



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_48W_3500K_.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_48W_3500K
[LUMINAIRE] 45 inch Lumen/Wattage selectable, CCT selectable, LED stri
[MORE] p w/frosted acrylic lens
[LAMP] LED
[BALLAST] 0-10V DIMMING DRIVER

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6710
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
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	28923	27368	28370
55	26326	25337	26994
65	23192	23114	25533
75	19097	20722	23737
85	13206	19076	22593

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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	2111.693	2111.693	2111.693	2111.693	2111.693	2111.693	2111.693	2111.693	2111.693
0.5	2083.907	2119.865	2114.961	2114.961	2105.155	2116.596	2114.961	2123.134	2085.542
1.0	2082.273	2118.230	2111.693	2116.596	2103.520	2116.596	2111.693	2121.499	2085.542
1.5	2085.542	2118.230	2108.424	2114.961	2105.155	2116.596	2111.693	2119.865	2085.542
2.0	2085.542	2116.596	2111.693	2116.596	2103.520	2119.865	2111.693	2121.499	2083.907
2.5	2083.907	2114.961	2108.424	2114.961	2103.520	2113.327	2111.693	2118.230	2080.638
3.0	2079.004	2114.961	2106.789	2114.961	2103.520	2114.961	2110.058	2119.865	2080.638
3.5	2080.638	2111.693	2105.155	2110.058	2100.252	2111.693	2108.424	2114.961	2082.273
4.0	2075.735	2108.424	2101.886	2111.693	2101.886	2110.058	2106.789	2116.596	2077.369
4.5	2077.369	2103.520	2101.886	2108.424	2098.617	2110.058	2103.520	2113.327	2074.101
5.0	2069.197	2101.886	2096.983	2106.789	2098.617	2108.424	2101.886	2110.058	2074.101
5.5	2067.563	2101.886	2095.348	2105.155	2098.617	2106.789	2101.886	2106.789	2069.197
6.0	2064.294	2096.983	2092.079	2103.520	2093.714	2103.520	2096.983	2106.789	2067.563
6.5	2061.025	2093.714	2090.445	2098.617	2090.445	2101.886	2095.348	2103.520	2064.294
7.0	2056.122	2088.810	2087.176	2093.714	2087.176	2098.617	2093.714	2101.886	2065.928
7.5	2054.487	2087.176	2082.273	2093.714	2083.907	2095.348	2088.810	2098.617	2059.391
8.0	2051.218	2082.273	2079.004	2088.810	2083.907	2093.714	2087.176	2095.348	2056.122
8.5	2046.315	2077.369	2074.101	2083.907	2077.369	2088.810	2083.907	2090.445	2049.584
9.0	2043.046	2072.466	2067.563	2082.273	2074.101	2083.907	2079.004	2088.810	2046.315
9.5	2033.240	2067.563	2067.563	2079.004	2070.832	2082.273	2075.735	2082.273	2041.412
10.0	2031.605	2065.928	2059.391	2069.197	2069.197	2077.369	2072.466	2079.004	2039.777
10.5	2020.164	2056.122	2056.122	2069.197	2061.025	2074.101	2067.563	2072.466	2031.605
11.0	2018.530	2054.487	2051.218	2062.659	2057.756	2069.197	2059.391	2064.294	2031.605
11.5	2011.992	2046.315	2044.681	2057.756	2054.487	2062.659	2056.122	2062.659	2023.433
12.0	2005.454	2039.777	2041.412	2052.853	2047.950	2059.391	2049.584	2056.122	2015.261
12.5	1997.282	2033.240	2034.874	2049.584	2047.950	2051.218	2044.681	2047.950	2011.992
13.0	1994.013	2029.971	2026.702	2043.046	2041.412	2047.950	2039.777	2044.681	2002.185
13.5	1989.110	2021.799	2023.433	2034.874	2034.874	2041.412	2034.874	2039.777	1995.648
14.0	1979.303	2013.626	2015.261	2029.971	2028.336	2036.508	2026.702	2033.240	1989.110
14.5	1967.862	2005.454	2007.089	2023.433	2021.799	2028.336	2021.799	2026.702	1984.206
15.0	1962.959	2000.551	2003.820	2020.164	2015.261	2023.433	2013.626	2018.530	1976.034
15.5	1956.421	1995.648	1994.013	2011.992	2008.723	2015.261	2008.723	2010.357	1969.497
16.0	1951.518	1984.206	1987.475	2007.089	2000.551	2008.723	1998.916	2003.820	1958.055
16.5	1936.808	1977.669	1977.669	2000.551	1994.013	2002.185	1990.744	1995.648	1956.421
17.0	1928.636	1969.497	1972.765	1992.379	1987.475	1992.379	1984.206	1989.110	1944.980
17.5	1920.463	1959.690	1962.959	1982.572	1979.303	1984.206	1974.400	1982.572	1940.077
18.0	1915.560	1948.249	1953.152	1972.765	1972.765	1974.400	1967.862	1969.497	1930.270
18.5	1905.754	1941.711	1944.980	1967.862	1964.593	1967.862	1958.055	1962.959	1922.098
19.0	1892.678	1931.904	1935.173	1958.055	1954.787	1959.690	1951.518	1953.152	1912.291
19.5	1886.140	1923.732	1927.001	1949.883	1944.980	1949.883	1943.346	1944.980	1900.850
20.0	1876.334	1912.291	1917.195	1940.077	1936.808	1943.346	1933.539	1935.173	1892.678
20.5	1864.893	1902.485	1909.022	1931.904	1928.636	1931.904	1925.367	1925.367	1884.506
21.0	1856.720	1892.678	1897.581	1920.463	1918.829	1925.367	1912.291	1918.829	1871.430
21.5	1843.645	1882.871	1887.775	1910.657	1912.291	1917.195	1905.754	1907.388	1863.258
22.0	1835.473	1874.699	1879.603	1900.850	1902.485	1905.754	1895.947	1897.581	1853.452
22.5	1820.763	1859.989	1868.161	1892.678	1895.947	1900.850	1886.140	1886.140	1840.376
23.0	1810.956	1850.183	1858.355	1881.237	1886.140	1889.409	1877.968	1876.334	1833.838
23.5	1802.784	1838.742	1850.183	1873.065	1879.603	1884.506	1868.161	1866.527	1822.397
24.0	1786.440	1828.935	1838.742	1863.258	1869.796	1874.699	1858.355	1851.817	1806.053
24.5	1779.902	1819.128	1827.301	1855.086	1861.624	1866.527	1846.914	1842.010	1796.246
25.0	1766.826	1802.784	1817.494	1846.914	1856.720	1858.355	1837.107	1832.204	1786.440
25.5	1752.116	1792.977	1802.784	1838.742	1848.548	1848.548	1828.935	1822.397	1776.633
26.0	1739.041	1783.171	1792.977	1825.666	1838.742	1838.742	1817.494	1810.956	1761.923
26.5	1727.600	1768.461	1783.171	1819.128	1830.569	1828.935	1806.053	1797.881	1752.116

