



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_39W_5000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 15180278.01
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 2024-03-19
[TESTDATE] 2/23/2024
[MANUFAC] H.E. WILLIAMS, INC.
[LUMCAT] FS-4-LS-8CS-DIM-UNV_39W_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	5890
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	150
Total Luminaire Watts	39.4
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	25389	24024	24904
55	23110	22241	23695
65	20358	20289	22413
75	16764	18190	20837
85	11592	16745	19833

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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	1853.671	1853.671	1853.671	1853.671	1853.671	1853.671	1853.671	1853.671	1853.671
0.5	1829.281	1860.845	1856.541	1856.541	1847.932	1857.975	1856.541	1863.714	1830.716
1.0	1827.846	1859.410	1853.671	1857.975	1846.498	1857.975	1853.671	1862.280	1830.716
1.5	1830.716	1859.410	1850.802	1856.541	1847.932	1857.975	1853.671	1860.845	1830.716
2.0	1830.716	1857.975	1853.671	1857.975	1846.498	1860.845	1853.671	1862.280	1829.281
2.5	1829.281	1856.541	1850.802	1856.541	1846.498	1855.106	1853.671	1859.410	1826.411
3.0	1824.977	1856.541	1849.367	1856.541	1846.498	1856.541	1852.236	1860.845	1826.411
3.5	1826.411	1853.671	1847.932	1852.236	1843.628	1853.671	1850.802	1856.541	1827.846
4.0	1822.107	1850.802	1845.063	1853.671	1845.063	1852.236	1849.367	1857.975	1823.542
4.5	1823.542	1846.498	1845.063	1850.802	1842.193	1852.236	1846.498	1855.106	1820.672
5.0	1816.368	1845.063	1840.759	1849.367	1842.193	1850.802	1845.063	1852.236	1820.672
5.5	1814.934	1845.063	1839.324	1847.932	1842.193	1849.367	1845.063	1849.367	1816.368
6.0	1812.064	1840.759	1836.454	1846.498	1837.889	1846.498	1840.759	1849.367	1814.934
6.5	1809.195	1837.889	1835.020	1842.193	1835.020	1845.063	1839.324	1846.498	1812.064
7.0	1804.890	1833.585	1832.150	1837.889	1832.150	1842.193	1837.889	1845.063	1813.499
7.5	1803.456	1832.150	1827.846	1837.889	1829.281	1839.324	1833.585	1842.193	1807.760
8.0	1800.586	1827.846	1824.977	1833.585	1829.281	1837.889	1832.150	1839.324	1804.890
8.5	1796.282	1823.542	1820.672	1829.281	1823.542	1833.585	1829.281	1835.020	1799.151
9.0	1793.413	1819.238	1814.934	1827.846	1820.672	1829.281	1824.977	1833.585	1796.282
9.5	1784.804	1814.934	1814.934	1824.977	1817.803	1827.846	1822.107	1827.846	1791.978
10.0	1783.369	1813.499	1807.760	1816.368	1816.368	1823.542	1819.238	1824.977	1790.543
10.5	1773.326	1804.890	1804.890	1816.368	1809.195	1820.672	1814.934	1819.238	1783.369
11.0	1771.892	1803.456	1800.586	1810.629	1806.325	1816.368	1807.760	1812.064	1783.369
11.5	1766.153	1796.282	1794.847	1806.325	1803.456	1810.629	1804.890	1810.629	1776.196
12.0	1760.414	1790.543	1791.978	1802.021	1797.717	1807.760	1799.151	1804.890	1769.022
12.5	1753.240	1784.804	1786.239	1799.151	1797.717	1800.586	1794.847	1797.717	1766.153
13.0	1750.371	1781.935	1779.065	1793.413	1791.978	1797.717	1790.543	1794.847	1757.544
13.5	1746.066	1774.761	1776.196	1786.239	1786.239	1791.978	1786.239	1790.543	1751.805
14.0	1737.458	1767.587	1769.022	1781.935	1780.500	1787.674	1779.065	1784.804	1746.066
14.5	1727.415	1760.414	1761.849	1776.196	1774.761	1780.500	1774.761	1779.065	1741.762
15.0	1723.111	1756.110	1758.979	1773.326	1769.022	1776.196	1767.587	1771.892	1734.589
15.5	1717.372	1751.805	1750.371	1766.153	1763.283	1769.022	1763.283	1764.718	1728.850
16.0	1713.068	1741.762	1744.632	1761.849	1756.110	1763.283	1754.675	1758.979	1718.807
16.5	1700.155	1736.023	1736.023	1756.110	1750.371	1757.544	1747.501	1751.805	1717.372
17.0	1692.981	1728.850	1731.719	1748.936	1744.632	1748.936	1741.762	1746.066	1707.329
17.5	1685.808	1720.241	1723.111	1740.328	1737.458	1741.762	1733.154	1740.328	1703.025
18.0	1681.504	1710.198	1714.502	1731.719	1731.719	1733.154	1727.415	1728.850	1694.416
18.5	1672.895	1704.459	1707.329	1727.415	1724.546	1727.415	1718.807	1723.111	1687.243
19.0	1661.417	1695.851	1698.720	1718.807	1715.937	1720.241	1713.068	1714.502	1678.634
19.5	1655.678	1688.677	1691.547	1711.633	1707.329	1711.633	1705.894	1707.329	1668.591
20.0	1647.070	1678.634	1682.938	1703.025	1700.155	1705.894	1697.286	1698.720	1661.417
20.5	1637.027	1670.026	1675.765	1695.851	1692.981	1695.851	1690.112	1690.112	1654.244
21.0	1629.853	1661.417	1665.722	1685.808	1684.373	1690.112	1678.634	1684.373	1642.766
21.5	1618.375	1652.809	1657.113	1677.199	1678.634	1682.938	1672.895	1674.330	1635.592
22.0	1611.202	1645.635	1649.940	1668.591	1670.026	1672.895	1664.287	1665.722	1626.984
22.5	1598.289	1632.723	1639.896	1661.417	1664.287	1668.591	1655.678	1655.678	1615.506
23.0	1589.681	1624.114	1631.288	1651.374	1655.678	1658.548	1648.505	1647.070	1609.767
23.5	1582.507	1614.071	1624.114	1644.201	1649.940	1654.244	1639.896	1638.462	1599.724
24.0	1568.160	1605.463	1614.071	1635.592	1641.331	1645.635	1631.288	1625.549	1585.377
24.5	1562.421	1596.855	1604.028	1628.419	1634.158	1638.462	1621.245	1616.941	1576.768
25.0	1550.943	1582.507	1595.420	1621.245	1629.853	1631.288	1612.637	1608.332	1568.160
25.5	1538.031	1573.899	1582.507	1614.071	1622.680	1622.680	1605.463	1599.724	1559.552
26.0	1526.553	1565.290	1573.899	1602.593	1614.071	1614.071	1595.420	1589.681	1546.639
26.5	1516.510	1552.378	1565.290	1596.855	1606.898	1605.463	1585.377	1578.203	1538.031

