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IES INDOOR REPORT

PHOTOMETRIC FILENAME : FSN MROR 4 LIGHT.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 18097-C

[TESTLAB] LightLab International (www.LightLabInternational.com)

[MANUFAC] Justice Design Group, Los Angeles, CA 90071

[LUMCAT] Artisan Glass (FSN) - Mercury Glass (MROR) 4-Light Bath Bar

[LUMINAIRE] Justice Design Group - Wall mount bathroom luminaire. Product ID: FSN MROR 4-Light

[MORE] Steel formed housing and four frosted clear glass lenses with white interior.

[MORE] 40 LEDs mounted in four circular arrays with white plastic dome lenses.

[MORE] No driver.

[MORE] Operating at 120 VAC and 60 Hz.

[MORE] Simulated data from test of one and six lamp fixtures.

[ISSUE DATE] April 18, 2018

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1717
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	29.99
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.56
Spacing Criterion (90-270)	1.74
Spacing Criterion (Diagonal)	1.54
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.08 m
Luminous Width (90-270)	0.66 m
Luminous Height	0.14 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2298	2616	5769
55	1938	2069	4169
65	1733	1799	3556
75	1609	1633	3719
85	1549	1553	4483

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	269.130	269.130	269.130	269.130	269.130	269.130	269.130	269.130	269.130
0.5	266.524	267.299	268.323	268.447	269.316	270.401	271.239	271.301	271.332
1.0	267.206	268.106	268.540	268.726	269.657	271.394	272.728	273.255	273.658
1.5	269.347	269.874	269.874	269.409	270.556	272.821	274.775	276.016	276.512
2.0	271.735	271.952	271.797	270.463	271.611	274.372	277.164	279.087	279.707
2.5	274.651	274.837	274.031	272.045	272.945	276.233	279.862	282.468	283.182
3.0	278.125	277.536	276.512	273.907	274.310	278.156	282.902	285.818	286.780
3.5	281.631	280.793	279.273	275.799	275.892	280.142	285.725	289.324	290.844
4.0	285.260	284.391	281.848	277.908	277.474	282.468	288.858	292.891	294.380
4.5	288.920	287.648	284.826	279.893	279.180	284.795	291.898	296.613	298.350
5.0	292.363	291.371	287.710	282.034	280.793	287.090	294.752	300.025	302.104
5.5	295.838	294.628	290.595	284.422	282.561	289.386	297.885	303.810	305.826
6.0	299.839	298.226	293.542	286.718	284.329	291.867	301.173	307.563	310.169
6.5	303.438	301.701	296.706	288.951	285.973	294.225	304.244	311.193	313.612
7.0	307.036	305.051	299.684	291.340	287.866	296.613	307.532	314.977	317.583
7.5	310.603	308.804	302.724	293.697	289.727	299.095	310.820	318.668	321.429
8.0	313.984	312.247	305.857	295.962	291.588	301.545	313.922	322.267	325.121
8.5	317.459	315.815	308.866	298.350	293.294	304.027	317.179	325.865	328.812
9.0	321.367	319.134	311.937	300.739	295.279	306.478	320.530	329.339	332.503
9.5	325.028	322.577	315.070	303.065	297.296	308.990	323.415	332.721	336.195
10.0	328.533	326.175	318.048	305.485	299.033	311.317	326.517	336.474	339.824
10.5	332.007	329.960	321.181	307.998	300.894	313.829	329.743	339.917	343.484
11.0	335.978	333.217	324.190	310.386	302.755	316.311	332.721	343.360	347.114
11.5	339.700	336.691	327.137	312.992	304.647	318.793	335.854	346.680	350.495
12.0	343.143	340.258	330.270	315.380	306.540	321.274	338.893	350.247	354.000
12.5	345.966	343.453	333.527	317.707	308.370	323.849	341.871	353.349	357.443
13.0	347.951	346.586	336.412	320.126	310.138	326.237	344.880	356.761	360.514
13.5	349.192	349.068	339.607	322.484	312.061	328.750	347.796	359.894	363.089
14.0	349.595	350.650	342.461	324.655	313.922	331.076	350.650	362.748	364.795
14.5	350.557	351.953	345.470	327.106	315.566	333.465	353.473	365.074	365.726
15.0	351.270	352.790	348.293	329.463	317.614	335.823	356.451	366.749	366.129
15.5	351.984	353.442	350.991	331.852	319.475	338.056	359.150	367.401	366.005
16.0	352.232	354.279	353.287	334.209	321.057	340.444	361.848	367.804	365.819
16.5	352.542	354.372	355.365	336.412	322.763	342.740	364.609	367.742	365.385
17.0	352.573	354.590	357.164	338.645	324.779	344.880	367.060	367.432	364.733
17.5	352.977	355.055	358.591	340.972	326.392	347.021	369.169	367.091	364.485
18.0	352.759	354.993	359.491	343.112	328.099	349.316	371.061	366.501	363.647
18.5	352.977	354.962	360.266	345.284	329.898	351.395	372.240	365.943	362.810
19.0	352.915	355.117	360.607	347.455	331.635	353.597	372.891	365.323	362.003
19.5	352.449	354.652	360.856	349.657	333.372	355.613	373.140	364.640	361.073
20.0	351.860	354.528	360.949	351.612	335.016	357.816	373.015	363.709	360.328
20.5	351.364	354.248	360.918	353.783	336.846	359.801	372.674	362.903	359.243
21.0	350.216	353.473	360.794	355.737	338.521	361.879	372.178	361.972	358.219
21.5	349.595	352.697	360.545	357.785	340.258	363.927	371.527	360.825	357.195
22.0	348.975	352.108	360.142	359.646	341.995	365.788	370.844	359.770	355.861
22.5	347.951	351.084	359.739	361.414	343.764	367.773	370.162	358.467	354.279
23.0	346.959	349.875	359.305	362.965	345.408	369.510	369.200	357.102	352.977
23.5	345.532	348.448	358.436	364.051	346.866	371.340	368.114	355.799	351.208
24.0	344.167	346.959	357.661	364.981	348.603	373.047	367.060	354.031	349.409
24.5	342.988	345.749	356.761	365.788	350.123	374.722	365.881	352.077	347.796
25.0	341.561	344.105	355.520	366.439	351.674	376.180	364.547	350.433	345.966
25.5	339.979	342.554	354.341	366.936	353.225	377.296	363.275	348.448	343.888
26.0	338.242	340.786	352.884	367.060	354.559	378.289	361.600	346.307	341.902
26.5	336.598	338.956	351.364	367.432	355.986	378.909	360.080	344.260	339.545