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27.0	1717.793	1757.020	1773.364	1807.687	1817.494	1819.128	1794.612	1786.440	1739.041
27.5	1703.083	1747.213	1761.923	1799.515	1809.322	1807.687	1784.805	1774.999	1725.965
28.0	1691.642	1730.869	1747.213	1789.708	1801.150	1797.881	1771.730	1761.923	1714.524
28.5	1680.201	1719.428	1737.406	1778.267	1791.343	1788.074	1761.923	1750.482	1703.083
29.0	1667.126	1706.352	1725.965	1768.461	1781.536	1776.633	1750.482	1739.041	1688.373
29.5	1654.050	1694.911	1714.524	1757.020	1770.095	1766.826	1740.675	1724.331	1675.298
30.0	1637.706	1681.836	1703.083	1745.579	1760.289	1757.020	1727.600	1712.890	1660.588
30.5	1624.794	1668.760	1690.008	1735.772	1750.482	1745.579	1716.159	1699.814	1647.512
31.0	1611.065	1654.050	1678.567	1724.331	1740.675	1735.772	1703.083	1686.739	1637.706
31.5	1600.768	1639.340	1667.126	1712.890	1729.234	1725.965	1693.277	1673.663	1620.054
32.0	1583.606	1629.207	1654.050	1703.083	1719.428	1716.159	1681.836	1660.588	1607.959
32.5	1572.492	1614.497	1640.975	1691.642	1709.621	1704.718	1667.126	1645.878	1596.681
33.0	1556.474	1601.421	1626.592	1681.836	1701.449	1694.911	1654.050	1631.495	1578.376
33.5	1542.091	1587.529	1614.333	1672.029	1690.008	1681.836	1642.609	1618.910	1566.771
34.0	1529.016	1573.799	1604.854	1658.954	1680.201	1672.029	1632.149	1606.652	1554.840
34.5	1513.816	1558.436	1590.961	1647.512	1670.395	1660.588	1619.237	1590.144	1538.169
35.0	1501.884	1545.197	1579.356	1637.706	1658.954	1649.147	1606.978	1577.395	1527.218
35.5	1487.011	1529.996	1567.752	1627.082	1650.781	1637.706	1593.086	1562.031	1509.566
36.0	1469.522	1514.306	1553.696	1615.477	1639.340	1628.880	1580.010	1548.466	1497.798
36.5	1454.322	1500.740	1542.908	1603.383	1629.697	1616.948	1567.915	1534.246	1484.232
37.0	1442.554	1485.213	1528.199	1594.230	1619.727	1606.161	1554.350	1520.026	1472.955
37.5	1426.863	1472.464	1516.267	1582.298	1609.103	1593.249	1543.399	1506.951	1458.735
38.0	1410.029	1457.591	1502.701	1571.675	1598.643	1581.808	1530.323	1493.548	1441.900
38.5	1396.463	1442.718	1491.751	1559.743	1586.875	1570.530	1515.940	1480.310	1425.883
39.0	1380.119	1426.863	1478.021	1548.139	1575.761	1558.763	1504.499	1467.561	1410.356
39.5	1364.591	1410.846	1465.600	1536.044	1565.627	1547.321	1490.607	1453.178	1392.213
40.0	1347.920	1397.934	1452.688	1524.930	1556.147	1537.025	1477.694	1439.939	1375.215
40.5	1333.864	1383.224	1439.939	1513.162	1543.562	1525.257	1464.946	1423.104	1359.198
41.0	1316.049	1366.716	1426.373	1502.374	1530.977	1513.816	1451.870	1408.231	1343.180
41.5	1301.339	1350.535	1415.259	1491.260	1522.478	1500.903	1437.814	1390.416	1326.999
42.0	1284.341	1336.152	1401.039	1479.002	1511.200	1491.751	1424.902	1373.581	1312.453
42.5	1269.140	1320.789	1387.474	1468.215	1500.413	1478.675	1410.356	1358.544	1296.435
43.0	1252.796	1307.223	1374.398	1455.956	1489.299	1466.090	1398.097	1340.565	1280.418
43.5	1238.576	1293.167	1360.669	1443.698	1479.329	1453.995	1386.003	1324.711	1266.362
44.0	1224.684	1276.495	1347.920	1432.911	1468.051	1443.535	1371.129	1307.713	1249.527
44.5	1205.234	1260.805	1332.230	1420.326	1456.774	1432.421	1360.015	1292.676	1234.654
45.0	1191.014	1245.278	1321.442	1408.885	1445.659	1418.364	1347.103	1275.678	1219.290
45.5	1176.304	1230.077	1306.242	1396.790	1432.257	1407.904	1333.537	1261.949	1203.926
46.0	1160.123	1217.165	1293.657	1383.551	1421.143	1396.626	1320.789	1245.768	1186.601
46.5	1145.904	1201.802	1279.601	1369.985	1410.519	1382.897	1307.713	1231.221	1172.382
47.0	1129.232	1185.294	1266.362	1360.342	1398.751	1373.417	1295.618	1216.185	1157.672
47.5	1112.888	1170.584	1252.796	1346.776	1388.291	1361.813	1282.379	1200.657	1138.876
48.0	1100.140	1155.383	1240.374	1337.133	1374.888	1346.940	1269.467	1184.967	1126.127
48.5	1082.324	1140.183	1226.972	1322.260	1364.265	1335.989	1256.065	1169.930	1107.331
49.0	1071.864	1127.435	1214.550	1310.982	1352.497	1324.057	1242.172	1155.383	1092.621
49.5	1057.808	1110.436	1201.311	1299.050	1339.748	1312.616	1225.174	1139.203	1078.075
50.0	1041.300	1097.361	1188.072	1286.792	1329.288	1300.358	1212.916	1123.675	1065.489
50.5	1024.955	1085.756	1171.891	1274.371	1317.520	1287.609	1198.860	1109.129	1051.597
51.0	1009.592	1071.537	1160.777	1261.785	1306.569	1275.351	1183.332	1093.111	1033.618
51.5	994.391	1057.317	1146.231	1250.998	1296.435	1263.256	1169.767	1083.795	1018.091
52.0	978.374	1041.463	1134.136	1239.067	1283.687	1251.325	1155.057	1068.922	1001.583
52.5	963.664	1027.080	1120.570	1226.481	1271.755	1238.740	1142.145	1055.683	986.546
53.0	947.156	1011.226	1106.350	1214.550	1259.497	1228.116	1128.906	1039.665	971.836
53.5	932.283	996.516	1093.111	1201.802	1247.239	1215.040	1114.196	1024.302	954.675
54.0	916.102	982.787	1081.180	1189.380	1234.163	1202.782	1102.264	1009.265	938.003
54.5	900.411	966.769	1071.537	1175.651	1224.030	1191.178	1087.881	993.574	923.130

