

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: P776833

Luminaire Tested: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776833
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-4000K
Description: 8 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4278.0 lumens
Efficiency: N/A
Efficacy: 89.1 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

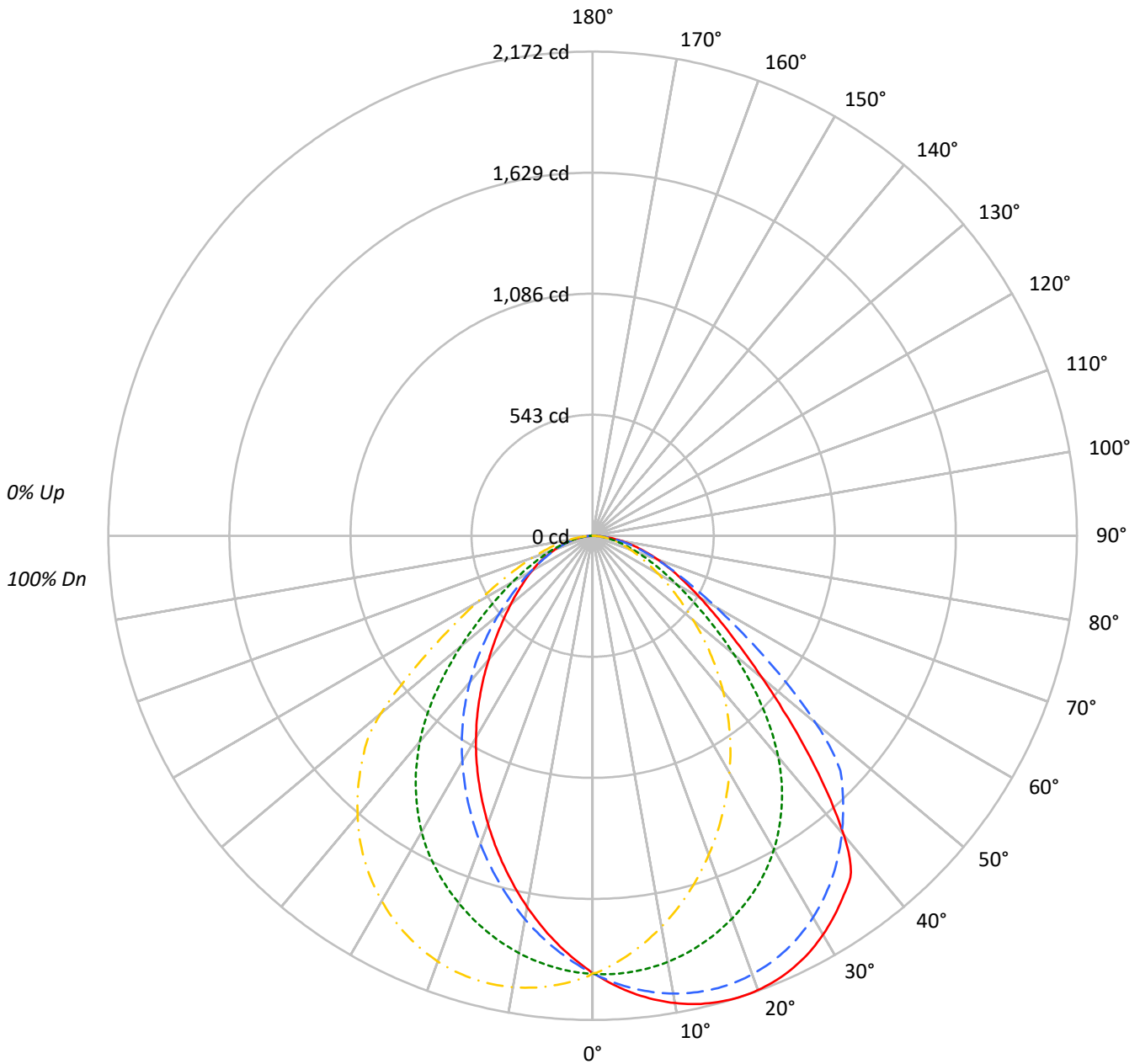
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	47072	47072	47072	47072
5°	49553	47286	44168	46792
10°	51825	47263	41163	46274
15°	53764	47035	38098	45600
20°	55339	46628	35051	44762
25°	56518	46030	32016	43792
30°	57214	45009	28964	42454
35°	57535	43288	25821	40475
40°	54862	40511	22703	37728
45°	45834	36284	20055	33738
50°	37170	30891	17906	28769
55°	30802	25342	16271	23904
60°	26688	20794	15039	19926
65°	23898	17362	13861	16789
70°	21755	14646	12535	14211
75°	19798	12313	11386	12007
80°	17758	10163	9970	9832
85°	14471	7896	6438	7236