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27.0	1507.901	1542.335	1556.682	1586.811	1595.420	1596.855	1575.334	1568.160	1526.553
27.5	1494.989	1533.726	1546.639	1579.638	1588.246	1586.811	1566.725	1558.117	1515.075
28.0	1484.946	1519.379	1533.726	1571.029	1581.073	1578.203	1555.247	1546.639	1505.032
28.5	1474.902	1509.336	1525.118	1560.986	1572.464	1569.595	1546.639	1536.596	1494.989
29.0	1463.425	1497.858	1515.075	1552.378	1563.856	1559.552	1536.596	1526.553	1482.076
29.5	1451.947	1487.815	1505.032	1542.335	1553.813	1550.943	1527.988	1513.640	1470.598
30.0	1437.600	1476.337	1494.989	1532.292	1545.204	1542.335	1516.510	1503.597	1457.686
30.5	1426.265	1464.859	1483.511	1523.683	1536.596	1532.292	1506.467	1492.119	1446.208
31.0	1414.213	1451.947	1473.468	1513.640	1527.988	1523.683	1494.989	1480.641	1437.600
31.5	1405.175	1439.034	1463.425	1503.597	1517.944	1515.075	1486.380	1469.164	1422.104
32.0	1390.110	1430.139	1451.947	1494.989	1509.336	1506.467	1476.337	1457.686	1411.487
32.5	1380.354	1417.226	1440.469	1484.946	1500.728	1496.423	1463.425	1444.773	1401.588
33.0	1366.293	1405.749	1427.843	1476.337	1493.554	1487.815	1451.947	1432.148	1385.519
33.5	1353.668	1393.553	1417.083	1467.729	1483.511	1476.337	1441.904	1421.100	1375.332
34.0	1342.190	1381.502	1408.761	1456.251	1474.902	1467.729	1432.721	1410.340	1364.859
34.5	1328.847	1368.015	1396.566	1446.208	1466.294	1457.686	1421.387	1395.849	1350.224
35.0	1318.373	1356.394	1386.380	1437.600	1456.251	1447.643	1410.627	1384.658	1340.612
35.5	1305.317	1343.051	1376.193	1428.274	1449.077	1437.600	1398.431	1371.172	1325.117
36.0	1289.966	1329.277	1363.854	1418.087	1439.034	1429.852	1386.954	1359.263	1314.787
36.5	1276.623	1317.369	1354.385	1407.470	1430.569	1419.378	1376.337	1346.781	1302.878
37.0	1266.293	1303.739	1341.473	1399.436	1421.817	1409.909	1364.428	1334.299	1292.979
37.5	1252.519	1292.548	1330.999	1388.962	1412.492	1398.575	1354.816	1322.821	1280.497
38.0	1237.742	1279.492	1319.091	1379.636	1403.309	1388.532	1343.338	1311.056	1265.719
38.5	1225.833	1266.436	1309.478	1369.163	1392.979	1378.632	1330.712	1299.435	1251.658
39.0	1211.486	1252.519	1297.426	1358.976	1383.223	1368.302	1320.669	1288.244	1238.029
39.5	1197.856	1238.459	1286.522	1348.359	1374.328	1358.259	1308.474	1275.618	1222.103
40.0	1183.222	1227.125	1275.188	1338.603	1366.006	1349.220	1297.139	1263.997	1207.182
40.5	1170.883	1214.212	1263.997	1328.273	1354.959	1338.890	1285.949	1249.219	1193.122
41.0	1155.245	1199.721	1252.089	1318.804	1343.912	1328.847	1274.471	1236.163	1179.061
41.5	1142.332	1185.517	1242.333	1309.048	1336.451	1317.513	1262.132	1220.525	1164.857
42.0	1127.411	1172.892	1229.851	1298.287	1326.551	1309.478	1250.798	1205.747	1152.088
42.5	1114.068	1159.405	1217.942	1288.818	1317.082	1298.000	1238.029	1192.548	1138.028
43.0	1099.721	1147.497	1206.465	1278.058	1307.326	1286.953	1227.268	1176.766	1123.968
43.5	1087.238	1135.158	1194.413	1267.297	1298.574	1276.336	1216.651	1162.849	1111.629
44.0	1075.043	1120.524	1183.222	1257.828	1288.675	1267.154	1203.595	1147.928	1096.851
44.5	1057.970	1106.751	1169.448	1246.780	1278.775	1257.397	1193.839	1134.728	1083.795
45.0	1045.488	1093.121	1159.979	1236.737	1269.019	1245.059	1182.505	1119.807	1070.309
45.5	1032.575	1079.778	1146.636	1226.120	1257.254	1235.876	1170.596	1107.755	1056.822
46.0	1018.371	1068.443	1135.589	1214.499	1247.498	1225.977	1159.405	1093.551	1041.614
46.5	1005.889	1054.957	1123.250	1202.591	1238.172	1213.925	1147.928	1080.782	1029.132
47.0	991.255	1040.466	1111.629	1194.126	1227.842	1205.604	1137.311	1067.583	1016.219
47.5	976.908	1027.554	1099.721	1182.218	1218.660	1195.417	1125.689	1053.953	999.720
48.0	965.717	1014.211	1088.817	1173.753	1206.895	1182.361	1114.355	1040.179	988.529
48.5	950.078	1000.868	1077.052	1160.697	1197.569	1172.748	1102.590	1026.980	972.030
49.0	940.896	989.677	1066.148	1150.797	1187.239	1162.275	1090.395	1014.211	959.117
49.5	928.557	974.756	1054.527	1140.323	1176.048	1152.232	1075.474	1000.007	946.348
50.0	914.067	963.278	1042.905	1129.563	1166.866	1141.471	1064.713	986.377	935.301
50.5	899.719	953.091	1028.701	1118.659	1156.536	1130.280	1052.374	973.608	923.105
51.0	886.233	940.609	1018.945	1107.612	1146.923	1119.520	1038.745	959.547	907.323
51.5	872.890	928.127	1006.176	1098.142	1138.028	1108.903	1026.836	951.369	893.693
52.0	858.829	914.210	995.559	1087.669	1126.837	1098.429	1013.924	938.313	879.203
52.5	845.917	901.584	983.651	1076.621	1116.363	1087.382	1002.589	926.692	866.003
53.0	831.426	887.667	971.169	1066.148	1105.603	1078.056	990.968	912.632	853.090
53.5	818.370	874.755	959.547	1054.957	1094.843	1066.578	978.055	899.145	838.026
54.0	804.166	862.703	949.074	1044.053	1083.365	1055.818	967.582	885.946	823.392
54.5	790.393	848.643	940.609	1032.001	1074.469	1045.631	954.956	872.172	810.336

