

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: P776581

Luminaire Tested: HCDJBS4050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B054)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K  
Description: 4 INCH ROUND NARROW LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4545.5 lumens  
Efficiency: N/A  
Efficacy: 94.7 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.07  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

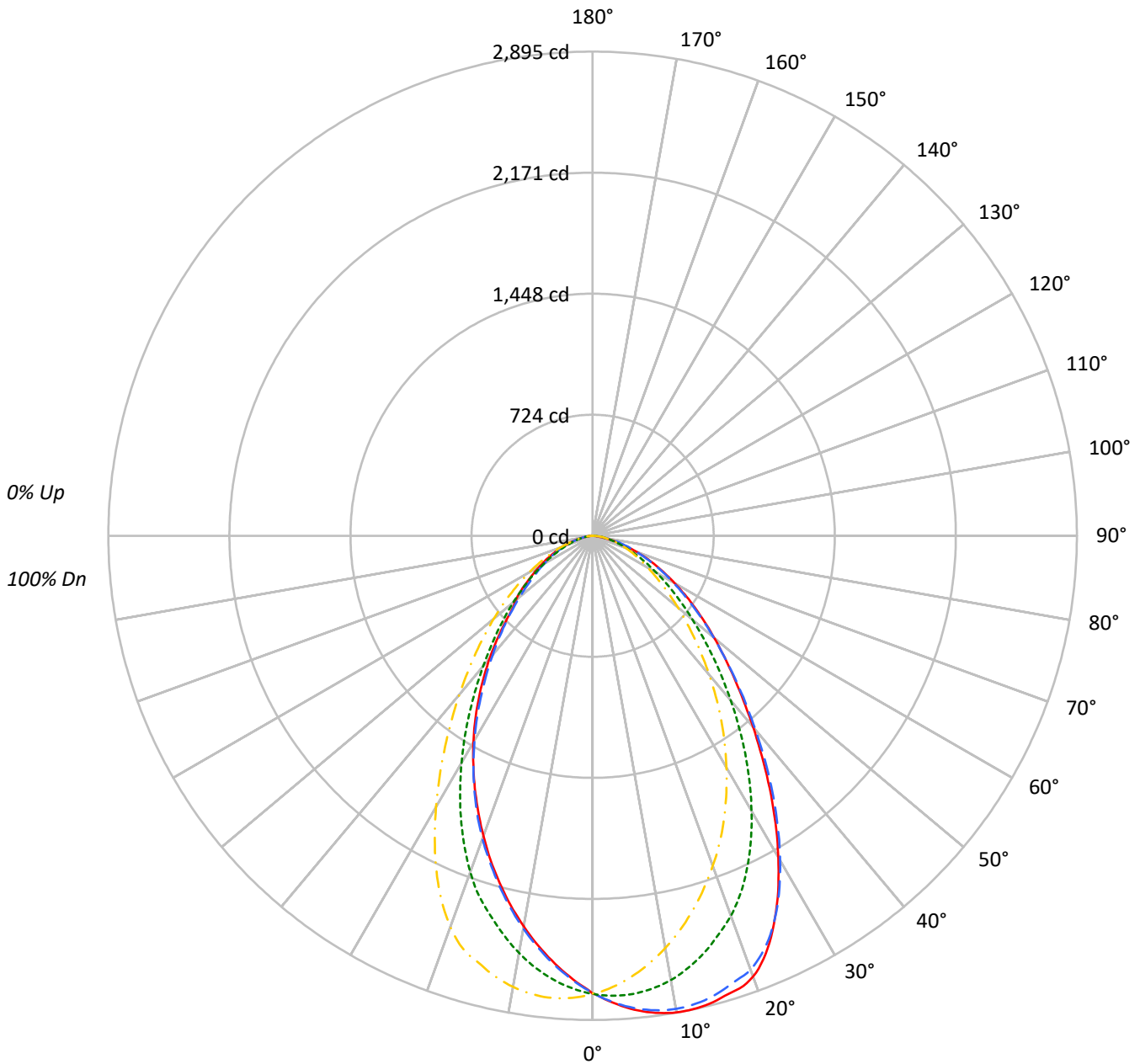
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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									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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	77	72	79	75	71	77	73	70	68																			
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60																			
5	82	71	63	57	80	70	63	57	68	62	57	66	60	56	64	59	56	54																			
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48																			
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	45	44																			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40																			
9	63	51	44	39	62	51	44	39	50	43	38	49	43	38	48	42	38	36																			
10	60	48	40	36	58	47	40	36	46	40	35	45	39	35	44	39	35	34																			

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

	0°	90°	180°	270°
0°	344463	344463	344463	344463
5°	359271	347422	324657	336683
10°	369777	344615	303070	323657
15°	374582	336159	279940	306623
20°	375584	323834	255652	286389
25°	356009	303770	231216	258627
30°	322695	276120	207079	227729
35°	283578	244263	182395	196375
40°	245015	211057	157270	167177
45°	212275	179883	132843	142258
50°	185685	152675	117316	121036
55°	163155	129826	104243	102422
60°	142739	110370	91896	85804
65°	123641	93773	80908	71379
70°	101005	79111	68367	58800
75°	75660	67053	55335	48770
80°	45441	58559	39353	38701
85°	17472	54293	14151	22815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 217899 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.9	5.6
10°-20°	699.7	15.4
20°-30°	947.9	20.9
30°-40°	921.4	20.3
40°-50°	729.4	16.0
