



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM 15180278.01  
[TESTLAB] UL Verification Services Inc.  
[ISSUE DATE] 2024-03-19  
[TEST DATE] 2/23/2024  
[MANUFAC] H.E. WILLIAMS, INC.  
[LUMCAT] FS-4-LS-8CS-DIM-UNV\_28W\_5000K  
[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	4223
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	152
Total Luminaire Watts	27.7
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	18200	17222	17852
55	16566	15944	16986
65	14594	14545	16067
75	12017	13039	14937
85	8310	12004	14217

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**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	1328.815	1328.815	1328.815	1328.815	1328.815	1328.815	1328.815	1328.815	1328.815
0.5	1311.331	1333.958	1330.872	1330.872	1324.702	1331.901	1330.872	1336.015	1312.360
1.0	1310.303	1332.929	1328.815	1331.901	1323.673	1331.901	1328.815	1334.986	1312.360
1.5	1312.360	1332.929	1326.758	1330.872	1324.702	1331.901	1328.815	1333.958	1312.360
2.0	1312.360	1331.901	1328.815	1331.901	1323.673	1333.958	1328.815	1334.986	1311.331
2.5	1311.331	1330.872	1326.758	1330.872	1323.673	1329.844	1328.815	1332.929	1309.274
3.0	1308.246	1330.872	1325.730	1330.872	1323.673	1330.872	1327.787	1333.958	1309.274
3.5	1309.274	1328.815	1324.702	1327.787	1321.616	1328.815	1326.758	1330.872	1310.303
4.0	1306.189	1326.758	1322.645	1328.815	1322.645	1327.787	1325.730	1331.901	1307.217
4.5	1307.217	1323.673	1322.645	1326.758	1320.588	1327.787	1323.673	1329.844	1305.160
5.0	1302.075	1322.645	1319.559	1325.730	1320.588	1326.758	1322.645	1327.787	1305.160
5.5	1301.046	1322.645	1318.531	1324.702	1320.588	1325.730	1322.645	1325.730	1302.075
6.0	1298.989	1319.559	1316.474	1323.673	1317.502	1323.673	1319.559	1325.730	1301.046
6.5	1296.932	1317.502	1315.445	1320.588	1315.445	1322.645	1318.531	1323.673	1298.989
7.0	1293.847	1314.417	1313.388	1317.502	1313.388	1320.588	1317.502	1322.645	1300.018
7.5	1292.818	1313.388	1310.303	1317.502	1311.331	1318.531	1314.417	1320.588	1295.904
8.0	1290.761	1310.303	1308.246	1314.417	1311.331	1317.502	1313.388	1318.531	1293.847
8.5	1287.676	1307.217	1305.160	1311.331	1307.217	1314.417	1311.331	1315.445	1289.733
9.0	1285.619	1304.132	1301.046	1310.303	1305.160	1311.331	1308.246	1314.417	1287.676
9.5	1279.448	1301.046	1301.046	1308.246	1303.103	1310.303	1306.189	1310.303	1284.590
10.0	1278.419	1300.018	1295.904	1302.075	1302.075	1307.217	1304.132	1308.246	1283.562
10.5	1271.220	1293.847	1293.847	1302.075	1296.932	1305.160	1301.046	1304.132	1278.419
11.0	1270.191	1292.818	1290.761	1297.961	1294.875	1302.075	1295.904	1298.989	1278.419
11.5	1266.077	1287.676	1286.647	1294.875	1292.818	1297.961	1293.847	1297.961	1273.277
12.0	1261.963	1283.562	1284.590	1291.790	1288.704	1295.904	1289.733	1293.847	1268.134
12.5	1256.821	1279.448	1280.476	1289.733	1288.704	1290.761	1286.647	1288.704	1266.077
13.0	1254.764	1277.391	1275.334	1285.619	1284.590	1288.704	1283.562	1286.647	1259.906
13.5	1251.678	1272.248	1273.277	1280.476	1280.476	1284.590	1280.476	1283.562	1255.792
14.0	1245.507	1267.106	1268.134	1277.391	1276.362	1281.505	1275.334	1279.448	1251.678
14.5	1238.308	1261.963	1262.992	1273.277	1272.248	1276.362	1272.248	1275.334	1248.593
15.0	1235.222	1258.878	1260.935	1271.220	1268.134	1273.277	1267.106	1270.191	1243.450
15.5	1231.108	1255.792	1254.764	1266.077	1264.020	1268.134	1264.020	1265.049	1239.336
16.0	1228.023	1248.593	1250.650	1262.992	1258.878	1264.020	1257.849	1260.935	1232.137
16.5	1218.767	1244.479	1244.479	1258.878	1254.764	1259.906	1252.707	1255.792	1231.108
17.0	1213.624	1239.336	1241.393	1253.735	1250.650	1253.735	1248.593	1251.678	1223.909
17.5	1208.482	1233.165	1235.222	1247.564	1245.507	1248.593	1242.422	1247.564	1220.824
18.0	1205.396	1225.966	1229.051	1241.393	1241.393	1242.422	1238.308	1239.336	1214.653
18.5	1199.225	1221.852	1223.909	1238.308	1236.251	1238.308	1232.137	1235.222	1209.510
19.0	1190.997	1215.681	1217.738	1232.137	1230.080	1233.165	1228.023	1229.051	1203.339
19.5	1186.883	1210.539	1212.596	1226.994	1223.909	1226.994	1222.881	1223.909	1196.140
20.0	1180.712	1203.339	1206.425	1220.824	1218.767	1222.881	1216.710	1217.738	1190.997
20.5	1173.513	1197.168	1201.282	1215.681	1213.624	1215.681	1211.567	1211.567	1185.855
21.0	1168.370	1190.997	1194.083	1208.482	1207.453	1211.567	1203.339	1207.453	1177.627
21.5	1160.142	1184.826	1187.912	1202.311	1203.339	1206.425	1199.225	1200.254	1172.484
22.0	1155.000	1179.684	1182.769	1196.140	1197.168	1199.225	1193.054	1194.083	1166.313
22.5	1145.743	1170.427	1175.570	1190.997	1193.054	1196.140	1186.883	1186.883	1158.085
23.0	1139.572	1164.256	1169.399	1183.798	1186.883	1188.940	1181.741	1180.712	1153.971
23.5	1134.430	1157.057	1164.256	1178.655	1182.769	1185.855	1175.570	1174.541	1146.772
24.0	1124.145	1150.886	1157.057	1172.484	1176.598	1179.684	1169.399	1165.285	1136.487
24.5	1120.031	1144.715	1149.857	1167.342	1171.456	1174.541	1162.199	1159.114	1130.316
25.0	1111.803	1134.430	1143.686	1162.199	1168.370	1169.399	1156.028	1152.943	1124.145
25.5	1102.547	1128.259	1134.430	1157.057	1163.228	1163.228	1150.886	1146.772	1117.974
26.0	1094.319	1122.088	1128.259	1148.829	1157.057	1157.057	1143.686	1139.572	1108.718
26.5	1087.119	1112.832	1122.088	1144.715	1151.914	1150.886	1136.487	1131.344	1102.547

