

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-22-L50-830-DMA-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GENERATED FROM 15746385.02  
[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-22-L50-830-DMA-DIM-UNV  
[LUMINAIRE] Recessed 2 x 2 narrow aperture LED luminaire  
[MORE] with center frame driver housing  
[LAMP] LED  
[ \_SEARCH\_SOURCE TYPE] LED  
[ \_SEARCH\_APPLICATION] INDOOR  
[ \_SEARCH\_MOUNTING] RECESSED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4997
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	53.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	1.06
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.90 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	4898	4245	4990
55	4315	3684	4382
65	3721	3149	3761
75	3035	2624	3114
85	2123	1604	2123

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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	2682.361	2682.361	2682.361	2682.361	2682.361
0.5	2672.116	2683.642	2688.124	2683.002	2672.116
1.0	2670.195	2682.361	2686.203	2682.361	2670.195
1.5	2668.274	2679.800	2684.282	2679.800	2668.274
2.0	2665.072	2676.598	2681.080	2675.958	2664.432
2.5	2660.590	2672.756	2676.598	2672.116	2660.590
3.0	2656.107	2667.633	2671.475	2666.993	2656.107
3.5	2650.344	2661.230	2665.072	2661.230	2649.704
4.0	2643.301	2654.186	2658.028	2654.827	2643.941
4.5	2635.617	2646.502	2650.344	2647.143	2636.897
5.0	2626.652	2637.538	2642.020	2638.818	2628.573
5.5	2617.047	2627.933	2632.415	2630.494	2620.249
6.0	2607.442	2617.047	2622.170	2620.889	2611.284
6.5	2595.916	2606.161	2611.284	2610.003	2601.039
7.0	2583.750	2593.995	2599.118	2598.477	2590.153
7.5	2570.943	2581.188	2586.311	2586.951	2578.627
8.0	2558.136	2567.101	2572.864	2574.785	2567.101
8.5	2544.049	2553.014	2559.417	2561.338	2553.654
9.0	2529.321	2537.646	2544.689	2547.251	2540.847
9.5	2514.594	2522.918	2529.321	2533.163	2526.760
10.0	2499.226	2506.910	2513.313	2517.795	2512.032
10.5	2483.217	2490.261	2497.945	2502.427	2497.945
11.0	2466.568	2473.612	2480.656	2486.419	2483.857
11.5	2449.279	2455.683	2463.367	2469.130	2467.849
12.0	2431.990	2437.753	2444.797	2452.481	2451.841
12.5	2414.701	2419.184	2426.227	2435.192	2435.192
13.0	2395.491	2400.614	2407.658	2417.263	2418.543
13.5	2378.202	2381.404	2388.448	2399.333	2401.895
14.0	2359.633	2362.194	2368.597	2381.404	2384.606
14.5	2339.782	2342.344	2348.107	2362.194	2366.676
15.0	2319.932	2322.493	2326.976	2342.984	2348.747
15.5	2300.722	2302.002	2305.844	2323.774	2330.177
16.0	2280.871	2280.871	2284.073	2303.923	2311.607
16.5	2260.381	2260.381	2262.942	2283.433	2292.397
17.0	2239.890	2238.609	2239.890	2262.302	2272.547
17.5	2219.399	2216.838	2217.478	2241.811	2253.977
18.0	2198.268	2195.067	2194.426	2220.040	2234.127
18.5	2177.137	2172.655	2171.374	2198.268	2213.636
19.0	2156.006	2149.603	2147.682	2176.497	2193.146
19.5	2134.875	2127.191	2123.989	2154.085	2172.015
20.0	2113.744	2104.139	2100.297	2131.033	2151.524
20.5	2091.332	2080.447	2075.964	2108.621	2130.393
21.0	2069.561	2057.395	2050.991	2085.569	2109.902
21.5	2047.149	2034.343	2026.018	2062.517	2088.131
22.0	2025.378	2011.291	2001.686	2038.825	2065.719
22.5	2004.247	1987.598	1976.713	2015.773	2044.588
23.0	1981.835	1963.906	1952.380	1992.081	2022.817
23.5	1960.704	1940.854	1927.407	1969.029	2001.045
24.0	1940.213	1917.802	1903.074	1945.977	1979.274
24.5	1918.442	1894.109	1878.101	1922.284	1958.143
25.0	1897.311	1871.057	1853.128	1898.592	1937.012
25.5	1876.180	1848.005	1828.155	1874.899	1915.881
26.0	1855.049	1825.594	1803.822	1852.488	1896.030
26.5	1834.558	1803.182	1779.490	1829.436	1874.259

