

IES INDOOR REPORT

PHOTOMETRIC FILENAME : FRM-24-L78-830-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-L78-830-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	7788
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
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	4159	3210	3413
55	3689	2779	3002
65	3187	2384	2581
75	2574	1978	2150
85	1896	1420	1674

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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	4173.381	4173.381	4173.381	4173.381	4173.381
0.5	4124.864	4169.420	4183.282	4180.312	4190.213
1.0	4122.884	4167.440	4181.302	4178.331	4187.242
1.5	4120.904	4164.470	4178.331	4173.381	4183.282
2.0	4116.943	4160.509	4173.381	4167.440	4176.351
2.5	4111.993	4154.568	4166.450	4159.519	4168.430
3.0	4107.042	4148.627	4158.529	4150.608	4159.519
3.5	4099.121	4140.706	4149.618	4139.716	4148.627
4.0	4091.200	4131.795	4138.726	4127.835	4135.756
4.5	4082.289	4121.894	4126.845	4113.973	4120.904
5.0	4072.388	4111.003	4113.973	4099.121	4106.052
5.5	4061.496	4098.131	4099.121	4082.289	4089.220
6.0	4049.615	4084.269	4082.289	4065.457	4069.417
6.5	4035.753	4071.398	4064.467	4045.654	4050.605
7.0	4021.891	4056.546	4046.645	4025.852	4028.822
7.5	4008.030	4039.714	4026.842	4005.059	4006.049
8.0	3992.188	4021.891	4007.039	3982.286	3983.276
8.5	3975.355	4004.069	3984.267	3957.533	3958.523
9.0	3958.523	3985.257	3962.484	3932.780	3932.780
9.5	3941.691	3965.454	3939.711	3908.027	3907.037
10.0	3922.879	3944.662	3914.958	3881.294	3879.313
10.5	3904.066	3923.869	3890.205	3853.570	3849.609
11.0	3884.264	3901.096	3863.471	3824.856	3820.896
11.5	3864.461	3878.323	3836.738	3795.153	3791.192
12.0	3843.669	3854.560	3809.014	3764.459	3760.498
12.5	3821.886	3829.807	3780.301	3732.775	3729.804
13.0	3800.103	3805.054	3751.587	3701.091	3698.120
13.5	3777.330	3779.311	3721.883	3669.407	3667.426
14.0	3754.557	3752.577	3691.189	3635.742	3633.762
14.5	3730.794	3726.834	3659.505	3602.078	3599.108
15.0	3707.031	3700.100	3627.821	3566.433	3565.443
15.5	3683.268	3671.387	3595.147	3531.779	3530.789
16.0	3658.515	3643.663	3562.473	3497.125	3495.144
16.5	3633.762	3614.950	3527.819	3460.490	3459.500
17.0	3609.009	3585.246	3493.164	3424.845	3422.865
17.5	3583.266	3554.552	3458.510	3388.211	3386.231
18.0	3556.532	3523.858	3422.865	3350.586	3348.606
18.5	3528.809	3493.164	3386.231	3312.961	3310.981
19.0	3502.075	3462.470	3350.586	3275.336	3273.356
19.5	3474.352	3430.786	3313.951	3237.712	3236.722
20.0	3446.628	3399.102	3276.327	3198.107	3198.107
20.5	3418.905	3366.428	3238.702	3160.482	3160.482
21.0	3390.191	3333.754	3200.087	3120.877	3122.857
21.5	3360.487	3301.080	3161.472	3082.262	3084.242
22.0	3330.784	3268.406	3122.857	3043.647	3046.617
22.5	3302.070	3235.731	3084.242	3004.042	3008.002
23.0	3273.356	3202.067	3045.627	2965.427	2970.378
23.5	3244.643	3167.413	3006.022	2925.822	2932.753
24.0	3215.929	3134.739	2967.407	2886.217	2895.128
24.5	3186.225	3100.084	2928.792	2848.592	2858.493
25.0	3156.521	3066.420	2890.177	2809.977	2821.859
25.5	3127.808	3032.756	2850.572	2772.353	2785.224
26.0	3098.104	2999.091	2812.948	2733.738	2749.580
26.5	3069.390	2964.437	2773.343	2695.123	2713.935