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55.0	775.615	835.443	929.562	1021.671	1063.709	1034.010	947.783	859.690	795.845
55.5	762.129	823.679	917.366	1009.906	1052.088	1022.963	936.592	846.491	781.497
56.0	748.642	809.331	905.315	998.429	1042.331	1012.632	924.253	832.861	768.728
56.5	735.730	795.988	893.263	988.099	1030.280	999.433	911.341	818.227	754.094
57.0	721.669	782.502	881.642	976.334	1019.950	988.529	899.289	805.457	738.743
57.5	708.470	770.307	870.738	965.430	1007.611	976.621	886.950	791.110	725.256
58.0	695.557	756.820	857.682	954.239	995.846	965.143	874.324	778.341	711.626
58.5	681.640	743.477	845.630	946.491	984.942	955.674	862.416	764.998	697.135
59.0	668.871	730.565	834.869	938.170	974.325	946.491	849.360	750.794	684.366
59.5	655.098	717.939	822.244	924.684	962.273	935.731	837.739	738.312	669.732
60.0	641.898	705.170	809.188	913.493	955.243	923.823	825.257	725.256	657.393
60.5	628.555	692.114	796.993	903.306	944.913	912.345	814.209	711.196	642.185
61.0	614.064	679.201	785.658	890.393	934.296	900.006	801.440	699.144	628.699
61.5	601.008	666.145	774.180	878.485	923.105	888.241	789.819	684.797	615.069
62.0	587.665	653.376	762.416	867.294	910.623	877.624	776.476	672.171	601.152
62.5	574.466	640.894	750.651	855.673	898.428	864.712	765.285	658.685	587.665
63.0	561.697	627.838	738.743	844.052	886.950	853.377	752.946	646.059	574.466
63.5	548.210	615.643	726.691	831.570	875.616	841.469	740.321	632.859	561.266
64.0	534.293	602.874	715.213	819.948	863.851	829.991	728.699	619.803	546.919
64.5	519.946	590.104	702.444	807.753	851.225	818.944	716.074	607.178	533.576
65.0	507.464	578.340	690.536	796.132	839.604	806.318	704.596	594.265	520.090
65.5	494.982	565.571	678.771	785.371	828.844	794.697	693.118	581.353	507.034
66.0	481.352	552.945	667.580	771.885	816.792	782.358	680.206	568.297	493.547
66.5	469.444	540.750	655.241	760.837	804.166	770.307	668.871	555.527	480.348
67.0	456.388	528.841	643.333	748.786	792.545	757.537	655.959	543.189	467.865
67.5	444.049	516.503	631.999	736.160	779.919	746.203	645.055	530.994	455.096
68.0	431.280	504.595	619.229	725.686	768.441	734.438	632.572	518.368	442.758
68.5	418.798	492.830	608.326	712.630	756.533	721.669	620.377	506.029	428.984
69.0	406.316	480.061	596.561	702.013	744.481	710.478	608.612	494.408	416.789
69.5	393.116	468.152	584.939	689.388	732.286	698.714	597.278	481.926	403.159
70.0	381.208	456.388	572.744	677.766	720.091	685.944	584.939	469.157	390.964
70.5	369.300	443.762	561.410	665.428	708.326	674.754	573.175	456.818	378.625
71.0	356.243	432.571	549.932	654.524	696.418	662.702	561.697	444.623	365.856
71.5	344.479	420.519	539.172	642.759	684.510	651.654	549.502	432.571	353.231
72.0	332.283	409.615	526.833	630.277	672.458	639.316	538.598	421.093	340.031
72.5	320.232	397.851	515.785	618.943	661.267	628.125	526.689	408.755	327.692
73.0	308.037	386.803	504.021	606.604	648.928	615.499	515.355	396.846	316.501
73.5	296.559	375.612	492.973	594.409	636.590	603.878	504.021	385.225	304.019
74.0	284.794	363.991	481.926	584.079	625.255	592.113	492.256	373.604	292.255
74.5	272.312	352.226	469.874	571.883	612.917	580.779	481.639	361.552	279.772
75.0	260.404	341.466	459.114	560.979	602.013	568.727	470.591	350.505	268.438
75.5	249.643	330.562	448.640	548.928	590.104	557.249	458.970	338.740	256.673
76.0	237.735	319.658	437.593	538.167	578.483	546.202	448.497	327.979	245.052
76.5	226.974	309.041	426.832	526.689	566.718	534.293	437.162	316.358	234.435
77.0	216.357	298.424	416.072	515.068	554.954	523.246	425.828	305.598	223.101
77.5	205.453	287.950	405.598	504.308	544.193	511.625	415.067	294.263	212.197
78.0	194.262	277.477	395.268	493.117	532.141	500.721	404.737	284.077	201.293
78.5	183.645	267.577	384.651	482.213	521.237	489.817	394.264	273.603	190.532
79.0	173.172	257.391	374.751	471.165	509.760	478.626	383.503	263.560	180.346
79.5	163.559	247.347	364.995	460.692	499.286	468.870	373.604	253.230	169.442
80.0	153.803	237.304	354.952	449.644	488.813	457.535	363.274	243.187	159.685
80.5	143.760	227.692	345.053	439.601	477.335	447.349	353.661	234.148	149.642
81.0	134.004	218.509	335.440	428.984	467.005	436.445	343.905	224.248	140.317
81.5	124.678	209.184	325.684	418.941	456.388	426.258	334.292	215.210	130.847
82.0	115.496	200.288	316.358	408.898	445.053	416.215	324.679	206.314	121.665
82.5	107.031	191.106	307.032	399.716	434.723	405.598	314.923	197.562	112.913

