

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776660

Luminaire Tested: HCDJBS4050CSD-HCD61TRMB-5000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776660
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B038)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD61TRMB-5000lm-2700K
Description: 6 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

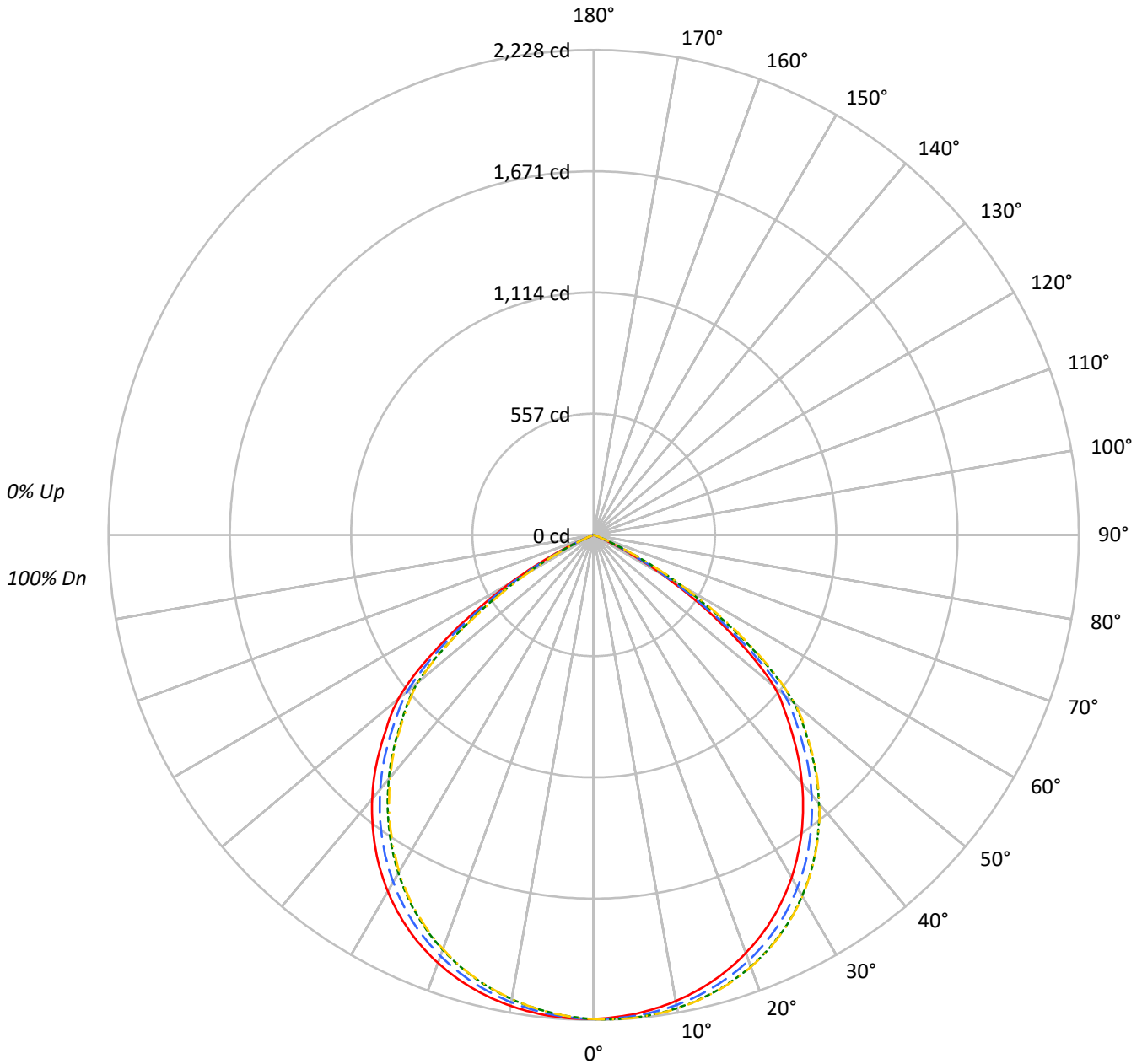
Lumens per Lamp: N/A
Luminaire Lumens: 4653.6 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.32
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90								
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79								
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	69								
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61								
5	82	71	64	58	81	70	63	58	68	62	57	66	61	56	65	60	56	54								
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48								
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43								
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	121920	121920	121920	121920
5°	121533	122435	122111	121307
10°	121034	122888	122276	120556
15°	120324	123145	122316	119626
20°	119244	123100	122032	118316
25°	117575	122535	121265	116360
30°	115056	121228	119696	113581
35°	111420	118862	117122	109714
40°	106528	115230	113241	104732
45°	99972	109647	107422	98095
50°	92133	102316	99792	90001
55°	69637	80695	78038	67496
60°	40370	50456	48505	39569
65°	12414	19146	17551	13413
70°	224	369	224	224
75°	106	191	106	106
80°	158	158	0	158
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 110035 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.5	4.5
10°-20°	603.4	13.0
20°-30°	908.9	19.5
30°-40°	1066.0	22.9
40°-50°	1032.3	22.2
50°-60°	686.8	14.8
60°-70°	144.9	3.1
70°-80°	0.8	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1722.7	37.0
0°-40°	2788.7	59.9
0°-60°	4507.9	96.9
0°-90°	4653.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4653.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2224	2224	2224	2224	2224	
5°	2208	2225	2219	2204	2208	210
15°	2120	2170	2155	2108	2120	598
25°	1944	2026	2005	1924	1944	894
35°	1665	1776	1750	1639	1665	1039
45°	1290	1414	1386	1265	1290	994
55°	729	844	816	706	729	646
65°	96	148	135	103	96	121
75°	0	1	0	0	0	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0
0.5°	2222.6	2222.6	2224.0	2225.4	2224.9	2225.4	2225.4	2224.9	2223.5	2223.1	2223.5
1°	2221.7	2222.6	2224.0	2225.8	2225.8	2226.3	2226.3	2225.4	2224.0	2222.6	2222.6
1.5°	2220.8	2221.7	2224.0	2225.4	2226.3	2226.7	2226.7	2225.8	2224.0	2222.6	2222.2
