

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GENERATED FROM 15746385.01  
[TESTLAB] UL Verification Services Inc.  
[ISSUE DATE] 2025-05-02  
[TEST DATE] 3/20/2025  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] FRM-24-L78-850-DMA-DIM-UNV\_  
[LUMINAIRE] Recessed 2 x 4 narrow aperture LED luminaire  
[MORE] with center frame driver housing  
[LAMP] LED  
[ \_SEARCH\_SOURCETYPE] LED  
[ \_SEARCH\_APPLICATION] INDOOR  
[ \_SEARCH\_MOUNTING] RECESSED  
[FILEGENINFO] 1.10000

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8338
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	85.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.06
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.06
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.88 ft
Luminous Width (90-270)	1.90 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4453	3437	3654
55	3950	2976	3214
65	3412	2553	2764
75	2755	2118	2302
85	2030	1520	1793

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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	4468.469	4468.469	4468.469	4468.469	4468.469
0.5	4416.522	4464.229	4479.070	4475.890	4486.491
1.0	4414.402	4462.108	4476.950	4473.770	4483.311
1.5	4412.282	4458.928	4473.770	4468.469	4479.070
2.0	4408.041	4454.687	4468.469	4462.108	4471.649
2.5	4402.741	4448.326	4461.048	4453.627	4463.168
3.0	4397.440	4441.966	4452.567	4444.086	4453.627
3.5	4388.959	4433.485	4443.026	4432.424	4441.966
4.0	4380.478	4423.943	4431.364	4419.703	4428.184
4.5	4370.937	4413.342	4418.643	4404.861	4412.282
5.0	4360.335	4401.681	4404.861	4388.959	4396.380
5.5	4348.674	4387.899	4388.959	4370.937	4378.358
6.0	4335.952	4373.057	4370.937	4352.914	4357.155
6.5	4321.110	4359.275	4351.854	4331.712	4337.012
7.0	4306.268	4343.373	4332.772	4310.509	4313.689
7.5	4291.427	4325.351	4311.569	4288.246	4289.306
8.0	4274.464	4306.268	4290.366	4263.863	4264.923
8.5	4256.442	4287.186	4265.983	4237.360	4238.420
9.0	4238.420	4267.043	4242.660	4210.856	4210.856
9.5	4220.397	4245.841	4218.277	4184.353	4183.293
10.0	4200.255	4223.578	4191.774	4155.729	4153.609
10.5	4180.112	4201.315	4165.270	4126.045	4121.805
11.0	4158.910	4176.932	4136.647	4095.302	4091.061
11.5	4137.707	4152.549	4108.023	4063.497	4059.257
12.0	4115.444	4127.106	4078.339	4030.633	4026.393
12.5	4092.121	4100.602	4047.595	3996.709	3993.529
13.0	4068.798	4074.099	4016.852	3962.785	3959.604
13.5	4044.415	4046.535	3985.047	3928.860	3926.740
14.0	4020.032	4017.912	3952.183	3892.816	3890.695
14.5	3994.589	3990.348	3918.259	3856.771	3853.591
15.0	3969.145	3961.725	3884.335	3818.606	3817.546
15.5	3943.702	3930.981	3849.350	3781.502	3780.441
16.0	3917.199	3901.297	3814.366	3744.397	3742.277
16.5	3890.695	3870.553	3777.261	3705.172	3704.112
17.0	3864.192	3838.749	3740.156	3667.007	3664.887
17.5	3836.629	3805.885	3703.052	3627.782	3625.662
18.0	3808.005	3773.020	3664.887	3587.497	3585.377
18.5	3778.321	3740.156	3625.662	3547.212	3545.091
19.0	3749.698	3707.292	3587.497	3506.927	3504.806
19.5	3720.014	3673.368	3548.272	3466.641	3465.581
20.0	3690.330	3639.443	3507.987	3424.236	3424.236
20.5	3660.646	3604.459	3467.702	3383.951	3383.951
21.0	3629.902	3569.475	3426.356	3341.546	3343.666
21.5	3598.098	3534.490	3385.011	3300.200	3302.321
22.0	3566.294	3499.506	3343.666	3258.855	3262.035
22.5	3535.550	3464.521	3302.321	3216.450	3220.690
23.0	3504.806	3428.477	3260.975	3175.104	3180.405
23.5	3474.062	3391.372	3218.570	3132.699	3140.120
24.0	3443.319	3356.387	3177.225	3090.294	3099.835
24.5	3411.514	3319.283	3135.879	3050.008	3060.610
25.0	3379.710	3283.238	3094.534	3008.663	3021.385
25.5	3348.966	3247.194	3052.129	2968.378	2982.160
26.0	3317.162	3211.149	3011.844	2927.033	2943.995
26.5	3286.419	3174.044	2969.438	2885.687	2905.830

