

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: P776630

Luminaire Tested: HCDJBS4050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776630  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B009)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K  
Description: 4 INCH SQUARE MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4016.1 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.14 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

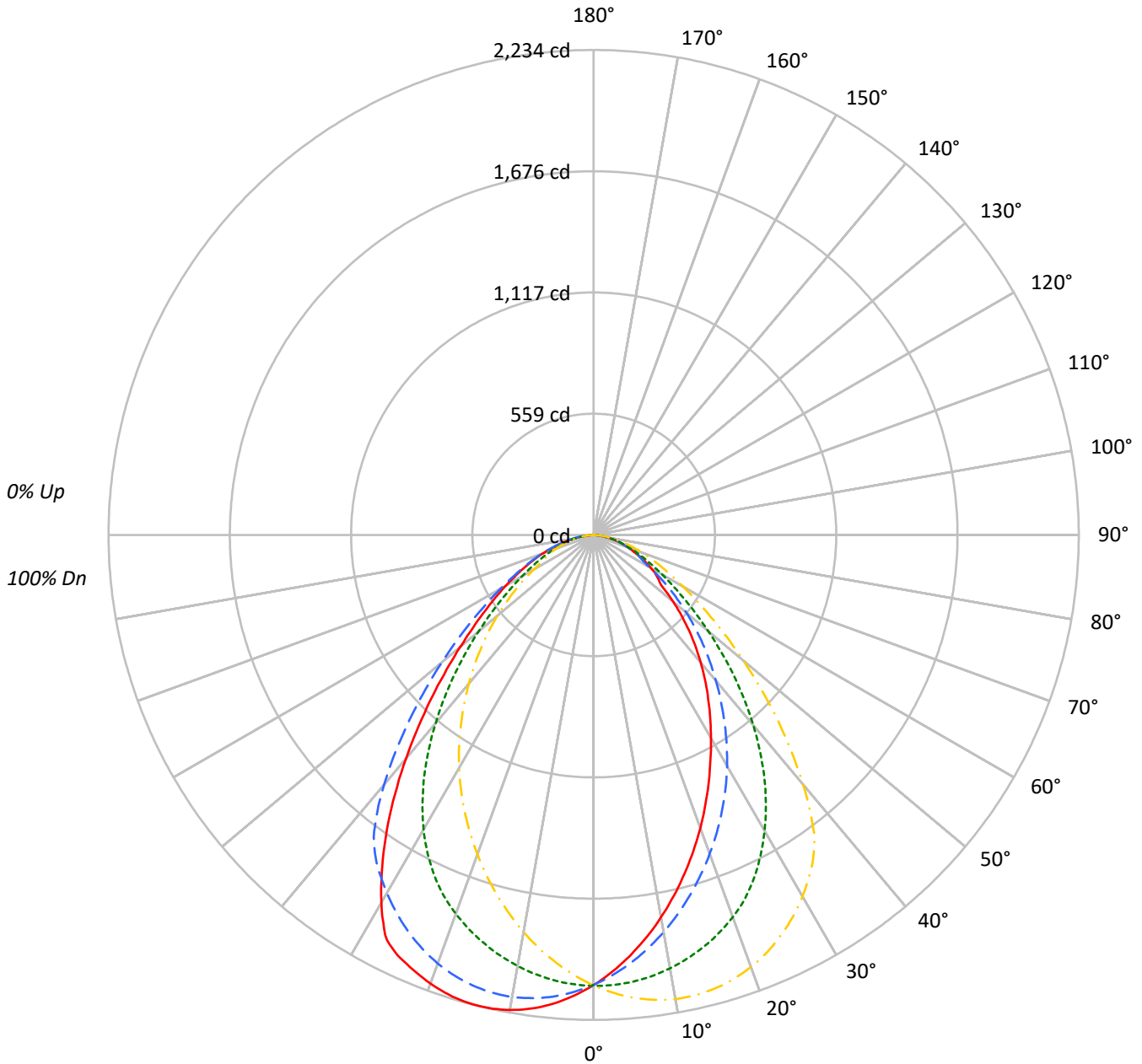
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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				
RW	70	50	30	10	70	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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66		
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58		
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52		
6	75	63	55	50	74	62	55	49	61	54	49	59	53	49	58	52	48	46		
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42		
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38		
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34		
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33	32		

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

	0°	90°	180°	270°
0°	261025	261025	261025	261025
5°	245549	260986	273935	260291
10°	228478	259046	283965	257704
15°	210508	255745	290767	253777
20°	192345	250925	294491	248661
25°	174116	242380	296674	240741
30°	156988	228761	284055	227642
35°	141190	210633	255079	209096
40°	125908	187811	220602	186086
45°	110204	161782	186521	160804
50°	93586	134623	157178	135505
55°	80875	110364	134456	113261
60°	76945	91644	117216	95872
65°	68937	77335	103659	82755
70°	61707	66564	91365	72599
75°	54508	57377	78432	64233
80°	42905	47905	60733	56167
85°	21082	34800	28879	46062