50°-60°	510.7	11.2
60°-70°	309.7	6.8
70°-80°	142.0	3.1
80°-90°	28.9	0.6
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°	1903.5	41.9
0°-40°	2824.9	62.1
0°-60°	4065.0	89.4
0°-90°	4545.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4545.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2737	2737	2737	2737	2737	
5°	2844	2750	2570	2665	2844	273
15°	2875	2580	2149	2353	2875	812
25°	2564	2188	1665	1862	2564	1171
35°	1846	1590	1187	1278	1846	1152
45°	1193	1011	746	799	1193	925
55°	744	592	475	467	744	668
65°	415	315	272	240	415	411
75°	156	138	114	100	156	168
85°	12	38	10	16	12	20
90°	0	4	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°	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1
0.5°	2745.5	2746.8	2745.9	2744.5	2743.1	2738.0	2734.3	2732.9	2717.6	2717.1	2719.9
1°	2758.5	2760.3	2758.9	2753.3	2746.4	2735.7	2726.9	2720.8	2702.7	2702.7	2706.4
1.5°	2771.0	2773.3	2769.6	2760.8	2749.2	2733.4	2719.0	2709.2	2687.4	2686.5	2692.0
2°	2783.1	2786.3	2780.3	2768.7	2751.0	2729.7	2710.6	2696.2	2672.1	2670.2	2676.7
2.5°	2794.7	2798.9	2791.0	2775.6	2752.9	2725.9	2701.3	2683.7	2655.8	2654.0	2661.4
3°	2805.8	2810.0	2801.2	2781.7	2753.3	2720.8	2691.6	2669.3	2639.1	2637.2	2646.1
3.5°	2816.5	2821.2	2810.0	2787.3	2753.8	2715.7	2681.4	2655.8	2622.4	2619.6	2629.8
4°	2826.3	2831.4	2818.8	2791.9	2752.9	2709.7	2670.7	2640.9	2605.6	2601.9	2613.5
4.5°	2835.6	2841.1	2826.7	2796.1	2752.0	2703.6	2659.5	2625.6	2587.5	2583.8	2596.4
5°	2843.9	2850.9	2834.2	2799.8	2750.1	2696.2	2647.4	2610.3	2569.9	2565.2	2579.6
5.5°	2851.8	2859.7	2841.1	2802.6	2747.8	2688.8	2635.4	2594.5	2550.8	2546.2	2561.1
6°	2859.2	2867.6	2847.2	2805.4	2744.5	2680.0	2621.9	2577.8	2532.7	2526.7	2543.4
6.5°	2865.7	2875.0	2852.7	2807.2	2740.8	2671.6	2608.9	2561.1	2513.7	2507.6	2524.4
7°	2871.8	2881.5	2857.4	2808.2	2736.6	2661.8	2595.0	2544.3	2494.2	2487.7	2504.9
7.5°	2877.4	2887.6	2861.6	2808.2	2731.1	2652.1	2581.0	2526.7	2474.7	2467.2	2485.8
8°	2881.5	2892.7	2865.3	2808.2	2725.5	2641.4	2566.2	2508.6	2454.7	2446.3	2466.3
8.5°	2885.7	2897.3	2868.1	2807.2	2719.4	2630.7	2550.8	2490.0	2434.3	2426.4	2446.8