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27.0	334.334	336.939	349.657	367.308	357.288	379.188	358.374	341.871	337.311
27.5	332.783	335.233	347.889	367.060	358.560	379.251	356.358	339.669	335.016
28.0	330.487	333.155	345.811	366.470	359.739	379.002	354.341	337.218	332.534
28.5	328.285	330.735	343.702	365.819	361.073	378.258	352.139	334.706	329.867
29.0	326.175	328.440	341.623	364.640	362.376	377.296	349.750	332.007	327.199
29.5	323.849	326.268	339.266	363.430	363.554	375.993	347.331	329.308	324.469
30.0	321.522	323.880	336.753	361.941	364.516	374.349	344.725	326.548	321.460
30.5	318.606	321.398	334.178	360.111	365.757	372.581	341.809	323.570	318.327
31.0	316.311	319.103	331.480	358.498	366.718	370.596	338.987	320.530	315.380
31.5	313.829	316.466	328.874	356.575	367.804	368.425	336.009	317.552	312.061
32.0	310.882	313.705	326.268	354.341	368.859	365.912	332.969	314.419	308.959
32.5	308.215	311.100	323.197	352.170	369.479	363.151	329.774	311.069	305.299
33.0	305.330	308.184	320.344	349.595	370.255	360.142	326.672	307.656	301.918
33.5	302.011	305.516	317.459	346.866	370.844	357.195	323.446	304.151	297.885
34.0	299.312	302.445	314.264	344.291	370.658	353.659	319.971	300.770	294.473
34.5	296.427	299.467	311.286	341.096	370.193	350.278	316.590	297.172	290.719
35.0	293.015	296.334	308.060	337.901	368.642	346.742	312.899	293.511	286.718
35.5	289.975	293.449	304.958	334.613	366.532	343.081	309.424	289.820	282.778
36.0	286.749	290.068	301.607	331.170	363.803	339.204	305.795	285.818	279.025
36.5	283.337	286.904	298.474	327.447	360.576	335.512	302.104	282.158	274.899
37.0	280.328	283.740	295.124	323.632	356.513	331.356	298.319	278.311	270.960
37.5	277.102	280.421	291.588	319.754	351.426	327.292	294.473	274.217	266.772
38.0	273.689	277.009	288.362	315.877	345.811	323.197	290.688	270.184	262.646
38.5	270.401	273.627	284.826	311.720	339.979	318.886	286.563	265.934	258.645
39.0	267.082	270.401	281.444	307.594	333.961	314.760	282.654	261.902	254.581
39.5	263.918	266.927	277.939	303.314	327.943	310.417	278.591	257.652	250.300
40.0	261.188	263.608	274.341	299.064	321.895	306.136	274.589	253.495	246.299
40.5	258.024	260.227	270.743	294.876	316.156	301.732	270.339	249.308	242.142
41.0	254.829	256.970	267.237	290.471	310.417	297.420	266.214	245.120	238.141
41.5	252.441	253.775	263.484	286.377	304.865	293.015	261.933	240.870	234.294
42.0	249.835	250.580	259.824	282.065	299.715	288.610	257.714	236.714	230.417
42.5	247.664	247.416	256.070	277.722	294.411	284.112	253.309	232.619	226.694
43.0	245.802	244.469	252.410	273.441	289.417	279.707	248.904	228.617	222.817
43.5	244.189	241.925	248.625	268.943	284.733	275.085	244.593	224.771	219.591
44.0	242.856	239.350	244.965	264.539	280.049	270.432	240.002	220.707	216.458
44.5	240.870	237.365	241.274	260.382	275.520	265.872	235.566	217.140	213.511
45.0	239.226	235.442	237.489	255.698	270.991	261.033	231.068	213.697	211.122
45.5	237.675	233.612	234.015	251.386	266.772	256.442	226.818	210.564	208.765
46.0	235.969	232.092	230.386	246.981	262.305	251.541	222.413	207.648	206.531
46.5	234.170	230.355	226.849	242.576	258.117	246.640	218.040	205.104	204.174
47.0	232.340	228.524	223.561	237.923	253.620	241.770	213.511	202.747	201.785
47.5	230.727	226.911	220.149	233.457	249.060	236.745	209.385	200.389	199.397
48.0	229.083	225.267	217.233	228.990	244.500	231.750	205.259	198.156	196.915
48.5	227.284	223.375	214.379	224.275	239.785	226.601	201.134	195.798	194.837
49.0	225.826	221.700	211.929	219.870	234.976	221.700	197.349	193.534	192.603
49.5	224.151	219.963	209.416	215.217	230.044	216.582	193.689	191.207	190.277
50.0	222.506	218.319	207.214	210.719	225.019	211.711	190.463	189.067	188.198
50.5	220.862	216.551	204.949	206.407	219.746	206.655	187.423	186.740	186.027
51.0	219.373	214.969	203.026	202.188	214.472	201.568	184.662	184.631	183.731
51.5	218.009	213.169	201.289	197.473	209.168	196.636	182.211	182.367	181.777
52.0	216.209	211.711	199.738	193.348	203.553	191.735	179.885	180.412	179.761
52.5	214.969	210.098	198.001	189.191	197.815	186.895	177.900	178.272	177.714
53.0	213.418	208.423	196.357	184.910	192.386	182.118	175.666	176.070	175.697
53.5	212.115	206.903	194.650	181.219	186.771	177.589	173.588	174.456	173.650
54.0	210.781	205.539	193.068	177.403	181.281	173.092	171.603	172.223	171.820
54.5	209.013	203.925	191.393	173.929	176.070	168.966	169.586	170.331	170.145

