

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: P776832

Luminaire Tested: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776832  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B027)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K  
Description: 8 INCH SQUARE MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4218.9 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.2 / 1.3  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')

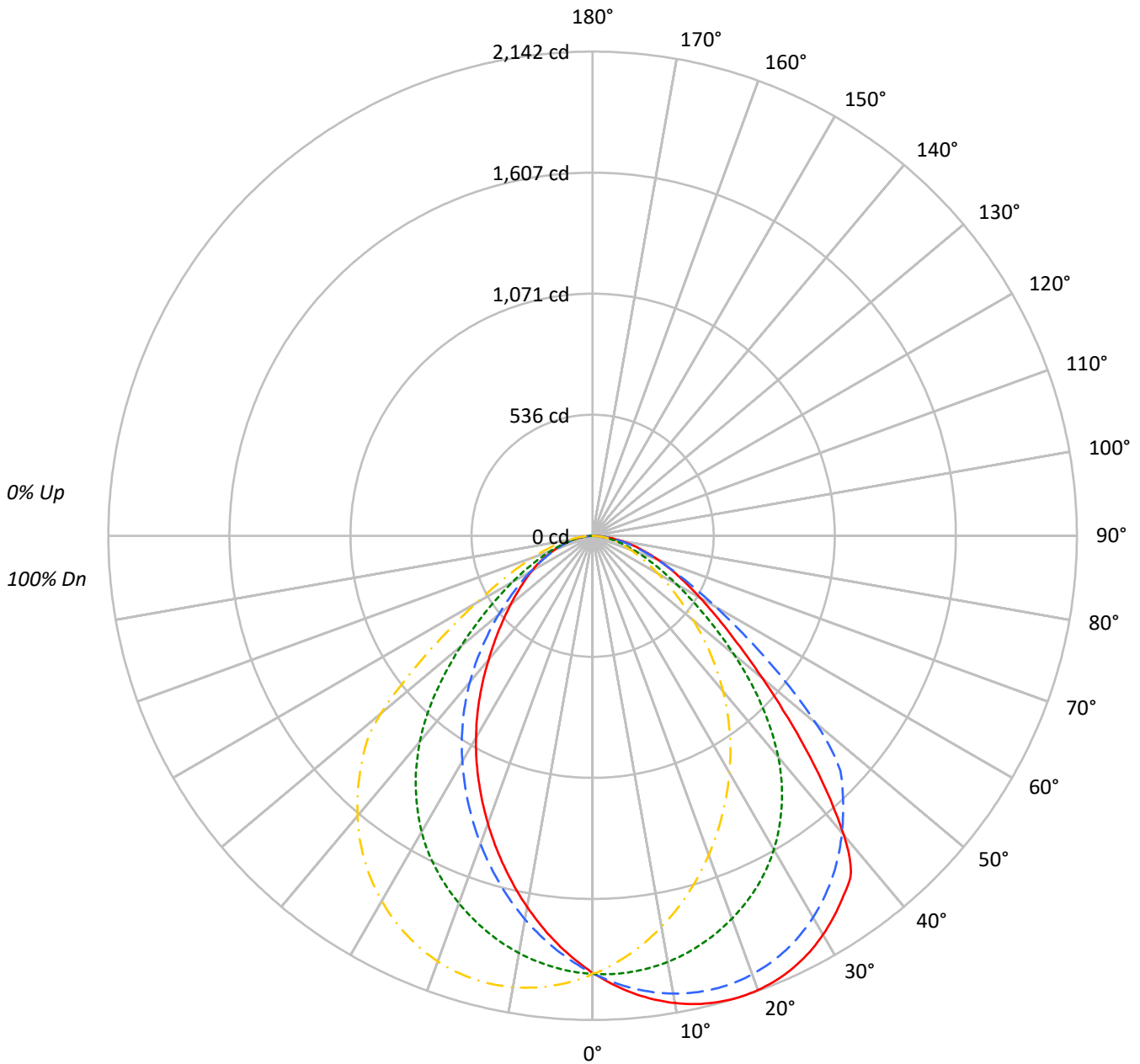
CIE Type: Direct  
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87								
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65								
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57								
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50								
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44								
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40								
8	64	52	44	38	63	51	43	38	50	43	38	49	42	38	47	42	38	36								
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32								
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	46422	46422	46422	46422
5°	48869	46633	43557	46145
10°	51110	46610	40594	45634
15°	53022	46384	37572	44969
20°	54574	45985	34566	44142
25°	55735	45395	31574	43186
30°	56422	44386	28563	41867
35°	56738	42688	25464	39916
40°	54105	39950	22390	37205
45°	45199	35782	19777	33273
50°	36655	30462	17660	28370
55°	30376	24995	16045	23574
60°	26319	20506	14833	19648
65°	23569	17123	13668	16562
70°	21453	14442	12360	14015
75°	19530	12146	11229	11840
80°	17509	10025	9832	9707
85°	14279	7786	6355	7126

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 52985 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.6	4.3
10°-20°	516.4	12.2
20°-30°	763.8	18.1
30°-40°	880.3	20.9
40°-50°	801.5	19.0
50°-60°	548.9	13.0
60°-70°	322.2	7.6
70°-80°	162.5	3.9
80°-90°	40.7	1.0
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°	1462.8	34.7
0°-40°	2343.1	55.5
0°-60°	3693.5	87.5
0°-90°	4218.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4218.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1936	1936	1936	1936	1936	
5°	2030	1937	1810	1917	2030	196
15°	2136	1868	1514	1812	2136	604
25°	2107	1716	1193	1632	2107	971
35°	1938	1458	870	1364	1938	1206
45°	1333	1055	583	981	1333	1029
55°	727	598	384	564	727	660
65°	415	302	241	292	415	415
75°	211	131	121	128	211	225
85°	52	28	23	26	52	60
90°	0	0	0	0	0	