9°	2889.0	2901.5	2870.4	2805.4	2712.5	2618.7	2535.0	2471.9	2413.8	2405.0	2426.4
9.5°	2891.8	2904.8	2871.3	2802.6	2705.0	2606.6	2519.3	2452.8	2392.5	2383.6	2405.5
10°	2893.6	2907.1	2872.2	2799.3	2696.7	2593.6	2503.0	2434.3	2371.6	2362.3	2384.6
10.5°	2894.5	2908.9	2871.8	2795.6	2687.9	2580.6	2485.8	2414.3	2350.2	2340.4	2363.7
11°	2895.0	2909.9	2871.3	2791.4	2678.1	2566.6	2468.2	2394.3	2328.8	2318.6	2342.3
11.5°	2895.0	2910.3	2869.9	2785.9	2667.9	2552.7	2451.0	2374.3	2307.0	2296.3	2320.5
12°	2894.1	2910.3	2867.6	2780.3	2657.2	2537.8	2432.9	2354.4	2285.2	2274.0	2298.2
12.5°	2892.7	2909.4	2864.8	2773.8	2645.6	2522.0	2414.3	2333.5	2262.9	2250.8	2276.3
13°	2890.4	2907.5	2861.1	2766.8	2634.0	2506.7	2395.7	2312.6	2240.6	2228.5	2254.5
13.5°	2887.1	2905.7	2857.4	2758.9	2621.4	2490.9	2376.7	2291.2	2217.8	2205.3	2231.8
14°	2883.9	2902.0	2852.3	2749.6	2608.4	2473.7	2356.7	2269.8	2195.1	2181.6	2209.0
14.5°	2879.7	2898.3	2846.7	2740.3	2594.5	2456.6	2336.7	2248.0	2171.8	2158.8	2185.8
15°	2875.0	2894.1	2840.2	2730.6	2580.1	2438.4	2316.7	2226.2	2148.6	2134.7	2162.5
15.5°	2869.0	2888.5	2833.2	2720.4	2565.7	2420.8	2296.3	2203.9	2125.4	2111.5	2138.9
16°	2862.5	2882.9	2825.3	2709.2	2549.9	2402.2	2274.9	2181.6	2102.2	2087.8	2115.6
16.5°	2857.4	2876.4	2817.0	2697.6	2534.1	2383.6	2254.0	2158.8	2078.5	2064.1	2091.9
17°	2853.2	2870.4	2808.6	2685.5	2517.4	2364.1	2233.1	2136.5	2054.8	2039.0	2068.7
17.5°	2849.5	2866.2	2799.8	2672.1	2501.1	2344.6	2211.3	2113.3	2030.6	2014.8	2045.0
18°	2845.8	2862.5	2792.8	2660.0	2484.4	2324.6	2189.0	2090.1	2006.5	1990.7	2020.9
18.5°	2838.8	2858.3	2786.3	2647.9	2468.2	2305.1	2167.2	2066.9	1982.3	1966.5	1997.2
19°	2830.0	2852.3	2779.8	2636.8	2451.9	2285.2	2144.9	2043.6	1958.2	1942.4	1974.4
19.5°	2817.9	2843.0	2771.5	2625.2	2435.7	2265.7	2123.5	2020.4	1933.6	1918.2	1950.8
20°	2804.4	2831.8	2760.3	2612.1	2418.0	2244.8	2100.3	1997.2	1908.9	1893.6	1926.6
20.5°	2789.1	2818.4	2746.8	2596.8	2398.5	2224.3	2078.5	1973.0	1884.3	1869.0	1902.0
21°	2771.0	2803.5	2731.1	2581.0	2377.6	2201.6	2054.8	1948.9	1860.6	1844.9	1876.9



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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°	2705.0	2746.8	2677.2	2521.6	2312.6	2132.4	1984.7	1876.9	1786.8	1771.5	1802.1
