



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_48W_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_48W_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	6892
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	47.7
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	29708	28110	29139
55	27040	26024	27726
65	23821	23740	26225
75	19615	21284	24381
85	13564	19593	23206

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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	2168.962	2168.962	2168.962	2168.962	2168.962	2168.962	2168.962	2168.962	2168.962
0.5	2140.423	2177.356	2172.319	2172.319	2162.247	2173.998	2172.319	2180.713	2142.102
1.0	2138.744	2175.677	2168.962	2173.998	2160.568	2173.998	2168.962	2179.034	2142.102
1.5	2142.102	2175.677	2165.604	2172.319	2162.247	2173.998	2168.962	2177.356	2142.102
2.0	2142.102	2173.998	2168.962	2173.998	2160.568	2177.356	2168.962	2179.034	2140.423
2.5	2140.423	2172.319	2165.604	2172.319	2160.568	2170.641	2168.962	2175.677	2137.065
3.0	2135.387	2172.319	2163.926	2172.319	2160.568	2172.319	2167.283	2177.356	2137.065
3.5	2137.065	2168.962	2162.247	2167.283	2157.210	2168.962	2165.604	2172.319	2138.744
4.0	2132.029	2165.604	2158.889	2168.962	2158.889	2167.283	2163.926	2173.998	2133.708
4.5	2133.708	2160.568	2158.889	2165.604	2155.532	2167.283	2160.568	2170.641	2130.350
5.0	2125.314	2158.889	2153.853	2163.926	2155.532	2165.604	2158.889	2167.283	2130.350
5.5	2123.635	2158.889	2152.174	2162.247	2155.532	2163.926	2158.889	2163.926	2125.314
6.0	2120.278	2153.853	2148.817	2160.568	2150.495	2160.568	2153.853	2163.926	2123.635
6.5	2116.920	2150.495	2147.138	2155.532	2147.138	2158.889	2152.174	2160.568	2120.278
7.0	2111.884	2145.459	2143.780	2150.495	2143.780	2155.532	2150.495	2158.889	2121.956
7.5	2110.205	2143.780	2138.744	2150.495	2140.423	2152.174	2145.459	2155.532	2115.241
8.0	2106.848	2138.744	2135.387	2145.459	2140.423	2150.495	2143.780	2152.174	2111.884
8.5	2101.811	2133.708	2130.350	2140.423	2133.708	2145.459	2140.423	2147.138	2105.169
9.0	2098.454	2128.672	2123.635	2138.744	2130.350	2140.423	2135.387	2145.459	2101.811
9.5	2088.381	2123.635	2123.635	2135.387	2126.993	2138.744	2132.029	2138.744	2096.775
10.0	2086.702	2121.956	2115.241	2125.314	2125.314	2133.708	2128.672	2135.387	2095.096
10.5	2074.951	2111.884	2111.884	2125.314	2116.920	2130.350	2123.635	2128.672	2086.702
11.0	2073.272	2110.205	2106.848	2118.599	2113.563	2125.314	2115.241	2120.278	2086.702
11.5	2066.557	2101.811	2100.133	2113.563	2110.205	2118.599	2111.884	2118.599	2078.309
12.0	2059.842	2095.096	2096.775	2108.526	2103.490	2115.241	2105.169	2111.884	2069.915
12.5	2051.448	2088.381	2090.060	2105.169	2103.490	2106.848	2100.133	2103.490	2066.557
13.0	2048.091	2085.024	2081.666	2098.454	2096.775	2103.490	2095.096	2100.133	2056.485
13.5	2043.055	2076.630	2078.309	2090.060	2090.060	2096.775	2090.060	2095.096	2049.770
14.0	2032.982	2068.236	2069.915	2085.024	2083.345	2091.739	2081.666	2088.381	2043.055
14.5	2021.231	2059.842	2061.521	2078.309	2076.630	2083.345	2076.630	2081.666	2038.018
15.0	2016.194	2054.806	2058.163	2074.951	2069.915	2078.309	2068.236	2073.272	2029.625
15.5	2009.479	2049.770	2048.091	2066.557	2063.200	2069.915	2063.200	2064.879	2022.909
16.0	2004.443	2038.018	2041.376	2061.521	2054.806	2063.200	2053.127	2058.163	2011.158
16.5	1989.334	2031.303	2031.303	2054.806	2048.091	2056.485	2044.733	2049.770	2009.479
17.0	1980.940	2022.909	2026.267	2046.412	2041.376	2046.412	2038.018	2043.055	1997.728
17.5	1972.547	2012.837	2016.194	2036.340	2032.982	2038.018	2027.946	2036.340	1992.692
18.0	1967.510	2001.086	2006.122	2026.267	2026.267	2027.946	2021.231	2022.909	1982.619
18.5	1957.438	1994.370	1997.728	2021.231	2017.873	2021.231	2011.158	2016.194	1974.225
19.0	1944.008	1984.298	1987.655	2011.158	2007.801	2012.837	2004.443	2006.122	1964.153
19.5	1937.293	1975.904	1979.262	2002.764	1997.728	2002.764	1996.049	1997.728	1952.401
20.0	1927.220	1964.153	1969.189	1992.692	1989.334	1996.049	1985.977	1987.655	1944.008
20.5	1915.469	1954.080	1960.795	1984.298	1980.940	1984.298	1977.583	1977.583	1935.614
21.0	1907.075	1944.008	1949.044	1972.547	1970.868	1977.583	1964.153	1970.868	1922.184
21.5	1893.645	1933.935	1938.971	1962.474	1964.153	1969.189	1957.438	1959.116	1913.790
22.0	1885.251	1925.541	1930.577	1952.401	1954.080	1957.438	1947.365	1949.044	1903.717
22.5	1870.142	1910.432	1918.826	1944.008	1947.365	1952.401	1937.293	1937.293	1890.287
23.0	1860.069	1900.360	1908.754	1932.256	1937.293	1940.650	1928.899	1927.220	1883.572
23.5	1851.676	1888.608	1900.360	1923.862	1930.577	1935.614	1918.826	1917.147	1871.821
24.0	1834.888	1878.536	1888.608	1913.790	1920.505	1925.541	1908.754	1902.039	1855.033
24.5	1828.173	1868.463	1876.857	1905.396	1912.111	1917.147	1897.002	1891.966	1844.961
25.0	1814.743	1851.676	1866.784	1897.002	1907.075	1908.754	1886.930	1881.893	1834.888
25.5	1799.634	1841.603	1851.676	1888.608	1898.681	1898.681	1878.536	1871.821	1824.815
26.0	1786.204	1831.530	1841.603	1875.178	1888.608	1888.608	1866.784	1860.069	1809.707
26.5	1774.453	1816.422	1831.530	1868.463	1880.215	1878.536	1855.033	1846.639	1799.634

