250	271.670
95	212.270	212.270	224.820	239.010	262.210	277.350	291.080	290.130	278.300	251.560
96	194.760	195.470	206.830	220.320	243.040	256.530	268.360	268.360	256.530	231.200
97	179.380	176.780	188.130	203.990	224.110	237.590	246.110	245.640	235.460	211.330
98	164.470	162.810	172.040	186.240	206.830	218.430	228.600	226.950	217.480	195.470
99	151.220	150.030	158.790	170.860	188.840	200.680	211.330	208.010	199.970	178.910
100	138.910	137.260	144.830	158.550	173.940	184.590	192.160	192.630	185.060	163.760
101	128.500	125.420	131.810	144.830	159.030	168.970	177.720	177.250	166.360	151.220
102	116.670	114.540	117.610	132.050	145.770	155.000	162.100	161.870	149.800	137.730
103	106.960	104.120	107.440	119.980	133.000	141.280	150.030	149.800	133.710	122.820
104	98.920	94.900	96.550	109.090	120.930	129.920	135.360	136.780	119.270	108.620
105	92.060	88.740	86.850	99.390	108.380	119.510	124.000	123.530	106.730	95.370
106	82.590	79.280	76.440	88.030	97.970	110.040	114.540	112.410	93.950	82.830
107	76.200	72.410	70.520	78.330	86.610	99.630	105.780	104.120	85.670	68.860
108	71.230	65.080	63.890	69.100	76.440	90.160	96.790	94.190	79.040	57.980
109	63.890	60.350	57.510	59.870	67.680	84.480	89.690	88.030	71.700	50.170