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CANDELA TABULATION - (Cont.)

83.0	97.992	182.498	297.850	389.673	424.967	395.555	306.171	188.810	104.161
83.5	89.527	174.176	288.811	379.917	414.637	386.229	296.702	180.346	95.696
84.0	81.206	165.998	280.059	370.304	404.881	376.760	288.237	172.024	87.375
84.5	73.171	157.964	271.307	361.265	395.125	367.147	279.342	163.990	79.628
85.0	65.711	150.503	262.556	351.796	385.655	357.535	270.590	156.242	71.593
85.5	58.250	142.612	254.521	342.470	376.043	348.639	262.269	147.921	64.132
86.0	50.789	135.295	246.487	334.005	366.717	339.744	253.660	140.460	56.528
86.5	43.759	128.121	238.739	325.253	357.822	330.562	245.769	132.856	49.211
87.0	36.729	121.091	230.705	316.788	348.783	322.240	238.022	125.682	41.894
87.5	30.273	114.491	223.244	309.041	340.174	314.062	229.987	118.652	34.864
88.0	23.960	107.318	216.214	301.150	332.283	306.028	222.670	111.479	27.834
88.5	17.647	101.148	209.758	293.976	324.249	298.711	215.783	104.448	20.660
89.0	11.334	95.266	203.732	286.946	317.219	291.250	209.040	98.279	13.917
89.5	5.595	90.388	197.993	280.490	310.189	284.794	203.301	92.827	7.317
90.0	2.009	85.940	192.971	274.177	303.445	278.194	197.993	88.092	2.296
90.5	1.291	82.210	188.093	268.151	296.702	271.738	192.684	84.075	1.291
91.0	1.291	79.054	183.215	262.269	290.389	265.999	187.232	80.919	1.148
91.5	1.291	76.758	179.054	256.530	284.363	260.404	183.072	78.480	1.148
92.0	1.291	74.749	174.750	251.508	278.912	255.382	179.054	76.471	1.148
92.5	1.291	72.884	171.737	246.917	273.603	250.504	175.611	74.606	1.148
93.0	1.291	71.163	168.581	242.469	268.581	246.056	172.455	72.741	1.148
93.5	1.291	69.441	165.711	238.596	264.277	241.895	169.442	71.019	1.148
94.0	1.291	67.863	162.985	234.578	259.973	238.022	166.859	69.297	1.148
94.5	1.291	66.285	160.546	231.135	256.099	234.435	164.133	67.576	1.148
95.0	1.291	64.706	158.107	227.692	252.369	230.561	161.407	65.998	1.148
95.5	1.291	63.272	155.381	224.248	248.208	227.261	158.825	64.563	1.148
96.0	1.291	61.837	153.086	220.805	244.621	223.674	156.242	63.128	1.148
96.5	1.291	60.402	150.503	217.649	241.035	220.518	153.516	61.550	1.148
97.0	1.291	58.967	148.208	214.062	237.304	216.788	151.221	60.115	1.148
97.5	1.291	57.533	145.625	211.192	233.718	213.775	148.782	58.824	1.148
98.0	1.291	56.241	143.330	207.749	230.418	210.475	146.199	57.389	1.148
98.5	1.291	55.094	141.177	204.736	227.118	207.175	143.903	55.954	1.148
99.0	1.291	53.659	138.595	201.867	223.818	204.019	141.464	54.663	1.148
99.5	1.291	52.368	136.443	198.854	220.375	201.006	139.169	53.372	1.148
100.0	1.291	51.220	134.004	195.841	217.075	197.993	136.730	52.081	1.148
100.5	1.291	49.929	131.852	192.828	213.631	195.123	134.578	50.933	1.291
101.0	1.291	48.924	129.700	189.815	210.618	192.254	132.426	49.642	1.291
101.5	1.291	47.633	127.404	186.945	207.605	189.097	129.987	48.494	1.291
102.0	1.435	46.629	125.395	184.076	204.162	186.515	127.978	47.346	1.291
102.5	1.435	45.481	123.243	181.350	200.862	183.789	125.682	46.198	1.291
103.0	1.435	44.477	121.091	178.480	197.849	180.919	123.530	45.051	1.291
103.5	1.435	43.329	118.939	176.041	194.980	178.050	121.522	43.903	1.291
104.0	1.435	42.325	117.074	173.459	192.110	175.324	119.226	42.755	1.291
104.5	1.435	41.320	114.922	170.446	189.384	172.598	117.217	41.751	1.435
105.0	1.435	40.316	113.057	168.007	186.228	170.016	115.209	40.746	1.435
105.5	1.435	39.312	111.192	165.424	183.502	167.146	113.200	39.742	1.435
106.0	1.435	38.307	109.183	162.698	180.776	164.564	111.048	38.738	1.435
106.5	1.435	37.446	107.318	160.403	177.620	161.981	109.183	37.877	1.435
107.0	1.578	36.442	105.453	157.820	175.181	159.255	107.174	36.873	1.435
107.5	1.578	35.581	103.444	155.094	172.598	156.816	105.453	36.012	1.435
108.0	1.578	34.720	101.579	152.942	169.872	154.377	103.588	35.151	1.435
108.5	1.578	33.716	100.001	150.360	167.290	152.081	101.579	34.147	1.578
109.0	1.578	32.855	98.136	147.921	164.707	149.642	99.714	33.286	1.578
109.5	1.578	31.994	96.270	145.482	162.268	147.203	97.992	32.425	1.578
110.0	1.578	31.277	94.692	143.186	159.685	144.764	96.270	31.564	1.578
110.5	1.578	30.416	92.971	141.034	157.103	142.325	94.405	30.703	1.578

