

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-22-L50-930-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-L50-930-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	4139
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
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	4057	3516	4133
55	3574	3051	3629
65	3082	2608	3115
75	2514	2173	2579
85	1759	1329	1759

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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	2221.753	2221.753	2221.753	2221.753	2221.753
0.5	2213.267	2222.814	2226.527	2222.284	2213.267
1.0	2211.676	2221.753	2224.936	2221.753	2211.676
1.5	2210.085	2219.632	2223.345	2219.632	2210.085
2.0	2207.433	2216.980	2220.693	2216.450	2206.903
2.5	2203.721	2213.798	2216.980	2213.267	2203.721
3.0	2200.008	2209.555	2212.737	2209.024	2200.008
3.5	2195.234	2204.251	2207.433	2204.251	2194.704
4.0	2189.400	2198.417	2201.599	2198.947	2189.931
4.5	2183.036	2192.052	2195.234	2192.583	2184.097
5.0	2175.610	2184.627	2188.340	2185.688	2177.202
5.5	2167.655	2176.671	2180.384	2178.793	2170.307
6.0	2159.699	2167.655	2171.898	2170.837	2162.881
6.5	2150.152	2158.638	2162.881	2161.821	2154.395
7.0	2140.075	2148.561	2152.804	2152.274	2145.379
7.5	2129.468	2137.954	2142.197	2142.727	2135.832
8.0	2118.860	2126.285	2131.059	2132.650	2126.285
8.5	2107.192	2114.617	2119.921	2121.512	2115.147
9.0	2094.993	2101.888	2107.722	2109.844	2104.540
9.5	2082.794	2089.689	2094.993	2098.175	2092.872
10.0	2070.065	2076.430	2081.734	2085.446	2080.673
10.5	2056.806	2062.640	2069.005	2072.717	2069.005
11.0	2043.016	2048.850	2054.684	2059.458	2057.336
11.5	2028.696	2034.000	2040.364	2045.138	2044.077
12.0	2014.376	2019.149	2024.983	2031.348	2030.817
12.5	2000.055	2003.768	2009.602	2017.027	2017.027
13.0	1984.144	1988.387	1994.221	2002.177	2003.238
13.5	1969.824	1972.476	1978.310	1987.326	1989.448
14.0	1954.443	1956.564	1961.868	1972.476	1975.128
14.5	1938.001	1940.123	1944.896	1956.564	1960.277
15.0	1921.559	1923.681	1927.394	1940.653	1945.426
15.5	1905.648	1906.709	1909.891	1924.742	1930.045
16.0	1889.206	1889.206	1891.858	1908.300	1914.665
16.5	1872.234	1872.234	1874.356	1891.328	1898.753
17.0	1855.262	1854.201	1855.262	1873.825	1882.311
17.5	1838.290	1836.169	1836.699	1856.853	1866.931
18.0	1820.788	1818.136	1817.605	1838.820	1850.489
18.5	1803.285	1799.572	1798.512	1820.788	1833.517
19.0	1785.783	1780.479	1778.888	1802.755	1816.545
19.5	1768.280	1761.916	1759.264	1784.192	1799.042
20.0	1750.778	1742.822	1739.640	1765.098	1782.070
20.5	1732.214	1723.198	1719.485	1746.535	1764.568
21.0	1714.182	1704.104	1698.801	1727.441	1747.595
21.5	1695.618	1685.011	1678.116	1708.347	1729.563
22.0	1677.586	1665.917	1657.962	1688.724	1710.999
22.5	1660.083	1646.293	1637.277	1669.630	1693.497
23.0	1641.520	1626.669	1617.122	1650.006	1675.464
23.5	1624.017	1607.576	1596.438	1630.912	1657.431
24.0	1607.045	1588.482	1576.283	1611.819	1639.398
24.5	1589.012	1568.858	1555.599	1592.195	1621.896
25.0	1571.510	1549.764	1534.914	1572.571	1604.393
25.5	1554.007	1530.671	1514.229	1552.947	1586.891
26.0	1536.505	1512.108	1494.075	1534.384	1570.449
26.5	1519.533	1493.544	1473.920	1515.290	1552.416

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**CANDELA TABULATION - (Cont.)**