2°	2219.4	2220.8	2223.5	2225.4	2226.7	2227.6	2227.6	2225.8	2224.0	2221.7	2221.3
2.5°	2218.1	2219.9	2222.6	2225.4	2226.7	2227.6	2227.6	2225.8	2223.5	2221.3	2219.9
3°	2216.2	2219.0	2222.2	2224.9	2226.7	2227.6	2227.6	2225.8	2223.1	2220.3	2218.5
3.5°	2214.9	2217.6	2221.3	2224.4	2226.3	2227.6	2227.6	2225.8	2222.2	2219.0	2216.7
4°	2212.6	2215.8	2220.3	2223.5	2226.3	2227.2	2227.2	2224.9	2221.3	2218.1	2215.3
4.5°	2210.8	2214.4	2219.0	2222.6	2225.4	2226.7	2226.7	2224.4	2220.3	2216.7	2213.5
5°	2208.5	2212.6	2217.2	2221.7	2224.9	2226.3	2225.8	2223.5	2219.0	2214.9	2211.2
5.5°	2206.2	2210.3	2215.8	2220.8	2224.0	2225.4	2224.9	2222.2	2217.6	2213.1	2208.9
6°	2203.0	2208.0	2214.4	2219.4	2222.6	2224.4	2224.0	2220.8	2216.2	2210.8	2206.2
6.5°	2200.3	2205.8	2212.1	2217.6	2221.7	2223.1	2222.6	2219.4	2214.4	2208.9	2203.5
7°	2197.1	2203.0	2209.9	2215.8	2219.9	2221.7	2221.3	2217.6	2212.6	2206.2	2200.7
7.5°	2193.9	2200.3	2207.6	2214.0	2218.5	2220.3	2219.9	2215.8	2209.9	2203.9	2198.0
8°	2190.7	2197.6	2204.8	2211.7	2216.7	2218.5	2218.1	2214.0	2208.0	2201.2	2194.8
8.5°	2186.6	2194.4	2202.1	2209.4	2214.4	2216.7	2216.2	2211.7	2205.3	2198.0	2191.2
9°	2183.0	2190.7	2198.9	2206.7	2212.6	2214.4	2214.0	2209.4	2202.6	2195.3	2188.0
9.5°	2178.9	2187.1	2195.7	2203.9	2209.9	2212.1	2211.7	2206.7	2199.8	2191.6	2183.9
10°	2174.3	2183.4	2192.5	2200.7	2207.6	2209.4	2208.9	2204.4	2196.6	2188.0	2180.2
10.5°	2170.2	2179.3	2188.9	2197.6	2204.4	2206.7	2206.2	2201.2	2193.5	2184.3	2176.1
11°	2165.2	2175.2	2185.3	2194.4	2201.7	2203.9	2203.0	2198.0	2190.3	2180.7	2171.6
11.5°	2160.7	2170.7	2181.2	2190.3	2198.5	2200.7	2199.8	2194.4	2186.2	2176.6	2167.5
12°	2155.2	2166.1	2177.1	2186.6	2194.8	2197.6	2196.6	2191.2	2182.5	2172.5	2162.5
12.5°	2150.2	2161.1	2172.5	2182.5	2191.2	2193.9	2193.0	2187.5	2178.9	2167.9	2157.9
13°	2144.2	2156.1	2167.9	2178.4	2187.1	2190.3	2188.9	2183.4	2174.3	2163.4	2152.5
13.5°	2138.8	2150.6	2163.4	2173.9	2183.4	2186.2	2185.3	2179.3	2169.8	2158.4	2147.0
14°	2132.9	2145.2	2157.9	2169.3	2178.9	2182.1	2180.7	2174.8	2165.2	2153.4	2141.5
14.5°	2126.5	2139.7	2152.9	2164.8	2174.3	2177.5	2176.1	2170.2	2160.2	2147.9	2136.0
15°	2120.1	2133.3	2147.4	2159.3	2169.8	2173.0	2171.6	2165.2	2155.2	2142.4	2130.1
15.5°	2113.3	2127.4	2142.0	2154.3	2164.8	2167.9	2167.0	2160.7	2149.7	2137.0	2124.2
16°	2106.9	2121.0	2136.0	2148.8	2159.7	2162.9	2161.6	2155.2	2144.2	2131.0	2117.4
16.5°	2099.6	2114.2	2129.7	2143.3	2154.3	2157.5	2156.1	2149.7	2138.8	2124.7	2110.5