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55.0	883.577	951.733	1058.952	1163.883	1211.772	1177.939	1079.709	979.355	906.622
55.5	868.213	938.330	1045.059	1150.480	1198.533	1165.354	1066.960	964.318	890.278
56.0	852.849	921.986	1031.330	1137.405	1187.418	1153.586	1052.904	948.791	875.731
56.5	838.139	906.786	1017.600	1125.637	1173.689	1138.549	1038.194	932.119	859.060
57.0	822.122	891.422	1004.362	1112.234	1161.921	1126.127	1024.465	917.573	841.572
57.5	807.085	877.529	991.940	1099.813	1147.865	1112.561	1010.409	901.229	826.208
58.0	792.375	862.165	977.066	1087.064	1134.463	1099.486	996.026	886.682	810.681
58.5	776.521	846.965	963.337	1078.238	1122.041	1088.698	982.460	871.482	794.173
59.0	761.975	832.255	951.079	1068.758	1109.946	1078.238	967.587	855.301	779.626
59.5	746.284	817.872	936.696	1053.395	1096.217	1065.980	954.348	841.081	762.955
60.0	731.247	803.326	921.822	1040.646	1088.208	1052.414	940.128	826.208	748.899
60.5	716.047	788.452	907.930	1029.042	1076.440	1039.338	927.543	810.190	731.574
61.0	699.539	773.742	895.018	1014.332	1064.345	1025.282	912.996	796.461	716.210
61.5	684.666	758.869	881.942	1000.766	1051.597	1011.880	899.758	780.117	700.683
62.0	669.465	744.323	868.540	988.017	1037.377	999.785	884.557	765.734	684.829
62.5	654.429	730.103	855.137	974.778	1023.484	985.075	871.809	750.370	669.465
63.0	639.882	715.230	841.572	961.539	1010.409	972.163	857.753	735.987	654.429
63.5	624.518	701.337	827.842	947.320	997.497	958.597	843.369	720.950	639.392
64.0	608.664	686.790	814.767	934.081	984.094	945.522	830.131	706.077	623.047
64.5	592.320	672.244	800.220	920.188	969.711	932.937	815.747	691.694	607.847
65.0	578.100	658.842	786.655	906.949	956.473	918.554	802.672	676.984	592.483
65.5	563.881	644.295	773.252	894.691	944.214	905.315	789.596	662.274	577.610
66.0	548.354	629.912	760.504	879.327	930.485	891.258	774.887	647.400	562.246
66.5	534.788	616.019	746.447	866.742	916.102	877.529	761.975	632.854	547.209
67.0	519.914	602.453	732.882	853.013	902.863	862.983	747.265	618.798	532.990
67.5	505.858	588.397	719.969	838.630	888.480	850.071	734.843	604.905	518.443
68.0	491.312	574.831	705.423	826.698	875.404	836.668	720.623	590.522	504.387
68.5	477.092	561.429	693.001	811.825	861.839	822.122	706.731	576.466	488.697
69.0	462.873	546.883	679.599	799.730	848.109	809.373	693.328	563.227	474.804
69.5	447.836	533.317	666.360	785.347	834.217	795.971	680.416	549.007	459.277
70.0	434.270	519.914	652.467	772.108	820.324	781.424	666.360	534.461	445.384
70.5	420.704	505.531	639.555	758.052	806.922	768.676	652.958	520.405	431.328
71.0	405.831	492.783	626.480	745.630	793.356	754.946	639.882	506.512	416.781
71.5	392.428	479.053	614.221	732.228	779.790	742.361	625.989	492.783	402.398
72.0	378.536	466.632	600.165	718.008	766.061	728.305	613.568	479.707	387.362
72.5	364.806	453.229	587.580	705.096	753.312	715.557	600.002	465.651	373.305
73.0	350.914	440.644	574.178	691.040	739.256	701.173	587.090	452.085	360.557
73.5	337.838	427.896	561.593	677.147	725.200	687.935	574.178	438.846	346.337
74.0	324.436	414.657	549.007	665.379	712.288	674.532	560.775	425.607	332.935
74.5	310.216	401.254	535.278	651.487	698.231	661.620	548.680	411.878	318.715
75.0	296.650	388.996	523.020	639.065	685.810	647.891	536.095	399.293	305.803
75.5	284.392	376.574	511.088	625.336	672.244	634.815	522.856	385.891	292.401
76.0	270.826	364.153	498.503	613.077	659.005	622.230	510.925	373.632	279.162
76.5	258.568	352.058	486.245	600.002	645.603	608.664	498.013	360.393	267.067
77.0	246.473	339.963	473.987	586.763	632.200	596.079	485.101	348.135	254.155
77.5	234.051	328.031	462.055	574.505	619.942	582.840	472.843	335.223	241.733
78.0	221.303	316.100	450.287	561.756	606.213	570.419	461.075	323.619	229.312
78.5	209.208	304.822	438.193	549.334	593.791	557.997	449.143	311.687	217.053
79.0	197.277	293.218	426.915	536.749	580.715	545.248	436.885	300.246	205.449
79.5	186.326	281.777	415.801	524.818	568.784	534.134	425.607	288.478	193.027
80.0	175.212	270.336	404.360	512.233	556.853	521.222	413.839	277.037	181.913
80.5	163.771	259.385	393.082	500.791	543.777	509.617	402.889	266.740	170.472
81.0	152.656	248.925	382.131	488.697	532.009	497.196	391.775	255.462	159.848
81.5	142.033	238.301	371.017	477.256	519.914	485.591	380.824	245.166	149.061
82.0	131.572	228.167	360.393	465.815	507.002	474.150	369.873	235.032	138.600
82.5	121.929	217.707	349.770	455.354	495.234	462.055	358.759	225.062	128.630

