

IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_5000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 15180278.01

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 2025-03-20

[TEST DATE] 2/23/2024

[MANUFAC] WILLIAMS INDOOR, H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMCAT] FS-4-LS-8CS-DIM-UNV_23W_5000K_

[LUMINAIRE] 45 INCH, 224 LEDS, LUMEN/WATTAGE/CCT SELECTABLE, LED STRIP

[MORE] WITH FROSTED ACRYLIC LENS

[SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Utility, Warehouse, Linear

[SEARCH_MOUNTING] Surface, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3293
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	23.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.71 ft
Luminous Width (90-270)	0.17 ft
Luminous Height	0.04 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	14192	13429	13921
55	12918	12433	13245
65	11380	11342	12529
75	9371	10168	11647
85	6480	9360	11086

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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	1036.180	1036.180	1036.180	1036.180	1036.180	1036.180	1036.180	1036.180	1036.180
0.5	1022.546	1040.190	1037.784	1037.784	1032.972	1038.586	1037.784	1041.794	1023.348
1.0	1021.744	1039.388	1036.180	1038.586	1032.170	1038.586	1036.180	1040.992	1023.348
1.5	1023.348	1039.388	1034.576	1037.784	1032.972	1038.586	1036.180	1040.190	1023.348
2.0	1023.348	1038.586	1036.180	1038.586	1032.170	1040.190	1036.180	1040.992	1022.546
2.5	1022.546	1037.784	1034.576	1037.784	1032.170	1036.982	1036.180	1039.388	1020.942
3.0	1020.140	1037.784	1033.774	1037.784	1032.170	1037.784	1035.378	1040.190	1020.942
3.5	1020.942	1036.180	1032.972	1035.378	1030.566	1036.180	1034.576	1037.784	1021.744
4.0	1018.536	1034.576	1031.368	1036.180	1031.368	1035.378	1033.774	1038.586	1019.338
4.5	1019.338	1032.170	1031.368	1034.576	1029.764	1035.378	1032.170	1036.982	1017.734
5.0	1015.328	1031.368	1028.962	1033.774	1029.764	1034.576	1031.368	1035.378	1017.734
5.5	1014.526	1031.368	1028.160	1032.972	1029.764	1033.774	1031.368	1033.774	1015.328
6.0	1012.922	1028.962	1026.556	1032.170	1027.358	1032.170	1028.962	1033.774	1014.526
6.5	1011.318	1027.358	1025.754	1029.764	1025.754	1031.368	1028.160	1032.170	1012.922
7.0	1008.912	1024.952	1024.150	1027.358	1024.150	1029.764	1027.358	1031.368	1013.724
7.5	1008.110	1024.150	1021.744	1027.358	1022.546	1028.160	1024.952	1029.764	1010.516
8.0	1006.506	1021.744	1020.140	1024.952	1022.546	1027.358	1024.150	1028.160	1008.912
8.5	1004.100	1019.338	1017.734	1022.546	1019.338	1024.952	1022.546	1025.754	1005.704
9.0	1002.496	1016.932	1014.526	1021.744	1017.734	1022.546	1020.140	1024.952	1004.100
9.5	997.684	1014.526	1014.526	1020.140	1016.130	1021.744	1018.536	1021.744	1001.694
10.0	996.882	1013.724	1010.516	1015.328	1015.328	1019.338	1016.932	1020.140	1000.892
10.5	991.268	1008.912	1008.912	1015.328	1011.318	1017.734	1014.526	1016.932	996.882
11.0	990.466	1008.110	1006.506	1012.120	1009.714	1015.328	1010.516	1012.922	996.882
11.5	987.258	1004.100	1003.298	1009.714	1008.110	1012.120	1008.912	1012.120	992.872
12.0	984.050	1000.892	1001.694	1007.308	1004.902	1010.516	1005.704	1008.912	988.862
12.5	980.040	997.684	998.486	1005.704	1004.902	1006.506	1003.298	1004.902	987.258
13.0	978.436	996.080	994.476	1002.496	1001.694	1004.902	1000.892	1003.298	982.446
13.5	976.031	992.070	992.872	998.486	998.486	1001.694	998.486	1000.892	979.238
14.0	971.219	988.060	988.862	996.080	995.278	999.288	994.476	997.684	976.031
14.5	965.605	984.050	984.852	992.872	992.070	995.278	992.070	994.476	973.625
15.0	963.199	981.644	983.248	991.268	988.862	992.872	988.060	990.466	969.615
15.5	959.991	979.238	978.436	987.258	985.654	988.862	985.654	986.456	966.407
16.0	957.585	973.625	975.229	984.852	981.644	985.654	980.842	983.248	960.793
16.5	950.367	970.417	970.417	981.644	978.436	982.446	976.832	979.238	959.991
17.0	946.357	966.407	968.011	977.634	975.229	977.634	973.625	976.031	954.377
17.5	942.347	961.595	963.199	972.823	971.219	973.625	968.813	972.823	951.971
18.0	939.941	955.981	958.387	968.011	968.011	968.813	965.605	966.407	947.159
18.5	935.129	952.773	954.377	965.605	964.001	965.605	960.793	963.199	943.149
19.0	928.713	947.961	949.565	960.793	959.189	961.595	957.585	958.387	938.337
19.5	925.505	943.951	945.555	956.783	954.377	956.783	953.575	954.377	932.723
20.0	920.693	938.337	940.743	951.971	950.367	953.575	948.763	949.565	928.713
20.5	915.079	933.525	936.733	947.961	946.357	947.961	944.753	944.753	924.703
21.0	911.069	928.713	931.119	942.347	941.545	944.753	938.337	941.545	918.287
21.5	904.653	923.901	926.307	937.535	938.337	940.743	935.129	935.931	914.277
22.0	900.643	919.891	922.297	932.723	933.525	935.129	930.317	931.119	909.465
22.5	893.425	912.673	916.683	928.713	930.317	932.723	925.505	925.505	903.049
23.0	888.613	907.861	911.871	923.099	925.505	927.109	921.495	920.693	899.841
23.5	884.603	902.247	907.861	919.089	922.297	924.703	916.683	915.881	894.227
24.0	876.583	897.435	902.247	914.277	917.485	919.891	911.871	908.663	886.207
24.5	873.375	892.623	896.633	910.267	913.475	915.881	906.257	903.851	881.395
25.0	866.959	884.603	891.821	906.257	911.069	911.871	901.445	899.039	876.583
25.5	859.741	879.791	884.603	902.247	907.059	907.059	897.435	894.227	871.771
26.0	853.325	874.979	879.791	895.831	902.247	902.247	891.821	888.613	864.553
26.5	847.711	867.761	874.979	892.623	898.237	897.435	886.207	882.197	859.741