27.0	1502.561	1474.981	1453.766	1496.727	1535.975
27.5	1485.589	1456.418	1433.612	1478.163	1519.003
28.0	1469.677	1438.385	1413.457	1459.600	1502.030
28.5	1452.705	1420.352	1393.833	1441.037	1485.589
29.0	1436.794	1402.319	1374.209	1422.474	1469.147
29.5	1420.352	1384.817	1354.055	1403.911	1452.175
30.0	1403.911	1366.784	1334.431	1385.878	1435.733
30.5	1387.999	1349.282	1314.807	1367.845	1419.291
31.0	1372.088	1331.779	1295.183	1349.812	1403.380
31.5	1356.177	1314.277	1276.089	1331.779	1386.938
32.0	1339.735	1297.305	1256.996	1314.277	1371.027
32.5	1323.823	1280.332	1238.433	1296.244	1355.116
33.0	1308.442	1262.830	1219.339	1278.211	1338.674
33.5	1292.531	1246.388	1200.776	1260.708	1322.763
34.0	1277.150	1228.886	1182.213	1243.206	1306.321
34.5	1261.769	1212.444	1164.180	1225.173	1290.940
35.0	1246.919	1195.472	1146.147	1207.671	1275.029
35.5	1231.538	1179.030	1128.114	1190.699	1258.587
36.0	1216.687	1162.589	1110.611	1173.726	1243.206
36.5	1201.837	1146.147	1093.109	1156.754	1227.825
37.0	1186.986	1130.235	1075.607	1139.782	1211.914
37.5	1172.135	1114.324	1058.634	1122.810	1196.002
38.0	1157.815	1098.943	1042.193	1106.899	1180.621
38.5	1143.495	1083.562	1025.751	1090.457	1165.240
39.0	1128.644	1067.651	1009.309	1074.546	1150.390
39.5	1114.855	1052.270	993.398	1058.634	1135.539
40.0	1100.534	1037.419	977.487	1042.723	1120.689
40.5	1085.684	1022.569	962.106	1026.812	1105.838
41.0	1071.364	1007.718	946.725	1011.431	1090.988
41.5	1057.574	992.868	931.874	996.580	1076.667
42.0	1043.253	979.078	916.493	981.199	1062.347
42.5	1028.933	964.227	901.643	966.879	1048.027
43.0	1014.613	950.437	887.322	952.028	1033.707
43.5	1000.823	936.117	873.002	937.708	1019.386
44.0	987.033	922.327	858.682	923.388	1005.066
44.5	973.244	908.537	844.892	908.537	990.746
45.0	958.923	894.748	831.102	894.217	976.956
45.5	945.134	880.427	817.312	880.427	962.636
46.0	931.344	867.168	803.523	866.107	948.316
46.5	917.024	853.378	790.263	851.787	934.526
47.0	903.234	839.588	777.004	837.467	919.675
47.5	888.914	825.799	763.744	823.677	905.886
48.0	875.124	812.009	751.015	809.887	891.565
48.5	861.864	798.749	738.286	796.097	877.245
49.0	848.074	784.959	725.557	782.308	863.455
49.5	834.285	771.700	713.358	768.518	848.605
50.0	820.495	757.910	700.629	754.728	834.815
50.5	806.705	744.651	688.431	740.938	820.495
51.0	792.915	731.391	676.762	727.679	806.705
51.5	779.125	717.601	665.094	714.419	792.385
52.0	765.866	704.872	653.426	701.160	778.595
52.5	752.076	691.613	641.757	687.900	764.805
53.0	738.817	678.884	630.089	674.641	750.485
53.5	725.027	665.624	618.421	661.912	736.695
54.0	711.237	653.426	607.283	649.183	722.905
54.5	698.508	640.697	596.145	636.454	709.115

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**CANDELA TABULATION - (Cont.)**