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CANDELA TABULATION - (Cont.)

83.0	111.632	207.900	339.309	443.913	484.120	450.614	348.789	215.092	118.660
83.5	101.989	198.421	329.012	432.799	472.352	439.990	338.002	205.449	109.017
84.0	92.509	189.104	319.042	421.848	461.238	429.203	328.358	195.969	99.537
84.5	83.356	179.952	309.072	411.551	450.124	418.252	318.225	186.816	90.711
85.0	74.857	171.452	299.102	400.764	439.337	407.302	308.255	177.990	81.558
85.5	66.358	162.463	289.949	390.140	428.386	397.168	298.775	168.510	73.059
86.0	57.859	154.127	280.796	380.497	417.762	387.035	288.968	160.011	64.397
86.5	49.850	145.955	271.970	370.527	407.629	376.574	279.979	151.349	56.061
87.0	41.842	137.946	262.817	360.884	397.332	367.095	271.153	143.177	47.726
87.5	34.487	130.428	254.318	352.058	387.525	357.778	262.000	135.168	39.717
88.0	27.295	122.256	246.310	343.068	378.536	348.625	253.665	126.996	31.708
88.5	20.104	115.228	238.955	334.896	369.383	340.290	245.819	118.987	23.536
89.0	12.912	108.527	232.090	326.887	361.374	331.791	238.137	111.959	15.854
89.5	6.374	102.970	225.552	319.532	353.365	324.436	231.600	105.748	8.336
90.0	2.288	97.903	219.832	312.341	345.683	316.917	225.552	100.354	2.615
90.5	1.471	93.653	214.275	305.476	338.002	309.562	219.505	95.778	1.471
91.0	1.471	90.057	208.718	298.775	330.810	303.025	213.294	92.182	1.308
91.5	1.471	87.442	203.978	292.237	323.945	296.650	208.554	89.404	1.308
92.0	1.471	85.154	199.074	286.517	317.735	290.930	203.978	87.115	1.308
92.5	1.471	83.029	195.642	281.287	311.687	285.373	200.055	84.991	1.308
93.0	1.471	81.068	192.046	276.220	305.967	280.306	196.459	82.866	1.308
93.5	1.471	79.107	188.777	271.807	301.063	275.566	193.027	80.905	1.308
94.0	1.471	77.309	185.672	267.230	296.160	271.153	190.085	78.943	1.308
94.5	1.471	75.511	182.893	263.308	291.747	267.067	186.980	76.982	1.308
95.0	1.471	73.713	180.115	259.385	287.497	262.654	183.874	75.184	1.308
95.5	1.471	72.079	177.010	255.462	282.758	258.895	180.932	73.550	1.308
96.0	1.471	70.444	174.394	251.540	278.672	254.809	177.990	71.915	1.308
96.5	1.471	68.810	171.452	247.944	274.585	251.213	174.885	70.117	1.308
97.0	1.471	67.175	168.837	243.858	270.336	246.963	172.270	68.483	1.308
97.5	1.471	65.541	165.895	240.589	266.250	243.531	169.491	67.012	1.308
98.0	1.471	64.070	163.280	236.666	262.491	239.772	166.549	65.377	1.308
98.5	1.471	62.762	160.829	233.234	258.731	236.013	163.934	63.743	1.308
99.0	1.471	61.128	157.887	229.965	254.972	232.417	161.155	62.272	1.308
99.5	1.471	59.657	155.435	226.533	251.050	228.985	158.540	60.801	1.308
100.0	1.471	58.349	152.656	223.101	247.290	225.552	155.762	59.330	1.308
100.5	1.471	56.878	150.205	219.668	243.368	222.283	153.310	58.023	1.471
101.0	1.471	55.734	147.753	216.236	239.935	219.015	150.859	56.552	1.471
101.5	1.471	54.263	145.138	212.967	236.503	215.419	148.080	55.244	1.471
102.0	1.634	53.119	142.850	209.698	232.580	212.477	145.792	53.936	1.471
102.5	1.634	51.812	140.398	206.593	228.821	209.371	143.177	52.629	1.471
103.0	1.634	50.668	137.946	203.324	225.389	206.103	140.725	51.321	1.471
103.5	1.634	49.360	135.495	200.545	222.120	202.834	138.437	50.014	1.471
104.0	1.634	48.216	133.370	197.603	218.851	199.728	135.822	48.706	1.471
104.5	1.634	47.072	130.918	194.171	215.746	196.623	133.534	47.562	1.634
105.0	1.634	45.928	128.794	191.393	212.150	193.681	131.245	46.418	1.634
105.5	1.634	44.784	126.669	188.451	209.044	190.412	128.957	45.274	1.634
106.0	1.634	43.639	124.381	185.345	205.939	187.470	126.505	44.130	1.634
106.5	1.634	42.659	122.256	182.730	202.343	184.528	124.381	43.149	1.634
107.0	1.798	41.515	120.131	179.788	199.565	181.423	122.092	42.005	1.634
107.5	1.798	40.534	117.843	176.683	196.623	178.644	120.131	41.024	1.634
108.0	1.798	39.553	115.718	174.231	193.517	175.865	118.006	40.044	1.634
108.5	1.798	38.409	113.920	171.289	190.575	173.250	115.718	38.900	1.798
109.0	1.798	37.429	111.795	168.510	187.633	170.472	113.593	37.919	1.798
109.5	1.798	36.448	109.671	165.732	184.855	167.693	111.632	36.938	1.798
110.0	1.798	35.631	107.873	163.117	181.913	164.915	109.671	35.958	1.798
110.5	1.798	34.650	105.912	160.665	178.971	162.136	107.546	34.977	1.798