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CANDELA TABULATION - (Cont.)

27.0	842.899	862.147	870.167	887.009	891.821	892.623	880.593	876.583	853.325
27.5	835.681	857.335	864.553	882.999	887.811	887.009	875.781	870.969	846.909
28.0	830.067	849.315	857.335	878.187	883.801	882.197	869.365	864.553	841.295
28.5	824.453	843.701	852.523	872.573	878.989	877.385	864.553	858.939	835.681
29.0	818.037	837.285	846.909	867.761	874.177	871.771	858.939	853.325	828.463
29.5	811.621	831.671	841.295	862.147	868.563	866.959	854.127	846.107	822.047
30.0	803.601	825.255	835.681	856.533	863.751	862.147	847.711	840.493	814.829
30.5	797.265	818.839	829.265	851.721	858.939	856.533	842.097	834.077	808.413
31.0	790.529	811.621	823.651	846.107	854.127	851.721	835.681	827.661	803.601
31.5	785.476	804.403	818.037	840.493	848.513	846.909	830.869	821.245	794.940
32.0	777.055	799.431	811.621	835.681	843.701	842.097	825.255	814.829	789.005
32.5	771.601	792.213	805.205	830.067	838.889	836.483	818.037	807.611	783.471
33.0	763.742	785.797	798.148	825.255	834.879	831.671	811.621	800.554	774.489
33.5	756.684	778.980	792.133	820.443	829.265	825.255	806.007	794.378	768.794
34.0	750.268	772.243	787.481	814.027	824.453	820.443	800.874	788.363	762.940
34.5	742.810	764.704	780.664	808.413	819.641	814.829	794.539	780.263	754.759
35.0	736.955	758.208	774.970	803.601	814.027	809.215	788.524	774.007	749.386
35.5	729.657	750.750	769.276	798.388	810.017	803.601	781.707	766.469	740.725
36.0	721.076	743.050	762.378	792.694	804.403	799.270	775.291	759.812	734.950
36.5	713.617	736.394	757.085	786.759	799.671	793.416	769.356	752.835	728.294
37.0	707.843	728.775	749.867	782.268	794.779	788.123	762.699	745.857	722.760
37.5	700.143	722.519	744.013	776.413	789.566	781.787	757.326	739.441	715.782
38.0	691.883	715.221	737.356	771.200	784.433	776.173	750.910	732.865	707.522
38.5	685.226	707.923	731.983	765.346	778.659	770.639	743.852	726.369	699.662
39.0	677.206	700.143	725.246	759.652	773.205	764.865	738.238	720.113	692.043
39.5	669.587	692.284	719.151	753.717	768.233	759.251	731.421	713.056	683.141
40.0	661.407	685.948	712.815	748.263	763.581	754.198	725.086	706.559	674.800
40.5	654.510	678.730	706.559	742.489	757.406	748.424	718.830	698.299	666.941
41.0	645.768	670.630	699.903	737.196	751.231	742.810	712.414	691.001	659.081
41.5	638.550	662.690	694.449	731.742	747.060	736.474	705.517	682.259	651.141
42.0	630.209	655.633	687.472	725.727	741.527	731.983	699.181	673.998	644.004
42.5	622.751	648.094	680.815	720.434	736.233	725.567	692.043	666.620	636.144
43.0	614.731	641.437	674.399	714.419	730.780	719.391	686.028	657.798	628.285
43.5	607.753	634.540	667.663	708.404	725.888	713.457	680.094	650.019	621.387
44.0	600.936	626.360	661.407	703.111	720.354	708.324	672.795	641.678	613.127
44.5	591.393	618.661	653.708	696.936	714.820	702.870	667.342	634.300	605.829
45.0	584.415	611.042	648.415	691.322	709.366	695.973	661.006	625.959	598.290
45.5	577.197	603.583	640.956	685.387	702.790	690.840	654.349	619.222	590.751
46.0	569.258	597.247	634.781	678.891	697.337	685.307	648.094	611.282	582.250
46.5	562.280	589.708	627.884	672.234	692.124	678.570	641.678	604.144	575.273
47.0	554.100	581.608	621.387	667.502	686.349	673.918	635.743	596.766	568.055
47.5	546.080	574.390	614.731	660.846	681.216	668.224	629.247	589.147	558.832
48.0	539.824	566.932	608.636	656.114	674.640	660.926	622.911	581.448	552.576
48.5	531.082	559.473	602.059	648.816	669.427	655.552	616.335	574.070	543.353
49.0	525.950	553.218	595.964	643.282	663.653	649.698	609.518	566.932	536.135
49.5	519.053	544.877	589.468	637.427	657.397	644.084	601.177	558.992	528.997
50.0	510.952	538.461	582.972	631.412	652.264	638.069	595.162	551.373	522.822
50.5	502.932	532.767	575.032	625.317	646.490	631.813	588.265	544.235	516.005
51.0	495.394	525.789	569.578	619.142	641.117	625.798	580.646	536.376	507.183
51.5	487.935	518.812	562.441	613.849	636.144	619.864	573.989	531.804	499.564
52.0	480.075	511.033	556.506	607.994	629.889	614.009	566.771	524.506	491.464
52.5	472.858	503.975	549.849	601.819	624.034	607.834	560.436	518.010	484.085
53.0	464.757	496.196	542.872	595.964	618.019	602.621	553.939	510.150	476.867
53.5	457.459	488.978	536.376	589.708	612.004	596.205	546.721	502.612	468.447
54.0	449.519	482.241	530.521	583.613	605.588	590.190	540.867	495.233	460.266
54.5	441.820	474.381	525.789	576.877	600.616	584.496	533.809	487.534	452.968

