

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: P776809

Luminaire Tested: HCDJBS4050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776809
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B022)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K
Description: 8 INCH ROUND MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

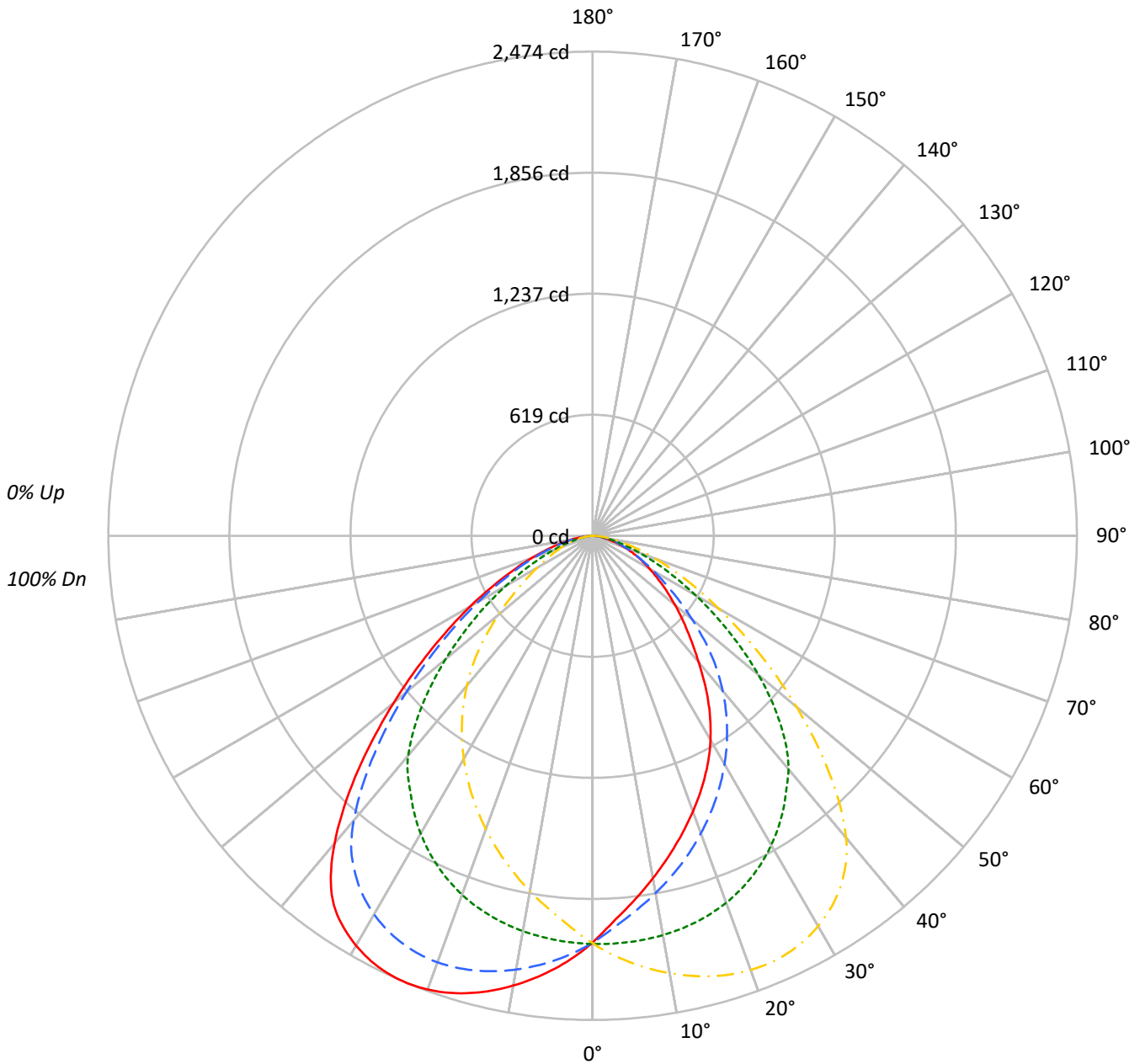
Lumens per Lamp: N/A
Luminaire Lumens: 4865.2 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.32
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87					87			
2	102	94	89	83	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65					65			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44					44			
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39					39			
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35					35			
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32					32			
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29					29			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	63524	63524	63524	63524
5°	58784	63887	68039	63589
10°	55068	64219	72348	63587
15°	51738	64583	76464	63572
20°	48702	64827	80162	63391
25°	45736	64792	83162	62879
30°	42456	64348	85214	61933
35°	38366	63360	85857	60322
40°	33597	62045	81745	58367
45°	29498	58517	73128	53336
50°	26085	52560	62962	46542
55°	23032	44999	53090	38979
60°	20400	37003	44061	31428
65°	18205	29677	36026	24627
70°	15514	23012	29341	18728
75°	12433	17470	23651	13742
80°	9652	12887	18619	9301
85°	6480	9178	11910	5289