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55.0	207.617	202.685	189.780	170.796	170.765	164.778	167.601	168.346	168.159
55.5	206.686	201.289	188.136	168.190	165.771	160.870	165.616	166.546	166.515
56.0	205.414	199.862	186.616	165.523	160.746	157.582	163.630	164.716	164.654
56.5	204.143	198.435	184.910	163.382	156.062	154.449	161.707	162.948	162.855
57.0	203.057	197.287	183.390	161.087	151.688	152.060	159.908	161.118	161.180
57.5	201.754	195.736	181.870	158.915	147.345	150.168	158.047	159.350	159.505
58.0	200.730	194.495	180.257	157.333	143.312	148.617	156.062	157.675	157.799
58.5	199.303	193.348	178.892	156.124	139.776	146.973	154.293	155.938	156.000
59.0	198.342	192.045	177.465	154.666	136.767	145.453	152.556	154.169	154.418
59.5	197.132	190.804	175.976	153.394	134.286	143.964	150.695	152.649	152.991
60.0	195.829	189.656	174.612	152.060	132.424	142.413	149.082	150.974	151.191
60.5	194.682	188.478	173.278	150.695	130.873	140.769	147.345	149.237	149.796
61.0	193.658	187.268	171.882	149.268	129.602	139.156	145.577	147.717	147.996
61.5	192.820	186.213	170.300	147.996	128.454	137.636	144.026	146.104	146.663
62.0	191.580	184.972	169.121	146.414	127.368	136.147	142.320	144.553	144.956
62.5	190.432	183.793	167.787	145.143	126.096	134.534	140.800	143.033	143.343
63.0	189.439	182.646	166.391	143.747	124.887	132.983	139.249	141.296	142.010
63.5	188.136	181.498	165.150	142.382	123.646	131.432	137.667	139.962	140.365
64.0	187.113	180.505	164.003	141.079	122.374	130.036	136.023	138.473	138.970
64.5	186.368	179.389	162.638	139.621	121.071	128.454	134.596	137.046	137.450
65.0	185.313	178.272	161.614	138.318	119.830	127.027	133.076	135.495	136.023
65.5	184.135	177.186	160.218	137.077	118.527	125.383	131.401	134.224	134.565
66.0	183.111	176.225	159.102	135.712	117.256	123.987	130.005	132.735	133.169
66.5	182.211	175.046	157.861	134.286	116.015	122.560	128.454	131.277	131.866
67.0	181.250	174.146	156.651	133.231	114.526	121.009	126.872	129.819	130.408
67.5	180.102	173.061	155.410	131.928	113.378	119.489	125.600	128.454	128.981
68.0	179.109	171.944	154.324	130.439	112.168	118.279	124.204	127.027	127.709
68.5	178.241	170.920	153.208	129.291	110.803	116.666	122.746	125.786	126.500
69.0	177.341	170.021	151.998	128.020	109.470	115.425	121.474	124.390	124.887
69.5	176.349	168.966	150.912	126.655	108.229	114.092	120.047	123.056	123.646
70.0	175.480	168.066	149.703	125.538	106.895	112.572	118.776	121.753	122.467
70.5	174.332	167.012	148.493	124.328	105.592	111.238	117.411	120.513	120.854
71.0	173.340	166.019	147.624	122.932	104.320	109.904	116.046	119.086	119.768
71.5	172.564	165.244	146.538	121.847	103.079	108.570	114.712	117.876	118.496
72.0	171.665	164.220	145.391	120.575	101.870	107.143	113.471	116.542	117.256
72.5	170.827	163.258	144.429	119.272	100.598	105.902	112.168	115.363	115.953
73.0	169.803	162.328	143.374	118.248	99.357	104.568	110.959	114.030	114.743
73.5	168.842	161.459	142.289	116.976	98.116	103.235	109.625	112.882	113.471
74.0	168.190	160.435	141.296	115.736	96.937	101.963	108.446	111.641	112.323
74.5	167.477	159.474	140.179	114.712	95.604	100.660	107.205	110.431	111.052
75.0	166.453	158.698	139.218	113.626	94.518	99.512	106.057	109.314	109.780
75.5	165.430	157.737	138.349	112.385	93.339	98.333	104.817	107.981	108.632
76.0	164.592	156.868	137.388	111.331	92.067	97.000	103.576	106.833	107.391
76.5	163.599	156.000	136.302	110.276	90.858	95.914	102.397	105.654	106.306
77.0	162.607	155.069	135.526	109.159	89.803	94.735	101.156	104.568	105.189
77.5	162.111	154.324	134.503	108.012	88.562	93.432	100.039	103.328	104.165
78.0	161.180	153.394	133.417	107.019	87.538	92.378	98.923	102.180	102.924
78.5	160.125	152.463	132.642	105.778	86.329	91.230	97.806	101.063	101.839
79.0	159.567	151.595	131.711	104.879	85.212	89.989	96.627	99.977	100.505
79.5	158.481	150.757	130.656	103.948	84.095	88.841	95.511	98.799	99.481
80.0	157.985	149.889	129.881	102.738	83.041	87.725	94.394	97.713	98.395
80.5	157.085	149.144	128.888	101.808	82.048	86.639	93.215	96.720	97.434
81.0	156.186	148.338	127.989	100.815	80.962	85.522	92.284	95.573	96.162
81.5	155.596	147.376	127.182	99.822	80.063	84.592	91.230	94.549	95.138
82.0	154.573	146.569	126.220	98.954	79.039	83.475	90.051	93.618	94.177
82.5	153.890	145.918	125.259	98.054	77.984	82.327	89.058	92.564	93.153