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES****CANDELA TABULATION - (Cont.)**

27.0	1080.948	1105.632	1115.917	1137.515	1143.686	1144.715	1129.287	1124.145	1094.319
27.5	1071.692	1099.461	1108.718	1132.373	1138.544	1137.515	1123.116	1116.946	1086.091
28.0	1064.492	1089.176	1099.461	1126.202	1133.401	1131.344	1114.889	1108.718	1078.891
28.5	1057.293	1081.977	1093.290	1119.003	1127.230	1125.173	1108.718	1101.518	1071.692
29.0	1049.065	1073.749	1086.091	1112.832	1121.059	1117.974	1101.518	1094.319	1062.435
29.5	1040.837	1066.549	1078.891	1105.632	1113.860	1111.803	1095.347	1085.062	1054.207
30.0	1030.552	1058.321	1071.692	1098.433	1107.689	1105.632	1087.119	1077.863	1044.951
30.5	1022.427	1050.093	1063.464	1092.262	1101.518	1098.433	1079.920	1069.635	1036.723
31.0	1013.787	1040.837	1056.264	1085.062	1095.347	1092.262	1071.692	1061.407	1030.552
31.5	1007.308	1031.580	1049.065	1077.863	1088.148	1086.091	1065.521	1053.179	1019.444
32.0	996.509	1025.204	1040.837	1071.692	1081.977	1079.920	1058.321	1044.951	1011.833
32.5	989.515	1015.947	1032.609	1064.492	1075.806	1072.720	1049.065	1035.694	1004.737
33.0	979.436	1007.719	1023.558	1058.321	1070.663	1066.549	1040.837	1026.644	993.218
33.5	970.385	998.977	1015.844	1052.150	1063.464	1058.321	1033.637	1018.724	985.915
34.0	962.157	990.338	1009.879	1043.922	1057.293	1052.150	1027.055	1011.011	978.407
34.5	952.592	980.670	1001.137	1036.723	1051.122	1044.951	1018.930	1000.623	967.917
35.0	945.084	972.339	993.835	1030.552	1043.922	1037.751	1011.216	992.600	961.026
35.5	935.725	962.774	986.532	1023.867	1038.780	1030.552	1002.474	982.933	949.918
36.0	924.720	952.901	977.687	1016.564	1031.580	1024.998	994.246	974.396	942.513
36.5	915.155	944.364	970.899	1008.954	1025.512	1017.490	986.635	965.448	933.976
37.0	907.750	934.593	961.643	1003.194	1019.238	1010.702	978.099	956.500	926.880
37.5	897.876	926.571	954.135	995.686	1012.553	1002.577	971.208	948.272	917.932
38.0	887.283	917.212	945.598	989.001	1005.971	995.377	962.980	939.839	907.338
38.5	878.746	907.852	938.707	981.493	998.566	988.281	953.929	931.508	897.259
39.0	868.461	897.876	930.068	974.190	991.572	980.876	946.730	923.486	887.488
39.5	858.690	887.797	922.251	966.580	985.195	973.676	937.987	914.435	876.072
40.0	848.200	879.672	914.126	959.586	979.230	967.197	929.862	906.104	865.376
40.5	839.355	870.415	906.104	952.181	971.311	959.791	921.840	895.511	855.296
41.0	828.144	860.027	897.568	945.393	963.391	952.592	913.612	886.151	845.217
41.5	818.888	849.845	890.574	938.399	958.043	944.467	904.767	874.941	835.035
42.0	808.191	840.795	881.626	930.685	950.946	938.707	896.642	864.347	825.881
42.5	798.626	831.127	873.089	923.897	944.158	930.479	887.488	854.885	815.802
43.0	788.341	822.590	864.861	916.183	937.165	922.560	879.775	843.572	805.723
43.5	779.393	813.745	856.222	908.470	930.891	914.949	872.164	833.595	796.878
44.0	770.651	803.255	848.200	901.682	923.794	908.367	862.804	822.899	786.284
44.5	758.412	793.381	838.326	893.762	916.698	901.373	855.811	813.437	776.925
45.0	749.464	783.610	831.538	886.563	909.704	892.528	847.686	802.740	767.257
45.5	740.208	774.045	821.973	878.952	901.270	885.946	839.149	794.101	757.589
46.0	730.026	765.920	814.054	870.621	894.276	878.849	831.127	783.919	746.687
46.5	721.078	756.252	805.209	862.084	887.591	870.210	822.899	774.765	737.739
47.0	710.587	745.865	796.878	856.016	880.186	864.244	815.288	765.303	728.483
47.5	700.302	736.608	788.341	847.480	873.604	856.942	806.957	755.532	716.655
48.0	692.280	727.043	780.525	841.412	865.170	847.583	798.832	745.659	708.633
48.5	681.069	717.478	772.091	832.052	858.485	840.692	790.398	736.197	696.805
49.0	674.487	709.456	764.275	824.956	851.080	833.184	781.656	727.043	687.549
49.5	665.642	698.759	755.944	817.448	843.057	825.984	770.960	716.861	678.395
50.0	655.254	690.532	747.613	809.734	836.475	818.271	763.246	707.090	670.476
50.5	644.969	683.229	737.431	801.918	829.070	810.248	754.401	697.937	661.734
51.0	635.301	674.281	730.437	793.998	822.179	802.535	744.630	687.857	650.420
51.5	625.736	665.333	721.284	787.210	815.802	794.924	736.094	681.995	640.650
52.0	615.657	655.357	713.673	779.702	807.780	787.416	726.837	672.636	630.262
52.5	606.401	646.306	705.136	771.783	800.272	779.496	718.712	664.305	620.800
53.0	596.013	636.330	696.188	764.275	792.558	772.811	710.381	654.226	611.543
53.5	586.654	627.073	687.857	756.252	784.844	764.583	701.125	644.558	600.744
54.0	576.471	618.434	680.349	748.436	776.617	756.869	693.617	635.096	590.253
54.5	566.598	608.355	674.281	739.796	770.240	749.567	684.566	625.222	580.894