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 53728 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.1	4.3
10°-20°	523.6	12.2
20°-30°	774.5	18.1
30°-40°	892.6	20.9
40°-50°	812.7	19.0
50°-60°	556.6	13.0
60°-70°	326.8	7.6
70°-80°	164.8	3.9
80°-90°	41.2	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°	1483.3	34.7
0°-40°	2375.9	55.5
0°-60°	3745.2	87.5
0°-90°	4278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4278.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1963	1963	1963	1963	1963	
5°	2059	1964	1835	1944	2059	199
15°	2166	1895	1535	1837	2166	613
25°	2136	1740	1210	1655	2136	984
35°	1966	1479	882	1383	1966	1223
45°	1352	1070	591	995	1352	1044
55°	737	606	389	572	737	669
65°	421	306	244	296	421	421
75°	214	133	123	130	214	228
85°	53	29	23	26	53	61
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°	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1
0.5°	1970.7	1971.2	1971.2	1968.8	1966.4	1963.1	1960.2	1948.8	1948.3	1949.2	1953.5
1°	1981.7	1981.3	1979.4	1974.1	1966.9	1959.3	1953.1	1938.2	1936.3	1938.2	1944.5
1.5°	1992.3	1991.8	1987.0	1978.4	1967.9	1955.4	1945.4	1927.7	1924.9	1926.8	1935.4
2°	2002.3	2001.8	1995.1	1983.2	1967.9	1951.1	1937.3	1916.7	1912.4	1914.8	1925.8
2.5°	2012.8	2011.4	2002.8	1987.5	1967.9	1946.8	1929.2	1905.7	1900.0	1903.3	1916.2
3°	2022.4	2020.5	2010.4	1991.8	1967.9	1942.5	1921.0	1893.8	1887.6	1891.4	1906.2
3.5°	2031.9	2029.6	2017.6	1995.6	1967.4	1937.8	1912.4	1882.3	1874.6	1879.0	1896.2
4°	2041.5	2038.6	2024.3	1999.0	1966.9	1932.5	1903.3	1870.8	1861.7	1866.5	1885.6
4.5°	2050.1	2047.2	2030.5	2002.3	1966.0	1927.7	1894.7	1858.9	1848.4	1853.6	1875.1
5°	2058.7	2055.4	2037.2	2005.6	1964.5	1922.0	1885.2	1846.0	1835.0	1840.7	1864.1
5.5°	2067.3	2063.5	2043.4	2008.5	1963.1	1916.7	1875.6	1834.0	1821.1	1827.8	1853.1
6°	2075.5	2071.2	2049.2	2010.9	1961.7	1910.5	1866.0	1821.1	1807.2	1814.4	1842.1
6.5°	2083.1	2078.3	2054.4	2013.3	1959.8	1904.8	1856.0	1808.7	1793.8	1801.0	1831.1
7°	2090.8	2086.0	2059.7	2015.2	1957.8	1898.1	1846.0	1795.3	1779.0	1787.2	1819.2
7.5°	2097.9	2092.7	2064.9	2017.6	1955.4	1891.9	1835.4	1781.9	1765.2	1773.8	1807.7
8°	2104.6	2099.4	2069.7	2019.0	1953.1	1885.2	1824.9	1768.5	1750.3	1759.4	1795.8
8.5°	2110.8	2105.6	2074.0	2020.5	1950.7	1878.0	1813.9	1755.1	1735.5	1745.6	1783.8
9°	2117.0	2111.3	2077.8	2021.4	1947.8	1871.3	1803.4	1741.7	1720.7	1730.7	1771.4
9.5°	2123.3	2117.0	2082.1	2022.4	1944.5	1863.7	1792.4	1727.9	1705.9	1716.9	1759.4
10°	2128.5	2122.3	2085.5	2022.9	1941.1	1856.0	1780.9	1713.5	1690.6	1702.1	1747.0
10.5°	2133.8	2127.1	2088.8	2023.3	1937.3	1848.4	1769.5	1699.7	1675.8	1687.2	1734.1
11°	2139.0	2131.9	2091.7	2023.3	1933.5	1840.2	1757.5	1685.3	1660.5	1672.9	1721.2
11.5°	2143.3	2136.2	2094.6	2023.3	1929.6	1832.1	1746.0	1671.0	1645.2	1657.6	1707.8
12°	2147.6	2140.0	2097.0	2022.9	1925.3	1824.0	1734.1	1656.6	1629.4	1642.8	1694.9
12.5°	2151.5	2143.8	2098.9	2022.4	1921.0	1815.4	1722.1	1641.8	1614.1	1627.9	1682.0
13°	2155.3	2147.2	2100.8	2021.4	1916.2	1806.8	1709.7	1627.0	1598.3	1612.2	1668.6
13.5°	2158.2	2150.0	2102.2	2020.0	1911.0	1797.7	1697.3	1612.2	1582.5	1596.9	1655.2
14°	2161.0	2152.9	2103.7	2018.6	1905.7	1788.6	1684.4	1596.9	1566.7	1581.6	1641.3
14.5°	2163.9	2155.3	2104.6	2017.1	1900.5	1779.5	1671.9	1582.0	1551.0	1566.3	1627.5
15°	2165.8	2157.2	2105.1	2015.2	1894.7	1769.5	1659.0	1566.3	1534.7	1550.5	1613.6
15.5°	2167.7	2159.1	2105.6	2012.8	1889.0	1759.9	1646.1	1551.5	1518.9	1535.2	1599.7
16°	2169.2	2160.6	2105.1	2010.4	1882.8	1749.9	1632.7	1536.2	1502.7	1519.4	1585.9
16.5°	2170.6	2161.5	2104.6	2007.6	1877.0	1739.8	1619.3	1520.9	1486.9	1504.1	1572.0
17°	2171.1	2162.0	2104.1	2004.7	1870.3	1729.8	1606.0	1505.1	1470.7	1487.9	1557.2
17.5°	2171.6	2162.0	2103.2	2001.3	1863.7	1719.3	1592.1	1489.8	1454.4	1472.6	1543.3
18°	2172.0	2162.5	2101.7	1998.0	1857.0	1708.7	1578.7	1474.5	1438.1	1455.8	1529.0
18.5°	2171.6	2162.0	2100.3	1994.2	1849.8	1698.2	1564.8	1458.7	1421.9	1440.5	1514.2
19°	2171.1	2161.0	2098.4	1989.9	1842.1	1687.2	1551.0	1442.9	1405.6	1424.8	1499.8
19.5°	2170.1	2160.1	2096.0	1985.6	1835.0	1676.2	1537.1	1427.6	1389.9	1409.0	1485.5
20°	2168.7	2158.6	2093.6	1981.3	1827.3	1665.2	1523.2	1411.8	1373.6	1392.7	1470.2
20.5°	2167.2	2157.2	2090.8	1976.5	1819.7	1653.8	1508.9	1396.1	1356.9	1376.5	1455.4
21°	2164.9	2154.8	2087.4	1971.7	1811.5	1642.8	1494.6	1379.8	1340.6	1360.7	1441.0