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110	58.690	54.670	53.010	51.120	59.870	76.910	80.220	78.330	66.500	45.670
111	53.960	50.880	49.460	43.310	55.850	70.520	74.310	70.990	62.000	42.120
112	48.990	45.440	44.960	36.920	49.700	61.770	67.210	65.550	58.690	39.050
113	44.730	41.890	42.120	31.950	45.670	57.510	61.060	58.930	53.010	36.920
114	42.830	39.520	39.760	29.110	42.360	51.350	56.560	54.430	47.800	35.020
115	38.340	37.390	37.150	28.400	37.860	47.090	53.720	47.570	45.440	34.550
116	35.970	34.550	35.260	27.210	34.790	43.540	48.750	42.830	43.070	33.130
117	35.260	32.420	34.550	26.270	32.660	39.990	45.440	39.990	39.050	32.890
118	33.840	31.470	34.550	25.560	30.050	38.100	40.700	36.210	37.390	31.710
119	33.600	31.000	33.600	26.270	29.110	37.860	38.810	33.600	35.970	31.950
120	34.310	30.050	34.080	26.270	28.400	34.310	37.630	30.530	35.500	32.180
121	35.020	31.470	33.600	26.270	28.870	32.890	35.730	31.950	34.790	32.180
122	37.390	33.130	34.790	27.450	27.920	32.420	34.080	31.470	35.970	34.080
123	36.680	32.890	35.020	29.580	28.630	31.000	32.890	32.180	37.630	34.080
124	38.340	34.310	35.500	28.400	30.290	30.290	34.080	31.950	38.340	34.790
125	38.340	35.730	36.920	29.580	31.710	32.180	34.550	34.080	37.150	36.210
126	39.280	36.920	38.100	32.420	32.890	34.790	35.970	32.890	38.810	36.920
127	39.280	36.920	38.570	32.420	31.950	34.550	36.440	34.310	38.810	37.860
128	39.990	40.940	39.760	32.890	33.370	35.970	38.100	35.970	40.940	38.340
129	40.940	42.600	40.470	33.840	34.080	35.730	38.100	36.680	39.990	39.520
130	42.120	42.600	39.520	34.790	34.550	35.020	37.860	39.760	41.890	40.700
131	43.070	43.070	41.410	35.500	36.210	36.680	38.570	38.810	42.600	40.470
132	44.490	44.730	42.600	35.970	35.970	37.150	39.520	39.280	42.830	42.600
133	44.960	45.670	43.310	36.210	36.210	37.150	40.700	40.470	43.540	44.250
134	45.440	46.150	41.890	38.340	38.810	38.100	40.940	39.760	44.020	44.490
135	45.670	46.150	43.540	37.860	39.280	38.810	42.830	42.120	44.730	45.910
136	45.910	47.090	44.490	39.990	39.760	42.120	43.780	41.650	46.380	45.910
137	48.040	48.040	44.960	39.050	41.650	41.180	45.440	43.310	47.800	45.910
138	47.330	48.750	44.250	40.940	40.230	42.360	45.670	43.310	45.440	46.150
139	48.990	49.220	44.960	40.700	41.180	40.940	46.620	42.830	47.330	47.090
140	50.410	49.700	46.380	42.830	41.650	41.650	48.040	44.730	47.570	47.800
141	51.830	51.120	47.570	43.070	42.360	43.540	48.750	45.670	48.990	48.750
142	52.540	50.640	47.800	43.540	42.830	44.250	48.510	45.670	50.170	48.750
143	53.480	50.640	48.280	44.250	43.540	45.200	50.410	47.330	50.170	50.170
144	53.480	51.350	49.220	45.910	43.310	45.910	50.170	47.330	51.830	51.120
145	54.670	53.480	50.640	46.620	44.730	47.800	50.880	48.040	52.770	51.350
146	56.090	53.480	50.170	46.620	45.200	47.330	50.880	49.220	52.060	52.770
147	54.900	54.900	50.880	47.800	45.910	46.860	51.350	49.930	52.770	53.480
148	55.140	56.320	52.060	48.280	47.330	47.090	53.250	50.640	54.900	53.010
149	56.560	57.030	53.010	48.750	48.990	48.040	53.480	51.120	54.900	53.960
150	56.090	57.510	53.010	48.750	51.120	48.990	53.250	51.120	56.800	56.320
151	56.090	58.450	53.250	49.930	51.350	50.640	54.190	53.010	56.090	56.090
152	57.510	59.160	53.720	50.880	51.120	51.830	55.610	54.190	57.980	56.800
153	58.220	58.450	54.670	52.770	51.830	49.930	56.320	55.610	57.740	57.030
154	59.160	58.450	54.430	54.900	53.480	50.170	56.320	55.610	58.690	55.850
155	60.350	60.350	56.090	53.250	54.190	51.830	56.560	57.510	60.350	57.030
156	58.690	60.110	55.610	55.380	55.140	54.190	56.800	58.220	59.870	57.510
157	60.110	61.060	57.270	54.900	55.380	53.720	57.510	58.220	60.580	57.980
158	62.000	62.710	58.220	55.850	56.090	55.380	58.450	59.400	61.530	57.510
159	61.060	61.530	58.930	55.610	57.270	55.610	57.740	59.160	62.710	57.740
160	62.000	63.180	58.220	56.320	56.560	56.560	58.450	59.160	62.950	57.980
161	62.710	63.180	58.220	56.800	57.030	57.030	59.400	59.160	64.370	59.160
162	63.180	63.420	58.930	56.320	56.800	57.030	60.580	60.110	64.600	61.530
163	63.420	64.130	62.240	55.610	57.030	56.800	62.710	59.870	64.370	61.060
164	64.600	65.790	61.770	55.140	58.450	57.030	62.240	59.870	65.080	62.000
165	62.950	63.660	61.060	57.510	57.980	58.930	62.710	60.110	63.660	61.290

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CANDELA TABULATION - (Cont.)

166	62.000	62.950	62.240	57.270	58.450	60.350	61.290	60.820	65.080	61.530
167	62.470	63.180	61.530	58.690	60.580	61.530	61.770	61.060	65.550	63.180
168	63.180	62.240	61.060	57.510	60.820	61.530	63.660	61.770	64.130	63.420
169	64.840	64.600	61.290	58.690	61.770	61.770	63.420	62.470	63.890	62.950
170	65.310	63.180	62.710	60.110	60.820	62.240	64.130	63.180	63.890	64.840
171	66.730	63.420	62.240	61.290	62.710	63.420	63.660	63.660	64.600	64.370
172	64.600	64.600	61.530	60.580	63.660	65.310	64.840	63.890	66.500	66.500
173	65.790	66.730	62.470	60.580	63.180	63.180	65.080	63.420	65.790	64.840
174	67.210	65.080	61.290	61.770	64.130	62.950	65.310	63.890	66.970	66.260
175	66.020	66.260	63.180	62.000	63.420	62.470	66.020	63.660	66.500	67.210
176	66.730	66.020	62.950	63.180	64.600	62.950	67.920	66.500	66.020	66.020
177	67.920	66.020	63.180	63.660	63.180	64.130	67.210	65.790	66.500	66.730
178	67.680	66.730	63.890	63.660	64.130	64.370	66.730	66.500	65.310	64.840
179	69.340	66.260	68.150	63.420	64.840	66.020	68.630	67.920	66.730	66.970
180	66.515	66.515	66.515	66.515	66.515	66.515	66.515	66.515	66.515	66.515