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**CANDELA TABULATION - (Cont.)**

27.0	1814.068	1780.770	1755.157	1807.024	1854.409
27.5	1793.577	1758.359	1730.824	1784.612	1833.918
28.0	1774.367	1736.587	1706.491	1762.201	1813.427
28.5	1753.876	1714.816	1682.799	1739.789	1793.577
29.0	1734.666	1693.044	1659.107	1717.377	1773.727
29.5	1714.816	1671.913	1634.774	1694.965	1753.236
30.0	1694.965	1650.142	1611.082	1673.194	1733.385
30.5	1675.755	1629.011	1587.389	1651.423	1713.535
31.0	1656.545	1607.880	1563.697	1629.651	1694.325
31.5	1637.335	1586.749	1540.645	1607.880	1674.475
32.0	1617.485	1566.258	1517.593	1586.749	1655.265
32.5	1598.275	1545.767	1495.181	1564.977	1636.055
33.0	1579.705	1524.636	1472.129	1543.206	1616.204
33.5	1560.495	1504.786	1449.717	1522.075	1596.994
34.0	1541.925	1483.655	1427.306	1500.944	1577.144
34.5	1523.356	1463.805	1405.534	1479.173	1558.574
35.0	1505.426	1443.314	1383.763	1458.042	1539.364
35.5	1486.857	1423.464	1361.991	1437.551	1519.514
36.0	1468.927	1403.613	1340.860	1417.060	1500.944
36.5	1450.998	1383.763	1319.729	1396.570	1482.374
37.0	1433.069	1364.553	1298.598	1376.079	1463.164
37.5	1415.139	1345.343	1278.108	1355.588	1443.954
38.0	1397.850	1326.773	1258.257	1336.378	1425.385
38.5	1380.561	1308.203	1238.407	1316.528	1406.815
39.0	1362.632	1288.993	1218.557	1297.318	1388.886
39.5	1345.983	1270.424	1199.346	1278.108	1370.956
40.0	1328.694	1252.494	1180.136	1258.898	1353.027
40.5	1310.765	1234.565	1161.567	1239.688	1335.097
41.0	1293.476	1216.636	1142.997	1221.118	1317.168
41.5	1276.827	1198.706	1125.068	1203.189	1299.879
42.0	1259.538	1182.057	1106.498	1184.619	1282.590
42.5	1242.249	1164.128	1088.569	1167.330	1265.301
43.0	1224.960	1147.479	1071.280	1149.400	1248.012
43.5	1208.311	1130.190	1053.991	1132.111	1230.723
44.0	1191.662	1113.542	1036.702	1114.822	1213.434
44.5	1175.014	1096.893	1020.053	1096.893	1196.145
45.0	1157.725	1080.244	1003.404	1079.604	1179.496
45.5	1141.076	1062.955	986.755	1062.955	1162.207
46.0	1124.427	1046.947	970.107	1045.666	1144.918
46.5	1107.138	1030.298	954.098	1028.377	1128.269
47.0	1090.490	1013.649	938.090	1011.088	1110.340
47.5	1073.201	997.001	922.082	994.439	1093.691
48.0	1056.552	980.352	906.714	977.791	1076.402
48.5	1040.544	964.344	891.346	961.142	1059.113
49.0	1023.895	947.695	875.978	944.493	1042.465
49.5	1007.246	931.687	861.250	927.845	1024.535
50.0	990.597	915.038	845.882	911.196	1007.886
50.5	973.949	899.030	831.154	894.547	990.597
51.0	957.300	883.021	817.067	878.539	973.949
51.5	940.651	866.373	802.979	862.531	956.660
52.0	924.643	851.005	788.892	846.522	940.011
52.5	907.994	834.996	774.805	830.514	923.362
53.0	891.986	819.628	760.717	814.505	906.073
53.5	875.337	803.620	746.630	799.137	889.425
54.0	858.689	788.892	733.183	783.769	872.776
54.5	843.321	773.524	719.736	768.401	856.127