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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°	2156.7	2146.2	2075.9	1955.0	1786.7	1607.4	1451.0	1333.0	1291.8	1312.9	1396.1
23°	2153.4	2142.9	2071.6	1948.8	1777.6	1595.4	1436.7	1316.7	1275.6	1296.6	1381.2
23.5°	2149.6	2139.0	2066.8	1942.5	1768.5	1583.5	1422.4	1300.4	1259.3	1280.8	1366.4
24°	2145.3	2134.7	2062.1	1936.3	1759.4	1571.1	1407.5	1284.7	1243.1	1264.6	1351.1
24.5°	2141.0	2130.0	2056.3	1929.6	1749.9	1558.6	1392.7	1268.9	1226.3	1248.8	1335.8
25°	2136.2	2125.2	2050.6	1922.5	1739.8	1546.2	1377.9	1253.1	1210.1	1232.6	1321.0
25.5°	2130.4	2119.9	2044.4	1914.8	1729.8	1532.8	1363.1	1237.3	1194.3	1216.3	1306.2
26°	2124.7	2114.2	2038.6	1907.6	1719.7	1519.9	1348.3	1221.1	1177.6	1200.5	1290.4
26.5°	2119.0	2108.0	2031.9	1899.5	1709.2	1507.0	1333.4	1204.8	1160.8	1184.3	1275.6
27°	2112.7	2101.7	2024.8	1891.9	1698.2	1493.6	1318.1	1188.6	1144.6	1168.5	1260.3
27.5°	2106.1	2095.1	2017.6	1883.3	1686.8	1480.2	1303.3	1172.8	1128.8	1151.8	1245.0
28°	2098.4	2087.9	2010.0	1874.2	1675.3	1466.3	1288.0	1157.0	1112.1	1136.0	1229.7
28.5°	2091.2	2080.2	2002.3	1865.1	1663.3	1452.5	1273.2	1140.8	1095.3	1119.7	1214.9
29°	2083.1	2072.1	1994.2	1856.0	1651.4	1438.1	1257.9	1124.5	1079.1	1103.5	1199.1
29.5°	2075.0	2064.0	1986.0	1846.4	1638.5	1424.3	1242.6	1108.7	1062.8	1087.2	1183.8
30°	2066.4	2055.9	1977.0	1836.4	1625.6	1409.5	1227.3	1092.0	1046.1	1071.0	1168.5
30.5°	2057.8	2046.8	1967.9	1825.9	1612.2	1394.6	1212.5	1076.2	1029.4	1054.7	1153.2
31°	2048.2	2037.7	1958.8	1814.9	1598.8	1379.3	1196.7	1059.5	1013.1	1038.9	1137.9
31.5°	2038.6	2028.1	1949.2	1803.9	1584.9	1364.5	1180.9	1043.7	996.8	1022.7	1122.6
32°	2029.1	2018.6	1939.2	1791.9	1570.6	1349.2	1165.6	1027.4	980.6	1006.4	1107.3
32.5°	2018.6	2008.0	1928.7	1780.0	1555.8	1333.0	1149.8	1011.2	963.9	990.2	1092.0
33°	2008.5	1998.0	1918.2	1768.0	1540.9	1317.2	1134.5	994.5	948.1	973.9	1076.7
33.5°	1998.0	1987.0	1907.2	1755.1	1526.1	1301.4	1118.8	979.2	931.3	958.1	1061.4
34°	1987.0	1976.5	1896.6	1742.2	1510.3	1285.6	1103.0	962.4	914.6	941.9	1045.1
34.5°	1976.0	1965.0	1884.7	1728.8	1494.6	1269.4	1087.2	946.2	898.4	925.6	1029.8
35°	1965.5	1953.5	1873.2	1715.0	1478.8	1253.1	1071.4	929.9	882.1	909.8	1014.5
35.5°	1955.0	1942.1	1860.8	1700.1	1462.0	1236.4	1055.2	914.1	865.8	893.6	998.8
36°	1944.9	1930.1	1848.8	1685.8	1445.3	1220.6	1039.4	897.9	849.6	877.3	983.0
36.5°	1933.5	1918.6	1836.4	1670.5	1427.6	1203.9	1023.6	881.1	833.3	861.1	967.2
37°	1920.1	1907.2	1823.0	1655.2	1410.4	1186.7	1007.4	864.9	817.6	844.8	951.4
37.5°	1903.3	1895.7	1810.1	1639.9	1392.2	1169.4	990.6	849.1	801.8	829.0	935.7
38°	1879.0	1884.7	1796.2	1623.6	1373.1	1152.7	974.9	832.9	786.0	813.3	919.9
38.5°	1853.6	1871.8	1782.4	1606.9	1354.5	1135.5	958.6	816.6	770.7	797.0	904.1
39°	1823.0	1857.4	1768.5	1589.2	1334.9	1118.3	942.3	800.8	755.4	781.7	888.3
39.5°	1789.1	1836.9	1754.2	1572.0	1315.3	1100.6	926.1	785.0	740.1	765.9	872.1
40°	1752.7	1814.4	1739.3	1553.8	1294.2	1082.9	909.8	769.3	725.3	750.6	856.3
40.5°	1713.0	1785.7	1725.0	1534.7	1273.7	1065.7	893.6	753.5	710.9	735.3	840.5
41°	1675.3	1756.1	1709.7	1514.6	1252.6	1047.5	876.8	738.7	696.6	721.0	824.3
41.5°	1634.2	1718.8	1694.4	1494.6	1231.1	1029.8	860.6	723.4	682.7	705.7	808.0
42°	1595.0	1684.8	1678.6	1473.0	1209.1	1011.7	844.3	708.6	668.9	691.3	792.2
42.5°	1553.8	1645.6	1662.8	1451.0	1186.7	994.0	828.1	693.7	655.5	677.0	776.4
