

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: P776731

Luminaire Tested: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776731  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B018)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K  
Description: 6 INCH SQUARE MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4123.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

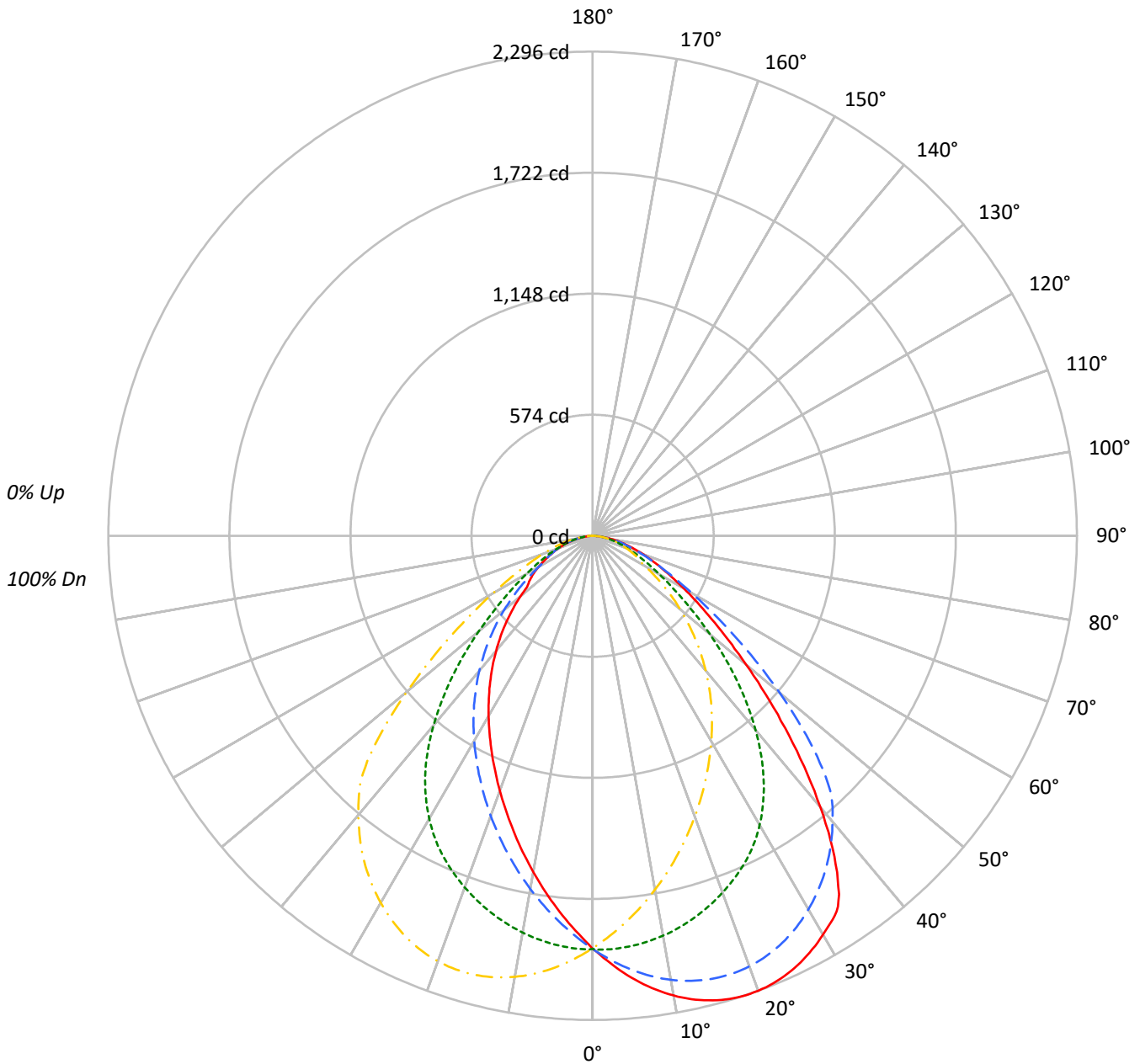
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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									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	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76																			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66																			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58																			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	54	62	57	53	51																			
6	75	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	45																			
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41																			
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33																			
10	57	45	38	33	56	45	37	33	44	37	32	43	37	32	42	36	32	31																			

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

	0°	90°	180°	270°
0°	84350	84350	84350	84350
5°	90901	84534	77360	84210
10°	96787	84169	70796	83540
15°	101621	83492	64597	82539
20°	105205	82501	58928	81287
25°	107489	81170	53768	79669
30°	108605	78731	49035	77041
35°	106762	74316	44514	72776
40°	94492	67559	39967	65912
45°	78706	58698	35207	56999
50°	63667	48663	29888	47136
55°	51570	38936	27144	38028
60°	43030	31577	25498	31258
65°	36605	26285	23249	26468
70°	31824	22521	21413	22936
75°	27765	19480	19414	20179
80°	22811	16712	16241	17505
85°	14672	12844	8942	14227