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CANDELA TABULATION - (Cont.)

55.0	433.560	467.003	519.614	571.102	594.601	577.999	529.799	480.557	444.868
55.5	426.021	460.427	512.797	564.526	588.104	571.824	523.544	473.178	436.848
56.0	418.482	452.407	506.060	558.110	582.651	566.050	516.647	465.559	429.710
56.5	411.264	444.948	499.323	552.335	575.914	558.671	509.429	457.379	421.530
57.0	403.405	437.409	492.827	545.759	570.140	552.576	502.692	450.241	412.948
57.5	396.026	430.592	486.732	539.664	563.243	545.919	495.795	442.221	405.410
58.0	388.808	423.053	479.434	533.408	556.666	539.503	488.737	435.083	397.791
58.5	381.029	415.595	472.697	529.078	550.571	534.210	482.080	427.625	389.690
59.0	373.891	408.377	466.682	524.426	544.636	529.078	474.782	419.685	382.553
59.5	366.192	401.319	459.625	516.887	537.899	523.063	468.286	412.708	374.372
60.0	358.814	394.182	452.326	510.632	533.970	516.406	461.309	405.410	367.475
60.5	351.355	386.883	445.509	504.937	528.195	509.990	455.133	397.550	358.974
61.0	343.255	379.665	439.174	497.719	522.261	503.093	447.996	390.813	351.435
61.5	335.957	372.367	432.758	491.063	516.005	496.516	441.499	382.793	343.816
62.0	328.498	365.229	426.181	484.807	509.028	490.582	434.041	375.736	336.037
62.5	321.120	358.252	419.605	478.311	502.211	483.364	427.785	368.197	328.498
63.0	313.982	350.954	412.948	471.815	495.795	477.028	420.888	361.139	321.120
63.5	306.443	344.137	406.212	464.838	489.459	470.371	413.831	353.761	313.741
64.0	298.664	336.999	399.796	458.341	482.882	463.955	407.334	346.463	305.721
64.5	290.644	329.861	392.658	451.524	475.825	457.780	400.277	339.405	298.263
65.0	283.666	323.285	386.001	445.028	469.329	450.722	393.861	332.187	290.724
65.5	276.689	316.147	379.425	439.013	463.314	444.226	387.445	324.969	283.426
66.0	269.070	309.090	373.169	431.474	456.577	437.329	380.227	317.671	275.887
66.5	262.413	302.273	366.272	425.299	449.519	430.592	373.891	310.533	268.509
67.0	255.115	295.616	359.616	418.562	443.023	423.454	366.673	303.636	261.531
67.5	248.218	288.719	353.280	411.505	435.966	417.119	360.578	296.819	254.393
68.0	241.080	282.062	346.142	405.650	429.550	410.542	353.601	289.762	247.496
68.5	234.103	275.486	340.047	398.352	422.893	403.405	346.784	282.864	239.797
69.0	227.126	268.348	333.470	392.417	416.156	397.149	340.207	276.368	232.980
69.5	219.747	261.692	326.974	385.360	409.339	390.573	333.871	269.391	225.361
70.0	213.091	255.115	320.157	378.863	402.522	383.435	326.974	262.253	218.544
70.5	206.434	248.058	313.821	371.966	395.946	377.179	320.398	255.356	211.647
71.0	199.136	241.802	307.405	365.871	389.289	370.442	313.982	248.539	204.509
71.5	192.560	235.065	301.391	359.295	382.633	364.267	307.165	241.802	197.452
72.0	185.743	228.970	294.493	352.317	375.896	357.370	301.070	235.386	190.073
72.5	179.006	222.394	288.318	345.982	369.640	351.114	294.413	228.489	183.176
73.0	172.189	216.218	281.742	339.084	362.743	344.057	288.077	221.832	176.921
73.5	165.773	209.963	275.566	332.267	355.846	337.561	281.742	215.336	169.943
74.0	159.196	203.467	269.391	326.493	349.510	330.984	275.165	208.840	163.367
74.5	152.219	196.890	262.654	319.676	342.613	324.648	269.230	202.103	156.389
75.0	145.562	190.875	256.639	313.581	336.518	317.912	263.055	195.928	150.054
75.5	139.547	184.780	250.785	306.844	329.861	311.496	256.559	189.352	143.477
76.0	132.891	178.685	244.609	300.829	323.365	305.320	250.704	183.337	136.981
76.5	126.876	172.750	238.594	294.413	316.789	298.664	244.369	176.840	131.046
77.0	120.941	166.815	232.579	287.917	310.212	292.488	238.033	170.825	124.711
77.5	114.846	160.961	226.725	281.902	304.198	285.992	232.018	164.490	118.615
78.0	108.590	155.106	220.950	275.646	297.461	279.897	226.243	158.795	112.520
78.5	102.656	149.572	215.015	269.551	291.366	273.802	220.389	152.941	106.505
79.0	96.801	143.878	209.482	263.376	284.950	267.546	214.374	147.327	100.811
79.5	91.428	138.264	204.028	257.521	279.095	262.093	208.840	141.552	94.716
80.0	85.974	132.650	198.414	251.346	273.240	255.757	203.066	135.939	89.262
80.5	80.360	127.277	192.880	245.732	266.824	250.063	197.692	130.886	83.648
81.0	74.907	122.144	187.507	239.797	261.050	243.968	192.239	125.352	78.435
81.5	69.694	116.931	182.053	234.183	255.115	238.273	186.865	120.300	73.142
82.0	64.561	111.959	176.840	228.569	248.780	232.659	181.492	115.327	68.009
82.5	59.829	106.826	171.627	223.436	243.005	226.725	176.038	110.435	63.117