43°	1513.2	1609.3	1647.5	1428.1	1164.2	975.8	811.8	679.4	642.1	663.1	760.7
43.5°	1471.6	1568.7	1631.3	1406.1	1141.2	957.2	795.6	664.6	628.7	648.8	744.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1351.6	1450.6	1584.4	1331.0	1070.0	902.7	746.8	623.4	591.4	609.1	697.6
45.5°	1310.0	1409.9	1568.7	1305.7	1046.1	884.0	730.5	610.1	579.0	596.2	682.3
46°	1273.7	1371.7	1550.5	1279.4	1022.2	865.8	714.3	596.7	567.5	583.3	666.5
46.5°	1233.0	1330.6	1531.8	1252.2	997.8	847.2	698.5	583.8	555.6	570.9	651.2
47°	1199.1	1294.2	1505.1	1224.4	973.4	829.0	682.3	571.3	544.1	558.9	636.4
47.5°	1158.9	1254.1	1479.7	1195.7	948.6	810.4	666.5	559.4	533.1	547.0	621.5
48°	1127.4	1219.2	1447.2	1166.6	925.1	792.2	650.7	546.5	522.1	535.5	607.2
48.5°	1089.6	1179.0	1416.6	1137.4	900.3	774.1	634.9	534.5	511.1	524.0	592.4
49°	1060.0	1146.5	1379.8	1108.2	875.9	755.9	619.6	523.0	500.6	512.5	578.0
49.5°	1024.1	1108.7	1345.4	1078.6	852.0	737.7	604.3	511.6	490.5	501.5	564.2
50°	996.4	1077.6	1306.2	1049.0	828.1	719.5	589.0	500.1	480.0	490.5	550.3
50.5°	962.9	1042.7	1268.4	1018.4	803.2	701.4	574.2	489.1	470.0	480.0	536.4
51°	937.1	1011.7	1229.2	987.8	780.3	683.7	559.9	478.1	460.9	470.0	523.0
51.5°	906.0	979.2	1191.4	957.6	756.8	666.5	545.5	467.1	451.3	459.5	510.1
52°	881.1	950.5	1151.3	928.0	733.9	648.8	531.2	457.1	441.8	449.4	497.2
52.5°	853.4	920.8	1114.5	898.4	710.9	631.1	517.3	446.5	432.2	439.9	484.3
53°	830.0	892.6	1075.7	868.2	689.4	613.9	503.9	436.5	423.1	429.8	471.9
53.5°	804.2	864.9	1039.4	838.6	667.4	597.2	490.5	426.5	414.5	420.7	459.5
54°	781.2	837.6	1001.6	809.4	646.4	580.4	477.1	417.4	405.9	411.6	448.0
54.5°	758.3	812.8	966.2	781.2	625.4	563.7	464.2	408.3	397.8	403.0	436.0
55°	736.8	786.5	931.8	753.0	606.2	547.4	451.8	398.7	389.2	394.0	424.6
55.5°	716.2	765.9	896.9	726.2	586.2	531.2	439.4	389.7	381.0	385.4	413.1
56°	695.2	739.6	864.9	699.9	567.0	515.4	426.9	380.6	372.4	376.7	402.6
56.5°	677.0	721.0	831.9	674.6	548.4	500.1	415.5	371.5	365.3	368.1	392.0
57°	656.0	696.6	802.3	649.7	530.7	484.8	404.0	363.8	357.6	360.0	381.5
57.5°	640.2	679.4	770.7	626.3	513.0	470.0	393.0	355.7	350.0	351.9	371.0
58°	620.6	656.9	742.5	602.9	496.3	455.6	381.5	347.6	342.3	343.8	360.5
58.5°	606.2	639.2	714.8	581.4	480.0	441.3	370.5	339.5	334.7	336.1	350.5
59°	587.1	619.6	687.5	560.3	463.8	427.4	359.1	331.3	327.5	328.5	340.4
59.5°	574.2	602.4	662.7	540.3	448.5	414.5	348.5	323.7	320.3	320.8	330.8
60°	556.5	584.2	636.8	520.7	433.6	401.6	338.0	316.0	313.6	313.6	321.3
60.5°	542.2	566.1	614.8	502.0	418.8	388.7	328.5	308.4	306.5	306.5	312.2
61°	526.9	550.8	590.0	483.8	405.4	375.8	318.4	300.7	299.8	299.3	303.1
61.5°	512.5	532.6	569.9	467.1	392.0	362.9	308.4	293.6	293.1	292.6	294.5
62°	498.7	518.7	548.4	450.9	378.2	350.5	299.3	286.9	286.4	285.4	285.4
62.5°	484.8	502.5	527.3	435.1	364.8	339.0	290.2	279.7	279.2	278.7	277.3
63°	471.4	488.1	509.2	419.8	352.8	327.0	281.1	273.0	272.0	272.0	269.2
63.5°	458.5	473.3	490.1	405.4	340.4	316.0	272.0	266.3	265.3	265.3	261.0
64°	446.1	458.5	472.8	390.6	328.9	305.0	263.4	259.6	258.2	258.7	253.4
64.5°	433.2	445.6	455.6	377.2	317.5	294.5	255.3	252.9	251.0	251.5	245.7
65°	421.2	431.7	438.4	364.3	306.0	284.0	247.2	246.2	244.3	244.8	238.1
65.5°	409.3	419.3	423.6	351.4	295.0	274.0	239.5	239.1	237.6	238.1	230.9
66°	397.3	406.4	407.8	339.0	284.5	263.9	231.9	232.4	230.9	231.9	223.8



