

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-24-L78-840-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-L78-840-DMA-DIM-UNV\_  
[LUMINAIRE] Recessed 2 x 4 narrow aperture LED luminaire  
[MORE] with center frame driver housing  
[LAMP] LED  
[ \_SEARCH\_SOURCE TYPE] LED  
[ \_SEARCH\_APPLICATION] INDOOR  
[ \_SEARCH\_MOUNTING] RECESSED  
[FILE GEN INFO] 1.10000

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8102
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
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	4327	3339	3550
55	3838	2892	3123
65	3316	2481	2685
75	2677	2058	2236
85	1972	1477	1742

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L78-840-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0.0</b>	4342.002	4342.002	4342.002	4342.002	4342.002
<b>0.5</b>	4291.526	4337.882	4352.303	4349.213	4359.514
<b>1.0</b>	4289.465	4335.821	4350.243	4347.153	4356.424
<b>1.5</b>	4287.405	4332.731	4347.153	4342.002	4352.303
<b>2.0</b>	4283.285	4328.610	4342.002	4335.821	4345.092
<b>2.5</b>	4278.134	4322.430	4334.791	4327.580	4336.851
<b>3.0</b>	4272.983	4316.249	4326.550	4318.309	4327.580
<b>3.5</b>	4264.742	4308.008	4317.279	4306.978	4316.249
<b>4.0</b>	4256.501	4298.737	4305.948	4294.616	4302.857
<b>4.5</b>	4247.230	4288.435	4293.586	4280.194	4287.405
<b>5.0</b>	4236.929	4277.104	4280.194	4264.742	4271.953
<b>5.5</b>	4225.597	4263.712	4264.742	4247.230	4254.441
<b>6.0</b>	4213.236	4249.290	4247.230	4229.718	4233.838
<b>6.5</b>	4198.814	4235.899	4228.688	4209.115	4214.266
<b>7.0</b>	4184.392	4220.447	4210.145	4188.513	4191.603
<b>7.5</b>	4169.970	4202.934	4189.543	4166.880	4167.910
<b>8.0</b>	4153.488	4184.392	4168.940	4143.187	4144.217
<b>8.5</b>	4135.976	4165.850	4145.247	4117.434	4118.464
<b>9.0</b>	4118.464	4146.277	4122.584	4091.680	4091.680
<b>9.5</b>	4100.951	4125.675	4098.891	4065.927	4064.897
<b>10.0</b>	4081.379	4104.042	4073.138	4038.113	4036.053
<b>10.5</b>	4061.806	4082.409	4047.385	4009.270	4005.149
<b>11.0</b>	4041.204	4058.716	4019.571	3979.396	3975.275
<b>11.5</b>	4020.601	4035.023	3991.758	3948.492	3944.372
<b>12.0</b>	3998.968	4010.300	3962.914	3916.558	3912.437
<b>12.5</b>	3976.306	3984.547	3933.040	3883.594	3880.503
<b>13.0</b>	3953.643	3958.793	3903.166	3850.630	3847.539
<b>13.5</b>	3929.950	3932.010	3872.262	3817.665	3815.605
<b>14.0</b>	3906.257	3904.196	3840.328	3782.641	3780.581
<b>14.5</b>	3881.534	3877.413	3807.364	3747.617	3744.526
<b>15.0</b>	3856.810	3849.599	3774.400	3710.532	3709.502
<b>15.5</b>	3832.087	3819.726	3740.406	3674.477	3673.447
<b>16.0</b>	3806.334	3790.882	3706.411	3638.423	3636.362
<b>16.5</b>	3780.581	3761.008	3670.357	3600.308	3599.278
<b>17.0</b>	3754.827	3730.104	3634.302	3563.223	3561.163
<b>17.5</b>	3728.044	3698.170	3598.248	3525.108	3523.048
<b>18.0</b>	3700.230	3666.236	3561.163	3485.963	3483.903
<b>18.5</b>	3671.387	3634.302	3523.048	3446.818	3444.758
<b>19.0</b>	3643.573	3602.368	3485.963	3407.673	3405.613
<b>19.5</b>	3614.730	3569.404	3447.848	3368.528	3367.498
<b>20.0</b>	3585.886	3536.440	3408.703	3327.323	3327.323
<b>20.5</b>	3557.042	3502.445	3369.558	3288.178	3288.178
<b>21.0</b>	3527.168	3468.451	3329.383	3246.973	3249.033
<b>21.5</b>	3496.265	3434.457	3289.208	3206.798	3208.858
<b>22.0</b>	3465.361	3400.462	3249.033	3166.623	3169.713
<b>22.5</b>	3435.487	3366.468	3208.858	3125.417	3129.538
<b>23.0</b>	3405.613	3331.444	3168.683	3085.242	3090.393
<b>23.5</b>	3375.739	3295.389	3127.478	3044.037	3051.248
<b>24.0</b>	3345.865	3261.395	3087.303	3002.832	3012.103
<b>24.5</b>	3314.962	3225.340	3047.127	2963.687	2973.988
<b>25.0</b>	3284.058	3190.316	3006.952	2923.512	2935.873
<b>25.5</b>	3254.184	3155.291	2965.747	2884.367	2897.758
<b>26.0</b>	3223.280	3120.267	2926.602	2844.192	2860.674
<b>26.5</b>	3193.406	3084.212	2885.397	2804.017	2823.589

