

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: P776608

Luminaire Tested: HCDJBS4050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776608
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B004)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K
Description: 4 INCH ROUND MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

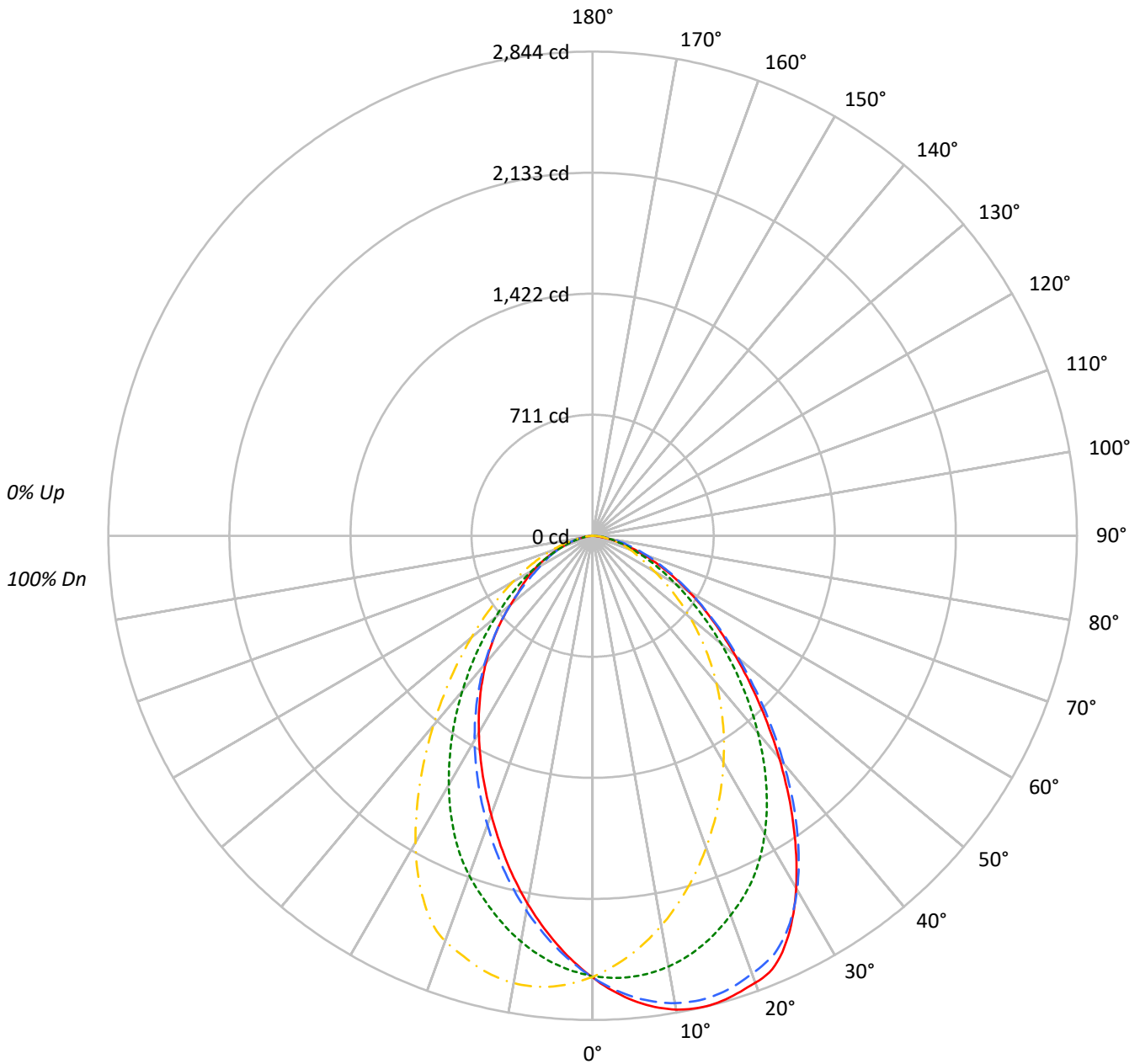
Lumens per Lamp: N/A
Luminaire Lumens: 4865.9 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.09 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	50	30	10
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	90	88		
2	102	95	89	84	100	93	88	83	90	85	82	87	83	80	84	81	78	76		
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66		
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58		
5	81	70	62	56	79	69	61	55	67	60	55	65	59	54	63	58	54	52		
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46		
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	44	42		
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	38		
9	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	35		
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	326177	326177	326177	326177
5°	346221	328510	304217	318896
10°	361112	328270	280527	309319
15°	369969	324525	256461	296981
20°	374218	317634	233313	284179
25°	370062	308935	212803	267347
30°	347370	293893	194190	245502
35°	315273	272931	176925	220957
40°	280057	247989	160030	195565
45°	245326	220640	142383	170058
50°	213859	192596	123268	145940
55°	187071	165766	110123	123990
60°	163177	141128	99723	103675
65°	138351	119531	85762	85197
70°	113736	100159	70612	68661
75°	87476	83732	57231	53973
80°	55805	69720	40585	39861
85°	16606	60791	15884	18627

