



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HWL48MFA40.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 4,195
[TESTLAB] TUV SUD America
[ISSUE DATE] 3/29/2016
[MANUFAC] LAMAR LED
[LUMCAT] HWL48MFA40
[LUMINAIRE] 4' WHITE FORMED STEEL HOUSING, 4000K
[MORE] HIGH TRANSMISSION ACRYLIC PATTERNED DIFFUSER
[MORE] MEDIUM OUTPUT
[LAMP] (2) 44 LED
[BALLAST] ONE EVERLINE D10CC30UNVTZ-C DRIVER
[OTHER] 25.4 C, 120 V, 0.288 A, 34.5 W, 0.9981 PF, 60 Hz

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3794
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	34.5
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.69 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.21 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6434	5433	5479
55	5439	4652	4929
65	4362	3962	4368
75	3213	3310	3735
85	1689	2787	3152

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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	1181.948	1181.948	1181.948	1181.948	1181.948
0.5	1181.231	1184.099	1180.513	1180.513	1184.817
1.0	1180.513	1183.382	1180.513	1179.796	1184.817
1.5	1180.513	1183.382	1180.513	1179.796	1184.817
2.0	1179.796	1182.665	1179.796	1179.796	1184.099
2.5	1179.079	1181.948	1179.796	1179.796	1184.099
3.0	1178.362	1181.231	1179.079	1179.079	1183.382
3.5	1176.927	1180.513	1178.362	1178.362	1182.665
4.0	1175.493	1179.796	1177.645	1177.645	1181.948
4.5	1174.776	1178.362	1176.927	1177.645	1181.231
5.0	1172.624	1176.927	1176.210	1176.210	1180.513
5.5	1171.190	1175.493	1174.776	1174.776	1179.796
6.0	1169.755	1173.341	1173.341	1174.059	1178.362
6.5	1167.604	1171.907	1171.907	1172.624	1177.645
7.0	1165.452	1169.755	1170.473	1171.190	1176.210
7.5	1163.300	1167.604	1168.321	1169.755	1174.059
8.0	1160.432	1164.735	1166.169	1168.321	1172.624
8.5	1157.563	1162.583	1164.018	1166.169	1171.190
9.0	1154.694	1159.714	1161.866	1164.018	1169.038
9.5	1151.825	1156.846	1158.997	1161.866	1166.887
10.0	1148.956	1153.977	1156.846	1159.714	1164.735
10.5	1145.370	1151.108	1153.977	1156.846	1161.866
11.0	1141.784	1147.522	1151.108	1153.977	1159.714
11.5	1138.198	1144.653	1147.522	1151.108	1156.846
12.0	1134.612	1141.067	1144.653	1147.522	1153.260
12.5	1130.309	1137.481	1141.067	1144.653	1150.391
13.0	1126.723	1133.895	1137.481	1141.067	1146.805
13.5	1122.420	1129.592	1133.178	1137.481	1143.219
14.0	1118.117	1125.289	1129.592	1133.895	1139.633
14.5	1113.096	1121.703	1126.006	1129.592	1135.330
15.0	1108.076	1116.682	1121.703	1125.289	1131.026
15.5	1103.773	1112.379	1117.400	1121.703	1126.723
16.0	1098.752	1107.359	1113.096	1117.400	1122.420
16.5	1093.732	1103.056	1108.076	1112.379	1117.400
17.0	1087.994	1098.035	1103.773	1108.076	1113.096
17.5	1082.974	1093.015	1099.470	1103.056	1108.793
18.0	1077.236	1087.277	1094.449	1098.035	1103.773
18.5	1071.499	1081.540	1089.429	1093.732	1098.752
19.0	1065.761	1076.519	1084.408	1087.994	1093.732
19.5	1059.306	1070.782	1078.671	1082.974	1088.712
20.0	1052.851	1065.044	1073.650	1077.954	1083.691
20.5	1046.397	1058.589	1067.913	1072.933	1078.671
21.0	1039.942	1052.851	1061.458	1067.196	1073.650
21.5	1034.204	1046.397	1055.720	1061.458	1067.913
22.0	1027.032	1039.942	1049.983	1056.438	1062.892
22.5	1020.577	1033.487	1043.528	1050.700	1057.155
23.0	1013.405	1027.032	1037.790	1044.962	1051.417
23.5	1006.233	1019.860	1031.335	1039.225	1045.679
24.0	999.061	1013.405	1024.881	1032.770	1039.942
24.5	991.889	1006.233	1018.426	1027.032	1034.204
25.0	984.000	999.061	1011.971	1020.577	1027.749
25.5	976.828	991.889	1004.799	1014.123	1022.012
26.0	968.222	984.000	998.344	1007.668	1015.557
26.5	960.333	976.828	991.889	1001.213	1009.102

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CANDELA TABULATION - (Cont.)