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 225°  
 Vertical Angle: 45°  
 Luminance: 212631 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	195.0	4.9
10°-20°	545.5	13.6
20°-30°	787.8	19.6
30°-40°	847.5	21.1
40°-50°	703.4	17.5
50°-60°	473.2	11.8
60°-70°	286.4	7.1
70°-80°	144.7	3.6
80°-90°	32.5	0.8
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°	1528.3	38.1
0°-40°	2375.8	59.2
0°-60°	3552.4	88.5
0°-90°	4016.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2074	2074	2074	2074	2074	
5°	1944	2066	2168	2060	1944	181
15°	1616	1963	2232	1948	1616	452
25°	1254	1746	2136	1734	1254	576
35°	919	1371	1660	1361	919	574
45°	619	909	1048	904	619	477
55°	369	503	613	516	369	337
65°	232	260	348	278	232	231
75°	112	118	161	132	112	119
85°	15	24	20	32	15	22
90°	0	0	0	0	0	

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CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1
0.5°	2061.8	2061.8	2064.0	2068.6	2077.2	2080.4	2083.2	2084.5	2084.5	2082.7	2080.0
1°	2049.9	2050.8	2055.8	2064.0	2077.2	2084.5	2090.9	2094.6	2095.5	2092.7	2087.3
1.5°	2037.6	2039.4	2047.2	2059.0	2076.8	2088.2	2098.2	2104.1	2105.9	2101.8	2094.1
2°	2025.3	2028.0	2038.1	2053.6	2075.9	2091.8	2105.0	2113.7	2116.0	2111.0	2101.4
2.5°	2012.1	2015.7	2028.5	2048.1	2075.0	2095.0	2111.9	2122.4	2125.5	2120.1	2107.8
3°	1999.3	2003.9	2019.4	2042.2	2073.6	2098.2	2118.3	2131.0	2135.1	2128.3	2113.7
3.5°	1985.7	1991.1	2009.4	2036.2	2072.2	2100.5	2124.2	2139.7	2143.8	2136.5	2119.6
4°	1972.0	1978.8	1998.9	2029.9	2070.0	2103.2	2130.1	2147.4	2152.4	2144.2	2125.1
4.5°	1957.9	1965.2	1988.4	2023.0	2068.1	2105.0	2135.6	2154.7	2160.6	2151.5	2129.6
5°	1943.7	1952.4	1977.9	2016.2	2065.9	2106.9	2140.6	2162.0	2168.4	2158.3	2134.7
5.5°	1928.7	1938.7	1966.5	2008.9	2063.1	2108.2	2145.1	2168.8	2175.7	2164.7	2138.8
6°	1914.1	1924.6	1955.6	2001.6	2060.4	2109.6	2149.2	2175.2	2182.5	2171.1	2142.9
6.5°	1899.5	1910.0	1944.2	1993.9	2057.2	2110.0	2153.3	2180.7	2188.9	2176.6	2146.5
7°	1884.1	1896.4	1932.4	1986.6	2053.6	2110.5	2157.0	2186.1	2195.3	2181.6	2149.7
7.5°	1868.1	1881.3	1920.0	1977.9	2049.9	2110.5	2160.2	2191.2	2200.7	2186.6	2152.4
8°	1853.1	1866.7	1908.2	1969.7	2045.8	2110.5	2162.9	2196.2	2205.7	2191.2	2154.7
8.5°	1837.1	1851.7	1895.9	1961.1	2041.2	2110.0	2165.2	2200.3	2210.7	2194.8	2156.5
9°	1820.7	1836.7	1883.1	1952.4	2036.7	2109.1	2167.5	2203.9	2214.8	2198.4	2158.3
9.5°	1804.3	1820.7	1869.9	1942.8	2032.1	2107.8	2169.3	2207.1	2218.5	2201.6	2159.7
10°	1787.9	1805.2	1857.2	1933.7	2027.1	2106.4	2170.6	2210.3	2222.1	2204.4	2160.6
10.5°	1771.1	1789.7	1844.0	1924.1	2021.7	2104.6	2171.6	2213.0	2224.9	2206.6	2161.5
11°	1754.7	1773.8	1830.7	1914.6	2016.2	2102.8	2172.0	2214.8	2227.6	2208.5	2161.5
11.5°	1737.8	1757.8	1817.1	1904.1	2010.3	2100.5	2172.0	2216.7	2229.4	2209.8	2161.1
12°	1720.0	1741.9	1803.0	1894.1	2004.3	2097.7	2172.0	2218.0	2231.2	2210.7	2160.6
12.5°	1703.2	1725.0	1789.3	1883.6	1998.0	2095.0	2171.6	2218.5	2232.6	2211.7	2159.7
13°	1686.3	1708.6	1775.2	1873.1	1991.6	2091.8	2170.2	2218.9	2233.1	2211.7	2158.3
13.5°	1668.5	1692.2	1761.0	1862.6	1984.7	2088.2	2168.8	2218.9	2233.5	2211.2	2156.5
14°	1651.2	1675.8	1746.0	1851.7	1977.9	2084.1	2167.0	2218.5	2233.5	2210.3	2154.2
14.5°	1633.5	1659.0	1731.4	1840.3	1970.6	2080.4	2165.2	2217.6	2232.6	2208.9	2151.5
15°	1615.7	1641.2	1716.8	1828.9	1962.9	2075.9	2162.4	2216.2	2231.7	2207.6	2148.8
15.5°	1597.9	1624.3	1702.3	1817.5	1955.1	2071.3	2159.7	2214.4	2230.3	2205.7	2145.6
16°	1580.1	1607.5	1687.2	1806.1	1947.4	2065.9	2156.5	2212.1	2228.5	2203.5	2141.9
16.5°	1562.8	1590.2	1671.7	1794.3	1939.2	2060.8	2152.9	2209.8	2226.2	2200.7	2137.8
17°	1544.6	1573.3	1656.7	1782.0	1930.5	2054.9	2149.2	2207.1	2223.5	2197.1	2133.7
17.5°	1526.8	1555.1	1641.2	1769.7	1921.4	2049.0	2144.7	2203.5	2220.3	2193.4	2128.7
18°	1508.6	1537.8	1626.2	1757.4	1912.3	2042.2	2140.1	2199.4	2216.7	2189.3	2123.7
18.5°	1490.8	1520.5	1610.7	1744.6	1903.2	2035.8	2135.1	2195.3	2212.6	2184.8	2118.3
19°	1472.6	1502.7	1594.7	1731.4	1893.6	2028.9	2129.6	2190.7	2208.5	2180.2	2112.8
19.5°	1453.9	1484.9	1579.2	1718.7	1883.6	2021.2	2123.7	2185.7	2203.9	2174.7	2106.9
20°	1436.2	1467.6	1562.8	1705.4	1873.6	2013.9	2117.8	2180.2	2198.9	2169.3	2100.5
20.5°	1417.9	1449.8	1547.3	1691.8	1863.1	2005.7	2111.4	2174.3	2193.4	2163.4	2093.2
21°	1399.7	1432.1	1531.4	1678.1	1852.2	1997.5	2104.6	2168.4	2188.0	2157.0	2086.4

