



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_3500K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 15180278.01
[TESTLAB] UL Verification Services Inc.
[ISSUE DATE] 10 May, 2024
[TEST DATE] 2/23/2024
[MANUFAC] H.E. WILLIAMS, INC.
[LUMCAT] FS-4-LS-8CS-DIM-UNV_23W_3500K
[LUMINAIRE] 45 inch Lumen/Wattage selectable, CCT selectable, LED stri
[MORE] p w/frosted acrylic lens
[LAMP] LED
[BALLAST] 0-10V DIMMING DRIVER

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3397
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	146
Total Luminaire Watts	23.3
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	14644	13856	14363
55	13329	12828	13667
65	11742	11702	12927
75	9669	10491	12018
85	6686	9658	11439

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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	1069.130	1069.130	1069.130	1069.130	1069.130	1069.130	1069.130	1069.130	1069.130
0.5	1055.062	1073.267	1070.785	1070.785	1065.820	1071.612	1070.785	1074.922	1055.890
1.0	1054.235	1072.440	1069.130	1071.612	1064.992	1071.612	1069.130	1074.095	1055.890
1.5	1055.890	1072.440	1067.475	1070.785	1065.820	1071.612	1069.130	1073.267	1055.890
2.0	1055.890	1071.612	1069.130	1071.612	1064.992	1073.267	1069.130	1074.095	1055.062
2.5	1055.062	1070.785	1067.475	1070.785	1064.992	1069.957	1069.130	1072.440	1053.407
3.0	1052.580	1070.785	1066.647	1070.785	1064.992	1070.785	1068.302	1073.267	1053.407
3.5	1053.407	1069.130	1065.820	1068.302	1063.337	1069.130	1067.475	1070.785	1054.235
4.0	1050.925	1067.475	1064.165	1069.130	1064.165	1068.302	1066.647	1071.612	1051.752
4.5	1051.752	1064.992	1064.165	1067.475	1062.510	1068.302	1064.992	1069.957	1050.097
5.0	1047.615	1064.165	1061.682	1066.647	1062.510	1067.475	1064.165	1068.302	1050.097
5.5	1046.787	1064.165	1060.855	1065.820	1062.510	1066.647	1064.165	1066.647	1047.615
6.0	1045.132	1061.682	1059.200	1064.992	1060.027	1064.992	1061.682	1066.647	1046.787
6.5	1043.477	1060.027	1058.372	1062.510	1058.372	1064.165	1060.855	1064.992	1045.132
7.0	1040.995	1057.545	1056.717	1060.027	1056.717	1062.510	1060.027	1064.165	1045.960
7.5	1040.167	1056.717	1054.235	1060.027	1055.062	1060.855	1057.545	1062.510	1042.650
8.0	1038.512	1054.235	1052.580	1057.545	1055.062	1060.027	1056.717	1060.855	1040.995
8.5	1036.030	1051.752	1050.097	1055.062	1051.752	1057.545	1055.062	1058.372	1037.685
9.0	1034.375	1049.270	1046.787	1054.235	1050.097	1055.062	1052.580	1057.545	1036.030
9.5	1029.410	1046.787	1046.787	1052.580	1048.442	1054.235	1050.925	1054.235	1033.547
10.0	1028.582	1045.960	1042.650	1047.615	1047.615	1051.752	1049.270	1052.580	1032.720
10.5	1022.790	1040.995	1040.995	1047.615	1043.477	1050.097	1046.787	1049.270	1028.582
11.0	1021.962	1040.167	1038.512	1044.305	1041.822	1047.615	1042.650	1045.132	1028.582
11.5	1018.652	1036.030	1035.202	1041.822	1040.167	1044.305	1040.995	1044.305	1024.445
12.0	1015.342	1032.720	1033.547	1039.340	1036.857	1042.650	1037.685	1040.995	1020.307
12.5	1011.205	1029.410	1030.237	1037.685	1036.857	1038.512	1035.202	1036.857	1018.652
13.0	1009.550	1027.755	1026.100	1034.375	1033.547	1036.857	1032.720	1035.202	1013.687
13.5	1007.067	1023.617	1024.445	1030.237	1030.237	1033.547	1030.237	1032.720	1010.377
14.0	1002.102	1019.480	1020.307	1027.755	1026.927	1031.065	1026.100	1029.410	1007.067
14.5	996.310	1015.342	1016.170	1024.445	1023.617	1026.927	1023.617	1026.100	1004.585
15.0	993.827	1012.860	1014.515	1022.790	1020.307	1024.445	1019.480	1021.962	1000.447
15.5	990.517	1010.377	1009.550	1018.652	1016.997	1020.307	1016.997	1017.825	997.137
16.0	988.035	1004.585	1006.240	1016.170	1012.860	1016.997	1012.032	1014.515	991.345
16.5	980.587	1001.275	1001.275	1012.860	1009.550	1013.687	1007.895	1010.377	990.517
17.0	976.450	997.137	998.792	1008.722	1006.240	1008.722	1004.585	1007.067	984.725
17.5	972.312	992.172	993.827	1003.757	1002.102	1004.585	999.620	1003.757	982.242
18.0	969.830	986.380	988.862	998.792	998.792	999.620	996.310	997.137	977.277
18.5	964.865	983.070	984.725	996.310	994.655	996.310	991.345	993.827	973.140
19.0	958.245	978.105	979.760	991.345	989.690	992.172	988.035	988.862	968.175
19.5	954.935	973.967	975.622	987.207	984.725	987.207	983.897	984.725	962.382
20.0	949.970	968.175	970.657	982.242	980.587	983.897	978.932	979.760	958.245
20.5	944.177	963.210	966.520	978.105	976.450	978.105	974.795	974.795	954.107
21.0	940.040	958.245	960.727	972.312	971.485	974.795	968.175	971.485	947.487
21.5	933.420	953.280	955.762	967.347	968.175	970.657	964.865	965.692	943.350
22.0	929.282	949.142	951.625	962.382	963.210	964.865	959.900	960.727	938.385
22.5	921.835	941.695	945.832	958.245	959.900	962.382	954.935	954.935	931.765
23.0	916.870	936.730	940.867	952.452	954.935	956.590	950.797	949.970	928.455
23.5	912.732	930.937	936.730	948.315	951.625	954.107	945.832	945.005	922.662
24.0	904.457	925.972	930.937	943.350	946.660	949.142	940.867	937.557	914.387
24.5	901.147	921.007	925.145	939.212	942.522	945.005	935.075	932.592	909.422
25.0	894.527	912.732	920.180	935.075	940.040	940.867	930.110	927.627	904.457
25.5	887.080	907.767	912.732	930.937	935.902	935.902	925.972	922.662	899.492
26.0	880.460	902.802	907.767	924.317	930.937	930.937	920.180	916.870	892.045
26.5	874.667	895.355	902.802	921.007	926.800	925.972	914.387	910.250	887.080