17°	2092.3	2107.3	2123.3	2137.0	2148.8	2152.0	2150.6	2143.8	2132.9	2118.3	2103.7
17.5°	2085.0	2100.5	2116.9	2130.6	2142.9	2146.5	2145.2	2138.3	2126.5	2111.4	2096.4
18°	2077.3	2093.7	2110.1	2124.2	2136.5	2140.1	2138.8	2131.5	2120.1	2104.6	2089.1
18.5°	2069.1	2085.9	2103.2	2117.8	2130.6	2133.8	2132.4	2125.1	2113.3	2097.8	2081.8
19°	2060.9	2077.7	2095.5	2111.0	2123.7	2127.4	2126.0	2118.3	2106.4	2090.5	2074.1
19.5°	2052.7	2070.0	2088.2	2103.7	2117.4	2121.0	2119.2	2111.4	2099.1	2083.2	2066.3
20°	2044.0	2062.2	2080.5	2096.4	2110.1	2113.7	2112.4	2104.6	2091.8	2075.4	2058.6
20.5°	2034.9	2053.6	2072.3	2089.1	2102.8	2106.4	2105.1	2096.9	2084.6	2067.2	2049.5
21°	2026.2	2044.5	2064.5	2081.4	2095.0	2099.1	2097.3	2089.6	2076.8	2059.0	2041.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1997.1	2017.6	2038.1	2055.9	2071.3	2075.0	2073.2	2065.0	2051.3	2033.1	2013.5
23°	1987.1	2008.0	2029.0	2047.2	2062.7	2066.8	2064.5	2056.3	2042.6	2023.5	2003.5
23.5°	1976.6	1998.0	2019.9	2038.1	2054.0	2058.1	2056.3	2047.7	2034.0	2013.9	1993.9
24°	1966.1	1988.0	2009.8	2029.0	2044.9	2049.0	2046.7	2038.1	2024.4	2004.4	1983.9
24.5°	1954.7	1977.0	1999.8	2018.9	2035.8	2039.9	2037.6	2029.0	2014.8	1994.3	1973.4
25°	1943.8	1966.1	1989.3	2008.9	2025.8	2029.9	2027.6	2019.4	2004.8	1984.3	1962.4
25.5°	1932.4	1955.6	1978.9	1998.9	2016.2	2020.3	2018.0	2009.4	1994.8	1973.4	1951.5
26°	1921.0	1944.2	1968.4	1988.4	2006.2	2009.8	2008.0	1998.9	1984.3	1962.4	1940.6
26.5°	1908.7	1932.8	1957.0	1977.9	1995.7	1999.8	1997.5	1988.4	1973.8	1951.5	1928.7
27°	1896.8	1921.0	1945.6	1967.0	1984.8	1989.3	1986.6	1977.9	1962.4	1940.1	1917.3
27.5°	1884.1	1908.7	1933.7	1955.6	1974.3	1978.4	1976.1	1967.0	1951.5	1928.7	1905.5
28°	1871.3	1896.4	1921.9	1943.8	1962.9	1966.5	1964.7	1955.6	1939.7	1916.4	1893.2
28.5°	1858.1	1884.1	1910.0	1932.4	1951.1	1955.6	1953.3	1944.2	1927.8	1904.6	1880.9
29°	1844.9	1870.9	1897.3	1920.5	1939.2	1943.3	1941.5	1932.4	1916.4	1892.3	1868.1
29.5°	1831.7	1858.1	1884.5	1908.2	1927.8	1931.5	1929.2	1920.1	1903.7	1880.0	1854.9
30°	1817.6	1844.4	1871.8	1895.5	1915.1	1919.2	1916.9	1907.8	1890.9	1866.3	1841.7
30.5°	1803.4	1831.2	1858.6	1882.3	1902.3	1906.4	1904.6	1895.5	1878.2	1853.1	1828.5
31°	1789.3	1817.1	1844.9	1869.0	1889.5	1893.2	1891.4	1882.3	1864.9	1839.9	1814.4
31.5°	1774.3	1803.0	1831.2	1855.8	1876.3	1880.0	1877.7	1869.0	1851.3	1826.2	1800.7
32°	1759.7	1788.4	1817.1	1842.6	1862.7	1866.8	1864.5	1855.4	1837.6	1812.1	1786.1
32.5°	1744.2	1773.8	1802.5	1828.0	1849.0	1852.6	1851.3	1842.2	1823.9	1798.0	1771.5
33°	1729.2	1758.8	1788.4	1813.9	1835.3	1839.0	1837.1	1827.6	1809.8	1783.4	1757.0