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 74389 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.3	4.1
10°-20°	571.7	11.8
20°-30°	875.1	18.0
30°-40°	1036.2	21.3
40°-50°	951.6	19.6
50°-60°	665.4	13.7
60°-70°	372.8	7.7
70°-80°	161.0	3.3
80°-90°	34.0	0.7
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°	1644.1	33.8
0°-40°	2680.4	55.1
0°-60°	4297.4	88.3
0°-90°	4865.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4865.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2081	2081	2081	2081	2081	
5°	1918	2085	2220	2075	1918	179
15°	1637	2043	2419	2011	1637	460
25°	1358	1923	2469	1867	1358	623
35°	1029	1700	2304	1618	1029	640
45°	683	1355	1694	1235	683	529
55°	433	845	997	732	433	389
65°	252	411	499	341	252	250
75°	105	148	200	116	105	114
85°	18	26	34	15	18	23
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°	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7
0.5°	2060.8	2062.3	2067.6	2074.9	2086.1	2090.4	2094.8	2094.8	2093.8	2091.9	2090.4
1°	2044.3	2047.2	2056.0	2068.6	2086.1	2096.8	2106.0	2109.4	2109.9	2107.0	2101.1
1.5°	2027.3	2031.2	2044.3	2062.3	2086.6	2103.6	2117.2	2124.0	2124.9	2120.6	2111.3
2°	2009.8	2015.7	2032.2	2056.0	2086.6	2109.4	2127.8	2137.5	2139.5	2134.1	2122.0
2.5°	1993.3	2000.1	2020.0	2049.2	2086.6	2115.2	2138.5	2150.7	2153.6	2147.3	2131.7
3°	1977.3	1985.1	2008.4	2042.9	2086.6	2121.5	2148.2	2163.8	2167.7	2159.9	2141.4
3.5°	1961.8	1971.0	1996.2	2036.1	2086.1	2126.9	2158.4	2176.4	2181.3	2172.0	2150.2
4°	1947.2	1956.9	1985.1	2028.8	2085.6	2132.2	2168.1	2189.0	2194.4	2184.2	2159.4
4.5°	1932.1	1943.3	1973.4	2022.0	2085.1	2137.5	2177.9	2201.6	2207.5	2195.8	2168.1
5°	1918.1	1929.7	1962.3	2014.7	2084.6	2142.9	2187.1	2213.3	2220.1	2207.5	2176.9
5.5°	1903.5	1916.1	1951.6	2007.4	2084.1	2147.3	2196.3	2225.4	2232.7	2219.1	2185.1
6°	1889.4	1903.0	1940.4	2000.6	2083.2	2152.1	2205.0	2236.6	2244.9	2230.3	2193.4
6.5°	1875.3	1889.9	1929.7	1993.3	2082.2	2157.0	2214.3	2248.3	2257.0	2240.5	2201.2
7°	1860.8	1876.8	1919.0	1986.0	2081.2	2161.3	2222.5	2258.9	2268.7	2251.2	2208.9
7.5°	1846.7	1863.7	1908.4	1978.8	2079.8	2165.7	2231.3	2269.6	2279.8	2261.9	2216.2
8°	1832.6	1850.1	1897.7	1971.5	2078.3	2169.6	2239.0	2280.3	2291.5	2272.1	2223.5
8.5°	1818.5	1837.0	1887.0	1964.2	2076.8	2173.5	2247.3	2291.0	2302.6	2281.8	2230.8
9°	1804.4	1823.9	1875.8	1956.4	2075.4	2177.4	2254.6	2300.7	2313.3	2291.0	2237.6
9.5°	1790.4	1810.7	1865.1	1949.1	2073.5	2180.8	2262.3	2310.4	2323.5	2300.7	2243.9
10°	1776.3	1797.2	1854.0	1941.9	2071.5	2184.6	2269.1	2320.6	2333.7	2309.4	2250.2
10.5°	1762.7	1784.0	1842.8	1934.6	2069.6	2187.6	2276.4	2329.4	2343.9	2318.7	2256.5
11°	1748.1	1770.9	1831.6	1926.8	2067.1	2190.5	2283.7	2338.6	2353.6	2326.9	2262.3
11.5°	1734.0	1757.8	1820.5	1919.0	2064.7	2193.4	2290.0	2347.3	2362.9	2335.2	2268.2
12°	1719.9	1744.2	1808.8	1911.3	2062.3	2196.3	2296.3	2356.1	2371.6	2343.4	2273.5
12.5°	1706.3	1731.1	1797.6	1903.0	2059.9	2198.7	2302.6	2364.8	2380.3	2350.7	2278.4
13°	1692.3	1718.0	1786.5	1894.8	2056.9	2201.2	2308.5	2372.6	2389.1	2358.5	2283.2
13.5°	1678.7	1704.9	1774.8	1887.0	2053.5	2203.1	2314.3	2379.9	2396.9	2365.3	2288.1
14°	1664.6	1691.3	1763.2	1878.2	2050.1	2204.6	2319.6	2387.6	2404.6	2372.1	2292.4
14.5°	1650.5	1678.2	1751.5	1870.0	2046.7	2206.5	2325.0	2394.4	2411.9	2378.4	2296.3
15°	1636.9	1664.6	1739.9	1860.8	2043.3	2208.0	2329.8	2401.2	2419.2	2384.7	2300.2
15.5°	1622.8	1651.0	1728.2	1852.5	2039.5	2208.9	2334.2	2407.5	2426.0	2390.1	2303.6
16°	1609.2	1637.9	1716.1	1843.3	2035.6	2209.9	2338.6	2413.8	2432.3	2395.4	2306.5
16.5°	1595.6	1624.8	1703.9	1834.5	2031.2	2210.4	2342.5	2419.2	2438.1	2400.7	2309.4
17°	1581.6	1611.2	1692.3	1824.8	2026.8	2210.9	2346.3	2424.5	2443.5	2405.1	2311.9
17.5°	1568.0	1598.1	1679.6	1815.1	2022.0	2210.9	2349.7	2429.4	2448.3	2409.5	2313.8
18°	1553.9	1584.5	1667.5	1805.4	2017.1	2210.9	2352.7	2433.8	2453.2	2413.4	2315.8
18.5°	1540.3	1571.4	1654.9	1795.7	2011.8	2210.4	2355.1	2438.1	2457.1	2416.3	2317.2
19°	1526.7	1557.8	1642.7	1785.5	2006.4	2209.9	2357.5	2442.0	2460.9	2419.7	2318.2
19.5°	1512.6	1544.6	1630.1	1775.8	2001.1	2208.9	2359.5	2444.9	2464.3	2422.1	2318.7
20°	1499.0	1530.6	1617.5	1765.1	1995.3	2207.5	2360.9	2447.8	2467.3	2424.0	2319.2
20.5°	1484.9	1517.0	1604.9	1754.9	1989.4	2205.5	2362.4	2450.3	2469.7	2425.5	2318.7
21°	1471.3	1503.4	1591.7	1744.2	1982.6	2203.6	2362.9	2452.2	2471.6	2427.0	2318.2