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L78-840-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION - (Cont.)**

27.0	3162.502	3049.188	2845.222	2764.872	2787.534
27.5	3132.628	3014.163	2805.047	2726.757	2750.450
28.0	3102.755	2979.139	2765.902	2688.642	2714.395
28.5	3071.851	2944.114	2726.757	2650.527	2680.401
29.0	3040.947	2909.090	2687.612	2613.442	2644.346
29.5	3011.073	2875.096	2649.497	2576.358	2609.322
30.0	2981.199	2840.071	2610.352	2539.273	2576.358
30.5	2952.355	2805.047	2572.237	2503.218	2542.363
31.0	2923.512	2771.052	2533.092	2467.164	2509.399
31.5	2892.608	2737.058	2496.007	2432.139	2476.435
32.0	2862.734	2702.034	2457.893	2397.115	2443.471
32.5	2832.860	2668.039	2419.778	2362.090	2411.537
33.0	2801.956	2635.075	2382.693	2327.066	2379.603
33.5	2773.113	2601.081	2345.608	2293.072	2348.699
34.0	2742.209	2567.086	2308.524	2260.107	2317.795
34.5	2712.335	2534.122	2273.499	2226.113	2286.891
35.0	2682.461	2500.128	2237.444	2194.179	2257.017
35.5	2653.617	2466.134	2201.390	2161.215	2227.143
36.0	2623.744	2433.169	2165.335	2129.281	2197.269
36.5	2593.870	2400.205	2131.341	2097.347	2168.426
37.0	2563.996	2367.241	2097.347	2065.413	2139.582
37.5	2534.122	2335.307	2063.352	2034.509	2110.738
38.0	2505.279	2303.373	2030.388	2004.635	2081.895
38.5	2475.405	2270.409	1997.424	1974.761	2054.081
39.0	2444.501	2237.444	1964.460	1945.917	2026.268
39.5	2415.657	2206.541	1932.526	1916.044	1999.484
40.0	2385.783	2174.607	1901.622	1888.230	1972.701
40.5	2356.940	2143.703	1870.718	1859.386	1945.917
41.0	2326.036	2111.769	1840.844	1831.573	1919.134
41.5	2297.192	2081.895	1810.970	1804.789	1893.381
42.0	2267.318	2050.991	1781.096	1778.006	1866.597
42.5	2238.475	2021.117	1752.253	1751.223	1840.844
43.0	2208.601	1990.213	1723.409	1723.409	1816.121
43.5	2178.727	1960.339	1695.596	1697.656	1790.368
44.0	2148.853	1930.465	1667.782	1671.903	1765.645
44.5	2120.010	1900.592	1640.999	1646.149	1740.921
45.0	2090.136	1871.748	1613.185	1620.396	1715.168
45.5	2060.262	1841.874	1586.402	1595.673	1690.445
46.0	2031.418	1812.000	1560.648	1569.920	1665.722
46.5	2002.575	1783.157	1534.895	1545.196	1640.999
47.0	1973.731	1754.313	1509.142	1520.473	1615.245
47.5	1943.857	1725.469	1483.389	1496.780	1590.522
48.0	1913.983	1696.626	1458.665	1472.057	1565.799
48.5	1884.110	1667.782	1432.912	1447.334	1541.076
49.0	1856.296	1639.969	1409.219	1422.611	1516.353
49.5	1825.392	1611.125	1384.496	1398.918	1492.660
50.0	1796.548	1583.311	1359.773	1374.195	1467.937
50.5	1767.705	1555.498	1336.080	1350.502	1444.244
51.0	1737.831	1527.684	1312.387	1326.809	1419.520
51.5	1708.987	1498.841	1289.724	1302.086	1393.767
52.0	1678.083	1471.027	1266.031	1278.393	1370.074
52.5	1649.240	1443.214	1243.368	1254.700	1345.351
53.0	1620.396	1416.430	1221.735	1232.037	1320.628
53.5	1591.552	1388.617	1199.072	1208.344	1295.905
54.0	1561.679	1361.833	1176.410	1184.651	1271.182
54.5	1532.835	1336.080	1154.777	1161.988	1246.458