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27.0	1764.380	1804.670	1821.458	1856.712	1866.784	1868.463	1843.282	1834.888	1786.204
27.5	1749.271	1794.598	1809.707	1848.318	1858.391	1856.712	1833.209	1823.137	1772.774
28.0	1737.520	1777.810	1794.598	1838.246	1849.997	1846.639	1819.779	1809.707	1761.022
28.5	1725.768	1766.059	1784.525	1826.494	1839.924	1836.567	1809.707	1797.955	1749.271
29.0	1712.338	1752.629	1772.774	1816.422	1829.852	1824.815	1797.955	1786.204	1734.162
29.5	1698.908	1740.877	1761.022	1804.670	1818.100	1814.743	1787.883	1771.095	1720.732
30.0	1682.121	1727.447	1749.271	1792.919	1808.028	1804.670	1774.453	1759.344	1705.623
30.5	1668.858	1714.017	1735.841	1782.846	1797.955	1792.919	1762.701	1745.914	1692.193
31.0	1654.757	1698.908	1724.090	1771.095	1787.883	1782.846	1749.271	1732.483	1682.121
31.5	1644.181	1683.799	1712.338	1759.344	1776.131	1772.774	1739.199	1719.053	1663.990
32.0	1626.554	1673.391	1698.908	1749.271	1766.059	1762.701	1727.447	1705.623	1651.567
32.5	1615.138	1658.282	1685.478	1737.520	1755.986	1750.950	1712.338	1690.514	1639.984
33.0	1598.686	1644.852	1670.705	1727.447	1747.592	1740.877	1698.908	1675.741	1621.181
33.5	1583.913	1630.583	1658.114	1717.375	1735.841	1727.447	1687.157	1662.815	1609.262
34.0	1570.483	1616.481	1648.377	1703.944	1725.768	1717.375	1676.413	1650.224	1597.007
34.5	1554.870	1600.701	1634.108	1692.193	1715.696	1705.623	1663.151	1633.269	1579.884
35.0	1542.615	1587.103	1622.189	1682.121	1703.944	1693.872	1650.560	1620.174	1568.636
35.5	1527.339	1571.490	1610.270	1671.209	1695.551	1682.121	1636.290	1604.394	1550.506
36.0	1509.376	1555.374	1595.832	1659.289	1683.799	1673.055	1622.860	1590.460	1538.418
36.5	1493.763	1541.440	1584.752	1646.867	1673.895	1660.800	1610.437	1575.855	1524.485
37.0	1481.676	1525.492	1569.643	1637.465	1663.654	1649.720	1596.504	1561.250	1512.901
37.5	1465.560	1512.398	1557.388	1625.210	1652.742	1636.458	1585.256	1547.820	1498.296
38.0	1448.269	1497.121	1543.455	1614.299	1641.998	1624.707	1571.826	1534.054	1481.005
38.5	1434.335	1481.844	1532.207	1602.044	1629.911	1613.123	1557.053	1520.456	1464.553
39.0	1417.548	1465.560	1518.105	1590.124	1618.495	1601.036	1545.301	1507.361	1448.605
39.5	1401.599	1449.108	1505.347	1577.701	1608.087	1589.285	1531.032	1492.588	1429.970
40.0	1384.476	1435.846	1492.085	1566.286	1598.350	1578.709	1517.770	1478.990	1412.511
40.5	1370.039	1420.737	1478.990	1554.199	1585.424	1566.622	1504.675	1461.699	1396.059
41.0	1351.740	1403.782	1465.056	1543.119	1572.497	1554.870	1491.245	1446.422	1379.607
41.5	1336.631	1387.162	1453.641	1531.703	1563.768	1541.608	1476.808	1428.124	1362.988
42.0	1319.172	1372.389	1439.036	1519.113	1552.184	1532.207	1463.546	1410.832	1348.047
42.5	1303.559	1356.608	1425.102	1508.033	1541.104	1518.777	1448.605	1395.388	1331.595
43.0	1286.772	1342.675	1411.672	1495.442	1529.689	1505.850	1436.014	1376.921	1315.143
43.5	1272.167	1328.237	1397.570	1482.851	1519.448	1493.428	1423.591	1360.637	1300.706
44.0	1257.897	1311.114	1384.476	1471.772	1507.865	1482.684	1408.314	1343.178	1283.414
44.5	1237.920	1294.998	1368.360	1458.845	1496.281	1471.268	1396.899	1327.734	1268.138
45.0	1223.315	1279.050	1357.280	1447.094	1484.866	1456.831	1383.636	1310.275	1252.357
45.5	1208.206	1263.437	1341.667	1434.671	1471.100	1446.086	1369.703	1296.173	1236.577
46.0	1191.586	1250.175	1328.741	1421.073	1459.684	1434.503	1356.608	1279.553	1218.782
46.5	1176.981	1234.394	1314.304	1407.139	1448.772	1420.401	1343.178	1264.612	1204.177
47.0	1159.857	1217.439	1300.706	1397.234	1436.685	1410.665	1330.755	1249.168	1189.068
47.5	1143.070	1202.330	1286.772	1383.301	1425.941	1398.745	1317.157	1233.219	1169.762
48.0	1129.975	1186.718	1274.013	1373.396	1412.175	1383.469	1303.895	1217.103	1156.668
48.5	1111.677	1171.105	1260.247	1358.119	1401.264	1372.221	1290.129	1201.659	1137.362
49.0	1100.933	1158.011	1247.489	1346.536	1389.176	1359.966	1275.860	1186.718	1122.253
49.5	1086.495	1140.552	1233.891	1334.281	1376.082	1348.215	1258.401	1170.098	1107.312
50.0	1069.540	1127.121	1220.293	1321.690	1365.338	1335.624	1245.810	1154.150	1094.386
50.5	1052.752	1115.202	1203.673	1308.932	1353.251	1322.530	1231.373	1139.209	1080.116
51.0	1036.972	1100.597	1192.258	1296.005	1342.003	1309.939	1215.424	1122.757	1061.650
51.5	1021.359	1085.992	1177.317	1284.925	1331.595	1297.516	1201.491	1113.188	1045.701
52.0	1004.908	1069.708	1164.894	1272.670	1318.500	1285.261	1186.382	1097.911	1028.746
52.5	989.799	1054.935	1150.960	1259.744	1306.246	1272.335	1173.120	1084.313	1013.301
53.0	972.843	1038.651	1136.355	1247.489	1293.655	1261.423	1159.522	1067.861	998.192
53.5	957.566	1023.542	1122.757	1234.394	1281.064	1247.992	1144.413	1052.081	980.565
54.0	940.947	1009.440	1110.502	1221.636	1267.634	1235.402	1132.158	1036.636	963.442
54.5	924.831	992.988	1100.597	1207.534	1257.226	1223.482	1117.385	1020.520	948.165