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CANDELA TABULATION - (Cont.)

27.0	869.702	889.562	897.837	915.215	920.180	921.007	908.595	904.457	880.460
27.5	862.255	884.597	892.045	911.077	916.042	915.215	903.630	898.665	873.840
28.0	856.462	876.322	884.597	906.112	911.905	910.250	897.010	892.045	868.047
28.5	850.670	870.530	879.632	900.320	906.940	905.285	892.045	886.252	862.255
29.0	844.050	863.910	873.840	895.355	901.975	899.492	886.252	880.460	854.807
29.5	837.430	858.117	868.047	889.562	896.182	894.527	881.287	873.012	848.187
30.0	829.155	851.497	862.255	883.770	891.217	889.562	874.667	867.220	840.740
30.5	822.618	844.877	855.635	878.805	886.252	883.770	868.875	860.600	834.120
31.0	815.667	837.430	849.842	873.012	881.287	878.805	862.255	853.980	829.155
31.5	810.453	829.982	844.050	867.220	875.495	873.840	857.290	847.360	820.218
32.0	801.765	824.852	837.430	862.255	870.530	868.875	851.497	840.740	814.094
32.5	796.138	817.404	830.810	856.462	865.565	863.082	844.050	833.292	808.385
33.0	788.028	810.784	823.528	851.497	861.427	858.117	837.430	826.010	799.117
33.5	780.746	803.751	817.322	846.532	855.635	851.497	831.637	819.639	793.241
34.0	774.126	796.800	812.522	839.912	850.670	846.532	826.341	813.432	787.201
34.5	766.430	789.021	805.488	834.120	845.705	840.740	819.804	805.075	778.760
35.0	760.390	782.318	799.613	829.155	839.912	834.947	813.598	798.620	773.216
35.5	752.859	774.623	793.738	823.776	835.775	829.155	806.564	790.842	764.279
36.0	744.005	766.679	786.621	817.901	829.982	824.686	799.944	783.973	758.321
36.5	736.309	759.810	781.160	811.777	825.100	818.646	793.821	776.774	751.453
37.0	730.351	751.949	773.712	807.143	820.052	813.184	786.952	769.575	745.743
37.5	722.407	745.495	767.672	801.103	814.674	806.647	781.408	762.955	738.544
38.0	713.884	737.964	760.803	795.724	809.378	800.854	774.788	756.169	730.020
38.5	707.016	730.434	755.259	789.683	803.420	795.145	767.506	749.467	721.911
39.0	698.741	722.407	748.308	783.808	797.793	789.187	761.714	743.012	714.050
39.5	690.880	714.298	742.019	777.684	792.662	783.394	754.680	735.730	704.864
40.0	682.439	707.761	735.482	772.057	787.863	778.181	748.143	729.027	696.258
40.5	675.323	700.313	729.027	766.099	781.491	772.223	741.688	720.504	688.149
41.0	666.303	691.955	722.159	760.638	775.119	766.430	735.068	712.974	680.039
41.5	658.855	683.763	716.532	755.011	770.816	759.893	727.952	703.954	671.847
42.0	650.249	676.481	709.333	748.805	765.106	755.259	721.414	695.431	664.482
42.5	642.554	668.703	702.465	743.343	759.645	748.639	714.050	687.818	656.373
43.0	634.279	661.834	695.845	737.137	754.018	742.267	707.843	678.715	648.263
43.5	627.079	654.718	688.894	730.931	748.970	736.144	701.720	670.689	641.147
44.0	620.046	646.277	682.439	725.469	743.260	730.848	694.190	662.083	632.624
44.5	610.198	638.333	674.495	719.097	737.551	725.221	688.563	654.470	625.093
45.0	602.999	630.472	669.034	713.305	731.924	718.104	682.025	645.864	617.315
45.5	595.552	622.776	661.338	707.181	725.138	712.808	675.157	638.913	609.536
46.0	587.359	616.239	654.966	700.479	719.511	707.099	668.703	630.720	600.765
46.5	580.160	608.461	647.850	693.610	714.132	700.148	662.083	623.356	593.566
47.0	571.720	600.103	641.147	688.728	708.174	695.348	655.959	615.743	586.118
47.5	563.445	592.655	634.279	681.860	702.878	689.473	649.256	607.881	576.602
48.0	556.990	584.960	627.990	676.978	696.093	681.943	642.719	599.937	570.147
48.5	547.970	577.264	621.204	669.447	690.714	676.398	635.934	592.324	560.631
49.0	542.674	570.809	614.915	663.738	684.756	670.358	628.900	584.960	553.184
49.5	535.558	562.203	608.212	657.697	678.302	664.565	620.294	576.767	545.819
50.0	527.200	555.583	601.510	651.491	673.006	658.359	614.088	568.906	539.447
50.5	518.925	549.708	593.317	645.202	667.048	651.904	606.971	561.541	532.413
51.0	511.147	542.509	587.690	638.830	661.503	645.698	599.110	553.432	523.311
51.5	503.451	535.310	580.326	633.368	656.373	639.575	592.242	548.715	515.450
52.0	495.341	527.283	574.202	627.328	649.918	633.534	584.794	541.185	507.092
52.5	487.894	520.001	567.334	620.956	643.878	627.162	578.257	534.482	499.479
53.0	479.536	511.974	560.135	614.915	637.671	621.783	571.554	526.373	492.031
53.5	472.006	504.527	553.432	608.461	631.465	615.163	564.107	518.594	483.343
54.0	463.814	497.576	547.391	602.172	624.845	608.957	558.066	510.981	474.902
54.5	455.870	489.466	542.509	595.221	619.715	603.082	550.784	503.037	467.372