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L78-840-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION - (Cont.)**

55.0	1503.991	1309.296	1133.144	1139.325	1223.796
55.5	1475.148	1282.513	1111.511	1116.662	1200.103
56.0	1446.304	1256.760	1089.879	1093.999	1175.379
56.5	1418.490	1231.007	1068.246	1072.366	1151.686
57.0	1390.677	1205.253	1047.643	1049.703	1127.993
57.5	1361.833	1179.500	1026.938	1027.453	1104.300
58.0	1334.020	1154.777	1005.923	1005.614	1081.638
58.5	1306.206	1129.024	985.423	983.466	1058.975
59.0	1278.393	1104.300	964.512	961.730	1035.282
59.5	1251.609	1079.577	944.012	940.304	1012.001
60.0	1223.796	1054.854	923.306	918.877	989.647
60.5	1197.012	1030.131	902.601	897.656	967.808
61.0	1170.229	1005.820	882.307	876.229	945.454
61.5	1142.415	981.818	861.190	855.215	923.615
62.0	1116.662	957.919	840.793	834.200	902.292
62.5	1089.879	934.535	819.984	813.494	880.453
63.0	1063.095	911.048	799.382	793.098	858.408
63.5	1038.372	888.282	778.882	772.907	837.806
64.0	1011.589	865.104	757.764	752.717	816.585
64.5	984.805	842.235	737.059	732.835	795.776
65.0	957.301	819.984	716.250	713.572	775.380
65.5	931.135	797.218	695.853	694.617	754.983
66.0	905.176	774.452	675.766	675.457	732.835
66.5	879.938	752.305	655.884	657.121	712.439
67.0	854.700	729.848	636.312	638.990	692.351
67.5	828.946	707.906	616.945	620.757	672.573
68.0	802.163	686.273	598.300	602.833	652.588
68.5	775.998	665.362	580.273	584.908	633.531
69.0	751.172	644.038	562.452	567.087	613.855
69.5	726.963	623.332	544.939	549.575	594.386
70.0	702.446	603.142	527.633	532.372	575.122
70.5	678.753	582.745	510.533	515.478	556.580
71.0	654.442	562.658	493.742	498.583	537.831
71.5	631.264	542.879	477.157	481.895	519.598
72.0	607.674	523.410	460.572	465.310	501.468
72.5	584.702	503.734	443.986	448.931	483.440
73.0	561.730	484.368	427.813	432.449	465.722
73.5	539.377	465.104	411.537	416.173	447.901
74.0	517.332	445.944	395.364	399.794	430.183
74.5	495.184	426.989	379.397	383.724	412.773
75.0	473.448	408.138	363.842	367.654	395.467
75.5	451.712	389.493	348.287	351.996	377.955
76.0	430.389	370.950	332.423	336.132	361.061
76.5	409.374	352.408	317.074	320.474	343.858
77.0	388.874	333.659	301.931	304.919	326.964
77.5	368.375	315.632	286.582	289.879	310.172
78.0	348.081	298.429	271.337	274.736	293.587
78.5	327.994	281.123	256.503	259.902	277.105
79.0	308.524	264.332	241.669	245.171	261.035
79.5	289.879	247.850	227.041	230.440	245.068
80.0	271.337	232.089	212.413	215.709	229.204
80.5	253.206	216.431	197.888	201.185	214.576
81.0	235.488	201.082	183.569	187.381	200.463
81.5	218.285	186.454	169.354	174.504	187.484
82.0	201.803	172.135	155.653	162.143	174.710
82.5	186.042	158.434	142.055	150.605	162.040