55.0	685.248	627.968	585.007	623.725	695.856
55.5	671.989	615.769	574.399	611.526	683.127
56.0	658.729	603.570	563.261	599.327	669.867
56.5	645.470	591.371	552.123	586.598	656.078
57.0	632.741	579.703	541.516	574.399	643.348
57.5	619.481	567.504	530.378	562.731	630.089
58.0	606.752	555.306	519.611	551.063	616.830
58.5	594.023	543.637	509.004	538.864	603.570
59.0	580.764	531.969	498.343	527.302	590.311
59.5	568.035	519.983	487.683	515.315	577.582
60.0	555.306	508.049	476.810	503.329	564.322
60.5	543.107	496.063	466.149	491.501	551.593
61.0	531.439	484.182	455.648	479.727	538.864
61.5	519.081	472.514	444.881	467.899	526.400
62.0	507.307	461.270	434.167	456.390	514.095
62.5	495.426	450.185	423.295	444.775	502.109
63.0	483.546	439.259	412.104	433.584	489.645
63.5	471.506	428.068	400.860	422.817	477.287
64.0	459.413	416.983	389.987	411.520	464.876
64.5	447.533	406.057	379.273	400.541	452.412
65.0	435.440	395.132	368.507	389.934	440.108
65.5	422.923	384.365	358.005	379.273	428.174
66.0	410.937	373.651	347.345	369.090	416.188
66.5	398.738	362.991	336.684	358.801	403.724
67.0	387.335	352.436	326.342	348.564	392.321
67.5	375.879	341.988	316.211	338.699	380.758
68.0	364.476	331.804	306.665	328.834	369.461
68.5	353.020	321.727	297.595	318.810	358.217
69.0	341.882	311.703	288.950	309.104	347.451
69.5	331.221	301.891	280.411	299.557	336.790
70.0	320.242	292.185	271.872	290.223	325.811
70.5	309.582	282.373	263.386	280.941	315.045
71.0	298.921	272.667	254.847	271.872	304.596
71.5	288.313	263.174	246.254	262.696	294.307
72.0	277.812	253.839	237.821	253.627	283.752
72.5	267.523	244.504	229.442	244.716	273.410
73.0	257.233	235.329	221.168	235.859	263.121
73.5	247.156	226.100	212.894	226.896	253.043
74.0	237.185	217.031	204.673	217.932	243.284
74.5	227.267	207.855	196.346	209.022	233.101
75.0	217.508	198.786	188.019	200.218	223.130
75.5	207.696	189.716	179.904	191.413	213.106
76.0	198.043	180.594	171.683	182.503	203.188
76.5	188.602	171.577	163.569	173.487	193.270
77.0	179.056	162.667	155.401	164.417	183.458
77.5	169.562	153.704	147.445	155.772	173.646
78.0	160.174	145.164	139.595	147.339	164.046
78.5	150.839	136.838	131.693	138.906	154.658
79.0	141.558	128.458	123.896	130.844	145.005
79.5	132.488	120.078	116.153	122.729	135.724
80.0	123.525	111.963	108.356	114.615	126.495
80.5	114.721	104.060	100.772	106.606	117.426
81.0	106.235	96.211	93.240	98.703	108.674
81.5	98.173	88.520	85.974	90.960	100.135
82.0	90.164	81.042	78.602	83.375	91.915
82.5	82.792	73.935	71.283	76.056	84.065

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**CANDELA TABULATION - (Cont.)**

83.0	75.791	67.358	63.858	69.002	76.640
83.5	69.373	61.312	56.697	62.319	69.586
84.0	63.168	55.743	49.962	56.167	63.115
84.5	57.122	50.492	43.809	50.439	57.069
85.0	51.235	45.559	38.718	45.135	51.235
85.5	45.294	40.521	34.581	39.884	45.613
86.0	39.778	35.588	31.080	34.899	40.044
86.5	34.475	30.815	27.845	30.179	35.058
87.0	29.807	26.254	24.769	25.882	30.550
87.5	25.352	22.170	21.692	22.276	26.519
88.0	21.268	18.669	18.457	19.200	22.753
88.5	17.237	15.381	14.745	15.964	18.988
89.0	12.093	11.085	9.812	10.979	14.214
89.5	4.773	5.251	4.614	4.879	6.630
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-L50-930-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-L50-930-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-L50-930-DMA-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	746.16	N.A.	18.00
0-30	1464.08	N.A.	35.40
0-40	2216.62	N.A.	53.60
0-60	3475.14	N.A.	84.00
0-80	4083.86	N.A.	98.70
0-90	4138.57	N.A.	100.00
10-90	3933.46	N.A.	95.00
20-40	1470.46	N.A.	35.50
20-50	2162.94	N.A.	52.30
40-70	1653.64	N.A.	40.00
60-80	608.72	N.A.	14.70
70-80	213.61	N.A.	5.20
80-90	54.71	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	4138.57	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	205.11
10-20	541.05
20-30	717.92
30-40	752.54
40-50	692.49
50-60	566.04
60-70	395.11
70-80	213.61
80-90	54.71
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-L50-930-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-L50-930-DMA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