Vert. Horizontal Angles

	<u>300</u>	<u>330</u>	<u>360</u>
0	7387.356	7387.356	7387.356
1	7374.650	7375.120	7389.790
2	7371.340	7369.210	7384.830
3	7366.130	7365.180	7378.910
4	7361.630	7357.850	7371.100
5	7354.300	7347.910	7361.160
6	7347.440	7337.020	7348.140
7	7336.550	7320.930	7332.530
8	7321.170	7303.890	7315.010
9	7303.180	7284.250	7292.060
10	7279.520	7257.510	7268.870
11	7256.330	7231.710	7243.310
12	7228.640	7205.210	7214.680
13	7200.950	7173.740	7182.020
14	7170.190	7138.480	7148.890
15	7133.510	7105.110	7115.990
16	7100.140	7069.370	7081.680
17	7066.300	7034.820	7044.050
18	7029.620	6996.490	7006.430
19	6988.440	6952.230	6962.170
20	6949.390	6910.350	6922.420
21	6908.220	6868.220	6880.290
22	6865.380	6826.340	6836.990
23	6822.080	6780.660	6783.500
24	6772.140	6726.240	6734.750
25	6722.210	6675.590	6682.690
26	6671.100	6622.580	6626.610
27	6614.300	6566.020	6560.350
28	6556.320	6500.000	6498.110
29	6489.350	6436.580	6431.370
30	6425.930	6372.680	6365.820
31	6360.140	6303.580	6294.830
32	6283.230	6224.070	6215.550
33	6209.630	6149.760	6140.770
34	6135.560	6073.090	6063.620
35	6056.760	5991.440	5973.930
36	5967.780	5900.330	5891.580

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CANDELA TABULATION - (Cont.)

37	5884.010	5815.140	5804.490
38	5797.390	5728.060	5717.170
39	5710.070	5636.000	5615.880
40	5620.140	5531.160	5519.810
41	5515.550	5436.270	5421.360
42	5418.760	5338.060	5321.020
43	5320.070	5236.540	5215.950
44	5215.710	5130.520	5112.060
45	5098.810	5011.960	4994.210
46	4991.610	4902.390	4883.460
47	4881.570	4788.800	4770.340
48	4767.980	4675.210	4643.970
49	4642.320	4549.550	4527.540
50	4526.600	4431.940	4407.560
51	4408.980	4311.480	4291.600
52	4289.950	4191.740	4169.730
53	4160.500	4060.400	4049.510
54	4040.280	3939.710	3916.280
55	3919.590	3817.840	3793.460
56	3784.470	3695.490	3672.060
57	3661.890	3560.360	3540.960
58	3540.250	3441.330	3422.870
59	3419.560	3319.930	3304.780
60	3299.580	3204.450	3185.510
61	3167.760	3074.760	3056.070
62	3049.680	2957.860	2940.580
63	2934.900	2844.030	2825.810
64	2819.890	2729.730	2710.800
65	2695.420	2609.280	2588.450
66	2584.430	2498.050	2479.830
67	2475.330	2389.900	2373.100
68	2366.950	2273.000	2267.790
69	2250.760	2167.690	2153.260
70	2145.920	2065.930	2048.190
71	2043.690	1964.890	1949.740
72	1943.590	1856.260	1850.580
73	1834.730	1758.770	1743.860
74	1738.180	1663.630	1649.430
75	1643.520	1570.870	1557.610
76	1552.170	1472.660	1464.610
77	1453.730	1384.390	1373.270
78	1364.750	1296.120	1275.290
79	1277.900	1210.690	1184.180
80	1191.760	1125.020	1096.390
81	1097.100	1032.970	1001.260
82	1013.800	950.140	915.120
83	927.900	857.370	823.060
84	835.130	760.350	727.930
85	731.000	658.830	628.300
86	641.790	575.760	543.580
87	558.730	493.410	460.750
88	476.370	404.670	374.140
89	383.610	354.730	342.900
90	350.000	327.990	314.500
91	323.970	302.670	290.840
92	296.760	279.010	269.780

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CANDELA TABULATION - (Cont.)