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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°	1345.0	1378.8	1482.6	1636.2	1816.2	1970.6	2082.3	2147.9	2169.3	2136.0	2062.7
23°	1326.4	1360.5	1465.8	1621.2	1803.4	1960.1	2074.1	2140.6	2162.9	2128.7	2054.5
23.5°	1308.6	1343.2	1449.8	1606.6	1789.3	1949.7	2065.4	2132.8	2156.1	2121.0	2045.8
24°	1290.4	1325.0	1433.0	1590.2	1775.2	1938.3	2055.8	2125.5	2149.7	2113.2	2036.7
24.5°	1271.7	1307.2	1416.6	1574.7	1760.6	1926.0	2046.7	2117.3	2143.3	2104.6	2027.1
25°	1253.9	1289.4	1399.3	1558.3	1745.5	1913.2	2037.1	2109.1	2136.5	2096.4	2017.6
25.5°	1236.1	1271.2	1382.9	1541.9	1730.5	1900.0	2027.6	2101.4	2127.4	2088.2	2007.1
26°	1218.4	1253.5	1366.0	1524.6	1714.6	1886.8	2017.1	2093.6	2117.3	2080.4	1997.1
26.5°	1200.6	1236.1	1349.1	1508.2	1698.2	1872.2	2006.6	2085.4	2106.9	2071.8	1986.1
27°	1182.8	1217.9	1332.3	1490.8	1681.3	1857.2	1995.7	2076.8	2095.9	2063.1	1975.2
27.5°	1165.5	1200.6	1315.4	1473.5	1664.0	1842.1	1984.7	2065.4	2078.6	2051.7	1964.2
28°	1147.7	1182.8	1298.1	1455.8	1646.7	1826.2	1973.4	2054.0	2054.9	2039.9	1952.9
28.5°	1130.9	1165.5	1281.2	1438.0	1628.9	1809.8	1961.5	2042.6	2030.8	2028.0	1941.0
29°	1114.0	1147.7	1263.5	1419.8	1611.1	1792.9	1949.2	2029.9	2008.4	2015.3	1928.7
29.5°	1096.7	1131.3	1246.2	1402.0	1592.4	1775.2	1936.5	2010.3	1981.6	1995.7	1916.4
30°	1080.3	1114.5	1228.4	1383.3	1574.2	1756.9	1923.7	1985.7	1954.7	1972.0	1904.1
30.5°	1063.5	1097.2	1210.6	1365.1	1554.6	1739.2	1910.0	1962.0	1927.8	1947.8	1891.3
31°	1047.1	1078.9	1192.9	1346.4	1535.9	1720.9	1895.9	1939.2	1900.5	1924.6	1878.6
31.5°	1030.6	1063.5	1174.6	1327.7	1515.9	1701.3	1881.3	1912.3	1870.4	1898.6	1865.4
32°	1014.2	1046.6	1156.9	1309.0	1496.3	1682.2	1867.2	1885.4	1841.7	1872.2	1852.2
32.5°	998.3	1030.6	1139.1	1290.4	1476.3	1662.2	1853.1	1858.1	1813.0	1846.2	1838.9
33°	982.4	1014.2	1121.3	1271.2	1455.8	1642.1	1838.0	1831.7	1782.9	1818.9	1825.3
33.5°	966.4	998.3	1103.5	1252.5	1434.3	1621.6	1822.5	1803.0	1752.4	1791.6	1811.2
34°	950.9	982.4	1085.3	1233.0	1414.3	1600.6	1806.1	1774.7	1721.4	1762.4	1795.2
34.5°	934.5	965.9	1067.1	1213.8	1392.4	1578.3	1787.9	1745.1	1690.9	1734.6	1777.9
35°	919.0	949.1	1049.3	1194.2	1371.0	1557.4	1769.7	1716.8	1660.3	1705.9	1759.7
35.5°	903.5	934.5	1031.6	1175.1	1349.1	1534.6	1750.1	1686.8	1628.9	1677.7	1741.9
36°	888.5	918.6	1014.2	1155.5	1326.4	1512.3	1730.0	1657.1	1597.0	1648.0	1723.2
36.5°	873.0	903.1	996.0	1136.4	1304.0	1489.5	1705.4	1626.6	1566.5	1618.4	1700.4
37°	857.5	887.6	978.7	1116.8	1282.2	1465.8	1676.7	1597.0	1534.6	1589.7	1672.6
37.5°	842.0	871.6	960.9	1096.7	1258.9	1441.6	1648.0	1566.5	1502.2	1560.1	1645.8
38°	826.5	856.1	943.6	1077.1	1235.7	1417.5	1620.2	1535.9	1469.4	1530.0	1618.4
38.5°	811.5	840.6	926.8	1057.1	1212.4	1393.3	1591.5	1504.1	1439.4	1499.5	1591.1
39°	796.9	825.6	909.4	1037.5	1189.7	1368.7	1561.0	1475.3	1407.9	1470.8	1561.0
39.5°	781.4	810.6	892.1	1017.4	1166.4	1343.7	1530.5	1443.9	1375.6	1441.2	1531.4
40°	766.4	794.6	875.3	997.4	1143.2	1318.2	1500.0	1412.5	1342.8	1410.6	1500.9
40.5°	751.3	779.6	858.4	977.8	1119.0	1293.1	1469.4	1381.5	1314.5	1379.7	1470.8
41°	736.3	764.6	842.0	957.7	1095.8	1267.6	1438.0	1352.8	1284.0	1351.9	1440.7
41.5°	721.7	749.5	825.2	938.2	1072.1	1242.1	1407.0	1322.3	1251.6	1322.3	1408.8
42°	706.7	734.5	808.8	918.1	1048.9	1216.5	1375.6	1290.4	1222.0	1291.3	1378.3