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CANDELA TABULATION - (Cont.)

111.0	1.798	33.669	103.950	158.050	176.356	159.848	105.585	34.160	1.798
111.5	1.961	32.852	102.152	155.598	173.577	157.069	103.460	33.179	1.798
112.0	1.961	31.872	100.191	152.820	170.962	154.454	101.662	32.198	1.798
112.5	1.961	31.054	98.230	150.695	168.184	152.003	99.701	31.381	1.961
113.0	1.961	30.237	96.595	147.917	165.405	149.551	97.739	30.401	1.961
113.5	1.961	29.420	94.470	145.465	162.626	146.772	95.941	29.583	1.961
114.0	1.961	28.439	92.836	143.177	160.338	144.321	94.144	28.766	1.961
114.5	1.961	27.622	91.038	140.725	157.560	142.033	92.182	27.785	1.961
115.0	1.961	26.968	89.240	138.437	155.108	139.581	90.221	26.968	1.961
115.5	1.961	25.988	87.442	136.149	152.493	137.129	88.423	26.151	1.961
116.0	1.961	25.334	85.808	133.534	150.041	134.841	86.625	25.334	2.125
116.5	1.961	24.517	84.010	131.409	147.590	132.553	84.991	24.680	2.125
117.0	1.961	23.699	82.212	128.957	144.975	130.101	83.193	23.863	2.125
117.5	1.961	22.882	80.578	126.832	142.686	127.813	81.395	23.046	2.125
118.0	1.961	22.228	79.107	124.381	140.235	125.525	79.761	22.228	2.125
118.5	1.961	21.411	77.472	122.256	137.946	123.237	78.126	21.575	2.125
119.0	1.961	20.757	75.838	120.131	135.495	121.112	76.492	20.757	2.125
119.5	1.961	19.940	74.203	118.006	133.043	118.987	74.857	20.104	2.125
120.0	1.961	19.286	72.569	115.555	130.755	116.535	73.059	19.286	2.125
120.5	1.961	18.633	70.935	113.757	128.303	114.411	71.588	18.633	2.288
121.0	1.961	17.815	69.464	111.469	125.852	112.286	69.954	17.979	2.288
121.5	1.961	16.998	67.993	109.344	123.890	110.161	68.483	17.162	2.288
122.0	1.961	16.344	66.522	107.219	121.275	108.036	67.012	16.508	2.288
122.5	1.961	15.691	64.887	105.094	119.150	105.748	65.541	15.854	2.288
123.0	1.961	15.037	63.416	103.133	116.862	103.787	63.906	15.200	2.288
123.5	1.961	14.383	61.945	101.008	114.574	101.825	62.435	14.546	2.288
124.0	1.961	13.729	60.638	98.883	112.449	99.701	60.964	13.893	2.288
124.5	1.961	13.075	59.167	96.922	110.324	97.412	59.494	13.239	2.452
125.0	1.961	12.422	57.696	94.961	108.200	95.451	58.023	12.585	2.452
125.5	1.961	11.768	56.225	92.999	105.912	93.490	56.552	11.931	2.452
126.0	1.961	11.278	54.754	91.202	103.787	91.528	55.081	11.278	2.452
126.5	1.961	10.624	53.446	89.240	101.662	89.567	53.773	10.624	2.452
127.0	1.961	9.970	52.139	87.279	99.374	87.606	52.465	10.134	2.452
127.5	1.961	9.480	50.831	85.481	97.412	85.644	50.994	9.480	2.452
128.0	1.961	8.826	49.360	83.520	95.451	84.010	49.687	8.989	2.615
128.5	1.961	8.336	47.889	81.722	93.490	82.212	48.379	8.499	2.615
129.0	1.961	7.845	46.581	79.761	91.365	80.251	47.072	8.009	2.615
129.5	1.961	7.518	45.437	77.963	89.404	78.453	45.764	7.682	2.615
130.0	2.125	7.028	44.293	76.165	87.442	76.655	44.620	7.192	2.615
130.5	2.125	6.701	42.822	74.530	85.481	75.021	43.313	6.865	2.779
131.0	2.125	6.374	41.678	72.896	83.520	73.059	42.005	6.538	2.779
131.5	2.125	6.047	40.534	71.098	81.558	71.425	40.861	6.211	2.779
132.0	2.125	5.721	39.226	69.464	79.597	69.627	39.553	5.884	2.779
132.5	2.125	5.394	38.082	67.666	77.799	67.993	38.409	5.557	2.779
133.0	2.125	5.230	36.938	65.868	76.001	66.195	37.265	5.394	2.942
133.5	2.125	5.067	35.631	64.233	74.040	64.560	35.958	5.230	2.942
134.0	2.125	4.903	34.323	62.599	72.406	62.762	34.814	5.067	2.942
134.5	2.125	4.740	33.016	60.964	70.444	61.128	33.669	4.903	2.942
135.0	2.125	4.576	31.708	59.330	68.646	59.494	32.525	4.740	2.942
135.5	2.125	4.413	30.564	57.532	66.848	57.859	31.381	4.576	2.942
136.0	2.125	4.250	29.256	55.898	65.051	56.225	30.237	4.413	2.942
136.5	2.125	4.250	28.112	54.427	63.253	54.590	29.256	4.413	3.105
137.0	2.125	4.086	26.805	52.956	61.455	52.956	28.112	4.250	3.105
137.5	2.125	4.086	25.661	51.321	59.820	51.485	26.968	4.250	3.105
138.0	2.125	3.923	24.517	49.687	58.186	49.850	25.988	4.086	3.105
138.5	2.125	3.923	23.536	48.216	56.552	48.379	25.007	4.086	3.105