93	274.270	259.130	248.240
94	253.210	239.720	228.840
95	233.810	221.740	212.270
96	216.060	205.650	194.760
97	196.180	188.130	179.380
98	179.850	172.990	164.470
99	164.710	160.450	151.220
100	147.900	147.190	138.910
101	133.230	134.890	128.500
102	120.220	122.580	116.670
103	106.960	112.880	106.960
104	95.130	103.650	98.920
105	86.140	93.710	92.060
106	78.800	86.850	82.590
107	71.470	79.750	76.200
108	63.890	72.890	71.230
109	59.400	66.020	63.890
110	55.610	60.820	58.690
111	52.060	54.900	53.960
112	49.460	49.220	48.990
113	45.440	47.090	44.730
114	42.120	42.120	42.830
115	39.050	38.810	38.340
116	38.810	35.970	35.970
117	37.390	35.260	35.260
118	33.840	35.260	33.840
119	32.420	36.680	33.600
120	31.950	35.970	34.310
121	31.710	35.970	35.020
122	32.420	37.390	37.390
123	34.550	37.390	36.680
124	34.550	37.390	38.340
125	35.970	38.340	38.340
126	35.730	38.810	39.280
127	36.440	39.520	39.280
128	37.150	40.700	39.990
129	38.570	42.600	40.940
130	39.050	42.600	42.120
131	39.280	44.490	43.070
132	40.230	43.780	44.490
133	42.360	45.670	44.960
134	42.830	46.380	45.440
135	42.120	46.860	45.670
136	43.310	46.150	45.910
137	44.250	46.150	48.040
138	45.200	47.090	47.330
139	44.490	48.750	48.990
140	45.910	48.750	50.410
141	46.380	49.460	51.830
142	47.570	50.410	52.540
143	48.510	51.590	53.480
144	48.990	53.250	53.480
145	50.170	52.540	54.670
146	50.880	51.830	56.090
147	51.350	51.830	54.900
148	51.120	51.830	55.140

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CANDELA TABULATION - (Cont.)

149	52.060	52.060	56.560
150	53.250	52.770	56.090
151	52.770	53.480	56.090
152	53.480	55.140	57.510
153	55.380	55.610	58.220
154	55.140	56.090	59.160
155	54.900	56.800	60.350
156	55.140	55.850	58.690
157	56.800	56.800	60.110
158	57.270	57.510	62.000
159	57.270	57.740	61.060
160	57.740	60.110	62.000
161	59.160	59.160	62.710
162	59.160	59.870	63.180
163	61.290	61.290	63.420
164	60.110	59.870	64.600
165	60.350	61.060	62.950
166	59.870	60.350	62.000
167	60.110	60.350	62.470
168	60.820	61.770	63.180
169	61.060	60.350	64.840
170	61.530	62.950	65.310
171	62.710	63.420	66.730
172	63.180	63.890	64.600
173	64.130	63.890	65.790
174	65.310	63.890	67.210
175	65.310	65.080	66.020
176	65.080	65.790	66.730
177	64.130	66.020	67.920
178	64.130	66.970	67.680
179	65.080	67.210	69.340
180	66.515	66.515	66.515

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2734.12	11.60	11.60
0-30	5872.05	24.90	24.90
0-40	9727.39	41.30	41.30
0-60	17403.53	73.90	73.90
0-80	22078.82	93.70	93.70
0-90	22974.63	97.50	97.50
10-90	22271.81	94.50	94.50
20-40	6993.27	29.70	29.70
20-50	11031.28	46.80	46.80
40-70	10493.92	44.50	44.50
60-80	4675.29	19.80	19.80
70-80	1857.51	7.90	7.90
80-90	895.81	3.80	3.80
90-110	394.23	1.70	1.70
90-120	436.88	1.90	1.90
90-130	468.50	2.00	2.00
90-150	532.90	2.30	2.30
90-180	582.30	2.50	2.50
110-180	188.07	0.80	0.80
0-180	23556.93	100.00	100.00

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	702.82
10-20	2031.3
20-30	3137.94
30-40	3855.33
40-50	4038.01
50-60	3638.13
60-70	2817.78
70-80	1857.51
80-90	895.81
90-100	282.08
100-110	112.15
110-120	42.65
120-130	31.63
130-140	33.15
140-150	31.25
150-160	26.01
160-170	17.25
170-180	6.14