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CANDELA TABULATION - (Cont.)

111.0	1.578	29.555	91.249	138.738	154.807	140.317	92.684	29.986	1.578
111.5	1.722	28.838	89.671	136.586	152.368	137.878	90.818	29.125	1.578
112.0	1.722	27.977	87.949	134.147	150.073	135.582	89.240	28.264	1.578
112.5	1.722	27.260	86.227	132.282	147.634	133.430	87.519	27.547	1.722
113.0	1.722	26.543	84.793	129.843	145.195	131.278	85.797	26.686	1.722
113.5	1.722	25.825	82.927	127.691	142.756	128.839	84.219	25.969	1.722
114.0	1.722	24.964	81.493	125.682	140.747	126.687	82.640	25.251	1.722
114.5	1.722	24.247	79.914	123.530	138.308	124.678	80.919	24.390	1.722
115.0	1.722	23.673	78.336	121.522	136.156	122.526	79.197	23.673	1.722
115.5	1.722	22.812	76.758	119.513	133.860	120.374	77.619	22.956	1.722
116.0	1.722	22.238	75.323	117.217	131.708	118.365	76.041	22.238	1.865
116.5	1.722	21.521	73.745	115.352	129.556	116.357	74.606	21.664	1.865
117.0	1.722	20.804	72.167	113.200	127.261	114.205	73.028	20.947	1.865
117.5	1.722	20.086	70.732	111.335	125.252	112.196	71.450	20.230	1.865
118.0	1.722	19.512	69.441	109.183	123.100	110.187	70.015	19.512	1.865
118.5	1.722	18.795	68.006	107.318	121.091	108.179	68.580	18.938	1.865
119.0	1.722	18.221	66.571	105.453	118.939	106.313	67.145	18.221	1.865
119.5	1.722	17.504	65.137	103.588	116.787	104.448	65.711	17.647	1.865
120.0	1.722	16.930	63.702	101.435	114.778	102.296	64.132	16.930	1.865
120.5	1.722	16.356	62.267	99.857	112.626	100.431	62.841	16.356	2.009
121.0	1.722	15.639	60.976	97.849	110.474	98.566	61.406	15.782	2.009
121.5	1.722	14.921	59.685	95.983	108.753	96.701	60.115	15.065	2.009
122.0	1.722	14.347	58.394	94.118	106.457	94.836	58.824	14.491	2.009
122.5	1.722	13.773	56.959	92.253	104.592	92.827	57.533	13.917	2.009
123.0	1.722	13.200	55.668	90.531	102.583	91.105	56.098	13.343	2.009
123.5	1.722	12.626	54.376	88.666	100.575	89.384	54.807	12.769	2.009
124.0	1.722	12.052	53.228	86.801	98.709	87.519	53.515	12.195	2.009
124.5	1.722	11.478	51.937	85.079	96.844	85.510	52.224	11.621	2.152
125.0	1.722	10.904	50.646	83.358	94.979	83.788	50.933	11.047	2.152
125.5	1.722	10.330	49.355	81.636	92.971	82.067	49.642	10.474	2.152
126.0	1.722	9.900	48.063	80.058	91.105	80.345	48.350	9.900	2.152
126.5	1.722	9.326	46.916	78.336	89.240	78.623	47.203	9.326	2.152
127.0	1.722	8.752	45.768	76.615	87.232	76.902	46.055	8.895	2.152
127.5	1.722	8.321	44.620	75.036	85.510	75.180	44.764	8.321	2.152
128.0	1.722	7.748	43.329	73.315	83.788	73.745	43.616	7.891	2.296
128.5	1.722	7.317	42.038	71.737	82.067	72.167	42.468	7.461	2.296
129.0	1.722	6.887	40.890	70.015	80.201	70.445	41.320	7.030	2.296
129.5	1.722	6.600	39.885	68.437	78.480	68.867	40.172	6.743	2.296
130.0	1.865	6.169	38.881	66.858	76.758	67.289	39.168	6.313	2.296
130.5	1.865	5.882	37.590	65.424	75.036	65.854	38.020	6.026	2.439
131.0	1.865	5.595	36.586	63.989	73.315	64.132	36.873	5.739	2.439
131.5	1.865	5.309	35.581	62.411	71.593	62.698	35.868	5.452	2.439
132.0	1.865	5.022	34.434	60.976	69.871	61.120	34.720	5.165	2.439
132.5	1.865	4.735	33.429	59.398	68.293	59.685	33.716	4.878	2.439
133.0	1.865	4.591	32.425	57.820	66.715	58.107	32.712	4.735	2.583
133.5	1.865	4.448	31.277	56.385	64.993	56.672	31.564	4.591	2.583
134.0	1.865	4.304	30.129	54.950	63.559	55.094	30.560	4.448	2.583
134.5	1.865	4.161	28.982	53.515	61.837	53.659	29.555	4.304	2.583
135.0	1.865	4.017	27.834	52.081	60.259	52.224	28.551	4.161	2.583
135.5	1.865	3.874	26.829	50.502	58.680	50.789	27.547	4.017	2.583
136.0	1.865	3.730	25.682	49.068	57.102	49.355	26.543	3.874	2.583
136.5	1.865	3.730	24.677	47.777	55.524	47.920	25.682	3.874	2.726
137.0	1.865	3.587	23.530	46.485	53.946	46.485	24.677	3.730	2.726
137.5	1.865	3.587	22.525	45.051	52.511	45.194	23.673	3.730	2.726
138.0	1.865	3.443	21.521	43.616	51.076	43.759	22.812	3.587	2.726
138.5	1.865	3.443	20.660	42.325	49.642	42.468	21.951	3.587	2.726