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83.0	152.867	144.956	124.514	97.031	76.961	81.396	88.066	91.509	92.067
83.5	152.122	144.274	123.677	96.100	76.030	80.435	87.011	90.423	90.982
84.0	151.471	143.530	122.746	95.324	75.068	79.380	86.080	89.524	89.958
84.5	150.664	142.630	122.064	94.332	74.169	78.388	85.026	88.407	88.903
85.0	150.013	141.823	121.257	93.525	73.331	77.395	84.126	87.507	88.159
85.5	149.299	141.079	120.358	92.688	72.339	76.340	83.258	86.515	87.073
86.0	148.555	140.303	119.582	91.788	71.532	75.503	82.141	85.336	86.298
86.5	147.779	139.683	118.962	91.013	70.633	74.541	81.210	84.467	85.026
87.0	146.942	138.908	118.062	90.423	69.826	73.641	80.373	83.661	84.157
87.5	146.259	138.101	117.411	89.493	69.206	72.804	79.442	82.637	83.351
88.0	145.608	137.636	116.759	88.903	68.275	71.966	78.636	81.800	82.327
88.5	144.894	136.922	116.046	88.252	67.717	71.129	77.767	80.962	81.427
89.0	144.770	136.519	115.518	87.538	67.065	70.539	76.930	80.001	80.404
89.5	144.832	136.488	115.518	87.476	66.600	69.919	76.154	79.225	79.628
90.0	144.553	136.674	115.736	87.600	66.848	69.764	75.844	78.760	79.101
90.5	145.018	136.860	115.767	87.694	66.848	69.826	75.658	78.512	78.946
91.0	145.422	136.984	115.953	87.880	66.786	69.826	75.503	78.388	78.791
91.5	145.546	137.357	116.108	88.066	67.003	69.857	75.472	78.325	78.512
92.0	145.794	137.326	116.418	88.004	67.034	69.857	75.317	78.077	78.419
92.5	145.980	137.574	116.542	88.252	67.220	69.764	75.192	77.829	78.201
93.0	146.228	137.791	116.542	88.469	67.158	69.578	75.192	77.736	78.077
93.5	146.601	137.946	116.976	88.562	67.468	69.609	75.192	77.612	77.860
94.0	146.756	138.256	117.100	88.810	67.406	69.547	74.913	77.488	77.612
94.5	146.973	138.349	117.287	88.872	67.562	69.392	75.006	77.271	77.240
95.0	147.438	138.566	117.411	89.027	67.562	69.392	74.789	76.837	77.023
95.5	147.376	138.908	117.566	89.214	67.655	69.361	74.634	76.712	76.930
96.0	147.748	139.063	117.783	89.338	67.717	69.299	74.479	76.557	76.526
96.5	147.934	139.218	118.155	89.431	67.903	69.206	74.293	76.216	76.340
97.0	148.152	139.435	118.093	89.648	67.872	69.144	74.200	75.999	75.937
97.5	148.307	139.621	118.279	89.896	67.903	68.988	74.107	75.937	75.782
98.0	148.648	139.652	118.496	89.865	68.151	69.051	73.828	75.627	75.534
98.5	148.679	139.931	118.651	90.144	68.182	68.864	73.735	75.410	75.223
99.0	148.865	140.117	118.651	90.392	68.275	68.678	73.672	75.161	74.975
99.5	149.082	140.179	118.869	90.299	68.337	68.678	73.331	74.913	74.541
100.0	149.144	140.334	118.962	90.485	68.492	68.554	73.269	74.696	74.355
100.5	149.392	140.365	118.993	90.640	68.523	68.461	73.176	74.386	74.045
101.0	149.361	140.459	119.117	90.827	68.678	68.337	72.990	74.045	73.735
101.5	149.703	140.521	119.241	90.889	68.740	68.120	72.773	73.859	73.300
102.0	149.578	140.614	119.210	91.044	68.988	68.058	72.556	73.517	73.176
102.5	149.671	140.614	119.241	91.075	68.988	67.965	72.277	73.207	72.866
103.0	149.703	140.707	119.303	91.199	69.175	67.717	72.028	72.959	72.587
103.5	149.703	140.738	119.241	91.385	69.113	67.624	71.842	72.773	72.028
104.0	149.951	140.769	119.117	91.199	69.175	67.468	71.563	72.463	71.904
104.5	150.013	140.893	119.148	91.385	69.237	67.282	71.191	72.090	71.408
105.0	149.734	140.924	119.086	91.478	69.423	67.096	70.850	71.873	71.067
105.5	149.889	140.738	119.055	91.292	69.485	66.941	70.508	71.470	70.664
106.0	150.013	140.769	119.148	91.354	69.392	66.817	70.167	71.036	70.415
106.5	149.951	140.831	119.086	91.354	69.485	66.662	69.857	70.726	70.012
107.0	150.044	140.831	118.993	91.323	69.392	66.538	69.485	70.260	69.702
107.5	149.951	140.738	118.962	91.292	69.392	66.352	69.175	69.888	69.175
108.0	149.951	140.707	118.900	91.447	69.485	65.980	68.833	69.268	68.647
108.5	150.013	140.676	118.962	91.292	69.361	65.917	68.523	68.895	68.089
109.0	149.734	140.645	118.807	91.292	69.423	65.576	68.182	68.368	67.748
109.5	149.827	140.428	118.651	91.168	69.268	65.483	67.841	67.965	66.972
110.0	149.671	140.459	118.558	91.168	69.361	65.328	67.500	67.344	66.724
110.5	149.703	140.210	118.558	91.137	69.237	65.142	67.065	67.034	65.949

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CANDELA TABULATION - (Cont.)