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CANDELA TABULATION - (Cont.)

83.0	54.776	102.014	166.495	217.822	237.552	221.111	171.146	105.543	58.225
83.5	50.045	97.362	161.442	212.369	231.777	215.898	165.853	100.811	53.493
84.0	45.393	92.791	156.550	206.995	226.324	210.604	161.121	96.159	48.842
84.5	40.902	88.300	151.658	201.943	220.870	205.231	156.149	91.668	44.511
85.0	36.731	84.129	146.765	196.650	215.577	199.858	151.257	87.337	40.020
85.5	32.561	79.719	142.274	191.437	210.203	194.885	146.605	82.686	35.849
86.0	28.391	75.628	137.783	186.705	204.990	189.913	141.793	78.516	31.599
86.5	24.461	71.618	133.452	181.813	200.018	184.780	137.382	74.265	27.509
87.0	20.531	67.689	128.961	177.081	194.966	180.129	133.051	70.255	23.418
87.5	16.922	63.999	124.791	172.750	190.154	175.557	128.560	66.325	19.489
88.0	13.393	59.989	120.861	168.339	185.743	171.066	124.470	62.315	15.559
88.5	9.865	56.541	117.252	164.329	181.251	166.976	120.620	58.385	11.549
89.0	6.336	53.253	113.884	160.399	177.322	162.805	116.851	54.937	7.779
89.5	3.128	50.526	110.676	156.790	173.392	159.196	113.643	51.889	4.090
90.0	1.123	48.040	107.869	153.262	169.622	155.507	110.676	49.243	1.283
90.5	0.722	45.954	105.142	149.893	165.853	151.898	107.708	46.997	0.722
91.0	0.722	44.190	102.415	146.605	162.324	148.690	104.661	45.233	0.642
91.5	0.722	42.907	100.089	143.397	158.956	145.562	102.335	43.869	0.642
92.0	0.722	41.784	97.683	140.590	155.908	142.755	100.089	42.746	0.642
92.5	0.722	40.741	95.999	138.024	152.941	140.029	98.164	41.704	0.642
93.0	0.722	39.779	94.235	135.538	150.134	137.543	96.400	40.661	0.642
93.5	0.722	38.817	92.631	133.372	147.728	135.217	94.716	39.699	0.642
94.0	0.722	37.934	91.107	131.127	145.322	133.051	93.272	38.736	0.642
94.5	0.722	37.052	89.743	129.202	143.156	131.046	91.748	37.774	0.642
95.0	0.722	36.170	88.380	127.277	141.071	128.881	90.225	36.892	0.642
95.5	0.722	35.368	86.856	125.352	138.746	127.036	88.781	36.090	0.642
96.0	0.722	34.566	85.573	123.427	136.741	125.031	87.337	35.288	0.642
96.5	0.722	33.764	84.129	121.663	134.736	123.267	85.814	34.406	0.642
97.0	0.722	32.962	82.846	119.658	132.650	121.182	84.530	33.604	0.642
97.5	0.722	32.160	81.403	118.054	130.645	119.498	83.167	32.882	0.642
98.0	0.722	31.438	80.120	116.129	128.801	117.653	81.724	32.080	0.642
98.5	0.722	30.797	78.917	114.445	126.956	115.808	80.440	31.278	0.642
99.0	0.722	29.995	77.473	112.841	125.112	114.044	79.077	30.556	0.642
99.5	0.722	29.273	76.270	111.157	123.187	112.360	77.794	29.834	0.642
100.0	0.722	28.631	74.907	109.473	121.342	110.676	76.430	29.112	0.642
100.5	0.722	27.909	73.704	107.788	119.417	109.072	75.227	28.471	0.722
101.0	0.722	27.348	72.501	106.104	117.733	107.468	74.024	27.749	0.722
101.5	0.722	26.626	71.217	104.500	116.049	105.703	72.661	27.108	0.722
102.0	0.802	26.065	70.095	102.896	114.124	104.260	71.538	26.466	0.722
102.5	0.802	25.423	68.892	101.372	112.280	102.736	70.255	25.824	0.722
103.0	0.802	24.862	67.689	99.768	110.595	101.132	69.052	25.183	0.722
103.5	0.802	24.220	66.486	98.405	108.991	99.528	67.929	24.541	0.722
104.0	0.802	23.659	65.443	96.961	107.387	98.004	66.646	23.900	0.722
104.5	0.802	23.098	64.240	95.277	105.864	96.480	65.523	23.338	0.802
105.0	0.802	22.536	63.197	93.914	104.099	95.037	64.400	22.777	0.802
105.5	0.802	21.975	62.155	92.470	102.575	93.433	63.278	22.215	0.802
106.0	0.802	21.413	61.032	90.946	101.052	91.989	62.075	21.654	0.802
106.5	0.802	20.932	59.989	89.663	99.287	90.545	61.032	21.173	0.802
107.0	0.882	20.371	58.947	88.220	97.924	89.022	59.909	20.611	0.802
107.5	0.882	19.890	57.824	86.696	96.480	87.658	58.947	20.130	0.802
108.0	0.882	19.408	56.781	85.493	94.956	86.295	57.904	19.649	0.802
108.5	0.882	18.847	55.899	84.049	93.513	85.012	56.781	19.088	0.882
109.0	0.882	18.366	54.857	82.686	92.069	83.648	55.739	18.606	0.882
109.5	0.882	17.885	53.814	81.323	90.706	82.285	54.776	18.125	0.882
110.0	0.882	17.484	52.932	80.039	89.262	80.922	53.814	17.644	0.882
110.5	0.882	17.002	51.969	78.836	87.819	79.558	52.771	17.163	0.882