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CANDELA TABULATION - (Cont.)

55.0	447.346	481.853	536.137	589.263	613.508	596.379	546.646	495.838	459.014
55.5	439.568	475.068	529.103	582.477	606.806	590.007	540.192	488.225	450.739
56.0	431.789	466.793	522.152	575.857	601.179	584.049	533.075	480.364	443.374
56.5	424.342	459.097	515.201	569.899	594.228	576.436	525.628	471.923	434.934
57.0	416.232	451.318	508.499	563.114	588.270	570.147	518.677	464.558	426.080
57.5	408.619	444.285	502.210	556.825	581.153	563.279	511.560	456.283	418.301
58.0	401.172	436.506	494.679	550.370	574.368	556.659	504.278	448.919	410.440
58.5	393.145	428.810	487.728	545.902	568.079	551.198	497.410	441.223	402.082
59.0	385.780	421.363	481.522	541.102	561.955	545.902	489.880	433.031	394.717
59.5	377.836	414.081	474.240	533.324	555.004	539.695	483.177	425.831	386.277
60.0	370.223	406.716	466.710	526.869	550.949	532.827	475.978	418.301	379.160
60.5	362.528	399.186	459.676	520.994	544.991	526.207	469.606	410.192	370.389
61.0	354.170	391.738	453.139	513.546	538.868	519.091	462.241	403.241	362.610
61.5	346.640	384.208	446.519	506.678	532.413	512.305	455.539	394.966	354.749
62.0	338.944	376.843	439.733	500.224	525.214	506.182	447.843	387.684	346.722
62.5	331.331	369.644	432.948	493.521	518.180	498.734	441.388	379.905	338.944
63.0	323.966	362.114	426.080	486.818	511.560	492.197	434.272	372.623	331.331
63.5	316.188	355.080	419.129	479.619	505.023	485.329	426.990	365.010	323.718
64.0	308.161	347.715	412.509	472.916	498.238	478.709	420.287	357.480	315.443
64.5	299.886	340.351	405.144	465.882	490.956	472.337	413.005	350.198	307.747
65.0	292.687	333.565	398.276	459.180	484.253	465.055	406.385	342.750	299.969
65.5	285.487	326.200	391.490	452.973	478.047	458.352	399.765	335.303	292.438
66.0	277.626	318.918	385.036	445.195	471.096	451.236	392.318	327.773	284.660
66.5	270.758	311.885	377.919	438.823	463.814	444.285	385.780	320.408	277.047
67.0	263.228	305.016	371.051	431.872	457.111	436.920	378.333	313.291	269.848
67.5	256.111	297.900	364.514	424.590	449.829	430.383	372.044	306.258	262.483
68.0	248.746	291.032	357.149	418.549	443.209	423.597	364.845	298.976	255.366
68.5	241.547	284.246	350.860	411.019	436.341	416.232	357.811	291.859	247.422
69.0	234.348	276.881	344.074	404.896	429.390	409.778	351.025	285.156	240.389
69.5	226.735	270.013	337.372	397.614	422.356	402.992	344.488	277.957	232.527
70.0	219.867	263.228	330.338	390.911	415.322	395.628	337.372	270.592	225.494
70.5	212.998	255.946	323.801	383.794	408.537	389.173	330.586	263.476	218.377
71.0	205.468	249.491	317.181	377.505	401.668	382.222	323.966	256.442	211.012
71.5	198.683	242.540	310.974	370.720	394.800	375.850	316.932	249.491	203.730
72.0	191.649	236.251	303.858	363.521	387.849	368.734	310.643	242.871	196.117
72.5	184.698	229.466	297.486	356.983	381.395	362.279	303.775	235.755	189.001
73.0	177.664	223.094	290.701	349.867	374.278	354.997	297.238	228.886	182.546
73.5	171.044	216.639	284.329	342.833	367.162	348.295	290.701	222.184	175.347
74.0	164.259	209.937	277.957	336.875	360.624	341.509	283.915	215.481	168.562
74.5	157.059	203.151	271.006	329.841	353.508	334.972	277.792	208.530	161.362
75.0	150.191	196.945	264.800	323.552	347.219	328.021	271.420	202.158	154.825
75.5	143.985	190.656	258.759	316.601	340.351	321.401	264.717	195.373	148.040
76.0	137.117	184.367	252.387	310.395	333.648	315.029	258.676	189.166	141.337
76.5	130.910	178.243	246.181	303.775	326.862	308.161	252.139	182.464	135.213
77.0	124.787	172.120	239.975	297.072	320.077	301.789	245.602	176.257	128.676
77.5	118.498	166.079	233.934	290.866	313.871	295.086	239.396	169.720	122.387
78.0	112.043	160.038	227.976	284.412	306.920	288.797	233.438	163.845	116.098
78.5	105.920	154.329	221.853	278.123	300.631	282.508	227.397	157.804	109.892
79.0	99.879	148.453	216.143	271.751	294.011	276.054	221.191	152.012	104.017
79.5	94.335	142.661	210.516	265.710	287.970	270.427	215.481	146.054	97.728
80.0	88.708	136.868	204.723	259.338	281.929	263.890	209.523	140.261	92.101
80.5	82.915	131.324	199.014	253.546	275.309	258.014	203.979	135.048	86.308
81.0	77.288	126.028	193.469	247.422	269.351	251.725	198.352	129.338	80.929
81.5	71.910	120.649	187.842	241.630	263.228	245.850	192.807	124.125	75.468
82.0	66.614	115.519	182.464	235.837	256.690	240.058	187.263	118.994	70.172
82.5	61.731	110.223	177.085	230.541	250.732	233.934	181.636	113.947	65.124