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 253673 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.2	5.0
10°-20°	673.8	13.8
20°-30°	954.7	19.6
30°-40°	997.5	20.5
40°-50°	839.6	17.3
50°-60°	596.2	12.3
60°-70°	361.7	7.4
70°-80°	165.9	3.4
80°-90°	33.3	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°	1871.7	38.5
0°-40°	2869.2	59.0
0°-60°	4305.0	88.5
0°-90°	4865.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4865.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2592	2592	2592	2592	2592	
5°	2741	2600	2408	2524	2741	264
15°	2840	2491	1968	2279	2840	801
25°	2665	2225	1532	1925	2665	1216
35°	2052	1776	1152	1438	2052	1279
45°	1378	1240	800	956	1378	1066
55°	853	756	502	565	853	767
65°	465	401	288	286	465	464
75°	180	172	118	111	180	194
85°	12	42	11	13	12	22
90°	0	2	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°	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8
0.5°	2611.9	2611.9	2609.0	2603.3	2589.4	2584.1	2580.8	2578.4	2578.4	2577.9	2579.8
1°	2628.6	2628.2	2622.4	2612.4	2592.3	2580.8	2571.2	2563.6	2560.7	2559.7	2564.5
1.5°	2644.4	2644.4	2636.3	2621.5	2595.1	2576.5	2560.2	2548.3	2543.0	2542.0	2548.7
2°	2659.7	2659.7	2649.7	2629.6	2597.5	2572.2	2549.2	2532.5	2524.3	2523.4	2532.5
2.5°	2674.6	2675.0	2662.1	2637.7	2599.4	2566.9	2538.2	2516.2	2505.7	2504.7	2515.7
3°	2688.4	2689.4	2674.6	2644.9	2600.4	2561.6	2526.7	2499.9	2487.0	2485.6	2499.4
3.5°	2702.3	2703.3	2686.0	2651.6	2601.4	2555.4	2514.3	2483.2	2467.9	2466.0	2482.7
4°	2715.7	2717.1	2697.1	2658.3	2601.4	2549.2	2501.8	2466.0	2447.8	2446.3	2465.0
4.5°	2728.2	2730.1	2707.6	2664.5	2601.4	2542.0	2488.9	2448.3	2427.7	2427.2	2447.3
5°	2740.6	2742.5	2717.6	2669.8	2600.4	2534.9	2475.5	2430.6	2408.1	2406.6	2429.6
5.5°	2751.6	2754.5	2727.2	2674.6	2599.9	2527.2	2462.1	2412.4	2387.5	2385.6	2411.4
6°	2762.6	2765.9	2736.3	2679.3	2598.0	2519.1	2447.8	2394.2	2366.9	2365.0	2392.8
6.5°	2772.6	2776.5	2744.4	2683.2	2596.1	2510.9	2433.9	2376.0	2346.3	2344.4	2374.1
7°	2782.2	2786.5	2752.6	2686.5	2593.7	2501.8	2419.5	2356.9	2324.8	2323.9	2355.4
7.5°	2791.3	2796.1	2759.7	2689.4	2590.4	2492.3	2404.2	2337.7	2303.8	2302.3	2335.8
8°	2799.4	2804.7	2766.4	2691.3	2587.0	2482.7	2388.9	2318.6	2282.2	2280.8	2316.2
8.5°	2806.6	2812.8	2772.6	2693.2	2583.2	2472.2	2373.1	2299.0	2260.7	2259.3	2296.6
9°	2813.8	2820.5	2778.4	2694.7	2578.9	2462.1	2357.8	2279.4	2238.7	2237.3	2277.0
9.5°	2820.0	2827.2	2783.2	2695.6	2574.1	2451.1	2341.1	2259.3	2216.7	2215.7	2256.9
10°	2825.8	2833.4	2787.5	2695.6	2568.8	2439.6	2324.8	2239.2	2195.2	2193.2	2236.3
10.5°	2830.5	2838.7	2790.8	2695.1	2563.1	2427.7	2307.6	2219.1	2172.7	2170.8	2215.7
11°	2834.4	2843.5	2794.2	2694.7	2556.9	2415.7	2291.8	2198.0	2150.2	2148.7	2195.2
11.5°	2837.7	2847.3	2796.1	2692.7	2550.2	2403.8	2273.6	2177.4	2128.2	2126.7	2174.6
12°	2840.1	2850.6	2798.0	2690.8	2543.0	2390.8	2255.9	2156.4	2105.2	2103.8	2153.5
12.5°	2842.0	2853.0	2799.0	2688.4	2535.3	2377.9	2237.7	2135.8	2082.7	2081.3	2132.0
13°	2843.0	2854.9	2799.4	2685.1	2527.2	2364.5	2220.5	2114.3	2060.2	2058.3	2111.4
13.5°	2843.5	2855.9	2799.0	2681.3	2518.6	2350.7	2202.3	2093.7	2037.3	2035.8	2089.9
14°	2842.5	2856.4	2798.0	2677.0	2510.0	2336.3	2183.7	2071.7	2014.3	2012.4	2068.4
14.5°	2841.5	2855.9	2796.1	2672.2	2499.9	2321.9	2165.0	2050.2	1991.8	1989.4	2046.8
15°	2839.6	2854.5	2793.7	2666.4	2490.8	2307.6	2145.9	2028.2	1968.4	1966.9	2024.8
15.5°	2836.8	2852.5	2790.8	2660.7	2480.3	2292.3	2127.2	2006.6	1945.4	1944.0	2003.3
16°	2833.9	2849.7	2787.0	2654.0	2469.3	2277.0	2108.1	1985.1	1922.4	1920.5	1981.8
16.5°	2829.6	2846.3	2782.7	2646.8	2458.3	2261.2	2088.5	1963.6	1899.9	1897.6	1960.2
17°	2825.3	2842.5	2777.4	2639.2	2446.8	2245.9	2069.3	1941.6	1876.5	1874.6	1938.2
17.5°	2820.0	2838.2	2772.2	2631.0	2434.4	2229.1	2049.2	1919.6	1853.5	1852.1	1916.7
18°	2814.8	2832.9	2765.9	2622.4	2422.4	2212.9	2029.6	1897.6	1831.0	1828.7	1894.7
18.5°	2808.5	2827.2	2759.3	2613.3	2410.0	2196.1	2009.5	1875.1	1808.6	1806.2	1872.7
19°	2803.3	2821.0	2752.1	2604.2	2397.5	2179.8	1990.4	1853.1	1786.1	1783.2	1851.1
19.5°	2799.0	2815.2	2744.9	2594.2	2384.6	2163.1	1969.3	1831.5	1764.5	1761.2	1829.1
20°	2794.2	2810.4	2737.2	2584.1	2371.7	2146.3	1949.2	1809.5	1742.1	1738.7	1807.6
20.5°	2788.9	2805.2	2730.1	2574.6	2358.3	2129.1	1929.1	1787.5	1721.0	1717.2	1785.6
21°	2782.7	2799.4	2723.4	2565.0	2344.9	2111.9	1909.0	1766.5	1699.0	1695.2	1764.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2756.4	2777.0	2698.5	2533.4	2303.3	2059.7	1847.3	1702.8	1635.8	1631.1	1699.5
23°	2741.5	2765.9	2688.4	2521.9	2288.5	2042.0	1827.2	1682.2	1614.3	1610.0	1677.9
23.5°	2724.8	2753.0	2677.4	2509.5	2273.1	2023.9	1806.2	1661.2	1594.2	1589.9	1656.9
24°	2707.1	2737.2	2663.1	2495.6	2257.4	2005.7	1785.6	1640.6	1573.6	1568.4	1635.4
24.5°	2687.5	2719.1	2647.3	2481.3	2241.1	1986.5	1764.5	1620.5	1553.1	1547.3	1614.3
25°	2665.0	2700.9	2630.5	2465.0	2224.8	1967.4	1744.4	1599.5	1532.5	1527.2	1593.3
25.5°	2642.0	2681.7	2612.4	2447.8	2206.6	1948.3	1723.9	1579.9	1512.9	1507.1	1572.2
26°	2619.1	2660.2	2593.2	2429.6	2188.9	1928.7	1703.3	1559.3	1492.8	1487.0	1551.2
26.5°	2593.7	2636.3	2573.1	2410.0	2169.3	1908.6	1681.8	1539.7	1472.7	1466.5	1530.1
27°	2566.9	2613.3	2552.1	2389.4	2150.2	1888.9	1661.2	1519.1	1452.6	1446.8	1509.0
27.5°	2538.7	2588.4	2529.1	2368.4	2129.6	1868.4	1640.6	1499.5	1433.5	1427.2	1489.0
28°	2511.9	2561.6	2505.2	2345.9	2109.5	1847.8	1620.0	1479.4	1413.4	1407.6	1467.9
28.5°	2481.7	2534.4	2480.8	2323.4	2088.0	1827.2	1599.0	1460.2	1394.7	1388.0	1447.3
29°	2451.6	2506.6	2455.4	2299.5	2066.4	1805.7	1578.4	1440.6	1375.1	1368.4	1426.8