33.5°	1713.7	1743.7	1773.4	1799.3	1820.7	1824.4	1822.6	1813.0	1795.2	1768.8	1741.9
34°	1697.7	1728.2	1758.3	1784.7	1806.2	1810.3	1808.0	1798.9	1780.2	1753.8	1726.4
34.5°	1681.3	1712.8	1742.8	1769.3	1791.1	1795.2	1793.4	1783.8	1765.2	1738.3	1710.9
35°	1664.9	1696.8	1726.9	1754.2	1776.1	1779.7	1777.9	1768.8	1750.1	1722.3	1695.0
35.5°	1648.5	1680.4	1711.4	1738.3	1760.6	1764.7	1762.4	1753.3	1734.2	1706.8	1679.0
36°	1631.2	1663.5	1695.0	1722.8	1745.1	1748.8	1746.9	1737.8	1718.2	1691.3	1662.6
36.5°	1614.8	1647.1	1678.6	1706.4	1729.2	1733.3	1731.4	1721.9	1702.3	1674.9	1646.2
37°	1597.0	1630.3	1661.7	1689.5	1713.2	1716.9	1715.0	1705.9	1685.9	1658.1	1629.4
37.5°	1579.3	1613.0	1644.9	1673.1	1696.4	1700.5	1698.2	1689.5	1669.0	1641.7	1613.0
38°	1561.0	1595.7	1627.6	1655.8	1679.9	1683.6	1681.8	1672.2	1652.6	1623.9	1595.7
38.5°	1543.7	1577.9	1610.7	1638.5	1663.1	1666.7	1665.4	1655.3	1635.3	1607.5	1577.9
39°	1525.9	1560.6	1592.9	1621.6	1645.8	1649.4	1648.1	1638.5	1617.5	1589.7	1560.6
39.5°	1507.3	1542.3	1574.7	1603.4	1628.0	1632.1	1630.3	1620.7	1600.2	1572.0	1542.3
40°	1488.6	1523.7	1556.9	1585.2	1610.2	1614.3	1612.5	1603.4	1582.4	1553.7	1524.6
40.5°	1469.9	1505.4	1538.2	1567.0	1592.0	1596.6	1594.7	1584.7	1564.2	1536.0	1506.4
41°	1450.8	1486.3	1519.6	1547.8	1573.8	1578.3	1576.5	1566.5	1546.0	1517.3	1487.7
41.5°	1431.2	1467.2	1500.4	1529.6	1554.6	1559.7	1558.3	1547.8	1526.9	1498.6	1469.0
42°	1412.0	1447.6	1481.3	1510.0	1536.0	1541.0	1539.2	1529.1	1508.2	1479.5	1449.9
42.5°	1392.4	1428.9	1461.7	1490.4	1516.8	1521.8	1520.5	1509.5	1488.6	1460.8	1430.7
43°	1371.9	1408.8	1441.6	1470.4	1497.2	1501.8	1500.9	1489.9	1469.0	1440.3	1411.1
43.5°	1351.9	1387.9	1421.6	1449.9	1476.7	1482.2	1480.8	1469.9	1448.9	1420.2	1391.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1289.5	1325.5	1358.3	1386.5	1414.3	1419.3	1418.9	1407.0	1385.6	1357.4	1328.2
45.5°	1268.5	1304.0	1337.3	1365.1	1392.9	1398.8	1397.9	1385.6	1364.2	1335.9	1306.8
46°	1248.0	1283.5	1316.3	1344.1	1371.9	1378.3	1376.9	1365.1	1343.2	1314.5	1286.3
46.5°	1228.0	1263.5	1295.8	1323.6	1351.4	1358.7	1357.4	1344.6	1321.8	1294.0	1265.3
47°	1208.4	1243.4	1275.8	1303.1	1330.9	1338.2	1337.3	1324.1	1301.3	1273.1	1244.8
47.5°	1188.8	1223.9	1255.7	1283.1	1310.9	1318.2	1317.3	1304.0	1281.3	1253.0	1225.2
48°	1169.2	1203.8	1235.2	1262.6	1290.8	1298.6	1297.7	1284.5	1261.2	1233.0	1205.6
48.5°	1150.0	1183.8	1215.7	1242.5	1270.8	1279.9	1278.1	1264.4	1240.7	1213.4	1186.0
49°	1129.1	1162.3	1192.9	1219.8	1248.5	1257.6	1256.2	1242.5	1218.8	1191.0	1163.7