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CANDELA TABULATION - (Cont.)

83.0	56.518	105.258	171.789	224.749	245.105	228.142	176.588	108.899	60.076
83.5	51.636	100.458	166.576	219.122	239.147	222.763	171.127	104.017	55.194
84.0	46.836	95.742	161.528	213.578	233.520	217.301	166.245	99.217	50.395
84.5	42.202	91.108	156.480	208.364	227.893	211.757	161.114	94.583	45.926
85.0	37.899	86.805	151.432	202.903	222.432	206.213	156.066	90.115	41.292
85.5	33.596	82.253	146.798	197.524	216.888	201.082	151.267	85.315	36.989
86.0	29.293	78.033	142.164	192.642	211.509	195.952	146.302	81.012	32.603
86.5	25.239	73.896	137.696	187.594	206.378	190.656	141.751	76.626	28.383
87.0	21.184	69.841	133.062	182.712	201.165	185.856	137.282	72.489	24.163
87.5	17.460	66.034	128.759	178.243	196.200	181.140	132.648	68.434	20.108
88.0	13.819	61.897	124.704	173.692	191.649	176.506	128.428	64.297	16.053
88.5	10.178	58.339	120.980	169.555	187.015	172.285	124.456	60.242	11.916
89.0	6.537	54.946	117.505	165.500	182.960	167.982	120.567	56.684	8.027
89.5	3.227	52.132	114.195	161.776	178.905	164.259	117.257	53.539	4.220
90.0	1.158	49.567	111.299	158.135	175.016	160.452	114.195	50.808	1.324
90.5	0.745	47.416	108.485	154.660	171.127	156.728	111.133	48.491	0.745
91.0	0.745	45.595	105.672	151.267	167.486	153.418	107.989	46.671	0.662
91.5	0.745	44.271	103.272	147.957	164.010	150.191	105.589	45.264	0.662
92.0	0.745	43.113	100.789	145.061	160.866	147.295	103.272	44.106	0.662
92.5	0.745	42.037	99.052	142.413	157.804	144.481	101.286	43.030	0.662
93.0	0.745	41.044	97.231	139.847	154.908	141.916	99.465	41.954	0.662
93.5	0.745	40.051	95.576	137.613	152.425	139.516	97.728	40.961	0.662
94.0	0.745	39.141	94.004	135.296	149.943	137.282	96.238	39.968	0.662
94.5	0.745	38.230	92.597	133.310	147.709	135.213	94.666	38.975	0.662
95.0	0.745	37.320	91.190	131.324	145.557	132.979	93.094	38.065	0.662
95.5	0.745	36.493	89.618	129.338	143.157	131.076	91.604	37.237	0.662
96.0	0.745	35.665	88.294	127.352	141.089	129.007	90.115	36.410	0.662
96.5	0.745	34.838	86.805	125.532	139.020	127.187	88.542	35.500	0.662
97.0	0.745	34.010	85.481	123.463	136.868	125.035	87.218	34.672	0.662
97.5	0.745	33.183	83.991	121.808	134.800	123.297	85.812	33.927	0.662
98.0	0.745	32.438	82.667	119.822	132.896	121.394	84.322	33.100	0.662
98.5	0.745	31.776	81.426	118.084	130.993	119.491	82.998	32.272	0.662
99.0	0.745	30.948	79.936	116.429	129.090	117.670	81.591	31.528	0.662
99.5	0.745	30.204	78.695	114.691	127.104	115.933	80.267	30.783	0.662
100.0	0.745	29.542	77.288	112.954	125.201	114.195	78.861	30.038	0.662
100.5	0.745	28.797	76.047	111.216	123.215	112.540	77.619	29.376	0.745
101.0	0.745	28.218	74.806	109.478	121.477	110.885	76.378	28.631	0.745
101.5	0.745	27.473	73.482	107.823	119.739	109.064	74.971	27.969	0.745
102.0	0.827	26.894	72.323	106.168	117.753	107.575	73.813	27.307	0.745
102.5	0.827	26.232	71.082	104.596	115.850	106.003	72.489	26.645	0.745
103.0	0.827	25.652	69.841	102.941	114.112	104.348	71.248	25.983	0.745
103.5	0.827	24.990	68.600	101.534	112.457	102.693	70.089	25.321	0.745
104.0	0.827	24.411	67.524	100.045	110.802	101.120	68.765	24.659	0.745
104.5	0.827	23.832	66.283	98.307	109.230	99.548	67.607	24.080	0.827
105.0	0.827	23.253	65.207	96.900	107.409	98.059	66.448	23.501	0.827
105.5	0.827	22.673	64.131	95.411	105.837	96.404	65.290	22.922	0.827
106.0	0.827	22.094	62.973	93.838	104.265	94.914	64.048	22.342	0.827
106.5	0.827	21.598	61.897	92.514	102.444	93.425	62.973	21.846	0.827
107.0	0.910	21.018	60.821	91.025	101.038	91.852	61.814	21.267	0.827
107.5	0.910	20.522	59.663	89.453	99.548	90.446	60.821	20.770	0.827
108.0	0.910	20.025	58.587	88.211	97.976	89.039	59.745	20.274	0.827
108.5	0.910	19.446	57.677	86.722	96.486	87.715	58.587	19.694	0.910
109.0	0.910	18.950	56.601	85.315	94.997	86.308	57.511	19.198	0.910
109.5	0.910	18.453	55.525	83.908	93.590	84.901	56.518	18.701	0.910
110.0	0.910	18.039	54.615	82.584	92.101	83.495	55.525	18.205	0.910
110.5	0.910	17.543	53.622	81.343	90.611	82.088	54.449	17.708	0.910