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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°	1429.1	1462.6	1553.4	1711.2	1962.7	2196.3	2363.3	2455.1	2474.5	2427.4	2314.3
23°	1415.0	1449.0	1539.8	1699.5	1955.5	2192.9	2362.4	2455.1	2474.1	2426.5	2311.9
23.5°	1400.9	1435.4	1527.2	1688.4	1947.7	2189.5	2360.9	2454.6	2473.6	2425.5	2309.4
24°	1386.8	1421.3	1513.6	1676.7	1939.4	2185.6	2359.5	2453.7	2472.6	2423.6	2306.0
24.5°	1372.3	1406.7	1500.5	1664.6	1931.7	2181.3	2357.5	2452.2	2470.7	2421.1	2302.6
25°	1357.7	1393.1	1486.9	1652.9	1923.4	2176.4	2354.6	2450.3	2468.7	2418.7	2298.8
25.5°	1343.1	1378.6	1473.8	1640.8	1915.1	2171.5	2351.7	2447.8	2466.3	2415.3	2294.4
26°	1328.6	1364.5	1460.2	1628.7	1905.9	2166.2	2348.3	2444.9	2462.9	2411.4	2289.1
26.5°	1314.0	1349.9	1446.6	1616.0	1896.7	2159.9	2344.4	2441.5	2459.0	2407.0	2283.7
27°	1298.5	1335.8	1432.5	1603.4	1887.5	2154.1	2340.0	2437.6	2455.1	2402.7	2277.9
27.5°	1282.9	1320.8	1418.9	1590.8	1877.8	2147.3	2335.2	2433.3	2450.3	2397.3	2271.6
28°	1267.9	1306.2	1404.8	1577.7	1867.6	2140.5	2329.8	2427.9	2444.9	2391.0	2264.8
28.5°	1252.3	1291.2	1390.7	1564.6	1857.4	2133.2	2324.0	2422.6	2439.1	2385.2	2258.0
29°	1236.3	1276.1	1376.6	1551.4	1847.2	2125.4	2317.7	2416.3	2432.3	2377.9	2250.2
29.5°	1220.3	1260.6	1362.6	1538.3	1836.0	2117.2	2310.9	2410.0	2425.0	2370.6	2241.9
30°	1204.3	1245.0	1348.0	1525.2	1825.3	2108.4	2303.6	2402.7	2417.2	2362.4	2233.2
30.5°	1187.7	1229.0	1333.4	1511.1	1814.1	2099.7	2295.8	2394.4	2409.0	2354.1	2224.0
31°	1170.7	1213.5	1318.9	1497.5	1802.5	2090.4	2287.6	2386.2	2400.2	2344.9	2214.3
31.5°	1153.8	1197.0	1303.8	1483.9	1790.4	2080.2	2278.9	2377.4	2391.0	2335.2	2204.1
32°	1136.3	1180.9	1289.2	1469.4	1778.7	2070.5	2269.6	2367.7	2380.8	2324.5	2193.9
32.5°	1118.8	1164.4	1274.2	1455.8	1766.6	2059.9	2259.9	2358.0	2370.6	2313.8	2182.2
33°	1101.8	1147.4	1259.1	1441.2	1753.9	2049.2	2249.7	2347.3	2359.0	2302.6	2170.1
33.5°	1083.8	1130.4	1244.1	1427.1	1740.8	2037.5	2238.5	2335.7	2346.8	2289.5	2157.5
34°	1066.3	1113.4	1228.5	1412.1	1727.7	2025.4	2226.9	2323.5	2334.2	2276.4	2143.4
34.5°	1047.4	1096.0	1213.0	1397.5	1714.1	2013.2	2215.2	2310.9	2320.1	2260.9	2128.3
35°	1029.4	1078.0	1197.5	1382.5	1700.0	2000.6	2202.1	2296.3	2303.6	2244.9	2112.3
35.5°	1010.5	1060.5	1181.4	1367.4	1686.0	1986.5	2188.0	2280.8	2286.6	2226.4	2095.3
36°	992.5	1042.6	1165.4	1352.4	1671.4	1972.0	2172.5	2263.3	2267.2	2207.0	2079.8
36.5°	973.1	1024.6	1149.9	1336.8	1656.3	1957.4	2156.0	2243.9	2246.3	2187.1	2063.7
37°	954.7	1006.1	1133.4	1321.8	1641.8	1941.9	2139.0	2224.0	2221.1	2165.7	2046.3
37.5°	935.2	987.7	1116.8	1305.7	1626.7	1927.8	2123.0	2202.1	2197.8	2140.9	2025.9
38°	916.8	968.7	1100.3	1291.2	1613.1	1913.7	2105.0	2177.9	2170.1	2114.7	2003.0
38.5°	896.9	950.3	1083.8	1275.6	1599.0	1900.6	2085.1	2152.1	2142.9	2087.5	1978.3
39°	878.9	931.4	1067.3	1260.6	1585.0	1885.0	2062.8	2125.9	2113.3	2058.9	1953.0
39.5°	860.5	912.4	1050.3	1245.5	1571.4	1868.0	2039.9	2097.7	2083.2	2029.3	1925.8
40°	843.0	893.5	1033.3	1230.5	1556.8	1849.1	2014.7	2067.6	2051.1	1998.2	1897.7
40.5°	824.5	874.5	1015.8	1214.9	1540.8	1827.3	1988.0	2037.5	2018.1	1966.1	1868.0
41°	808.0	856.1	998.4	1199.4	1523.3	1805.4	1960.3	2005.0	1984.6	1933.1	1838.4
41.5°	791.0	837.6	981.4	1183.4	1504.8	1782.1	1931.7	1972.4	1949.6	1899.6	1807.3
42°	775.5	819.2	963.9	1166.9	1485.4	1757.3	1902.0	1938.5	1914.7	1865.6	1775.8
42.5°	759.5	801.7	946.4	1149.9	1465.5	1733.1	1871.4	1903.5	1879.2	1830.2	1744.2