49.5°	1106.3	1139.6	1169.2	1195.1	1224.8	1233.4	1232.1	1218.4	1194.7	1166.9	1140.5
50°	1080.3	1114.5	1143.2	1167.8	1199.7	1208.4	1207.4	1193.3	1170.1	1142.3	1115.0
50.5°	1051.6	1083.5	1114.5	1140.0	1171.9	1179.7	1177.4	1165.1	1142.7	1113.6	1086.2
51°	1020.2	1051.6	1082.6	1109.0	1141.4	1148.7	1146.8	1135.5	1112.7	1082.6	1054.8
51.5°	986.5	1017.9	1048.4	1076.2	1109.0	1115.9	1115.0	1102.2	1081.2	1050.7	1021.5
52°	950.5	983.3	1013.3	1040.7	1073.9	1082.6	1081.7	1068.5	1046.6	1016.5	988.3
52.5°	915.4	947.7	976.9	1002.0	1038.0	1048.9	1048.0	1033.4	1009.7	981.0	953.7
53°	878.9	910.4	939.1	962.8	1000.6	1012.4	1012.4	997.4	971.9	944.5	918.1
53.5°	842.0	873.0	900.8	923.1	961.9	976.9	977.4	959.6	932.7	907.2	881.7
54°	804.2	835.2	860.7	882.6	922.7	940.0	940.4	921.8	894.0	869.4	843.8
54.5°	766.8	797.4	820.6	842.0	883.0	902.2	903.1	882.6	854.3	829.3	806.9
55°	728.6	758.6	780.1	801.0	844.3	865.3	866.2	843.8	816.5	791.0	769.6
55.5°	690.3	719.0	739.5	760.5	804.7	825.2	827.4	803.8	776.9	750.9	730.8
56°	652.9	680.7	698.5	719.0	764.1	786.0	788.3	765.0	738.6	710.8	693.5
56.5°	615.6	642.0	657.9	680.7	724.5	746.3	748.6	725.4	698.5	671.6	655.2
57°	577.3	603.3	617.4	640.6	685.3	706.7	709.4	687.1	661.1	632.0	617.4
57.5°	540.8	564.5	578.2	601.4	646.6	666.6	669.8	648.4	622.4	594.2	579.6
58°	504.9	526.7	539.0	563.6	607.8	627.0	630.2	610.1	585.5	555.4	542.2
58.5°	469.8	488.9	500.3	526.3	570.0	587.8	591.0	572.7	549.0	518.5	505.8
59°	435.1	452.0	463.8	489.8	532.6	548.6	551.8	536.3	512.6	482.1	470.2
59.5°	400.5	414.6	427.8	453.8	496.2	510.8	512.1	499.4	476.1	447.0	435.6
60°	368.2	379.5	393.7	418.3	460.2	473.4	473.9	463.4	442.4	414.2	401.4
60.5°	335.4	344.9	359.0	383.7	426.5	437.9	438.8	429.2	408.7	381.4	367.2
61°	303.5	311.7	326.2	350.4	392.8	402.8	403.2	395.0	375.4	348.6	333.5
61.5°	272.5	279.8	295.3	318.5	359.0	367.2	367.7	360.9	341.7	315.8	299.4
62°	242.9	249.7	264.3	287.1	325.3	332.2	332.2	326.7	308.0	285.7	269.7
62.5°	214.6	221.0	235.6	257.0	291.6	297.1	296.6	292.5	277.0	256.1	240.1
63°	187.7	193.2	207.3	229.2	259.7	264.3	263.8	260.6	247.4	228.3	212.3
63.5°	161.3	167.7	181.3	201.4	229.6	233.7	233.3	230.6	219.2	201.4	186.4
64°	139.4	147.2	156.3	175.4	200.9	204.1	204.1	201.4	190.5	175.9	162.2
64.5°	117.6	127.1	136.2	152.6	173.6	176.3	175.9	173.1	162.7	152.2	139.0
65°	95.7	106.6	115.7	131.2	147.6	149.9	149.9	147.2	135.3	128.9	118.0
65.5°	74.3	86.6	95.2	109.4	122.6	125.8	125.8	122.1	109.4	107.5	98.4
66°	52.4	66.1	75.2	87.9	99.8	102.5	102.5	98.9	85.2	87.5	80.2