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**CANDELA TABULATION - (Cont.)**

55.0	556.004	598.893	666.362	732.391	762.526	741.236	679.424	616.274	570.506
55.5	546.337	590.459	657.620	723.958	754.195	733.317	671.402	606.812	560.221
56.0	536.669	580.174	648.980	715.730	747.202	725.912	662.556	597.041	551.068
56.5	527.412	570.609	640.341	708.324	738.562	716.450	653.300	586.551	540.577
57.0	517.333	560.941	632.010	699.891	731.157	708.633	644.661	577.397	529.572
57.5	507.871	552.199	624.194	692.074	722.312	700.097	635.816	567.112	519.904
58.0	498.614	542.531	614.834	684.052	713.878	691.869	626.765	557.959	510.133
58.5	488.638	532.966	606.195	678.498	706.062	685.080	618.228	548.394	499.746
59.0	479.484	523.710	598.481	672.533	698.451	678.498	608.869	538.211	490.592
59.5	469.611	514.659	589.430	662.865	689.812	670.784	600.538	529.264	480.101
60.0	460.149	505.505	580.071	654.843	684.772	662.248	591.590	519.904	471.256
60.5	450.584	496.146	571.329	647.540	677.367	654.020	583.671	509.825	460.354
61.0	440.196	486.890	563.204	638.284	669.756	645.175	574.517	501.186	450.686
61.5	430.837	477.530	554.976	629.747	661.734	636.741	566.186	490.901	440.916
62.0	421.272	468.377	546.542	621.725	652.786	629.130	556.621	481.850	430.939
62.5	411.809	459.429	538.109	613.394	644.044	619.874	548.599	472.182	421.272
63.0	402.656	450.069	529.572	605.064	635.816	611.749	539.754	463.131	411.809
63.5	392.988	441.327	520.933	596.116	627.690	603.212	530.703	453.669	402.347
64.0	383.012	432.174	512.705	587.785	619.257	594.984	522.373	444.310	392.062
64.5	372.727	423.020	503.551	579.043	610.206	587.065	513.322	435.259	382.497
65.0	363.779	414.586	495.015	570.712	601.875	578.014	505.094	426.003	372.829
65.5	354.831	405.433	486.581	562.998	594.162	569.683	496.866	416.746	363.470
66.0	345.060	396.382	478.559	553.330	585.522	560.838	487.609	407.387	353.802
66.5	336.524	387.640	469.714	545.411	576.471	552.199	479.484	398.233	344.340
67.0	327.164	379.103	461.177	536.772	568.141	543.045	470.228	389.388	335.392
67.5	318.319	370.258	453.052	527.721	559.090	534.920	462.411	380.646	326.239
68.0	309.166	361.722	443.898	520.213	550.862	526.487	453.463	371.595	317.394
68.5	300.218	353.288	436.082	510.853	542.325	517.333	444.721	362.750	307.520
69.0	291.270	344.134	427.648	503.243	533.686	509.311	436.288	354.419	298.778
69.5	281.808	335.598	419.317	494.192	524.944	500.877	428.162	345.471	289.007
70.0	273.271	327.164	410.575	485.861	516.202	491.723	419.317	336.318	280.265
70.5	264.735	318.113	402.450	477.016	507.768	483.701	410.884	327.473	271.420
71.0	255.375	310.091	394.222	469.199	499.231	475.062	402.656	318.731	262.266
71.5	246.942	301.452	386.508	460.766	490.695	467.142	393.914	310.091	253.215
72.0	238.199	293.635	377.663	451.818	482.056	458.297	386.097	301.863	243.753
72.5	229.560	285.202	369.744	443.693	474.033	450.275	377.560	293.018	234.908
73.0	220.818	277.282	361.310	434.848	465.188	441.224	369.435	284.482	226.886
73.5	212.590	269.260	353.391	426.105	456.343	432.894	361.310	276.151	217.938
74.0	204.156	260.929	345.471	418.700	448.218	424.460	352.877	267.820	209.504
74.5	195.208	252.496	336.832	409.958	439.373	416.335	345.266	259.181	200.557
75.0	186.672	244.782	329.118	402.142	431.556	407.695	337.346	251.261	192.431
75.5	178.958	236.965	321.610	393.502	423.020	399.467	329.016	242.828	183.998
76.0	170.422	229.149	313.691	385.788	414.689	391.548	321.508	235.114	175.667
76.5	162.708	221.538	305.977	377.560	406.256	383.012	313.382	226.783	168.056
77.0	155.097	213.927	298.264	369.230	397.822	375.092	305.257	219.069	159.931
77.5	147.280	206.419	290.756	361.516	390.108	366.761	297.544	210.944	152.114
78.0	139.258	198.911	283.350	353.494	381.469	358.945	290.138	203.642	144.298
78.5	131.647	191.814	275.739	345.677	373.652	351.128	282.630	196.134	136.584
79.0	124.139	184.512	268.643	337.758	365.424	343.106	274.917	188.935	129.282
79.5	117.248	177.313	261.649	330.250	357.916	336.112	267.820	181.529	121.465
80.0	110.255	170.113	254.450	322.330	350.408	327.987	260.415	174.330	114.471
80.5	103.055	163.222	247.353	315.131	342.180	320.685	253.524	167.850	107.272
81.0	96.061	156.640	240.462	307.520	334.775	312.868	246.530	160.754	100.587
81.5	89.376	149.955	233.468	300.321	327.164	305.566	239.639	154.274	93.799
82.0	82.794	143.578	226.783	293.121	319.039	298.366	232.748	147.898	87.216
82.5	76.726	136.996	220.098	286.539	311.634	290.756	225.755	141.624	80.943