23°	2679.0	2724.1	2656.7	2500.7	2288.4	2108.2	1960.0	1852.3	1762.2	1747.3	1776.6
23.5°	2652.1	2700.4	2634.4	2478.4	2264.7	2084.1	1935.9	1828.1	1738.5	1722.7	1750.6
24°	2624.2	2674.9	2611.7	2454.7	2239.6	2058.0	1910.8	1804.0	1713.9	1698.5	1725.0
24.5°	2594.5	2647.4	2586.6	2429.6	2214.1	2032.5	1885.7	1778.9	1689.3	1673.9	1699.5
25°	2563.8	2618.7	2560.6	2404.1	2187.6	2006.5	1859.7	1754.3	1665.1	1649.8	1673.9
25.5°	2532.7	2588.5	2532.7	2378.1	2161.2	1980.0	1834.6	1729.7	1641.0	1624.7	1647.5
26°	2500.7	2557.8	2504.4	2350.7	2134.2	1953.5	1809.6	1705.0	1617.3	1599.6	1621.4
26.5°	2467.2	2526.7	2475.1	2323.3	2106.3	1926.1	1783.5	1680.0	1592.6	1575.5	1595.4
27°	2434.3	2493.7	2444.5	2294.5	2077.6	1898.7	1757.5	1654.9	1569.0	1550.8	1569.4
27.5°	2400.4	2460.3	2412.9	2265.2	2049.2	1871.8	1731.1	1630.3	1544.3	1526.2	1543.0
28°	2364.6	2425.4	2379.5	2234.5	2020.0	1844.9	1705.0	1605.7	1520.7	1501.6	1516.5
28.5°	2329.3	2390.1	2345.1	2203.9	1991.2	1816.5	1679.0	1580.1	1497.0	1477.0	1490.5
29°	2293.5	2354.8	2311.6	2172.8	1961.0	1788.2	1652.6	1555.0	1473.3	1452.4	1464.5
29.5°	2256.8	2319.1	2277.7	2140.3	1930.8	1760.8	1626.6	1530.4	1449.1	1428.2	1438.4
30°	2220.6	2281.9	2242.4	2108.7	1900.1	1732.5	1599.6	1505.8	1425.0	1403.6	1412.0
30.5°	2183.4	2245.2	2206.2	2075.7	1869.5	1703.7	1573.1	1480.7	1400.8	1379.5	1386.4
31°	2145.8	2207.6	2170.0	2041.8	1839.7	1675.8	1547.1	1455.6	1377.1	1354.8	1360.9
31.5°	2109.1	2169.5	2133.8	2008.3	1808.2	1647.0	1520.7	1431.0	1353.4	1330.2	1335.8
32°	2071.0	2131.0	2096.6	1973.5	1777.0	1619.1	1494.6	1406.4	1329.8	1306.5	1310.3
32.5°	2033.0	2092.4	2059.4	1939.1	1745.9	1590.8	1467.7	1381.8	1305.6	1282.4	1284.2
33°	1995.3	2054.3	2022.7	1904.8	1714.3	1562.0	1441.7	1357.6	1281.9	1258.2	1258.7
33.5°	1957.3	2016.2	1987.0	1869.9	1683.7	1533.7	1415.7	1332.1	1258.2	1234.1	1234.5
34°	1920.1	1977.7	1949.4	1834.6	1652.1	1504.4	1389.7	1307.9	1234.5	1209.9	1209.0
34.5°	1882.9	1938.7	1911.7	1799.8	1620.5	1476.1	1363.7	1283.8	1210.4	1186.2	1184.4
35°	1845.8	1900.6	1874.1	1765.0	1589.9	1448.2	1337.2	1259.6	1187.2	1163.0	1159.3