TEST NUMBER: P776660

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	16.9	28.2	32.8	36.0	51.9	53.8	53.8	51.0	38.3	46.0	42.4
68°	12.8	19.6	22.8	24.1	38.3	39.6	39.6	37.8	22.8	34.6	29.6
68.5°	9.1	15.9	14.1	15.0	24.6	25.5	25.5	24.1	7.3	22.8	17.3
69°	5.0	12.3	10.9	11.4	11.4	11.8	11.4	11.4	2.3	10.9	10.0
69.5°	1.4	8.7	7.7	8.2	5.5	5.5	5.5	5.5	1.4	5.5	5.0
70°	1.4	5.0	4.6	4.6	2.3	2.3	2.3	2.3	1.4	2.3	2.3
70.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
71°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
71.5°	0.9	0.9	0.9	0.9	1.4	1.4	1.4	0.9	0.9	0.9	0.9
72°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
73°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
73.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
74°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
74.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.9	0.9
75°	0.5	0.5	0.5	0.5	0.9	0.9	0.9	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
80.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
81°	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776660
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776660

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2224.0	2224.0	2224.0	2224.0	2224.0	2224.0
0.5°	2223.5	2223.1	2223.1	2223.5	2223.1	2222.6
1°	2222.6	2221.7	2221.7	2222.2	2222.2	2221.7
1.5°	2221.7	2220.3	2219.9	2220.8	2220.8	2220.8
2°	2220.3	2218.5	2218.1	2219.0	2219.0	2219.4
2.5°	2219.0	2216.2	2216.2	2216.7	2217.2	2218.1
3°	2217.2	2214.4	2214.0	2214.9	2215.3	2216.2
3.5°	2215.3	2212.1	2211.7	2212.6	2213.5	2214.9
4°	2213.1	2209.9	2208.9	2209.9	2211.2	2212.6
4.5°	2210.8	2207.1	2206.2	2207.1	2208.5	2210.8
5°	2208.5	2204.4	2203.5	2204.4	2205.8	2208.5
5.5°	2205.8	2201.2	2200.3	2201.2	2203.0	2206.2
6°	2203.0	2198.0	2197.1	2198.0	2199.8	2203.0
6.5°	2199.8	2194.8	2193.5	2194.4	2197.1	2200.3
7°	2196.6	2191.2	2189.8	2191.2	2193.5	2197.1
7.5°	2193.5	2187.1	2186.2	2187.1	2189.8	2193.9
8°	2189.8	2183.4	2181.6	2183.0	2186.2	2190.7
8.5°	2185.7	2179.3	2177.5	2178.9	2182.1	2186.6
9°	2182.1	2174.8	2173.0	2174.3	2177.5	2183.0
9.5°	2177.5	2170.7	2168.9	2169.8	2173.4	2178.9
10°	2173.4	2165.7	2163.8	2165.2	2168.9	2174.3
10.5°	2168.9	2160.7	2158.8	2160.2	2163.8	2170.2
11°	2164.3	2155.6	2153.4	2155.2	2158.8	2165.2
11.5°	2159.3	2150.6	2147.9	2149.3	2153.8	2160.7
12°	2154.3	2144.7	2142.4	2143.8	2148.3	2155.2
12.5°	2148.8	2139.2	2136.5	2137.9	2142.9	2150.2
13°	2143.3	2133.3	2130.6	2131.9	2137.0	2144.2
13.5°	2137.4	2127.4	2124.2	2125.6	2130.6	2138.8
14°	2131.9	2121.0	2117.8	2119.2	2124.7	2132.9
14.5°	2125.6	2114.2	2111.4	2112.8	2117.8	2126.5
15°	2119.2	2107.8	2104.2	2106.0	2111.4	2120.1
15.5°	2112.8	2100.5	2096.9	2098.7	2104.2	2113.3
16°	2105.5	2093.7	2089.6	2091.4	2097.3	2106.9
16.5°	2099.1	2085.9	2082.3	2084.1	2090.0	2099.6
17°	2091.8	2078.2	2074.5	2075.9	2082.3	2092.3
17.5°	2084.1	2070.4	2066.3	2068.2	2074.5	2085.0
18°	2076.8	2062.2	2058.1	2060.0	2066.3	2077.3
18.5°	2068.6	2054.0	2049.5	2051.3	2058.1	2069.1
19°	2060.4	2045.8	2040.8	2042.6	2049.5	2060.9
19.5°	2052.2	2037.2	2031.7	2033.5	2041.3	2052.7
20°	2043.6	2028.1	2022.6	2024.4	2032.2	2044.0
20.5°	2034.9	2018.5	2013.0	2014.8	2022.6	2034.9
21°	2025.8	2008.9	2003.5	2004.8	2013.0	2026.2