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55.0	907.539	977.544	1087.671	1195.447	1244.635	1209.885	1108.991	1005.915	931.210
55.5	891.759	963.778	1073.401	1181.681	1231.037	1196.958	1095.897	990.470	914.422
56.0	875.979	946.990	1059.299	1168.251	1219.621	1184.871	1081.459	974.522	899.481
56.5	860.870	931.378	1045.198	1156.164	1205.520	1169.426	1066.350	957.399	882.358
57.0	844.418	915.597	1031.600	1142.398	1193.433	1156.668	1052.249	942.458	864.395
57.5	828.973	901.328	1018.841	1129.640	1178.995	1142.734	1037.811	925.670	848.615
58.0	813.864	885.547	1003.565	1116.545	1165.229	1129.304	1023.038	910.729	832.666
58.5	797.580	869.935	989.463	1107.480	1152.471	1118.224	1009.104	895.116	815.711
59.0	782.639	854.826	976.872	1097.743	1140.048	1107.480	993.828	878.497	800.770
59.5	766.523	840.053	962.099	1081.963	1125.946	1094.889	980.230	863.891	783.647
60.0	751.079	825.112	946.822	1068.868	1117.720	1080.956	965.624	848.615	769.209
60.5	735.466	809.835	932.553	1056.949	1105.633	1067.525	952.698	832.163	751.414
61.0	718.511	794.726	919.291	1041.840	1093.210	1053.088	937.757	818.061	735.634
61.5	703.234	779.450	905.861	1027.907	1080.116	1039.322	924.159	801.274	719.686
62.0	687.621	764.509	892.095	1014.812	1065.511	1026.899	908.547	786.500	703.402
62.5	672.177	749.903	878.329	1001.214	1051.241	1011.790	895.452	770.720	687.621
63.0	657.236	734.627	864.395	987.616	1037.811	998.528	881.015	755.947	672.177
63.5	641.455	720.357	850.293	973.011	1024.549	984.595	866.242	740.502	656.732
64.0	625.171	705.416	836.863	959.413	1010.783	971.164	852.644	725.226	639.944
64.5	608.384	690.475	821.922	945.144	996.010	958.238	837.871	710.453	624.332
65.0	593.778	676.709	807.989	931.546	982.412	943.465	824.441	695.344	608.552
65.5	579.173	661.768	794.223	918.955	969.821	929.867	811.010	680.235	593.275
66.0	563.225	646.995	781.128	903.175	955.720	915.429	795.902	664.958	577.494
66.5	549.291	632.726	766.691	890.248	940.947	901.328	782.639	650.017	562.050
67.0	534.015	618.792	752.757	876.146	927.349	886.387	767.530	635.580	547.445
67.5	519.577	604.355	739.495	861.373	912.576	873.125	754.772	621.310	532.504
68.0	504.636	590.421	724.554	849.118	899.145	859.359	740.167	606.537	518.066
68.5	490.031	576.655	711.796	833.842	885.212	844.418	725.897	592.100	501.950
69.0	475.426	561.714	698.030	821.419	871.110	831.323	712.131	578.502	487.681
69.5	459.981	547.780	684.432	806.646	856.841	817.558	698.869	563.897	471.732
70.0	446.047	534.015	670.162	793.048	842.571	802.617	684.432	548.956	457.463
70.5	432.114	519.241	656.900	778.610	828.805	789.522	670.666	534.518	443.026
71.0	416.837	506.147	643.470	765.852	814.872	775.421	657.236	520.249	428.085
71.5	403.071	492.045	630.879	752.086	800.938	762.494	642.966	506.147	413.311
72.0	388.802	479.287	616.442	737.481	786.836	748.057	630.208	492.717	397.867
72.5	374.700	465.521	603.515	724.218	773.742	734.962	616.274	478.280	383.429
73.0	360.430	452.595	589.749	709.781	759.305	720.189	603.012	464.346	370.335
73.5	347.000	439.500	576.823	695.512	744.867	706.591	589.749	450.748	355.730
74.0	333.234	425.902	563.897	683.424	731.605	692.826	575.984	437.150	341.964
74.5	318.629	412.136	549.795	669.155	717.168	679.563	563.561	423.048	327.359
75.0	304.695	399.546	537.204	656.396	704.409	665.462	550.634	410.122	314.097
75.5	292.105	386.787	524.949	642.295	690.475	652.032	537.036	396.356	300.331
76.0	278.171	374.028	512.023	629.704	676.877	639.105	524.781	383.765	286.733
76.5	265.580	361.606	499.432	616.274	663.111	625.171	511.519	370.167	274.310
77.0	253.157	349.183	486.841	602.676	649.346	612.245	498.257	357.577	261.048
77.5	240.399	336.928	474.586	590.085	636.755	598.647	485.666	344.314	248.289
78.0	227.305	324.673	462.499	576.991	622.653	585.888	473.579	332.395	235.530
78.5	214.882	313.089	450.076	564.232	609.895	573.130	461.324	320.140	222.940
79.0	202.627	301.170	438.493	551.306	596.465	560.035	448.733	308.389	211.021
79.5	191.379	289.419	427.077	539.051	584.210	548.620	437.150	296.302	198.262
80.0	179.963	277.667	415.326	526.124	571.955	535.358	425.063	284.550	186.846
80.5	168.212	266.420	403.743	514.373	558.524	523.438	413.815	273.974	175.095
81.0	156.796	255.676	392.495	501.950	546.437	510.680	402.399	262.391	164.183
81.5	145.885	244.764	381.079	490.199	534.015	498.760	391.152	251.814	153.103
82.0	135.140	234.355	370.167	478.447	520.752	487.009	379.904	241.406	142.359
82.5	125.236	223.611	359.255	467.703	508.665	474.586	368.488	231.166	132.119