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION - (Cont.)**

27.0	3254.614	3138.000	2928.093	2845.402	2868.725
27.5	3223.871	3101.955	2886.748	2806.177	2830.560
28.0	3193.127	3065.910	2846.462	2766.952	2793.456
28.5	3161.323	3029.866	2806.177	2727.727	2758.471
29.0	3129.519	2993.821	2765.892	2689.563	2721.367
29.5	3098.775	2958.837	2726.667	2651.398	2685.322
30.0	3068.031	2922.792	2686.382	2613.233	2651.398
30.5	3038.347	2886.748	2647.157	2576.128	2616.413
31.0	3008.663	2851.763	2606.872	2539.023	2582.489
31.5	2976.859	2816.779	2568.707	2502.979	2548.565
32.0	2946.115	2780.734	2529.482	2466.934	2514.640
32.5	2915.371	2745.750	2490.257	2430.890	2481.776
33.0	2883.567	2711.825	2452.092	2394.845	2448.912
33.5	2853.883	2676.841	2413.927	2359.861	2417.108
34.0	2822.079	2641.856	2375.763	2325.936	2385.304
34.5	2791.335	2607.932	2339.718	2290.952	2353.500
35.0	2760.592	2572.948	2302.613	2258.088	2322.756
35.5	2730.908	2537.963	2265.509	2224.163	2292.012
36.0	2700.164	2504.039	2228.404	2191.299	2261.268
36.5	2669.420	2470.115	2193.419	2158.435	2231.584
37.0	2638.676	2436.190	2158.435	2125.571	2201.900
37.5	2607.932	2403.326	2123.450	2093.767	2172.217
38.0	2578.248	2370.462	2089.526	2063.023	2142.533
38.5	2547.504	2336.538	2055.602	2032.279	2113.909
39.0	2515.700	2302.613	2021.677	2002.595	2085.286
39.5	2486.017	2270.809	1988.813	1971.851	2057.722
40.0	2455.273	2237.945	1957.009	1943.227	2030.159
40.5	2425.589	2206.141	1925.205	1913.544	2002.595
41.0	2393.785	2173.277	1894.461	1884.920	1975.032
41.5	2364.101	2142.533	1863.717	1857.357	1948.528
42.0	2333.357	2110.729	1832.973	1829.793	1920.965
42.5	2303.673	2079.985	1803.290	1802.230	1894.461
43.0	2272.929	2048.181	1773.606	1773.606	1869.018
43.5	2242.186	2017.437	1744.982	1747.102	1842.515
44.0	2211.442	1986.693	1716.359	1720.599	1817.071
44.5	2181.758	1955.949	1688.795	1694.096	1791.628
45.0	2151.014	1926.265	1660.171	1667.592	1765.125
45.5	2120.270	1895.521	1632.608	1642.149	1739.682
46.0	2090.586	1864.777	1606.105	1615.646	1714.238
46.5	2060.902	1835.094	1579.601	1590.203	1688.795
47.0	2031.219	1805.410	1553.098	1564.759	1662.292
47.5	2000.475	1775.726	1526.594	1540.376	1636.848
48.0	1969.731	1746.042	1501.151	1514.933	1611.405
48.5	1938.987	1716.359	1474.648	1489.490	1585.962
49.0	1910.363	1687.735	1450.265	1464.046	1560.519
49.5	1878.559	1658.051	1424.821	1439.663	1536.136
50.0	1848.875	1629.428	1399.378	1414.220	1510.692
50.5	1819.192	1600.804	1374.995	1389.837	1486.309
51.0	1788.448	1572.180	1350.612	1365.454	1460.866
51.5	1758.764	1542.496	1327.289	1340.011	1434.363
52.0	1726.960	1513.873	1302.906	1315.628	1409.980
52.5	1697.276	1485.249	1279.583	1291.244	1384.536
53.0	1667.592	1457.686	1257.320	1267.921	1359.093
53.5	1637.909	1429.062	1233.997	1243.538	1333.650
54.0	1607.165	1401.498	1210.674	1219.155	1308.207
54.5	1577.481	1374.995	1188.411	1195.832	1282.763