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111.0	0.910	17.046	52.629	80.019	89.287	80.929	53.456	17.295	0.910
111.5	0.993	16.633	51.719	78.778	87.880	79.523	52.381	16.798	0.910
112.0	0.993	16.136	50.726	77.371	86.556	78.199	51.470	16.302	0.910
112.5	0.993	15.722	49.733	76.295	85.150	76.957	50.477	15.888	0.993
113.0	0.993	15.309	48.905	74.889	83.743	75.716	49.484	15.391	0.993
113.5	0.993	14.895	47.829	73.647	82.336	74.309	48.574	14.978	0.993
114.0	0.993	14.398	47.002	72.489	81.178	73.068	47.664	14.564	0.993
114.5	0.993	13.985	46.092	71.248	79.771	71.910	46.671	14.067	0.993
115.0	0.993	13.654	45.181	70.089	78.530	70.668	45.678	13.654	0.993
115.5	0.993	13.157	44.271	68.931	77.206	69.427	44.768	13.240	0.993
116.0	0.993	12.826	43.444	67.607	75.964	68.269	43.857	12.826	1.076
116.5	0.993	12.412	42.533	66.531	74.723	67.110	43.030	12.495	1.076
117.0	0.993	11.999	41.623	65.290	73.399	65.869	42.120	12.081	1.076
117.5	0.993	11.585	40.796	64.214	72.241	64.710	41.209	11.668	1.076
118.0	0.993	11.254	40.051	62.973	70.999	63.552	40.382	11.254	1.076
118.5	0.993	10.840	39.223	61.897	69.841	62.393	39.554	10.923	1.076
119.0	0.993	10.509	38.396	60.821	68.600	61.318	38.727	10.509	1.076
119.5	0.993	10.095	37.568	59.745	67.358	60.242	37.899	10.178	1.076
120.0	0.993	9.764	36.741	58.504	66.200	59.001	36.989	9.764	1.076
120.5	0.993	9.433	35.913	57.594	64.959	57.925	36.244	9.433	1.158
121.0	0.993	9.020	35.169	56.435	63.717	56.849	35.417	9.102	1.158
121.5	0.993	8.606	34.424	55.360	62.724	55.773	34.672	8.689	1.158
122.0	0.993	8.275	33.679	54.284	61.400	54.698	33.927	8.358	1.158
122.5	0.993	7.944	32.852	53.208	60.325	53.539	33.183	8.027	1.158
123.0	0.993	7.613	32.107	52.215	59.166	52.546	32.355	7.696	1.158
123.5	0.993	7.282	31.362	51.139	58.008	51.553	31.610	7.365	1.158
124.0	0.993	6.951	30.700	50.064	56.932	50.477	30.866	7.034	1.158
124.5	0.993	6.620	29.955	49.071	55.856	49.319	30.121	6.703	1.241
125.0	0.993	6.289	29.211	48.078	54.780	48.326	29.376	6.372	1.241
125.5	0.993	5.958	28.466	47.085	53.622	47.333	28.631	6.041	1.241
126.0	0.993	5.710	27.721	46.174	52.546	46.340	27.887	5.710	1.241
126.5	0.993	5.379	27.059	45.181	51.470	45.347	27.225	5.379	1.241
127.0	0.993	5.048	26.397	44.188	50.312	44.354	26.563	5.130	1.241
127.5	0.993	4.799	25.735	43.278	49.319	43.361	25.818	4.799	1.241
128.0	0.993	4.468	24.990	42.285	48.326	42.533	25.156	4.551	1.324
128.5	0.993	4.220	24.246	41.375	47.333	41.623	24.494	4.303	1.324
129.0	0.993	3.972	23.584	40.382	46.257	40.630	23.832	4.055	1.324
129.5	0.993	3.806	23.004	39.472	45.264	39.720	23.170	3.889	1.324
130.0	1.076	3.558	22.425	38.561	44.271	38.810	22.591	3.641	1.324
130.5	1.076	3.393	21.680	37.734	43.278	37.982	21.929	3.475	1.407
131.0	1.076	3.227	21.101	36.906	42.285	36.989	21.267	3.310	1.407
131.5	1.076	3.062	20.522	35.996	41.292	36.162	20.687	3.144	1.407
132.0	1.076	2.896	19.860	35.169	40.299	35.251	20.025	2.979	1.407
132.5	1.076	2.731	19.281	34.258	39.389	34.424	19.446	2.813	1.407
133.0	1.076	2.648	18.701	33.348	38.479	33.514	18.867	2.731	1.489
133.5	1.076	2.565	18.039	32.521	37.486	32.686	18.205	2.648	1.489
134.0	1.076	2.482	17.377	31.693	36.658	31.776	17.626	2.565	1.489
134.5	1.076	2.400	16.715	30.866	35.665	30.948	17.046	2.482	1.489
135.0	1.076	2.317	16.053	30.038	34.755	30.121	16.467	2.400	1.489
135.5	1.076	2.234	15.474	29.128	33.845	29.293	15.888	2.317	1.489
136.0	1.076	2.151	14.812	28.300	32.934	28.466	15.309	2.234	1.489
136.5	1.076	2.151	14.233	27.556	32.024	27.638	14.812	2.234	1.572
137.0	1.076	2.069	13.571	26.811	31.114	26.811	14.233	2.151	1.572
137.5	1.076	2.069	12.992	25.983	30.286	26.066	13.654	2.151	1.572
138.0	1.076	1.986	12.412	25.156	29.459	25.239	13.157	2.069	1.572
138.5	1.076	1.986	11.916	24.411	28.631	24.494	12.661	2.069	1.572