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 92827 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.0	4.5
10°-20°	525.3	12.7
20°-30°	779.2	18.9
30°-40°	890.5	21.6
40°-50°	774.2	18.8
50°-60°	503.7	12.2
60°-70°	287.0	7.0
70°-80°	143.8	3.5
80°-90°	34.1	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°	1489.6	36.1
0°-40°	2380.1	57.7
0°-60°	3658.0	88.7
0°-90°	4123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1959	1959	1959	1959	1959	
5°	2103	1956	1790	1948	2103	204
15°	2280	1873	1449	1852	2280	645
25°	2263	1709	1132	1677	2263	1042
35°	2031	1414	847	1385	2031	1247
45°	1293	964	578	936	1293	998
55°	687	519	362	507	687	625
65°	359	258	228	260	359	360
75°	167	117	117	121	167	177
85°	30	26	18	29	30	39
90°	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°	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1
0.5°	1971.2	1971.2	1971.2	1968.9	1963.3	1959.1	1944.7	1939.1	1939.1	1941.4	1947.5
1°	1986.5	1985.6	1981.9	1974.9	1963.3	1953.1	1933.5	1924.2	1922.9	1926.1	1935.9
1.5°	2002.3	2000.5	1993.0	1981.0	1963.3	1946.6	1921.5	1909.4	1906.1	1910.8	1923.8
2°	2017.7	2014.9	2003.7	1986.5	1962.8	1940.1	1909.8	1894.0	1889.9	1895.9	1911.7
2.5°	2032.5	2028.4	2014.9	1992.1	1962.4	1933.1	1898.2	1878.7	1873.1	1880.1	1899.1
3°	2047.4	2042.3	2025.1	1997.2	1961.4	1926.6	1885.7	1863.4	1856.9	1864.8	1886.6
3.5°	2061.8	2055.8	2034.9	2002.3	1960.5	1919.6	1873.6	1848.0	1840.1	1849.0	1874.1
4°	2075.8	2068.8	2045.1	2007.0	1958.6	1911.7	1861.0	1832.7	1823.9	1833.6	1861.5
4.5°	2089.7	2081.3	2054.4	2011.6	1957.2	1904.7	1849.0	1816.4	1806.7	1817.3	1849.0
5°	2103.2	2093.9	2063.7	2016.3	1955.9	1896.8	1836.4	1801.1	1789.9	1801.5	1835.9
5.5°	2115.7	2106.0	2073.0	2020.0	1953.5	1888.9	1823.4	1785.3	1773.2	1785.7	1822.9
6°	2128.3	2117.6	2081.3	2023.7	1951.2	1880.6	1810.4	1769.5	1756.5	1769.5	1809.4
6.5°	2140.8	2128.8	2089.7	2027.4	1948.9	1872.7	1797.8	1753.7	1739.3	1753.7	1796.4
7°	2152.5	2139.9	2097.6	2030.7	1946.1	1864.8	1784.8	1737.4	1722.1	1737.4	1783.0
7.5°	2163.6	2150.1	2105.5	2033.9	1943.3	1855.5	1771.3	1721.1	1704.9	1721.1	1769.5
8°	2174.3	2160.4	2112.5	2036.7	1940.1	1847.1	1757.9	1705.3	1688.1	1704.9	1756.0
8.5°	2185.0	2169.7	2119.5	2039.1	1936.8	1837.8	1744.8	1689.1	1670.9	1689.1	1742.0
9°	2195.2	2179.4	2126.0	2040.9	1933.1	1829.0	1731.4	1673.3	1653.3	1672.3	1728.6
9.5°	2205.0	2188.3	2132.0	2042.8	1929.4	1820.1	1717.9	1656.5	1636.5	1656.1	1714.6
10°	2213.8	2196.6	2138.1	2044.6	1925.2	1810.4	1703.9	1640.3	1619.3	1639.8	1700.7
10.5°	2222.6	2205.0	2143.6	2046.0	1921.5	1801.1	1690.0	1624.0	1602.6	1623.5	1686.7
11°	2231.0	2212.4	2148.3	2047.0	1916.8	1791.3	1676.0	1607.7	1585.4	1606.8	1672.8
11.5°	2238.9	2219.4	2153.4	2047.9	1912.2	1781.1	1662.1	1591.9	1567.8	1591.0	1658.9
12°	2246.4	2226.4	2157.6	2047.9	1907.1	1770.9	1648.2	1574.7	1551.0	1574.3	1644.4
12.5°	2253.3	2232.4	2161.3	2048.3	1901.9	1760.6	1634.2	1558.9	1534.3	1558.0	1630.5
13°	2259.4	2238.4	2165.0	2047.9	1896.8	1750.9	1619.8	1542.7	1517.1	1541.3	1616.1
13.5°	2265.4	2243.6	2168.3	2047.4	1890.8	1740.2	1605.4	1526.4	1499.9	1525.5	1601.7
14°	2270.5	2248.7	2171.1	2047.0	1885.2	1729.5	1591.5	1510.1	1483.2	1508.7	1587.3
14.5°	2275.6	2252.9	2173.4	2046.0	1879.2	1718.8	1576.6	1493.4	1466.0	1492.5	1572.9
15°	2279.8	2257.0	2175.2	2044.6	1873.1	1707.7	1562.2	1477.1	1449.2	1476.2	1558.5
15.5°	2284.0	2260.3	2177.1	2042.8	1866.6	1697.0	1547.8	1461.3	1432.5	1460.4	1543.6
16°	2287.3	2263.5	2178.0	2040.9	1860.1	1685.8	1533.4	1445.0	1415.8	1443.7	1529.2
16.5°	2290.0	2265.9	2179.0	2038.6	1853.6	1674.7	1518.9	1428.8	1399.5	1427.8	1514.8
17°	2292.4	2267.7	2179.4	2035.8	1846.2	1663.0	1504.1	1412.5	1382.8	1411.6	1500.4
17.5°	2294.2	2269.1	2179.4	2033.0	1839.2	1651.9	1489.7	1396.7	1366.5	1395.3	1485.5
18°	2295.6	2270.1	2179.0	2030.2	1831.8	1640.7	1475.3	1380.4	1349.8	1379.5	1470.6
18.5°	2296.5	2271.0	2178.0	2026.5	1824.3	1628.6	1460.4	1364.6	1334.0	1363.7	1456.2
19°	2296.5	2271.0	2176.6	2022.8	1816.4	1616.6	1446.0	1348.8	1318.2	1347.9	1441.8
19.5°	2296.5	2270.5	2175.2	2019.1	1809.0	1604.9	1431.1	1333.0	1301.9	1332.1	1427.4
20°	2296.1	2269.6	2172.9	2014.4	1800.6	1593.3	1416.2	1317.2	1286.1	1316.3	1412.5
20.5°	2294.7	2268.2	2170.6	2010.2	1792.7	1581.2	1401.8	1301.4	1269.8	1301.0	1397.6
21°	2293.3	2266.3	2167.3	2005.1	1783.9	1568.7	1386.9	1286.1	1254.5	1285.2	1383.2