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**CANDELA TABULATION - (Cont.)**

55.0	827.312	758.156	706.289	753.033	840.119
55.5	811.304	743.428	693.482	738.306	824.751
56.0	795.295	728.701	680.035	723.578	808.742
56.5	779.287	713.973	666.588	708.210	792.094
57.0	763.919	699.886	653.782	693.482	776.726
57.5	747.911	685.158	640.334	679.395	760.717
58.0	732.543	670.430	627.336	665.308	744.709
58.5	717.175	656.343	614.529	650.580	728.701
59.0	701.166	642.255	601.658	636.621	712.692
59.5	685.798	627.784	588.788	622.149	697.324
60.0	670.430	613.376	575.661	607.677	681.316
60.5	655.703	598.905	562.790	593.398	665.948
61.0	641.615	584.561	550.111	579.183	650.580
61.5	626.695	570.474	537.113	564.903	635.532
62.0	612.480	556.899	524.178	551.008	620.676
62.5	598.136	543.516	511.051	536.985	606.205
63.0	583.793	530.325	497.540	523.473	591.157
63.5	569.257	516.814	483.965	510.475	576.237
64.0	554.658	503.431	470.838	496.836	561.253
64.5	540.314	490.240	457.903	483.581	546.205
65.0	525.715	477.049	444.904	470.774	531.350
65.5	510.603	464.050	432.226	457.903	516.942
66.0	496.131	451.116	419.355	445.609	502.470
66.5	481.403	438.245	406.484	433.186	487.423
67.0	467.636	425.502	393.998	420.828	473.655
67.5	453.805	412.888	381.767	408.918	459.696
68.0	440.038	400.593	370.241	397.007	446.057
68.5	426.207	388.427	359.292	384.905	432.482
69.0	412.760	376.325	348.854	373.187	419.483
69.5	399.889	364.478	338.545	361.661	406.612
70.0	386.634	352.760	328.235	350.391	393.357
70.5	373.763	340.914	317.990	339.185	380.359
71.0	360.893	329.196	307.681	328.235	367.744
71.5	348.086	317.734	297.307	317.158	355.322
72.0	335.407	306.464	287.126	306.208	342.579
72.5	322.985	295.194	277.009	295.450	330.092
73.0	310.562	284.116	267.019	284.757	317.670
73.5	298.396	272.975	257.030	273.935	305.504
74.0	286.358	262.025	247.105	263.113	293.721
74.5	274.383	250.947	237.052	252.356	281.427
75.0	262.601	239.997	226.999	241.726	269.389
75.5	250.755	229.048	217.201	231.097	257.286
76.0	239.101	218.034	207.276	220.339	245.312
76.5	227.703	207.148	197.479	209.453	233.338
77.0	216.177	196.391	187.618	198.504	221.492
77.5	204.715	185.569	178.013	188.066	209.646
78.0	193.381	175.260	168.536	177.885	198.055
78.5	182.111	165.206	158.995	167.704	186.722
79.0	170.905	155.089	149.582	157.971	175.067
79.5	159.956	144.972	140.233	148.173	163.862
80.0	149.134	135.175	130.820	138.376	152.720
80.5	138.504	125.634	121.664	128.707	141.770
81.0	128.259	116.157	112.571	119.166	131.205
81.5	118.526	106.872	103.798	109.817	120.895
82.0	108.857	97.843	94.898	100.661	110.970
82.5	99.956	89.263	86.061	91.824	101.493

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**CANDELA TABULATION - (Cont.)**