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CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0
0.5°	1943.5	1944.0	1944.0	1941.6	1939.3	1936.0	1933.1	1921.8	1921.4	1922.3	1926.5
1°	1954.4	1953.9	1952.0	1946.8	1939.7	1932.2	1926.1	1911.4	1909.6	1911.4	1917.6
1.5°	1964.7	1964.3	1959.5	1951.1	1940.7	1928.4	1918.5	1901.1	1898.2	1900.1	1908.6
2°	1974.6	1974.2	1967.6	1955.8	1940.7	1924.2	1910.5	1890.2	1886.0	1888.3	1899.2
2.5°	1985.0	1983.6	1975.1	1960.0	1940.7	1919.9	1902.5	1879.4	1873.7	1877.0	1889.8
3°	1994.4	1992.5	1982.6	1964.3	1940.7	1915.7	1894.5	1867.6	1861.5	1865.2	1879.9
3.5°	2003.9	2001.5	1989.7	1968.0	1940.2	1911.0	1886.0	1856.3	1848.7	1853.0	1870.0
4°	2013.3	2010.5	1996.3	1971.3	1939.7	1905.8	1877.0	1845.0	1836.0	1840.7	1859.6
4.5°	2021.8	2019.0	2002.4	1974.6	1938.8	1901.1	1868.5	1833.2	1822.8	1828.0	1849.2
5°	2030.3	2027.0	2009.0	1977.9	1937.4	1895.4	1859.1	1820.5	1809.6	1815.3	1838.4
5.5°	2038.8	2035.0	2015.2	1980.8	1936.0	1890.2	1849.7	1808.7	1795.9	1802.5	1827.5
6°	2046.8	2042.5	2020.8	1983.1	1934.6	1884.1	1840.3	1795.9	1782.3	1789.3	1816.7
6.5°	2054.3	2049.6	2026.0	1985.5	1932.7	1878.4	1830.4	1783.7	1769.1	1776.1	1805.8
7°	2061.9	2057.1	2031.2	1987.4	1930.8	1871.8	1820.5	1770.5	1754.4	1762.5	1794.0
7.5°	2068.9	2063.7	2036.4	1989.7	1928.4	1865.7	1810.1	1757.3	1740.8	1749.3	1782.7
8°	2075.5	2070.3	2041.1	1991.1	1926.1	1859.1	1799.7	1744.1	1726.2	1735.1	1770.9
8.5°	2081.7	2076.5	2045.4	1992.5	1923.7	1852.0	1788.9	1730.9	1711.5	1721.4	1759.2
9°	2087.8	2082.1	2049.1	1993.5	1920.9	1845.4	1778.5	1717.7	1696.9	1706.8	1746.9
9.5°	2093.9	2087.8	2053.4	1994.4	1917.6	1837.9	1767.6	1704.0	1682.3	1693.1	1735.1
10°	2099.1	2093.0	2056.7	1994.9	1914.3	1830.4	1756.3	1689.8	1667.2	1678.5	1722.9
10.5°	2104.3	2097.7	2060.0	1995.4	1910.5	1822.8	1745.0	1676.2	1652.6	1663.9	1710.1
11°	2109.5	2102.4	2062.8	1995.4	1906.7	1814.8	1733.2	1662.0	1637.5	1649.8	1697.4
11.5°	2113.7	2106.6	2065.6	1995.4	1903.0	1806.8	1721.9	1647.9	1622.4	1634.7	1684.2
12°	2118.0	2110.4	2068.0	1994.9	1898.7	1798.8	1710.1	1633.7	1606.9	1620.1	1671.5
12.5°	2121.7	2114.2	2069.9	1994.4	1894.5	1790.3	1698.3	1619.1	1591.8	1605.4	1658.7
13°	2125.5	2117.5	2071.8	1993.5	1889.8	1781.8	1686.1	1604.5	1576.2	1589.9	1645.5
13.5°	2128.3	2120.3	2073.2	1992.1	1884.6	1772.8	1673.8	1589.9	1560.7	1574.8	1632.3
14°	2131.2	2123.2	2074.6	1990.7	1879.4	1763.9	1661.1	1574.8	1545.1	1559.7	1618.7
14.5°	2134.0	2125.5	2075.5	1989.2	1874.2	1754.9	1648.8	1560.2	1529.5	1544.6	1605.0
15°	2135.9	2127.4	2076.0	1987.4	1868.5	1745.0	1636.1	1544.6	1513.5	1529.1	1591.3
15.5°	2137.8	2129.3	2076.5	1985.0	1862.9	1735.6	1623.4	1530.0	1497.9	1514.0	1577.6
16°	2139.2	2130.7	2076.0	1982.6	1856.8	1725.7	1610.2	1514.9	1481.9	1498.4	1564.0
16.5°	2140.6	2131.6	2075.5	1979.8	1851.1	1715.8	1597.0	1499.8	1466.4	1483.3	1550.3
17°	2141.1	2132.1	2075.1	1977.0	1844.5	1705.9	1583.8	1484.3	1450.3	1467.3	1535.7
17.5°	2141.5	2132.1	2074.1	1973.7	1837.9	1695.5	1570.1	1469.2	1434.3	1452.2	1522.0
18°	2142.0	2132.6	2072.7	1970.4	1831.3	1685.1	1556.9	1454.1	1418.3	1435.7	1507.8
18.5°	2141.5	2132.1	2071.3	1966.6	1824.2	1674.8	1543.2	1438.5	1402.2	1420.6	1493.2
19°	2141.1	2131.2	2069.4	1962.4	1816.7	1663.9	1529.5	1423.0	1386.2	1405.1	1479.1
19.5°	2140.1	2130.2	2067.0	1958.1	1809.6	1653.1	1515.9	1407.9	1370.6	1389.5	1464.9
20°	2138.7	2128.8	2064.7	1953.9	1802.1	1642.2	1502.2	1392.3	1354.6	1373.5	1449.9
20.5°	2137.3	2127.4	2061.9	1949.2	1794.5	1630.9	1488.0	1376.8	1338.1	1357.4	1435.2
21°	2134.9	2125.0	2058.6	1944.5	1786.5	1620.1	1473.9	1360.7	1322.1	1341.9	1421.1