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55.0	1547.797	1347.432	1166.149	1172.509	1259.440
55.5	1518.113	1319.868	1143.886	1149.186	1235.057
56.0	1488.430	1293.365	1121.623	1125.863	1209.614
56.5	1459.806	1266.861	1099.360	1103.601	1185.231
57.0	1431.182	1240.358	1078.157	1080.278	1160.848
57.5	1401.498	1213.855	1056.849	1057.379	1136.465
58.0	1372.875	1188.411	1035.222	1034.904	1113.142
58.5	1344.251	1161.908	1014.125	1012.111	1089.819
59.0	1315.628	1136.465	992.604	989.742	1065.436
59.5	1288.064	1111.021	971.508	967.691	1041.477
60.0	1259.440	1085.578	950.199	945.640	1018.472
60.5	1231.877	1060.135	928.890	923.802	995.997
61.0	1204.313	1035.116	908.006	901.751	972.992
61.5	1175.690	1010.415	886.273	880.124	950.517
62.0	1149.186	985.820	865.282	858.497	928.572
62.5	1121.623	961.754	843.867	837.189	906.097
63.0	1094.059	937.583	822.665	816.198	883.411
63.5	1068.616	914.154	801.568	795.419	862.208
64.0	1041.053	890.301	779.835	774.641	840.369
64.5	1013.489	866.766	758.527	754.180	818.954
65.0	985.183	843.867	737.112	734.356	797.964
65.5	958.256	820.438	716.121	714.849	776.973
66.0	931.541	797.009	695.449	695.131	754.180
66.5	905.567	774.217	674.988	676.260	733.189
67.0	879.594	751.106	654.845	657.602	712.517
67.5	853.091	728.525	634.915	638.837	692.162
68.0	825.527	706.262	615.726	620.391	671.596
68.5	798.600	684.741	597.174	601.945	651.983
69.0	773.050	662.796	578.834	583.604	631.734
69.5	748.137	641.488	560.811	565.582	611.698
70.0	722.906	620.709	543.001	547.878	591.873
70.5	698.523	599.718	525.403	530.492	572.791
71.0	673.504	579.046	508.123	513.105	553.496
71.5	649.651	558.691	491.055	495.931	534.732
72.0	625.374	538.655	473.986	478.863	516.074
72.5	601.733	518.406	456.918	462.007	497.521
73.0	578.092	498.475	440.274	445.045	479.287
73.5	555.087	478.651	423.524	428.295	460.947
74.0	532.400	458.932	406.880	411.438	442.712
74.5	509.607	439.426	390.448	394.900	424.796
75.0	487.238	420.025	374.440	378.362	406.986
75.5	464.869	400.837	358.432	362.248	388.964
76.0	442.924	381.755	342.106	345.922	371.577
76.5	421.298	362.672	326.310	329.808	353.873
77.0	400.201	343.378	310.726	313.800	336.487
77.5	379.104	324.825	294.930	298.322	319.207
78.0	358.220	307.121	279.240	282.738	302.138
78.5	337.547	289.311	263.974	267.472	285.176
79.0	317.510	272.031	248.708	252.312	268.638
79.5	298.322	255.068	233.654	237.152	252.206
80.0	279.240	238.848	218.600	221.992	235.880
80.5	260.581	222.734	203.652	207.044	220.826
81.0	242.347	206.938	188.916	192.839	206.302
81.5	224.643	191.884	174.286	179.587	192.945
82.0	207.680	177.149	160.186	166.865	179.799
82.5	191.460	163.049	146.193	154.992	166.759