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**CANDELA TABULATION - (Cont.)**

83.0	70.246	130.825	213.516	279.339	304.640	283.556	219.481	135.350	74.669
83.5	64.178	124.859	207.036	272.345	297.235	276.871	212.693	129.282	68.601
84.0	58.213	118.997	200.762	265.455	290.241	270.083	206.625	123.317	62.635
84.5	52.453	113.237	194.488	258.975	283.248	263.192	200.248	117.557	57.081
85.0	47.105	107.889	188.215	252.187	276.459	256.301	193.974	112.003	51.322
85.5	41.757	102.232	182.455	245.502	269.569	249.924	188.009	106.038	45.974
86.0	36.409	96.987	176.695	239.434	262.883	243.548	181.838	100.690	40.523
86.5	31.369	91.845	171.142	233.160	256.507	236.965	176.181	95.239	35.277
87.0	26.329	86.805	165.382	227.092	250.027	231.000	170.627	90.096	30.032
87.5	21.701	82.074	160.034	221.538	243.856	225.138	164.868	85.057	24.992
88.0	17.176	76.931	154.994	215.881	238.199	219.378	159.622	79.914	19.953
88.5	12.650	72.509	150.366	210.739	232.440	214.133	154.686	74.874	14.810
89.0	8.125	68.292	146.046	205.699	227.400	208.784	149.852	70.452	9.976
89.5	4.011	64.795	141.932	201.071	222.361	204.156	145.738	66.544	5.245
90.0	1.440	61.607	138.333	196.545	217.527	199.425	141.932	63.150	1.646
90.5	0.926	58.933	134.836	192.226	212.693	194.797	138.127	60.270	0.926
91.0	0.926	56.670	131.339	188.009	208.167	190.683	134.219	58.007	0.823
91.5	0.926	55.024	128.356	183.895	203.848	186.672	131.236	56.259	0.823
92.0	0.926	53.585	125.271	180.295	199.939	183.072	128.356	54.819	0.823
92.5	0.926	52.248	123.111	177.004	196.134	179.575	125.888	53.482	0.823
93.0	0.926	51.013	120.848	173.816	192.534	176.387	123.625	52.145	0.823
93.5	0.926	49.779	118.791	171.039	189.449	173.404	121.465	50.911	0.823
94.0	0.926	48.648	116.837	168.159	186.363	170.627	119.614	49.676	0.823
94.5	0.926	47.516	115.089	165.691	183.586	168.056	117.660	48.442	0.823
95.0	0.926	46.385	113.340	163.222	180.912	165.279	115.706	47.311	0.823
95.5	0.926	45.357	111.386	160.754	177.930	162.914	113.854	46.282	0.823
96.0	0.926	44.328	109.740	158.285	175.358	160.342	112.003	45.254	0.823
96.5	0.926	43.300	107.889	156.023	172.787	158.080	110.049	44.122	0.823
97.0	0.926	42.271	106.244	153.451	170.113	155.406	108.403	43.094	0.823
97.5	0.926	41.243	104.392	151.394	167.542	153.246	106.655	42.168	0.823
98.0	0.926	40.317	102.747	148.926	165.176	150.880	104.804	41.140	0.823
98.5	0.926	39.494	101.204	146.766	162.811	148.515	103.158	40.111	0.823
99.0	0.926	38.466	99.353	144.709	160.445	146.252	101.410	39.186	0.823
99.5	0.926	37.540	97.810	142.549	157.977	144.092	99.764	38.260	0.823
100.0	0.926	36.717	96.061	140.390	155.611	141.932	98.016	37.334	0.823
100.5	0.926	35.792	94.519	138.230	153.143	139.875	96.473	36.512	0.926
101.0	0.926	35.072	92.976	136.070	150.983	137.818	94.930	35.586	0.926
101.5	0.926	34.146	91.330	134.013	148.823	135.556	93.182	34.763	0.926
102.0	1.028	33.426	89.890	131.956	146.355	133.704	91.742	33.940	0.926
102.5	1.028	32.603	88.348	130.002	143.989	131.750	90.096	33.118	0.926
103.0	1.028	31.883	86.805	127.945	141.829	129.693	88.553	32.295	0.926
103.5	1.028	31.061	85.262	126.196	139.772	127.636	87.114	31.472	0.926
104.0	1.028	30.341	83.925	124.345	137.715	125.682	85.468	30.649	0.926
104.5	1.028	29.621	82.382	122.185	135.761	123.728	84.028	29.929	1.028
105.0	1.028	28.901	81.045	120.437	133.499	121.877	82.588	29.209	1.028
105.5	1.028	28.181	79.708	118.585	131.545	119.820	81.148	28.489	1.028
106.0	1.028	27.461	78.268	116.631	129.590	117.968	79.606	27.769	1.028
106.5	1.028	26.844	76.931	114.986	127.328	116.117	78.268	27.152	1.028
107.0	1.131	26.124	75.594	113.134	125.579	114.163	76.829	26.432	1.028
107.5	1.131	25.507	74.154	111.180	123.728	112.414	75.594	25.815	1.028
108.0	1.131	24.890	72.817	109.638	121.774	110.666	74.257	25.198	1.028
108.5	1.131	24.170	71.686	107.786	119.923	109.020	72.817	24.478	1.131
109.0	1.131	23.553	70.349	106.038	118.071	107.272	71.480	23.861	1.131
109.5	1.131	22.935	69.012	104.289	116.323	105.524	70.246	23.244	1.131
110.0	1.131	22.421	67.881	102.644	114.471	103.775	69.012	22.627	1.131
110.5	1.131	21.804	66.646	101.101	112.620	102.027	67.675	22.010	1.131