111.0	149.516	140.241	118.434	91.230	69.268	64.956	66.786	66.507	65.390
111.5	149.423	140.148	118.434	91.106	69.113	64.801	66.290	66.073	65.111
112.0	149.051	140.086	118.310	91.075	69.082	64.491	65.980	65.514	64.429
112.5	149.144	139.962	118.062	90.982	69.144	64.398	65.700	65.080	63.808
113.0	149.082	139.776	118.062	90.889	69.113	64.118	65.359	64.615	63.250
113.5	148.896	139.621	117.907	90.765	69.019	63.994	64.863	63.963	62.815
114.0	148.648	139.528	117.690	90.765	68.988	63.839	64.553	63.622	62.319
114.5	148.710	139.342	117.597	90.609	68.957	63.529	64.242	62.909	61.699
115.0	148.338	139.125	117.318	90.485	68.802	63.343	63.591	62.226	60.985
115.5	148.214	139.156	117.194	90.392	68.833	63.095	63.436	61.606	60.427
116.0	147.903	138.721	116.945	90.175	68.585	63.064	62.909	60.768	59.776
116.5	147.934	138.597	116.790	90.144	68.678	62.691	62.381	60.117	59.124
117.0	147.531	138.380	116.542	89.989	68.523	62.567	62.164	59.527	58.007
117.5	147.190	138.070	116.449	89.834	68.368	62.350	61.823	58.690	57.418
118.0	147.004	137.853	116.077	89.586	68.244	62.071	61.327	58.069	56.425
118.5	146.725	137.729	115.891	89.462	68.058	61.854	60.892	57.387	55.712
119.0	146.352	137.326	115.674	89.400	67.965	61.668	60.644	56.674	54.843
119.5	146.042	137.139	115.456	89.245	67.965	61.482	60.086	55.867	53.913
120.0	145.763	136.953	115.270	88.996	67.748	61.264	59.838	55.029	53.075
120.5	145.546	136.457	115.022	88.686	67.593	60.954	59.372	54.285	52.269
121.0	145.236	136.240	114.650	88.686	67.344	60.737	58.876	53.603	51.431
121.5	144.677	136.023	114.340	88.531	67.344	60.427	58.659	52.920	50.563
122.0	144.429	135.557	114.123	88.159	67.251	60.179	58.225	52.145	49.663
122.5	143.995	135.247	113.905	87.942	67.003	60.086	57.821	51.493	48.919
123.0	143.654	134.968	113.502	87.849	66.848	59.713	57.480	50.780	48.081
123.5	143.188	134.379	113.161	87.445	66.724	59.527	57.139	50.159	47.057
124.0	143.126	133.944	112.944	87.321	66.662	59.341	56.580	49.415	46.375
124.5	142.351	133.634	112.603	87.104	66.414	59.031	56.301	48.794	45.630
125.0	141.823	133.138	112.292	86.856	66.197	58.969	56.022	48.112	44.855
125.5	141.296	132.735	111.827	86.515	66.042	58.690	55.681	47.523	44.266
126.0	140.676	132.176	111.486	86.329	65.980	58.566	55.464	46.995	43.614
126.5	140.428	131.649	111.083	86.018	65.824	58.411	55.060	46.375	42.963
127.0	139.497	131.246	110.741	85.863	65.731	58.256	54.595	45.879	42.311
127.5	138.877	130.625	110.276	85.584	65.607	58.007	54.347	45.444	41.815
128.0	138.442	130.067	109.873	85.243	65.390	57.945	54.068	44.762	41.257
128.5	137.760	129.446	109.439	85.057	65.390	57.883	53.665	44.203	40.729
129.0	137.077	129.105	109.066	84.716	65.111	57.604	53.354	43.583	40.202
129.5	136.612	128.423	108.539	84.498	64.987	57.418	53.137	43.056	39.861
130.0	135.712	127.989	108.105	84.064	64.863	57.077	52.579	42.559	39.364
130.5	135.185	127.368	107.608	83.847	64.863	56.984	52.362	42.094	38.713
131.0	134.565	126.748	107.143	83.661	64.553	56.798	52.052	41.660	38.434
131.5	134.037	126.220	106.740	83.258	64.429	56.674	51.679	41.070	38.155
132.0	133.138	125.600	106.150	83.165	64.335	56.549	51.369	40.636	37.627
132.5	132.331	124.793	105.716	82.699	64.149	56.363	51.152	40.171	37.162
133.0	131.773	124.204	105.220	82.327	63.870	56.177	50.780	39.768	37.069
133.5	130.935	123.584	104.692	82.079	63.839	56.022	50.501	39.457	36.604
134.0	130.253	122.839	104.196	81.707	63.560	55.960	50.159	39.023	36.448
134.5	129.602	122.157	103.669	81.303	63.529	55.774	49.942	38.558	36.045
135.0	128.826	121.505	103.017	80.931	63.281	55.526	49.632	38.279	35.735
135.5	128.082	120.668	102.614	80.621	63.095	55.557	49.322	37.937	35.425
136.0	127.244	120.234	101.994	80.249	62.878	55.216	48.950	37.379	35.022
136.5	126.469	119.520	101.466	80.001	62.722	55.060	48.608	37.131	34.618
137.0	125.600	118.683	100.908	79.535	62.567	54.874	48.484	36.759	34.184
137.5	124.731	117.969	100.350	79.194	62.257	54.719	48.019	36.324	34.029
138.0	123.801	117.225	99.760	78.884	62.195	54.440	47.864	36.138	33.936
138.5	123.087	116.418	99.264	78.481	62.009	54.440	47.740	35.828	33.533

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CANDELA TABULATION - (Cont.)