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CANDELA TABULATION - (Cont.)

83.0	114.660	213.539	348.511	455.952	497.250	462.835	358.248	220.925	121.878
83.5	104.755	203.802	337.935	444.536	485.163	451.923	347.168	211.021	111.973
84.0	95.018	194.233	327.695	433.289	473.747	440.843	337.263	201.284	102.237
84.5	85.617	184.832	317.454	422.713	462.331	429.595	326.855	191.883	93.171
85.0	76.887	176.102	307.214	411.633	451.252	418.348	316.615	182.817	83.770
85.5	68.158	166.869	297.813	400.721	440.004	407.939	306.878	173.080	75.041
86.0	59.428	158.307	288.411	390.816	429.092	397.531	296.805	164.351	66.143
86.5	51.202	149.914	279.346	380.576	418.684	386.787	287.572	155.453	57.582
87.0	42.976	141.688	269.945	370.671	408.107	377.050	278.507	147.060	49.020
87.5	35.422	133.965	261.216	361.606	398.035	367.481	269.106	138.834	40.794
88.0	28.035	125.571	252.990	352.372	388.802	358.080	260.544	130.440	32.568
88.5	20.649	118.353	245.435	343.979	379.400	349.518	252.486	122.214	24.174
89.0	13.262	111.470	238.384	335.753	371.175	340.789	244.596	114.995	16.284
89.5	6.547	105.762	231.669	328.198	362.949	333.234	237.881	108.616	8.562
90.0	2.350	100.558	225.794	320.812	355.058	325.512	231.669	103.076	2.686
90.5	1.511	96.193	220.086	313.761	347.168	317.958	225.458	98.376	1.511
91.0	1.511	92.500	214.378	306.878	339.782	311.243	219.079	94.682	1.343
91.5	1.511	89.814	209.510	300.163	332.731	304.695	214.210	91.828	1.343
92.0	1.511	87.464	204.473	294.287	326.352	298.820	209.510	89.478	1.343
92.5	1.511	85.281	200.948	288.915	320.140	293.112	205.481	87.296	1.343
93.0	1.511	83.267	197.255	283.711	314.264	287.908	201.787	85.113	1.343
93.5	1.511	81.252	193.897	279.178	309.228	283.039	198.262	83.099	1.343
94.0	1.511	79.405	190.707	274.478	304.192	278.507	195.240	81.084	1.343
94.5	1.511	77.559	187.854	270.449	299.659	274.310	192.050	79.070	1.343
95.0	1.511	75.712	185.000	266.420	295.294	269.777	188.861	77.223	1.343
95.5	1.511	74.033	181.810	262.391	290.426	265.916	185.839	75.544	1.343
96.0	1.511	72.355	179.124	258.362	286.229	261.719	182.817	73.866	1.343
96.5	1.511	70.676	176.102	254.668	282.032	258.026	179.628	72.019	1.343
97.0	1.511	68.997	173.416	250.471	277.667	253.661	176.942	70.340	1.343
97.5	1.511	67.318	170.394	247.114	273.470	250.136	174.088	68.829	1.343
98.0	1.511	65.808	167.708	243.085	269.609	246.275	171.066	67.151	1.343
98.5	1.511	64.465	165.190	239.559	265.748	242.413	168.380	65.472	1.343
99.0	1.511	62.786	162.169	236.202	261.887	238.720	165.526	63.961	1.343
99.5	1.511	61.275	159.650	232.677	257.858	235.195	162.840	62.450	1.343
100.0	1.511	59.932	156.796	229.151	253.997	231.669	159.986	60.939	1.343
100.5	1.511	58.421	154.278	225.626	249.968	228.312	157.468	59.596	1.511
101.0	1.511	57.246	151.760	222.100	246.442	224.954	154.950	58.085	1.511
101.5	1.511	55.735	149.074	218.743	242.917	221.261	152.096	56.742	1.511
102.0	1.679	54.560	146.724	215.385	238.888	218.239	149.746	55.399	1.511
102.5	1.679	53.217	144.206	212.196	235.027	215.050	147.060	54.056	1.511
103.0	1.679	52.042	141.688	208.838	231.501	211.692	144.541	52.713	1.511
103.5	1.679	50.699	139.169	205.984	228.144	208.334	142.191	51.370	1.511
104.0	1.679	49.524	136.987	202.962	224.786	205.145	139.505	50.027	1.511
104.5	1.679	48.348	134.469	199.437	221.597	201.955	137.155	48.852	1.679
105.0	1.679	47.173	132.287	196.583	217.903	198.933	134.805	47.677	1.679
105.5	1.679	45.998	130.104	193.561	214.714	195.576	132.454	46.502	1.679
106.0	1.679	44.823	127.754	190.372	211.524	192.554	129.936	45.327	1.679
106.5	1.679	43.816	125.571	187.686	207.831	189.532	127.754	44.319	1.679
107.0	1.847	42.641	123.389	184.664	204.977	186.343	125.404	43.144	1.679
107.5	1.847	41.633	121.039	181.474	201.955	183.489	123.389	42.137	1.679
108.0	1.847	40.626	118.856	178.956	198.766	180.635	121.207	41.130	1.679
108.5	1.847	39.451	117.010	175.934	195.744	177.949	118.856	39.955	1.847
109.0	1.847	38.444	114.827	173.080	192.722	175.095	116.674	38.947	1.847
109.5	1.847	37.436	112.645	170.227	189.868	172.241	114.660	37.940	1.847
110.0	1.847	36.597	110.798	167.541	186.846	169.387	112.645	36.933	1.847
110.5	1.847	35.590	108.784	165.022	183.825	166.533	110.463	35.926	1.847