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**CANDELA TABULATION - (Cont.)**

111.0	1.131	21.187	65.412	99.455	110.975	100.587	66.441	21.496	1.131
111.5	1.234	20.673	64.281	97.913	109.226	98.838	65.104	20.878	1.131
112.0	1.234	20.056	63.047	96.164	107.581	97.193	63.972	20.261	1.131
112.5	1.234	19.541	61.813	94.827	105.832	95.650	62.738	19.747	1.234
113.0	1.234	19.027	60.784	93.079	104.084	94.107	61.504	19.130	1.234
113.5	1.234	18.513	59.447	91.536	102.335	92.359	60.373	18.616	1.234
114.0	1.234	17.896	58.419	90.096	100.895	90.816	59.241	18.102	1.234
114.5	1.234	17.382	57.287	88.553	99.147	89.376	58.007	17.484	1.234
115.0	1.234	16.970	56.156	87.114	97.604	87.833	56.773	16.970	1.234
115.5	1.234	16.353	55.024	85.674	95.959	86.291	55.642	16.456	1.234
116.0	1.234	15.942	53.996	84.028	94.416	84.851	54.510	15.942	1.337
116.5	1.234	15.427	52.865	82.691	92.873	83.411	53.482	15.530	1.337
117.0	1.234	14.913	51.733	81.148	91.228	81.868	52.350	15.016	1.337
117.5	1.234	14.399	50.705	79.811	89.788	80.428	51.219	14.502	1.337
118.0	1.234	13.988	49.779	78.268	88.245	78.988	50.191	13.988	1.337
118.5	1.234	13.473	48.751	76.931	86.805	77.549	49.162	13.576	1.337
119.0	1.234	13.062	47.722	75.594	85.262	76.211	48.134	13.062	1.337
119.5	1.234	12.548	46.694	74.257	83.719	74.874	47.105	12.650	1.337
120.0	1.234	12.136	45.665	72.715	82.280	73.332	45.974	12.136	1.337
120.5	1.234	11.725	44.637	71.583	80.737	71.995	45.048	11.725	1.440
121.0	1.234	11.211	43.711	70.143	79.194	70.658	44.020	11.313	1.440
121.5	1.234	10.696	42.785	68.806	77.960	69.321	43.094	10.799	1.440
122.0	1.234	10.285	41.860	67.469	76.314	67.984	42.168	10.388	1.440
122.5	1.234	9.874	40.831	66.132	74.977	66.544	41.243	9.976	1.440
123.0	1.234	9.462	39.906	64.898	73.537	65.309	40.214	9.565	1.440
123.5	1.234	9.051	38.980	63.561	72.097	64.075	39.289	9.154	1.440
124.0	1.234	8.639	38.157	62.224	70.760	62.738	38.363	8.742	1.440
124.5	1.234	8.228	37.232	60.990	69.423	61.298	37.437	8.331	1.543
125.0	1.234	7.817	36.306	59.756	68.086	60.064	36.512	7.919	1.543
125.5	1.234	7.405	35.380	58.521	66.646	58.830	35.586	7.508	1.543
126.0	1.234	7.097	34.455	57.390	65.309	57.596	34.660	7.097	1.543
126.5	1.234	6.685	33.632	56.156	63.972	56.362	33.837	6.685	1.543
127.0	1.234	6.274	32.809	54.922	62.532	55.127	33.015	6.377	1.543
127.5	1.234	5.965	31.986	53.790	61.298	53.893	32.089	5.965	1.543
128.0	1.234	5.554	31.061	52.556	60.064	52.865	31.266	5.657	1.646
128.5	1.234	5.245	30.135	51.425	58.830	51.733	30.443	5.348	1.646
129.0	1.234	4.937	29.312	50.191	57.493	50.499	29.621	5.040	1.646
129.5	1.234	4.731	28.592	49.059	56.259	49.368	28.798	4.834	1.646
130.0	1.337	4.423	27.872	47.928	55.024	48.236	28.078	4.525	1.646
130.5	1.337	4.217	26.947	46.899	53.790	47.208	27.255	4.320	1.748
131.0	1.337	4.011	26.227	45.871	52.556	45.974	26.432	4.114	1.748
131.5	1.337	3.805	25.507	44.740	51.322	44.945	25.712	3.908	1.748
132.0	1.337	3.600	24.684	43.711	50.088	43.814	24.890	3.703	1.748
132.5	1.337	3.394	23.964	42.580	48.956	42.785	24.170	3.497	1.748
133.0	1.337	3.291	23.244	41.448	47.825	41.654	23.450	3.394	1.851
133.5	1.337	3.188	22.421	40.420	46.591	40.626	22.627	3.291	1.851
134.0	1.337	3.085	21.598	39.391	45.562	39.494	21.907	3.188	1.851
134.5	1.337	2.983	20.776	38.363	44.328	38.466	21.187	3.085	1.851
135.0	1.337	2.880	19.953	37.334	43.197	37.437	20.467	2.983	1.851
135.5	1.337	2.777	19.233	36.203	42.065	36.409	19.747	2.880	1.851
136.0	1.337	2.674	18.410	35.175	40.934	35.380	19.027	2.777	1.851
136.5	1.337	2.674	17.690	34.249	39.803	34.352	18.410	2.777	1.954
137.0	1.337	2.571	16.867	33.323	38.671	33.323	17.690	2.674	1.954
137.5	1.337	2.571	16.147	32.295	37.643	32.398	16.970	2.674	1.954
138.0	1.337	2.468	15.427	31.266	36.614	31.369	16.353	2.571	1.954
138.5	1.337	2.468	14.810	30.341	35.586	30.443	15.736	2.571	1.954