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27.0	3039.686	2930.773	2734.728	2657.498	2679.281
27.5	3010.973	2897.108	2696.113	2620.863	2643.636
28.0	2982.259	2863.444	2658.488	2584.229	2608.982
28.5	2952.555	2829.780	2620.863	2547.594	2576.308
29.0	2922.852	2796.116	2583.238	2511.949	2541.653
29.5	2894.138	2763.441	2546.604	2476.305	2507.989
30.0	2865.424	2729.777	2508.979	2440.660	2476.305
30.5	2837.701	2696.113	2472.344	2406.006	2443.631
31.0	2809.977	2663.439	2434.720	2371.352	2411.947
31.5	2780.274	2630.765	2399.075	2337.687	2380.263
32.0	2751.560	2597.100	2362.440	2304.023	2348.579
32.5	2722.846	2564.426	2325.806	2270.359	2317.885
33.0	2693.142	2532.742	2290.161	2236.694	2287.191
33.5	2665.419	2500.068	2254.517	2204.020	2257.487
34.0	2635.715	2467.394	2218.872	2172.336	2227.783
34.5	2607.001	2435.710	2185.208	2139.662	2198.079
35.0	2578.288	2403.036	2150.553	2108.968	2169.366
35.5	2550.564	2370.361	2115.899	2077.284	2140.652
36.0	2521.851	2338.677	2081.245	2046.590	2111.939
36.5	2493.137	2306.993	2048.570	2015.896	2084.215
37.0	2464.423	2275.309	2015.896	1985.202	2056.491
37.5	2435.710	2244.615	1983.222	1955.499	2028.768
38.0	2407.986	2213.922	1951.538	1926.785	2001.044
38.5	2379.273	2182.237	1919.854	1898.071	1974.311
39.0	2349.569	2150.553	1888.170	1870.348	1947.578
39.5	2321.845	2120.850	1857.476	1841.634	1921.834
40.0	2293.132	2090.156	1827.772	1814.901	1896.091
40.5	2265.408	2060.452	1798.069	1787.177	1870.348
41.0	2235.704	2029.758	1769.355	1760.444	1844.605
41.5	2207.981	2001.044	1740.641	1734.701	1819.851
42.0	2179.267	1971.341	1711.928	1708.957	1794.108
42.5	2151.544	1942.627	1684.204	1683.214	1769.355
43.0	2122.830	1912.923	1656.481	1656.481	1745.592
43.5	2094.116	1884.210	1629.747	1631.727	1720.839
44.0	2065.403	1855.496	1603.014	1606.974	1697.076
44.5	2037.679	1826.782	1577.271	1582.221	1673.313
45.0	2008.965	1799.059	1550.537	1557.468	1648.560
45.5	1980.252	1770.345	1524.794	1533.705	1624.797
46.0	1952.528	1741.631	1500.041	1508.952	1601.034
46.5	1924.805	1713.908	1475.288	1485.189	1577.271
47.0	1897.081	1686.184	1450.534	1461.426	1552.517
47.5	1868.368	1658.461	1425.781	1438.653	1528.754
48.0	1839.654	1630.737	1402.018	1414.890	1504.991
48.5	1810.940	1603.014	1377.265	1391.127	1481.228
49.0	1784.207	1576.280	1354.492	1367.364	1457.465
49.5	1754.503	1548.557	1330.729	1344.591	1434.692
50.0	1726.780	1521.823	1306.966	1320.828	1410.929
50.5	1699.056	1495.090	1284.193	1298.055	1388.157
51.0	1670.342	1468.357	1261.420	1275.282	1364.393
51.5	1642.619	1440.633	1239.638	1251.519	1339.640
52.0	1612.915	1413.900	1216.865	1228.746	1316.867
52.5	1585.192	1387.166	1195.082	1205.973	1293.104
53.0	1557.468	1361.423	1174.289	1184.191	1269.341
53.5	1529.745	1334.690	1152.507	1161.418	1245.578
54.0	1501.031	1308.946	1130.724	1138.645	1221.815
54.5	1473.307	1284.193	1109.931	1116.862	1198.052