TEST NUMBER: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	363.4	369.1	365.3	304.1	254.4	235.2	209.9	213.2	211.3	212.8	203.7
68°	352.8	357.6	351.9	293.6	244.8	226.6	203.2	207.0	204.6	206.5	197.5
68.5°	341.8	346.1	339.5	283.0	235.7	218.0	196.5	201.3	198.4	200.3	190.8
69°	331.3	335.2	326.5	272.5	226.6	209.4	189.8	195.1	191.7	194.1	184.5
69.5°	321.3	324.2	314.6	262.5	217.5	200.8	183.6	188.9	185.5	188.4	178.8
70°	310.3	313.2	303.1	252.4	208.9	192.7	177.4	183.1	178.8	182.2	172.6
70.5°	300.2	302.2	291.6	242.9	200.3	185.0	171.6	177.4	173.1	176.4	166.9
71°	290.2	291.6	280.6	233.8	192.2	177.9	165.4	171.2	166.4	170.2	161.1
71.5°	280.2	281.6	269.7	224.7	184.1	170.2	159.7	165.4	160.6	164.0	155.4
72°	270.6	271.6	259.1	215.6	176.4	162.6	153.9	159.2	154.9	158.3	150.1
72.5°	261.0	261.5	249.1	206.5	168.8	155.9	148.2	153.5	149.6	152.5	144.9
73°	251.5	252.0	239.1	198.4	161.1	148.7	143.0	147.7	144.4	147.3	139.6
73.5°	241.4	241.9	229.0	189.8	153.9	142.0	137.7	142.5	138.7	141.5	134.3
74°	232.4	232.4	219.5	181.7	146.8	135.3	132.4	137.2	133.4	136.3	129.1
74.5°	223.3	222.8	209.9	173.6	140.1	129.1	127.2	131.5	128.1	130.5	123.8
75°	213.7	213.7	200.8	166.4	132.9	122.9	122.4	126.7	122.9	125.3	118.6
75.5°	205.1	204.6	191.7	158.7	126.2	116.7	117.1	121.0	117.6	120.0	113.8
76°	196.0	195.5	183.1	151.6	120.0	110.9	112.4	115.7	112.4	114.7	108.5
76.5°	186.9	186.5	174.5	143.9	113.8	105.2	107.6	110.4	107.6	109.5	103.3
77°	178.3	177.9	166.4	136.7	107.6	99.4	102.8	105.2	102.3	104.2	99.0
77.5°	170.2	169.2	158.3	129.6	101.4	94.2	97.5	99.9	97.5	99.0	93.7
78°	162.1	161.1	150.1	122.4	95.6	88.9	92.8	94.7	92.3	93.7	88.9
78.5°	153.5	153.0	142.0	115.7	89.9	83.7	88.0	89.9	87.5	88.9	84.1
79°	145.3	144.4	133.9	109.0	84.6	78.9	83.7	84.6	82.2	83.7	79.4
79.5°	136.7	136.3	125.7	102.3	78.9	74.1	78.9	79.4	77.5	78.9	74.6
80°	128.6	128.1	118.1	96.1	73.6	69.3	74.1	74.1	72.2	74.1	69.8
80.5°	120.5	120.0	110.4	89.4	68.4	65.0	69.8	68.8	67.4	68.8	65.0
81°	112.8	112.4	103.3	83.7	63.6	60.7	65.0	63.6	62.6	64.1	60.7
81.5°	104.7	104.2	96.1	77.5	58.8	56.4	60.2	58.3	57.4	58.8	55.9
82°	97.1	97.1	88.9	71.7	54.0	52.1	55.5	53.5	52.6	54.0	51.6
82.5°	89.4	89.4	81.8	66.0	49.2	48.3	51.2	48.3	47.8	49.2	46.9
83°	81.8	81.8	75.1	60.2	45.4	44.5	46.4	43.5	42.6	44.0	42.6
83.5°	74.1	74.6	67.9	54.5	41.1	40.6	42.1	38.2	37.8	39.2	38.2
84°	66.9	67.4	61.2	49.7	36.8	36.8	37.8	33.5	33.0	34.4	33.9
84.5°	59.8	60.2	55.0	44.5	32.5	33.0	33.9	28.7	28.2	29.6	30.1
85°	52.6	53.1	48.8	39.7	28.7	29.2	29.6	23.4	23.4	24.4	25.8
85.5°	45.4	45.9	43.0	34.4	24.4	25.3	25.3	19.1	18.6	20.1	22.0
86°	38.2	39.2	37.3	30.1	20.6	22.0	21.5	15.3	14.8	15.8	18.2
86.5°	31.1	32.5	32.0	25.3	17.2	18.2	17.7	12.0	11.5	12.4	14.3
87°	24.4	26.3	26.3	21.0	13.9	14.3	13.9	8.6	8.6	9.6	11.0
87.5°	19.6	21.0	21.0	16.3	10.5	11.0	10.5	5.7	5.7	6.2	7.2
88°	15.8	16.3	16.3	12.4	7.2	7.6	6.7	2.9	2.9	3.3	3.8
88.5°	12.0	12.4	12.4	8.6	4.3	3.8	3.3	1.0	1.0	1.0	1.0