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CANDELA TABULATION - (Cont.)

139.0	2.009	3.443	19.656	41.033	48.207	41.033	21.091	3.443	2.869
139.5	2.009	3.300	18.651	39.742	46.772	39.885	20.230	3.443	2.869
140.0	2.009	3.300	17.791	38.451	45.337	38.451	19.225	3.443	2.869
140.5	2.009	3.300	16.930	37.016	43.903	37.160	18.365	3.300	2.869
141.0	2.009	3.156	16.212	35.868	42.468	35.868	17.504	3.300	2.869
141.5	2.009	3.156	15.352	34.577	41.033	34.720	16.643	3.300	3.013
142.0	2.009	3.156	14.634	33.429	39.742	33.429	15.782	3.300	3.013
142.5	2.009	3.013	13.917	32.138	38.307	32.138	14.921	3.156	3.013
143.0	2.009	3.013	13.200	30.990	37.016	30.847	14.204	3.156	3.013
143.5	2.152	3.013	12.482	29.699	35.725	29.699	13.343	3.156	3.013
144.0	2.152	3.013	11.765	28.551	34.290	28.551	12.626	3.013	3.013
144.5	2.152	3.013	11.047	27.403	32.999	27.260	11.765	3.013	3.156
145.0	2.152	2.869	10.474	26.112	31.708	26.112	11.047	3.013	3.156
145.5	2.152	2.869	9.756	24.964	30.416	24.964	10.330	3.013	3.156
146.0	2.152	2.869	9.182	23.960	29.125	23.817	9.613	3.013	3.156
146.5	2.152	2.869	8.608	22.812	27.834	22.669	9.039	3.013	3.156
147.0	2.152	2.869	8.034	21.664	26.686	21.521	8.465	2.869	3.156
147.5	2.152	2.869	7.461	20.517	25.395	20.517	7.891	2.869	3.300
148.0	2.296	2.869	7.030	19.369	24.247	19.369	7.461	2.869	3.300
148.5	2.296	2.869	6.600	18.221	22.956	18.365	7.030	2.869	3.300
149.0	2.296	2.869	6.313	16.930	21.808	17.217	6.600	2.869	3.300
149.5	2.296	2.869	5.882	15.926	20.660	16.212	6.313	2.869	3.300
150.0	2.296	2.869	5.595	14.778	19.512	15.208	6.026	3.013	3.300
150.5	2.296	2.869	5.452	13.773	18.365	14.204	5.739	2.869	3.443
151.0	2.296	2.869	5.165	12.769	17.217	13.200	5.452	2.869	3.443
151.5	2.439	2.869	5.022	11.908	16.212	12.339	5.309	3.013	3.443
152.0	2.439	3.013	4.878	10.904	15.065	11.334	5.022	3.013	3.443
152.5	2.439	3.013	4.735	10.187	14.060	10.474	4.878	3.013	3.443
153.0	2.439	3.013	4.591	9.469	12.913	9.613	4.735	3.013	3.443
153.5	2.439	3.013	4.448	8.752	11.908	8.895	4.591	3.013	3.443
154.0	2.439	3.013	4.304	8.034	10.904	8.321	4.448	3.013	3.587
154.5	2.583	3.013	4.161	7.461	10.043	7.604	4.304	3.013	3.587
155.0	2.583	3.013	4.017	6.887	9.182	7.030	4.161	3.013	3.587
155.5	2.583	3.156	4.017	6.456	8.465	6.600	4.161	3.013	3.587
156.0	2.583	3.156	3.874	6.026	7.748	6.169	4.017	3.156	3.587
156.5	2.726	3.156	3.874	5.595	7.174	5.739	3.874	3.156	3.587
157.0	2.726	3.156	3.730	5.309	6.600	5.452	3.874	3.156	3.587
157.5	2.726	3.156	3.730	5.165	6.026	5.165	3.730	3.156	3.587
158.0	2.726	3.156	3.587	4.878	5.739	4.878	3.730	3.156	3.730
158.5	2.726	3.300	3.587	4.735	5.309	4.735	3.587	3.156	3.730
159.0	2.869	3.300	3.443	4.448	5.022	4.448	3.587	3.300	3.730
159.5	2.869	3.300	3.443	4.304	4.735	4.304	3.443	3.300	3.730
160.0	2.869	3.300	3.443	4.161	4.591	4.161	3.443	3.300	3.730
160.5	2.869	3.300	3.300	4.017	4.304	4.017	3.443	3.300	3.730
161.0	2.869	3.300	3.300	3.874	4.161	3.874	3.300	3.300	3.730
161.5	3.013	3.300	3.300	3.874	4.017	3.874	3.300	3.300	3.730
162.0	3.013	3.443	3.300	3.730	3.874	3.730	3.300	3.300	3.730
162.5	3.013	3.443	3.300	3.587	3.730	3.587	3.300	3.443	3.730
163.0	3.013	3.443	3.300	3.443	3.587	3.587	3.300	3.443	3.874
163.5	3.013	3.443	3.300	3.443	3.443	3.443	3.300	3.443	3.874
164.0	3.156	3.443	3.300	3.300	3.443	3.300	3.300	3.443	3.874
164.5	3.156	3.443	3.300	3.300	3.300	3.300	3.300	3.443	3.874
165.0	3.156	3.587	3.300	3.300	3.300	3.300	3.300	3.443	3.874
165.5	3.156	3.587	3.300	3.300	3.156	3.300	3.300	3.587	3.874
166.0	3.300	3.587	3.443	3.300	3.156	3.156	3.443	3.587	3.874
166.5	3.300	3.587	3.443	3.300	3.156	3.156	3.443	3.587	3.874