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55.0	1445.584	1258.450	1089.138	1095.079	1176.270
55.5	1417.860	1232.707	1068.346	1073.296	1153.497
56.0	1390.137	1207.954	1047.553	1051.514	1129.734
56.5	1363.403	1183.200	1026.761	1030.721	1106.961
57.0	1336.670	1158.447	1006.958	1008.938	1084.188
57.5	1308.946	1133.694	987.057	987.552	1061.415
58.0	1282.213	1109.931	966.858	966.561	1039.632
58.5	1255.480	1085.178	947.154	945.273	1017.849
59.0	1228.746	1061.415	927.055	924.382	995.077
59.5	1203.003	1037.652	907.351	903.787	972.700
60.0	1176.270	1013.889	887.450	883.192	951.214
60.5	1150.526	990.126	867.548	862.796	930.223
61.0	1124.783	966.759	848.043	842.201	908.738
61.5	1098.050	943.689	827.745	822.003	887.747
62.0	1073.296	920.718	808.141	801.804	867.251
62.5	1047.553	898.242	788.140	781.902	846.261
63.0	1021.810	875.667	768.338	762.298	825.072
63.5	998.047	853.786	748.634	742.891	805.269
64.0	972.304	831.508	728.337	723.485	784.873
64.5	946.560	809.527	708.435	704.376	764.872
65.0	920.124	788.140	688.435	685.860	745.268
65.5	894.975	766.258	668.830	667.642	725.663
66.0	870.024	744.377	649.523	649.226	704.376
66.5	845.766	723.089	630.413	631.601	684.771
67.0	821.507	701.504	611.601	614.175	665.464
67.5	796.754	680.415	592.986	596.650	646.453
68.0	771.011	659.622	575.065	579.422	627.245
68.5	745.862	639.522	557.738	562.193	608.927
69.0	722.000	619.027	540.609	545.064	590.016
69.5	698.732	599.125	523.777	528.232	571.303
70.0	675.167	579.719	507.142	511.697	552.787
70.5	652.394	560.114	490.706	495.459	534.965
71.0	629.027	540.807	474.567	479.221	516.945
71.5	606.749	521.796	458.626	463.181	499.420
72.0	584.075	503.083	442.685	447.240	481.993
72.5	561.995	484.172	426.744	431.497	464.666
73.0	539.916	465.557	411.199	415.655	447.636
73.5	518.430	447.042	395.555	400.011	430.507
74.0	497.241	428.625	380.010	384.268	413.477
74.5	475.954	410.407	364.663	368.822	396.743
75.0	455.062	392.288	349.712	353.376	380.109
75.5	434.170	374.367	334.762	338.326	363.277
76.0	413.675	356.544	319.514	323.078	347.039
76.5	393.476	338.722	304.761	308.028	330.504
77.0	373.773	320.702	290.206	293.077	314.266
77.5	354.069	303.375	275.453	278.621	298.127
78.0	334.564	286.839	260.799	264.067	282.186
78.5	315.256	270.205	246.541	249.809	266.344
79.0	296.543	254.066	232.284	235.650	250.898
79.5	278.621	238.224	218.224	221.491	235.551
80.0	260.799	223.075	204.164	207.332	220.303
80.5	243.373	208.025	190.203	193.372	206.243
81.0	226.343	193.273	176.440	180.104	192.678
81.5	209.808	179.213	162.777	167.727	180.203
82.0	193.966	165.450	149.608	155.846	167.925
82.5	178.817	152.281	136.538	144.756	155.747