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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°	2284.9	2257.5	2156.2	1988.9	1757.4	1532.0	1343.3	1240.1	1207.5	1239.6	1339.1
23°	2281.7	2253.8	2151.5	1982.8	1748.6	1519.4	1328.4	1224.7	1192.2	1224.3	1324.7
23.5°	2277.5	2249.6	2146.4	1976.8	1738.8	1506.9	1314.0	1209.4	1176.9	1209.4	1310.3
24°	2272.8	2244.5	2141.3	1969.8	1729.0	1493.8	1299.1	1194.5	1162.0	1194.1	1295.4
24.5°	2267.7	2239.4	2135.3	1963.3	1719.3	1481.3	1284.7	1179.6	1147.1	1178.7	1281.0
25°	2262.6	2233.8	2129.2	1955.9	1708.6	1467.8	1270.3	1164.3	1131.8	1163.8	1266.1
25.5°	2256.6	2227.3	2122.7	1948.4	1698.4	1455.3	1255.4	1149.4	1116.9	1149.4	1252.2
26°	2250.1	2221.3	2115.7	1940.1	1687.2	1441.8	1241.0	1134.6	1102.0	1134.1	1237.3
26.5°	2243.1	2213.8	2108.3	1932.1	1676.0	1428.3	1226.6	1120.2	1087.2	1119.7	1222.9
27°	2236.1	2206.8	2100.9	1923.8	1664.4	1414.8	1212.2	1105.3	1072.7	1104.8	1208.5
27.5°	2228.7	2198.9	2092.5	1914.5	1651.9	1401.4	1197.3	1090.4	1058.3	1090.4	1194.5
28°	2220.3	2191.0	2083.7	1904.7	1638.9	1387.4	1182.9	1075.5	1043.5	1075.5	1180.1
28.5°	2212.0	2182.2	2075.3	1895.0	1626.3	1373.0	1169.0	1061.1	1029.1	1061.1	1165.7
29°	2203.1	2172.9	2066.0	1884.3	1612.4	1358.6	1154.1	1046.7	1015.1	1046.7	1151.3
29.5°	2193.8	2163.6	2056.2	1873.1	1598.4	1344.2	1140.1	1032.3	1000.7	1032.8	1136.9
30°	2184.5	2153.9	2046.5	1861.5	1583.6	1328.8	1125.3	1018.4	986.3	1017.9	1122.5
30.5°	2174.8	2143.6	2036.3	1849.4	1568.7	1313.5	1110.9	1003.5	971.9	1004.0	1108.5
31°	2165.5	2133.4	2025.6	1836.9	1553.3	1298.6	1096.4	989.1	957.9	990.0	1094.1
31.5°	2156.2	2122.7	2014.4	1822.9	1537.5	1282.8	1082.0	975.6	944.0	975.6	1079.7
32°	2146.9	2111.6	2003.3	1809.0	1521.3	1267.0	1067.6	961.2	930.1	961.7	1065.3
32.5°	2135.7	2100.9	1991.2	1794.1	1504.1	1251.2	1053.2	946.8	916.1	947.7	1051.4
33°	2123.2	2089.7	1979.6	1778.8	1486.4	1235.0	1038.8	933.3	902.2	933.8	1037.0
33.5°	2110.8	2079.0	1967.5	1763.0	1469.2	1218.7	1024.4	919.4	888.2	920.3	1022.5
34°	2098.1	2067.9	1954.9	1746.7	1451.1	1202.0	1009.5	905.4	874.7	905.9	1008.1
34.5°	2083.2	2055.8	1941.4	1729.0	1433.0	1185.2	995.1	891.0	860.8	892.4	993.7
35°	2067.2	2041.4	1928.0	1710.9	1413.9	1168.0	980.7	877.5	846.9	878.5	979.8
35.5°	2050.4	2025.1	1914.0	1692.3	1394.8	1151.3	966.8	863.6	833.4	865.0	965.4
36°	2032.6	2002.3	1899.6	1672.8	1374.9	1134.1	951.9	850.1	819.9	851.5	951.0
36.5°	2013.4	1980.0	1884.7	1653.3	1354.4	1116.9	937.0	836.2	806.0	837.6	936.1
37°	1992.2	1950.7	1869.4	1632.8	1334.0	1099.2	922.6	822.2	792.5	823.6	922.2
37.5°	1868.5	1919.6	1853.6	1611.0	1313.0	1081.6	907.7	808.7	779.0	810.1	907.3
38°	1830.4	1893.6	1837.8	1588.7	1290.7	1063.9	893.3	794.8	765.5	796.7	892.9
38.5°	1796.0	1856.9	1821.1	1566.4	1269.8	1046.3	878.5	781.3	752.0	783.2	878.5
39°	1755.1	1825.7	1804.8	1543.6	1247.5	1028.6	863.6	767.8	738.1	769.7	864.5
39.5°	1719.7	1792.2	1787.1	1519.4	1225.2	1010.5	848.7	753.9	724.6	756.2	849.6
40°	1681.2	1753.7	1769.5	1494.3	1202.0	991.9	833.8	740.4	711.1	742.7	834.8
40.5°	1638.4	1723.0	1751.3	1469.2	1179.2	973.7	819.4	726.9	698.1	729.3	820.4
41°	1603.5	1683.5	1734.6	1443.7	1155.9	955.6	804.1	713.5	684.6	715.8	806.4
41.5°	1561.2	1646.3	1716.0	1416.7	1132.2	937.0	789.2	700.0	671.6	702.8	791.1
42°	1523.1	1611.4	1695.6	1389.3	1108.5	918.9	774.8	686.5	658.1	689.3	776.7
42.5°	1485.0	1571.0	1673.7	1362.3	1084.8	900.3	760.4	673.5	644.7	675.8	762.7