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CANDELA TABULATION - (Cont.)

167.0	3.300	3.587	3.443	3.156	3.013	3.156	3.443	3.587	3.874
167.5	3.300	3.587	3.443	3.156	3.013	3.156	3.443	3.587	3.874
168.0	3.300	3.587	3.443	3.156	3.013	3.156	3.443	3.587	3.874
168.5	3.443	3.730	3.443	3.156	3.013	3.156	3.443	3.587	3.874
169.0	3.443	3.730	3.443	3.300	3.013	3.300	3.443	3.730	3.874
169.5	3.443	3.730	3.443	3.300	3.013	3.300	3.443	3.730	3.874
170.0	3.443	3.730	3.443	3.300	3.013	3.156	3.443	3.730	3.874
170.5	3.443	3.730	3.443	3.300	3.013	3.300	3.443	3.730	3.874
171.0	3.443	3.730	3.587	3.300	3.013	3.300	3.443	3.730	3.874
171.5	3.443	3.730	3.587	3.300	3.013	3.300	3.587	3.730	3.874
172.0	3.443	3.730	3.587	3.300	3.013	3.300	3.587	3.730	3.874
172.5	3.587	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
173.0	3.587	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
173.5	3.587	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
174.0	3.587	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
174.5	3.587	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
175.0	3.587	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
175.5	3.730	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
176.0	3.730	3.730	3.587	3.300	3.156	3.300	3.587	3.730	3.874
176.5	3.730	3.730	3.587	3.443	3.156	3.300	3.587	3.730	3.874
177.0	3.730	3.874	3.587	3.443	3.156	3.300	3.587	3.874	3.874
177.5	3.730	3.874	3.587	3.443	3.156	3.300	3.587	3.874	3.874
178.0	3.730	3.874	3.587	3.443	3.156	3.443	3.587	3.874	3.874
178.5	3.730	3.874	3.587	3.443	3.156	3.443	3.587	3.874	3.874
179.0	3.874	3.874	3.587	3.443	3.156	3.443	3.730	3.874	3.874
179.5	3.874	3.874	3.587	3.443	3.156	3.443	3.587	3.874	3.874
180.0	3.587	3.587	3.587	3.587	3.587	3.587	3.587	3.587	3.587

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_39W_5000K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	671.65	N.A.	11.40
0-30	1410.86	N.A.	24.00
0-40	2287.49	N.A.	38.80
0-60	4026.76	N.A.	68.40
0-80	5189.84	N.A.	88.10
0-90	5466.37	N.A.	92.80
10-90	5291.36	N.A.	89.80
20-40	1615.85	N.A.	27.40
20-50	2519.75	N.A.	42.80
40-70	2423.36	N.A.	41.10
60-80	1163.08	N.A.	19.70
70-80	478.98	N.A.	8.10
80-90	276.53	N.A.	4.70
90-110	271.11	N.A.	4.60
90-120	344.34	N.A.	5.80
90-130	388.20	N.A.	6.60
90-150	420.18	N.A.	7.10
90-180	424.11	N.A.	7.20
110-180	153.00	N.A.	2.60
0-180	5890.48	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	175.01
10-20	496.63
20-30	739.21
30-40	876.63
40-50	903.90
50-60	835.37
60-70	684.09
70-80	478.98
80-90	276.53
90-100	160.13
100-110	110.98
110-120	73.24
120-130	43.86
130-140	22.73
140-150	9.25
150-160	2.61
160-170	0.98
170-180	0.33

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	53	44	38	50	42	37	48	41	36	45	40	35	33
7	63	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_39W_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	21.0	22.6	21.5	23.0	23.5	23.5	25.0	23.9	25.5	25.9
	3H	22.5	23.9	23.0	24.4	24.9	25.9	27.3	26.4	27.7	28.3
	4H	23.0	24.3	23.5	24.8	25.3	27.0	28.3	27.5	28.8	29.4
	6H	23.3	24.5	23.8	25.0	25.6	28.1	29.4	28.7	29.9	30.4
	8H	23.4	24.5	23.9	25.1	25.6	28.7	29.9	29.3	30.4	31.0
	12H	23.4	24.5	23.9	25.0	25.6	29.3	30.5	29.9	31.0	31.6