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L78-840-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION - (Cont.)**

83.0	171.105	145.042	129.281	139.583	149.678
83.5	156.683	132.269	117.538	128.457	137.729
84.0	143.291	120.113	106.825	117.435	125.985
84.5	130.003	108.267	97.141	106.619	114.654
85.0	117.435	96.935	87.973	96.008	103.734
85.5	105.382	86.119	79.423	85.810	93.124
86.0	93.433	75.612	71.285	76.230	83.647
86.5	81.792	65.825	63.559	67.680	75.097
87.0	70.152	57.069	56.348	60.366	67.165
87.5	58.511	49.137	49.961	54.185	60.263
88.0	47.077	41.617	43.987	48.519	54.082
88.5	36.879	34.406	37.806	42.853	48.107
89.0	27.504	26.577	30.286	34.715	38.424
89.5	16.997	16.894	20.294	26.062	30.286
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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : FRM-24-L78-840-DMA-DIM-UNV\_.IES\_.IES

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-L78-840-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-L78-840-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-L78-840-DMA-DIM-UNV\_.IES\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1459.8	N.A.	18.00
0-30	2865.11	N.A.	35.40
0-40	4335.8	N.A.	53.50
0-60	6796.16	N.A.	83.90
0-80	7987.09	N.A.	98.60
0-90	8102.47	N.A.	100.00
10-90	7701.45	N.A.	95.10
20-40	2876.00	N.A.	35.50
20-50	4229.2	N.A.	52.20
40-70	3233.74	N.A.	39.90
60-80	1190.93	N.A.	14.70
70-80	417.55	N.A.	5.20
80-90	115.38	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	8102.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	401.02
10-20	1058.78
20-30	1405.31
30-40	1470.69
40-50	1353.2
50-60	1107.16
60-70	773.38
70-80	417.55
80-90	115.38
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-L78-840-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-L78-840-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