35.5°	1808.6	1863.0	1837.0	1730.6	1558.3	1419.9	1312.1	1235.0	1163.9	1139.8	1135.6
36°	1771.0	1825.3	1800.3	1696.2	1527.2	1391.5	1286.6	1211.3	1140.3	1116.6	1111.5
36.5°	1735.2	1788.2	1763.6	1661.4	1495.6	1363.2	1260.6	1187.6	1117.0	1093.3	1087.8
37°	1698.5	1750.1	1726.9	1627.9	1465.9	1336.3	1234.5	1163.9	1093.3	1070.1	1064.1
37.5°	1663.2	1712.9	1691.1	1594.0	1434.3	1307.9	1209.0	1140.3	1071.1	1047.8	1040.9
38°	1627.5	1676.7	1654.0	1559.2	1404.5	1280.5	1184.4	1117.5	1047.8	1025.1	1017.6
38.5°	1593.1	1640.5	1618.7	1526.7	1374.4	1253.1	1158.4	1093.8	1025.1	1002.3	995.8
39°	1558.7	1604.7	1582.9	1492.8	1344.6	1226.7	1133.3	1071.1	1002.8	980.0	973.1
39.5°	1525.3	1569.9	1549.5	1461.2	1314.0	1199.2	1108.2	1047.8	980.0	958.2	950.8
40°	1491.4	1535.5	1514.6	1427.3	1284.7	1172.3	1084.1	1025.1	957.3	935.9	928.9
40.5°	1459.3	1502.1	1480.7	1396.6	1255.9	1144.9	1059.4	1001.4	935.4	914.1	908.0
41°	1427.3	1467.7	1447.3	1364.6	1226.7	1119.8	1035.8	979.1	913.6	892.7	886.7
41.5°	1395.3	1436.1	1414.8	1333.0	1197.9	1092.9	1012.1	956.3	891.8	871.3	866.2
42°	1364.6	1403.6	1382.2	1301.4	1170.5	1067.3	988.8	935.0	869.9	850.9	846.7
42.5°	1334.9	1372.0	1351.1	1272.6	1143.0	1042.7	965.6	912.7	849.0	830.9	827.2
43°	1305.1	1341.8	1320.5	1242.9	1115.6	1018.1	943.3	891.3	827.7	811.0	807.2
43.5°	1276.3	1311.6	1289.4	1213.6	1088.7	993.5	920.6	869.5	806.8	791.9	787.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1192.7	1224.3	1201.6	1128.2	1010.7	923.4	855.5	808.6	746.4	737.6	732.5
45.5°	1165.8	1196.9	1173.2	1100.8	985.6	900.6	835.1	789.6	726.9	720.4	714.8
46°	1139.8	1170.0	1145.8	1074.3	961.0	878.8	814.7	770.5	708.3	702.7	697.2
46.5°	1114.3	1143.0	1118.4	1047.8	936.8	856.5	795.2	751.5	690.2	685.5	679.5
47°	1089.2	1116.6	1092.4	1021.8	912.7	834.6	775.2	732.9	673.0	669.3	662.3
47.5°	1065.0	1091.0	1065.9	996.7	889.4	813.7	755.7	714.8	656.8	653.5	645.6
48°	1040.4	1065.5	1039.9	970.7	866.2	792.4	736.6	697.2	642.4	637.7	629.8
48.5°	1016.2	1041.3	1015.3	947.0	843.9	772.4	717.6	679.5	629.8	622.4	613.6
49°	993.5	1017.2	990.7	923.4	822.1	752.4	699.5	662.8	618.7	607.5	598.2
49.5°	970.7	993.5	967.0	900.1	800.7	732.9	680.9	646.1	608.4	593.6	582.9