27.0	952.443	968.939	984.717	994.758	1003.365
27.5	943.120	961.050	978.263	988.303	996.910
28.0	935.230	953.878	971.091	981.849	990.455
28.5	927.341	945.989	963.919	975.394	983.283
29.0	918.018	938.099	956.747	968.222	977.545
29.5	909.411	929.493	948.857	961.767	971.091
30.0	900.805	921.604	941.685	955.312	964.636
30.5	892.198	912.997	933.796	948.140	958.181
31.0	883.592	905.108	926.624	941.685	951.726
31.5	874.268	897.219	918.735	934.513	945.989
32.0	865.662	888.612	911.563	928.058	939.534
32.5	857.056	880.006	903.674	921.604	933.079
33.0	848.449	871.400	895.784	914.432	927.341
33.5	839.126	862.793	887.895	907.977	920.169
34.0	830.519	854.187	880.723	901.522	914.432
34.5	821.195	844.863	872.834	894.350	907.977
35.0	812.589	836.257	864.945	887.895	901.522
35.5	803.265	827.650	857.056	880.723	895.067
36.0	793.225	818.327	849.166	874.268	888.612
36.5	783.901	809.720	841.277	867.096	882.158
37.0	773.860	800.397	834.105	859.924	875.703
37.5	764.537	791.790	826.216	853.470	869.248
38.0	754.496	782.467	818.327	846.298	862.793
38.5	744.455	773.860	809.720	839.843	856.338
39.0	735.131	764.537	802.548	832.671	849.884
39.5	725.091	755.930	794.659	826.216	844.146
40.0	715.337	746.607	786.770	819.044	837.691
40.5	705.583	738.000	778.881	812.589	831.236
41.0	695.757	728.677	770.991	805.417	824.781
41.5	685.931	720.070	763.102	798.962	818.327
42.0	675.962	711.249	754.496	791.790	811.872
42.5	666.495	702.140	746.607	785.335	806.134
43.0	656.383	693.247	738.717	778.163	799.679
43.5	647.274	684.210	730.828	771.709	793.225
44.0	637.449	675.030	722.939	765.254	787.487
44.5	627.838	665.921	715.265	758.082	781.032
45.0	618.084	656.813	707.519	752.344	774.577
45.5	608.617	647.920	699.558	745.889	768.840
46.0	599.007	638.596	691.812	738.717	763.102
46.5	589.755	629.559	683.995	732.263	756.647
47.0	580.503	620.666	676.177	725.808	750.910
47.5	570.749	611.558	668.503	719.353	744.455
48.0	560.851	602.593	660.686	712.755	738.000
48.5	551.384	593.556	653.012	706.443	732.263
49.0	543.710	584.591	645.481	699.702	726.525
49.5	534.458	575.769	637.520	693.318	720.787
50.0	526.426	567.019	629.990	686.935	714.261
50.5	516.959	558.126	622.100	680.481	708.165
51.0	507.420	550.882	614.355	673.954	701.997
51.5	497.881	542.850	606.752	667.284	696.116
52.0	488.342	535.032	599.078	660.686	689.876
52.5	479.019	526.641	591.548	654.303	683.708
53.0	469.695	518.823	583.874	647.633	677.468
53.5	460.658	510.217	576.343	641.106	671.014
54.0	451.693	501.754	568.812	634.580	664.559
54.5	442.585	493.291	561.927	627.910	658.463

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CANDELA TABULATION - (Cont.)