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION - (Cont.)**

83.0	176.088	149.267	133.047	143.648	154.038
83.5	161.247	136.121	120.961	132.199	141.740
84.0	147.465	123.612	109.936	120.855	129.655
84.5	133.789	111.420	99.971	109.724	117.993
85.0	120.855	99.759	90.536	98.805	106.756
85.5	108.452	88.627	81.736	88.309	95.836
86.0	96.154	77.814	73.361	78.450	86.083
86.5	84.175	67.743	65.410	69.651	77.284
87.0	72.195	58.731	57.989	62.124	69.121
87.5	60.216	50.568	51.417	55.763	62.018
88.0	48.448	42.829	45.268	49.932	55.657
88.5	37.953	35.409	38.907	44.102	49.508
89.0	28.306	27.351	31.168	35.727	39.543
89.5	17.492	17.386	20.885	26.821	31.168
90.0	0.000	0.000	0.000	0.000	0.000
90.5	0.000	0.000	0.000	0.000	0.000
91.0	0.000	0.000	0.000	0.000	0.000
91.5	0.000	0.000	0.000	0.000	0.000
92.0	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000
93.0	0.000	0.000	0.000	0.000	0.000
93.5	0.000	0.000	0.000	0.000	0.000
94.0	0.000	0.000	0.000	0.000	0.000
94.5	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000
95.5	0.000	0.000	0.000	0.000	0.000
96.0	0.000	0.000	0.000	0.000	0.000
96.5	0.000	0.000	0.000	0.000	0.000
97.0	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000
98.0	0.000	0.000	0.000	0.000	0.000
98.5	0.000	0.000	0.000	0.000	0.000
99.0	0.000	0.000	0.000	0.000	0.000
99.5	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000
100.5	0.000	0.000	0.000	0.000	0.000
101.0	0.000	0.000	0.000	0.000	0.000
101.5	0.000	0.000	0.000	0.000	0.000
102.0	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000
103.0	0.000	0.000	0.000	0.000	0.000
103.5	0.000	0.000	0.000	0.000	0.000
104.0	0.000	0.000	0.000	0.000	0.000
104.5	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000
105.5	0.000	0.000	0.000	0.000	0.000
106.0	0.000	0.000	0.000	0.000	0.000
106.5	0.000	0.000	0.000	0.000	0.000
107.0	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000
108.0	0.000	0.000	0.000	0.000	0.000
108.5	0.000	0.000	0.000	0.000	0.000
109.0	0.000	0.000	0.000	0.000	0.000
109.5	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000
110.5	0.000	0.000	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