43°	743.4	784.7	928.4	1131.9	1444.1	1707.3	1839.4	1868.5	1842.8	1795.7	1712.2
43.5°	727.9	767.7	910.5	1113.4	1422.8	1680.6	1806.9	1832.6	1805.9	1758.8	1678.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	683.2	719.6	854.6	1056.1	1355.3	1596.6	1707.3	1722.9	1693.7	1650.5	1578.2
45.5°	669.6	704.1	836.2	1037.2	1331.5	1568.0	1672.4	1686.4	1656.8	1614.1	1544.2
46°	655.1	688.6	816.8	1016.8	1308.2	1537.8	1638.4	1649.0	1618.9	1577.7	1510.2
46.5°	641.0	673.5	797.3	995.9	1284.4	1507.7	1603.9	1612.1	1581.6	1540.8	1476.2
47°	627.4	658.9	777.9	975.5	1259.6	1477.2	1568.4	1574.3	1543.7	1504.3	1442.2
47.5°	613.8	643.9	758.0	954.2	1234.4	1446.6	1533.0	1537.4	1507.3	1468.4	1407.7
48°	600.7	629.8	738.1	933.3	1209.1	1415.5	1498.5	1501.4	1470.4	1433.0	1374.2
48.5°	587.6	615.7	719.2	912.4	1183.9	1384.4	1463.1	1464.5	1434.4	1397.0	1340.7
49°	574.9	601.6	699.7	890.6	1158.6	1353.3	1428.1	1428.6	1396.5	1362.1	1307.7
49.5°	561.8	588.0	681.3	869.2	1132.4	1321.8	1393.6	1391.7	1361.1	1326.1	1274.7
50°	549.2	574.4	662.3	847.8	1106.6	1290.7	1359.2	1355.8	1325.6	1291.7	1241.2
50.5°	536.6	561.3	643.9	826.0	1079.9	1259.6	1323.7	1320.3	1290.7	1257.2	1208.6
51°	524.4	547.7	626.4	804.1	1053.7	1227.6	1289.2	1284.9	1255.7	1223.7	1176.1
51.5°	512.8	535.1	608.9	781.8	1028.0	1197.5	1256.2	1250.9	1221.2	1190.2	1145.0
52°	500.6	522.0	591.4	760.4	1001.3	1166.4	1222.7	1216.4	1188.2	1157.2	1113.0
52.5°	489.0	509.4	574.9	738.6	975.1	1134.8	1188.7	1181.9	1153.8	1124.6	1081.4
53°	477.3	496.8	557.9	716.7	948.8	1104.2	1155.7	1148.9	1122.2	1093.1	1050.8
53.5°	466.2	484.6	541.4	695.4	922.6	1074.1	1123.2	1116.4	1088.7	1061.0	1020.7
54°	454.5	472.5	524.9	674.0	896.4	1043.5	1091.6	1084.3	1058.1	1029.9	990.6
54.5°	443.8	460.8	509.4	652.6	870.7	1013.9	1059.5	1052.3	1025.6	999.3	961.5
55°	432.7	449.2	493.8	631.7	845.4	984.8	1028.0	1021.2	997.4	970.7	932.8
55.5°	422.0	437.5	478.8	610.9	820.2	954.7	998.4	990.6	965.8	940.6	904.6
56°	411.8	426.3	463.7	590.0	794.9	926.0	967.3	960.5	937.7	911.4	876.5
56.5°	401.1	415.2	449.7	570.1	770.6	898.8	937.7	930.9	907.1	883.8	849.3
57°	390.9	403.5	435.1	550.7	745.4	870.2	908.5	902.2	880.9	856.1	822.1
57.5°	381.2	393.3	421.5	530.7	722.1	842.5	879.4	873.6	851.7	828.9	795.9
58°	371.0	382.6	408.4	511.8	697.8	815.3	851.7	845.9	826.0	802.2	770.6
58.5°	361.8	372.4	395.3	493.4	674.5	789.1	824.5	819.2	798.3	776.9	744.9
59°	352.5	362.2	382.6	474.9	651.2	762.9	797.3	792.5	773.5	751.7	720.6
59.5°	343.3	352.5	370.5	456.9	628.3	737.6	770.1	766.3	747.3	726.4	695.8
60°	334.1	342.8	358.4	439.5	606.0	712.4	743.9	741.0	721.6	702.6	672.5
60.5°	325.3	333.1	346.7	422.9	584.2	687.6	719.2	716.2	697.8	679.3	649.2
61°	316.6	323.9	335.1	405.9	563.3	663.3	694.9	692.0	672.1	656.0	626.4
61.5°	307.9	315.1	324.9	389.9	541.9	640.0	670.6	668.2	649.2	633.2	604.6
62°	299.6	306.4	314.2	374.9	521.5	617.2	646.8	645.3	626.4	610.9	583.2
62.5°	291.4	297.7	304.0	359.8	502.1	594.8	623.5	622.0	602.6	589.0	562.3
63°	283.6	288.9	294.3	345.3	482.7	572.0	601.2	599.7	581.7	567.6	541.4
63.5°	275.8	280.7	284.6	330.7	462.8	550.2	578.8	577.8	559.4	546.8	522.0
64°	268.0	272.9	275.3	317.1	445.8	529.3	557.9	557.0	538.0	526.4	502.1
64.5°	260.3	264.6	266.6	304.0	428.3	508.9	537.1	536.1	518.6	507.0	483.2
65°	252.0	256.9	258.3	291.4	410.8	489.5	516.7	516.2	498.7	488.0	465.2
65.5°	244.2	249.1	249.6	279.2	393.3	470.0	496.8	496.8	478.8	469.1	447.2
66°	236.5	241.3	241.3	267.1	375.8	450.6	477.8	477.8	460.3	450.6	429.3



TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	212.2	218.5	218.5	234.1	327.8	398.2	423.9	424.4	408.9	399.6	380.2
68°	204.9	211.2	211.2	223.4	312.7	381.2	407.4	407.9	391.9	383.1	363.7
68.5°	197.1	203.9	203.9	213.7	298.6	363.7	390.4	390.9	375.4	366.6	348.2
69°	189.4	196.7	196.7	203.5	284.1	347.7	373.9	374.4	358.4	351.6	333.1
69.5°	182.1	188.9	189.9	194.7	271.0	331.7	356.9	357.9	343.3	336.5	318.5
70°	173.8	181.6	183.1	186.0	257.8	316.1	341.4	342.8	328.7	321.9	304.0
70.5°	167.0	173.8	176.8	177.7	245.2	301.5	325.8	327.8	314.2	307.9	290.4
71°	160.2	167.0	170.4	170.0	232.6	288.0	311.7	313.7	300.1	293.8	277.3
71.5°	153.0	160.7	164.1	162.7	220.9	273.9	297.7	299.6	286.0	280.2	264.2
72°	146.2	153.9	157.8	154.9	209.3	260.3	283.6	285.5	272.9	267.1	251.5
72.5°	139.4	147.6	152.0	147.6	198.1	247.2	270.5	272.4	259.8	254.4	238.9
73°	132.6	140.8	145.7	139.8	187.4	234.5	256.9	259.8	247.2	241.8	227.3
73.5°	125.3	134.0	139.4	133.5	176.8	222.4	245.2	247.2	235.0	230.2	215.6
74°	118.5	127.7	133.5	127.2	167.0	210.7	232.6	235.5	223.4	218.5	204.4
74.5°	112.2	121.4	127.7	120.9	157.3	199.6	220.5	223.4	211.7	207.8	193.7
75°	105.4	114.6	121.9	115.1	148.1	188.4	208.8	212.2	200.5	196.7	183.1
75.5°	99.1	108.8	116.1	109.7	138.9	177.7	198.1	201.0	189.9	186.0	172.9
76°	92.7	102.5	110.7	104.4	130.6	167.5	187.0	190.3	179.2	175.3	162.7
76.5°	86.9	96.1	104.9	99.1	122.4	157.3	176.8	180.2	169.5	165.6	153.4
77°	81.1	90.3	99.5	94.2	114.6	148.1	166.6	170.0	159.3	155.9	144.2
77.5°	76.2	84.5	94.2	89.8	106.8	138.9	156.8	160.2	149.6	146.6	135.0
78°	71.9	79.2	88.9	85.0	99.5	129.7	147.1	151.0	140.3	137.4	126.3
78.5°	67.5	74.3	83.5	80.6	92.3	121.4	138.4	141.8	131.6	128.7	118.0
79°	63.1	69.4	78.7	75.8	85.9	113.1	129.2	133.1	122.4	119.9	110.2
79.5°	59.2	65.1	73.8	71.4	79.2	104.9	120.9	124.3	114.1	112.2	102.0
80°	54.9	61.2	69.0	67.0	73.3	97.6	112.7	115.6	105.9	103.9	94.2
80.5°	51.5	56.8	64.1	63.1	67.0	90.3	104.4	107.8	97.6	96.1	87.4
81°	47.6	52.9	59.7	58.8	62.2	83.0	97.1	100.0	89.8	88.4	80.1
81.5°	43.7	48.6	55.8	54.4	56.3	76.2	89.3	92.3	82.1	81.1	73.3
82°	39.8	44.7	51.5	50.5	51.5	69.9	82.5	85.0	74.8	74.3	66.5
82.5°	36.4	40.8	47.6	46.6	46.6	63.6	75.3	77.7	67.5	67.5	60.2
83°	32.5	36.9	43.7	42.7	42.2	57.8	69.0	70.9	60.7	60.7	54.4
83.5°	28.6	33.0	39.8	39.3	38.4	52.4	62.2	64.1	53.4	54.4	49.0
84°	25.3	29.6	35.9	35.4	34.5	47.6	56.3	57.8	47.1	48.6	43.7
84.5°	21.9	25.7	32.0	32.0	30.1	42.2	50.0	51.5	40.3	42.7	38.4
85°	18.5	22.3	28.2	28.2	26.2	37.4	45.2	45.6	34.0	36.9	33.0
85.5°	15.5	18.5	24.8	24.8	22.8	32.5	39.8	40.3	27.7	31.1	27.7
86°	12.6	15.5	20.9	21.4	19.4	27.7	34.5	35.0	20.9	25.3	22.3
86.5°	9.7	13.1	18.0	18.0	16.5	23.8	29.1	29.1	15.5	20.9	18.0
87°	7.3	10.2	14.6	15.1	13.6	19.4	23.8	23.8	12.6	16.5	13.6
87.5°	4.9	7.3	11.7	12.1	10.7	15.5	19.4	18.9	9.7	12.6	9.2
88°	2.9	4.9	8.3	8.7	8.3	12.1	14.6	14.6	6.8	8.3	5.3
88.5°	1.5	2.9	5.3	5.8	5.8	8.7	10.7	9.7	3.9	3.9	1.5



TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

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	0.5	0.5	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2080.7	2080.7	2080.7	2080.7	2080.7	2080.7
0.5°	2086.6	2085.1	2077.3	2070.5	2064.2	2060.8
1°	2091.9	2084.6	2070.5	2058.4	2048.2	2044.3
1.5°	2097.2	2083.6	2063.3	2045.8	2032.2	2027.3
2°	2102.6	2082.7	2056.0	2033.6	2016.2	2009.8
2.5°	2107.9	2081.7	2048.7	2020.5	2000.6	1993.3
3°	2112.8	2080.2	2041.4	2007.9	1985.6	1977.3
3.5°	2117.2	2079.3	2033.6	1995.3	1971.0	1961.8
4°	2122.0	2077.8	2025.9	1983.1	1955.9	1947.2
4.5°	2126.4	2076.4	2018.1	1971.0	1941.9	1932.1
5°	2130.3	2074.9	2009.8	1959.3	1928.3	1918.1
5.5°	2134.1	2073.0	2002.1	1947.2	1914.7	1903.5
6°	2138.0	2071.0	1993.8	1936.0	1901.1	1889.4
6.5°	2141.4	2069.1	1986.0	1924.4	1887.5	1875.3
7°	2144.8	2067.1	1977.8	1913.2	1873.9	1860.8
7.5°	2148.2	2064.7	1969.5	1901.6	1860.3	1846.7
8°	2151.1	2062.3	1961.8	1890.4	1846.7	1832.6
8.5°	2154.1	2059.9	1953.0	1878.7	1833.1	1818.5
9°	2157.0	2056.9	1944.8	1867.1	1819.0	1804.4
9.5°	2159.4	2054.0	1936.5	1855.4	1805.9	1790.4
10°	2161.8	2051.1	1928.3	1844.3	1792.3	1776.3
10.5°	2163.8	2047.7	1919.5	1832.1	1778.7	1762.7
11°	2165.7	2044.3	1911.3	1820.5	1765.1	1748.1
11.5°	2167.2	2040.9	1902.5	1808.3	1751.5	1734.0
12°	2168.6	2037.5	1893.8	1796.7	1737.9	1719.9
12.5°	2170.1	2033.6	1884.6	1784.5	1724.3	1706.3
13°	2171.1	2029.3	1875.8	1772.4	1711.2	1692.3
13.5°	2172.0	2025.4	1866.6	1760.2	1697.1	1678.7
14°	2172.5	2021.0	1857.4	1748.1	1683.5	1664.6
14.5°	2172.5	2016.2	1848.1	1735.5	1669.9	1650.5
15°	2172.5	2011.3	1838.9	1723.3	1656.3	1636.9
15.5°	2172.5	2006.4	1828.7	1710.7	1641.8	1622.8
16°	2172.0	2001.1	1819.0	1698.1	1628.7	1609.2
16.5°	2171.5	1995.8	1809.3	1685.5	1615.1	1595.6
17°	2170.6	1989.9	1799.1	1673.3	1601.5	1581.6
17.5°	2169.1	1984.1	1788.4	1660.2	1587.4	1568.0
18°	2167.7	1978.3	1778.2	1647.6	1573.8	1553.9
18.5°	2165.7	1971.5	1767.5	1634.0	1559.7	1540.3
19°	2163.3	1965.2	1756.8	1621.4	1546.1	1526.7
19.5°	2160.9	1958.4	1745.7	1608.3	1532.5	1512.6
20°	2157.9	1951.1	1735.0	1595.6	1518.9	1499.0
20.5°	2155.0	1944.3	1723.3	1582.0	1504.8	1484.9
21°	2151.6	1936.5	1712.2	1568.4	1491.2	1471.3

TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	<i>2139.5</i>	<i>1912.2</i>	<i>1676.7</i>	<i>1528.1</i>	<i>1449.0</i>	<i>1429.1</i>
23°	2134.1	1904.0	1664.6	1515.0	1434.9	1415.0
23.5°	2129.3	1894.8	1652.4	1500.9	1420.8	1400.9
24°	2123.5	1886.0	1640.3	1487.3	1406.7	1386.8
24.5°	2117.6	1876.3	1627.7	1473.3	1392.2	1372.3
25°	2111.3	1866.6	1615.1	1459.7	1378.1	1357.7
25.5°	2105.0	1856.9	1601.9	1445.6	1364.0	1343.1
26°	2097.7	1847.2	1589.3	1431.5	1349.4	1328.6
26.5°	2090.4	1837.0	1576.2	1417.4	1334.4	1314.0
27°	2082.7	1825.8	1563.1	1403.3	1319.8	1298.5
27.5°	2074.4	1815.1	1549.5	1388.8	1304.8	1282.9
28°	2065.7	1804.0	1535.9	1374.2	1289.2	1267.9
28.5°	2056.9	1792.8	1522.3	1359.6	1274.7	1252.3
29°	2047.7	1780.6	1508.7	1345.6	1259.1	1236.3
29.5°	2038.0	1769.0	1495.1	1331.0	1244.1	1220.3
30°	2027.8	1756.8	1481.0	1316.4	1228.5	1204.3
30.5°	2017.1	1744.2	1466.5	1300.9	1212.5	1187.7
31°	2006.4	1731.6	1452.4	1286.3	1196.5	1170.7
31.5°	1994.8	1719.0	1438.3	1271.3	1180.0	1153.8
32°	1983.6	1704.9	1423.3	1256.2	1163.5	1136.3
32.5°	1971.0	1691.8	1408.7	1241.2	1147.0	1118.8
33°	1958.4	1677.7	1393.6	1225.6	1130.4	1101.8
33.5°	1944.8	1663.6	1379.1	1210.1	1113.0	1083.8
34°	1930.2	1648.6	1363.5	1194.5	1096.0	1066.3
34.5°	1915.6	1633.5	1348.5	1179.0	1079.0	1047.4
35°	1900.1	1618.5	1332.9	1163.0	1061.0	1029.4
35.5°	1885.5	1604.4	1317.9	1147.0	1043.5	1010.5
36°	1871.9	1590.8	1302.8	1131.4	1025.6	992.5
36.5°	1858.8	1577.2	1287.8	1114.9	1007.1	973.1
37°	1845.2	1563.6	1272.7	1098.4	989.1	954.7
37.5°	1830.2	1550.0	1257.7	1082.4	970.7	935.2
38°	1813.2	1535.4	1242.6	1065.9	952.2	916.8
38.5°	1794.2	1519.9	1227.6	1049.8	933.3	896.9
39°	1772.4	1502.9	1213.0	1032.8	914.8	878.9
39.5°	1749.6	1484.4	1197.0	1016.8	895.9	860.5
40°	1725.3	1464.5	1180.5	999.3	877.5	843.0
40.5°	1701.0	1443.6	1163.5	982.8	858.0	824.5
41°	1675.8	1422.8	1146.0	965.8	839.6	808.0
41.5°	1649.0	1400.4	1128.5	948.8	821.1	791.0
42°	1622.3	1378.1	1109.6	930.9	803.2	775.5
42.5°	1595.1	1355.3	1090.6	913.4	786.2	759.5
43°	1568.0	1332.0	1071.2	895.4	768.7	743.4
43.5°	1538.8	1308.2	1051.8	877.0	752.2	727.9

TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1451.9	1235.3	990.1	820.6	703.6	683.2
45.5°	1421.8	1210.1	969.2	801.7	688.6	669.6
46°	1391.7	1185.8	948.3	781.8	672.5	655.1
46.5°	1363.0	1159.6	927.0	762.9	658.0	641.0
47°	1332.0	1134.3	905.6	742.9	643.4	627.4
47.5°	1301.4	1108.1	883.8	723.0	628.8	613.8
48°	1271.3	1083.3	862.4	703.1	614.3	600.7
48.5°	1242.1	1057.1	840.5	683.7	600.2	587.6
49°	1211.1	1031.9	819.2	664.3	586.1	574.9
49.5°	1180.9	1006.1	797.3	645.8	572.5	561.8
50°	1150.8	979.9	775.5	626.9	558.9	549.2
50.5°	1122.2	954.7	753.6	608.9	545.3	536.6
51°	1091.1	929.4	733.2	590.5	532.2	524.4
51.5°	1063.4	904.2	711.4	573.5	519.1	512.8
52°	1033.3	878.4	690.5	556.0	506.5	500.6
52.5°	1005.2	852.7	669.1	539.0	493.8	489.0
53°	976.5	828.4	648.3	522.0	481.7	477.3
53.5°	948.8	804.1	627.4	506.5	469.1	466.2
54°	920.2	779.4	607.5	490.4	456.9	454.5
54.5°	893.5	755.1	587.6	474.4	445.3	443.8
55°	866.3	732.3	567.6	459.4	433.6	432.7
55.5°	840.1	708.5	547.7	444.8	422.5	422.0
56°	813.4	685.6	529.3	430.2	411.3	411.8
56.5°	787.6	662.3	510.4	415.7	400.1	401.1
57°	762.4	640.0	491.9	402.1	389.0	390.9
57.5°	738.1	617.7	473.4	389.0	378.3	381.2
58°	713.3	596.8	456.5	376.3	368.1	371.0
58.5°	690.0	575.9	439.5	363.7	357.9	361.8
59°	665.7	555.0	422.9	351.6	348.2	352.5
59.5°	642.9	534.1	406.4	339.9	338.5	343.3
60°	620.6	514.7	390.9	328.7	328.7	334.1
60.5°	598.7	494.8	375.4	317.6	319.5	325.3
61°	576.9	476.4	360.3	306.9	310.3	316.6
61.5°	556.5	458.4	346.2	296.7	301.5	307.9
62°	535.6	439.9	332.1	287.0	292.8	299.6
62.5°	515.7	422.5	318.1	277.3	284.6	291.4
63°	495.8	405.0	304.9	268.0	276.3	283.6
63.5°	476.8	388.5	292.3	258.8	267.6	275.8
64°	457.9	372.0	280.2	250.6	260.3	268.0
64.5°	439.9	356.4	268.0	242.3	252.5	260.3
65°	423.4	340.9	256.9	234.1	244.7	252.0
65.5°	406.4	326.3	245.7	226.3	237.5	244.2
66°	389.4	311.3	235.0	219.0	230.2	236.5



TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	340.4	270.5	204.9	197.1	207.8	212.2
68°	325.3	257.4	195.7	190.3	200.1	204.9
68.5°	310.8	244.7	187.0	183.6	192.8	197.1
69°	296.7	233.1	178.2	177.2	185.5	189.4
69.5°	282.6	221.4	170.4	171.4	178.2	182.1
70°	269.0	209.8	162.7	165.1	171.4	173.8
70.5°	256.4	199.1	154.9	159.3	164.6	167.0
71°	243.8	188.4	147.1	153.0	157.8	160.2
71.5°	231.1	178.2	139.8	146.6	151.0	153.0
72°	219.5	169.0	133.1	140.8	144.2	146.2
72.5°	207.8	160.2	126.3	135.0	137.4	139.4
73°	196.7	151.0	119.5	129.2	130.6	132.6
73.5°	186.0	141.8	113.6	123.3	124.3	125.3
74°	175.8	132.6	107.8	118.0	118.0	118.5
74.5°	165.6	124.3	102.5	112.2	111.7	112.2
75°	155.9	116.5	97.1	106.8	105.4	105.4
75.5°	146.6	108.8	91.8	101.5	99.1	99.1
76°	137.4	101.5	86.9	96.1	93.2	92.7
76.5°	129.2	94.7	82.1	90.8	86.9	86.9
77°	120.4	87.9	77.7	85.5	81.6	81.1
77.5°	112.7	81.6	73.3	80.6	75.8	76.2
78°	104.9	75.3	69.4	75.3	70.9	71.9
78.5°	97.1	69.4	65.1	70.4	66.0	67.5
79°	90.3	63.6	60.7	66.0	61.7	63.1
79.5°	83.0	58.3	56.8	61.2	57.8	59.2
80°	76.2	52.9	52.9	56.3	53.4	54.9
80.5°	69.9	48.1	49.0	52.4	49.5	51.5
81°	64.1	43.7	45.2	48.1	45.6	47.6
81.5°	58.3	39.3	41.3	44.2	41.3	43.7
82°	52.4	35.0	37.9	40.3	37.4	39.8
82.5°	47.6	31.1	34.5	36.4	34.0	36.4
83°	43.2	27.7	31.1	33.0	30.1	32.5
83.5°	38.4	24.3	27.2	29.1	26.2	28.6
84°	33.5	20.9	24.3	25.7	22.8	25.3
84.5°	28.6	17.5	20.9	22.3	19.4	21.9
85°	23.8	15.1	17.5	18.9	16.5	18.5
85.5°	19.9	12.1	14.6	16.0	13.6	15.5
86°	16.0	9.7	11.7	13.1	10.7	12.6
86.5°	12.1	6.8	8.7	9.7	8.3	9.7
87°	8.7	4.9	5.8	6.8	5.8	7.3
87.5°	5.8	2.4	3.4	4.4	3.9	4.9
88°	2.4	1.0	1.0	1.9	2.4	2.9
88.5°	0.5	0.0	0.0	0.5	1.0	1.5



TEST NUMBER: P776809

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-HCD8TRLWW-5000lm-5000K

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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Peachtree City, GA 30269

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°	1457.2	1489.8	1579.1	1733.1	1976.3	2201.6	2363.3	2453.7	2473.1	2427.4	2317.2
22°	1443.2	1476.7	1566.0	1722.4	1969.5	2199.2	2363.3	2454.6	2473.6	2427.4	2315.8



44°	712.8	751.7	892.0	1095.0	1400.4	1652.9	1774.8	1796.7	1768.0	1723.3	1645.2
44.5°	698.3	735.2	873.6	1076.1	1378.6	1625.3	1740.8	1759.8	1732.1	1686.9	1612.1



66.5°	228.2	234.1	233.6	255.4	358.4	432.7	458.9	458.9	442.4	433.1	413.2
67°	220.5	226.3	225.8	244.2	342.8	415.7	440.9	440.9	425.4	416.6	396.7



89°	0.5	1.5	2.4	3.4	3.9	5.3	6.3	4.9	1.0	0.5	0.0
89.5°	0.0	0.5	0.5	1.0	1.9	2.4	2.4	1.0	0.0	0.0	0.0

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21.5°	2147.7	1928.7	1700.5	1555.3	1477.2	1457.2
22°	2143.4	1920.5	1688.9	1541.7	1463.1	1443.2



44°	1510.7	1283.9	1031.4	858.5	735.7	712.8
44.5°	1480.1	1259.6	1010.5	840.1	719.6	698.3



66.5°	372.9	297.2	224.8	211.7	222.4	228.2
67°	355.9	283.1	214.6	204.4	215.1	220.5

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89°	0.0	0.0	0.0	0.0	0.5	0.5
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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(END OF REPORT)