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111.0	1.847	34.583	106.769	162.336	181.139	164.183	108.448	35.086	1.847
111.5	2.015	33.743	104.923	159.818	178.285	161.329	106.266	34.079	1.847
112.0	2.015	32.736	102.908	156.964	175.599	158.643	104.419	33.072	1.847
112.5	2.015	31.896	100.894	154.782	172.745	156.125	102.405	32.232	2.015
113.0	2.015	31.057	99.215	151.928	169.891	153.607	100.390	31.225	2.015
113.5	2.015	30.218	97.033	149.410	167.037	150.753	98.543	30.386	2.015
114.0	2.015	29.210	95.354	147.060	164.687	148.235	96.697	29.546	2.015
114.5	2.015	28.371	93.507	144.541	161.833	145.885	94.682	28.539	2.015
115.0	2.015	27.700	91.660	142.191	159.315	143.366	92.668	27.700	2.015
115.5	2.015	26.692	89.814	139.841	156.629	140.848	90.821	26.860	2.015
116.0	2.015	26.021	88.135	137.155	154.110	138.498	88.974	26.021	2.182
116.5	2.015	25.181	86.288	134.973	151.592	136.148	87.296	25.349	2.182
117.0	2.015	24.342	84.442	132.454	148.906	133.630	85.449	24.510	2.182
117.5	2.015	23.503	82.763	130.272	146.556	131.279	83.602	23.671	2.182
118.0	2.015	22.831	81.252	127.754	144.038	128.929	81.924	22.831	2.182
118.5	2.015	21.992	79.573	125.571	141.688	126.579	80.245	22.160	2.182
119.0	2.015	21.320	77.895	123.389	139.169	124.396	78.566	21.320	2.182
119.5	2.015	20.481	76.216	121.207	136.651	122.214	76.887	20.649	2.182
120.0	2.015	19.809	74.537	118.689	134.301	119.696	75.041	19.809	2.182
120.5	2.015	19.138	72.858	116.842	131.783	117.513	73.530	19.138	2.350
121.0	2.015	18.299	71.347	114.492	129.265	115.331	71.851	18.466	2.350
121.5	2.015	17.459	69.837	112.309	127.250	113.149	70.340	17.627	2.350
122.0	2.015	16.788	68.326	110.127	124.564	110.966	68.829	16.956	2.350
122.5	2.015	16.116	66.647	107.944	122.382	108.616	67.318	16.284	2.350
123.0	2.015	15.445	65.136	105.930	120.032	106.601	65.640	15.612	2.350
123.5	2.015	14.773	63.625	103.748	117.681	104.587	64.129	14.941	2.350
124.0	2.015	14.102	62.282	101.565	115.499	102.405	62.618	14.269	2.350
124.5	2.015	13.430	60.771	99.551	113.317	100.054	61.107	13.598	2.518
125.0	2.015	12.759	59.260	97.536	111.134	98.040	59.596	12.926	2.518
125.5	2.015	12.087	57.749	95.522	108.784	96.025	58.085	12.255	2.518
126.0	2.015	11.583	56.239	93.675	106.601	94.011	56.574	11.583	2.518
126.5	2.015	10.912	54.896	91.660	104.419	91.996	55.231	10.912	2.518
127.0	2.015	10.240	53.553	89.646	102.069	89.982	53.888	10.408	2.518
127.5	2.015	9.737	52.210	87.799	100.054	87.967	52.377	9.737	2.518
128.0	2.015	9.065	50.699	85.785	98.040	86.288	51.034	9.233	2.686
128.5	2.015	8.562	49.188	83.938	96.025	84.442	49.691	8.730	2.686
129.0	2.015	8.058	47.845	81.924	93.843	82.427	48.348	8.226	2.686
129.5	2.015	7.722	46.670	80.077	91.828	80.581	47.005	7.890	2.686
130.0	2.182	7.219	45.494	78.230	89.814	78.734	45.830	7.387	2.686
130.5	2.182	6.883	43.984	76.552	87.799	77.055	44.487	7.051	2.854
131.0	2.182	6.547	42.808	74.873	85.785	75.041	43.144	6.715	2.854
131.5	2.182	6.211	41.633	73.026	83.770	73.362	41.969	6.379	2.854
132.0	2.182	5.876	40.290	71.347	81.756	71.515	40.626	6.044	2.854
132.5	2.182	5.540	39.115	69.501	79.909	69.837	39.451	5.708	2.854
133.0	2.182	5.372	37.940	67.654	78.062	67.990	38.276	5.540	3.022
133.5	2.182	5.204	36.597	65.975	76.048	66.311	36.933	5.372	3.022
134.0	2.182	5.036	35.254	64.297	74.369	64.465	35.758	5.204	3.022
134.5	2.182	4.868	33.911	62.618	72.355	62.786	34.583	5.036	3.022
135.0	2.182	4.701	32.568	60.939	70.508	61.107	33.407	4.868	3.022
135.5	2.182	4.533	31.393	59.092	68.661	59.428	32.232	4.701	3.022
136.0	2.182	4.365	30.050	57.414	66.815	57.749	31.057	4.533	3.022
136.5	2.182	4.365	28.875	55.903	64.968	56.071	30.050	4.533	3.190
137.0	2.182	4.197	27.532	54.392	63.121	54.392	28.875	4.365	3.190
137.5	2.182	4.197	26.357	52.713	61.443	52.881	27.700	4.365	3.190
138.0	2.182	4.029	25.181	51.034	59.764	51.202	26.692	4.197	3.190
138.5	2.182	4.029	24.174	49.524	58.085	49.691	25.685	4.197	3.190