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CANDELA TABULATION - (Cont.)

139.0	2.288	3.923	22.392	46.745	54.917	46.745	24.026	3.923	3.269
139.5	2.288	3.759	21.248	45.274	53.283	45.437	23.046	3.923	3.269
140.0	2.288	3.759	20.267	43.803	51.648	43.803	21.901	3.923	3.269
140.5	2.288	3.759	19.286	42.168	50.014	42.332	20.921	3.759	3.269
141.0	2.288	3.596	18.469	40.861	48.379	40.861	19.940	3.759	3.269
141.5	2.288	3.596	17.488	39.390	46.745	39.553	18.959	3.759	3.432
142.0	2.288	3.596	16.671	38.082	45.274	38.082	17.979	3.759	3.432
142.5	2.288	3.432	15.854	36.611	43.639	36.611	16.998	3.596	3.432
143.0	2.288	3.432	15.037	35.304	42.168	35.140	16.181	3.596	3.432
143.5	2.452	3.432	14.220	33.833	40.697	33.833	15.200	3.596	3.432
144.0	2.452	3.432	13.402	32.525	39.063	32.525	14.383	3.432	3.432
144.5	2.452	3.432	12.585	31.218	37.592	31.054	13.402	3.432	3.596
145.0	2.452	3.269	11.931	29.747	36.121	29.747	12.585	3.432	3.596
145.5	2.452	3.269	11.114	28.439	34.650	28.439	11.768	3.432	3.596
146.0	2.452	3.269	10.460	27.295	33.179	27.132	10.951	3.432	3.596
146.5	2.452	3.269	9.807	25.988	31.708	25.824	10.297	3.432	3.596
147.0	2.452	3.269	9.153	24.680	30.401	24.517	9.643	3.269	3.596
147.5	2.452	3.269	8.499	23.372	28.930	23.372	8.989	3.269	3.759
148.0	2.615	3.269	8.009	22.065	27.622	22.065	8.499	3.269	3.759
148.5	2.615	3.269	7.518	20.757	26.151	20.921	8.009	3.269	3.759
149.0	2.615	3.269	7.192	19.286	24.843	19.613	7.518	3.269	3.759
149.5	2.615	3.269	6.701	18.142	23.536	18.469	7.192	3.269	3.759
150.0	2.615	3.269	6.374	16.835	22.228	17.325	6.865	3.432	3.759
150.5	2.615	3.269	6.211	15.691	20.921	16.181	6.538	3.269	3.923
151.0	2.615	3.269	5.884	14.546	19.613	15.037	6.211	3.269	3.923
151.5	2.779	3.269	5.721	13.566	18.469	14.056	6.047	3.432	3.923
152.0	2.779	3.432	5.557	12.422	17.162	12.912	5.721	3.432	3.923
152.5	2.779	3.432	5.394	11.605	16.017	11.931	5.557	3.432	3.923
153.0	2.779	3.432	5.230	10.787	14.710	10.951	5.394	3.432	3.923
153.5	2.779	3.432	5.067	9.970	13.566	10.134	5.230	3.432	3.923
154.0	2.779	3.432	4.903	9.153	12.422	9.480	5.067	3.432	4.086
154.5	2.942	3.432	4.740	8.499	11.441	8.663	4.903	3.432	4.086
155.0	2.942	3.432	4.576	7.845	10.460	8.009	4.740	3.432	4.086
155.5	2.942	3.596	4.576	7.355	9.643	7.518	4.740	3.432	4.086
156.0	2.942	3.596	4.413	6.865	8.826	7.028	4.576	3.596	4.086
156.5	3.105	3.596	4.413	6.374	8.172	6.538	4.413	3.596	4.086
157.0	3.105	3.596	4.250	6.047	7.518	6.211	4.413	3.596	4.086
157.5	3.105	3.596	4.250	5.884	6.865	5.884	4.250	3.596	4.086
158.0	3.105	3.596	4.086	5.557	6.538	5.557	4.250	3.596	4.250
158.5	3.105	3.759	4.086	5.394	6.047	5.394	4.086	3.596	4.250
159.0	3.269	3.759	3.923	5.067	5.721	5.067	4.086	3.759	4.250
159.5	3.269	3.759	3.923	4.903	5.394	4.903	3.923	3.759	4.250
160.0	3.269	3.759	3.923	4.740	5.230	4.740	3.923	3.759	4.250
160.5	3.269	3.759	3.759	4.576	4.903	4.576	3.923	3.759	4.250
161.0	3.269	3.759	3.759	4.413	4.740	4.413	3.759	3.759	4.250
161.5	3.432	3.759	3.759	4.413	4.576	4.413	3.759	3.759	4.250
162.0	3.432	3.923	3.759	4.250	4.413	4.250	3.759	3.759	4.250
162.5	3.432	3.923	3.759	4.086	4.250	4.086	3.759	3.923	4.250
163.0	3.432	3.923	3.759	3.923	4.086	4.086	3.759	3.923	4.413
163.5	3.432	3.923	3.759	3.923	3.923	3.923	3.759	3.923	4.413
164.0	3.596	3.923	3.759	3.759	3.923	3.759	3.759	3.923	4.413
164.5	3.596	3.923	3.759	3.759	3.759	3.759	3.759	3.923	4.413
165.0	3.596	4.086	3.759	3.759	3.759	3.759	3.759	3.923	4.413
165.5	3.596	4.086	3.759	3.759	3.596	3.759	3.759	4.086	4.413
166.0	3.759	4.086	3.923	3.759	3.596	3.596	3.923	4.086	4.413
166.5	3.759	4.086	3.923	3.759	3.596	3.596	3.923	4.086	4.413

