

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-24-L50-840-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-L50-840-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	5173
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	52.8
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	2762	2132	2267
55	2450	1846	1994
65	2117	1584	1715
75	1709	1314	1428
85	1259	943	1112

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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	2772.125	2772.125	2772.125	2772.125	2772.125
0.5	2739.899	2769.494	2778.702	2776.729	2783.306
1.0	2738.583	2768.179	2777.387	2775.414	2781.333
1.5	2737.268	2766.206	2775.414	2772.125	2778.702
2.0	2734.637	2763.575	2772.125	2768.179	2774.098
2.5	2731.349	2759.629	2767.521	2762.918	2768.837
3.0	2728.060	2755.683	2762.260	2756.998	2762.918
3.5	2722.799	2750.422	2756.341	2749.764	2755.683
4.0	2717.538	2744.503	2749.106	2741.872	2747.133
4.5	2711.618	2737.926	2741.214	2732.664	2737.268
5.0	2705.042	2730.691	2732.664	2722.799	2727.403
5.5	2697.807	2722.141	2722.799	2711.618	2716.222
6.0	2689.915	2712.934	2711.618	2700.438	2703.069
6.5	2680.707	2704.384	2699.780	2687.284	2690.573
7.0	2671.500	2694.519	2687.942	2674.131	2676.104
7.5	2662.292	2683.338	2674.788	2660.319	2660.977
8.0	2651.770	2671.500	2661.635	2645.193	2645.850
8.5	2640.589	2659.662	2646.508	2628.751	2629.408
9.0	2629.408	2647.166	2632.039	2612.309	2612.309
9.5	2618.228	2634.012	2616.912	2595.867	2595.209
10.0	2605.732	2620.201	2600.470	2578.109	2576.794
10.5	2593.236	2606.390	2584.028	2559.694	2557.063
11.0	2580.082	2591.263	2566.271	2540.621	2537.991
11.5	2566.929	2576.136	2548.514	2520.891	2518.260
12.0	2553.117	2560.352	2530.099	2500.503	2497.872
12.5	2538.648	2543.910	2511.026	2479.457	2477.484
13.0	2524.179	2527.468	2491.953	2458.411	2456.438
13.5	2509.053	2510.368	2472.223	2437.366	2436.050
14.0	2493.926	2492.611	2451.835	2415.004	2413.689
14.5	2478.142	2475.511	2430.789	2392.643	2390.670
15.0	2462.357	2457.754	2409.743	2368.967	2368.309
15.5	2446.573	2438.681	2388.039	2345.948	2345.290
16.0	2430.131	2420.266	2366.336	2322.929	2321.614
16.5	2413.689	2401.193	2343.317	2298.595	2297.937
17.0	2397.247	2381.463	2320.298	2274.918	2273.603
17.5	2380.147	2361.075	2297.279	2250.584	2249.269
18.0	2362.390	2340.686	2273.603	2225.592	2224.277
18.5	2343.975	2320.298	2249.269	2200.600	2199.285
19.0	2326.217	2299.910	2225.592	2175.609	2174.293
19.5	2307.802	2278.864	2201.258	2150.617	2149.959
20.0	2289.387	2257.819	2176.266	2124.309	2124.309
20.5	2270.972	2236.115	2151.274	2099.318	2099.318
21.0	2251.899	2214.412	2125.625	2073.010	2074.326
21.5	2232.169	2192.708	2099.975	2047.361	2048.676
22.0	2212.439	2171.005	2074.326	2021.711	2023.684
22.5	2193.366	2149.301	2048.676	1995.404	1998.035
23.0	2174.293	2126.940	2023.027	1969.754	1973.043
23.5	2155.220	2103.921	1996.719	1943.447	1948.051
24.0	2136.148	2082.218	1971.070	1917.140	1923.059
24.5	2116.417	2059.199	1945.420	1892.148	1898.725
25.0	2096.687	2036.838	1919.771	1866.498	1874.391
25.5	2077.614	2014.477	1893.463	1841.507	1850.056
26.0	2057.884	1992.116	1868.472	1815.857	1826.380
26.5	2038.811	1969.097	1842.164	1790.207	1802.703