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**CANDELA TABULATION - (Cont.)**

139.0	1.440	2.468	14.090	29.415	34.557	29.415	15.119	2.468	2.057
139.5	1.440	2.366	13.370	28.489	33.529	28.592	14.502	2.468	2.057
140.0	1.440	2.366	12.753	27.564	32.500	27.564	13.782	2.468	2.057
140.5	1.440	2.366	12.136	26.535	31.472	26.638	13.165	2.366	2.057
141.0	1.440	2.263	11.622	25.712	30.443	25.712	12.548	2.366	2.057
141.5	1.440	2.263	11.005	24.787	29.415	24.890	11.931	2.366	2.160
142.0	1.440	2.263	10.491	23.964	28.489	23.964	11.313	2.366	2.160
142.5	1.440	2.160	9.976	23.038	27.461	23.038	10.696	2.263	2.160
143.0	1.440	2.160	9.462	22.215	26.535	22.113	10.182	2.263	2.160
143.5	1.543	2.160	8.948	21.290	25.610	21.290	9.565	2.263	2.160
144.0	1.543	2.160	8.434	20.467	24.581	20.467	9.051	2.160	2.160
144.5	1.543	2.160	7.919	19.644	23.655	19.541	8.434	2.160	2.263
145.0	1.543	2.057	7.508	18.719	22.730	18.719	7.919	2.160	2.263
145.5	1.543	2.057	6.994	17.896	21.804	17.896	7.405	2.160	2.263
146.0	1.543	2.057	6.582	17.176	20.878	17.073	6.891	2.160	2.263
146.5	1.543	2.057	6.171	16.353	19.953	16.250	6.480	2.160	2.263
147.0	1.543	2.057	5.760	15.530	19.130	15.427	6.068	2.057	2.263
147.5	1.543	2.057	5.348	14.707	18.204	14.707	5.657	2.057	2.366
148.0	1.646	2.057	5.040	13.885	17.382	13.885	5.348	2.057	2.366
148.5	1.646	2.057	4.731	13.062	16.456	13.165	5.040	2.057	2.366
149.0	1.646	2.057	4.525	12.136	15.633	12.342	4.731	2.057	2.366
149.5	1.646	2.057	4.217	11.416	14.810	11.622	4.525	2.057	2.366
150.0	1.646	2.057	4.011	10.593	13.988	10.902	4.320	2.160	2.366
150.5	1.646	2.057	3.908	9.874	13.165	10.182	4.114	2.057	2.468
151.0	1.646	2.057	3.703	9.154	12.342	9.462	3.908	2.057	2.468
151.5	1.748	2.057	3.600	8.537	11.622	8.845	3.805	2.160	2.468
152.0	1.748	2.160	3.497	7.817	10.799	8.125	3.600	2.160	2.468
152.5	1.748	2.160	3.394	7.302	10.079	7.508	3.497	2.160	2.468
153.0	1.748	2.160	3.291	6.788	9.256	6.891	3.394	2.160	2.468
153.5	1.748	2.160	3.188	6.274	8.537	6.377	3.291	2.160	2.468
154.0	1.748	2.160	3.085	5.760	7.817	5.965	3.188	2.160	2.571
154.5	1.851	2.160	2.983	5.348	7.199	5.451	3.085	2.160	2.571
155.0	1.851	2.160	2.880	4.937	6.582	5.040	2.983	2.160	2.571
155.5	1.851	2.263	2.880	4.628	6.068	4.731	2.983	2.160	2.571
156.0	1.851	2.263	2.777	4.320	5.554	4.423	2.880	2.263	2.571
156.5	1.954	2.263	2.777	4.011	5.142	4.114	2.777	2.263	2.571
157.0	1.954	2.263	2.674	3.805	4.731	3.908	2.777	2.263	2.571
157.5	1.954	2.263	2.674	3.703	4.320	3.703	2.674	2.263	2.571
158.0	1.954	2.263	2.571	3.497	4.114	3.497	2.674	2.263	2.674
158.5	1.954	2.366	2.571	3.394	3.805	3.394	2.571	2.263	2.674
159.0	2.057	2.366	2.468	3.188	3.600	3.188	2.571	2.366	2.674
159.5	2.057	2.366	2.468	3.085	3.394	3.085	2.468	2.366	2.674
160.0	2.057	2.366	2.468	2.983	3.291	2.983	2.468	2.366	2.674
160.5	2.057	2.366	2.366	2.880	3.085	2.880	2.468	2.366	2.674
161.0	2.057	2.366	2.366	2.777	2.983	2.777	2.366	2.366	2.674
161.5	2.160	2.366	2.366	2.777	2.880	2.777	2.366	2.366	2.674
162.0	2.160	2.468	2.366	2.674	2.777	2.674	2.366	2.366	2.674
162.5	2.160	2.468	2.366	2.571	2.674	2.571	2.366	2.468	2.674
163.0	2.160	2.468	2.366	2.468	2.571	2.571	2.366	2.468	2.777
163.5	2.160	2.468	2.366	2.468	2.468	2.468	2.366	2.468	2.777
164.0	2.263	2.468	2.366	2.366	2.468	2.366	2.366	2.468	2.777
164.5	2.263	2.468	2.366	2.366	2.366	2.366	2.366	2.468	2.777
165.0	2.263	2.571	2.366	2.366	2.366	2.366	2.366	2.468	2.777
165.5	2.263	2.571	2.366	2.366	2.263	2.366	2.366	2.571	2.777
166.0	2.366	2.571	2.468	2.366	2.263	2.263	2.468	2.571	2.777
166.5	2.366	2.571	2.468	2.366	2.263	2.263	2.468	2.571	2.777