83.0	91.504	81.322	77.096	83.308	92.528
83.5	83.756	74.023	68.452	75.239	84.012
84.0	76.264	67.299	60.320	67.811	76.200
84.5	68.964	60.960	52.892	60.896	68.900
85.0	61.856	55.005	46.744	54.492	61.856
85.5	54.685	48.922	41.750	48.153	55.069
86.0	48.025	42.966	37.524	42.134	48.345
86.5	41.622	37.203	33.618	36.435	42.326
87.0	35.987	31.697	29.904	31.248	36.883
87.5	30.608	26.766	26.190	26.894	32.017
88.0	25.677	22.540	22.284	23.180	27.470
88.5	20.811	18.570	17.801	19.274	22.924
89.0	14.600	13.383	11.846	13.255	17.161
89.5	5.763	6.339	5.571	5.891	8.004
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-22-L50-830-DMA-DIM-UNV\_.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-22-L50-830-DMA-DIM-UNV\_.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-22-L50-830-DMA-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	900.86	N.A.	18.00
0-30	1767.61	N.A.	35.40
0-40	2676.16	N.A.	53.60
0-60	4195.6	N.A.	84.00
0-80	4930.52	N.A.	98.70
0-90	4996.57	N.A.	100.00
10-90	4748.93	N.A.	95.00
20-40	1775.31	N.A.	35.50
20-50	2611.36	N.A.	52.30
40-70	1996.46	N.A.	40.00
60-80	734.92	N.A.	14.70
70-80	257.89	N.A.	5.20
80-90	66.05	N.A.	1.30
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	4996.57	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	247.64
10-20	653.22
20-30	866.75
30-40	908.55
40-50	836.05
50-60	683.39
60-70	477.02
70-80	257.89
80-90	66.05
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-22-L50-830-DMA-DIM-UNV\_.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	73	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	74	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	54	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-22-L50-830-DMA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