50°	948.4	970.7	943.8	876.9	779.8	713.9	663.3	629.8	599.2	580.6	568.0
50.5°	926.6	947.5	920.1	854.2	758.9	694.8	646.1	614.0	589.9	567.6	552.7
51°	904.8	925.2	897.3	832.3	738.5	676.7	628.9	598.7	579.2	556.0	538.8
51.5°	883.4	903.4	875.5	811.0	719.5	659.1	612.6	583.8	566.6	545.3	525.3
52°	862.5	881.6	853.7	789.1	699.9	641.4	595.9	569.4	552.7	532.7	511.4
52.5°	842.1	860.2	832.3	768.7	680.9	624.2	580.1	555.5	539.2	520.2	497.9
53°	822.1	839.8	811.0	748.7	662.3	607.1	564.3	542.5	526.2	507.7	484.9
53.5°	801.7	818.9	790.5	728.3	644.2	590.3	549.0	529.0	512.8	495.1	471.9
54°	782.2	798.9	770.1	708.8	626.6	574.1	534.1	516.9	499.8	483.0	459.4
54.5°	762.7	778.4	749.6	689.7	608.4	558.3	519.3	505.8	487.7	471.0	447.3
55°	743.6	759.4	731.1	670.7	591.7	543.0	505.3	494.2	475.1	459.8	435.7
55.5°	724.6	739.9	711.6	652.6	575.0	527.2	491.4	482.6	463.5	447.3	424.1
56°	706.0	720.8	692.5	634.0	558.8	511.8	477.5	470.5	451.5	435.7	412.9
56.5°	687.9	702.3	673.9	616.3	543.0	497.4	464.0	458.9	439.8	425.0	402.7
57°	670.2	684.2	655.8	599.2	526.7	482.6	451.0	447.3	428.2	414.3	392.5
57.5°	651.6	665.6	638.2	582.0	511.4	468.6	438.5	436.1	417.6	403.2	382.7
58°	634.5	647.5	620.1	565.3	496.0	454.7	426.4	425.0	406.4	392.9	372.5
58.5°	617.3	629.8	602.9	548.5	482.1	441.2	414.3	413.8	396.2	382.7	362.7
59°	600.1	613.1	586.2	532.3	467.3	427.8	402.7	403.2	385.5	372.5	352.5
59.5°	583.4	595.0	569.0	516.5	452.9	414.8	392.0	392.9	375.3	362.3	343.2
60°	567.1	579.2	552.7	501.2	438.5	402.2	381.3	382.7	365.1	352.1	334.0
60.5°	550.9	562.5	536.5	485.4	425.4	390.6	370.6	372.5	354.9	342.3	324.7
61°	534.6	546.2	520.7	471.0	412.0	378.5	360.0	362.3	345.1	333.0	315.4
61.5°	518.8	529.5	504.4	456.1	399.4	366.5	349.3	352.1	335.3	323.3	306.5
62°	503.5	514.6	489.5	441.7	386.9	354.4	340.0	342.3	326.1	314.0	297.7
62.5°	488.6	498.8	474.7	427.8	374.4	342.8	330.2	333.0	316.3	304.7	288.9
63°	473.3	483.5	459.4	413.8	361.8	331.6	320.9	323.3	307.5	296.3	280.1
63.5°	458.4	468.2	445.0	400.4	349.3	320.9	311.7	314.0	298.2	287.0	271.7
64°	444.0	453.3	430.6	386.9	337.2	310.3	303.3	304.7	289.4	278.7	263.4
64.5°	429.6	438.9	416.6	373.9	326.1	300.0	294.5	295.9	280.5	269.9	255.5