TEST NUMBER: P776660

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1996.6	1978.9	1972.5	1974.3	1983.0	1997.1
23°	1987.1	1968.4	1961.5	1963.4	1972.5	1987.1
23.5°	1976.6	1957.9	1951.1	1952.4	1962.0	1976.6
24°	1966.1	1947.0	1939.7	1941.0	1950.6	1966.1
24.5°	1955.2	1935.1	1928.3	1929.6	1939.2	1954.7
25°	1944.2	1923.7	1916.4	1917.8	1927.8	1943.8
25.5°	1932.8	1912.3	1904.1	1905.9	1916.0	1932.4
26°	1921.4	1900.0	1891.8	1893.6	1904.1	1921.0
26.5°	1909.1	1887.3	1879.1	1880.9	1891.4	1908.7
27°	1896.8	1874.5	1866.8	1868.1	1879.1	1896.8
27.5°	1885.0	1862.2	1854.0	1854.9	1866.3	1884.1
28°	1872.2	1849.0	1840.3	1841.7	1853.1	1871.3
28.5°	1859.0	1835.3	1826.7	1828.0	1839.4	1858.1
29°	1846.3	1822.1	1813.0	1814.8	1826.2	1844.9
29.5°	1833.0	1808.0	1798.9	1800.2	1812.5	1831.7
30°	1818.9	1794.3	1784.7	1786.1	1798.0	1817.6
30.5°	1805.3	1779.7	1769.7	1771.1	1783.8	1803.4
31°	1791.1	1764.7	1755.1	1756.5	1768.8	1789.3
31.5°	1776.5	1750.1	1739.6	1741.0	1753.8	1774.3
32°	1761.5	1735.1	1724.6	1726.0	1738.7	1759.7
32.5°	1746.9	1719.6	1709.1	1710.0	1723.7	1744.2
33°	1731.4	1704.1	1693.2	1694.5	1707.7	1729.2
33.5°	1716.4	1688.6	1677.2	1679.0	1691.8	1713.7
34°	1700.5	1672.7	1661.3	1662.2	1675.8	1697.7
34.5°	1685.0	1655.8	1644.4	1645.8	1659.4	1681.3
35°	1668.1	1639.4	1627.6	1629.4	1642.6	1664.9
35.5°	1652.2	1622.5	1611.1	1612.5	1625.7	1648.5
36°	1635.8	1606.1	1594.3	1595.7	1609.3	1631.2
36.5°	1619.3	1588.8	1577.4	1578.3	1592.5	1614.8
37°	1602.0	1571.5	1560.1	1561.0	1574.7	1597.0
37.5°	1584.7	1554.2	1541.9	1543.7	1557.4	1579.3
38°	1567.4	1536.4	1524.6	1525.9	1539.2	1561.0
38.5°	1549.2	1518.7	1506.8	1508.2	1521.4	1543.7
39°	1531.9	1500.4	1489.0	1489.9	1503.6	1525.9
39.5°	1513.6	1482.7	1470.8	1472.2	1485.4	1507.3
40°	1495.4	1463.5	1452.6	1453.5	1466.3	1488.6
40.5°	1477.2	1445.3	1433.9	1435.3	1447.6	1469.9
41°	1458.1	1426.2	1415.2	1416.6	1428.9	1450.8
41.5°	1439.4	1407.0	1395.6	1397.5	1409.8	1431.2
42°	1420.2	1387.9	1376.9	1378.3	1390.6	1412.0
42.5°	1401.1	1368.3	1357.8	1358.7	1371.0	1392.4
43°	1381.5	1348.2	1337.3	1339.1	1350.5	1371.9
43.5°	1361.0	1327.7	1317.3	1318.6	1330.0	1351.9