139.0	122.157	115.767	98.613	78.015	61.668	54.347	47.305	35.394	33.284
139.5	121.350	114.929	97.992	77.643	61.513	54.130	47.088	35.146	32.974
140.0	120.730	114.185	97.155	77.333	61.420	54.068	46.871	34.804	32.664
140.5	119.861	113.285	96.720	76.743	61.047	53.789	46.468	34.556	32.385
141.0	118.993	112.696	96.038	76.526	60.923	53.572	46.344	34.122	32.013
141.5	118.248	111.703	95.480	76.030	60.675	53.541	46.034	33.812	31.702
142.0	117.349	110.959	94.766	75.534	60.365	53.354	45.786	33.440	31.330
142.5	116.263	110.183	94.177	75.161	60.179	53.137	45.630	33.284	30.958
143.0	115.394	109.283	93.494	74.665	59.962	53.075	45.413	32.788	30.865
143.5	114.464	108.384	92.750	74.169	59.713	52.796	45.041	32.509	30.586
144.0	113.595	107.546	92.098	73.797	59.372	52.579	44.979	32.261	30.400
144.5	112.665	106.678	91.447	73.393	59.155	52.641	44.917	32.075	30.182
145.0	111.672	105.933	90.858	72.773	58.876	52.393	44.576	31.671	30.027
145.5	110.772	105.065	90.175	72.432	58.690	52.176	44.359	31.516	29.996
146.0	109.749	104.134	89.431	71.966	58.380	51.927	44.266	31.299	30.182
146.5	108.849	103.173	88.655	71.470	58.038	51.834	43.986	30.834	30.151
147.0	107.950	102.335	88.066	70.974	57.728	51.648	44.017	30.617	30.058
147.5	107.019	101.280	87.352	70.477	57.635	51.493	43.738	30.431	30.151
148.0	105.902	100.412	86.577	70.012	57.232	51.276	43.552	30.182	30.213
148.5	104.848	99.574	85.925	69.485	57.077	51.090	43.397	29.903	30.276
149.0	103.731	98.737	85.150	69.051	56.705	50.966	43.335	29.624	30.431
149.5	102.955	97.775	84.405	68.430	56.363	50.873	43.149	29.500	30.586
150.0	101.901	96.720	83.661	67.996	55.991	50.563	42.994	29.283	30.555
150.5	100.877	95.914	82.885	67.500	55.805	50.501	42.901	29.159	30.741
151.0	99.884	94.797	82.203	66.879	55.464	50.252	42.715	29.128	30.958
151.5	98.985	93.898	81.490	66.445	55.154	50.128	42.559	28.880	30.834
152.0	97.682	93.060	80.652	66.011	54.874	49.880	42.435	28.600	30.772
152.5	96.627	91.974	79.970	65.359	54.502	49.756	42.187	28.569	30.896
153.0	95.821	90.951	79.039	64.708	54.254	49.601	42.218	28.445	30.865
153.5	94.580	90.051	78.388	64.211	53.882	49.353	42.156	28.414	30.989
154.0	93.525	89.058	77.550	63.715	53.572	49.136	41.908	28.352	30.896
154.5	92.378	88.004	76.681	63.095	53.292	48.919	41.908	28.352	30.834
155.0	91.230	86.918	75.937	62.505	53.013	48.670	41.722	28.321	30.834
155.5	90.206	85.863	75.161	61.885	52.641	48.484	41.474	28.383	31.020
156.0	89.214	84.933	74.324	61.451	52.269	48.360	41.474	28.414	31.020
156.5	87.849	83.909	73.424	60.768	52.052	48.081	41.474	28.290	31.206
157.0	87.011	82.947	72.711	60.117	51.555	47.895	41.288	28.042	31.144
157.5	85.801	81.893	71.811	59.527	51.152	47.585	41.226	27.918	30.989
158.0	84.716	80.745	71.098	59.031	50.873	47.430	41.195	27.701	30.989
158.5	83.754	79.845	70.353	58.349	50.407	47.181	41.039	27.298	30.958
159.0	82.544	78.853	69.392	57.728	50.035	46.840	40.977	27.142	30.989
159.5	81.427	77.736	68.585	57.201	49.663	46.747	40.915	26.770	31.020
160.0	80.280	76.619	67.717	56.425	49.260	46.406	40.698	26.739	30.989
160.5	79.256	75.596	66.910	55.836	48.919	46.282	40.512	26.584	30.958
161.0	78.046	74.479	65.980	55.278	48.577	45.972	40.326	26.522	31.206
161.5	76.743	73.424	65.204	54.471	48.112	45.723	40.047	26.150	31.330
162.0	75.534	72.370	64.149	53.789	47.740	45.413	39.768	25.902	31.485
162.5	74.386	71.284	63.343	53.261	47.523	45.196	39.333	25.623	31.485
163.0	73.238	70.136	62.474	52.548	46.933	44.886	38.372	25.436	31.547
163.5	71.997	69.113	61.513	51.927	46.685	44.576	37.348	24.971	31.733
164.0	70.974	67.965	60.675	51.338	46.313	44.483	36.076	24.196	31.640
164.5	69.702	66.786	59.776	50.501	45.848	44.110	34.494	23.513	31.051
165.0	68.492	65.607	58.876	49.849	45.413	43.521	33.036	23.172	30.120
165.5	67.189	64.553	57.945	49.105	45.010	42.839	31.485	23.017	28.880
166.0	66.073	63.405	56.984	48.515	44.483	41.753	29.624	22.893	27.453
166.5	64.739	62.195	55.898	47.864	43.893	40.264	28.073	22.583	25.436

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CANDELA TABULATION - (Cont.)