43°	1441.8	1537.1	1650.9	1334.4	1060.7	882.2	745.5	660.0	631.2	662.8	748.3
43.5°	1408.3	1498.5	1621.2	1305.6	1036.5	863.6	730.2	646.5	618.2	649.3	733.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1292.6	1383.2	1524.5	1219.2	964.0	807.8	686.5	606.6	578.2	609.8	690.7
45.5°	1251.7	1348.8	1492.5	1189.4	939.3	789.7	672.1	593.1	565.2	596.8	676.3
46°	1220.5	1311.6	1455.7	1160.1	915.6	771.1	657.2	580.1	551.7	583.3	661.9
46.5°	1180.6	1272.1	1418.6	1129.9	891.5	753.0	642.8	566.6	538.2	570.3	647.0
47°	1147.6	1240.1	1384.2	1099.7	867.3	734.8	627.9	553.1	525.2	556.8	633.0
47.5°	1113.6	1200.1	1344.2	1070.0	843.1	716.7	613.5	540.1	512.2	544.3	618.6
48°	1075.5	1169.0	1307.9	1040.2	819.4	699.1	599.6	526.6	499.2	530.8	604.2
48.5°	1048.1	1133.6	1270.7	1010.0	795.7	680.5	585.2	513.6	486.2	517.8	589.8
49°	1009.5	1097.4	1230.8	980.3	772.0	662.8	570.3	500.1	472.7	504.8	575.9
49.5°	983.5	1067.6	1195.9	950.0	749.2	645.1	556.4	487.1	459.7	491.8	561.5
50°	950.5	1029.5	1156.9	920.3	726.5	627.9	542.0	474.1	446.2	478.7	547.5
50.5°	920.3	1002.6	1119.7	890.5	702.8	610.3	528.0	460.6	433.2	465.7	533.6
51°	893.8	967.2	1083.4	860.8	680.5	593.1	514.1	448.1	420.6	452.7	519.2
51.5°	859.9	939.3	1044.9	832.0	659.1	576.8	500.1	434.6	407.2	439.7	505.7
52°	838.5	910.1	1011.9	803.2	637.7	559.6	486.2	421.6	395.1	427.1	491.8
52.5°	806.9	878.5	975.6	774.8	615.9	543.3	473.2	408.6	389.0	414.1	478.3
53°	785.0	853.4	941.2	746.9	595.9	527.1	459.2	398.3	383.5	403.4	464.8
53.5°	759.5	819.9	907.3	719.5	575.4	510.8	445.7	388.1	377.9	392.8	451.3
54°	733.9	797.6	872.4	692.5	556.4	495.5	432.7	378.3	372.8	382.1	438.3
54.5°	713.0	767.4	842.2	666.5	537.3	479.7	419.7	368.1	367.2	371.4	425.8
55°	687.0	744.1	808.7	641.4	518.7	464.8	406.7	358.4	361.6	360.7	412.7
55.5°	669.3	719.0	779.9	617.2	501.0	450.4	394.1	352.8	355.6	355.1	400.2
56°	643.3	693.5	748.3	593.5	483.4	435.5	381.6	347.2	349.5	350.0	388.1
56.5°	627.0	672.1	720.4	570.8	467.1	421.6	368.6	341.2	343.5	343.9	376.0
57°	605.2	645.6	692.5	548.9	450.9	407.6	356.0	335.6	337.0	338.4	363.9
57.5°	588.0	627.0	664.2	527.5	435.5	395.1	344.9	329.5	330.5	332.3	351.4
58°	569.4	601.9	638.6	507.6	420.6	382.1	332.8	323.5	324.0	326.3	340.2
58.5°	550.8	584.7	612.6	488.0	406.2	369.0	321.2	317.5	317.0	320.2	328.1
59°	534.5	561.5	589.4	469.9	392.8	356.5	310.0	311.4	310.0	314.2	317.0
59.5°	515.9	545.2	564.7	451.8	379.7	344.9	298.9	304.9	303.0	307.7	306.3
60°	499.7	524.3	542.9	435.0	366.7	333.7	288.2	298.9	296.1	301.2	295.6
60.5°	482.9	508.5	520.6	418.8	353.2	322.6	277.9	291.9	289.1	294.7	285.4
61°	467.1	489.0	500.6	403.0	341.2	311.9	268.7	285.8	282.1	288.2	275.6
61.5°	452.2	473.2	479.7	388.1	329.5	301.2	262.6	278.9	274.7	281.7	266.8
62°	437.8	456.0	462.0	373.7	318.4	291.4	257.5	272.4	267.7	274.7	260.3
62.5°	423.0	441.1	442.5	360.2	307.2	281.7	251.9	265.9	260.7	268.2	255.2
63°	409.9	424.8	425.8	347.2	297.0	272.4	246.3	258.9	253.8	261.2	249.6
63.5°	396.0	410.9	408.6	334.2	286.8	263.1	241.2	252.4	247.3	254.7	244.5
64°	383.9	395.5	392.8	322.1	277.0	254.2	235.7	245.9	240.8	247.7	239.4
64.5°	370.4	382.5	376.9	310.5	267.3	245.9	230.1	239.4	234.3	241.7	233.8
65°	359.3	368.6	362.5	299.3	258.0	237.5	224.5	232.9	228.2	235.2	228.7
65.5°	347.2	356.5	348.6	289.1	249.1	229.6	219.4	226.8	222.2	228.7	223.1
66°	336.0	343.0	335.1	278.4	240.3	221.7	213.3	220.8	216.1	222.2	217.5