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**CANDELA TABULATION - (Cont.)**

167.0	2.366	2.571	2.468	2.263	2.160	2.263	2.468	2.571	2.777
167.5	2.366	2.571	2.468	2.263	2.160	2.263	2.468	2.571	2.777
168.0	2.366	2.571	2.468	2.263	2.160	2.263	2.468	2.571	2.777
168.5	2.468	2.674	2.468	2.263	2.160	2.263	2.468	2.571	2.777
169.0	2.468	2.674	2.468	2.366	2.160	2.366	2.468	2.674	2.777
169.5	2.468	2.674	2.468	2.366	2.160	2.366	2.468	2.674	2.777
170.0	2.468	2.674	2.468	2.366	2.160	2.263	2.468	2.674	2.777
170.5	2.468	2.674	2.468	2.366	2.160	2.366	2.468	2.674	2.777
171.0	2.468	2.674	2.571	2.366	2.160	2.366	2.468	2.674	2.777
171.5	2.468	2.674	2.571	2.366	2.160	2.366	2.571	2.674	2.777
172.0	2.468	2.674	2.571	2.366	2.160	2.366	2.571	2.674	2.777
172.5	2.571	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
173.0	2.571	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
173.5	2.571	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
174.0	2.571	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
174.5	2.571	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
175.0	2.571	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
175.5	2.674	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
176.0	2.674	2.674	2.571	2.366	2.263	2.366	2.571	2.674	2.777
176.5	2.674	2.674	2.571	2.468	2.263	2.366	2.571	2.674	2.777
177.0	2.674	2.777	2.571	2.468	2.263	2.366	2.571	2.777	2.777
177.5	2.674	2.777	2.571	2.468	2.263	2.366	2.571	2.777	2.777
178.0	2.674	2.777	2.571	2.468	2.263	2.468	2.571	2.777	2.777
178.5	2.674	2.777	2.571	2.468	2.263	2.468	2.571	2.777	2.777
179.0	2.777	2.777	2.571	2.468	2.263	2.468	2.674	2.777	2.777
179.5	2.777	2.777	2.571	2.468	2.263	2.468	2.571	2.777	2.777
180.0	2.571	2.571	2.571	2.571	2.571	2.571	2.571	2.571	2.571



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	481.47	N.A.	11.40
0-30	1011.38	N.A.	24.00
0-40	1639.8	N.A.	38.80
0-60	2886.61	N.A.	68.40
0-80	3720.37	N.A.	88.10
0-90	3918.6	N.A.	92.80
10-90	3793.14	N.A.	89.80
20-40	1158.33	N.A.	27.40
20-50	1806.3	N.A.	42.80
40-70	1737.2	N.A.	41.10
60-80	833.76	N.A.	19.70
70-80	343.36	N.A.	8.10
80-90	198.23	N.A.	4.70
90-110	194.35	N.A.	4.60
90-120	246.85	N.A.	5.80
90-130	278.28	N.A.	6.60
90-150	301.21	N.A.	7.10
90-180	304.02	N.A.	7.20
110-180	109.68	N.A.	2.60
0-180	4222.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	125.46
10-20	356.01
20-30	529.91
30-40	628.42
40-50	647.97
50-60	598.84
60-70	490.40
70-80	343.36
80-90	198.23
90-100	114.79
100-110	79.56
110-120	52.50
120-130	31.44
130-140	16.30
140-150	6.63
150-160	1.87
160-170	0.70
170-180	0.24

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV\_28W\_5000K\_.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	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\_28W\_5000K\_.IES**