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CANDELA TABULATION - (Cont.)

111.0	0.882	16.521	51.007	77.553	86.535	78.435	51.809	16.762	0.882
111.5	0.962	16.120	50.125	76.350	85.172	77.072	50.766	16.281	0.882
112.0	0.962	15.639	49.162	74.987	83.889	75.789	49.884	15.799	0.882
112.5	0.962	15.238	48.200	73.944	82.526	74.586	48.922	15.398	0.962
113.0	0.962	14.837	47.398	72.581	81.162	73.383	47.959	14.917	0.962
113.5	0.962	14.436	46.355	71.378	79.799	72.019	47.077	14.516	0.962
114.0	0.962	13.955	45.553	70.255	78.676	70.816	46.195	14.115	0.962
114.5	0.962	13.554	44.671	69.052	77.313	69.694	45.233	13.634	0.962
115.0	0.962	13.233	43.789	67.929	76.110	68.491	44.270	13.233	0.962
115.5	0.962	12.752	42.907	66.806	74.826	67.288	43.388	12.832	0.962
116.0	0.962	12.431	42.105	65.523	73.623	66.165	42.506	12.431	1.043
116.5	0.962	12.030	41.223	64.481	72.420	65.042	41.704	12.110	1.043
117.0	0.962	11.629	40.340	63.278	71.137	63.839	40.822	11.709	1.043
117.5	0.962	11.228	39.538	62.235	70.014	62.716	39.939	11.308	1.043
118.0	0.962	10.907	38.817	61.032	68.811	61.593	39.137	10.907	1.043
118.5	0.962	10.506	38.015	59.989	67.689	60.471	38.335	10.586	1.043
119.0	0.962	10.185	37.213	58.947	66.486	59.428	37.533	10.185	1.043
119.5	0.962	9.784	36.411	57.904	65.283	58.385	36.731	9.865	1.043
120.0	0.962	9.464	35.609	56.701	64.160	57.182	35.849	9.464	1.043
120.5	0.962	9.143	34.807	55.819	62.957	56.140	35.127	9.143	1.123
121.0	0.962	8.742	34.085	54.696	61.754	55.097	34.325	8.822	1.123
121.5	0.962	8.341	33.363	53.654	60.791	54.055	33.604	8.421	1.123
122.0	0.962	8.020	32.641	52.611	59.508	53.012	32.882	8.100	1.123
122.5	0.962	7.699	31.839	51.568	58.466	51.889	32.160	7.779	1.123
123.0	0.962	7.378	31.117	50.606	57.343	50.927	31.358	7.459	1.123
123.5	0.962	7.058	30.396	49.563	56.220	49.964	30.636	7.138	1.123
124.0	0.962	6.737	29.754	48.521	55.177	48.922	29.914	6.817	1.123
124.5	0.962	6.416	29.032	47.558	54.135	47.799	29.193	6.496	1.203
125.0	0.962	6.095	28.310	46.596	53.092	46.837	28.471	6.175	1.203
125.5	0.962	5.774	27.589	45.634	51.969	45.874	27.749	5.855	1.203
126.0	0.962	5.534	26.867	44.751	50.927	44.912	27.027	5.534	1.203
126.5	0.962	5.213	26.225	43.789	49.884	43.949	26.386	5.213	1.203
127.0	0.962	4.892	25.584	42.827	48.761	42.987	25.744	4.972	1.203
127.5	0.962	4.652	24.942	41.944	47.799	42.025	25.022	4.652	1.203
128.0	0.962	4.331	24.220	40.982	46.837	41.223	24.381	4.411	1.283
128.5	0.962	4.090	23.499	40.100	45.874	40.340	23.739	4.170	1.283
129.0	0.962	3.850	22.857	39.137	44.832	39.378	23.098	3.930	1.283
129.5	0.962	3.689	22.296	38.255	43.869	38.496	22.456	3.769	1.283
130.0	1.043	3.449	21.734	37.373	42.907	37.614	21.895	3.529	1.283
130.5	1.043	3.288	21.012	36.571	41.944	36.812	21.253	3.368	1.363
131.0	1.043	3.128	20.451	35.769	40.982	35.849	20.611	3.208	1.363
131.5	1.043	2.967	19.890	34.887	40.020	35.047	20.050	3.048	1.363
132.0	1.043	2.807	19.248	34.085	39.057	34.165	19.408	2.887	1.363
132.5	1.043	2.647	18.687	33.203	38.175	33.363	18.847	2.727	1.363
133.0	1.043	2.566	18.125	32.320	37.293	32.481	18.286	2.647	1.444
133.5	1.043	2.486	17.484	31.518	36.330	31.679	17.644	2.566	1.444
134.0	1.043	2.406	16.842	30.716	35.528	30.797	17.083	2.486	1.444
134.5	1.043	2.326	16.200	29.914	34.566	29.995	16.521	2.406	1.444
135.0	1.043	2.246	15.559	29.112	33.684	29.193	15.960	2.326	1.444
135.5	1.043	2.165	14.997	28.230	32.802	28.391	15.398	2.246	1.444
136.0	1.043	2.085	14.356	27.428	31.919	27.589	14.837	2.165	1.444
136.5	1.043	2.085	13.794	26.707	31.037	26.787	14.356	2.165	1.524
137.0	1.043	2.005	13.153	25.985	30.155	25.985	13.794	2.085	1.524
137.5	1.043	2.005	12.591	25.183	29.353	25.263	13.233	2.085	1.524
138.0	1.043	1.925	12.030	24.381	28.551	24.461	12.752	2.005	1.524
138.5	1.043	1.925	11.549	23.659	27.749	23.739	12.271	2.005	1.524

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CANDELA TABULATION - (Cont.)