55.0	433.548	484.756	554.970	621.311	651.649
55.5	424.655	476.293	548.229	614.785	645.194
56.0	415.690	467.902	541.128	607.972	638.739
56.5	406.868	459.511	534.530	601.302	632.069
57.0	398.118	451.191	527.430	594.775	625.615
57.5	389.440	442.944	521.047	587.962	619.160
58.0	380.762	434.767	513.660	581.507	612.490
58.5	372.156	426.591	506.488	574.980	605.892
59.0	363.549	418.487	499.172	568.956	599.365
59.5	355.015	410.526	492.000	562.573	592.623
60.0	346.480	402.565	484.828	556.405	586.097
60.5	338.017	394.819	477.656	550.165	579.140
61.0	329.697	387.074	470.556	543.495	572.685
61.5	321.450	379.471	463.455	536.682	568.023
62.0	313.345	371.869	456.355	530.155	560.923
62.5	305.241	364.410	449.398	523.987	554.253
63.0	297.136	356.879	442.441	517.963	547.440
63.5	289.032	349.492	435.413	511.867	540.483
64.0	281.143	342.177	428.599	505.053	533.669
64.5	273.397	334.861	421.643	498.383	526.713
65.0	265.723	327.618	414.829	491.570	519.756
65.5	258.264	320.374	408.088	484.756	514.592
66.0	250.877	313.274	401.274	477.943	507.635
66.5	243.490	306.102	394.676	471.130	500.463
67.0	236.031	299.001	388.006	464.244	493.363
67.5	228.787	291.973	381.408	457.431	486.262
68.0	221.400	285.016	374.809	450.618	479.162
68.5	214.300	278.131	368.211	443.876	471.990
69.0	207.271	271.317	361.685	437.062	464.746
69.5	200.386	264.576	355.158	430.321	457.646
70.0	193.573	257.906	348.632	423.507	450.402
70.5	186.687	251.379	342.248	416.694	443.302
71.0	179.874	244.853	335.865	409.952	436.202
71.5	173.132	238.469	329.554	403.354	429.102
72.0	166.391	232.230	323.314	396.612	422.073
72.5	159.936	225.990	317.075	390.158	415.116
73.0	153.625	219.966	310.978	383.703	408.303
73.5	147.385	214.013	305.026	377.320	401.561
74.0	141.360	208.132	299.145	371.080	394.891
74.5	135.408	202.394	293.407	364.840	388.221
75.0	129.455	196.728	287.813	358.744	381.623
75.5	123.574	191.134	282.290	352.648	375.168
76.0	117.908	185.612	276.768	346.623	368.785
76.5	112.385	180.233	271.317	340.671	362.474
77.0	107.006	174.925	265.938	334.646	356.090
77.5	101.771	169.618	260.559	328.693	349.779
78.0	96.535	164.383	255.180	322.669	343.468
78.5	91.300	159.290	249.873	316.716	337.228
79.0	86.208	154.198	244.637	310.763	330.988
79.5	81.044	149.178	239.402	304.882	324.749
80.0	76.095	144.301	234.238	299.073	318.653
80.5	71.218	139.496	229.074	293.264	312.556
81.0	66.485	134.834	223.982	287.526	306.460
81.5	61.823	130.172	219.033	281.932	300.364
82.0	57.233	125.654	214.085	276.338	294.339
82.5	52.786	121.207	209.208	270.743	288.315

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CANDELA TABULATION - (Cont.)