TEST NUMBER: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

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: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1963.1	1963.1	1963.1	1963.1	1963.1	1963.1
0.5°	1958.3	1964.5	1969.3	1974.6	1968.8	1970.7
1°	1952.6	1963.1	1972.2	1981.3	1978.4	1981.7
1.5°	1946.8	1961.2	1975.1	1987.5	1987.5	1992.3
2°	1940.6	1959.8	1977.4	1993.7	1996.6	2002.3
2.5°	1934.4	1957.4	1979.8	1999.9	2005.6	2012.8
3°	1927.7	1955.4	1981.7	2005.2	2014.7	2022.4
3.5°	1921.0	1952.6	1983.2	2010.9	2022.9	2031.9
4°	1914.3	1950.2	1984.6	2016.2	2031.0	2041.5
4.5°	1907.2	1947.3	1986.0	2020.9	2038.6	2050.1
5°	1899.5	1944.0	1987.0	2025.3	2046.3	2058.7
5.5°	1892.3	1940.6	1988.0	2029.6	2053.0	2067.3
6°	1884.7	1937.3	1988.4	2033.9	2060.2	2075.5
6.5°	1876.6	1933.5	1988.4	2037.7	2066.8	2083.1
7°	1868.4	1929.2	1988.4	2041.5	2073.1	2090.8
7.5°	1859.8	1925.3	1988.4	2044.4	2079.3	2097.9
8°	1851.2	1920.5	1988.0	2047.2	2085.0	2104.6
8.5°	1842.6	1916.2	1987.5	2050.1	2090.3	2110.8
9°	1834.0	1911.0	1986.0	2052.5	2095.5	2117.0
9.5°	1824.9	1906.2	1985.1	2054.4	2100.3	2123.3
10°	1815.4	1900.5	1983.7	2056.3	2104.6	2128.5
10.5°	1806.3	1895.2	1982.2	2057.8	2108.9	2133.8
11°	1796.7	1889.5	1980.3	2059.2	2112.7	2139.0
11.5°	1786.7	1883.7	1977.9	2060.2	2116.1	2143.3
12°	1776.6	1877.5	1975.5	2061.1	2119.4	2147.6
12.5°	1766.6	1871.3	1973.1	2061.6	2122.3	2151.5
13°	1756.6	1864.6	1969.8	2061.6	2124.7	2155.3
13.5°	1746.0	1857.9	1966.9	2061.1	2127.1	2158.2
14°	1735.5	1851.2	1963.6	2060.6	2129.0	2161.0
14.5°	1724.5	1844.1	1959.8	2060.2	2130.4	2163.9
15°	1713.5	1836.9	1955.9	2058.7	2131.4	2165.8
15.5°	1702.5	1829.2	1951.6	2057.3	2132.3	2167.7
16°	1691.5	1821.6	1947.3	2055.9	2133.3	2169.2
16.5°	1680.1	1813.9	1943.0	2053.9	2133.3	2170.6
17°	1668.6	1805.8	1938.2	2051.5	2133.3	2171.1
17.5°	1656.6	1797.7	1933.0	2049.2	2132.8	2171.6
18°	1645.2	1789.1	1927.7	2046.3	2131.9	2172.0
18.5°	1633.2	1780.5	1922.5	2042.9	2130.9	2171.6
19°	1621.3	1771.9	1916.7	2039.6	2129.5	2171.1
19.5°	1609.3	1763.3	1910.5	2035.8	2127.6	2170.1
20°	1596.9	1754.2	1904.8	2031.9	2125.2	2168.7
20.5°	1584.4	1745.1	1898.1	2027.6	2122.8	2167.2
21°	1572.0	1735.5	1891.4	2022.4	2119.9	2164.9