139.0	1.123	1.925	10.987	22.937	26.947	22.937	11.789	1.925	1.604
139.5	1.123	1.845	10.426	22.215	26.145	22.296	11.308	1.925	1.604
140.0	1.123	1.845	9.945	21.494	25.343	21.494	10.747	1.925	1.604
140.5	1.123	1.845	9.464	20.692	24.541	20.772	10.266	1.845	1.604
141.0	1.123	1.764	9.063	20.050	23.739	20.050	9.784	1.845	1.604
141.5	1.123	1.764	8.581	19.328	22.937	19.408	9.303	1.845	1.684
142.0	1.123	1.764	8.180	18.687	22.215	18.687	8.822	1.845	1.684
142.5	1.123	1.684	7.779	17.965	21.413	17.965	8.341	1.764	1.684
143.0	1.123	1.684	7.378	17.323	20.692	17.243	7.940	1.764	1.684
143.5	1.203	1.684	6.977	16.601	19.970	16.601	7.459	1.764	1.684
144.0	1.203	1.684	6.576	15.960	19.168	15.960	7.058	1.684	1.684
144.5	1.203	1.684	6.175	15.318	18.446	15.238	6.576	1.684	1.764
145.0	1.203	1.604	5.855	14.596	17.724	14.596	6.175	1.684	1.764
145.5	1.203	1.604	5.454	13.955	17.002	13.955	5.774	1.684	1.764
146.0	1.203	1.604	5.133	13.393	16.281	13.313	5.373	1.684	1.764
146.5	1.203	1.604	4.812	12.752	15.559	12.672	5.053	1.684	1.764
147.0	1.203	1.604	4.491	12.110	14.917	12.030	4.732	1.604	1.764
147.5	1.203	1.604	4.170	11.469	14.195	11.469	4.411	1.604	1.845
148.0	1.283	1.604	3.930	10.827	13.554	10.827	4.170	1.604	1.845
148.5	1.283	1.604	3.689	10.185	12.832	10.266	3.930	1.604	1.845
149.0	1.283	1.604	3.529	9.464	12.190	9.624	3.689	1.604	1.845
149.5	1.283	1.604	3.288	8.902	11.549	9.063	3.529	1.604	1.845
150.0	1.283	1.604	3.128	8.261	10.907	8.501	3.368	1.684	1.845
150.5	1.283	1.604	3.048	7.699	10.266	7.940	3.208	1.604	1.925
151.0	1.283	1.604	2.887	7.138	9.624	7.378	3.048	1.604	1.925
151.5	1.363	1.604	2.807	6.657	9.063	6.897	2.967	1.684	1.925
152.0	1.363	1.684	2.727	6.095	8.421	6.336	2.807	1.684	1.925
152.5	1.363	1.684	2.647	5.694	7.860	5.855	2.727	1.684	1.925
153.0	1.363	1.684	2.566	5.293	7.218	5.373	2.647	1.684	1.925
153.5	1.363	1.684	2.486	4.892	6.657	4.972	2.566	1.684	1.925
154.0	1.363	1.684	2.406	4.491	6.095	4.652	2.486	1.684	2.005
154.5	1.444	1.684	2.326	4.170	5.614	4.251	2.406	1.684	2.005
155.0	1.444	1.684	2.246	3.850	5.133	3.930	2.326	1.684	2.005
155.5	1.444	1.764	2.246	3.609	4.732	3.689	2.326	1.684	2.005
156.0	1.444	1.764	2.165	3.368	4.331	3.449	2.246	1.764	2.005
156.5	1.524	1.764	2.165	3.128	4.010	3.208	2.165	1.764	2.005
157.0	1.524	1.764	2.085	2.967	3.689	3.048	2.165	1.764	2.005
157.5	1.524	1.764	2.085	2.887	3.368	2.887	2.085	1.764	2.005
158.0	1.524	1.764	2.005	2.727	3.208	2.727	2.085	1.764	2.085
158.5	1.524	1.845	2.005	2.647	2.967	2.647	2.005	1.764	2.085
159.0	1.604	1.845	1.925	2.486	2.807	2.486	2.005	1.845	2.085
159.5	1.604	1.845	1.925	2.406	2.647	2.406	1.925	1.845	2.085
160.0	1.604	1.845	1.925	2.326	2.566	2.326	1.925	1.845	2.085
160.5	1.604	1.845	1.845	2.246	2.406	2.246	1.925	1.845	2.085
161.0	1.604	1.845	1.845	2.165	2.326	2.165	1.845	1.845	2.085
161.5	1.684	1.845	1.845	2.165	2.246	2.165	1.845	1.845	2.085
162.0	1.684	1.925	1.845	2.085	2.165	2.085	1.845	1.845	2.085
162.5	1.684	1.925	1.845	2.005	2.085	2.005	1.845	1.925	2.085
163.0	1.684	1.925	1.845	1.925	2.005	2.005	1.845	1.925	2.165
163.5	1.684	1.925	1.845	1.925	1.925	1.925	1.845	1.925	2.165
164.0	1.764	1.925	1.845	1.845	1.925	1.845	1.845	1.925	2.165
164.5	1.764	1.925	1.845	1.845	1.845	1.845	1.845	1.925	2.165
165.0	1.764	2.005	1.845	1.845	1.845	1.845	1.845	1.925	2.165
165.5	1.764	2.005	1.845	1.845	1.764	1.845	1.845	2.005	2.165
166.0	1.845	2.005	1.925	1.845	1.764	1.764	1.925	2.005	2.165
166.5	1.845	2.005	1.925	1.845	1.764	1.764	1.925	2.005	2.165

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CANDELA TABULATION - (Cont.)