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CANDELA TABULATION - (Cont.)

139.0	1.158	1.986	11.337	23.666	27.804	23.666	12.164	1.986	1.655
139.5	1.158	1.903	10.757	22.922	26.976	23.004	11.668	1.986	1.655
140.0	1.158	1.903	10.261	22.177	26.149	22.177	11.088	1.986	1.655
140.5	1.158	1.903	9.764	21.349	25.321	21.432	10.592	1.903	1.655
141.0	1.158	1.820	9.351	20.687	24.494	20.687	10.095	1.903	1.655
141.5	1.158	1.820	8.854	19.943	23.666	20.025	9.599	1.903	1.738
142.0	1.158	1.820	8.440	19.281	22.922	19.281	9.102	1.903	1.738
142.5	1.158	1.738	8.027	18.536	22.094	18.536	8.606	1.820	1.738
143.0	1.158	1.738	7.613	17.874	21.349	17.791	8.192	1.820	1.738
143.5	1.241	1.738	7.199	17.129	20.605	17.129	7.696	1.820	1.738
144.0	1.241	1.738	6.785	16.467	19.777	16.467	7.282	1.738	1.738
144.5	1.241	1.738	6.372	15.805	19.032	15.722	6.785	1.738	1.820
145.0	1.241	1.655	6.041	15.060	18.288	15.060	6.372	1.738	1.820
145.5	1.241	1.655	5.627	14.398	17.543	14.398	5.958	1.738	1.820
146.0	1.241	1.655	5.296	13.819	16.798	13.736	5.544	1.738	1.820
146.5	1.241	1.655	4.965	13.157	16.053	13.074	5.213	1.738	1.820
147.0	1.241	1.655	4.634	12.495	15.391	12.412	4.882	1.655	1.820
147.5	1.241	1.655	4.303	11.833	14.647	11.833	4.551	1.655	1.903
148.0	1.324	1.655	4.055	11.171	13.985	11.171	4.303	1.655	1.903
148.5	1.324	1.655	3.806	10.509	13.240	10.592	4.055	1.655	1.903
149.0	1.324	1.655	3.641	9.764	12.578	9.930	3.806	1.655	1.903
149.5	1.324	1.655	3.393	9.185	11.916	9.351	3.641	1.655	1.903
150.0	1.324	1.655	3.227	8.523	11.254	8.771	3.475	1.738	1.903
150.5	1.324	1.655	3.144	7.944	10.592	8.192	3.310	1.655	1.986
151.0	1.324	1.655	2.979	7.365	9.930	7.613	3.144	1.655	1.986
151.5	1.407	1.655	2.896	6.868	9.351	7.116	3.062	1.738	1.986
152.0	1.407	1.738	2.813	6.289	8.689	6.537	2.896	1.738	1.986
152.5	1.407	1.738	2.731	5.875	8.109	6.041	2.813	1.738	1.986
153.0	1.407	1.738	2.648	5.461	7.447	5.544	2.731	1.738	1.986
153.5	1.407	1.738	2.565	5.048	6.868	5.130	2.648	1.738	1.986
154.0	1.407	1.738	2.482	4.634	6.289	4.799	2.565	1.738	2.069
154.5	1.489	1.738	2.400	4.303	5.792	4.386	2.482	1.738	2.069
155.0	1.489	1.738	2.317	3.972	5.296	4.055	2.400	1.738	2.069
155.5	1.489	1.820	2.317	3.724	4.882	3.806	2.400	1.738	2.069
156.0	1.489	1.820	2.234	3.475	4.468	3.558	2.317	1.820	2.069
156.5	1.572	1.820	2.234	3.227	4.137	3.310	2.234	1.820	2.069
157.0	1.572	1.820	2.151	3.062	3.806	3.144	2.234	1.820	2.069
157.5	1.572	1.820	2.151	2.979	3.475	2.979	2.151	1.820	2.069
158.0	1.572	1.820	2.069	2.813	3.310	2.813	2.151	1.820	2.151
158.5	1.572	1.903	2.069	2.731	3.062	2.731	2.069	1.820	2.151
159.0	1.655	1.903	1.986	2.565	2.896	2.565	2.069	1.903	2.151
159.5	1.655	1.903	1.986	2.482	2.731	2.482	1.986	1.903	2.151
160.0	1.655	1.903	1.986	2.400	2.648	2.400	1.986	1.903	2.151
160.5	1.655	1.903	1.903	2.317	2.482	2.317	1.986	1.903	2.151
161.0	1.655	1.903	1.903	2.234	2.400	2.234	1.903	1.903	2.151
161.5	1.738	1.903	1.903	2.234	2.317	2.234	1.903	1.903	2.151
162.0	1.738	1.986	1.903	2.151	2.234	2.151	1.903	1.903	2.151
162.5	1.738	1.986	1.903	2.069	2.151	2.069	1.903	1.986	2.151
163.0	1.738	1.986	1.903	1.986	2.069	2.069	1.903	1.986	2.234
163.5	1.738	1.986	1.903	1.986	1.986	1.986	1.903	1.986	2.234
164.0	1.820	1.986	1.903	1.903	1.986	1.903	1.903	1.986	2.234
164.5	1.820	1.986	1.903	1.903	1.903	1.903	1.903	1.986	2.234
165.0	1.820	2.069	1.903	1.903	1.903	1.903	1.903	1.986	2.234
165.5	1.820	2.069	1.903	1.903	1.820	1.903	1.903	2.069	2.234
166.0	1.903	2.069	1.986	1.903	1.820	1.820	1.986	2.069	2.234
166.5	1.903	2.069	1.986	1.903	1.820	1.820	1.986	2.069	2.234