TEST NUMBER: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1534.2	1706.8	1870.3	2007.1	2109.4	2156.7
23°	1521.3	1696.8	1863.2	2001.3	2105.1	2153.4
23.5°	1508.4	1686.8	1855.5	1995.1	2100.8	2149.6
24°	1495.5	1676.7	1847.9	1988.9	2096.0	2145.3
24.5°	1482.1	1666.2	1839.7	1982.2	2090.8	2141.0
25°	1469.2	1655.2	1831.6	1975.5	2085.0	2136.2
25.5°	1455.8	1644.2	1823.0	1968.4	2078.8	2130.4
26°	1442.4	1633.2	1814.4	1960.7	2073.1	2124.7
26.5°	1428.6	1621.7	1805.3	1953.1	2066.4	2119.0
27°	1415.2	1610.3	1796.2	1944.9	2059.2	2112.7
27.5°	1401.3	1598.3	1786.7	1936.8	2052.0	2106.1
28°	1387.5	1585.9	1776.6	1928.2	2044.4	2098.4
28.5°	1372.6	1573.4	1766.6	1919.6	2036.2	2091.2
29°	1358.8	1560.5	1756.1	1910.5	2028.1	2083.1
29.5°	1344.0	1547.1	1745.6	1901.4	2019.0	2075.0
30°	1329.1	1533.3	1734.1	1891.9	2010.4	2066.4
30.5°	1314.3	1519.4	1722.1	1882.3	2001.3	2057.8
31°	1299.0	1505.6	1710.7	1871.8	1991.8	2048.2
31.5°	1284.2	1490.7	1698.2	1861.7	1981.7	2038.6
32°	1268.9	1475.9	1685.3	1851.2	1971.7	2029.1
32.5°	1253.1	1461.1	1671.9	1840.2	1961.2	2018.6
33°	1237.8	1445.8	1658.5	1829.2	1950.2	2008.5
33.5°	1221.6	1430.5	1644.7	1817.3	1939.2	1998.0
34°	1205.3	1414.2	1630.3	1805.8	1928.2	1987.0
34.5°	1189.5	1398.9	1615.5	1793.8	1916.7	1976.0
35°	1174.2	1382.7	1600.7	1781.4	1904.8	1965.5
35.5°	1157.5	1366.4	1585.4	1769.0	1892.8	1955.0
36°	1141.2	1349.2	1570.1	1756.1	1880.9	1944.9
36.5°	1125.0	1332.5	1553.8	1742.7	1868.4	1933.5
37°	1109.2	1315.3	1537.6	1728.8	1856.0	1920.1
37.5°	1092.5	1297.6	1520.9	1715.0	1843.6	1903.3
38°	1076.2	1279.4	1503.6	1700.6	1831.6	1879.0
38.5°	1059.5	1261.2	1485.9	1685.8	1819.7	1853.6
39°	1043.7	1243.1	1468.3	1671.0	1808.2	1823.0
39.5°	1026.0	1224.9	1449.1	1655.7	1794.3	1789.1
40°	1009.8	1205.3	1430.5	1639.9	1780.0	1752.7
40.5°	993.0	1185.7	1410.9	1624.1	1757.5	1713.0
41°	976.3	1166.1	1390.3	1608.3	1735.5	1675.3
41.5°	959.6	1146.0	1369.3	1591.6	1706.8	1634.2
42°	942.8	1125.5	1348.3	1574.9	1677.2	1595.0
42.5°	926.1	1104.4	1326.3	1558.1	1642.3	1553.8
43°	909.4	1082.9	1303.3	1541.4	1609.8	1513.2
43.5°	892.1	1061.4	1279.4	1523.7	1572.5	1471.6

TEST NUMBER: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	841.0	994.9	1203.4	1469.7	1463.0	1351.6
45.5°	823.3	972.0	1177.1	1451.0	1424.8	1310.0
46°	806.1	950.0	1149.4	1433.4	1387.9	1273.7
46.5°	788.9	927.5	1122.1	1414.2	1350.2	1233.0
47°	771.7	904.6	1093.9	1396.1	1313.8	1199.1
47.5°	754.9	882.1	1066.2	1375.5	1275.6	1158.9
48°	737.2	859.6	1038.0	1354.5	1240.2	1127.4
48.5°	720.5	837.2	1009.3	1331.0	1203.4	1089.6
49°	703.3	815.2	981.1	1300.9	1169.4	1060.0
49.5°	686.6	793.7	953.3	1272.2	1134.1	1024.1
50°	669.8	771.2	925.1	1238.3	1102.0	996.4
50.5°	652.6	749.7	896.9	1203.9	1067.1	962.9
51°	636.4	728.2	868.7	1168.0	1035.6	937.1
51.5°	619.6	707.6	841.5	1130.7	1004.0	906.0
52°	603.4	686.6	814.7	1092.9	974.9	881.1
52.5°	587.1	666.5	788.4	1057.6	943.8	853.4
53°	570.9	646.9	761.6	1020.8	914.1	830.0
53.5°	555.6	627.8	736.3	984.9	887.4	804.2
54°	539.8	608.1	711.9	949.0	859.2	781.2
54.5°	524.5	590.0	688.0	915.1	833.8	758.3
55°	509.2	571.8	665.0	882.1	805.6	736.8
55.5°	494.4	554.6	642.1	848.6	783.1	716.2
56°	479.5	537.4	620.1	817.6	756.4	695.2
56.5°	465.7	520.7	599.5	786.5	735.8	677.0
57°	451.3	503.9	579.0	757.3	710.0	656.0
57.5°	437.5	488.1	559.4	728.6	690.9	640.2
58°	424.1	472.8	540.3	701.4	667.4	620.6
58.5°	411.6	458.0	522.6	675.1	648.8	606.2
59°	399.2	443.7	505.4	648.8	628.2	587.1
59.5°	386.8	429.3	488.6	625.8	609.1	574.2
60°	374.4	415.5	471.9	601.9	590.9	556.5
60.5°	361.4	401.6	456.6	579.5	572.8	542.2
61°	349.5	388.7	441.3	557.5	556.5	526.9
61.5°	338.5	376.3	426.9	536.9	538.3	512.5
62°	327.0	363.8	413.1	517.3	524.0	498.7
62.5°	316.0	351.4	399.7	498.7	507.3	484.8
63°	305.0	339.9	385.8	480.5	492.4	471.4
63.5°	295.0	328.5	373.4	463.3	477.6	458.5
64°	285.0	317.0	361.0	445.6	462.3	446.1
64.5°	274.9	306.0	349.0	430.3	448.9	433.2
65°	264.9	295.9	337.1	414.5	434.6	421.2
65.5°	255.3	285.0	325.6	400.2	422.2	409.3
66°	246.2	274.9	314.6	385.4	408.8	397.3