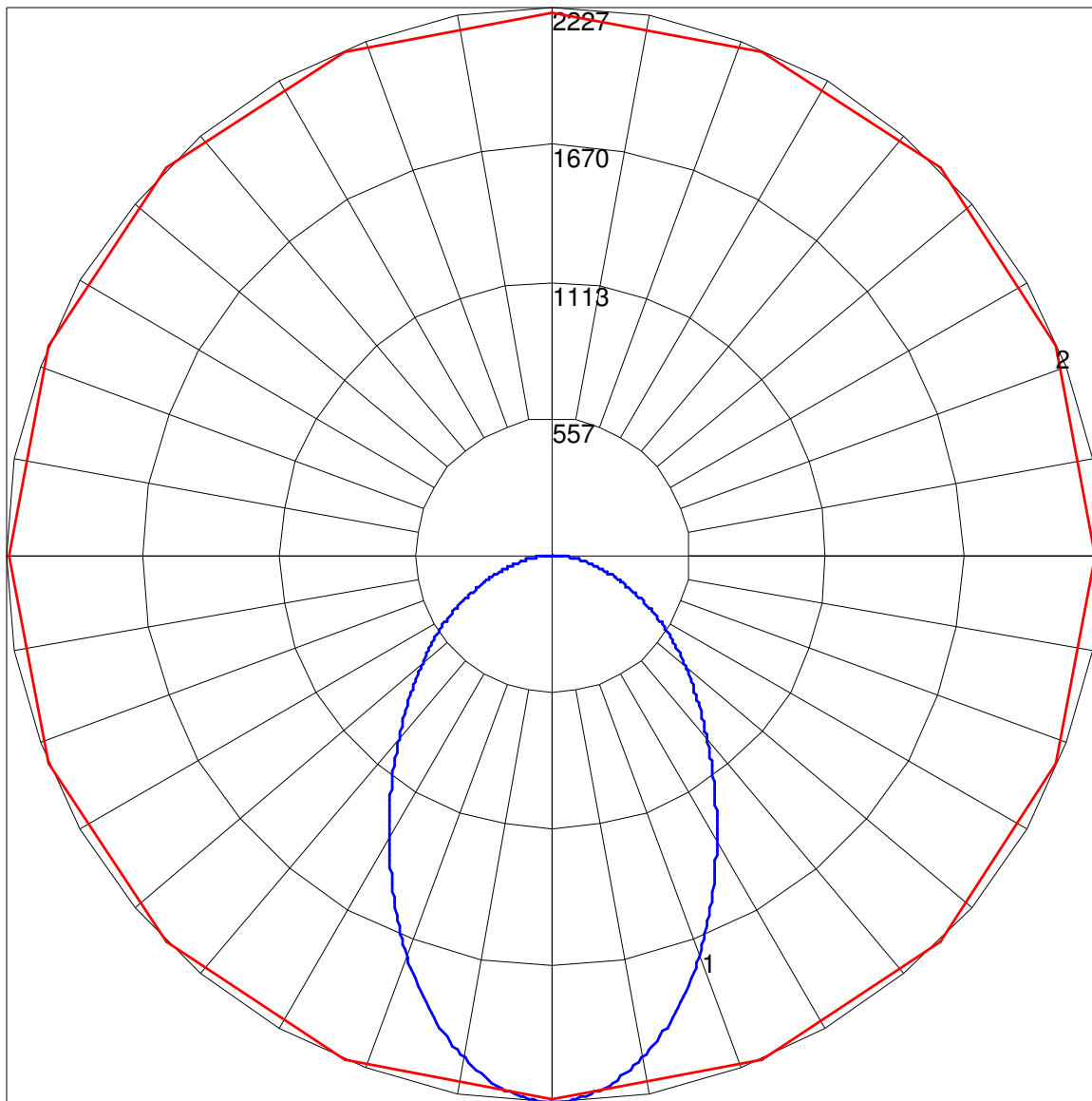
Reflectances

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	15.7	17.2	16.1	17.6	17.9	15.7	17.2	16.1	17.5	17.8
	3H	17.3	18.7	17.7	19.1	19.4	17.3	18.7	17.7	19.0	19.4
	4H	17.9	19.2	18.3	19.6	20.0	18.0	19.3	18.4	19.6	20.0
	6H	18.4	19.6	18.8	19.9	20.3	18.4	19.6	18.8	20.0	20.3
	8H	18.5	19.6	18.9	20.0	20.4	18.5	19.7	19.0	20.0	20.4
	12H	18.5	19.6	19.0	20.0	20.4	18.6	19.7	19.0	20.1	20.5
4H	2H	16.1	17.4	16.5	17.8	18.2	16.1	17.4	16.5	17.8	18.1
	3H	18.0	19.1	18.4	19.5	19.9	18.0	19.1	18.4	19.5	19.9
	4H	18.7	19.7	19.1	20.1	20.5	18.7	19.7	19.1	20.1	20.5
	6H	19.2	20.1	19.7	20.5	21.0	19.3	20.1	19.7	20.6	21.0
	8H	19.4	20.2	19.9	20.6	21.1	19.4	20.2	19.9	20.7	21.1
	12H	19.5	20.2	20.0	20.7	21.2	19.6	20.3	20.0	20.7	21.2
8H	4H	18.9	19.7	19.4	20.2	20.6	18.9	19.7	19.4	20.2	20.6
	6H	19.5	20.2	20.0	20.7	21.2	19.6	20.2	20.1	20.7	21.2
	8H	19.7	20.3	20.3	20.8	21.3	19.8	20.4	20.3	20.9	21.4
	12H	19.9	20.4	20.4	20.9	21.5	20.0	20.5	20.5	21.0	21.5
12H	4H	18.9	19.6	19.4	20.1	20.6	19.0	19.7	19.4	20.1	20.6
	6H	19.6	20.2	20.1	20.6	21.2	19.6	20.2	20.1	20.7	21.2
	8H	19.8	20.3	20.3	20.8	21.4	19.9	20.4	20.4	20.9	21.4

Maximum UGR = 21.5

POLAR GRAPH



Maximum Candela = 2226.527 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.)