IES INDOOR REPORT**PHOTOMETRIC FILENAME : FRM-24-L78-830-DMA-DIM-UNV_.IES_.IES****CANDELA TABULATION - (Cont.)**

83.0	164.460	139.410	124.261	134.162	143.865
83.5	150.598	127.132	112.973	123.469	132.380
84.0	137.727	115.449	102.676	112.874	121.092
84.5	124.954	104.062	93.369	102.478	110.201
85.0	112.874	93.171	84.557	92.280	99.706
85.5	101.290	82.775	76.339	82.477	89.507
86.0	89.804	72.675	68.517	73.269	80.398
86.5	78.616	63.269	61.091	65.051	72.180
87.0	67.428	54.853	54.160	58.021	64.556
87.5	56.239	47.229	48.021	52.081	57.922
88.0	45.249	40.001	42.278	46.635	51.982
88.5	35.447	33.070	36.338	41.189	46.239
89.0	26.436	25.545	29.110	33.367	36.932
89.5	16.337	16.238	19.505	25.050	29.110
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-L78-830-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-L78-830-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-L78-830-DMA-DIM-UNV_.IES_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1403.11	N.A.	18.00
0-30	2753.84	N.A.	35.40
0-40	4167.42	N.A.	53.50
0-60	6532.23	N.A.	83.90
0-80	7676.91	N.A.	98.60
0-90	7787.81	N.A.	100.00
10-90	7402.36	N.A.	95.10
20-40	2764.31	N.A.	35.50
20-50	4064.96	N.A.	52.20
40-70	3108.16	N.A.	39.90
60-80	1144.68	N.A.	14.70
70-80	401.33	N.A.	5.20
80-90	110.90	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	7787.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	385.45
10-20	1017.66
20-30	1350.74
30-40	1413.58
40-50	1300.65
50-60	1064.16
60-70	743.34
70-80	401.33
80-90	110.90
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-L78-830-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-L78-830-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	15.9	17.5	16.3	17.8	18.1	14.9	16.4	15.2	16.7	17.0
	3H	17.6	19.0	18.0	19.3	19.7	16.5	17.9	16.9	18.2	18.6
	4H	18.2	19.5	18.6	19.9	20.2	17.1	18.4	17.5	18.8	19.1
	6H	18.6	19.8	19.1	20.2	20.6	17.5	18.7	18.0	19.1	19.5
	8H	18.8	19.9	19.2	20.3	20.7	17.7	18.8	18.1	19.2	19.6
	12H	18.9	19.9	19.3	20.3	20.8	17.8	18.9	18.2	19.3	19.7