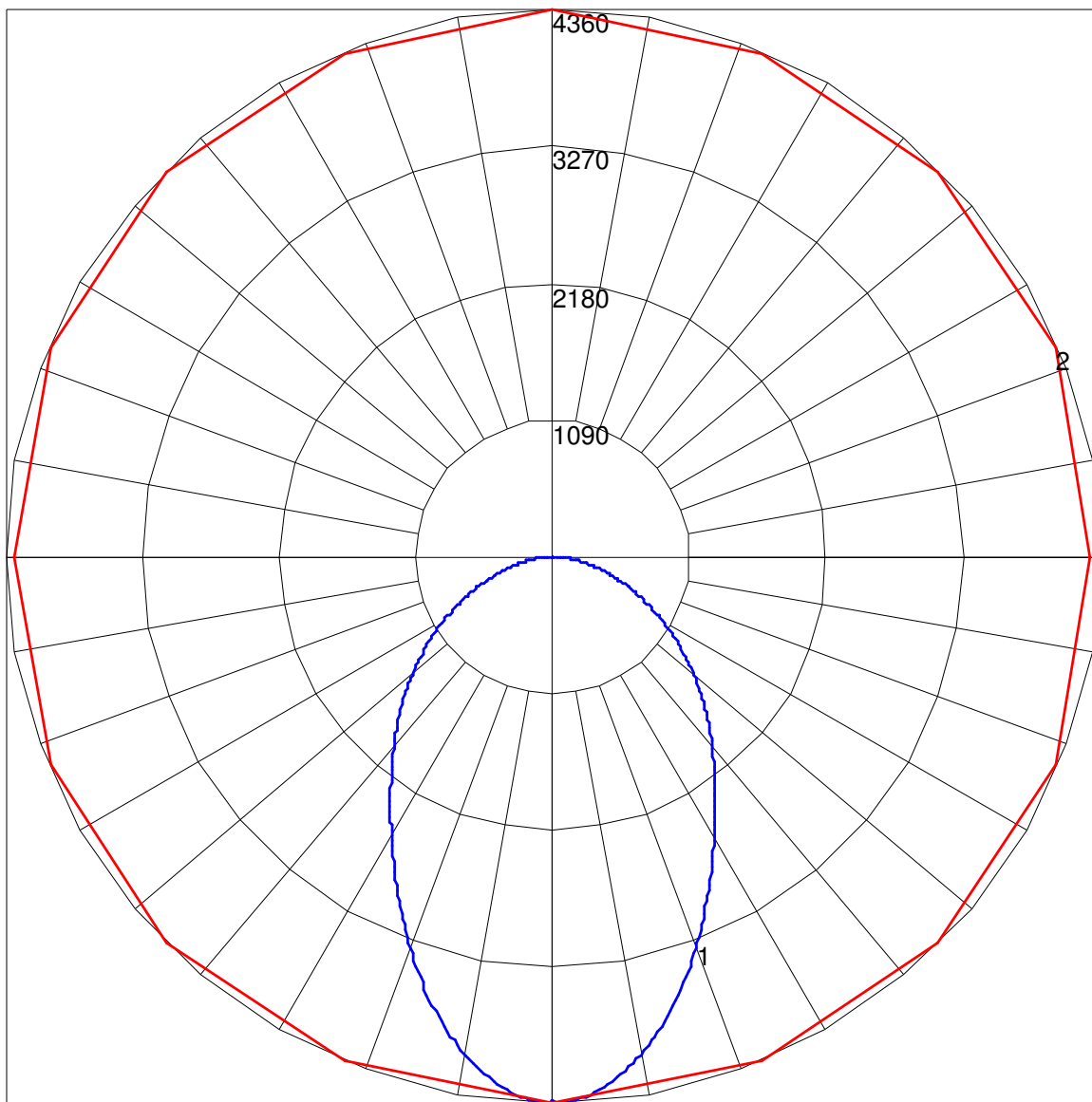
X=2H	Y=2H	16.1	17.7	16.5	18.0	18.3	15.1	16.6	15.4	16.9	17.2
	3H	17.8	19.2	18.2	19.5	19.9	16.7	18.1	17.1	18.4	18.8
	4H	18.4	19.7	18.8	20.1	20.4	17.3	18.6	17.7	19.0	19.3
	6H	18.8	20.0	19.3	20.4	20.8	17.7	18.9	18.2	19.3	19.7
	8H	19.0	20.1	19.4	20.5	20.9	17.9	19.0	18.3	19.4	19.8
	12H	19.1	20.1	19.5	20.5	21.0	18.0	19.1	18.4	19.5	19.9

### UGR Viewed Endwise

4H	2H	16.5	17.8	16.9	18.1	18.5	15.6	16.9	16.0	17.2	17.6
	3H	18.4	19.4	18.8	19.8	20.2	17.4	18.5	17.8	18.9	19.3
	4H	19.1	20.1	19.5	20.5	20.9	18.1	19.1	18.6	19.5	20.0
	6H	19.6	20.5	20.1	20.9	21.4	18.7	19.5	19.2	20.0	20.5
	8H	19.8	20.6	20.3	21.0	21.5	18.9	19.7	19.3	20.1	20.6
	12H	19.9	20.6	20.4	21.1	21.6	19.0	19.7	19.5	20.2	20.7
8H	4H	19.3	20.0	19.7	20.5	21.0	18.4	19.2	18.9	19.6	20.1
	6H	19.9	20.5	20.4	21.0	21.5	19.1	19.7	19.6	20.2	20.7
	8H	20.1	20.7	20.6	21.2	21.7	19.3	19.9	19.8	20.4	20.9
	12H	20.3	20.8	20.8	21.3	21.9	19.5	20.0	20.0	20.5	21.1
12H	4H	19.3	20.0	19.7	20.4	20.9	18.4	19.1	18.9	19.6	20.1
	6H	19.9	20.5	20.4	21.0	21.5	19.1	19.7	19.6	20.2	20.7
	8H	20.2	20.7	20.7	21.2	21.8	19.4	19.9	19.9	20.4	21.0

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 4359.514 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.)