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FRM-24-L50-840-DMA-DIM-UNV\_.IES\_.IES****CANDELA TABULATION - (Cont.)**

27.0	2019.080	1946.736	1816.515	1765.216	1779.685
27.5	2000.008	1924.374	1790.865	1740.881	1756.008
28.0	1980.935	1902.013	1765.873	1716.547	1732.989
28.5	1961.205	1879.652	1740.881	1692.213	1711.286
29.0	1941.474	1857.291	1715.890	1668.537	1688.267
29.5	1922.401	1835.587	1691.555	1644.860	1665.906
30.0	1903.329	1813.226	1666.563	1621.183	1644.860
30.5	1884.914	1790.865	1642.229	1598.165	1623.157
31.0	1866.498	1769.162	1617.237	1575.146	1602.111
31.5	1846.768	1747.458	1593.561	1552.785	1581.065
32.0	1827.695	1725.097	1569.227	1530.424	1560.019
32.5	1808.623	1703.394	1544.893	1508.062	1539.631
33.0	1788.892	1682.348	1521.216	1485.701	1519.243
33.5	1770.477	1660.644	1497.539	1463.998	1499.513
34.0	1750.747	1638.941	1473.863	1442.952	1479.782
34.5	1731.674	1617.895	1451.502	1421.248	1460.052
35.0	1712.601	1596.192	1428.483	1400.860	1440.979
35.5	1694.186	1574.488	1405.464	1379.815	1421.906
36.0	1675.113	1553.442	1382.445	1359.426	1402.833
36.5	1656.041	1532.397	1360.742	1339.038	1384.418
37.0	1636.968	1511.351	1339.038	1318.650	1366.003
37.5	1617.895	1490.963	1317.335	1298.920	1347.588
38.0	1599.480	1470.575	1296.289	1279.847	1329.173
38.5	1580.407	1449.529	1275.243	1260.774	1311.416
39.0	1560.677	1428.483	1254.198	1242.359	1293.658
39.5	1542.262	1408.753	1233.809	1223.287	1276.559
40.0	1523.189	1388.364	1214.079	1205.529	1259.459
40.5	1504.774	1368.634	1194.349	1187.114	1242.359
41.0	1485.044	1348.246	1175.276	1169.357	1225.260
41.5	1466.628	1329.173	1156.203	1152.257	1208.818
42.0	1447.556	1309.443	1137.130	1135.157	1191.718
42.5	1429.141	1290.370	1118.715	1118.058	1175.276
43.0	1410.068	1270.640	1100.300	1100.300	1159.491
43.5	1390.995	1251.567	1082.543	1083.858	1143.049
44.0	1371.922	1232.494	1064.785	1067.416	1127.265
44.5	1353.507	1213.421	1047.686	1050.974	1111.481
45.0	1334.435	1195.006	1029.928	1034.532	1095.039
45.5	1315.362	1175.934	1012.829	1018.748	1079.254
46.0	1296.947	1156.861	996.387	1002.306	1063.470
46.5	1278.532	1138.446	979.945	986.521	1047.686
47.0	1260.117	1120.031	963.503	970.737	1031.244
47.5	1241.044	1101.616	947.061	955.610	1015.459
48.0	1221.971	1083.200	931.276	939.826	999.675
48.5	1202.898	1064.785	914.834	924.042	983.891
49.0	1185.141	1047.028	899.708	908.257	968.106
49.5	1165.411	1028.613	883.923	893.131	952.980
50.0	1146.996	1010.856	868.139	877.346	937.195
50.5	1128.580	993.098	853.012	862.220	922.069
51.0	1109.508	975.341	837.886	847.093	906.284
51.5	1091.093	956.926	823.417	831.309	889.842
52.0	1071.362	939.168	808.290	816.182	874.716
52.5	1052.947	921.411	793.821	801.055	858.931
53.0	1034.532	904.311	780.010	786.586	843.147
53.5	1016.117	886.554	765.541	771.460	827.363
54.0	997.044	869.454	751.072	756.333	811.578
54.5	978.629	853.012	737.260	741.864	795.794