65°	415.2	425.0	402.7	360.9	314.9	289.8	286.1	287.5	271.7	261.5	247.1
65.5°	400.8	410.1	388.8	348.8	303.8	280.1	277.3	278.7	262.4	253.1	239.2
66°	386.0	396.7	375.8	336.7	293.1	270.3	269.4	269.9	253.6	244.8	231.8





TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	343.2	355.3	336.7	301.0	262.4	243.4	244.8	244.8	227.1	220.2	209.0
68°	329.3	341.8	324.2	289.8	252.7	234.6	237.3	236.4	218.8	212.3	201.6
68.5°	314.9	328.4	312.1	279.1	242.9	226.2	229.4	228.1	210.4	203.9	194.6
69°	301.4	314.9	300.5	268.0	233.6	217.8	222.0	220.2	202.0	196.5	187.6
69.5°	288.0	301.9	288.9	257.8	224.3	210.4	214.1	211.8	193.7	188.6	180.7
70°	274.5	288.9	277.3	247.1	215.0	202.5	207.2	203.9	185.8	181.1	173.7
70.5°	262.0	276.4	266.1	236.9	206.2	195.1	199.7	196.5	178.4	173.7	167.2
71°	249.0	264.3	255.0	227.1	197.9	188.1	192.8	188.6	170.5	165.8	160.2
71.5°	236.4	251.7	244.3	217.4	189.5	181.1	185.8	181.1	163.0	158.8	153.7
72°	223.9	240.1	234.1	208.1	181.6	174.2	178.8	173.7	155.6	151.9	147.2
72.5°	212.3	229.0	223.4	199.3	173.7	167.7	172.3	166.3	148.2	144.4	140.7
73°	200.6	217.4	213.2	190.4	166.3	160.7	165.3	159.3	140.7	137.9	134.7
73.5°	188.6	206.7	203.4	181.1	158.8	154.7	158.8	151.9	133.8	131.0	128.7
74°	177.4	195.5	193.2	172.8	151.9	148.6	152.3	145.4	126.8	124.0	122.6
74.5°	165.8	184.9	183.9	166.7	144.9	142.6	146.3	138.4	120.3	117.5	116.1
75°	155.6	174.6	174.6	158.8	137.9	136.6	139.8	131.9	113.8	111.0	110.5
75.5°	145.4	164.4	164.9	151.0	131.4	131.0	133.8	125.4	107.3	105.0	104.5
76°	135.2	155.6	156.5	142.6	125.4	125.4	127.7	118.9	100.8	98.5	98.9
76.5°	124.9	146.3	148.2	134.7	118.9	119.8	121.7	112.4	94.3	92.4	93.4
77°	115.2	137.0	140.3	127.3	113.3	114.3	115.7	106.4	88.2	86.4	87.8
77.5°	105.4	127.7	131.9	120.3	107.3	109.1	109.6	100.3	82.2	80.8	82.7
78°	96.1	118.9	123.5	113.8	101.7	104.0	104.5	94.3	76.6	74.8	77.6
78.5°	87.3	111.0	115.7	107.3	96.1	98.5	98.5	88.2	70.6	69.2	72.0
79°	78.5	102.6	108.2	100.8	90.6	93.4	93.4	82.2	65.0	63.6	66.9
79.5°	70.6	94.8	100.8	94.3	85.5	88.7	87.8	76.6	59.5	58.5	62.2
80°	62.7	86.9	93.4	88.2	80.8	83.6	82.7	71.1	54.3	52.9	57.1
80.5°	55.7	79.9	86.4	82.7	75.7	79.0	77.6	66.0	48.8	47.8	52.5