83.0	48.268	116.760	204.402	265.221	282.434
83.5	43.821	112.457	199.669	259.770	276.553
84.0	39.446	108.154	194.935	254.320	270.743
84.5	35.215	103.851	190.202	249.012	264.934
85.0	31.127	99.691	185.540	243.777	259.340
85.5	27.110	95.459	180.950	238.541	253.746
86.0	23.094	91.371	176.360	233.306	248.295
86.5	19.078	87.283	171.913	228.213	242.916
87.0	15.133	83.267	167.395	223.193	237.609
87.5	11.260	79.251	163.020	218.316	232.517
88.0	7.387	75.378	158.788	213.367	227.425
88.5	3.658	71.577	154.557	208.634	222.548
89.0	1.865	67.991	150.612	204.115	217.886
89.5	0.072	64.978	147.170	200.027	213.798
90.0	0.000	62.827	144.373	196.513	210.212
90.5	0.000	61.392	142.221	193.573	206.913
91.0	0.000	60.604	140.428	190.991	204.115
91.5	0.000	59.886	138.850	188.696	201.534
92.0	0.000	59.313	137.344	186.472	199.095
92.5	0.000	58.739	135.910	184.392	196.800
93.0	0.000	58.165	134.475	182.313	194.433
93.5	0.000	57.663	133.184	180.304	192.210
94.0	0.000	57.089	131.893	178.368	189.987
94.5	0.000	56.587	130.602	176.432	187.907
95.0	0.000	56.085	129.383	174.567	185.899
95.5	0.000	55.583	128.236	172.774	183.819
96.0	0.000	55.081	127.016	171.053	181.954
96.5	0.000	54.651	125.869	169.331	180.089
97.0	0.000	54.220	124.721	167.682	178.296
97.5	0.000	53.718	123.646	166.032	176.575
98.0	0.000	53.288	122.570	164.454	174.854
98.5	0.000	52.858	121.494	162.876	173.204
99.0	0.000	52.427	120.418	161.370	171.626
99.5	0.000	51.997	119.342	159.792	170.048
100.0	0.000	51.567	118.338	158.358	168.542
100.5	0.000	51.136	117.262	156.924	167.036
101.0	0.000	50.706	116.258	155.489	165.602
101.5	0.000	50.348	115.183	154.127	164.096
102.0	0.000	49.917	114.250	152.764	162.661
102.5	0.000	49.559	113.246	151.401	161.299
103.0	0.000	49.128	112.242	150.110	159.864
103.5	0.000	48.770	111.310	148.819	158.501
104.0	0.000	48.411	110.306	147.528	157.139
104.5	0.000	48.052	109.373	146.237	155.848
105.0	0.000	47.694	108.441	145.018	154.557
105.5	0.000	47.335	107.580	143.799	153.266
106.0	0.000	47.048	106.720	142.580	152.047
106.5	0.000	46.690	105.787	141.432	150.827
107.0	0.000	46.331	104.927	140.285	149.608
107.5	0.000	46.044	104.066	139.137	148.461
108.0	0.000	45.686	103.205	137.990	147.313
108.5	0.000	45.399	102.416	136.914	146.166
109.0	0.000	45.040	101.627	135.766	145.090
109.5	0.000	44.753	100.767	134.690	143.942
110.0	0.000	44.395	99.978	133.615	142.866
110.5	0.000	44.108	99.189	132.539	141.791

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111.0	0.000	43.749	98.400	131.535	140.715
111.5	0.000	43.462	97.611	130.459	139.639
112.0	0.000	43.104	96.822	129.455	138.635
112.5	0.000	42.817	96.033	128.379	137.559
113.0	0.000	42.458	95.244	127.447	136.555
113.5	0.000	42.171	94.455	126.371	135.551
114.0	0.000	41.885	93.738	125.439	134.475
114.5	0.000	41.526	93.021	124.434	133.471
115.0	0.000	41.239	92.232	123.502	132.467
115.5	0.000	40.880	91.515	122.498	131.463
116.0	0.000	40.450	90.798	121.566	130.459
116.5	0.000	40.092	90.009	120.562	129.455
117.0	0.000	39.661	89.292	119.557	128.522
117.5	0.000	39.231	88.574	118.625	127.447
118.0	0.000	38.801	87.857	117.693	126.514
118.5	0.000	38.370	87.140	116.689	125.510
119.0	0.000	37.868	86.351	115.756	124.578
119.5	0.000	37.438	85.634	114.824	123.574
120.0	0.000	36.936	84.917	113.820	122.641
120.5	0.000	36.434	84.199	112.887	121.637
121.0	0.000	36.004	83.482	111.955	120.705
121.5	0.000	35.645	82.765	111.023	119.773
122.0	0.000	35.358	81.976	110.090	118.769
122.5	0.000	34.928	81.187	109.158	117.836
123.0	0.000	34.497	80.470	108.226	116.904
123.5	0.000	34.067	79.609	107.293	115.900
124.0	0.000	33.637	78.820	106.289	114.896
124.5	0.000	33.206	77.960	105.429	113.963
125.0	0.000	32.776	77.099	104.425	112.959
125.5	0.000	32.346	76.167	103.420	111.955
126.0	0.000	31.915	75.234	102.488	111.023
126.5	0.000	31.485	74.302	101.556	109.947
127.0	0.000	31.127	73.298	100.552	108.943
127.5	0.000	30.696	72.294	99.619	107.867
128.0	0.000	30.266	71.362	98.615	106.863
128.5	0.000	29.836	70.357	97.683	105.859
129.0	0.000	29.405	69.353	96.679	104.783
129.5	0.000	28.975	68.349	95.746	103.779
130.0	0.000	28.545	67.345	94.742	102.775
130.5	0.000	28.114	66.341	93.738	101.771
131.0	0.000	27.756	65.337	92.806	100.695
131.5	0.000	27.325	64.261	91.802	99.691
132.0	0.000	26.895	63.185	90.798	98.615
132.5	0.000	26.536	62.181	89.794	97.611
133.0	0.000	26.106	61.177	88.790	96.607
133.5	0.000	25.676	60.101	87.857	95.531
134.0	0.000	25.317	59.097	86.853	94.455
134.5	0.000	24.887	58.093	85.849	93.451
135.0	0.000	24.528	57.089	84.845	92.376
135.5	0.000	24.098	56.085	83.841	91.300
136.0	0.000	23.739	55.009	82.765	90.152
136.5	0.000	23.381	54.077	81.761	89.148
137.0	0.000	23.022	53.073	80.757	88.072
137.5	0.000	22.664	52.284	79.681	86.997
138.0	0.000	22.305	51.567	78.677	85.849
138.5	0.000	21.946	50.850	77.601	84.773