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**CANDELA TABULATION - (Cont.)**

55.0	960.214	835.912	723.449	727.395	781.325
55.5	941.799	818.813	709.638	712.926	766.198
56.0	923.384	802.371	695.826	698.457	750.414
56.5	905.627	785.929	682.015	684.646	735.287
57.0	887.869	769.487	668.862	670.177	720.161
57.5	869.454	753.045	655.642	655.971	705.034
58.0	851.697	737.260	642.225	642.028	690.565
58.5	833.939	720.818	629.138	627.888	676.096
59.0	816.182	705.034	615.787	614.011	660.969
59.5	799.082	689.250	602.699	600.331	646.106
60.0	781.325	673.465	589.479	586.651	631.834
60.5	764.225	657.681	576.260	573.103	617.891
61.0	747.126	642.160	563.304	559.423	603.620
61.5	729.368	626.836	549.821	546.007	589.677
62.0	712.926	611.577	536.799	532.590	576.063
62.5	695.826	596.648	523.514	519.371	562.120
63.0	678.727	581.653	510.360	506.349	548.046
63.5	662.942	567.118	497.273	493.458	534.892
64.0	645.843	552.320	483.790	480.567	521.344
64.5	628.743	537.720	470.571	467.874	508.059
65.0	611.183	523.514	457.286	455.576	495.036
65.5	594.478	508.979	444.263	443.474	482.014
66.0	577.904	494.445	431.439	431.241	467.874
66.5	561.791	480.304	418.745	419.535	454.852
67.0	545.678	465.967	406.250	407.959	442.027
67.5	529.236	451.958	393.885	396.319	429.400
68.0	512.136	438.147	381.981	384.875	416.641
68.5	495.431	424.796	370.472	373.431	404.474
69.0	479.581	411.182	359.094	362.053	391.912
69.5	464.125	397.963	347.913	350.873	379.482
70.0	448.473	385.072	336.864	339.890	367.183
70.5	433.346	372.050	325.947	329.104	355.345
71.0	417.825	359.225	315.226	318.318	343.375
71.5	403.027	346.598	304.638	307.663	331.734
72.0	387.966	334.168	294.049	297.074	320.159
72.5	373.300	321.606	283.460	286.617	308.650
73.0	358.633	309.242	273.135	276.094	297.338
73.5	344.362	296.943	262.744	265.703	285.960
74.0	330.287	284.710	252.418	255.246	274.648
74.5	316.147	272.609	242.224	244.986	263.533
75.0	302.270	260.573	232.293	234.726	252.484
75.5	288.393	248.669	222.362	224.730	241.303
76.0	274.779	236.831	212.234	214.601	230.517
76.5	261.362	224.993	202.434	204.605	219.534
77.0	248.275	213.023	192.766	194.674	208.748
77.5	235.187	201.513	182.967	185.071	198.028
78.0	222.230	190.530	173.233	175.404	187.439
78.5	209.406	179.481	163.763	165.933	176.916
79.0	196.975	168.761	154.292	156.528	166.656
79.5	185.071	158.238	144.953	147.123	156.462
80.0	173.233	148.176	135.614	137.718	146.334
80.5	161.658	138.179	126.341	128.445	136.995
81.0	150.346	128.379	117.199	119.632	127.985
81.5	139.363	119.040	108.123	111.411	119.698
82.0	128.840	109.898	99.376	103.519	111.543
82.5	118.777	101.151	90.694	96.153	103.453