167.0	1.845	2.005	1.925	1.764	1.684	1.764	1.925	2.005	2.165
167.5	1.845	2.005	1.925	1.764	1.684	1.764	1.925	2.005	2.165
168.0	1.845	2.005	1.925	1.764	1.684	1.764	1.925	2.005	2.165
168.5	1.925	2.085	1.925	1.764	1.684	1.764	1.925	2.005	2.165
169.0	1.925	2.085	1.925	1.845	1.684	1.845	1.925	2.085	2.165
169.5	1.925	2.085	1.925	1.845	1.684	1.845	1.925	2.085	2.165
170.0	1.925	2.085	1.925	1.845	1.684	1.764	1.925	2.085	2.165
170.5	1.925	2.085	1.925	1.845	1.684	1.845	1.925	2.085	2.165
171.0	1.925	2.085	2.005	1.845	1.684	1.845	1.925	2.085	2.165
171.5	1.925	2.085	2.005	1.845	1.684	1.845	2.005	2.085	2.165
172.0	1.925	2.085	2.005	1.845	1.684	1.845	2.005	2.085	2.165
172.5	2.005	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
173.0	2.005	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
173.5	2.005	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
174.0	2.005	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
174.5	2.005	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
175.0	2.005	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
175.5	2.085	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
176.0	2.085	2.085	2.005	1.845	1.764	1.845	2.005	2.085	2.165
176.5	2.085	2.085	2.005	1.925	1.764	1.845	2.005	2.085	2.165
177.0	2.085	2.165	2.005	1.925	1.764	1.845	2.005	2.165	2.165
177.5	2.085	2.165	2.005	1.925	1.764	1.845	2.005	2.165	2.165
178.0	2.085	2.165	2.005	1.925	1.764	1.925	2.005	2.165	2.165
178.5	2.085	2.165	2.005	1.925	1.764	1.925	2.005	2.165	2.165
179.0	2.165	2.165	2.005	1.925	1.764	1.925	2.085	2.165	2.165
179.5	2.165	2.165	2.005	1.925	1.764	1.925	2.005	2.165	2.165
180.0	2.005	2.005	2.005	2.005	2.005	2.005	2.005	2.005	2.005

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_5000K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	375.44	N.A.	11.40
0-30	788.65	N.A.	24.00
0-40	1278.68	N.A.	38.80
0-60	2250.91	N.A.	68.40
0-80	2901.06	N.A.	88.10
0-90	3055.64	N.A.	92.80
10-90	2957.81	N.A.	89.80
20-40	903.24	N.A.	27.40
20-50	1408.51	N.A.	42.80
40-70	1354.63	N.A.	41.10
60-80	650.15	N.A.	19.70
70-80	267.75	N.A.	8.10
80-90	154.58	N.A.	4.70
90-110	151.55	N.A.	4.60
90-120	192.48	N.A.	5.80
90-130	217.00	N.A.	6.60
90-150	234.88	N.A.	7.10
90-180	237.07	N.A.	7.20
110-180	85.53	N.A.	2.60
0-180	3292.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.83
10-20	277.61
20-30	413.21
30-40	490.03
40-50	505.27
50-60	466.96
60-70	382.40
70-80	267.75
80-90	154.58
90-100	89.51
100-110	62.04
110-120	40.94
120-130	24.52
130-140	12.71
140-150	5.17
150-160	1.46
160-170	0.55
170-180	0.19

IES INDOOR REPORT
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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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	106	100	96	91	102	97	93	89	92	88	85	87	84	81	82	79	77	75
2	96	87	80	73	92	84	78	72	80	74	69	75	71	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	58	66	60	56	63	58	54	51
4	80	67	58	51	77	65	57	50	62	55	49	59	52	47	56	50	46	44
5	73	60	51	44	70	58	50	43	55	48	42	53	46	41	50	44	40	38
6	67	54	45	38	65	52	44	38	50	42	37	48	41	36	45	40	35	33
7	62	49	40	34	60	48	39	33	45	38	33	43	37	32	41	36	31	29
8	58	44	36	30	56	43	35	30	42	34	29	40	33	28	38	32	28	26
9	54	41	33	27	53	40	32	27	38	31	26	37	30	26	35	29	25	23
10	51	38	30	24	49	37	29	24	35	28	24	34	28	23	33	27	23	21

IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_5000K_.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