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CANDELA TABULATION - (Cont.)

139.0	0.000	21.588	50.132	76.454	83.697
139.5	0.000	21.301	49.272	75.378	82.622
140.0	0.000	21.014	48.483	74.230	81.474
140.5	0.000	20.655	47.622	73.083	80.398
141.0	0.000	20.369	46.762	71.864	79.251
141.5	0.000	20.082	45.973	70.716	78.175
142.0	0.000	19.723	45.112	69.497	77.027
142.5	0.000	19.436	44.323	68.206	75.952
143.0	0.000	19.149	43.462	66.915	74.876
143.5	0.000	18.862	42.673	65.552	73.800
144.0	0.000	18.576	41.813	64.261	72.652
144.5	0.000	18.217	41.024	62.970	71.505
145.0	0.000	17.930	40.235	61.608	70.429
145.5	0.000	17.643	39.446	60.317	69.282
146.0	0.000	17.356	38.585	59.026	68.134
146.5	0.000	17.069	37.797	57.663	67.058
147.0	0.000	16.711	37.008	56.300	65.911
147.5	0.000	16.424	36.290	55.009	64.763
148.0	0.000	16.137	35.573	53.718	63.687
148.5	0.000	15.850	34.856	52.356	62.540
149.0	0.000	15.563	34.139	51.065	61.392
149.5	0.000	15.205	33.422	49.845	60.317
150.0	0.000	14.918	32.776	48.698	59.169
150.5	0.000	14.631	32.059	47.479	58.022
151.0	0.000	14.272	31.413	46.259	56.946
151.5	0.000	13.985	30.768	45.112	55.798
152.0	0.000	13.627	30.051	43.964	54.651
152.5	0.000	13.340	29.405	42.745	53.503
153.0	0.000	12.981	28.760	41.669	52.356
153.5	0.000	12.694	28.043	40.522	51.136
154.0	0.000	12.336	27.397	39.446	50.061
154.5	0.000	11.977	26.752	38.370	48.913
155.0	0.000	11.690	26.106	37.294	47.694
155.5	0.000	11.332	25.461	36.219	46.475
156.0	0.000	11.045	24.815	35.215	45.255
156.5	0.000	10.686	24.170	34.211	44.036
157.0	0.000	10.399	23.596	33.206	42.817
157.5	0.000	10.113	22.950	32.202	41.598
158.0	0.000	9.754	22.305	31.198	40.378
158.5	0.000	9.467	21.659	30.194	39.087
159.0	0.000	9.180	21.086	29.190	37.868
159.5	0.000	8.822	20.440	28.186	36.649
160.0	0.000	8.535	19.795	27.182	35.430
160.5	0.000	8.248	19.149	26.178	34.282
161.0	0.000	7.889	18.504	25.174	33.206
161.5	0.000	7.602	17.930	24.241	32.202
162.0	0.000	7.315	17.213	23.309	31.198
162.5	0.000	7.029	16.567	22.305	30.051
163.0	0.000	6.742	15.922	21.373	28.975
163.5	0.000	6.383	15.276	20.512	27.827
164.0	0.000	6.096	14.559	19.580	26.680
164.5	0.000	5.809	13.914	18.719	25.461
165.0	0.000	5.451	13.268	17.787	24.313
165.5	0.000	5.164	12.623	16.926	23.166
166.0	0.000	4.805	11.977	16.065	22.090
166.5	0.000	4.518	11.332	15.205	21.014