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83.0	109.241	92.601	82.539	89.116	95.561
83.5	100.033	84.446	75.041	82.013	87.932
84.0	91.483	76.686	68.202	74.976	80.434
84.5	82.999	69.122	62.019	68.070	73.200
85.0	74.976	61.888	56.166	61.296	66.228
85.5	67.281	54.982	50.707	54.785	59.454
86.0	59.652	48.274	45.512	48.668	53.404
86.5	52.220	42.026	40.579	43.210	47.945
87.0	44.788	36.436	35.975	38.540	42.881
87.5	37.356	31.371	31.898	34.594	38.474
88.0	30.056	26.570	28.083	30.977	34.528
88.5	23.545	21.967	24.137	27.360	30.714
89.0	17.560	16.968	19.336	22.164	24.531
89.5	10.852	10.786	12.956	16.639	19.336
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-L50-840-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-L50-840-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-L50-840-DMA-DIM-UNV\_.IES\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	932.00	N.A.	18.00
0-30	1829.21	N.A.	35.40
0-40	2768.17	N.A.	53.50
0-60	4338.97	N.A.	83.90
0-80	5099.31	N.A.	98.60
0-90	5172.97	N.A.	100.00
10-90	4916.94	N.A.	95.10
20-40	1836.17	N.A.	35.50
20-50	2700.11	N.A.	52.20
40-70	2064.56	N.A.	39.90
60-80	760.34	N.A.	14.70
70-80	266.58	N.A.	5.20
80-90	73.67	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	5172.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	256.03
10-20	675.97
20-30	897.21
30-40	938.95
40-50	863.94
50-60	706.86
60-70	493.76
70-80	266.58
80-90	73.67
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-L50-840-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-L50-840-DMA-DIM-UNV\_.IES\_.IES