167.0	63.374	61.047	55.029	47.243	42.963	38.682	26.832	22.427	23.048
167.5	62.164	59.900	54.130	46.468	41.629	36.790	25.591	21.776	20.970
168.0	60.768	58.535	52.889	45.879	39.768	34.742	24.816	21.342	18.488
168.5	59.496	57.325	51.958	45.134	38.124	32.819	24.320	20.814	16.192
169.0	58.194	56.208	51.090	44.017	35.890	30.772	23.761	19.791	13.463
169.5	56.829	55.029	49.942	42.652	33.905	28.787	23.544	18.674	10.547
170.0	55.402	53.758	48.794	40.822	31.671	27.267	23.110	17.061	7.848
170.5	54.037	52.145	47.585	38.930	29.779	26.274	22.489	15.076	5.677
171.0	52.641	50.656	45.817	36.945	28.197	25.281	21.993	13.339	3.474
171.5	51.369	49.384	44.297	34.866	27.111	24.723	21.125	11.850	2.295
172.0	49.880	47.957	42.808	32.881	26.150	24.320	19.636	10.081	2.047
172.5	48.608	46.003	40.729	31.423	25.312	23.606	17.899	8.344	2.016
173.0	46.375	44.235	38.744	30.058	24.599	22.800	16.130	6.669	1.923
173.5	43.707	42.218	36.511	28.445	23.699	21.156	13.804	5.646	1.644
174.0	42.280	39.613	33.936	27.142	22.955	18.767	11.415	5.211	1.427
174.5	39.954	37.100	31.609	25.654	21.559	16.379	9.120	4.684	1.210
175.0	37.162	34.401	29.376	23.792	19.543	13.649	7.290	4.281	0.931
175.5	33.533	31.268	26.739	21.900	17.061	10.671	6.235	3.536	0.682
176.0	29.903	27.794	24.134	19.636	14.424	8.096	5.522	2.947	0.900
176.5	25.995	23.885	21.063	16.441	11.353	6.235	4.715	2.078	0.713
177.0	21.435	19.915	17.619	13.183	8.593	5.242	3.971	1.365	0.589
177.5	16.720	15.448	14.362	10.268	6.328	4.622	3.350	0.900	0.589
178.0	11.695	10.826	10.950	6.979	4.653	3.846	2.637	0.744	0.993
178.5	7.445	6.917	7.228	4.436	3.753	3.164	1.985	0.807	0.682
179.0	4.374	4.157	3.877	2.761	2.916	2.513	1.551	0.744	0.775
179.5	1.551	2.358	1.489	1.489	2.016	2.016	0.962	0.775	1.086
180.0	1.117	1.117	1.117	1.117	1.117	1.117	1.117	1.117	1.117

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	126.45	N.A.	7.40
0-30	290.37	N.A.	16.90
0-40	488.60	N.A.	28.50
0-60	836.06	N.A.	48.70
0-80	1106.12	N.A.	64.40
0-90	1215.24	N.A.	70.80
10-90	1186.59	N.A.	69.10
20-40	362.15	N.A.	21.10
20-50	549.00	N.A.	32.00
40-70	490.64	N.A.	28.60
60-80	270.06	N.A.	15.70
70-80	126.88	N.A.	7.40
80-90	109.13	N.A.	6.40
90-110	199.51	N.A.	11.60
90-120	287.46	N.A.	16.70
90-130	360.98	N.A.	21.00
90-150	460.17	N.A.	26.80
90-180	502.14	N.A.	29.20
110-180	302.63	N.A.	17.60
0-180	1717.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	28.65
10-20	97.80
20-30	163.92
30-40	198.23
40-50	186.85
50-60	160.61
60-70	143.18
70-80	126.88
80-90	109.13
90-100	101.68
100-110	97.83
110-120	87.95
120-130	73.52
130-140	57.61
140-150	41.58
150-160	26.62
160-170	13.08
170-180	2.27

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FSN MROR 4 LIGHT.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	112	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	100	94	89	85	85	94	89	85	81	80	76	73	71	68	66	63	61	59	54
2	90	81	74	68	68	85	77	70	65	69	64	59	61	57	53	54	51	48	44
3	82	71	63	56	56	77	67	60	54	60	54	49	54	49	44	47	44	40	37
4	75	63	54	47	47	70	60	51	45	53	47	41	48	42	38	42	38	34	31
5	69	56	47	40	40	65	53	45	39	48	41	36	43	37	33	38	33	30	27
6	63	50	41	35	35	60	48	40	34	43	36	31	38	33	28	34	30	26	23
7	59	45	37	31	31	55	43	35	29	39	32	27	35	29	25	31	27	23	21
8	54	41	33	27	27	51	39	31	26	36	29	24	32	26	22	29	24	21	18
9	51	38	30	24	24	48	36	28	23	33	26	22	29	24	20	27	22	19	16
10	47	35	27	22	22	45	33	26	21	30	24	20	27	22	18	25	20	17	15

IES INDOOR REPORT
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UGR TABLE - CORRECTED