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167.0	1.903	2.069	1.986	1.820	1.738	1.820	1.986	2.069	2.234
167.5	1.903	2.069	1.986	1.820	1.738	1.820	1.986	2.069	2.234
168.0	1.903	2.069	1.986	1.820	1.738	1.820	1.986	2.069	2.234
168.5	1.986	2.151	1.986	1.820	1.738	1.820	1.986	2.069	2.234
169.0	1.986	2.151	1.986	1.903	1.738	1.903	1.986	2.151	2.234
169.5	1.986	2.151	1.986	1.903	1.738	1.903	1.986	2.151	2.234
170.0	1.986	2.151	1.986	1.903	1.738	1.820	1.986	2.151	2.234
170.5	1.986	2.151	1.986	1.903	1.738	1.903	1.986	2.151	2.234
171.0	1.986	2.151	2.069	1.903	1.738	1.903	1.986	2.151	2.234
171.5	1.986	2.151	2.069	1.903	1.738	1.903	2.069	2.151	2.234
172.0	1.986	2.151	2.069	1.903	1.738	1.903	2.069	2.151	2.234
172.5	2.069	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
173.0	2.069	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
173.5	2.069	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
174.0	2.069	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
174.5	2.069	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
175.0	2.069	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
175.5	2.151	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
176.0	2.151	2.151	2.069	1.903	1.820	1.903	2.069	2.151	2.234
176.5	2.151	2.151	2.069	1.986	1.820	1.903	2.069	2.151	2.234
177.0	2.151	2.234	2.069	1.986	1.820	1.903	2.069	2.234	2.234
177.5	2.151	2.234	2.069	1.986	1.820	1.903	2.069	2.234	2.234
178.0	2.151	2.234	2.069	1.986	1.820	1.986	2.069	2.234	2.234
178.5	2.151	2.234	2.069	1.986	1.820	1.986	2.069	2.234	2.234
179.0	2.234	2.234	2.069	1.986	1.820	1.986	2.151	2.234	2.234
179.5	2.234	2.234	2.069	1.986	1.820	1.986	2.069	2.234	2.234
180.0	2.069	2.069	2.069	2.069	2.069	2.069	2.069	2.069	2.069

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_3500K.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	387.38	N.A.	11.40
0-30	813.73	N.A.	24.00
0-40	1319.34	N.A.	38.80
0-60	2322.49	N.A.	68.40
0-80	2993.31	N.A.	88.10
0-90	3152.8	N.A.	92.80
10-90	3051.86	N.A.	89.80
20-40	931.96	N.A.	27.40
20-50	1453.3	N.A.	42.80
40-70	1397.7	N.A.	41.10
60-80	670.82	N.A.	19.70
70-80	276.26	N.A.	8.10
80-90	159.49	N.A.	4.70
90-110	156.36	N.A.	4.60
90-120	198.60	N.A.	5.80
90-130	223.90	N.A.	6.60
90-150	242.35	N.A.	7.10
90-180	244.61	N.A.	7.20
110-180	88.24	N.A.	2.60
0-180	3397.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	100.94
10-20	286.44
20-30	426.35
30-40	505.61
40-50	521.34
50-60	481.81
60-70	394.56
70-80	276.26
80-90	159.49
90-100	92.36
100-110	64.01
110-120	42.24
120-130	25.30
130-140	13.11
140-150	5.33
150-160	1.51
160-170	0.56
170-180	0.19

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_3500K.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	97	97	97	97	94	94	94	94	89	89	89	84	84	84	79	79	79	77
1	87	83	79	75	85	81	77	74	76	73	70	72	69	67	68	66	64	62
2	79	72	66	61	76	70	64	60	66	61	57	62	58	55	59	56	53	51
3	72	63	56	50	69	61	55	49	58	52	48	55	50	46	52	48	45	42
4	66	56	48	42	63	54	47	42	51	45	40	49	43	39	46	42	38	36
5	60	50	42	36	58	48	41	36	46	40	35	44	38	34	41	37	33	31
6	56	45	37	32	54	43	36	31	41	35	30	39	34	30	38	33	29	27
7	52	40	33	28	50	39	32	28	38	31	27	36	30	26	34	29	26	24
8	48	37	30	25	46	36	29	25	34	28	24	33	27	24	31	27	23	21
9	45	34	27	22	43	33	27	22	32	26	22	30	25	21	29	24	21	19
10	42	31	25	20	41	31	24	20	29	24	20	28	23	19	27	22	19	17