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CANDELA TABULATION - (Cont.)

139.0	2.350	4.029	22.999	48.013	56.406	48.013	24.678	4.029	3.358
139.5	2.350	3.861	21.824	46.502	54.728	46.670	23.671	4.029	3.358
140.0	2.350	3.861	20.817	44.991	53.049	44.991	22.495	4.029	3.358
140.5	2.350	3.861	19.809	43.312	51.370	43.480	21.488	3.861	3.358
141.0	2.350	3.693	18.970	41.969	49.691	41.969	20.481	3.861	3.358
141.5	2.350	3.693	17.963	40.458	48.013	40.626	19.474	3.861	3.525
142.0	2.350	3.693	17.123	39.115	46.502	39.115	18.466	3.861	3.525
142.5	2.350	3.525	16.284	37.604	44.823	37.604	17.459	3.693	3.525
143.0	2.350	3.525	15.445	36.261	43.312	36.093	16.620	3.693	3.525
143.5	2.518	3.525	14.605	34.750	41.801	34.750	15.612	3.693	3.525
144.0	2.518	3.525	13.766	33.407	40.122	33.407	14.773	3.525	3.525
144.5	2.518	3.525	12.926	32.064	38.612	31.896	13.766	3.525	3.693
145.0	2.518	3.358	12.255	30.553	37.101	30.553	12.926	3.525	3.693
145.5	2.518	3.358	11.416	29.210	35.590	29.210	12.087	3.525	3.693
146.0	2.518	3.358	10.744	28.035	34.079	27.867	11.248	3.525	3.693
146.5	2.518	3.358	10.073	26.692	32.568	26.524	10.576	3.525	3.693
147.0	2.518	3.358	9.401	25.349	31.225	25.181	9.905	3.358	3.693
147.5	2.518	3.358	8.730	24.006	29.714	24.006	9.233	3.358	3.861
148.0	2.686	3.358	8.226	22.663	28.371	22.663	8.730	3.358	3.861
148.5	2.686	3.358	7.722	21.320	26.860	21.488	8.226	3.358	3.861
149.0	2.686	3.358	7.387	19.809	25.517	20.145	7.722	3.358	3.861
149.5	2.686	3.358	6.883	18.634	24.174	18.970	7.387	3.358	3.861
150.0	2.686	3.358	6.547	17.291	22.831	17.795	7.051	3.525	3.861
150.5	2.686	3.358	6.379	16.116	21.488	16.620	6.715	3.358	4.029
151.0	2.686	3.358	6.044	14.941	20.145	15.445	6.379	3.358	4.029
151.5	2.854	3.358	5.876	13.934	18.970	14.437	6.211	3.525	4.029
152.0	2.854	3.525	5.708	12.759	17.627	13.262	5.876	3.525	4.029
152.5	2.854	3.525	5.540	11.919	16.452	12.255	5.708	3.525	4.029
153.0	2.854	3.525	5.372	11.080	15.109	11.248	5.540	3.525	4.029
153.5	2.854	3.525	5.204	10.240	13.934	10.408	5.372	3.525	4.029
154.0	2.854	3.525	5.036	9.401	12.759	9.737	5.204	3.525	4.197
154.5	3.022	3.525	4.868	8.730	11.751	8.897	5.036	3.525	4.197
155.0	3.022	3.525	4.701	8.058	10.744	8.226	4.868	3.525	4.197
155.5	3.022	3.693	4.701	7.554	9.905	7.722	4.868	3.525	4.197
156.0	3.022	3.693	4.533	7.051	9.065	7.219	4.701	3.693	4.197
156.5	3.190	3.693	4.533	6.547	8.394	6.715	4.533	3.693	4.197
157.0	3.190	3.693	4.365	6.211	7.722	6.379	4.533	3.693	4.197
157.5	3.190	3.693	4.365	6.044	7.051	6.044	4.365	3.693	4.197
158.0	3.190	3.693	4.197	5.708	6.715	5.708	4.365	3.693	4.365
158.5	3.190	3.861	4.197	5.540	6.211	5.540	4.197	3.693	4.365
159.0	3.358	3.861	4.029	5.204	5.876	5.204	4.197	3.861	4.365
159.5	3.358	3.861	4.029	5.036	5.540	5.036	4.029	3.861	4.365
160.0	3.358	3.861	4.029	4.868	5.372	4.868	4.029	3.861	4.365
160.5	3.358	3.861	3.861	4.701	5.036	4.701	4.029	3.861	4.365
161.0	3.358	3.861	3.861	4.533	4.868	4.533	3.861	3.861	4.365
161.5	3.525	3.861	3.861	4.533	4.701	4.533	3.861	3.861	4.365
162.0	3.525	4.029	3.861	4.365	4.533	4.365	3.861	3.861	4.365
162.5	3.525	4.029	3.861	4.197	4.365	4.197	3.861	4.029	4.365
163.0	3.525	4.029	3.861	4.029	4.197	4.197	3.861	4.029	4.533
163.5	3.525	4.029	3.861	4.029	4.029	4.029	3.861	4.029	4.533
164.0	3.693	4.029	3.861	3.861	4.029	3.861	3.861	4.029	4.533
164.5	3.693	4.029	3.861	3.861	3.861	3.861	3.861	4.029	4.533
165.0	3.693	4.197	3.861	3.861	3.861	3.861	3.861	4.029	4.533
165.5	3.693	4.197	3.861	3.861	3.693	3.861	3.861	4.197	4.533
166.0	3.861	4.197	4.029	3.861	3.693	3.693	4.029	4.197	4.533
166.5	3.861	4.197	4.029	3.861	3.693	3.693	4.029	4.197	4.533