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CANDELA TABULATION - (Cont.)

167.0	3.759	4.086	3.923	3.596	3.432	3.596	3.923	4.086	4.413
167.5	3.759	4.086	3.923	3.596	3.432	3.596	3.923	4.086	4.413
168.0	3.759	4.086	3.923	3.596	3.432	3.596	3.923	4.086	4.413
168.5	3.923	4.250	3.923	3.596	3.432	3.596	3.923	4.086	4.413
169.0	3.923	4.250	3.923	3.759	3.432	3.759	3.923	4.250	4.413
169.5	3.923	4.250	3.923	3.759	3.432	3.759	3.923	4.250	4.413
170.0	3.923	4.250	3.923	3.759	3.432	3.596	3.923	4.250	4.413
170.5	3.923	4.250	3.923	3.759	3.432	3.759	3.923	4.250	4.413
171.0	3.923	4.250	4.086	3.759	3.432	3.759	3.923	4.250	4.413
171.5	3.923	4.250	4.086	3.759	3.432	3.759	4.086	4.250	4.413
172.0	3.923	4.250	4.086	3.759	3.432	3.759	4.086	4.250	4.413
172.5	4.086	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
173.0	4.086	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
173.5	4.086	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
174.0	4.086	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
174.5	4.086	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
175.0	4.086	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
175.5	4.250	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
176.0	4.250	4.250	4.086	3.759	3.596	3.759	4.086	4.250	4.413
176.5	4.250	4.250	4.086	3.923	3.596	3.759	4.086	4.250	4.413
177.0	4.250	4.413	4.086	3.923	3.596	3.759	4.086	4.413	4.413
177.5	4.250	4.413	4.086	3.923	3.596	3.759	4.086	4.413	4.413
178.0	4.250	4.413	4.086	3.923	3.596	3.923	4.086	4.413	4.413
178.5	4.250	4.413	4.086	3.923	3.596	3.923	4.086	4.413	4.413
179.0	4.413	4.413	4.086	3.923	3.596	3.923	4.250	4.413	4.413
179.5	4.413	4.413	4.086	3.923	3.596	3.923	4.086	4.413	4.413
180.0	4.086	4.086	4.086	4.086	4.086	4.086	4.086	4.086	4.086

IES INDOOR REPORT
PHOTOMETRIC FILENAME : FS-4-LS-8CS-DIM-UNV_48W_3500K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	765.14	N.A.	11.40
0-30	1607.24	N.A.	24.00
0-40	2605.9	N.A.	38.80
0-60	4587.26	N.A.	68.40
0-80	5912.23	N.A.	88.10
0-90	6227.26	N.A.	92.80
10-90	6027.89	N.A.	89.80
20-40	1840.77	N.A.	27.40
20-50	2870.48	N.A.	42.80
40-70	2760.68	N.A.	41.10
60-80	1324.97	N.A.	19.70
70-80	545.66	N.A.	8.10
80-90	315.02	N.A.	4.70
90-110	308.84	N.A.	4.60
90-120	392.28	N.A.	5.80
90-130	442.24	N.A.	6.60
90-150	478.67	N.A.	7.10
90-180	483.14	N.A.	7.20
110-180	174.30	N.A.	2.60
0-180	6710.4	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	199.37
10-20	565.76
20-30	842.11
30-40	998.66
40-50	1029.72
50-60	951.64
60-70	779.31
70-80	545.66
80-90	315.02
90-100	182.42
100-110	126.43
110-120	83.43
120-130	49.96
130-140	25.90
140-150	10.54
150-160	2.97
160-170	1.11
170-180	0.38

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_3500K_.IES

UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	21.4	23.0	21.9	23.4	23.9	23.9	25.4	24.3	25.9	26.3
	3H	22.9	24.3	23.4	24.8	25.3	26.3	27.7	26.8	28.1	28.7
	4H	23.4	24.7	23.9	25.2	25.7	27.4	28.7	27.9	29.2	29.8
	6H	23.7	24.9	24.2	25.4	26.0	28.5	29.8	29.1	30.3	30.8
	8H	23.8	24.9	24.3	25.5	26.0	29.1	30.3	29.6	30.8	31.4
	12H	23.8	24.9	24.3	25.4	26.0	29.7	30.9	30.3	31.4	32.0