111.0	0.000	0.000	0.000	0.000	0.000
111.5	0.000	0.000	0.000	0.000	0.000
112.0	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000
113.0	0.000	0.000	0.000	0.000	0.000
113.5	0.000	0.000	0.000	0.000	0.000
114.0	0.000	0.000	0.000	0.000	0.000
114.5	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000
115.5	0.000	0.000	0.000	0.000	0.000
116.0	0.000	0.000	0.000	0.000	0.000
116.5	0.000	0.000	0.000	0.000	0.000
117.0	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000
118.0	0.000	0.000	0.000	0.000	0.000
118.5	0.000	0.000	0.000	0.000	0.000
119.0	0.000	0.000	0.000	0.000	0.000
119.5	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000
120.5	0.000	0.000	0.000	0.000	0.000
121.0	0.000	0.000	0.000	0.000	0.000
121.5	0.000	0.000	0.000	0.000	0.000
122.0	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000
123.0	0.000	0.000	0.000	0.000	0.000
123.5	0.000	0.000	0.000	0.000	0.000
124.0	0.000	0.000	0.000	0.000	0.000
124.5	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000
125.5	0.000	0.000	0.000	0.000	0.000
126.0	0.000	0.000	0.000	0.000	0.000
126.5	0.000	0.000	0.000	0.000	0.000
127.0	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000
128.0	0.000	0.000	0.000	0.000	0.000
128.5	0.000	0.000	0.000	0.000	0.000
129.0	0.000	0.000	0.000	0.000	0.000
129.5	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000
130.5	0.000	0.000	0.000	0.000	0.000
131.0	0.000	0.000	0.000	0.000	0.000
131.5	0.000	0.000	0.000	0.000	0.000
132.0	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000
133.0	0.000	0.000	0.000	0.000	0.000
133.5	0.000	0.000	0.000	0.000	0.000
134.0	0.000	0.000	0.000	0.000	0.000
134.5	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000
135.5	0.000	0.000	0.000	0.000	0.000
136.0	0.000	0.000	0.000	0.000	0.000
136.5	0.000	0.000	0.000	0.000	0.000
137.0	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000
138.0	0.000	0.000	0.000	0.000	0.000
138.5	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES

CANDELA TABULATION - (Cont.)

139.0	0.000	0.000	0.000	0.000	0.000
139.5	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000
140.5	0.000	0.000	0.000	0.000	0.000
141.0	0.000	0.000	0.000	0.000	0.000
141.5	0.000	0.000	0.000	0.000	0.000
142.0	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000
143.0	0.000	0.000	0.000	0.000	0.000
143.5	0.000	0.000	0.000	0.000	0.000
144.0	0.000	0.000	0.000	0.000	0.000
144.5	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000
145.5	0.000	0.000	0.000	0.000	0.000
146.0	0.000	0.000	0.000	0.000	0.000
146.5	0.000	0.000	0.000	0.000	0.000
147.0	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000
148.0	0.000	0.000	0.000	0.000	0.000
148.5	0.000	0.000	0.000	0.000	0.000
149.0	0.000	0.000	0.000	0.000	0.000
149.5	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000
150.5	0.000	0.000	0.000	0.000	0.000
151.0	0.000	0.000	0.000	0.000	0.000
151.5	0.000	0.000	0.000	0.000	0.000
152.0	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000
153.0	0.000	0.000	0.000	0.000	0.000
153.5	0.000	0.000	0.000	0.000	0.000
154.0	0.000	0.000	0.000	0.000	0.000
154.5	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
155.5	0.000	0.000	0.000	0.000	0.000
156.0	0.000	0.000	0.000	0.000	0.000
156.5	0.000	0.000	0.000	0.000	0.000
157.0	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000
158.0	0.000	0.000	0.000	0.000	0.000
158.5	0.000	0.000	0.000	0.000	0.000
159.0	0.000	0.000	0.000	0.000	0.000
159.5	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000
160.5	0.000	0.000	0.000	0.000	0.000
161.0	0.000	0.000	0.000	0.000	0.000
161.5	0.000	0.000	0.000	0.000	0.000
162.0	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000
163.0	0.000	0.000	0.000	0.000	0.000
163.5	0.000	0.000	0.000	0.000	0.000
164.0	0.000	0.000	0.000	0.000	0.000
164.5	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000
165.5	0.000	0.000	0.000	0.000	0.000
166.0	0.000	0.000	0.000	0.000	0.000
166.5	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES

CANDELA TABULATION - (Cont.)