UGR Viewed Endwise

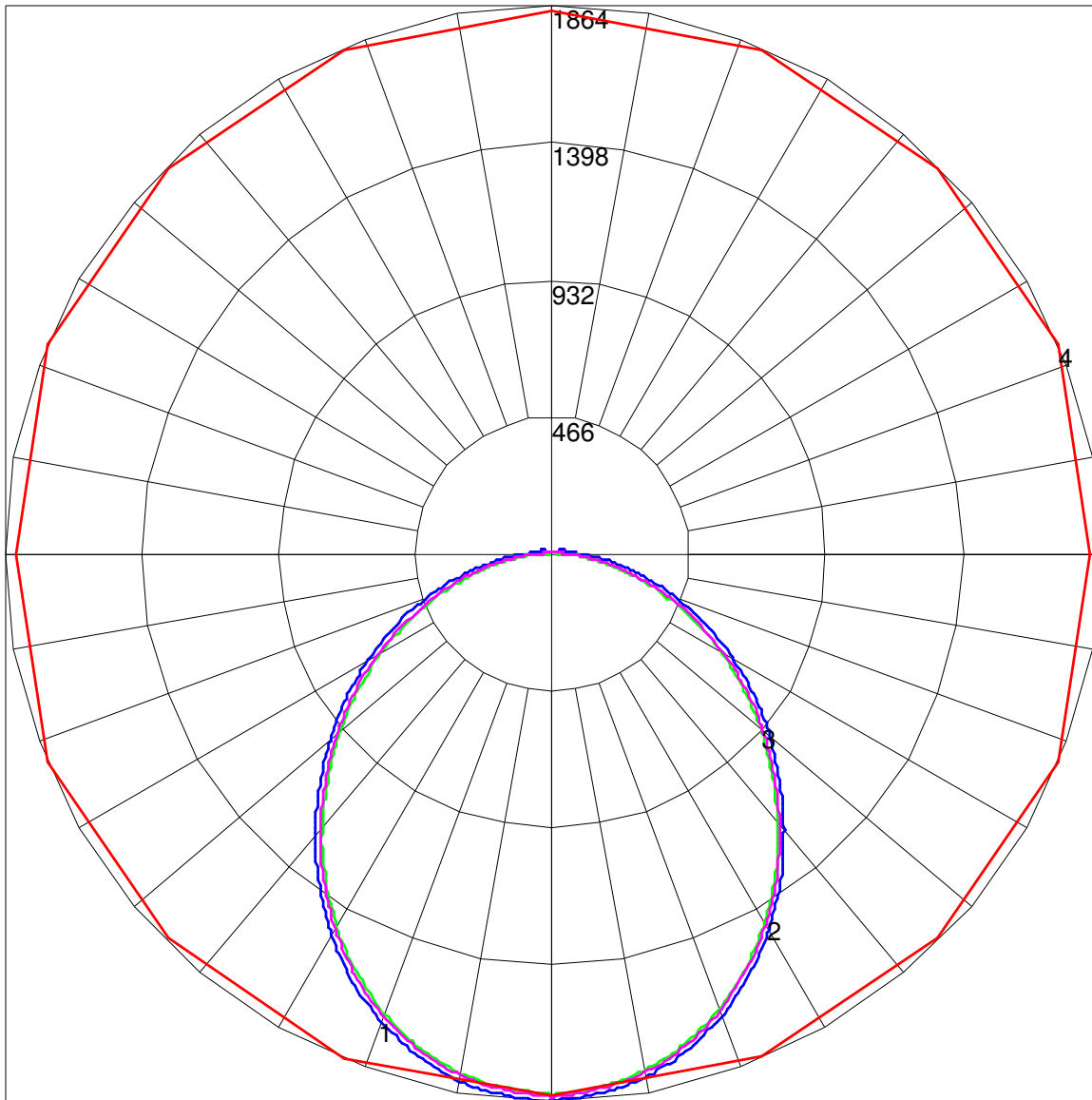
4H	2H	22.0	23.3	22.5	23.8	24.3	23.9	25.2	24.4	25.7	26.2
	3H	23.7	24.8	24.2	25.4	25.9	26.6	27.7	27.1	28.2	28.8
	4H	24.3	25.3	24.8	25.9	26.5	27.8	28.9	28.4	29.4	30.0
	6H	24.7	25.6	25.3	26.2	26.8	29.2	30.1	29.7	30.6	31.2
	8H	24.8	25.7	25.4	26.3	26.9	29.8	30.7	30.4	31.2	31.9
	12H	24.9	25.7	25.5	26.3	26.9	30.6	31.3	31.1	31.9	32.6

8H	4H	25.0	25.9	25.6	26.4	27.0	28.0	28.9	28.6	29.5	30.1
	6H	25.6	26.3	26.2	26.9	27.6	29.5	30.3	30.1	30.9	31.5
	8H	25.8	26.5	26.4	27.1	27.7	30.4	31.0	31.0	31.6	32.2
	12H	26.0	26.5	26.6	27.1	27.8	31.3	31.8	31.9	32.4	33.1

12H	4H	25.2	26.0	25.8	26.6	27.2	28.0	28.8	28.6	29.4	30.0
	6H	25.9	26.6	26.5	27.1	27.8	29.6	30.2	30.2	30.8	31.5
	8H	26.2	26.8	26.8	27.4	28.1	30.4	31.0	31.0	31.6	32.3

Maximum UGR = 33.1

POLAR GRAPH



Maximum Candela = 1863.714 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.)