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167.0	3.861	4.197	4.029	3.693	3.525	3.693	4.029	4.197	4.533
167.5	3.861	4.197	4.029	3.693	3.525	3.693	4.029	4.197	4.533
168.0	3.861	4.197	4.029	3.693	3.525	3.693	4.029	4.197	4.533
168.5	4.029	4.365	4.029	3.693	3.525	3.693	4.029	4.197	4.533
169.0	4.029	4.365	4.029	3.861	3.525	3.861	4.029	4.365	4.533
169.5	4.029	4.365	4.029	3.861	3.525	3.861	4.029	4.365	4.533
170.0	4.029	4.365	4.029	3.861	3.525	3.693	4.029	4.365	4.533
170.5	4.029	4.365	4.029	3.861	3.525	3.861	4.029	4.365	4.533
171.0	4.029	4.365	4.197	3.861	3.525	3.861	4.029	4.365	4.533
171.5	4.029	4.365	4.197	3.861	3.525	3.861	4.197	4.365	4.533
172.0	4.029	4.365	4.197	3.861	3.525	3.861	4.197	4.365	4.533
172.5	4.197	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
173.0	4.197	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
173.5	4.197	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
174.0	4.197	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
174.5	4.197	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
175.0	4.197	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
175.5	4.365	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
176.0	4.365	4.365	4.197	3.861	3.693	3.861	4.197	4.365	4.533
176.5	4.365	4.365	4.197	4.029	3.693	3.861	4.197	4.365	4.533
177.0	4.365	4.533	4.197	4.029	3.693	3.861	4.197	4.533	4.533
177.5	4.365	4.533	4.197	4.029	3.693	3.861	4.197	4.533	4.533
178.0	4.365	4.533	4.197	4.029	3.693	4.029	4.197	4.533	4.533
178.5	4.365	4.533	4.197	4.029	3.693	4.029	4.197	4.533	4.533
179.0	4.533	4.533	4.197	4.029	3.693	4.029	4.365	4.533	4.533
179.5	4.533	4.533	4.197	4.029	3.693	4.029	4.197	4.533	4.533
180.0	4.197	4.197	4.197	4.197	4.197	4.197	4.197	4.197	4.197

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_48W_5000K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	785.89	N.A.	11.40
0-30	1650.83	N.A.	24.00
0-40	2676.57	N.A.	38.80
0-60	4711.67	N.A.	68.40
0-80	6072.58	N.A.	88.10
0-90	6396.14	N.A.	92.80
10-90	6191.36	N.A.	89.80
20-40	1890.69	N.A.	27.40
20-50	2948.33	N.A.	42.80
40-70	2835.55	N.A.	41.10
60-80	1360.9	N.A.	19.70
70-80	560.45	N.A.	8.10
80-90	323.57	N.A.	4.70
90-110	317.22	N.A.	4.60
90-120	402.91	N.A.	5.80
90-130	454.23	N.A.	6.60
90-150	491.65	N.A.	7.10
90-180	496.25	N.A.	7.20
110-180	179.02	N.A.	2.60
0-180	6892.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	204.78
10-20	581.11
20-30	864.95
30-40	1025.74
40-50	1057.65
50-60	977.45
60-70	800.45
70-80	560.45
80-90	323.57
90-100	187.37
100-110	129.86
110-120	85.69
120-130	51.32
130-140	26.60
140-150	10.82
150-160	3.06
160-170	1.15
170-180	0.39