167.0	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000
168.0	0.000	0.000	0.000	0.000	0.000
168.5	0.000	0.000	0.000	0.000	0.000
169.0	0.000	0.000	0.000	0.000	0.000
169.5	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000
170.5	0.000	0.000	0.000	0.000	0.000
171.0	0.000	0.000	0.000	0.000	0.000
171.5	0.000	0.000	0.000	0.000	0.000
172.0	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000
173.0	0.000	0.000	0.000	0.000	0.000
173.5	0.000	0.000	0.000	0.000	0.000
174.0	0.000	0.000	0.000	0.000	0.000
174.5	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000
175.5	0.000	0.000	0.000	0.000	0.000
176.0	0.000	0.000	0.000	0.000	0.000
176.5	0.000	0.000	0.000	0.000	0.000
177.0	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000
178.0	0.000	0.000	0.000	0.000	0.000
178.5	0.000	0.000	0.000	0.000	0.000
179.0	0.000	0.000	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



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1502.32	N.A.	18.00
0-30	2948.56	N.A.	35.40
0-40	4462.09	N.A.	53.50
0-60	6994.11	N.A.	83.90
0-80	8219.72	N.A.	98.60
0-90	8338.47	N.A.	100.00
10-90	7925.76	N.A.	95.10
20-40	2959.77	N.A.	35.50
20-50	4352.38	N.A.	52.20
40-70	3327.92	N.A.	39.90
60-80	1225.61	N.A.	14.70
70-80	429.71	N.A.	5.20
80-90	118.75	N.A.	1.40
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	8338.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	412.71
10-20	1089.61
20-30	1446.24
30-40	1513.53
40-50	1392.61
50-60	1139.41
60-70	795.90
70-80	429.71
80-90	118.75
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	102	98	107	103	100	96	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	93	83	75	69	90	81	74	69	78	72	68	76	71	66	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	69	56	48	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	57	44	37	32	55	44	36	31	43	36	31	42	36	31	41	35	31	29

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-24-L78-850-DMA-DIM-UNV\_.IES\_.IES