UGR Viewed Endwise

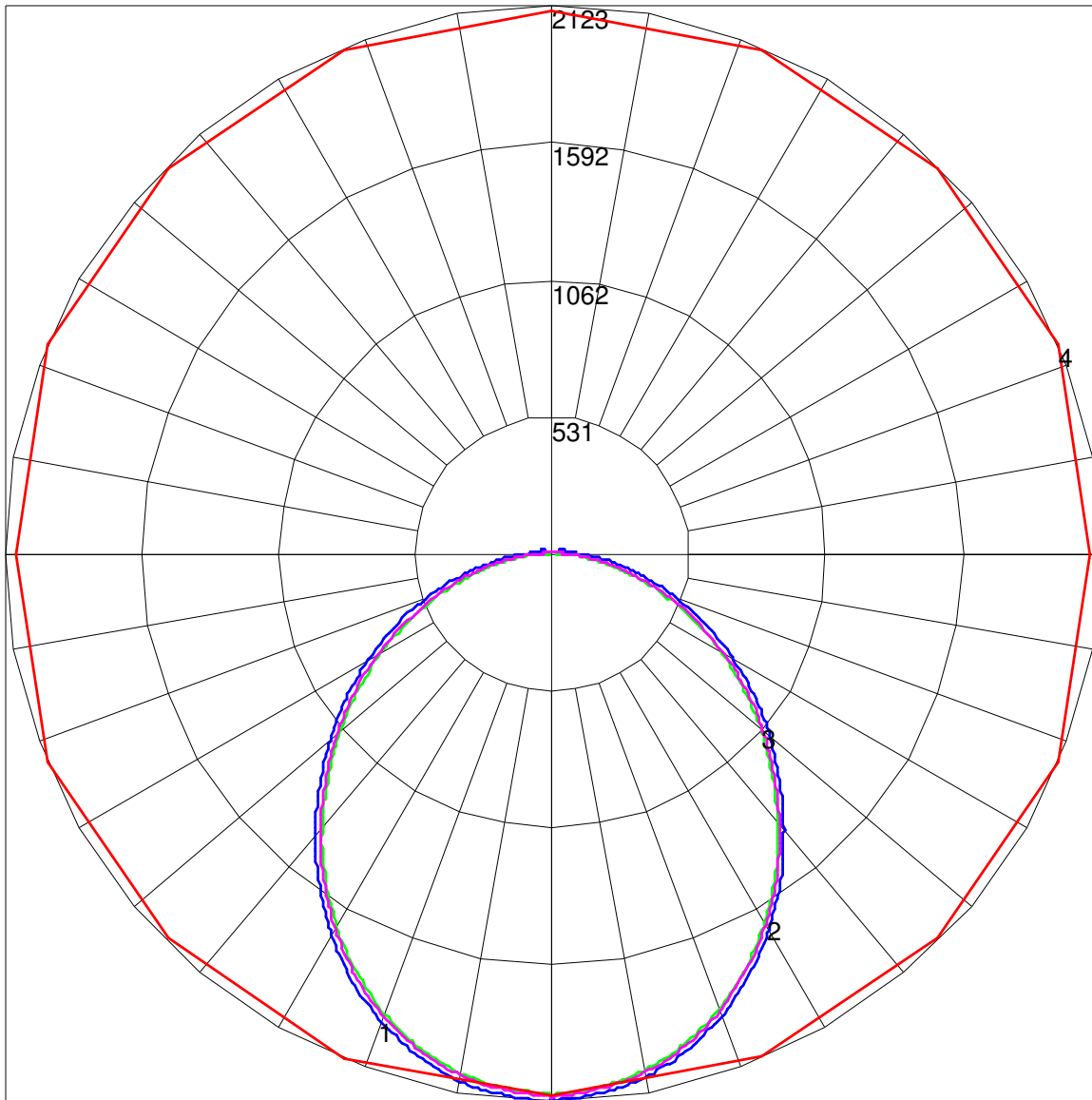
4H	2H	22.4	23.7	22.9	24.2	24.7	24.3	25.6	24.8	26.1	26.6
	3H	24.1	25.2	24.6	25.8	26.3	27.0	28.1	27.5	28.6	29.2
	4H	24.7	25.7	25.2	26.3	26.9	28.2	29.3	28.8	29.8	30.4
	6H	25.1	26.0	25.7	26.6	27.2	29.6	30.5	30.1	31.0	31.6
	8H	25.2	26.1	25.8	26.7	27.3	30.2	31.1	30.8	31.6	32.3
	12H	25.3	26.1	25.9	26.7	27.3	31.0	31.7	31.5	32.3	33.0

8H	4H	25.4	26.3	26.0	26.8	27.4	28.4	29.3	29.0	29.9	30.5
	6H	26.0	26.7	26.6	27.3	28.0	29.9	30.7	30.5	31.3	31.9
	8H	26.2	26.9	26.8	27.5	28.1	30.8	31.4	31.4	32.0	32.6
	12H	26.3	26.9	27.0	27.5	28.2	31.7	32.2	32.3	32.8	33.5

12H	4H	25.6	26.4	26.2	27.0	27.6	28.4	29.2	29.0	29.8	30.4
	6H	26.3	27.0	26.9	27.5	28.2	30.0	30.6	30.6	31.2	31.9
	8H	26.6	27.2	27.2	27.8	28.5	30.8	31.4	31.4	32.0	32.7

Maximum UGR = 33.5

POLAR GRAPH



Maximum Candela = 2123.134 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.)