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CANDELA TABULATION - (Cont.)

167.0	0.000	4.231	10.758	14.344	19.938
167.5	0.000	3.873	10.113	13.483	18.934
168.0	0.000	3.586	9.539	12.623	17.858
168.5	0.000	3.227	8.965	11.834	16.854
169.0	0.000	3.012	8.391	10.973	15.850
169.5	0.000	2.797	7.817	10.184	14.846
170.0	0.000	2.582	7.315	9.395	13.842
170.5	0.000	2.367	6.742	8.606	12.910
171.0	0.000	2.152	6.240	7.961	11.977
171.5	0.000	1.936	5.738	7.244	11.045
172.0	0.000	1.793	5.164	6.527	10.041
172.5	0.000	1.578	4.662	5.881	8.893
173.0	0.000	1.506	4.088	5.164	7.387
173.5	0.000	1.363	3.514	4.518	5.451
174.0	0.000	1.219	2.941	3.729	4.088
174.5	0.000	1.076	2.510	3.012	2.941
175.0	0.000	0.932	2.152	2.438	1.650
175.5	0.000	0.789	1.865	1.865	0.215
176.0	0.000	0.645	1.578	1.506	0.000
176.5	0.000	0.502	1.219	1.219	0.000
177.0	0.000	0.359	0.932	0.861	0.000
177.5	0.000	0.287	0.645	0.502	0.000
178.0	0.000	0.215	0.359	0.215	0.000
178.5	0.000	0.143	0.143	0.000	0.000
179.0	0.000	0.072	0.000	0.000	0.000
179.5	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	427.46	N.A.	11.30
0-30	891.95	N.A.	23.50
0-40	1430.74	N.A.	37.70
0-60	2466.99	N.A.	65.00
0-80	3161.59	N.A.	83.30
0-90	3346.61	N.A.	88.20
10-90	3234.94	N.A.	85.30
20-40	1003.28	N.A.	26.40
20-50	1546.34	N.A.	40.80
40-70	1439.4	N.A.	37.90
60-80	694.60	N.A.	18.30
70-80	291.46	N.A.	7.70
80-90	185.02	N.A.	4.90
90-110	224.58	N.A.	5.90
90-120	304.86	N.A.	8.00
90-130	365.61	N.A.	9.60
90-150	431.52	N.A.	11.40
90-180	447.17	N.A.	11.80
110-180	222.58	N.A.	5.90
0-180	3793.78	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	111.68
10-20	315.78
20-30	464.49
30-40	538.79
40-50	543.06
50-60	493.20
60-70	403.14
70-80	291.46
80-90	185.02
90-100	124.19
100-110	100.39
110-120	80.28
120-130	60.75
130-140	41.37
140-150	24.54
150-160	11.67
160-170	3.66
170-180	0.33