## UGR TABLE - CORRECTED

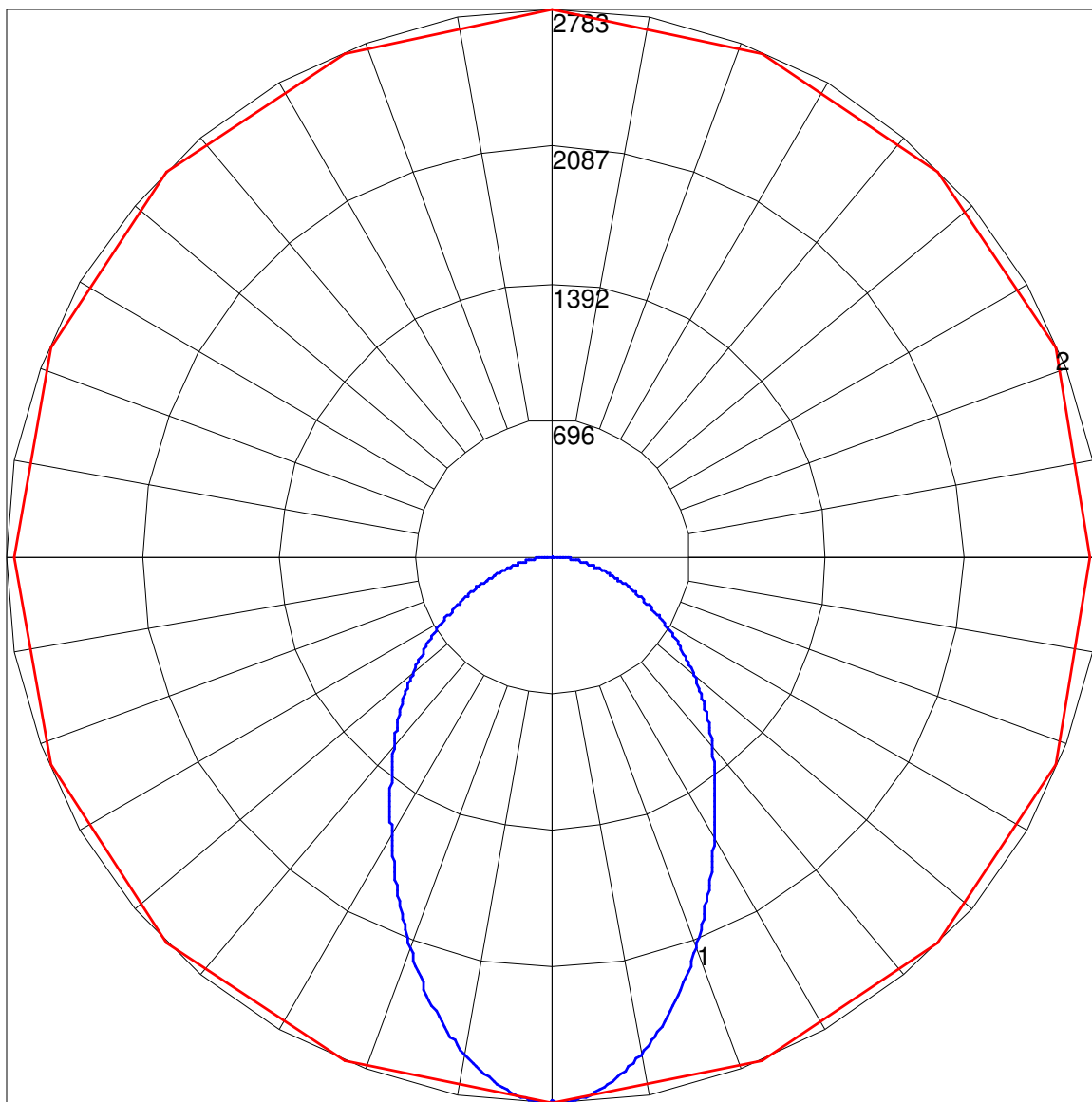
### Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.5	16.1	14.9	16.4	16.7	13.5	15.0	13.8	15.3	15.6
	3H	16.2	17.6	16.6	17.9	18.3	15.1	16.5	15.5	16.8	17.2
	4H	16.8	18.1	17.2	18.5	18.8	15.7	17.0	16.1	17.4	17.7
	6H	17.2	18.4	17.7	18.8	19.2	16.1	17.3	16.6	17.7	18.1
	8H	17.4	18.5	17.8	18.9	19.3	16.3	17.4	16.7	17.8	18.2
	12H	17.5	18.5	17.9	18.9	19.4	16.4	17.5	16.8	17.9	18.3
4H	2H	14.9	16.2	15.3	16.5	16.9	14.0	15.3	14.4	15.6	16.0
	3H	16.8	17.8	17.2	18.2	18.6	15.8	16.9	16.2	17.3	17.7
	4H	17.5	18.5	17.9	18.9	19.3	16.5	17.5	17.0	17.9	18.4
	6H	18.0	18.9	18.5	19.3	19.8	17.1	18.0	17.6	18.4	18.9
	8H	18.2	19.0	18.7	19.4	19.9	17.3	18.1	17.7	18.5	19.0
	12H	18.3	19.0	18.8	19.5	20.0	17.4	18.1	17.9	18.6	19.1
8H	4H	17.7	18.4	18.1	18.9	19.4	16.8	17.6	17.3	18.0	18.5
	6H	18.3	18.9	18.8	19.4	19.9	17.5	18.1	18.0	18.6	19.1
	8H	18.5	19.1	19.0	19.6	20.1	17.7	18.3	18.2	18.8	19.3
	12H	18.7	19.2	19.2	19.7	20.3	17.9	18.4	18.4	18.9	19.5
12H	4H	17.7	18.4	18.1	18.8	19.3	16.8	17.5	17.3	18.0	18.5
	6H	18.3	18.9	18.8	19.4	19.9	17.5	18.1	18.0	18.6	19.1
	8H	18.6	19.1	19.1	19.6	20.2	17.8	18.3	18.3	18.8	19.4

Maximum UGR = 20.3

POLAR GRAPH



Maximum Candela = 2783.306 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.)