TEST NUMBER: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	219.9	245.7	283.0	346.1	371.0	363.4
68°	211.8	237.1	272.5	332.8	359.5	352.8
68.5°	203.7	228.1	263.0	321.3	348.1	341.8
69°	196.0	219.5	253.4	309.3	336.1	331.3
69.5°	187.9	210.8	244.3	297.9	325.1	321.3
70°	180.7	202.7	235.2	286.9	314.1	310.3
70.5°	173.1	194.1	226.1	275.9	303.1	300.2
71°	165.9	186.5	217.1	265.3	293.1	290.2
71.5°	159.2	178.3	208.9	254.8	282.6	280.2
72°	152.5	171.6	200.3	244.8	272.0	270.6
72.5°	145.8	164.5	192.2	235.2	262.0	261.0
73°	139.1	157.3	184.1	225.2	252.0	251.5
73.5°	132.9	150.1	175.9	216.1	242.4	241.4
74°	126.7	143.0	168.8	207.0	232.8	232.4
74.5°	121.0	136.3	161.6	197.5	223.3	223.3
75°	115.2	129.6	154.4	188.9	213.7	213.7
75.5°	109.5	122.9	146.8	180.2	204.6	205.1
76°	103.7	116.7	139.6	170.2	196.0	196.0
76.5°	98.5	110.4	132.4	162.6	186.9	186.9
77°	93.7	104.7	125.7	154.9	177.9	178.3
77.5°	88.9	98.5	119.0	147.3	169.2	170.2
78°	83.7	92.8	112.4	139.1	161.1	162.1
78.5°	78.9	87.5	106.1	131.5	153.0	153.5
79°	74.6	81.8	99.4	123.8	144.9	145.3
79.5°	70.3	76.5	93.2	116.2	136.3	136.7
80°	66.0	71.2	87.0	108.5	128.1	128.6
80.5°	61.7	66.5	81.3	101.4	120.0	120.5
81°	57.4	61.2	75.5	94.2	112.4	112.8
81.5°	53.1	56.4	69.8	87.0	104.7	104.7
82°	49.2	52.1	64.1	79.8	96.6	97.1
82.5°	44.9	47.3	58.8	73.2	89.4	89.4
83°	41.1	43.0	53.5	66.5	81.8	81.8
83.5°	37.3	38.7	48.3	59.8	74.6	74.1
84°	33.5	34.4	43.0	53.5	66.9	66.9
84.5°	29.6	30.6	38.2	47.3	59.8	59.8
85°	25.8	26.3	33.5	41.6	53.1	52.6
85.5°	22.0	22.9	28.7	36.3	45.9	45.4
86°	18.2	19.1	24.4	30.6	39.2	38.2
86.5°	14.8	15.8	20.1	25.3	33.0	31.1
87°	11.0	12.4	16.3	20.6	27.3	24.4
87.5°	7.2	9.1	12.4	15.3	22.0	19.6
88°	3.8	5.7	8.6	11.5	17.2	15.8
88.5°	1.0	2.4	4.8	7.6	12.9	12.0



TEST NUMBER: P776833

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-HCD8TSQLWW-5000lm-4000K

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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Cooper Lighting Solutions Photometric Lab
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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Peachtree City, GA 30269

Scaled Data Report





21.5°	2162.5	2152.4	2084.1	1966.4	1803.4	1630.8	1480.2	1364.0	1324.8	1344.9	1426.2
22°	2160.1	2149.6	2080.2	1960.7	1795.3	1619.3	1465.9	1348.3	1308.1	1329.1	1410.9



44°	1431.4	1529.5	1615.5	1381.7	1117.8	939.0	779.3	651.2	616.3	635.4	728.6
44.5°	1390.3	1489.3	1599.7	1356.9	1094.4	920.8	763.1	636.8	603.4	622.0	713.3



66.5°	386.3	393.5	393.0	327.0	274.4	253.9	224.2	226.1	224.2	225.2	217.1
67°	374.8	381.5	379.1	315.5	264.4	244.8	217.1	219.9	217.5	219.0	210.4



89°	8.1	8.1	8.1	4.8	1.4	1.0	1.0	0.5	0.0	0.5	0.5
89.5°	4.3	4.3	4.3	1.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0

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Scaled Data Report





21.5°	1559.6	1726.0	1884.7	2017.6	2117.0	2162.5
22°	1547.1	1716.4	1877.5	2012.8	2113.2	2160.1



44°	874.9	1039.4	1255.0	1506.0	1537.6	1431.4
44.5°	858.2	1017.4	1229.7	1487.9	1499.3	1390.3



66.5°	237.6	265.3	303.6	372.0	395.9	386.3
67°	228.5	255.8	293.1	358.6	383.9	374.8



89°	0.0	0.5	1.0	3.8	8.6	8.1
89.5°	0.0	0.0	0.0	0.5	4.8	4.3

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)