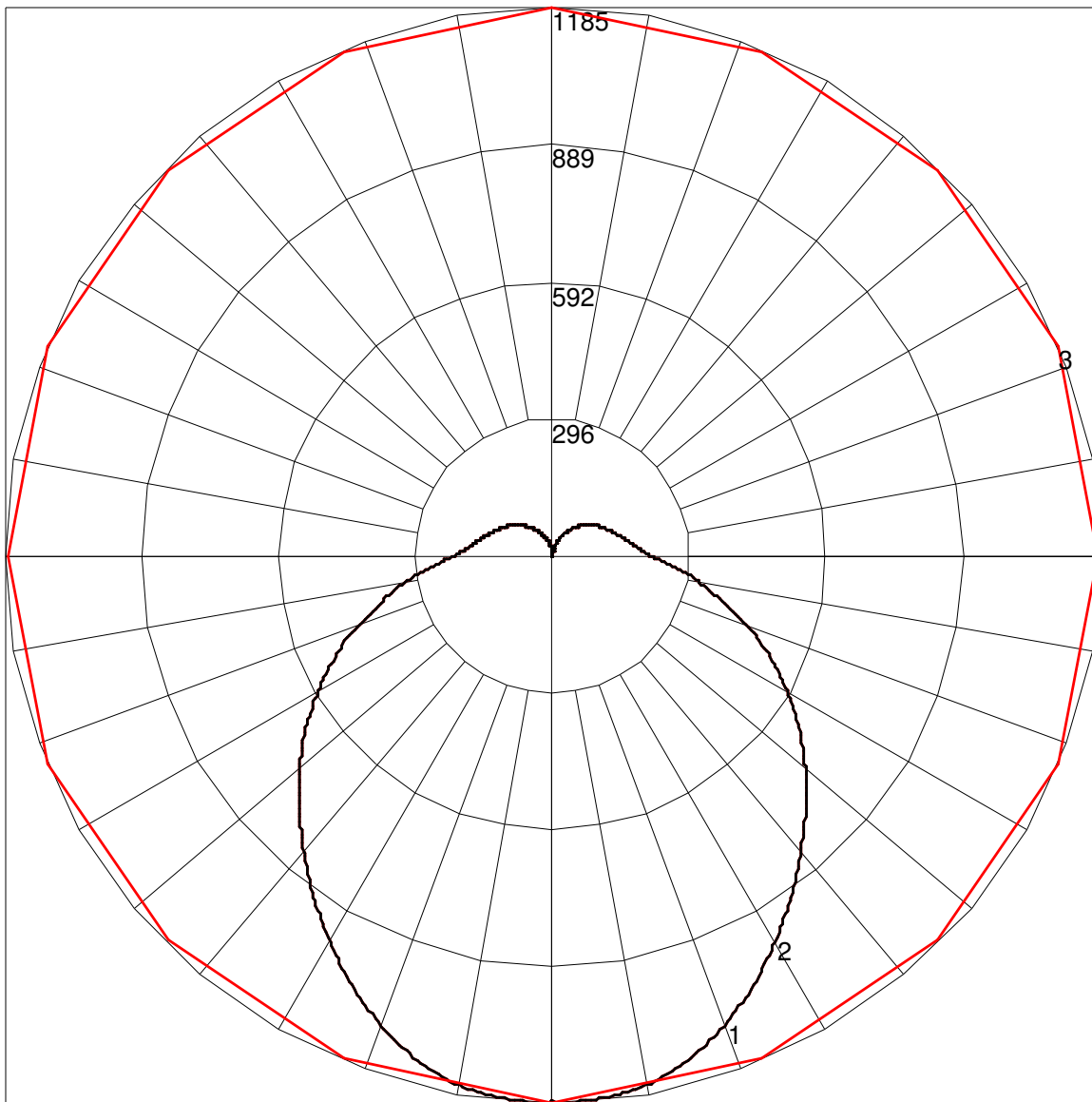
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	91	91	91	88
1	105	99	95	90	101	96	92	88	89	86	83	84	81	78	78	76	74	71
2	95	86	79	73	91	83	77	71	78	72	68	73	68	64	68	64	61	58
3	86	75	67	60	83	73	65	59	68	62	56	64	59	54	60	55	52	49
4	79	67	58	51	76	65	56	50	61	54	48	57	51	46	53	48	44	42
5	73	60	51	44	70	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	54	45	38	64	52	44	38	49	42	36	46	40	35	44	38	34	32
7	62	49	40	34	60	47	39	33	45	37	32	42	36	31	40	34	30	28
8	58	44	36	30	56	43	35	30	41	34	29	39	32	28	37	31	27	25
9	54	41	33	27	52	40	32	27	38	31	26	36	30	25	34	28	24	23
10	51	38	30	25	49	37	29	24	35	28	24	33	27	23	32	26	22	20

POLAR GRAPH



Maximum Candela = 1184.817 Located At Horizontal Angle = 90, Vertical Angle = .5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (90 - 270)
3 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)