TEST NUMBER: P776731

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	302.6	308.2	297.0	249.1	215.7	199.9	196.6	202.7	198.5	204.0	200.8
68°	292.4	296.5	284.9	239.8	207.8	192.9	191.0	197.1	192.9	198.5	195.2
68.5°	282.1	285.8	274.2	231.0	200.3	186.4	185.5	191.5	186.8	192.4	189.6
69°	271.9	275.6	262.6	222.2	193.4	179.9	179.9	185.5	181.3	186.8	183.6
69.5°	262.1	264.9	252.4	213.8	185.5	173.8	174.3	179.9	175.7	180.8	178.0
70°	252.8	255.2	242.6	205.9	178.9	167.3	168.7	174.3	170.1	175.2	172.4
70.5°	243.1	244.9	232.4	197.5	172.0	161.7	163.6	168.7	164.5	169.6	167.3
71°	233.8	235.7	223.1	190.1	165.5	155.7	158.0	163.1	159.4	164.1	161.7
71.5°	225.0	226.4	213.8	182.7	159.0	150.1	152.5	158.0	153.8	158.5	156.2
72°	216.1	217.1	204.5	175.2	152.5	144.6	147.3	152.5	148.3	152.9	150.6
72.5°	207.3	208.2	195.7	168.3	146.4	139.0	142.2	146.9	143.2	147.3	145.5
73°	198.5	198.9	187.3	161.7	140.4	133.9	137.1	141.3	137.6	141.8	140.4
73.5°	190.1	190.6	178.9	154.8	134.3	129.2	132.0	136.2	132.5	136.6	134.8
74°	181.7	182.2	170.6	148.3	128.3	124.1	126.9	130.6	127.4	131.1	129.7
74.5°	173.4	173.8	163.1	141.8	122.7	119.9	121.8	125.5	121.8	126.0	124.6
75°	166.9	166.9	155.7	135.3	117.1	115.7	116.7	119.9	116.7	120.4	119.5
75.5°	159.0	159.0	148.3	129.2	112.0	111.6	111.6	114.8	111.6	115.3	114.3
76°	151.1	151.1	140.8	123.2	106.4	107.4	106.9	109.2	106.4	110.2	109.2
76.5°	142.7	143.2	133.4	117.1	101.3	102.7	101.8	104.1	101.3	104.6	104.1
77°	134.8	135.3	126.0	111.1	96.2	98.5	96.7	99.0	96.2	99.5	99.0
77.5°	127.8	128.3	119.0	105.0	91.1	93.9	91.6	93.9	91.1	94.4	93.9
78°	120.4	120.8	112.5	99.5	86.0	89.7	86.9	88.3	85.5	89.2	89.2
78.5°	112.9	113.9	105.5	93.9	81.3	85.1	81.8	83.2	80.4	84.1	84.1
79°	106.0	106.4	99.0	88.3	76.7	80.4	77.2	78.1	75.3	78.6	79.0
79.5°	99.0	99.9	92.5	83.2	72.0	76.2	72.5	73.0	70.6	73.4	73.9
80°	92.0	93.0	86.0	77.6	67.4	71.6	67.9	67.9	65.5	68.3	69.3
80.5°	85.5	86.5	79.9	72.5	62.7	67.4	63.2	62.3	60.4	63.2	64.6
81°	79.0	79.9	73.9	67.4	58.6	62.7	58.6	57.6	55.8	58.1	59.5
81.5°	72.5	73.4	67.9	62.3	54.4	58.6	53.9	52.1	50.7	53.0	54.8
82°	66.0	66.9	62.3	57.6	49.7	54.4	49.3	47.4	46.0	48.3	50.7
82.5°	60.0	60.9	56.7	53.0	46.0	50.2	45.1	42.8	40.9	43.7	46.0
83°	53.9	54.8	51.6	48.3	41.8	46.0	40.9	38.1	36.3	38.6	42.3
83.5°	47.4	48.3	46.0	43.7	38.1	41.8	36.7	33.9	31.6	33.9	38.1
84°	41.4	42.3	41.4	39.0	33.9	37.6	33.0	29.3	27.0	29.3	34.4
84.5°	35.3	36.7	36.7	34.9	30.2	33.5	28.8	24.6	22.3	24.6	30.2
85°	29.7	31.1	32.5	30.7	26.0	29.3	24.6	20.9	18.1	20.5	26.5
85.5°	23.7	25.6	27.9	26.5	22.3	25.1	20.9	17.7	15.3	17.2	22.8
86°	19.5	21.4	23.7	22.3	19.1	21.4	17.2	14.9	13.0	14.4	19.1
86.5°	16.3	17.7	19.5	18.6	15.3	17.2	13.5	12.1	10.7	11.6	15.8
87°	13.5	14.4	15.8	14.4	12.1	13.5	10.2	9.3	7.9	9.3	12.5
87.5°	10.2	10.7	12.1	10.7	8.8	9.8	6.5	6.0	5.6	6.5	8.8
88°	7.4	7.4	8.4	7.0	5.6	6.0	3.3	3.3	3.3	3.7	5.6
88.5°	4.2	4.2	4.6	3.3	2.3	2.8	0.9	0.9	1.4	1.4	2.3