29.5°	2421.0	2477.4	2428.6	2275.5	2044.0	1785.1	1558.3	1421.0	1355.5	1349.2	1406.2
30°	2390.4	2447.8	2401.4	2250.7	2022.4	1763.1	1537.3	1401.9	1336.3	1330.1	1386.1
30.5°	2357.3	2417.2	2373.1	2224.8	1999.0	1741.1	1516.7	1382.7	1317.7	1311.0	1365.5
31°	2324.8	2385.6	2344.0	2199.0	1975.5	1719.6	1496.1	1363.1	1298.5	1291.8	1344.9
31.5°	2291.8	2353.0	2314.3	2171.7	1951.6	1697.1	1475.6	1343.5	1280.3	1272.2	1324.4
32°	2258.3	2321.0	2284.1	2144.4	1928.2	1675.1	1455.0	1324.4	1261.2	1253.6	1304.7
32.5°	2224.3	2288.0	2252.6	2117.2	1903.3	1653.1	1434.9	1305.7	1243.0	1234.9	1284.2
33°	2190.8	2254.5	2221.5	2089.4	1878.4	1630.1	1413.8	1286.6	1224.4	1216.2	1264.1
33.5°	2156.9	2220.0	2189.4	2060.2	1853.5	1607.6	1393.7	1267.9	1206.2	1197.6	1243.5
34°	2122.4	2186.5	2156.9	2031.0	1828.2	1584.6	1372.7	1249.2	1188.0	1178.9	1223.9
34.5°	2086.5	2150.7	2122.4	2001.9	1802.3	1561.7	1352.6	1230.1	1169.8	1160.3	1203.8
35°	2052.1	2116.2	2089.4	1971.7	1776.5	1538.7	1332.0	1211.4	1151.6	1142.1	1183.7
35.5°	2017.6	2080.8	2055.9	1941.6	1750.7	1516.2	1311.9	1192.8	1134.4	1123.9	1164.1
36°	1983.2	2046.8	2022.0	1910.9	1724.4	1493.3	1291.4	1174.6	1115.8	1105.2	1144.9
36.5°	1947.8	2011.4	1987.5	1880.3	1698.0	1469.3	1271.3	1155.9	1098.5	1087.1	1124.8
37°	1911.9	1975.1	1954.0	1849.2	1671.2	1446.4	1250.7	1137.3	1079.9	1068.9	1105.2
37.5°	1877.9	1939.7	1919.6	1818.1	1644.5	1423.9	1230.6	1119.1	1062.6	1050.7	1086.1
38°	1843.0	1904.3	1885.1	1786.6	1617.7	1400.0	1210.0	1100.9	1044.5	1033.0	1066.5
38.5°	1808.1	1868.4	1849.7	1755.0	1590.9	1377.0	1190.9	1082.7	1026.8	1014.8	1046.9
39°	1772.7	1833.9	1816.2	1723.4	1564.1	1353.5	1170.3	1064.1	1009.5	997.1	1028.2
39.5°	1739.2	1798.5	1781.3	1691.8	1536.8	1330.6	1150.7	1045.9	992.3	978.9	1008.6
40°	1704.7	1762.6	1747.3	1660.2	1509.5	1306.7	1130.6	1027.7	974.1	961.2	989.9
40.5°	1669.8	1727.2	1712.4	1628.7	1482.3	1283.7	1110.5	1009.1	956.4	943.0	970.3
41°	1635.8	1693.3	1679.4	1596.6	1455.0	1260.3	1090.9	991.4	939.2	924.9	952.1
41.5°	1602.8	1658.8	1644.9	1565.5	1428.7	1237.3	1071.3	973.2	922.0	907.2	933.0
42°	1569.8	1623.9	1611.9	1534.4	1400.9	1213.8	1051.2	955.0	904.3	889.9	914.3
42.5°	1536.3	1589.4	1578.4	1502.8	1374.1	1191.4	1031.5	937.3	886.6	872.2	896.1
43°	1504.3	1556.9	1544.9	1472.7	1347.3	1168.4	1012.4	919.6	869.4	854.5	877.5
43.5°	1472.7	1523.4	1511.9	1441.1	1320.1	1145.4	992.3	901.4	852.1	836.8	858.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1378.4	1425.3	1415.7	1350.7	1239.7	1077.0	934.9	847.8	800.0	784.7	804.3
45.5°	1348.3	1393.7	1384.2	1320.1	1213.4	1054.5	915.3	829.6	783.2	767.4	786.1
46°	1317.7	1362.2	1353.1	1290.9	1187.0	1032.0	896.1	812.4	766.0	750.2	767.9
46.5°	1287.0	1331.5	1322.9	1261.7	1161.2	1010.0	877.0	794.7	748.8	732.5	750.2
47°	1258.8	1301.4	1291.8	1233.0	1134.4	987.5	857.9	777.0	731.6	715.8	733.5
47.5°	1230.1	1270.8	1261.7	1203.8	1108.6	965.5	839.2	759.8	713.9	698.5	714.8
48°	1200.9	1240.6	1232.5	1175.6	1083.2	944.0	820.1	742.6	697.6	681.8	697.6
48.5°	1173.2	1212.9	1203.8	1148.3	1058.3	922.5	801.9	724.9	680.4	664.6	680.4
49°	1146.9	1184.2	1175.6	1121.0	1033.0	900.5	783.2	708.1	663.1	648.3	664.1
49.5°	1119.6	1155.5	1147.3	1093.7	1008.1	879.9	764.6	690.9	646.4	631.6	646.4
50°	1092.3	1127.7	1119.1	1067.4	983.7	858.3	746.4	673.7	629.6	615.3	630.1
50.5°	1067.4	1101.4	1091.8	1040.2	959.3	837.3	728.2	656.4	612.4	599.0	613.4
51°	1041.6	1075.1	1064.6	1014.8	935.9	816.7	710.0	639.7	596.2	582.3	597.1
51.5°	1015.8	1047.8	1038.7	989.0	912.4	796.1	692.3	622.9	580.4	567.0	580.8
52°	991.8	1022.9	1013.4	964.1	888.5	776.1	674.6	606.7	563.6	551.7	565.1
52.5°	968.4	998.5	987.5	939.7	865.5	755.5	656.9	589.9	548.8	535.9	548.8
53°	943.5	972.7	962.7	914.8	843.0	735.9	639.7	573.7	540.7	520.6	533.5
53.5°	919.6	948.8	938.3	890.9	820.6	716.2	622.0	557.9	532.0	506.2	518.2
54°	898.1	925.3	913.8	867.4	798.1	696.6	605.2	542.1	522.5	497.6	503.3
54.5°	875.6	902.4	890.4	844.5	776.5	677.5	588.5	526.8	511.9	488.5	488.5
55°	852.6	879.4	867.4	821.5	755.5	658.8	572.2	511.9	501.9	478.9	474.1
55.5°	832.5	856.9	845.0	799.5	734.4	640.2	556.0	496.6	490.9	468.9	460.3
56°	811.0	834.9	822.5	777.0	713.4	622.0	539.7	485.6	480.4	458.8	446.4
56.5°	789.5	813.4	800.9	756.0	692.8	603.8	523.4	477.0	469.8	448.3	433.0
57°	768.9	791.8	779.4	734.9	673.2	586.1	508.1	467.5	458.8	438.3	420.1
57.5°	748.8	771.7	758.4	714.3	653.6	568.4	492.8	457.9	448.3	428.2	408.6
58°	727.3	751.2	737.8	693.8	634.4	551.7	478.0	447.8	438.3	418.2	397.1
58.5°	707.6	730.6	717.7	674.1	615.3	534.9	463.6	437.8	427.7	408.1	385.6
59°	687.1	711.0	697.6	654.5	596.6	518.2	449.3	427.3	417.2	398.6	374.2
59.5°	667.0	690.9	678.4	635.4	578.5	501.9	434.9	417.2	406.7	389.0	362.7
60°	648.3	671.3	659.3	616.3	560.7	486.1	421.0	407.6	396.2	378.9	354.1
60.5°	627.3	652.1	640.7	598.1	543.0	470.8	408.6	397.6	385.6	369.4	345.4
61°	609.1	631.6	621.5	579.9	526.3	455.5	396.2	387.5	375.1	359.3	336.8
61.5°	589.9	613.9	604.3	562.7	509.1	440.2	383.7	378.0	364.6	349.8	328.2
62°	571.8	595.2	586.6	545.0	492.8	426.3	371.3	367.9	353.6	340.2	319.6
62.5°	553.1	576.5	568.9	528.2	476.5	412.4	358.8	357.4	342.6	330.1	311.0
63°	534.4	558.8	551.7	511.0	460.8	399.0	346.9	347.4	331.6	320.1	302.4
63.5°	516.7	540.7	534.9	494.7	445.0	385.2	336.4	336.8	320.6	310.5	293.8
64°	498.6	523.4	518.6	478.5	429.7	371.8	326.3	326.8	309.6	300.5	286.1
64.5°	481.8	505.7	502.4	463.1	415.8	357.9	317.7	316.7	298.6	290.4	278.0
65°	464.6	489.5	486.6	447.8	401.4	345.9	309.6	307.2	288.0	280.9	269.8
65.5°	448.3	472.2	470.8	433.0	387.1	333.5	301.4	296.6	277.5	270.8	261.7
66°	431.1	456.4	455.5	418.2	373.2	320.6	292.8	287.1	267.0	261.2	254.1



TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	383.7	408.6	410.5	375.6	333.0	287.1	268.4	257.9	236.4	233.0	230.6
68°	367.9	393.3	396.2	362.2	319.6	276.1	260.3	248.3	226.8	223.4	223.0
68.5°	352.6	378.5	382.3	348.3	307.6	265.5	252.6	239.2	217.7	214.8	215.3
69°	338.3	363.6	368.4	335.4	295.7	255.5	244.5	229.7	208.6	205.7	207.6
69.5°	323.4	348.8	354.1	322.5	283.7	245.4	236.4	220.6	200.5	197.6	200.0
70°	309.1	334.9	341.1	310.5	272.2	235.9	228.7	211.5	191.9	189.5	192.3
70.5°	294.7	321.0	328.2	297.6	260.8	226.8	221.0	203.3	183.7	181.3	184.7
71°	280.9	307.2	315.3	286.1	250.2	217.7	213.4	194.7	176.1	173.7	177.5
71.5°	267.5	293.8	301.9	274.2	239.2	209.1	205.7	186.6	168.4	166.0	169.9
72°	254.5	280.4	289.9	262.7	229.2	200.5	198.1	178.9	160.8	158.4	162.7
72.5°	241.1	267.9	277.5	251.7	218.7	192.3	190.4	171.3	153.1	151.2	155.5
73°	228.2	255.5	265.5	240.2	209.1	184.7	183.2	163.6	145.9	144.0	148.3
73.5°	215.8	242.6	253.6	229.7	199.0	176.5	175.6	156.5	138.8	136.8	141.1
74°	203.3	231.1	242.1	219.6	189.9	168.9	168.4	149.3	131.6	129.7	134.4
74.5°	191.4	219.1	231.1	209.1	180.9	161.7	161.7	142.1	124.9	123.0	128.2
75°	179.9	207.6	219.6	199.0	172.2	154.5	154.1	135.4	117.7	115.8	121.5
75.5°	168.9	196.2	208.6	189.5	163.6	147.4	147.4	128.7	111.0	109.1	115.3
76°	157.9	185.6	198.1	179.9	155.5	140.7	140.2	121.5	104.8	102.4	109.1
76.5°	147.4	174.6	187.6	170.8	147.4	134.0	134.0	114.8	98.1	96.2	102.9
77°	136.4	164.6	177.5	162.2	139.7	127.7	127.3	108.6	91.9	89.5	96.6
77.5°	125.8	155.0	167.9	153.1	131.6	121.5	121.0	102.4	85.6	83.3	90.9
78°	115.8	145.0	158.8	144.5	124.4	115.3	114.4	95.7	79.4	77.0	84.7
78.5°	105.3	134.9	149.3	135.9	116.7	109.6	108.6	89.5	73.2	70.8	78.9
79°	95.7	125.4	139.7	127.7	110.0	104.3	102.4	83.3	67.5	65.1	73.2
79.5°	86.1	116.3	130.6	119.6	102.9	98.6	96.2	77.5	61.7	59.3	67.5
80°	77.0	107.2	121.5	112.0	96.2	93.3	90.4	71.3	56.0	53.6	62.2
80.5°	67.9	98.1	113.4	104.3	89.9	88.0	84.7	65.5	50.2	48.3	56.9
81°	59.3	89.9	105.3	97.1	83.7	82.8	78.9	59.8	45.0	43.5	52.2
81.5°	50.7	81.8	96.6	89.9	78.0	77.5	73.7	54.5	39.7	38.8	46.9
82°	42.1	74.2	89.0	83.3	72.2	72.2	67.9	48.8	34.4	34.0	42.6
82.5°	34.4	66.5	81.8	76.6	66.5	67.0	62.7	44.5	29.2	29.2	38.3
83°	26.8	59.3	74.6	70.3	61.2	62.2	57.4	39.7	23.9	24.4	34.0
83.5°	19.6	52.6	67.9	64.1	56.0	57.4	52.6	34.9	19.1	21.1	29.7
84°	17.2	46.4	61.2	57.9	51.2	52.2	47.8	30.6	15.3	18.2	25.4
84.5°	14.4	41.1	55.0	52.2	46.4	47.8	43.5	25.8	12.4	15.8	21.5
85°	11.5	36.4	48.8	46.4	42.1	43.1	38.8	23.0	11.0	13.4	17.7
85.5°	8.6	31.6	43.1	41.1	37.3	38.8	34.4	20.1	9.1	11.0	13.9
86°	6.2	27.3	37.3	35.9	33.0	34.0	30.1	17.2	7.7	8.6	10.5
86.5°	4.8	23.0	31.6	30.6	28.2	29.2	25.4	14.4	6.2	6.7	6.7
87°	3.3	18.7	26.3	25.8	23.9	24.9	21.5	12.0	4.8	4.3	3.3
87.5°	2.4	14.4	21.1	21.1	20.1	20.6	17.2	9.1	2.9	2.4	1.0
88°	1.0	10.5	16.3	16.7	16.3	16.7	13.4	6.7	1.4	1.0	0.5
88.5°	0.5	6.7	12.4	12.9	12.4	12.4	9.6	3.8	0.5	0.5	0.0



TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.5	0.5	1.4	2.4	1.9	1.0	0.5	0.0	0.5	0.0



TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8
0.5°	2583.2	2581.3	2589.9	2599.0	2606.6	2611.9
1°	2572.7	2577.0	2592.3	2607.6	2620.0	2628.6
1.5°	2561.6	2572.2	2593.7	2615.2	2632.9	2644.4
2°	2550.2	2566.0	2594.7	2622.9	2645.9	2659.7
2.5°	2538.2	2560.7	2595.6	2630.1	2657.3	2674.6
3°	2526.2	2554.5	2595.6	2636.3	2668.8	2688.4
3.5°	2513.3	2547.8	2595.6	2642.5	2679.8	2702.3
4°	2500.4	2540.6	2594.7	2647.8	2689.9	2715.7
4.5°	2487.5	2532.5	2593.2	2652.6	2699.9	2728.2
5°	2473.1	2524.3	2591.8	2656.9	2709.0	2740.6
5.5°	2459.3	2516.2	2589.4	2660.7	2718.1	2751.6
6°	2444.9	2507.1	2587.0	2663.6	2725.8	2762.6
6.5°	2430.6	2497.5	2583.2	2666.4	2733.4	2772.6
7°	2415.2	2488.0	2579.8	2668.3	2739.6	2782.2
7.5°	2399.9	2477.4	2575.5	2669.8	2745.9	2791.3
8°	2384.1	2466.9	2570.3	2670.7	2751.1	2799.4
8.5°	2367.9	2455.4	2565.0	2670.7	2755.9	2806.6
9°	2351.6	2444.4	2559.3	2670.7	2760.2	2813.8
9.5°	2335.3	2432.5	2553.0	2669.8	2763.6	2820.0
10°	2318.6	2420.5	2546.3	2667.9	2766.4	2825.8
10.5°	2301.4	2407.6	2539.2	2666.0	2768.8	2830.5
11°	2283.7	2395.1	2531.0	2663.1	2770.3	2834.4
11.5°	2266.0	2381.3	2522.4	2659.7	2770.7	2837.7
12°	2248.3	2367.9	2513.8	2655.4	2770.7	2840.1
12.5°	2230.1	2353.5	2504.2	2650.6	2769.8	2842.0
13°	2212.4	2339.2	2494.7	2645.4	2768.3	2843.0
13.5°	2194.2	2324.3	2484.6	2639.6	2765.9	2843.5
14°	2175.1	2310.0	2474.1	2633.4	2763.1	2842.5
14.5°	2155.9	2294.7	2463.1	2626.7	2759.7	2841.5
15°	2137.3	2279.4	2452.1	2619.1	2755.4	2839.6
15.5°	2118.6	2264.0	2440.6	2610.9	2750.6	2836.8
16°	2099.5	2249.2	2429.1	2602.8	2745.4	2833.9
16.5°	2080.3	2233.4	2417.2	2594.7	2739.6	2829.6
17°	2062.1	2218.1	2405.7	2585.6	2733.4	2825.3
17.5°	2042.5	2202.8	2394.2	2576.5	2726.7	2820.0
18°	2022.9	2187.0	2382.7	2568.8	2719.5	2814.8
18.5°	2003.3	2171.2	2370.3	2560.7	2713.8	2808.5
19°	1984.2	2155.0	2358.8	2552.1	2708.5	2803.3
19.5°	1965.0	2139.2	2345.4	2542.5	2702.8	2799.0
20°	1945.9	2121.9	2331.5	2532.5	2695.6	2794.2
20.5°	1926.3	2104.7	2317.6	2521.9	2688.0	2788.9
21°	1906.2	2086.5	2302.3	2510.0	2679.3	2782.7

TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1845.4	2030.6	2249.7	2462.6	2641.6	2756.4
23°	1824.3	2010.9	2230.1	2443.0	2624.3	2741.5
23.5°	1803.8	1990.4	2209.0	2422.9	2605.7	2724.8
24°	1782.7	1968.8	2187.5	2401.4	2585.6	2707.1
24.5°	1762.2	1947.3	2164.1	2377.9	2564.5	2687.5
25°	1740.6	1925.3	2141.6	2354.5	2541.6	2665.0
25.5°	1719.1	1902.8	2118.1	2331.0	2516.7	2642.0
26°	1697.1	1879.9	2093.7	2306.2	2491.8	2619.1
26.5°	1675.1	1857.4	2068.8	2279.8	2466.0	2593.7
27°	1653.5	1834.4	2044.0	2254.0	2438.2	2566.9
27.5°	1631.1	1810.5	2018.6	2226.3	2409.0	2538.7
28°	1608.6	1786.1	1992.8	2197.5	2379.8	2511.9
28.5°	1586.1	1763.1	1966.5	2169.3	2350.7	2481.7
29°	1563.6	1738.2	1939.7	2140.6	2320.5	2451.6
29.5°	1541.1	1714.3	1913.3	2110.0	2288.9	2421.0
30°	1518.1	1689.4	1886.5	2080.3	2258.3	2390.4
30.5°	1495.2	1665.0	1858.3	2049.2	2225.3	2357.3
31°	1472.2	1640.1	1831.0	2018.6	2193.2	2324.8
31.5°	1449.7	1615.3	1802.8	1988.0	2160.2	2291.8
32°	1427.2	1589.4	1774.1	1955.4	2127.2	2258.3
32.5°	1403.8	1565.0	1746.4	1924.3	2093.2	2224.3
33°	1381.3	1539.2	1717.7	1892.8	2060.7	2190.8
33.5°	1358.8	1514.8	1689.4	1861.2	2027.2	2156.9
34°	1336.8	1489.0	1659.8	1829.6	1993.7	2122.4
34.5°	1313.8	1464.1	1631.1	1797.1	1959.8	2086.5
35°	1290.9	1438.2	1601.9	1765.5	1926.3	2052.1
35.5°	1268.4	1413.8	1573.6	1733.9	1892.3	2017.6
36°	1246.4	1389.4	1544.5	1702.3	1859.8	1983.2
36.5°	1223.9	1363.6	1515.7	1671.2	1825.8	1947.8
37°	1201.9	1338.2	1487.5	1639.7	1792.8	1911.9
37.5°	1179.4	1313.8	1458.3	1608.6	1758.3	1877.9
38°	1157.9	1289.0	1430.1	1577.5	1725.3	1843.0
38.5°	1135.9	1264.1	1401.9	1547.3	1692.8	1808.1
39°	1114.8	1239.2	1373.6	1516.7	1659.3	1772.7
39.5°	1092.8	1214.8	1346.4	1486.6	1627.7	1739.2
40°	1070.8	1190.4	1317.7	1455.9	1594.7	1704.7
40.5°	1049.7	1166.0	1291.4	1426.8	1563.1	1669.8
41°	1028.7	1141.6	1264.1	1396.6	1529.6	1635.8
41.5°	1007.6	1117.2	1237.3	1368.4	1499.5	1602.8
42°	986.6	1093.7	1210.5	1339.7	1468.9	1569.8
42.5°	966.0	1070.3	1184.7	1311.4	1437.8	1536.3
43°	944.9	1046.9	1158.8	1282.7	1406.2	1504.3
43.5°	924.9	1023.9	1133.0	1255.5	1377.0	1472.7

TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	864.1	955.5	1058.3	1174.6	1288.0	1378.4
45.5°	844.0	933.5	1034.4	1148.3	1260.7	1348.3
46°	824.9	911.5	1010.5	1122.0	1233.0	1317.7
46.5°	805.2	889.4	986.6	1097.1	1205.2	1287.0
47°	785.1	868.4	963.6	1071.7	1176.5	1258.8
47.5°	766.5	846.9	940.6	1046.9	1150.2	1230.1
48°	747.8	825.8	918.2	1022.0	1124.4	1200.9
48.5°	729.2	805.2	895.7	998.5	1098.5	1173.2
49°	711.0	785.1	873.7	975.1	1072.2	1146.9
49.5°	692.3	765.5	852.1	952.1	1047.8	1119.6
50°	674.1	745.4	831.1	928.2	1022.5	1092.3
50.5°	656.4	726.3	809.5	906.2	998.1	1067.4
51°	638.7	707.2	789.5	883.7	973.7	1041.6
51.5°	622.0	688.5	768.9	862.2	951.2	1015.8
52°	604.8	670.3	749.3	841.1	927.7	991.8
52.5°	588.0	652.1	729.2	819.1	904.8	968.4
53°	571.3	634.0	710.5	798.5	882.7	943.5
53.5°	555.5	616.3	690.9	778.0	860.7	919.6
54°	539.7	599.0	672.2	757.9	838.7	898.1
54.5°	523.4	581.3	653.1	738.3	818.2	875.6
55°	508.1	565.1	635.9	718.6	797.1	852.6
55.5°	493.3	548.3	618.2	699.5	776.5	832.5
56°	478.5	532.0	600.5	680.8	756.0	811.0
56.5°	463.6	516.3	583.2	662.2	736.8	789.5
57°	449.3	500.5	566.5	644.0	717.2	768.9
57.5°	435.9	484.7	549.3	625.8	698.1	748.8
58°	422.0	470.3	533.0	608.6	679.9	727.3
58.5°	409.1	455.0	516.7	591.4	661.2	707.6
59°	396.6	440.7	500.9	574.6	643.0	687.1
59.5°	383.7	426.3	485.6	557.4	624.9	667.0
60°	370.8	411.9	470.3	540.7	606.7	648.3
60.5°	357.9	398.1	455.0	524.9	589.0	627.3
61°	345.9	384.7	440.7	509.1	571.3	609.1
61.5°	334.0	371.3	425.8	493.3	553.6	589.9
62°	323.0	358.4	411.9	478.0	536.3	571.8
62.5°	312.0	345.9	397.6	462.7	518.6	553.1
63°	300.5	333.5	384.2	447.8	501.9	534.4
63.5°	289.9	321.0	370.3	433.5	485.2	516.7
64°	279.9	309.1	357.4	419.1	468.9	498.6
64.5°	269.8	297.6	344.5	404.8	453.1	481.8
65°	260.3	286.1	332.0	391.4	436.8	464.6
65.5°	250.7	274.6	319.1	377.0	421.5	448.3
66°	241.1	264.1	307.2	363.6	405.7	431.1



TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	215.3	233.0	271.8	324.9	361.7	383.7
68°	207.2	223.4	260.8	312.4	347.4	367.9
68.5°	199.5	213.4	249.8	299.5	333.5	352.6
69°	191.9	204.3	239.2	287.6	319.6	338.3
69.5°	184.2	195.2	228.7	275.6	306.2	323.4
70°	177.5	186.6	218.7	264.1	292.3	309.1
70.5°	170.8	178.0	208.6	252.1	279.4	294.7
71°	164.6	172.2	199.0	241.1	266.5	280.9
71.5°	157.9	164.1	189.5	230.1	254.1	267.5
72°	151.7	156.0	180.4	219.1	242.1	254.5
72.5°	145.5	147.4	170.3	208.6	230.1	241.1
73°	139.7	139.2	162.2	198.1	218.2	228.2
73.5°	133.5	132.1	154.1	188.0	206.7	215.8
74°	127.7	124.9	145.9	178.0	195.7	203.3
74.5°	122.0	118.2	137.8	168.9	184.7	191.4
75°	115.8	111.0	130.1	159.3	174.6	179.9
75.5°	110.5	104.8	122.5	150.2	164.6	168.9
76°	104.8	98.6	114.8	140.7	155.0	157.9
76.5°	99.0	92.3	107.2	131.6	145.0	147.4
77°	93.3	86.6	100.5	123.0	135.4	136.4
77.5°	88.0	80.9	93.3	114.8	125.4	125.8
78°	82.8	75.6	87.1	106.7	116.7	115.8
78.5°	77.5	70.3	80.4	98.6	107.7	105.3
79°	72.2	65.1	74.2	91.4	99.0	95.7
79.5°	67.0	59.8	68.4	83.7	90.9	86.1
80°	61.7	55.0	62.2	76.6	82.8	77.0
80.5°	56.9	50.2	56.9	69.9	75.6	67.9
81°	52.2	45.5	51.7	63.2	68.4	59.3
81.5°	47.4	41.1	45.9	56.9	61.2	50.7
82°	42.6	36.8	41.1	50.7	54.5	42.1
82.5°	38.3	32.5	36.4	45.0	48.8	34.4
83°	33.5	28.2	31.6	39.7	42.6	26.8
83.5°	29.2	23.9	26.8	34.4	37.3	19.6
84°	24.4	20.1	22.5	29.2	32.5	17.2
84.5°	20.1	16.3	18.2	24.4	28.2	14.4
85°	15.8	12.9	14.4	19.6	23.9	11.5
85.5°	12.0	9.6	10.5	15.8	19.6	8.6
86°	8.1	6.2	7.2	12.0	15.8	6.2
86.5°	4.3	2.4	3.3	8.1	12.4	4.8
87°	1.4	0.5	1.0	4.3	8.6	3.3
87.5°	0.5	0.0	0.5	1.0	4.8	2.4
88°	0.0	0.0	0.0	0.0	1.0	1.0
88.5°	0.0	0.0	0.0	0.0	0.5	0.5



TEST NUMBER: P776608

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-HCD4TRLWW-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	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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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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21.5°	2775.5	2792.7	2715.7	2555.0	2331.5	2094.7	1888.5	1744.9	1677.9	1673.6	1742.1
22°	2767.4	2785.6	2707.6	2544.4	2317.2	2077.0	1867.4	1723.9	1656.9	1652.1	1720.5



44°	1440.1	1489.9	1480.3	1410.5	1292.8	1122.0	973.2	883.2	834.4	819.6	840.2
44.5°	1408.6	1456.4	1447.8	1380.3	1266.0	1099.5	954.0	865.5	817.2	801.9	822.5



66.5°	415.3	440.2	440.2	403.8	358.8	309.1	284.7	277.5	256.5	251.7	245.9
67°	399.0	423.9	425.3	389.0	345.9	298.1	276.5	267.5	246.4	242.1	238.3



89°	0.0	2.9	8.6	9.1	8.6	8.6	5.7	1.9	0.0	0.5	0.0
89.5°	0.0	0.5	4.8	5.3	5.3	4.8	2.9	0.5	0.0	0.5	0.0

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21.5°	1886.1	2068.4	2286.5	2496.1	2669.3	2775.5
22°	1866.0	2050.2	2268.8	2480.8	2656.4	2767.4



44°	904.3	1000.0	1107.6	1227.7	1347.8	1440.1
44.5°	884.2	977.5	1082.7	1201.4	1318.6	1408.6

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66.5°	232.5	253.6	295.2	350.7	390.9	415.3
67°	223.9	243.1	283.2	337.3	376.1	399.0

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Scaled Data Report



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

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)