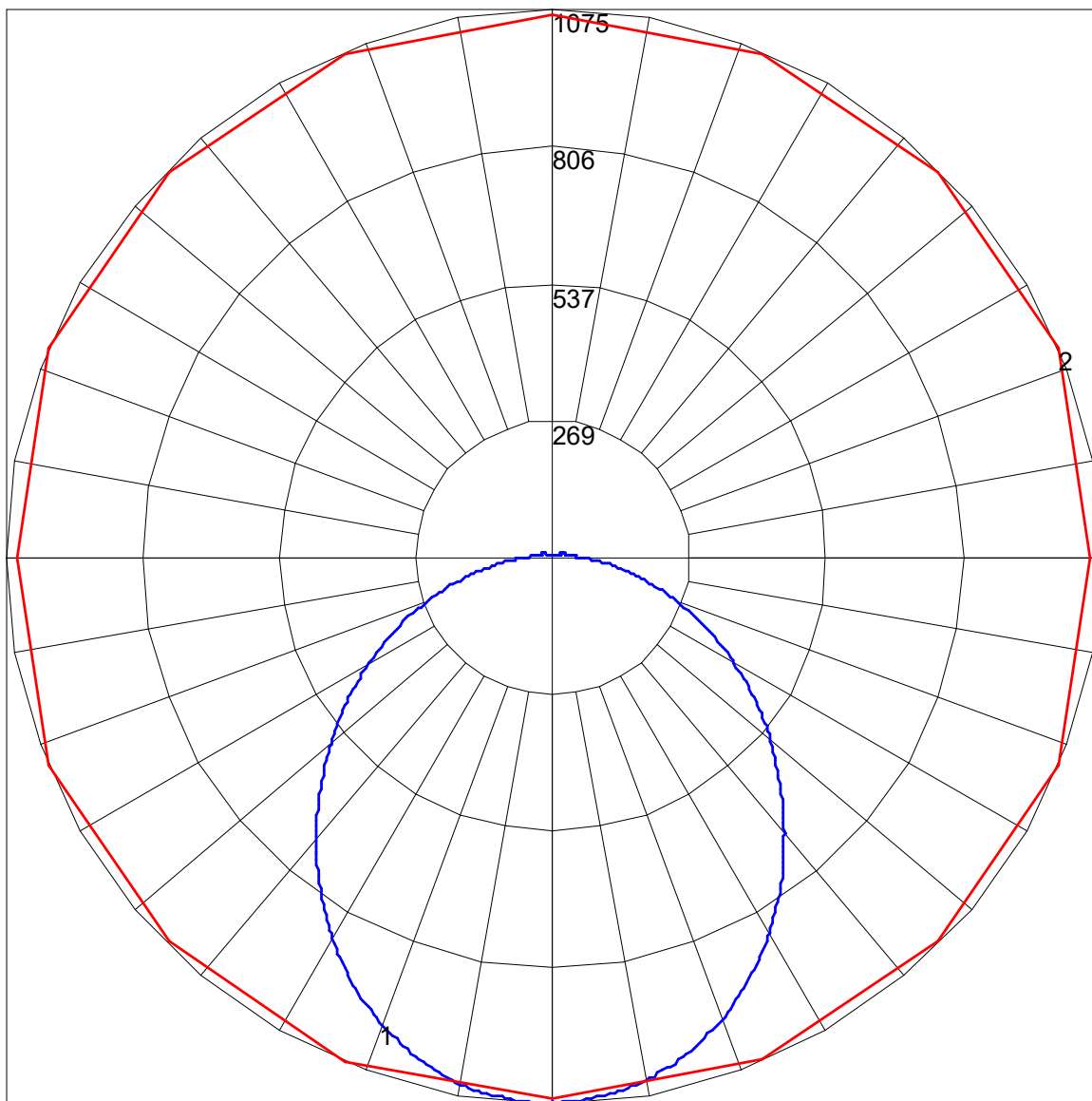
IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_23W_3500K.IES

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	19.7	21.3	20.2	21.7	22.2	22.2	23.7	22.6	24.2	24.6
	3H	21.2	22.6	21.7	23.1	23.6	24.6	26.0	25.1	26.4	27.0
	4H	21.7	23.0	22.2	23.5	24.0	25.7	27.0	26.2	27.5	28.1
	6H	22.0	23.2	22.5	23.7	24.3	26.8	28.1	27.4	28.6	29.1
	8H	22.1	23.2	22.6	23.8	24.3	27.4	28.6	27.9	29.1	29.7
	12H	22.1	23.2	22.6	23.7	24.3	28.0	29.2	28.6	29.7	30.3
4H	2H	20.7	22.0	21.2	22.5	23.0	22.6	23.9	23.1	24.4	24.9
	3H	22.4	23.5	22.9	24.1	24.6	25.3	26.4	25.8	26.9	27.5
	4H	23.0	24.0	23.5	24.6	25.2	26.5	27.6	27.1	28.1	28.7
	6H	23.4	24.3	24.0	24.9	25.5	27.9	28.8	28.4	29.3	29.9
	8H	23.5	24.4	24.1	25.0	25.6	28.5	29.4	29.1	29.9	30.6
	12H	23.6	24.4	24.2	25.0	25.6	29.3	30.0	29.8	30.6	31.3
8H	4H	23.7	24.6	24.3	25.1	25.7	26.7	27.6	27.3	28.2	28.8
	6H	24.3	25.0	24.9	25.6	26.3	28.2	29.0	28.8	29.6	30.2
	8H	24.5	25.2	25.1	25.8	26.4	29.1	29.7	29.7	30.3	30.9
	12H	24.6	25.2	25.3	25.8	26.5	30.0	30.5	30.6	31.1	31.8
12H	4H	23.9	24.7	24.5	25.3	25.9	26.7	27.5	27.3	28.1	28.7
	6H	24.6	25.3	25.2	25.8	26.5	28.3	28.9	28.9	29.5	30.2
	8H	24.9	25.5	25.5	26.1	26.8	29.1	29.7	29.7	30.3	31.0

Maximum UGR = 31.8

POLAR GRAPH



Maximum Candela = 1074.922 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.)