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**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: P776731

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1959.1	1959.1	1959.1	1959.1	1959.1	1959.1
0.5°	1955.9	1962.8	1970.3	1967.0	1968.9	1971.2
1°	1948.9	1961.9	1975.4	1978.2	1982.8	1986.5
1.5°	1941.9	1961.0	1981.0	1988.4	1997.2	2002.3
2°	1934.5	1960.0	1985.6	1998.6	2011.2	2017.7
2.5°	1927.5	1958.6	1990.2	2008.8	2024.6	2032.5
3°	1919.6	1956.8	1994.4	2018.6	2038.1	2047.4
3.5°	1911.7	1954.9	1998.6	2028.4	2051.6	2061.8
4°	1903.8	1953.1	2002.3	2037.7	2064.2	2075.8
4.5°	1895.4	1950.7	2006.5	2046.5	2076.7	2089.7
5°	1887.1	1948.4	2009.8	2055.3	2088.8	2103.2
5.5°	1878.7	1945.2	2013.0	2063.7	2100.9	2115.7
6°	1869.9	1942.4	2015.8	2072.1	2112.0	2128.3
6.5°	1861.0	1939.1	2018.1	2079.5	2122.7	2140.8
7°	1852.2	1935.9	2020.9	2086.9	2133.4	2152.5
7.5°	1842.9	1932.1	2022.8	2093.9	2143.6	2163.6
8°	1833.6	1928.4	2024.6	2100.9	2153.4	2174.3
8.5°	1824.3	1924.2	2026.0	2106.9	2162.7	2185.0
9°	1814.6	1920.1	2027.4	2113.0	2171.5	2195.2
9.5°	1804.8	1915.4	2028.4	2118.5	2180.3	2205.0
10°	1795.0	1910.8	2028.8	2124.1	2188.3	2213.8
10.5°	1784.8	1905.7	2029.3	2128.8	2195.7	2222.6
11°	1774.6	1900.5	2029.3	2133.4	2203.1	2231.0
11.5°	1764.4	1895.4	2028.8	2137.1	2210.1	2238.9
12°	1754.1	1889.4	2028.4	2140.8	2216.1	2246.4
12.5°	1743.4	1883.8	2027.9	2144.6	2222.2	2253.3
13°	1732.8	1877.8	2026.5	2147.3	2227.8	2259.4
13.5°	1721.6	1871.7	2025.1	2150.1	2232.9	2265.4
14°	1710.4	1865.2	2023.2	2152.5	2237.1	2270.5
14.5°	1699.3	1858.7	2021.4	2153.9	2241.2	2275.6
15°	1688.1	1851.7	2019.1	2155.7	2245.0	2279.8
15.5°	1677.0	1844.8	2016.7	2156.6	2247.7	2284.0
16°	1665.8	1837.8	2013.5	2157.1	2250.5	2287.3
16.5°	1654.2	1830.4	2010.2	2157.1	2252.4	2290.0
17°	1642.1	1822.9	2007.0	2156.6	2253.8	2292.4
17.5°	1630.5	1815.0	2003.3	2156.2	2255.2	2294.2
18°	1618.9	1807.1	1999.1	2155.3	2255.6	2295.6
18.5°	1606.8	1799.2	1994.4	2153.9	2255.6	2296.5
19°	1595.2	1790.9	1990.2	2151.5	2255.6	2296.5
19.5°	1582.6	1782.5	1985.1	2149.2	2254.7	2296.5
20°	1570.5	1774.1	1980.0	2146.9	2253.3	2296.1
20.5°	1558.5	1765.3	1974.4	2143.6	2251.5	2294.7
21°	1545.9	1756.0	1968.9	2139.9	2249.1	2293.3