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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°	2126.9	2116.6	2047.2	1928.0	1762.0	1585.2	1431.0	1314.5	1274.0	1294.7	1376.8
23°	2123.6	2113.3	2043.0	1921.8	1753.0	1573.4	1416.8	1298.5	1258.0	1278.7	1362.2
23.5°	2119.9	2109.5	2038.3	1915.7	1744.1	1561.6	1402.7	1282.5	1241.9	1263.1	1347.5
24°	2115.6	2105.2	2033.6	1909.6	1735.1	1549.3	1388.1	1266.9	1225.9	1247.1	1332.5
24.5°	2111.4	2100.5	2027.9	1903.0	1725.7	1537.1	1373.5	1251.4	1209.4	1231.6	1317.4
25°	2106.6	2095.8	2022.3	1895.9	1715.8	1524.8	1358.9	1235.8	1193.4	1215.5	1302.7
25.5°	2101.0	2090.6	2016.1	1888.3	1705.9	1511.6	1344.2	1220.2	1177.8	1199.5	1288.1
26°	2095.3	2085.0	2010.5	1881.3	1696.0	1498.9	1329.6	1204.2	1161.3	1183.9	1272.6
26.5°	2089.7	2078.8	2003.9	1873.3	1685.6	1486.2	1315.0	1188.2	1144.8	1167.9	1258.0
27°	2083.5	2072.7	1996.8	1865.7	1674.8	1473.0	1299.9	1172.1	1128.8	1152.3	1242.9
27.5°	2076.9	2066.1	1989.7	1857.2	1663.4	1459.8	1285.3	1156.6	1113.2	1135.8	1227.8
28°	2069.4	2059.0	1982.2	1848.3	1652.1	1446.1	1270.2	1141.0	1096.7	1120.3	1212.7
28.5°	2062.3	2051.5	1974.6	1839.3	1640.3	1432.4	1255.6	1125.0	1080.2	1104.2	1198.1
29°	2054.3	2043.5	1966.6	1830.4	1628.6	1418.3	1240.5	1109.0	1064.2	1088.2	1182.5
29.5°	2046.3	2035.5	1958.6	1820.9	1615.8	1404.6	1225.4	1093.4	1048.1	1072.2	1167.4
30°	2037.8	2027.4	1949.6	1811.0	1603.1	1390.0	1210.3	1076.9	1031.6	1056.2	1152.3
30.5°	2029.3	2018.5	1940.7	1800.6	1589.9	1375.4	1195.7	1061.3	1015.1	1040.1	1137.3
31°	2019.9	2009.5	1931.7	1789.8	1576.7	1360.3	1180.2	1044.8	999.1	1024.6	1122.2
31.5°	2010.5	2000.1	1922.3	1779.0	1563.0	1345.7	1164.6	1029.3	983.1	1008.5	1107.1
32°	2001.0	1990.7	1912.4	1767.2	1548.9	1330.6	1149.5	1013.2	967.0	992.5	1092.0
32.5°	1990.7	1980.3	1902.0	1755.4	1534.3	1314.5	1134.0	997.2	950.5	976.5	1076.9
33°	1980.8	1970.4	1891.6	1743.6	1519.6	1299.0	1118.9	980.7	935.0	960.4	1061.8
33.5°	1970.4	1959.5	1880.8	1730.9	1505.0	1283.4	1103.3	965.6	918.5	944.9	1046.7
34°	1959.5	1949.2	1870.4	1718.1	1489.5	1267.9	1087.7	949.1	902.0	928.8	1030.7
34.5°	1948.7	1937.9	1858.6	1704.9	1473.9	1251.8	1072.2	933.1	885.9	912.8	1015.6
35°	1938.3	1926.5	1847.3	1691.3	1458.3	1235.8	1056.6	917.1	869.9	897.3	1000.5
35.5°	1928.0	1915.2	1835.1	1676.6	1441.8	1219.3	1040.6	901.5	853.9	881.2	985.0
36°	1918.1	1903.4	1823.3	1662.5	1425.3	1203.7	1025.0	885.5	837.9	865.2	969.4
36.5°	1906.7	1892.1	1811.0	1647.4	1407.9	1187.2	1009.5	869.0	821.8	849.2	953.8
37°	1893.5	1880.8	1797.8	1632.3	1390.9	1170.3	993.4	852.9	806.3	833.1	938.3
37.5°	1877.0	1869.5	1785.1	1617.2	1373.0	1153.3	976.9	837.4	790.7	817.6	922.7
38°	1853.0	1858.6	1771.4	1601.2	1354.1	1136.8	961.4	821.3	775.1	802.0	907.2
38.5°	1828.0	1845.9	1757.7	1584.7	1335.8	1119.8	945.4	805.3	760.1	786.0	891.6
39°	1797.8	1831.8	1744.1	1567.3	1316.4	1102.8	929.3	789.8	745.0	770.9	876.0
39.5°	1764.3	1811.5	1729.9	1550.3	1297.1	1085.4	913.3	774.2	729.9	755.3	860.0
40°	1728.5	1789.3	1715.3	1532.4	1276.3	1067.9	897.3	758.6	715.3	740.3	844.5
40.5°	1689.4	1761.0	1701.2	1513.5	1256.1	1051.0	881.2	743.1	701.1	725.2	828.9
41°	1652.1	1731.8	1686.1	1493.7	1235.3	1033.1	864.7	728.5	687.0	711.0	812.9
41.5°	1611.6	1695.0	1671.0	1473.9	1214.1	1015.6	848.7	713.4	673.3	695.9	796.8
42°	1572.9	1661.6	1655.4	1452.7	1192.4	997.7	832.7	698.8	659.6	681.8	781.3
42.5°	1532.4	1622.9	1639.9	1431.0	1170.3	980.2	816.6	684.1	646.4	667.6	765.7
43°	1492.3	1587.1	1624.8	1408.4	1148.1	962.3	800.6	670.0	633.2	654.0	750.2
43.5°	1451.3	1547.0	1608.7	1386.7	1125.5	943.9	784.6	655.4	620.0	639.8	734.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1332.9	1430.5	1562.5	1312.6	1055.2	890.2	736.5	614.8	583.2	600.7	687.9
45.5°	1291.9	1390.4	1547.0	1287.7	1031.6	871.8	720.4	601.6	571.0	588.0	672.8
46°	1256.1	1352.7	1529.1	1261.7	1008.1	853.9	704.4	588.4	559.7	575.2	657.3
46.5°	1216.0	1312.2	1510.7	1234.9	984.0	835.5	688.9	575.7	547.9	563.0	642.2
47°	1182.5	1276.3	1484.3	1207.5	960.0	817.6	672.8	563.4	536.6	551.2	627.6
47.5°	1142.9	1236.7	1459.3	1179.2	935.5	799.2	657.3	551.7	525.7	539.4	612.9
48°	1111.8	1202.3	1427.2	1150.5	912.3	781.3	641.7	538.9	514.9	528.1	598.8
48.5°	1074.5	1162.7	1397.0	1121.7	887.8	763.4	626.1	527.1	504.0	516.8	584.2
49°	1045.3	1130.7	1360.7	1092.9	863.8	745.4	611.1	515.8	493.7	505.4	570.0
49.5°	1009.9	1093.4	1326.8	1063.7	840.2	727.5	596.0	504.5	483.8	494.6	556.4
50°	982.6	1062.8	1288.1	1034.5	816.6	709.6	580.9	493.2	473.4	483.8	542.7
50.5°	949.6	1028.3	1250.9	1004.3	792.1	691.7	566.3	482.3	463.5	473.4	529.0
51°	924.1	997.7	1212.2	974.1	769.5	674.2	552.1	471.5	454.5	463.5	515.8
51.5°	893.5	965.6	1175.0	944.4	746.4	657.3	538.0	460.7	445.1	453.1	503.1
52°	869.0	937.3	1135.4	915.2	723.7	639.8	523.8	450.8	435.7	443.2	490.4
52.5°	841.6	908.1	1099.1	885.9	701.1	622.4	510.2	440.4	426.2	433.8	477.6
53°	818.5	880.3	1060.9	856.2	679.9	605.4	497.0	430.5	417.3	423.9	465.4
53.5°	793.1	852.9	1025.0	827.0	658.2	588.9	483.8	420.6	408.8	414.9	453.1
54°	770.4	826.1	987.8	798.2	637.5	572.4	470.6	411.6	400.3	406.0	441.8
54.5°	747.8	801.5	952.9	770.4	616.7	555.9	457.8	402.7	392.3	397.5	430.0
55°	726.6	775.6	918.9	742.6	597.9	539.9	445.6	393.2	383.8	388.5	418.7
55.5°	706.3	755.3	884.5	716.2	578.1	523.8	433.3	384.3	375.8	380.0	407.4
56°	685.6	729.4	852.9	690.3	559.2	508.3	421.0	375.3	367.3	371.5	397.0
56.5°	667.6	711.0	820.4	665.3	540.8	493.2	409.7	366.4	360.2	363.1	386.6
57°	646.9	687.0	791.2	640.8	523.4	478.1	398.4	358.8	352.7	355.0	376.3
57.5°	631.3	670.0	760.1	617.7	505.9	463.5	387.6	350.8	345.1	347.0	365.9
58°	612.0	647.8	732.2	594.6	489.4	449.3	376.3	342.8	337.6	339.0	355.5
58.5°	597.9	630.4	704.9	573.3	473.4	435.2	365.4	334.8	330.0	331.5	345.6
59°	579.0	611.1	678.0	552.6	457.4	421.5	354.1	326.7	323.0	323.9	335.7
59.5°	566.3	594.1	653.5	532.8	442.3	408.8	343.7	319.2	315.9	316.4	326.3
60°	548.8	576.2	628.0	513.5	427.6	396.1	333.3	311.7	309.3	309.3	316.8
60.5°	534.7	558.3	606.3	495.1	413.0	383.3	323.9	304.1	302.2	302.2	307.9
61°	519.6	543.2	581.8	477.2	399.8	370.6	314.0	296.6	295.6	295.2	298.9
61.5°	505.4	525.2	562.0	460.7	386.6	357.9	304.1	289.5	289.0	288.6	290.4
62°	491.8	511.6	540.8	444.6	373.0	345.6	295.2	282.9	282.4	281.5	281.5
62.5°	478.1	495.5	520.1	429.1	359.8	334.3	286.2	275.8	275.4	274.9	273.5
63°	464.9	481.4	502.1	414.0	348.0	322.5	277.2	269.2	268.3	268.3	265.5
63.5°	452.2	466.8	483.3	399.8	335.7	311.7	268.3	262.6	261.7	261.7	257.4
64°	439.9	452.2	466.3	385.2	324.4	300.8	259.8	256.0	254.6	255.1	249.9
64.5°	427.2	439.4	449.3	372.0	313.1	290.4	251.8	249.4	247.5	248.0	242.3
65°	415.4	425.8	432.4	359.3	301.8	280.1	243.8	242.8	240.9	241.4	234.8
65.5°	403.6	413.5	417.7	346.6	290.9	270.2	236.2	235.7	234.3	234.8	227.7
66°	391.8	400.8	402.2	334.3	280.5	260.3	228.7	229.1	227.7	228.7	220.7





TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	358.3	364.0	360.2	299.9	250.8	232.0	207.0	210.3	208.4	209.8	200.9
68°	348.0	352.7	347.0	289.5	241.4	223.5	200.4	204.2	201.8	203.7	194.7
68.5°	337.1	341.4	334.8	279.1	232.4	215.0	193.8	198.5	195.7	197.6	188.1
69°	326.7	330.5	322.0	268.8	223.5	206.5	187.2	192.4	189.1	191.4	182.0
69.5°	316.8	319.7	310.2	258.9	214.5	198.0	181.1	186.2	182.9	185.8	176.3
70°	306.0	308.8	298.9	249.0	206.0	190.0	174.9	180.6	176.3	179.6	170.2
70.5°	296.1	298.0	287.6	239.5	197.6	182.5	169.3	174.9	170.7	174.0	164.6
71°	286.2	287.6	276.8	230.6	189.5	175.4	163.1	168.8	164.1	167.9	158.9
71.5°	276.3	277.7	265.9	221.6	181.5	167.9	157.5	163.1	158.4	161.7	153.2
72°	266.9	267.8	255.6	212.6	174.0	160.3	151.8	157.0	152.8	156.1	148.1
72.5°	257.4	257.9	245.7	203.7	166.4	153.7	146.2	151.4	147.6	150.4	142.9
73°	248.0	248.5	235.7	195.7	158.9	146.6	141.0	145.7	142.4	145.2	137.7
73.5°	238.1	238.6	225.8	187.2	151.8	140.0	135.8	140.5	136.7	139.6	132.5
74°	229.1	229.1	216.4	179.2	144.7	133.4	130.6	135.3	131.5	134.4	127.3
74.5°	220.2	219.7	207.0	171.2	138.1	127.3	125.4	129.7	126.4	128.7	122.1
75°	210.8	210.8	198.0	164.1	131.1	121.2	120.7	124.9	121.2	123.5	116.9
75.5°	202.3	201.8	189.1	156.5	124.5	115.0	115.5	119.3	116.0	118.3	112.2
76°	193.3	192.8	180.6	149.5	118.3	109.4	110.8	114.1	110.8	113.2	107.0
76.5°	184.4	183.9	172.1	141.9	112.2	103.7	106.1	108.9	106.1	108.0	101.8
77°	175.9	175.4	164.1	134.8	106.1	98.1	101.4	103.7	100.9	102.8	97.6
77.5°	167.9	166.9	156.1	127.8	100.0	92.9	96.2	98.5	96.2	97.6	92.4
78°	159.8	158.9	148.1	120.7	94.3	87.7	91.5	93.4	91.0	92.4	87.7
78.5°	151.4	150.9	140.0	114.1	88.6	82.5	86.8	88.6	86.3	87.7	83.0
79°	143.3	142.4	132.0	107.5	83.5	77.8	82.5	83.5	81.1	82.5	78.3
79.5°	134.8	134.4	124.0	100.9	77.8	73.1	77.8	78.3	76.4	77.8	73.6
80°	126.8	126.4	116.5	94.8	72.6	68.4	73.1	73.1	71.2	73.1	68.8
80.5°	118.8	118.3	108.9	88.2	67.4	64.1	68.8	67.9	66.5	67.9	64.1
81°	111.3	110.8	101.8	82.5	62.7	59.9	64.1	62.7	61.8	63.2	59.9
81.5°	103.3	102.8	94.8	76.4	58.0	55.6	59.4	57.5	56.6	58.0	55.2
82°	95.7	95.7	87.7	70.7	53.3	51.4	54.7	52.8	51.9	53.3	50.9
82.5°	88.2	88.2	80.6	65.1	48.6	47.6	50.5	47.6	47.1	48.6	46.2
83°	80.6	80.6	74.0	59.4	44.8	43.8	45.7	42.9	42.0	43.4	42.0
83.5°	73.1	73.6	67.0	53.8	40.5	40.1	41.5	37.7	37.2	38.7	37.7
84°	66.0	66.5	60.4	49.0	36.3	36.3	37.2	33.0	32.5	33.9	33.5
84.5°	58.9	59.4	54.2	43.8	32.1	32.5	33.5	28.3	27.8	29.2	29.7
85°	51.9	52.3	48.1	39.1	28.3	28.8	29.2	23.1	23.1	24.0	25.5
85.5°	44.8	45.3	42.4	33.9	24.0	25.0	25.0	18.9	18.4	19.8	21.7
86°	37.7	38.7	36.8	29.7	20.3	21.7	21.2	15.1	14.6	15.6	17.9
86.5°	30.6	32.1	31.6	25.0	17.0	17.9	17.4	11.8	11.3	12.3	14.1
87°	24.0	25.9	25.9	20.7	13.7	14.1	13.7	8.5	8.5	9.4	10.8
87.5°	19.3	20.7	20.7	16.0	10.4	10.8	10.4	5.7	5.7	6.1	7.1
88°	15.6	16.0	16.0	12.3	7.1	7.5	6.6	2.8	2.8	3.3	3.8
88.5°	11.8	12.3	12.3	8.5	4.2	3.8	3.3	0.9	0.9	0.9	0.9



TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1936.0	1936.0	1936.0	1936.0	1936.0	1936.0
0.5°	1931.3	1937.4	1942.1	1947.3	1941.6	1943.5
1°	1925.6	1936.0	1944.9	1953.9	1951.1	1954.4
1.5°	1919.9	1934.1	1947.8	1960.0	1960.0	1964.7
2°	1913.8	1932.7	1950.1	1966.1	1969.0	1974.6
2.5°	1907.7	1930.3	1952.5	1972.3	1977.9	1985.0
3°	1901.1	1928.4	1954.4	1977.5	1986.9	1994.4
3.5°	1894.5	1925.6	1955.8	1983.1	1994.9	2003.9
4°	1887.9	1923.2	1957.2	1988.3	2002.9	2013.3
4.5°	1880.8	1920.4	1958.6	1993.0	2010.5	2021.8
5°	1873.3	1917.1	1959.5	1997.3	2018.0	2030.3
5.5°	1866.2	1913.8	1960.5	2001.5	2024.6	2038.8
6°	1858.6	1910.5	1961.0	2005.7	2031.7	2046.8
6.5°	1850.6	1906.7	1961.0	2009.5	2038.3	2054.3
7°	1842.6	1902.5	1961.0	2013.3	2044.4	2061.9
7.5°	1834.1	1898.7	1961.0	2016.1	2050.5	2068.9
8°	1825.6	1894.0	1960.5	2019.0	2056.2	2075.5
8.5°	1817.2	1889.8	1960.0	2021.8	2061.4	2081.7
9°	1808.7	1884.6	1958.6	2024.1	2066.6	2087.8
9.5°	1799.7	1879.9	1957.7	2026.0	2071.3	2093.9
10°	1790.3	1874.2	1956.2	2027.9	2075.5	2099.1
10.5°	1781.3	1869.0	1954.8	2029.3	2079.8	2104.3
11°	1771.9	1863.4	1952.9	2030.7	2083.5	2109.5
11.5°	1762.0	1857.7	1950.6	2031.7	2086.8	2113.7
12°	1752.1	1851.6	1948.2	2032.6	2090.1	2118.0
12.5°	1742.2	1845.4	1945.9	2033.1	2093.0	2121.7
13°	1732.3	1838.8	1942.6	2033.1	2095.3	2125.5
13.5°	1721.9	1832.2	1939.7	2032.6	2097.7	2128.3
14°	1711.5	1825.6	1936.4	2032.2	2099.6	2131.2
14.5°	1700.7	1818.6	1932.7	2031.7	2101.0	2134.0
15°	1689.8	1811.5	1928.9	2030.3	2101.9	2135.9
15.5°	1679.0	1803.9	1924.7	2028.9	2102.9	2137.8
16°	1668.2	1796.4	1920.4	2027.4	2103.8	2139.2
16.5°	1656.8	1788.9	1916.2	2025.6	2103.8	2140.6
17°	1645.5	1780.8	1911.4	2023.2	2103.8	2141.1
17.5°	1633.7	1772.8	1906.3	2020.8	2103.3	2141.5
18°	1622.4	1764.3	1901.1	2018.0	2102.4	2142.0
18.5°	1610.6	1755.9	1895.9	2014.7	2101.5	2141.5
19°	1598.8	1747.4	1890.2	2011.4	2100.0	2141.1
19.5°	1587.1	1738.9	1884.1	2007.6	2098.2	2140.1
20°	1574.8	1729.9	1878.4	2003.9	2095.8	2138.7
20.5°	1562.5	1721.0	1871.8	1999.6	2093.4	2137.3
21°	1550.3	1711.5	1865.2	1994.4	2090.6	2134.9



TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1513.0	1683.2	1844.5	1979.3	2080.2	2126.9
23°	1500.3	1673.3	1837.4	1973.7	2076.0	2123.6
23.5°	1487.6	1663.4	1829.9	1967.6	2071.8	2119.9
24°	1474.8	1653.5	1822.3	1961.4	2067.0	2115.6
24.5°	1461.6	1643.2	1814.3	1954.8	2061.9	2111.4
25°	1448.9	1632.3	1806.3	1948.2	2056.2	2106.6
25.5°	1435.7	1621.5	1797.8	1941.2	2050.1	2101.0
26°	1422.5	1610.6	1789.3	1933.6	2044.4	2095.3
26.5°	1408.8	1599.3	1780.4	1926.1	2037.8	2089.7
27°	1395.6	1588.0	1771.4	1918.1	2030.7	2083.5
27.5°	1382.0	1576.2	1762.0	1910.0	2023.7	2076.9
28°	1368.3	1564.0	1752.1	1901.5	2016.1	2069.4
28.5°	1353.7	1551.7	1742.2	1893.1	2008.1	2062.3
29°	1340.0	1539.0	1731.8	1884.1	2000.1	2054.3
29.5°	1325.4	1525.8	1721.4	1875.1	1991.1	2046.3
30°	1310.8	1512.1	1710.1	1865.7	1982.6	2037.8
30.5°	1296.1	1498.4	1698.3	1856.3	1973.7	2029.3
31°	1281.1	1484.7	1687.0	1845.9	1964.3	2019.9
31.5°	1266.4	1470.1	1674.8	1836.0	1954.4	2010.5
32°	1251.4	1455.5	1662.0	1825.6	1944.5	2001.0
32.5°	1235.8	1440.9	1648.8	1814.8	1934.1	1990.7
33°	1220.7	1425.8	1635.6	1803.9	1923.2	1980.8
33.5°	1204.7	1410.7	1622.0	1792.2	1912.4	1970.4
34°	1188.6	1394.7	1607.8	1780.8	1901.5	1959.5
34.5°	1173.1	1379.6	1593.2	1769.1	1890.2	1948.7
35°	1158.0	1363.6	1578.6	1756.8	1878.4	1938.3
35.5°	1141.5	1347.5	1563.5	1744.5	1866.7	1928.0
36°	1125.5	1330.6	1548.4	1731.8	1854.9	1918.1
36.5°	1109.4	1314.1	1532.4	1718.6	1842.6	1906.7
37°	1093.9	1297.1	1516.3	1704.9	1830.4	1893.5
37.5°	1077.4	1279.6	1499.8	1691.3	1818.1	1877.0
38°	1061.3	1261.7	1482.9	1677.1	1806.3	1853.0
38.5°	1044.8	1243.8	1465.4	1662.5	1794.5	1828.0
39°	1029.3	1225.9	1448.0	1647.9	1783.2	1797.8
39.5°	1011.8	1208.0	1429.1	1632.8	1769.5	1764.3
40°	995.8	1188.6	1410.7	1617.2	1755.4	1728.5
40.5°	979.3	1169.3	1391.4	1601.7	1733.2	1689.4
41°	962.8	1150.0	1371.1	1586.1	1711.5	1652.1
41.5°	946.3	1130.2	1350.4	1569.6	1683.2	1611.6
42°	929.8	1109.9	1329.6	1553.1	1654.0	1572.9
42.5°	913.3	1089.2	1307.9	1536.6	1619.6	1532.4
43°	896.8	1067.9	1285.3	1520.1	1587.5	1492.3
43.5°	879.8	1046.7	1261.7	1502.7	1550.8	1451.3



TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	829.4	981.2	1186.8	1449.4	1442.8	1332.9
45.5°	811.9	958.6	1160.8	1431.0	1405.1	1291.9
46°	794.9	936.9	1133.5	1413.5	1368.8	1256.1
46.5°	778.0	914.7	1106.6	1394.7	1331.5	1216.0
47°	761.0	892.1	1078.8	1376.8	1295.7	1182.5
47.5°	744.5	869.9	1051.4	1356.5	1258.0	1142.9
48°	727.0	847.8	1023.6	1335.8	1223.1	1111.8
48.5°	710.5	825.6	995.3	1312.6	1186.8	1074.5
49°	693.6	803.9	967.5	1282.9	1153.3	1045.3
49.5°	677.1	782.7	940.2	1254.7	1118.4	1009.9
50°	660.6	760.5	912.3	1221.2	1086.8	982.6
50.5°	643.6	739.3	884.5	1187.2	1052.4	949.6
51°	627.6	718.1	856.7	1151.9	1021.3	924.1
51.5°	611.1	697.8	829.8	1115.1	990.1	893.5
52°	595.0	677.1	803.4	1077.8	961.4	869.0
52.5°	579.0	657.3	777.5	1043.0	930.7	841.6
53°	563.0	637.9	751.1	1006.6	901.5	818.5
53.5°	547.9	619.1	726.1	971.3	875.1	793.1
54°	532.3	599.7	702.1	935.9	847.3	770.4
54.5°	517.2	581.8	678.5	902.4	822.3	747.8
55°	502.1	563.9	655.9	869.9	794.5	726.6
55.5°	487.5	546.9	633.2	836.9	772.3	706.3
56°	472.9	530.0	611.5	806.3	745.9	685.6
56.5°	459.2	513.5	591.3	775.6	725.6	667.6
57°	445.1	497.0	571.0	746.9	700.2	646.9
57.5°	431.4	481.4	551.7	718.6	681.3	631.3
58°	418.2	466.3	532.8	691.7	658.2	612.0
58.5°	406.0	451.7	515.3	665.8	639.8	597.9
59°	393.7	437.5	498.4	639.8	619.5	579.0
59.5°	381.4	423.4	481.9	617.2	600.7	566.3
60°	369.2	409.7	465.4	593.6	582.8	548.8
60.5°	356.5	396.1	450.3	571.5	564.9	534.7
61°	344.7	383.3	435.2	549.8	548.8	519.6
61.5°	333.8	371.1	421.0	529.5	530.9	505.4
62°	322.5	358.8	407.4	510.2	516.8	491.8
62.5°	311.7	346.6	394.2	491.8	500.3	478.1
63°	300.8	335.2	380.5	473.9	485.6	464.9
63.5°	290.9	323.9	368.2	456.9	471.0	452.2
64°	281.0	312.6	356.0	439.4	455.9	439.9
64.5°	271.1	301.8	344.2	424.3	442.7	427.2
65°	261.2	291.9	332.4	408.8	428.6	415.4
65.5°	251.8	281.0	321.1	394.6	416.3	403.6
66°	242.8	271.1	310.2	380.0	403.1	391.8



TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	216.9	242.3	279.1	341.4	365.9	358.3
68°	208.9	233.9	268.8	328.2	354.6	348.0
68.5°	200.9	224.9	259.3	316.8	343.3	337.1
69°	193.3	216.4	249.9	305.1	331.5	326.7
69.5°	185.3	207.9	240.9	293.7	320.6	316.8
70°	178.2	199.9	232.0	282.9	309.8	306.0
70.5°	170.7	191.4	223.0	272.1	298.9	296.1
71°	163.6	183.9	214.1	261.7	289.0	286.2
71.5°	157.0	175.9	206.0	251.3	278.7	276.3
72°	150.4	169.3	197.6	241.4	268.3	266.9
72.5°	143.8	162.2	189.5	232.0	258.4	257.4
73°	137.2	155.1	181.5	222.1	248.5	248.0
73.5°	131.1	148.1	173.5	213.1	239.0	238.1
74°	124.9	141.0	166.4	204.2	229.6	229.1
74.5°	119.3	134.4	159.4	194.7	220.2	220.2
75°	113.6	127.8	152.3	186.2	210.8	210.8
75.5°	108.0	121.2	144.7	177.8	201.8	202.3
76°	102.3	115.0	137.7	167.9	193.3	193.3
76.5°	97.1	108.9	130.6	160.3	184.4	184.4
77°	92.4	103.3	124.0	152.8	175.4	175.9
77.5°	87.7	97.1	117.4	145.2	166.9	167.9
78°	82.5	91.5	110.8	137.2	158.9	159.8
78.5°	77.8	86.3	104.7	129.7	150.9	151.4
79°	73.6	80.6	98.1	122.1	142.9	143.3
79.5°	69.3	75.4	91.9	114.6	134.4	134.8
80°	65.1	70.3	85.8	107.0	126.4	126.8
80.5°	60.8	65.5	80.2	100.0	118.3	118.8
81°	56.6	60.4	74.5	92.9	110.8	111.3
81.5°	52.3	55.6	68.8	85.8	103.3	103.3
82°	48.6	51.4	63.2	78.7	95.2	95.7
82.5°	44.3	46.7	58.0	72.1	88.2	88.2
83°	40.5	42.4	52.8	65.5	80.6	80.6
83.5°	36.8	38.2	47.6	58.9	73.6	73.1
84°	33.0	33.9	42.4	52.8	66.0	66.0
84.5°	29.2	30.2	37.7	46.7	58.9	58.9
85°	25.5	25.9	33.0	41.0	52.3	51.9
85.5°	21.7	22.6	28.3	35.8	45.3	44.8
86°	17.9	18.9	24.0	30.2	38.7	37.7
86.5°	14.6	15.6	19.8	25.0	32.5	30.6
87°	10.8	12.3	16.0	20.3	26.9	24.0
87.5°	7.1	9.0	12.3	15.1	21.7	19.3
88°	3.8	5.7	8.5	11.3	17.0	15.6
88.5°	0.9	2.4	4.7	7.5	12.7	11.8



TEST NUMBER: P776832

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.5	0.5



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Scaled Data Report





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

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2132.6	2122.7	2055.3	1939.3	1778.5	1608.3	1459.8	1345.2	1306.5	1326.3	1406.5
22°	2130.2	2119.9	2051.5	1933.6	1770.5	1597.0	1445.6	1329.6	1290.0	1310.8	1391.4



44°	1411.7	1508.3	1593.2	1362.6	1102.4	926.0	768.5	642.2	607.8	626.6	718.6
44.5°	1371.1	1468.7	1577.6	1338.1	1079.3	908.1	752.5	628.0	595.0	613.4	703.5



66.5°	381.0	388.0	387.6	322.5	270.6	250.4	221.1	223.0	221.1	222.1	214.1
67°	369.7	376.3	373.9	311.2	260.7	241.4	214.1	216.9	214.5	215.9	207.5



89°	8.0	8.0	8.0	4.7	1.4	0.9	0.9	0.5	0.0	0.5	0.5
89.5°	4.2	4.2	4.2	0.9	0.0	0.0	0.0	0.5	0.0	0.5	0.0



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21.5°	1538.0	1702.1	1858.6	1989.7	2087.8	2132.6
22°	1525.8	1692.7	1851.6	1985.0	2084.0	2130.2



44°	862.8	1025.0	1237.7	1485.2	1516.3	1411.7
44.5°	846.3	1003.3	1212.7	1467.3	1478.6	1371.1



66.5°	234.3	261.7	299.4	366.8	390.4	381.0
67°	225.4	252.3	289.0	353.6	378.6	369.7



89°	0.0	0.5	0.9	3.8	8.5	8.0
89.5°	0.0	0.0	0.0	0.5	4.7	4.2

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Scaled Data Report



(END OF REPORT)