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_48W_5000K_.IES

UGR TABLE - CORRECTED

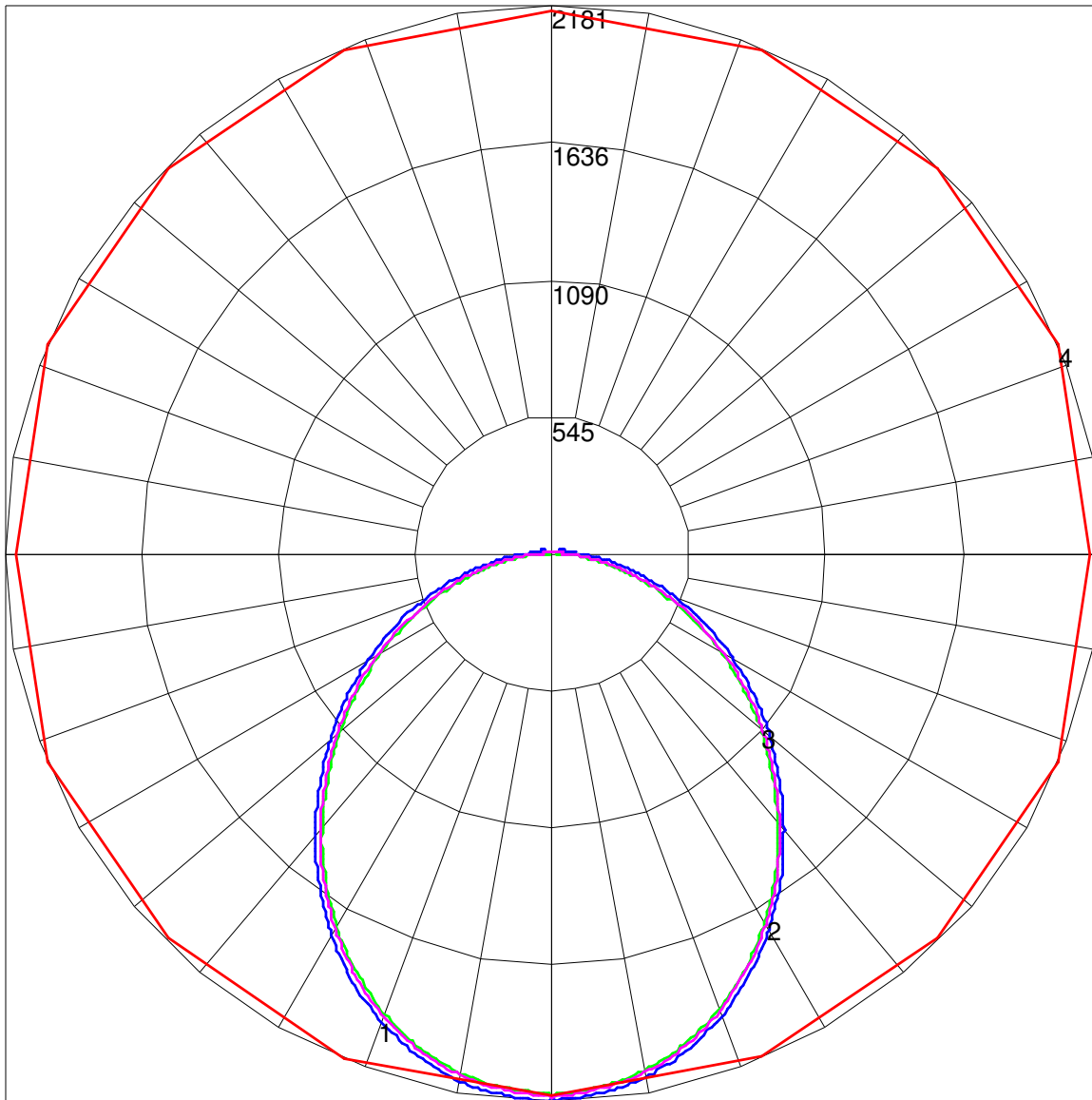
Reflectances

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	21.5	23.1	22.0	23.5	24.0	24.0	25.5	24.4	26.0	26.4
	3H	23.0	24.4	23.5	24.9	25.4	26.4	27.8	26.9	28.2	28.8
	4H	23.5	24.8	24.0	25.3	25.8	27.5	28.8	28.0	29.3	29.9
	6H	23.8	25.0	24.3	25.5	26.1	28.6	29.9	29.2	30.4	30.9
	8H	23.9	25.0	24.4	25.6	26.1	29.2	30.4	29.7	30.9	31.5
	12H	23.9	25.0	24.4	25.5	26.1	29.8	31.0	30.4	31.5	32.1
4H	2H	22.5	23.8	23.0	24.3	24.8	24.4	25.7	24.9	26.2	26.7
	3H	24.2	25.3	24.7	25.9	26.4	27.1	28.2	27.6	28.7	29.3
	4H	24.8	25.8	25.3	26.4	27.0	28.3	29.4	28.9	29.9	30.5
	6H	25.2	26.1	25.8	26.7	27.3	29.7	30.6	30.2	31.1	31.7
	8H	25.3	26.2	25.9	26.8	27.4	30.3	31.2	30.9	31.7	32.4
	12H	25.4	26.2	26.0	26.8	27.4	31.1	31.8	31.6	32.4	33.1
8H	4H	25.5	26.4	26.1	26.9	27.5	28.5	29.4	29.1	30.0	30.6
	6H	26.1	26.8	26.7	27.4	28.1	30.0	30.8	30.6	31.4	32.0
	8H	26.3	27.0	26.9	27.6	28.2	30.9	31.5	31.5	32.1	32.7
	12H	26.4	27.0	27.1	27.6	28.3	31.8	32.3	32.4	32.9	33.6
12H	4H	25.7	26.5	26.3	27.1	27.7	28.5	29.3	29.1	29.9	30.5
	6H	26.4	27.1	27.0	27.6	28.3	30.1	30.7	30.7	31.3	32.0
	8H	26.7	27.3	27.3	27.9	28.6	30.9	31.5	31.5	32.1	32.8

Maximum UGR = 33.6

POLAR GRAPH



Maximum Candela = 2180.713 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.)