TEST NUMBER: P776731

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1508.3	1728.1	1949.8	2126.9	2239.4	2284.9
23°	1495.7	1718.3	1942.8	2121.8	2235.2	2281.7
23.5°	1482.7	1708.6	1935.4	2116.2	2230.5	2277.5
24°	1470.1	1698.4	1928.0	2110.2	2225.4	2272.8
24.5°	1456.7	1687.7	1920.1	2104.1	2219.9	2267.7
25°	1443.7	1677.0	1912.2	2097.2	2213.8	2262.6
25.5°	1430.6	1665.8	1903.3	2090.2	2207.3	2256.6
26°	1417.2	1654.7	1895.0	2082.3	2200.3	2250.1
26.5°	1403.7	1643.0	1885.7	2074.8	2192.9	2243.1
27°	1390.2	1631.0	1876.4	2066.5	2185.9	2236.1
27.5°	1376.3	1617.9	1866.1	2057.6	2177.6	2228.7
28°	1361.8	1605.4	1855.9	2048.8	2169.2	2220.3
28.5°	1347.9	1591.9	1845.2	2039.5	2159.9	2212.0
29°	1333.5	1578.0	1833.6	2029.8	2151.1	2203.1
29.5°	1318.6	1564.0	1822.0	2020.0	2141.3	2193.8
30°	1303.3	1549.6	1809.4	2009.3	2131.5	2184.5
30.5°	1288.4	1534.3	1796.4	1998.6	2120.9	2174.8
31°	1273.1	1519.4	1783.0	1987.5	2110.2	2165.5
31.5°	1257.7	1503.6	1769.0	1976.3	2099.5	2156.2
32°	1242.4	1487.8	1754.6	1964.2	2087.9	2146.9
32.5°	1226.1	1471.1	1739.3	1952.1	2076.7	2135.7
33°	1210.3	1454.8	1723.9	1940.1	2065.1	2123.2
33.5°	1194.5	1438.1	1707.7	1927.5	2053.5	2107.8
34°	1178.3	1420.4	1690.9	1914.5	2042.8	2084.1
34.5°	1161.5	1402.7	1674.2	1901.0	2031.2	2063.2
35°	1145.3	1384.6	1656.5	1887.1	2017.2	2031.2
35.5°	1129.0	1365.1	1637.9	1873.1	2002.3	2001.4
36°	1111.8	1346.0	1619.3	1858.2	1982.3	1972.6
36.5°	1095.1	1325.6	1600.3	1843.4	1958.2	1935.4
37°	1078.3	1305.1	1579.8	1828.0	1934.9	1905.2
37.5°	1061.1	1283.8	1558.9	1812.2	1902.4	1868.5
38°	1043.9	1261.9	1536.6	1796.0	1875.0	1830.4
38.5°	1025.3	1240.1	1513.4	1778.8	1843.8	1796.0
39°	1007.7	1217.8	1490.1	1762.5	1808.0	1755.1
39.5°	990.0	1195.5	1465.5	1745.8	1780.2	1719.7
40°	971.9	1172.7	1439.5	1728.1	1743.4	1681.2
40.5°	953.8	1149.4	1413.4	1709.5	1708.1	1638.4
41°	935.2	1125.7	1386.9	1692.3	1675.6	1603.5
41.5°	917.0	1103.4	1360.5	1674.7	1637.0	1561.2
42°	898.9	1079.7	1333.0	1656.1	1602.6	1523.1
42.5°	880.3	1055.5	1305.6	1637.0	1565.9	1485.0
43°	862.2	1031.8	1277.3	1616.6	1526.8	1441.8
43.5°	843.6	1008.1	1248.9	1594.2	1493.8	1408.3

TEST NUMBER: P776731

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	788.8	936.1	1162.0	1510.1	1383.2	1292.6
45.5°	770.2	912.4	1133.2	1474.8	1342.8	1251.7
46°	751.6	888.7	1103.4	1442.3	1310.7	1220.5
46.5°	733.4	865.0	1074.1	1408.3	1273.1	1180.6
47°	715.8	841.7	1044.9	1369.7	1238.7	1147.6
47.5°	698.1	817.6	1015.1	1335.4	1204.3	1113.6
48°	680.0	794.3	985.8	1297.7	1165.7	1075.5
48.5°	662.3	771.6	957.0	1259.1	1136.9	1048.1
49°	645.1	748.3	927.7	1224.3	1099.7	1009.5
49.5°	628.4	726.0	898.4	1184.8	1070.0	983.5
50°	610.7	703.7	869.6	1148.0	1038.4	950.5
50.5°	593.1	681.4	840.8	1112.3	1003.0	920.3
51°	576.8	660.0	812.5	1074.6	976.1	893.8
51.5°	560.5	638.6	785.0	1040.7	940.7	859.9
52°	544.3	618.6	758.1	1004.0	916.1	838.5
52.5°	527.5	598.7	731.1	969.1	885.9	806.9
53°	512.2	578.7	704.2	936.6	857.1	785.0
53.5°	496.9	559.6	679.5	901.2	831.1	759.5
54°	481.5	541.5	654.4	870.1	799.9	733.9
54.5°	467.1	524.3	630.7	837.1	778.1	713.0
55°	452.2	506.6	607.5	806.9	747.9	687.0
55.5°	438.3	489.9	585.6	777.1	726.9	669.3
56°	424.8	473.6	564.3	746.5	700.0	643.3
56.5°	411.3	458.8	543.8	720.0	678.1	627.0
57°	399.3	443.4	523.8	691.6	655.4	605.2
57.5°	386.7	428.5	505.2	666.1	631.7	588.0
58°	374.6	414.6	487.1	639.1	612.1	569.4
58.5°	362.5	401.1	469.4	615.4	588.9	550.8
59°	350.0	388.1	453.2	591.7	571.7	534.5
59.5°	338.8	375.1	437.4	568.4	549.9	515.9
60°	328.1	363.0	422.0	546.6	534.0	499.7
60.5°	317.9	350.9	407.2	524.8	513.1	482.9
61°	307.7	339.3	392.8	505.2	498.3	467.1
61.5°	297.9	328.6	379.3	484.8	479.2	452.2
62°	288.2	317.9	366.3	467.1	464.8	437.8
62.5°	278.9	307.2	353.7	449.0	447.1	423.0
63°	270.0	297.0	341.6	431.8	433.2	409.9
63.5°	261.2	287.2	329.5	415.1	417.4	396.0
64°	252.8	277.9	317.9	399.7	403.9	383.9
64.5°	244.9	268.7	307.2	383.9	388.6	370.4
65°	237.0	259.8	296.5	369.5	376.5	359.3
65.5°	229.1	251.0	286.3	355.6	362.1	347.2
66°	221.7	242.6	276.1	342.1	350.9	336.0