42.5°	692.1	719.4	792.4	899.0	1025.6	1190.1	1345.0	1261.7	1193.8	1263.0	1346.9
43°	677.5	704.4	775.9	879.4	1001.9	1164.6	1314.1	1233.0	1164.1	1234.8	1316.8
43.5°	662.5	689.8	759.5	859.8	978.2	1138.6	1283.1	1202.0	1131.3	1205.2	1285.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	619.2	645.6	711.7	801.9	909.0	1060.7	1190.6	1116.8	1048.0	1122.2	1194.7
45.5°	604.6	631.1	695.8	782.8	885.8	1035.2	1159.1	1085.3	1021.1	1092.2	1164.6
46°	591.0	616.9	680.3	764.1	863.0	1009.7	1128.6	1058.4	996.9	1063.9	1134.5
46.5°	575.9	602.4	664.3	745.0	840.2	983.7	1099.4	1032.9	969.6	1040.7	1106.3
47°	561.8	587.8	648.8	726.7	817.4	958.2	1069.8	1004.2	940.0	1013.3	1076.7
47.5°	547.7	573.2	632.9	708.1	795.1	932.7	1039.8	974.1	919.0	983.7	1048.0
48°	534.0	559.1	618.3	689.8	772.8	907.6	1009.7	951.8	896.2	960.5	1019.3
48.5°	519.4	544.5	602.8	671.6	751.3	883.0	982.8	926.3	869.4	937.2	993.3
49°	505.8	530.8	587.8	654.3	729.9	858.4	955.0	897.6	845.7	910.4	965.5
49.5°	492.1	516.7	572.7	636.5	709.0	834.3	926.3	872.5	825.6	883.9	938.2
50°	478.0	502.6	557.7	618.8	687.6	809.2	898.5	850.2	802.8	863.0	910.8
50.5°	463.8	488.4	543.1	601.4	667.5	786.0	873.5	825.2	777.3	839.7	887.1
51°	450.6	474.8	528.5	585.0	647.5	761.8	846.6	798.3	760.0	811.9	861.2
51.5°	437.0	461.1	514.0	568.2	628.3	739.5	820.1	779.6	741.3	793.3	835.6
52°	423.7	447.4	499.8	551.8	608.7	715.8	796.9	757.7	717.2	772.3	811.0
52.5°	410.5	433.8	485.7	535.8	589.6	693.9	772.8	731.8	699.9	748.6	790.1
53°	398.2	420.1	472.0	519.9	571.4	671.2	747.2	713.1	683.0	726.3	764.6
53.5°	386.4	406.9	457.9	504.4	554.1	649.7	724.0	694.4	663.4	709.0	740.9
54°	379.1	394.1	444.2	488.9	536.3	627.9	702.1	672.5	644.3	688.0	719.9
54.5°	374.1	381.4	431.0	473.9	519.4	606.9	679.8	652.5	629.7	665.7	699.4
55°	368.6	369.5	417.8	459.7	503.0	586.9	657.0	636.1	612.8	650.2	676.6
55.5°	363.6	358.1	405.1	445.6	487.1	566.4	637.9	617.4	594.1	632.4	656.1
56°	357.7	352.2	391.8	431.9	471.6	547.2	616.9	597.8	580.9	611.0	637.0
56.5°	351.8	347.2	379.1	418.3	456.5	529.0	596.0	582.8	565.9	596.0	616.9
57°	346.3	341.7	366.8	405.1	441.5	510.8	577.7	565.9	548.6	580.5	596.9
57.5°	339.9	336.3	354.5	391.8	427.8	493.0	559.5	547.7	536.3	561.8	580.5
58°	334.0	330.3	343.1	379.5	413.7	476.6	539.9	534.5	522.6	546.8	561.8
58.5°	327.1	324.9	331.2	367.7	401.0	460.2	523.5	519.4	506.7	533.1	543.6
59°	319.9	318.5	319.9	355.9	388.7	444.7	506.7	502.1	493.5	516.7	527.6
59.5°	313.0	312.6	308.5	344.0	376.4	429.2	489.4	489.8	479.3	502.1	511.2
60°	305.7	306.2	298.0	333.1	364.1	414.6	473.9	476.1	465.7	489.4	493.9
60.5°	298.0	299.4	287.1	321.7	351.8	400.5	458.8	460.6	452.9	473.9	479.3
61°	290.7	292.5	277.0	311.7	339.4	387.3	442.9	448.8	439.7	460.2	464.7
61.5°	283.4	285.7	268.4	301.2	328.5	374.5	429.2	435.1	427.4	447.4	449.3
62°	275.7	278.4	259.7	291.2	318.0	361.3	415.5	421.0	415.1	433.3	435.6
62.5°	268.4	271.1	254.7	281.6	307.6	348.1	401.0	409.2	403.7	421.0	422.4
63°	261.1	264.3	249.2	272.0	297.1	336.7	388.7	396.9	392.8	409.2	407.8
63.5°	253.8	257.0	244.2	262.9	287.5	325.3	376.4	384.6	381.4	395.5	395.9
64°	246.0	250.1	239.2	254.2	277.9	314.4	364.5	372.7	370.4	384.1	384.1
64.5°	238.8	242.9	233.7	245.1	268.4	303.5	352.2	360.9	359.0	372.7	371.8
65°	231.5	236.0	228.3	236.9	259.7	293.4	339.9	349.0	348.1	361.3	360.0
65.5°	224.2	228.7	222.8	229.2	250.6	283.4	328.5	339.4	337.2	349.9	347.7
66°	216.9	221.9	217.3	221.0	241.9	273.4	317.6	327.6	326.7	339.0	336.3





TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	197.7	200.9	199.6	198.7	217.8	245.6	285.2	297.1	296.2	307.6	303.9
68°	191.4	194.6	193.2	191.8	210.0	236.9	275.2	287.1	286.6	297.1	293.4
68.5°	185.4	188.2	187.3	185.0	202.3	228.7	265.2	277.0	276.6	287.1	282.9
69°	179.5	181.8	181.8	178.2	195.0	220.5	255.2	267.5	267.5	277.0	272.9
69.5°	173.6	175.9	175.9	171.8	187.7	211.9	246.0	257.9	257.9	267.5	262.9
70°	167.7	170.0	169.5	165.9	180.9	204.1	236.5	248.3	248.3	257.9	253.8
70.5°	162.2	163.1	164.0	159.9	173.6	196.4	227.4	239.7	239.7	248.3	244.2
71°	156.7	158.1	158.6	154.5	167.2	189.1	218.7	230.1	230.6	239.7	235.1
71.5°	151.3	152.6	152.6	148.5	160.4	181.3	209.6	221.4	221.4	230.1	226.0
72°	145.3	147.2	146.7	143.1	154.0	174.1	200.9	212.3	212.3	221.0	217.3
72.5°	139.9	141.7	141.2	137.1	147.6	167.2	192.7	203.7	203.7	211.9	208.2
73°	134.4	136.2	135.3	132.1	141.7	159.9	184.5	195.5	195.0	203.7	200.0
73.5°	128.5	130.8	129.9	127.1	135.3	153.1	176.3	186.8	186.4	194.6	191.4
74°	123.0	124.8	123.9	122.6	129.4	146.7	168.1	178.2	177.7	185.9	183.2
74.5°	117.6	119.4	118.9	118.5	123.5	139.9	160.4	170.0	169.5	177.7	175.0
75°	112.1	113.9	113.9	113.9	118.0	133.5	152.6	162.2	161.3	169.5	167.2
75.5°	106.6	108.4	108.4	109.4	112.1	127.6	144.9	154.0	153.1	160.8	159.0
76°	101.2	103.0	103.0	104.3	106.6	121.2	138.1	145.8	144.9	153.1	151.3
76.5°	95.7	97.5	98.0	99.8	101.2	114.8	130.3	137.6	136.7	144.9	143.5
77°	90.7	92.0	92.9	95.2	96.1	108.9	123.5	130.3	129.4	137.1	136.2
77.5°	85.2	86.6	87.9	90.2	90.7	103.0	116.2	122.6	121.2	128.9	128.9
78°	80.2	81.1	82.9	85.7	85.7	97.1	109.4	115.3	113.5	121.7	121.7
78.5°	74.7	76.1	77.9	81.1	80.6	91.1	102.5	107.5	106.2	113.9	114.8
79°	69.7	70.6	73.4	76.1	75.6	85.7	96.1	100.2	98.4	106.2	107.5
79.5°	64.2	65.2	68.3	71.5	71.1	80.2	89.8	92.5	91.1	98.9	100.7
80°	59.2	59.7	63.3	67.0	66.1	74.7	83.4	85.2	83.8	91.6	94.3
80.5°	54.2	54.7	58.8	62.4	61.5	69.3	77.0	78.4	76.5	84.3	87.5
81°	49.2	49.2	54.2	57.9	57.0	64.2	71.1	71.1	69.3	77.0	81.1
81.5°	44.2	44.2	49.7	53.3	52.9	59.2	65.2	64.2	62.4	70.2	75.2
82°	39.2	39.2	45.6	49.2	48.3	54.2	59.2	58.3	55.6	63.3	68.8
82.5°	34.2	35.1	41.0	44.7	44.2	49.7	53.8	51.9	49.2	57.0	63.3
83°	29.6	30.5	36.9	40.6	40.1	44.7	48.8	46.5	42.8	50.6	57.4
83.5°	24.6	26.4	33.3	36.5	36.0	40.6	43.7	41.5	36.5	45.6	51.9
84°	20.0	22.8	29.2	31.9	31.9	36.0	39.2	36.0	30.1	40.1	46.9
84.5°	16.4	19.1	25.5	27.8	27.8	31.4	34.2	30.5	23.7	35.1	42.4
85°	14.6	16.4	21.9	23.7	24.1	26.9	29.6	25.1	20.0	30.1	37.4
85.5°	12.3	14.1	18.2	19.6	20.0	22.3	24.6	21.4	17.3	24.6	32.8
86°	10.0	11.4	15.0	15.5	16.4	18.2	20.5	17.8	14.6	21.0	27.8
86.5°	8.2	9.1	11.4	11.8	12.8	14.1	15.9	14.6	12.3	17.8	23.2
87°	5.9	6.4	8.2	8.2	9.1	10.0	11.8	10.9	9.6	14.6	18.7
87.5°	4.1	4.1	4.6	5.0	5.5	6.4	7.7	7.7	7.3	10.9	14.6
88°	2.3	1.8	1.8	1.4	2.3	3.2	4.1	5.0	5.0	7.7	10.5
88.5°	0.9	0.5	0.5	0.5	0.5	0.9	1.4	2.3	2.3	4.6	6.4



TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

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



TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2074.1	2074.1	2074.1	2074.1	2074.1	2074.1
0.5°	2077.2	2076.3	2071.3	2066.8	2063.6	2061.8
1°	2080.9	2075.9	2066.3	2058.1	2052.6	2049.9
1.5°	2084.5	2075.0	2061.3	2049.0	2041.2	2037.6
2°	2087.7	2073.6	2055.4	2040.3	2029.4	2025.3
2.5°	2090.5	2072.2	2049.4	2030.3	2017.1	2012.1
3°	2093.2	2070.4	2043.5	2020.7	2005.3	1999.3
3.5°	2095.5	2068.1	2037.1	2010.7	1993.0	1985.7
4°	2097.3	2065.9	2030.3	2000.7	1979.7	1972.0
4.5°	2098.7	2063.1	2023.5	1989.3	1966.5	1957.9
5°	2100.0	2060.4	2016.6	1978.8	1952.9	1943.7
5.5°	2100.9	2056.7	2009.4	1967.4	1939.6	1928.7
6°	2101.8	2053.6	2001.6	1956.0	1925.5	1914.1
6.5°	2102.3	2049.9	1993.4	1944.2	1911.4	1899.5
7°	2102.3	2045.8	1985.2	1933.3	1897.3	1884.1
7.5°	2101.8	2041.7	1977.0	1921.0	1882.7	1868.1
8°	2101.4	2037.1	1968.3	1908.7	1867.7	1853.1
8.5°	2100.5	2032.1	1959.7	1896.4	1852.6	1837.1
9°	2099.1	2027.1	1950.6	1883.6	1837.1	1820.7
9.5°	2097.7	2022.1	1941.0	1870.4	1822.1	1804.3
10°	2095.9	2016.6	1931.4	1857.2	1806.6	1787.9
10.5°	2093.6	2010.7	1921.9	1844.4	1791.1	1771.1
11°	2091.4	2004.8	1911.8	1830.7	1775.2	1754.7
11.5°	2088.6	1998.4	1901.8	1817.1	1758.8	1737.8
12°	2085.4	1991.6	1891.3	1803.4	1742.8	1720.0
12.5°	2082.3	1985.2	1880.9	1789.3	1726.4	1703.2
13°	2078.6	1978.4	1870.4	1775.2	1710.0	1686.3
13.5°	2074.1	1971.1	1859.4	1761.0	1693.6	1668.5
14°	2070.4	1963.8	1849.0	1746.9	1676.7	1651.2
14.5°	2065.9	1956.0	1837.6	1732.3	1659.9	1633.5
15°	2060.8	1947.8	1826.2	1717.3	1643.0	1615.7
15.5°	2055.8	1940.1	1814.8	1702.7	1625.7	1597.9
16°	2050.4	1931.9	1803.4	1687.7	1608.8	1580.1
16.5°	2044.9	1923.2	1791.6	1673.1	1592.0	1562.8
17°	2038.5	1914.6	1779.7	1658.1	1574.7	1544.6
17.5°	2032.1	1905.5	1767.4	1642.6	1557.4	1526.8
18°	2025.8	1896.4	1755.6	1627.1	1540.0	1508.6
18.5°	2018.9	1886.8	1742.8	1612.0	1522.3	1490.8
19°	2011.6	1876.8	1730.0	1596.1	1505.0	1472.6
19.5°	2004.3	1867.2	1717.3	1581.1	1488.1	1453.9
20°	1996.6	1856.7	1704.5	1565.6	1470.3	1436.2
20.5°	1987.9	1846.2	1691.3	1549.6	1453.0	1417.9
21°	1979.7	1835.3	1677.7	1533.7	1435.3	1399.7

TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1952.4	1801.1	1636.6	1486.3	1382.4	1345.0
23°	1942.8	1788.8	1622.1	1470.3	1364.2	1326.4
23.5°	1932.4	1776.1	1608.4	1454.4	1347.3	1308.6
24°	1921.9	1761.9	1593.8	1438.0	1329.5	1290.4
24.5°	1910.9	1748.7	1578.8	1422.0	1311.8	1271.7
25°	1899.5	1733.7	1563.3	1405.6	1293.5	1253.9
25.5°	1887.7	1719.1	1548.3	1389.2	1276.7	1236.1
26°	1874.9	1703.2	1532.3	1372.8	1258.9	1218.4
26.5°	1861.7	1687.7	1515.9	1356.4	1241.2	1200.6
27°	1848.1	1672.2	1499.5	1340.0	1223.8	1182.8
27.5°	1833.5	1655.3	1482.6	1323.2	1206.5	1165.5
28°	1818.0	1637.6	1465.3	1306.3	1188.8	1147.7
28.5°	1802.5	1621.2	1448.5	1289.9	1171.4	1130.9
29°	1786.5	1603.4	1431.2	1273.5	1154.6	1114.0
29.5°	1769.7	1585.2	1413.8	1256.6	1137.7	1096.7
30°	1753.3	1566.5	1395.6	1239.3	1120.9	1080.3
30.5°	1736.0	1547.3	1378.3	1222.5	1104.0	1063.5
31°	1717.7	1527.7	1359.6	1205.2	1087.1	1047.1
31.5°	1698.6	1507.7	1341.4	1187.8	1070.3	1030.6
32°	1679.5	1488.1	1322.7	1171.0	1054.3	1014.2
32.5°	1659.9	1467.6	1304.5	1153.2	1037.9	998.3
33°	1639.4	1446.2	1285.3	1135.9	1021.5	982.4
33.5°	1618.9	1425.2	1266.2	1118.6	1005.6	966.4
34°	1597.0	1404.3	1247.1	1100.8	989.6	950.9
34.5°	1575.6	1382.4	1227.9	1083.0	974.1	934.5
35°	1553.7	1361.0	1208.3	1065.3	958.2	919.0
35.5°	1531.4	1338.2	1189.2	1048.0	942.7	903.5
36°	1508.6	1316.8	1169.6	1031.1	926.8	888.5
36.5°	1484.9	1294.5	1150.0	1013.8	911.7	873.0
37°	1461.7	1271.2	1130.4	996.5	896.2	857.5
37.5°	1438.0	1248.9	1110.8	978.7	881.2	842.0
38°	1413.8	1225.2	1091.2	961.4	865.3	826.5
38.5°	1389.2	1202.4	1071.2	944.5	850.2	811.5
39°	1365.1	1179.2	1051.6	927.7	835.6	796.9
39.5°	1340.5	1156.4	1032.0	911.3	820.6	781.4
40°	1315.4	1132.7	1012.4	894.0	804.7	766.4
40.5°	1289.9	1109.5	992.4	877.1	790.1	751.3
41°	1264.4	1086.2	972.8	860.7	775.5	736.3
41.5°	1239.3	1063.0	952.7	843.8	760.0	721.7
42°	1213.4	1040.2	933.1	827.4	745.4	706.7
42.5°	1188.8	1017.0	913.5	811.0	730.4	692.1
43°	1162.8	993.7	894.4	794.6	716.3	677.5
43.5°	1136.8	971.0	874.8	778.2	700.8	662.5



TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1061.2	903.5	817.9	730.4	657.9	619.2
45.5°	1036.1	881.2	798.7	714.9	642.9	604.6
46°	1010.6	859.3	781.0	699.4	629.2	591.0
46.5°	986.0	837.5	761.8	683.5	614.7	575.9
47°	960.9	816.0	743.6	668.0	600.5	561.8
47.5°	936.8	794.6	725.4	652.5	585.9	547.7
48°	912.2	773.7	708.1	637.4	572.3	534.0
48.5°	888.5	752.7	690.3	622.4	558.2	519.4
49°	864.3	732.7	672.5	607.4	544.0	505.8
49.5°	841.1	712.6	655.2	592.3	529.9	492.1
50°	817.4	692.1	638.8	577.3	516.2	478.0
50.5°	794.6	673.0	621.5	562.7	502.6	463.8
51°	772.3	653.8	605.1	548.1	488.4	450.6
51.5°	750.4	635.2	588.7	534.0	474.8	437.0
52°	728.1	616.9	572.7	519.4	461.6	423.7
52.5°	705.8	598.7	556.8	505.8	448.3	410.5
53°	684.4	581.4	541.8	491.6	434.7	398.2
53.5°	663.9	564.5	525.8	478.0	421.0	386.4
54°	642.9	547.7	510.8	464.3	408.2	379.1
54.5°	623.3	531.7	496.6	451.1	395.5	374.1
55°	604.2	516.2	482.1	437.9	383.2	368.6
55.5°	585.0	500.7	468.4	425.1	370.9	363.6
56°	566.8	486.2	454.3	412.4	359.5	357.7
56.5°	549.0	471.6	441.1	399.6	353.1	351.8
57°	532.2	457.5	427.8	387.3	348.1	346.3
57.5°	515.3	443.8	415.5	375.0	342.6	339.9
58°	499.4	430.6	403.2	363.1	337.2	334.0
58.5°	483.9	417.8	390.9	351.8	331.2	327.1
59°	468.4	405.5	379.1	340.4	325.3	319.9
59.5°	453.8	393.2	367.7	329.0	319.9	313.0
60°	439.7	380.9	356.3	318.0	313.5	305.7
60.5°	426.0	369.5	345.4	307.6	307.1	298.0
61°	412.8	358.1	334.4	297.1	300.7	290.7
61.5°	399.6	347.7	324.4	287.5	293.9	283.4
62°	387.7	336.7	314.4	277.9	286.6	275.7
62.5°	375.9	326.2	304.8	268.8	279.8	268.4
63°	364.1	316.2	294.8	260.6	272.9	261.1
63.5°	352.2	306.2	285.7	254.2	266.1	253.8
64°	340.4	296.2	276.1	249.2	258.8	246.0
64.5°	329.0	287.1	267.5	244.2	252.0	238.8
65°	318.5	277.9	258.8	239.2	245.1	231.5
65.5°	308.0	269.3	250.6	233.7	238.3	224.2
66°	298.0	260.2	242.4	228.3	231.0	216.9



TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	269.3	235.6	219.2	211.9	210.5	197.7
68°	259.7	227.4	211.9	205.9	203.7	191.4
68.5°	251.1	219.6	205.0	200.5	197.3	185.4
69°	242.4	211.9	197.7	194.6	190.9	179.5
69.5°	233.7	204.6	190.9	188.6	184.5	173.6
70°	225.5	197.3	184.5	182.7	178.6	167.7
70.5°	217.3	190.5	178.2	176.8	172.7	162.2
71°	209.6	183.2	171.3	170.9	166.8	156.7
71.5°	201.4	176.3	165.9	164.9	161.3	151.3
72°	194.1	169.5	159.9	159.5	155.4	145.3
72.5°	186.4	164.0	154.0	153.5	149.9	139.9
73°	179.1	157.6	148.5	148.1	144.0	134.4
73.5°	171.8	151.3	142.6	142.2	138.5	128.5
74°	164.9	144.4	137.1	136.7	132.6	123.0
74.5°	157.6	138.1	131.7	131.2	127.1	117.6
75°	150.8	132.1	126.7	125.8	121.2	112.1
75.5°	144.4	126.2	121.7	120.7	115.7	106.6
76°	137.6	120.3	117.1	115.3	109.8	101.2
76.5°	131.2	114.8	112.5	109.8	104.3	95.7
77°	124.8	108.9	108.0	104.8	98.9	90.7
77.5°	118.5	103.4	103.4	99.3	93.4	85.2
78°	112.5	98.0	98.4	94.3	87.9	80.2
78.5°	106.2	92.9	93.9	89.3	82.5	74.7
79°	100.2	87.5	88.8	84.3	77.0	69.7
79.5°	94.3	82.5	84.3	79.3	71.5	64.2
80°	88.4	77.5	79.3	74.3	66.1	59.2
80.5°	82.9	72.4	74.7	69.3	61.1	54.2
81°	77.5	67.4	69.7	64.7	55.6	49.2
81.5°	72.0	62.9	65.2	59.7	50.6	44.2
82°	66.5	58.3	60.6	55.1	46.0	39.2
82.5°	61.5	53.8	56.0	50.6	41.0	34.2
83°	56.5	49.2	51.5	46.5	36.5	29.6
83.5°	51.5	44.7	46.9	41.9	31.9	24.6
84°	46.5	40.6	42.8	37.8	27.8	20.0
84.5°	41.9	36.0	38.3	33.7	24.1	16.4
85°	37.4	31.9	33.7	29.6	20.5	14.6
85.5°	32.8	27.8	29.6	25.5	17.8	12.3
86°	28.2	24.1	25.1	21.9	15.0	10.0
86.5°	23.2	20.0	21.0	17.8	12.3	8.2
87°	19.1	16.4	16.9	14.1	9.6	5.9
87.5°	15.0	12.8	12.8	10.9	6.8	4.1
88°	10.9	9.1	9.1	7.3	4.6	2.3
88.5°	6.8	5.5	5.5	3.6	2.3	0.9



TEST NUMBER: P776630

CATALOG NUMBER: HCDJBL54050CSD-HCD4TQSH-HCD4TSQLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

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



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1121 Highway 74 South  
Peachtree City, GA 30269

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°	1381.0	1414.3	1515.0	1664.4	1840.8	1988.9	2097.3	2161.5	2182.0	2150.1	2078.6
22°	1363.3	1396.5	1498.6	1650.3	1828.9	1979.7	2090.0	2155.2	2175.7	2143.3	2071.3



44°	648.4	675.3	743.6	840.6	955.0	1112.7	1250.7	1171.0	1105.8	1174.2	1253.9
44.5°	633.8	660.7	727.7	821.1	931.8	1087.1	1220.6	1145.0	1078.5	1149.1	1223.8



66.5°	210.5	215.1	211.0	213.2	233.7	263.8	306.2	317.6	316.2	328.1	325.3
67°	203.7	207.8	205.0	205.9	225.5	254.7	295.7	307.1	306.2	318.0	313.9



89°	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.8	2.7
89.5°	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.9



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21.5°	1971.1	1824.4	1664.0	1518.2	1417.5	1381.0
22°	1962.0	1812.5	1650.3	1502.2	1399.7	1363.3



44°	1111.3	948.6	855.7	762.3	687.1	648.4
44.5°	1086.7	925.9	836.5	746.3	672.1	633.8



66.5°	288.0	252.0	234.7	223.3	224.2	210.5
67°	278.4	243.3	226.9	217.8	217.3	203.7



89°	3.2	1.8	1.8	1.4	0.5	0.0
89.5°	0.9	0.5	0.5	0.5	0.5	0.0

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Scaled Data Report



(END OF REPORT)