UGR Viewed Endwise

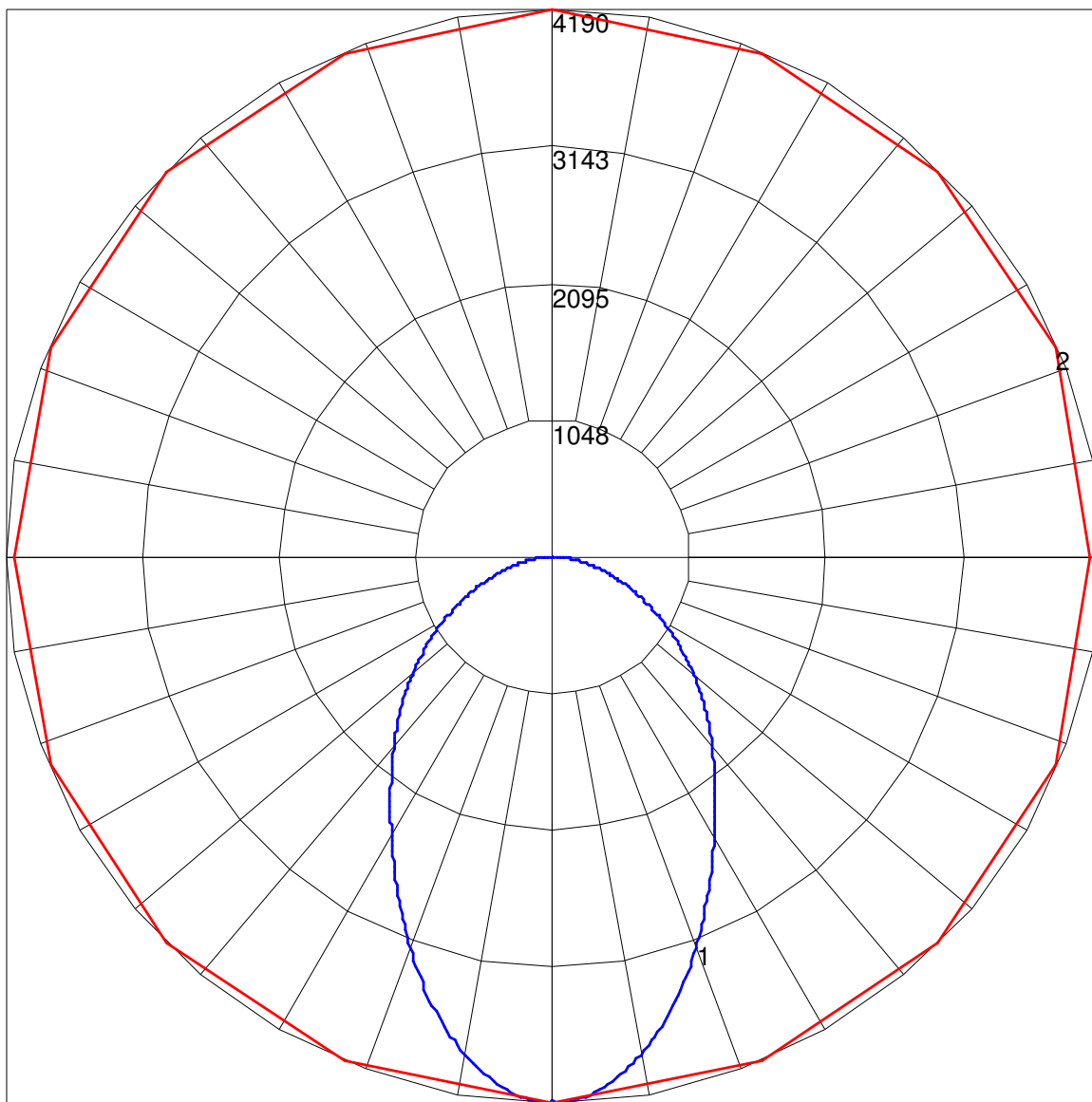
4H	2H	16.3	17.6	16.7	17.9	18.3	15.4	16.7	15.8	17.0	17.4
	3H	18.2	19.2	18.6	19.6	20.0	17.2	18.3	17.6	18.7	19.1
	4H	18.9	19.9	19.3	20.3	20.7	17.9	18.9	18.4	19.3	19.8
	6H	19.4	20.3	19.9	20.7	21.2	18.5	19.4	19.0	19.8	20.3
	8H	19.6	20.4	20.1	20.8	21.3	18.7	19.5	19.1	19.9	20.4
	12H	19.7	20.4	20.2	20.9	21.4	18.8	19.5	19.3	20.0	20.5

8H	4H	19.1	19.8	19.5	20.3	20.8	18.2	19.0	18.7	19.4	19.9
	6H	19.7	20.3	20.2	20.8	21.3	18.9	19.5	19.4	20.0	20.5
	8H	19.9	20.5	20.4	21.0	21.5	19.1	19.7	19.6	20.2	20.7
	12H	20.1	20.6	20.6	21.1	21.7	19.3	19.8	19.8	20.3	20.9

12H	4H	19.1	19.8	19.5	20.2	20.7	18.2	18.9	18.7	19.4	19.9
	6H	19.7	20.3	20.2	20.8	21.3	18.9	19.5	19.4	20.0	20.5
	8H	20.0	20.5	20.5	21.0	21.6	19.2	19.7	19.7	20.2	20.8

Maximum UGR = 21.7

POLAR GRAPH



Maximum Candela = 4190.213 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.)