**UGR TABLE - CORRECTED**

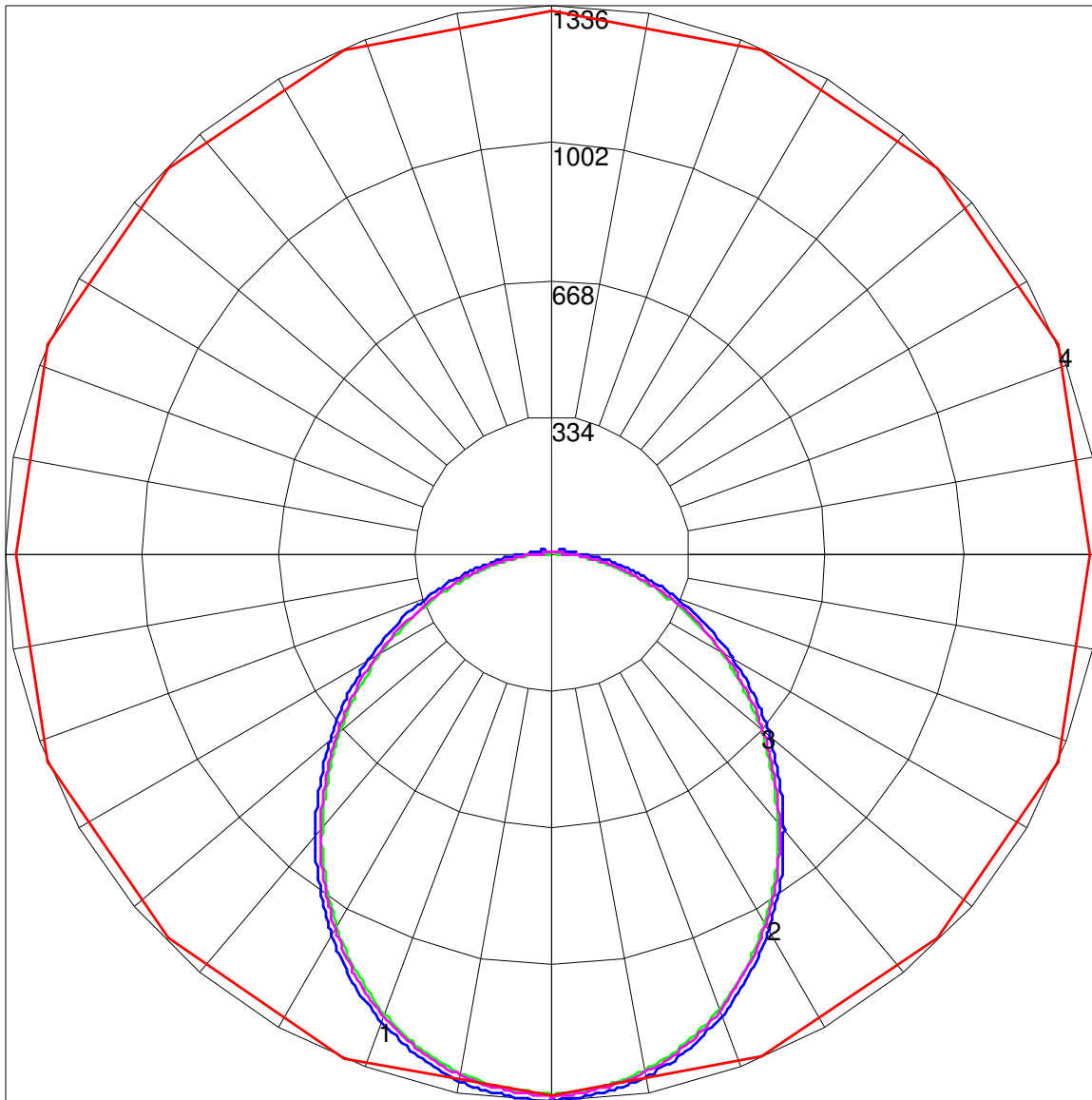
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	19.8	21.4	20.3	21.8	22.3	22.3	23.8	22.7	24.3	24.7
	3H	21.3	22.7	21.8	23.2	23.7	24.7	26.1	25.2	26.5	27.1
	4H	21.8	23.1	22.3	23.6	24.1	25.8	27.1	26.3	27.6	28.2
	6H	22.1	23.3	22.6	23.8	24.4	26.9	28.2	27.5	28.7	29.2
	8H	22.2	23.3	22.7	23.9	24.4	27.5	28.7	28.0	29.2	29.8
	12H	22.2	23.3	22.7	23.8	24.4	28.1	29.3	28.7	29.8	30.4
4H	2H	20.8	22.1	21.3	22.6	23.1	22.7	24.0	23.2	24.5	25.0
	3H	22.5	23.6	23.0	24.2	24.7	25.4	26.5	25.9	27.0	27.6
	4H	23.1	24.1	23.6	24.7	25.3	26.6	27.7	27.2	28.2	28.8
	6H	23.5	24.4	24.1	25.0	25.6	28.0	28.9	28.5	29.4	30.0
	8H	23.6	24.5	24.2	25.1	25.7	28.6	29.5	29.2	30.0	30.7
	12H	23.7	24.5	24.3	25.1	25.7	29.4	30.1	29.9	30.7	31.4
8H	4H	23.8	24.7	24.4	25.2	25.8	26.8	27.7	27.4	28.3	28.9
	6H	24.4	25.1	25.0	25.7	26.4	28.3	29.1	28.9	29.7	30.3
	8H	24.6	25.3	25.2	25.9	26.5	29.2	29.8	29.8	30.4	31.0
	12H	24.7	25.3	25.4	25.9	26.6	30.1	30.6	30.7	31.2	31.9
12H	4H	24.0	24.8	24.6	25.4	26.0	26.8	27.6	27.4	28.2	28.8
	6H	24.7	25.4	25.3	25.9	26.6	28.4	29.0	29.0	29.6	30.3
	8H	25.0	25.6	25.6	26.2	26.9	29.2	29.8	29.8	30.4	31.1

Maximum UGR = 31.9

POLAR GRAPH



Maximum Candela = 1336.015 Located At Horizontal Angle = 157.5, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (157.5 - 337.5) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (5 - 185)  
# 3 - Vertical Plane Through Horizontal Angles (10 - 190)  
# 4 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)