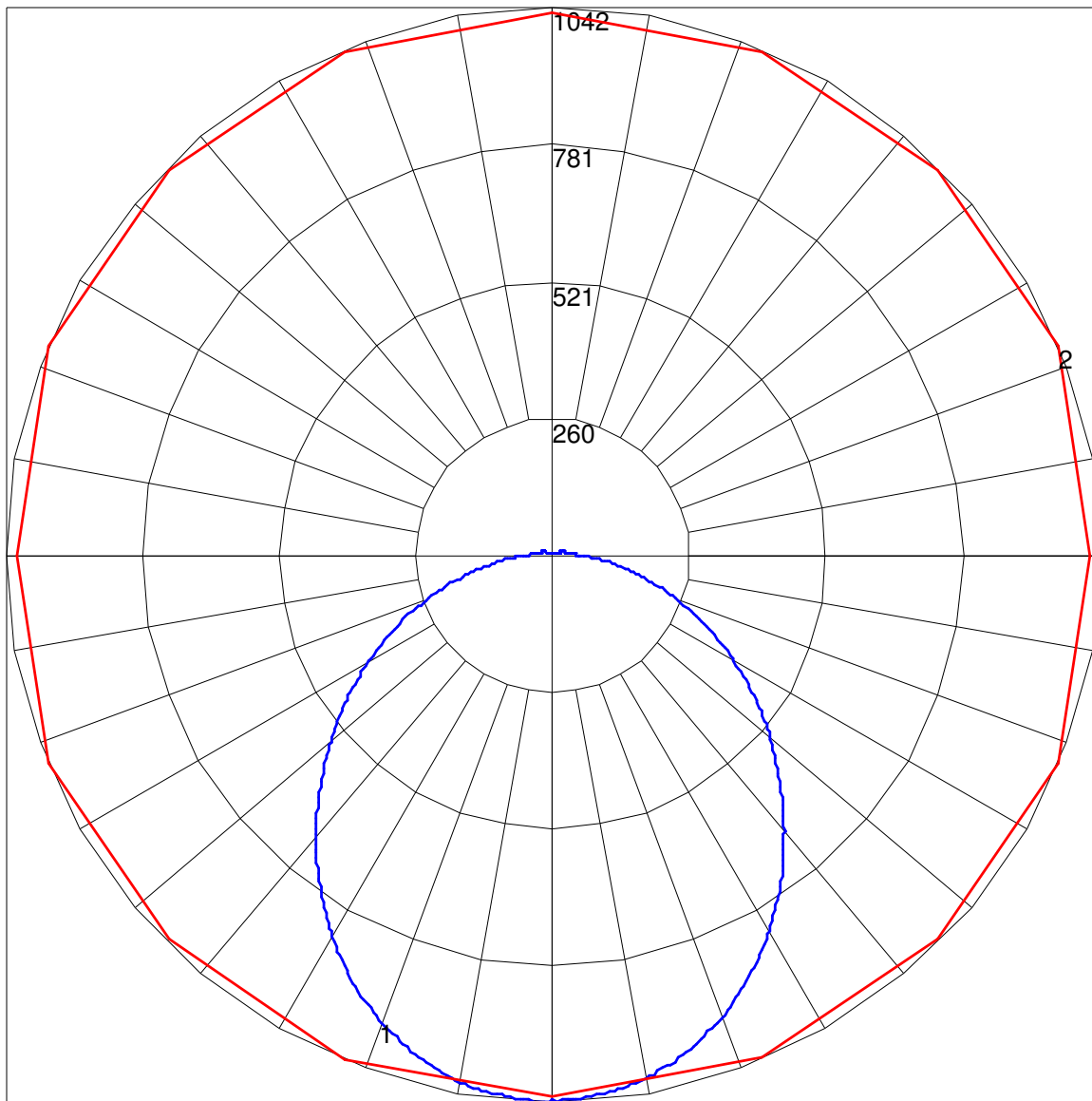
X=2H	Y=2H	18.9	20.5	19.4	20.9	21.4	21.4	22.9	21.8	23.4	23.8
	3H	20.4	21.8	20.9	22.3	22.8	23.8	25.2	24.3	25.6	26.2
	4H	20.9	22.2	21.4	22.7	23.2	24.9	26.2	25.4	26.7	27.3
	6H	21.2	22.4	21.7	22.9	23.5	26.0	27.3	26.6	27.8	28.3
	8H	21.3	22.4	21.8	23.0	23.5	26.6	27.8	27.2	28.3	28.9
	12H	21.3	22.4	21.8	22.9	23.5	27.2	28.4	27.8	28.9	29.5

UGR Viewed Endwise

4H	2H	19.9	21.2	20.4	21.7	22.2	21.8	23.1	22.3	23.6	24.1
	3H	21.6	22.7	22.1	23.3	23.8	24.5	25.6	25.0	26.1	26.7
	4H	22.2	23.2	22.7	23.8	24.4	25.7	26.8	26.3	27.3	27.9
	6H	22.6	23.5	23.2	24.1	24.7	27.1	28.0	27.6	28.5	29.1
	8H	22.7	23.6	23.3	24.2	24.8	27.7	28.6	28.3	29.1	29.8
	12H	22.8	23.6	23.4	24.2	24.8	28.5	29.2	29.0	29.8	30.5
8H	4H	22.9	23.8	23.5	24.3	24.9	25.9	26.8	26.5	27.4	28.0
	6H	23.5	24.2	24.1	24.8	25.5	27.4	28.2	28.0	28.8	29.4
	8H	23.7	24.4	24.3	25.0	25.6	28.3	28.9	28.9	29.5	30.1
	12H	23.9	24.4	24.5	25.0	25.7	29.2	29.7	29.8	30.3	31.0
12H	4H	23.1	23.9	23.7	24.5	25.1	25.9	26.7	26.5	27.3	27.9
	6H	23.8	24.5	24.4	25.0	25.7	27.5	28.1	28.1	28.7	29.4
	8H	24.1	24.7	24.7	25.3	26.0	28.3	28.9	28.9	29.5	30.2

Maximum UGR = 31.0

POLAR GRAPH



Maximum Candela = 1041.794 Located At Horizontal Angle = 157.5, Vertical Angle = .5
1 - Vertical Plane Through Horizontal Angles (157.5 - 337.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)