TEST NUMBER: P776731

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	200.3	218.5	248.2	304.9	314.2	302.6
68°	193.8	210.6	238.9	293.3	303.5	292.4
68.5°	187.3	203.1	230.5	282.1	292.4	282.1
69°	180.8	196.1	222.2	271.4	281.7	271.9
69.5°	174.8	189.2	213.8	260.7	271.4	262.1
70°	168.7	182.2	205.9	250.5	260.7	252.8
70.5°	162.7	175.2	198.0	240.8	251.0	243.1
71°	157.1	168.3	190.6	231.0	241.2	233.8
71.5°	151.5	162.2	183.1	221.7	231.9	225.0
72°	145.9	156.2	175.7	212.4	222.6	216.1
72.5°	140.4	150.1	168.7	204.0	213.3	207.3
73°	135.3	144.6	162.2	195.2	205.0	198.5
73.5°	130.1	138.5	155.7	186.4	195.7	190.1
74°	125.5	132.5	149.2	178.5	187.3	181.7
74.5°	120.4	126.9	142.7	170.1	178.9	173.4
75°	116.2	121.3	136.2	162.7	170.6	166.9
75.5°	112.0	115.7	130.1	155.2	163.1	159.0
76°	107.8	110.2	123.6	147.8	155.2	151.1
76.5°	103.2	105.0	118.1	140.4	147.8	142.7
77°	99.0	99.9	112.0	132.9	139.9	134.8
77.5°	94.4	94.8	106.4	126.0	132.5	127.8
78°	89.7	89.7	100.9	119.0	125.0	120.4
78.5°	85.5	85.1	94.8	112.0	118.1	112.9
79°	80.9	79.9	89.7	105.0	110.6	106.0
79.5°	76.2	75.3	84.1	98.5	103.6	99.0
80°	72.0	70.6	79.0	92.0	96.7	92.0
80.5°	67.4	66.0	73.9	86.0	90.2	85.5
81°	62.7	61.8	68.8	79.9	83.2	79.0
81.5°	58.6	57.2	63.7	73.9	76.7	72.5
82°	54.4	53.0	58.6	67.9	70.2	66.0
82.5°	50.2	48.8	53.9	62.3	64.1	60.0
83°	46.0	44.6	49.3	56.7	58.1	53.9
83.5°	41.8	40.4	44.6	51.6	51.6	47.4
84°	37.6	36.7	40.0	46.5	45.5	41.4
84.5°	33.5	32.5	35.8	41.4	40.0	35.3
85°	29.3	28.8	31.1	36.7	34.9	29.7
85.5°	25.1	25.1	27.0	32.1	29.7	23.7
86°	20.9	21.4	22.8	27.9	25.1	19.5
86.5°	17.2	17.7	18.6	23.2	20.9	16.3
87°	13.5	13.9	14.9	19.1	17.2	13.5
87.5°	9.8	10.7	11.2	15.3	13.5	10.2
88°	6.0	7.0	7.4	11.6	9.8	7.4
88.5°	2.8	3.7	3.3	7.9	6.5	4.2



TEST NUMBER: P776731

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-3000K

**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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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°	2291.0	2263.5	2164.1	2000.0	1775.5	1556.1	1372.5	1270.7	1238.7	1269.8	1368.4
22°	2288.2	2260.8	2160.4	1994.4	1766.7	1544.5	1357.7	1255.4	1223.3	1254.5	1353.9



44°	1366.5	1458.1	1592.4	1277.7	1012.3	845.0	715.8	633.0	605.2	635.8	719.0
44.5°	1330.2	1423.7	1560.3	1248.0	988.2	826.4	701.4	619.6	591.7	622.8	704.6



66.5°	324.4	331.9	321.6	268.2	231.9	214.3	207.8	214.7	210.1	216.1	211.9
67°	313.7	319.3	309.1	258.4	223.6	206.8	202.2	208.7	204.0	210.1	206.4



89°	1.4	0.9	0.9	0.9	0.5	0.5	0.0	0.5	0.0	0.5	0.5
89.5°	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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21.5°	1533.4	1747.2	1962.4	2136.2	2246.4	2291.0
22°	1520.8	1737.9	1956.3	2132.0	2243.1	2288.2



44°	825.0	984.4	1219.6	1567.3	1453.9	1366.5
44.5°	807.3	960.7	1190.8	1537.5	1419.0	1330.2



66.5°	214.3	234.3	266.8	329.5	337.4	324.4
67°	207.3	226.4	257.0	316.5	326.8	313.7

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89°	0.5	0.9	0.9	4.2	2.8	1.4
89.5°	0.0	0.0	0.0	0.9	0.5	0.0

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Peachtree City, GA 30269

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(END OF REPORT)