TEST NUMBER: P776660

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1299.0	1265.3	1255.7	1256.7	1267.6	1289.5
45.5°	1278.1	1244.8	1234.8	1236.2	1246.6	1268.5
46°	1257.6	1224.3	1214.3	1215.7	1226.6	1248.0
46.5°	1236.6	1204.7	1194.7	1195.6	1206.5	1228.0
47°	1217.0	1185.1	1175.6	1176.5	1186.5	1208.4
47.5°	1197.4	1165.5	1156.0	1157.3	1166.9	1188.8
48°	1178.3	1146.4	1136.4	1138.2	1147.8	1169.2
48.5°	1158.7	1126.8	1117.2	1118.1	1128.2	1150.0
49°	1137.7	1105.4	1095.8	1097.2	1107.7	1129.1
49.5°	1115.0	1082.1	1073.5	1074.9	1084.9	1106.3
50°	1089.9	1055.3	1047.1	1049.8	1060.3	1080.3
50.5°	1060.3	1025.2	1017.9	1021.1	1030.7	1051.6
51°	1028.8	992.8	986.0	988.7	999.7	1020.2
51.5°	995.6	960.0	952.3	954.6	966.9	986.5
52°	962.3	925.0	917.2	919.5	931.3	950.5
52.5°	927.2	889.4	881.7	883.0	894.4	915.4
53°	892.1	852.5	843.8	845.2	857.5	878.9
53.5°	855.7	816.5	806.0	807.9	820.2	842.0
54°	820.6	780.1	768.2	769.6	781.9	804.2
54.5°	783.2	743.2	731.3	731.8	744.5	766.8
55°	747.3	706.2	693.0	693.5	706.2	728.6
55.5°	709.4	670.7	655.7	654.8	668.4	690.3
56°	673.4	634.7	618.3	616.0	631.5	652.9
56.5°	636.1	599.2	581.9	579.1	595.1	615.6
57°	599.6	562.7	545.4	541.8	558.2	577.3
57.5°	563.6	528.1	509.4	505.8	522.2	540.8
58°	528.1	493.5	474.8	471.1	487.1	504.9
58.5°	492.5	459.7	440.6	436.0	451.5	469.8
59°	457.5	426.0	407.3	402.8	418.7	435.1
59.5°	424.2	392.8	375.4	370.4	385.9	400.5
60°	390.5	360.9	343.1	339.5	353.6	368.2
60.5°	357.2	329.4	313.0	309.4	322.6	335.4
61°	324.0	298.4	283.9	280.7	292.5	303.5
61.5°	293.4	269.7	256.5	253.3	263.4	272.5
62°	263.4	241.0	230.1	228.3	235.6	242.9
62.5°	234.2	213.2	205.0	203.2	208.7	214.6
63°	205.9	187.7	181.3	180.0	182.7	187.7
63.5°	179.5	163.1	158.1	157.2	158.6	161.3
64°	154.5	143.1	139.4	138.5	139.0	139.4
64.5°	131.2	123.0	120.7	120.3	119.4	117.6
65°	109.8	103.4	102.1	101.6	99.8	95.7
65.5°	90.2	83.4	83.4	83.4	80.2	74.3
66°	71.5	63.8	67.4	68.3	63.8	52.4



TEST NUMBER: P776660
 CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	37.4	26.4	30.1	31.0	26.9	16.9
68°	26.0	18.2	21.0	21.4	18.7	12.8
68.5°	15.0	14.1	13.2	13.7	14.1	9.1
69°	9.1	10.0	10.0	10.5	10.0	5.0
69.5°	4.6	5.5	7.3	7.3	5.5	1.4
70°	2.3	1.4	4.1	4.1	1.4	1.4
70.5°	1.4	1.4	1.4	1.4	1.4	1.4
71°	0.9	0.9	0.9	0.9	0.9	0.9
71.5°	0.9	0.9	0.9	0.9	0.9	0.9
72°	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9	0.9
73°	0.9	0.9	0.9	0.9	0.9	0.9
73.5°	0.9	0.9	0.9	0.9	0.9	0.9
74°	0.9	0.9	0.9	0.9	0.9	0.9
74.5°	0.9	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776660

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Scaled Data Report



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Scaled Data Report





21.5°	2016.2	2035.8	2055.9	2073.2	2087.7	2091.4	2089.6	2081.8	2068.6	2050.4	2032.2
22°	2007.1	2026.7	2047.2	2065.0	2079.5	2083.6	2081.4	2073.2	2060.4	2041.7	2023.0



44°	1330.9	1366.9	1399.7	1429.3	1455.8	1461.2	1460.3	1448.9	1427.5	1399.7	1370.1
44.5°	1310.0	1346.4	1379.2	1407.9	1435.3	1441.6	1438.9	1428.4	1406.6	1378.8	1349.2



66.5°	37.8	51.5	59.2	66.5	79.3	82.0	82.0	77.9	69.7	69.7	67.4
67°	26.0	38.7	45.1	50.1	65.6	67.9	67.9	64.2	54.2	57.9	55.1



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	2016.2	1999.4	1993.4	1994.8	2003.5	2016.2
22°	2006.6	1989.3	1983.4	1984.8	1993.4	2007.1



44°	1340.5	1306.8	1296.8	1297.7	1309.5	1330.9
44.5°	1320.0	1286.3	1276.3	1277.2	1288.6	1310.0



66.5°	60.1	48.8	53.8	53.8	49.7	37.8
67°	48.8	36.5	41.0	41.5	37.4	26.0

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89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)