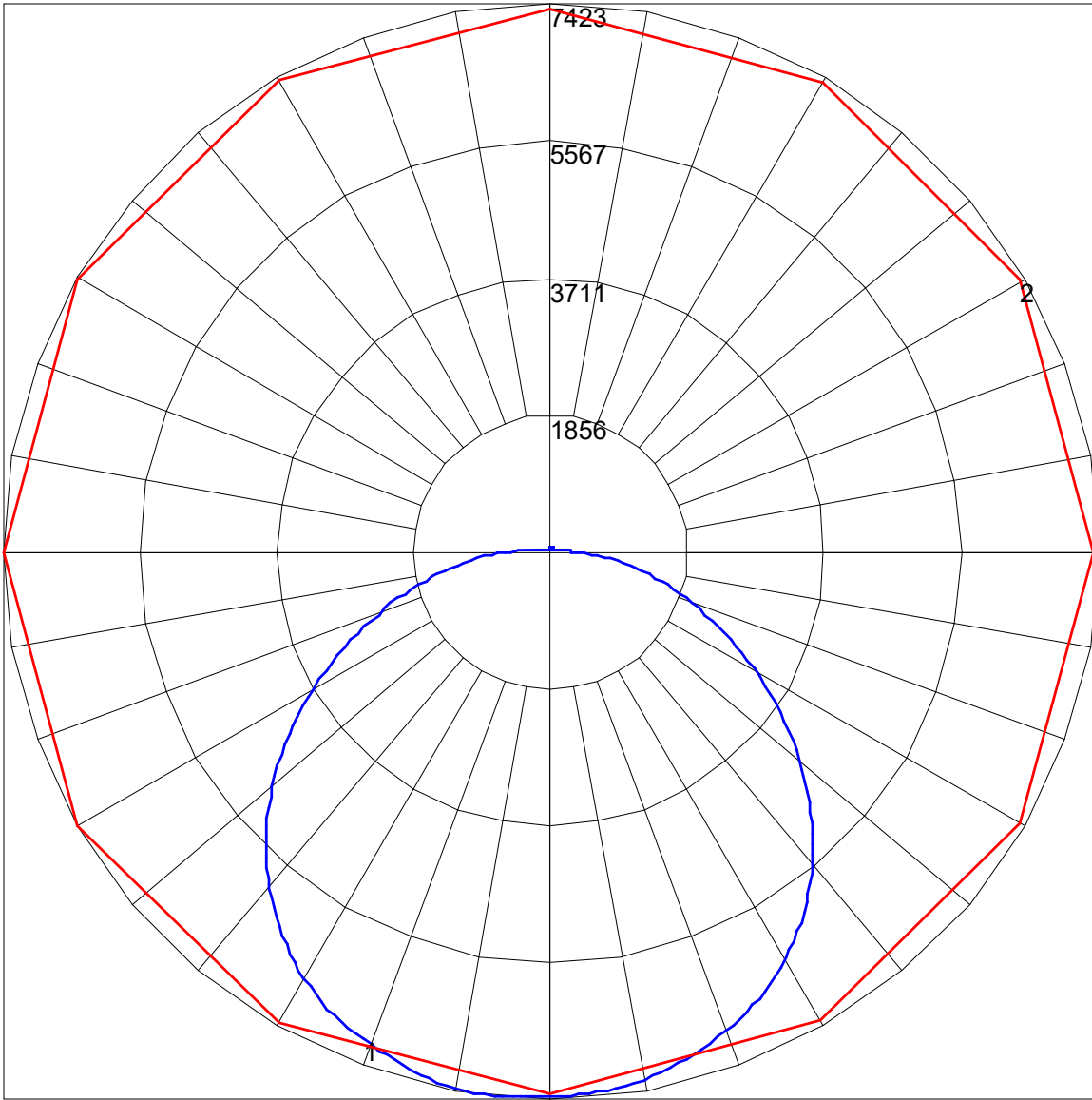
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	98
1	107	102	97	93	104	99	95	91	95	91	88	90	87	85	86	84	82	80
2	97	88	81	75	94	86	80	74	82	77	72	79	74	70	75	71	68	66
3	88	77	69	62	86	76	68	61	72	65	60	69	63	59	66	61	57	55
4	81	68	59	52	78	67	58	52	64	57	51	61	55	50	59	53	49	47
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	53	47	42	40
6	68	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35
7	63	50	41	34	61	49	40	34	47	39	34	45	38	33	44	38	33	31
8	59	45	37	31	57	44	36	30	43	35	30	41	35	30	40	34	29	27
9	55	41	33	27	53	41	33	27	39	32	27	38	32	27	37	31	26	25
10	52	38	30	25	50	38	30	25	36	29	24	35	29	24	34	28	24	22

POLAR GRAPH



Maximum Candela = 7422.69 Located At Horizontal Angle = 180, Vertical Angle = 6
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (6) (Through Max. Cd.)