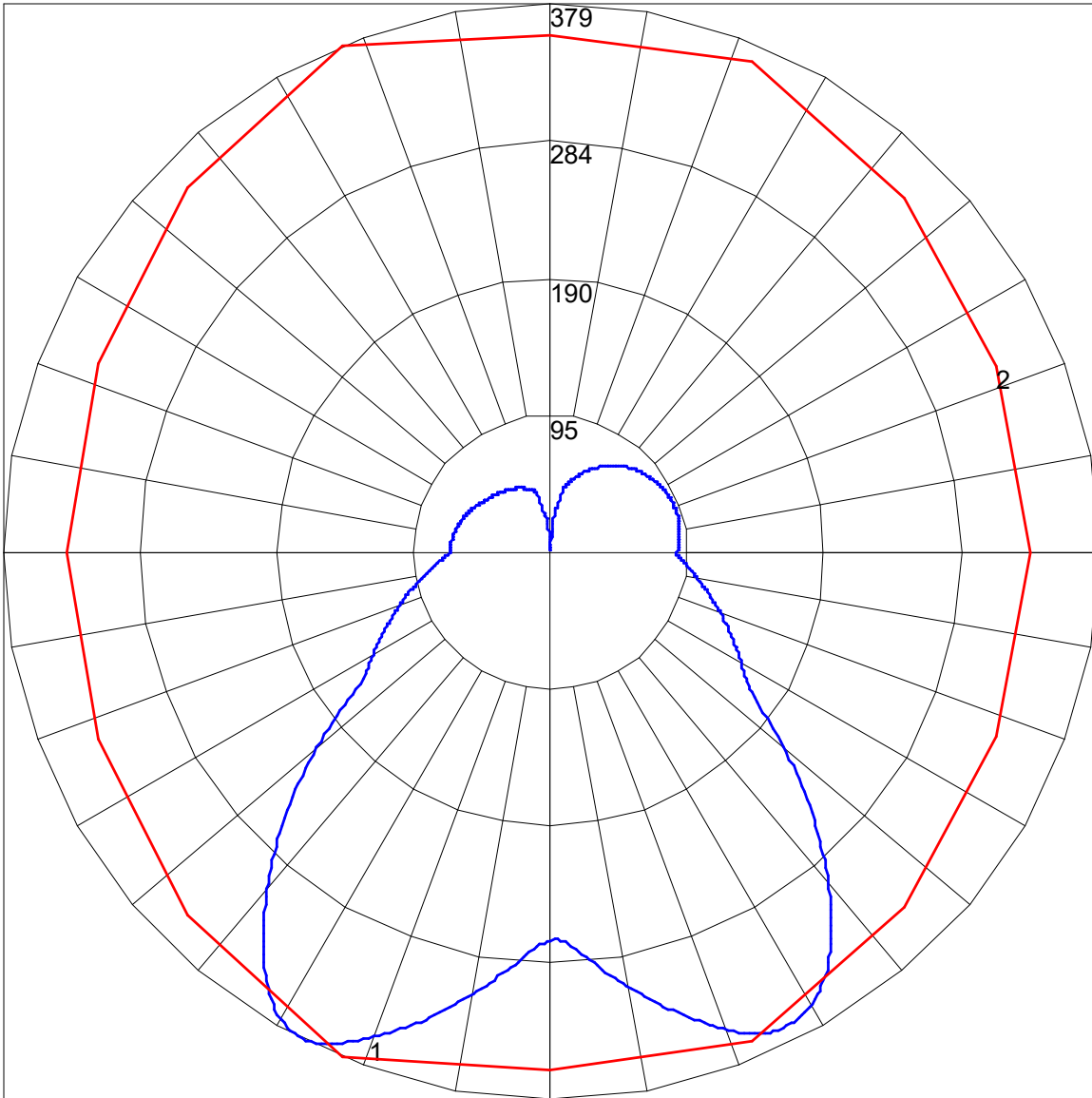
Reflectances

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	12.1	13.3	12.9	14.1	15.0	10.4	11.5	11.1	12.3	13.2
	3H	14.4	15.5	15.2	16.3	17.2	12.2	13.2	12.9	14.0	15.0
	4H	15.5	16.5	16.3	17.3	18.3	13.0	14.0	13.8	14.8	15.7
	6H	16.6	17.5	17.4	18.3	19.3	13.7	14.6	14.5	15.4	16.4
	8H	17.1	18.0	17.9	18.8	19.8	14.0	14.9	14.8	15.7	16.7
	12H	17.6	18.5	18.4	19.3	20.3	14.3	15.2	15.1	16.0	17.0
4H	2H	12.8	13.8	13.6	14.6	15.6	11.3	12.3	12.1	13.1	14.1
	3H	15.3	16.2	16.1	17.0	18.0	13.4	14.2	14.2	15.1	16.1
	4H	16.6	17.4	17.4	18.2	19.2	14.3	15.1	15.1	15.9	16.9
	6H	17.9	18.6	18.7	19.4	20.4	15.2	15.9	16.0	16.7	17.7
	8H	18.5	19.1	19.3	20.0	21.0	15.6	16.2	16.4	17.1	18.1
	12H	19.1	19.7	19.9	20.5	21.6	15.9	16.6	16.8	17.4	18.5
8H	4H	17.0	17.7	17.8	18.5	19.6	15.0	15.7	15.8	16.5	17.6
	6H	18.5	19.1	19.4	20.0	21.0	16.1	16.7	17.0	17.6	18.6
	8H	19.3	19.8	20.1	20.7	21.7	16.6	17.1	17.5	18.0	19.1
	12H	20.1	20.5	20.9	21.4	22.5	17.1	17.6	18.0	18.5	19.6
12H	4H	17.1	17.7	17.9	18.6	19.6	15.2	15.8	16.1	16.7	17.7
	6H	18.7	19.2	19.5	20.0	21.1	16.4	16.9	17.3	17.8	18.9
	8H	19.5	20.0	20.4	20.8	21.9	17.0	17.5	17.9	18.3	19.4

Maximum UGR = 22.5

POLAR GRAPH



Maximum Candela = 379.251 Located At Horizontal Angle = 112.5, Vertical Angle = 27.5
1 - Vertical Plane Through Horizontal Angles (112.5 - 292.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (27.5) (Through Max. Cd.)