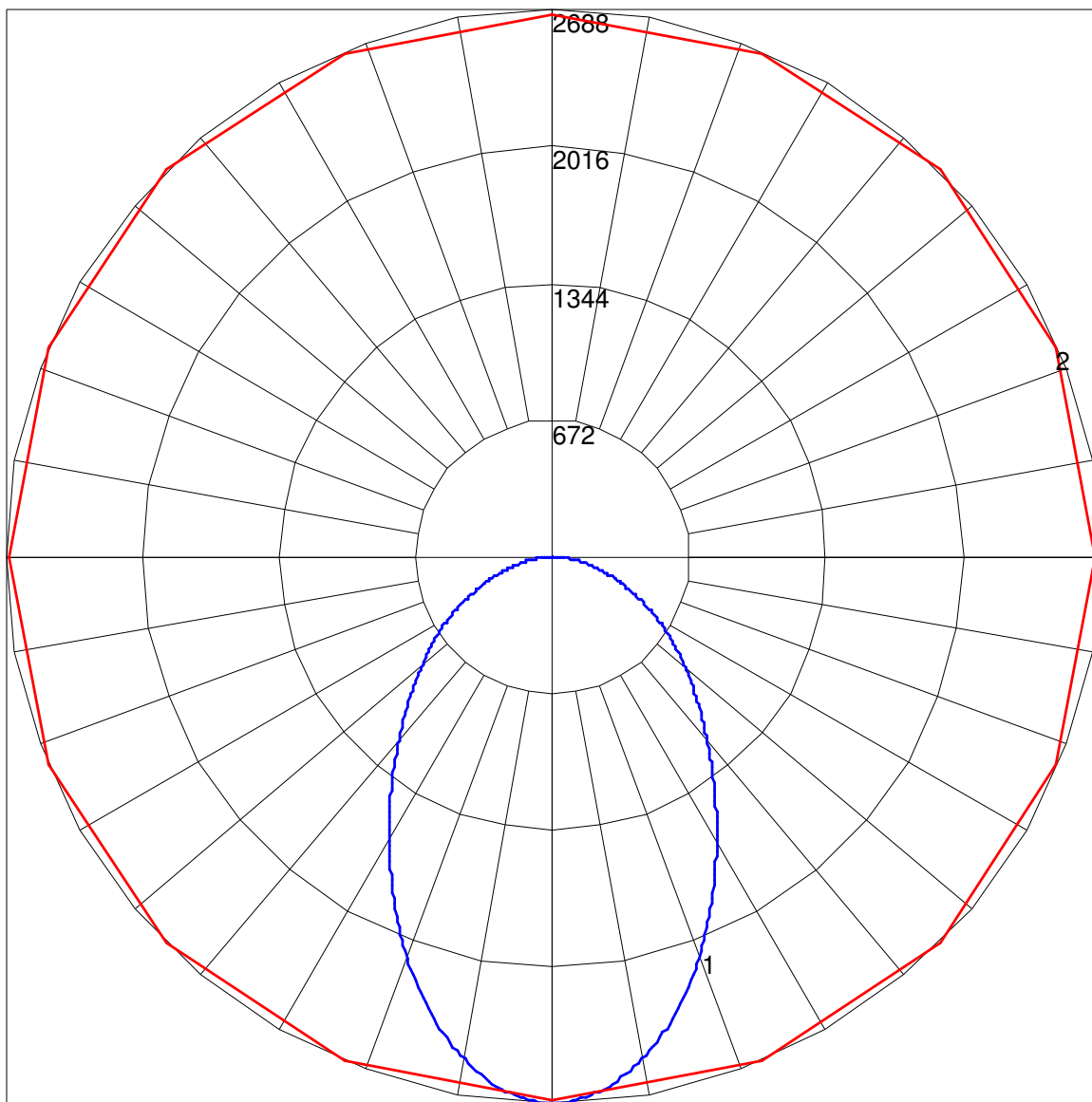
Reflectances

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	16.4	17.9	16.8	18.3	18.6	16.4	17.9	16.8	18.2	18.5
	3H	18.0	19.4	18.4	19.8	20.1	18.0	19.4	18.4	19.8	20.1
	4H	18.6	19.9	19.0	20.3	20.7	18.7	20.0	19.1	20.3	20.7
	6H	19.1	20.3	19.5	20.6	21.0	19.1	20.3	19.5	20.7	21.0
	8H	19.2	20.3	19.6	20.7	21.1	19.2	20.4	19.7	20.7	21.1
	12H	19.2	20.3	19.7	20.7	21.1	19.3	20.4	19.7	20.8	21.2
4H	2H	16.8	18.1	17.2	18.5	18.9	16.8	18.1	17.2	18.5	18.8
	3H	18.7	19.8	19.1	20.2	20.6	18.7	19.8	19.1	20.2	20.6
	4H	19.4	20.4	19.8	20.8	21.2	19.4	20.4	19.8	20.8	21.2
	6H	19.9	20.8	20.4	21.2	21.7	20.0	20.8	20.4	21.3	21.7
	8H	20.1	20.9	20.6	21.3	21.8	20.1	20.9	20.6	21.4	21.8
	12H	20.2	20.9	20.7	21.4	21.9	20.3	21.0	20.7	21.4	21.9
8H	4H	19.6	20.4	20.1	20.9	21.3	19.6	20.4	20.1	20.9	21.3
	6H	20.2	20.9	20.7	21.4	21.9	20.3	20.9	20.8	21.4	21.9
	8H	20.4	21.0	21.0	21.5	22.0	20.5	21.1	21.0	21.6	22.1
	12H	20.6	21.1	21.1	21.6	22.2	20.7	21.2	21.2	21.7	22.2
12H	4H	19.6	20.3	20.1	20.8	21.3	19.7	20.4	20.1	20.8	21.3
	6H	20.3	20.9	20.8	21.3	21.9	20.3	20.9	20.8	21.4	21.9
	8H	20.5	21.0	21.0	21.5	22.1	20.6	21.1	21.1	21.6	22.1

Maximum UGR = 22.2

POLAR GRAPH



Maximum Candela = 2688.124 Located At Horizontal Angle = 45, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)