## UGR TABLE - CORRECTED

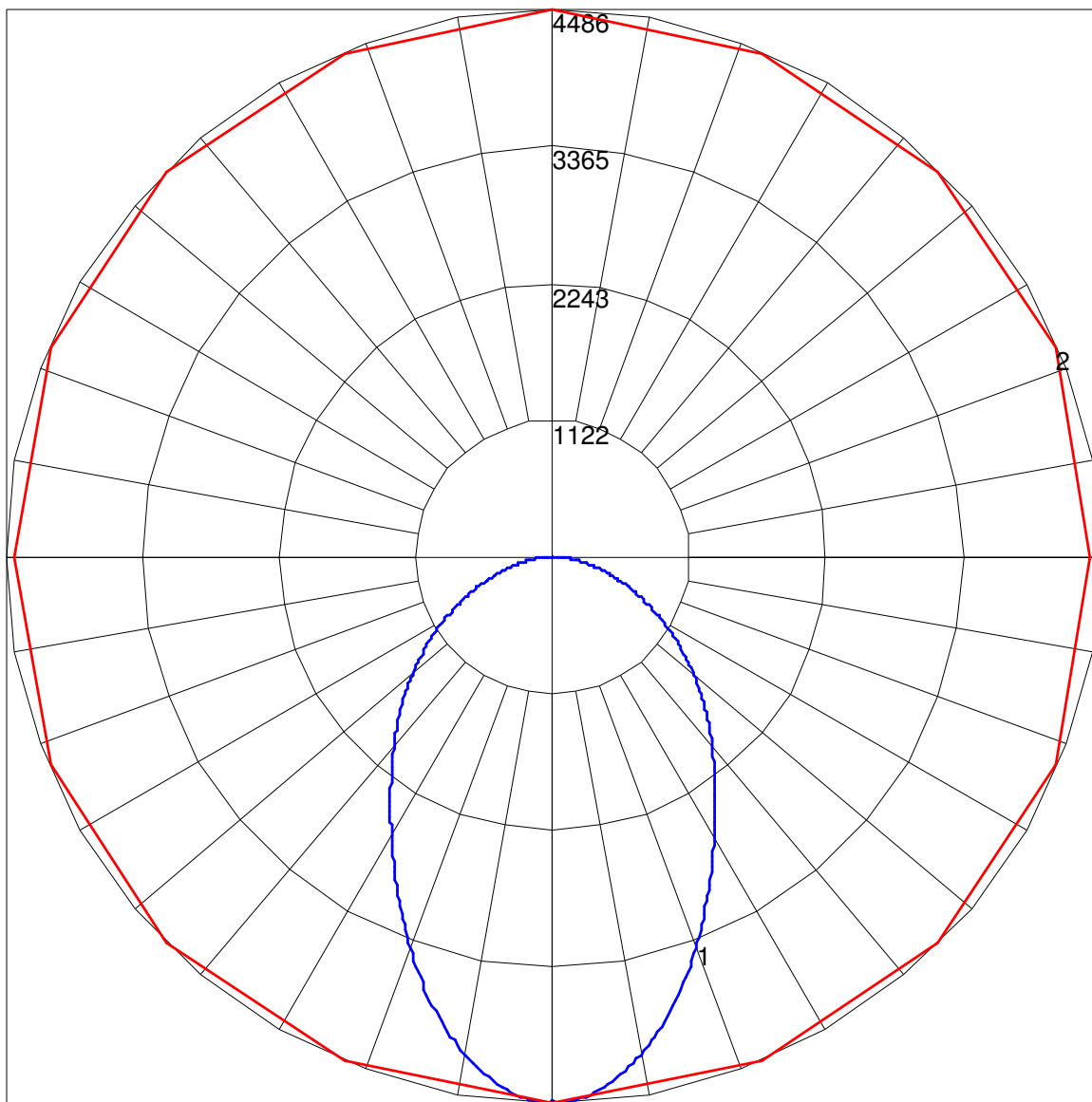
### Reflectances

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	16.2	17.8	16.6	18.1	18.4	15.2	16.7	15.5	17.0	17.3
	3H	17.9	19.3	18.3	19.6	20.0	16.8	18.2	17.2	18.5	18.9
	4H	18.5	19.8	18.9	20.2	20.5	17.4	18.7	17.8	19.1	19.4
	6H	18.9	20.1	19.4	20.5	20.9	17.8	19.0	18.3	19.4	19.8
	8H	19.1	20.2	19.5	20.6	21.0	18.0	19.1	18.4	19.5	19.9
	12H	19.2	20.2	19.6	20.6	21.1	18.1	19.2	18.5	19.6	20.0
4H	2H	16.6	17.9	17.0	18.2	18.6	15.7	17.0	16.1	17.3	17.7
	3H	18.5	19.5	18.9	19.9	20.3	17.5	18.6	17.9	19.0	19.4
	4H	19.2	20.2	19.6	20.6	21.0	18.2	19.2	18.7	19.6	20.1
	6H	19.7	20.6	20.2	21.0	21.5	18.8	19.7	19.3	20.1	20.6
	8H	19.9	20.7	20.4	21.1	21.6	19.0	19.8	19.4	20.2	20.7
	12H	20.0	20.7	20.5	21.2	21.7	19.1	19.8	19.6	20.3	20.8
8H	4H	19.4	20.1	19.8	20.6	21.1	18.5	19.3	19.0	19.7	20.2
	6H	20.0	20.6	20.5	21.1	21.6	19.2	19.8	19.7	20.3	20.8
	8H	20.2	20.8	20.7	21.3	21.8	19.4	20.0	19.9	20.5	21.0
	12H	20.4	20.9	20.9	21.4	22.0	19.6	20.1	20.1	20.6	21.2
12H	4H	19.4	20.1	19.8	20.5	21.0	18.5	19.2	19.0	19.7	20.2
	6H	20.0	20.6	20.5	21.1	21.6	19.2	19.8	19.7	20.3	20.8
	8H	20.3	20.8	20.8	21.3	21.9	19.5	20.0	20.0	20.5	21.1

Maximum UGR = 22.0

POLAR GRAPH



Maximum Candela = 4486.491 Located At Horizontal Angle = 90, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)