81°	48.8	72.9	79.9	77.1	71.1	74.3	72.5	60.4	44.1	43.2	47.8
81.5°	42.3	66.4	73.4	71.5	66.4	69.7	67.3	55.3	39.0	38.6	43.7
82°	35.8	59.9	66.9	66.4	61.8	65.0	62.7	50.2	34.4	33.9	39.5
82.5°	29.7	53.4	60.8	61.3	57.6	60.4	57.6	45.5	29.3	29.3	35.3
83°	24.6	47.4	55.3	56.2	53.4	56.2	52.9	40.9	24.2	24.6	31.1
83.5°	20.0	41.8	49.7	51.6	49.2	52.0	48.8	36.2	20.0	20.9	26.9
84°	16.3	35.8	44.6	46.9	45.1	47.4	44.6	31.6	15.8	17.6	23.2
84.5°	13.9	30.7	39.5	42.7	41.3	43.7	40.4	26.9	12.1	14.9	20.0
85°	12.1	25.5	34.8	38.6	37.6	39.5	36.7	23.2	9.8	12.5	16.3
85.5°	9.8	20.9	30.7	34.4	33.9	35.8	32.5	20.0	8.4	10.2	13.0
86°	7.9	16.7	26.5	30.7	30.2	31.6	28.3	17.2	7.0	8.4	9.3
86.5°	6.5	13.9	22.8	26.5	26.5	27.4	24.6	14.9	5.6	6.0	6.5
87°	5.6	11.1	19.0	23.2	23.2	23.7	20.9	12.1	4.2	4.2	3.7
87.5°	4.2	8.4	16.3	20.0	20.0	20.0	17.2	9.8	2.8	2.3	1.4
88°	3.3	5.6	13.5	16.7	16.3	16.7	13.9	7.4	1.9	0.9	0.5
88.5°	2.3	3.7	10.2	13.5	13.0	13.0	10.7	5.1	0.5	0.5	0.0



TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.9	2.8	5.1	4.2	3.7	1.9	0.5	0.0	0.5	0.0



TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2737.1	2737.1	2737.1	2737.1	2737.1	2737.1
0.5°	2724.5	2734.8	2739.9	2747.3	2754.3	2745.5
1°	2714.3	2729.2	2740.3	2752.4	2764.0	2758.5
1.5°	2703.2	2723.2	2739.9	2757.5	2773.3	2771.0
2°	2692.0	2717.1	2738.5	2761.7	2782.1	2783.1
2.5°	2680.0	2709.7	2737.1	2765.4	2790.5	2794.7
3°	2667.4	2702.3	2734.3	2768.2	2797.9	2805.8
3.5°	2654.0	2693.9	2731.5	2771.0	2804.9	2816.5
4°	2640.5	2685.1	2727.3	2772.4	2810.5	2826.3
4.5°	2626.5	2675.3	2723.2	2773.3	2816.0	2835.6
5°	2611.7	2665.1	2718.0	2773.8	2821.6	2843.9
5.5°	2596.4	2654.9	2712.0	2773.3	2825.8	2851.8
6°	2581.0	2643.3	2706.0	2772.4	2829.1	2859.2
6.5°	2565.2	2631.2	2699.0	2770.5	2831.8	2865.7
7°	2548.1	2618.7	2691.1	2767.7	2834.2	2871.8
7.5°	2531.3	2605.6	2682.7	2764.5	2836.0	2877.4
8°	2514.1	2592.6	2673.9	2760.8	2836.5	2881.5
8.5°	2496.0	2578.2	2664.2	2756.6	2836.5	2885.7
9°	2477.9	2563.4	2654.0	2751.5	2836.0	2889.0
9.5°	2458.9	2548.1	2643.3	2745.5	2835.1	2891.8
10°	2439.8	2532.7	2632.1	2738.9	2833.2	2893.6
10.5°	2420.3	2516.5	2620.5	2732.0	2830.9	2894.5
11°	2400.8	2500.2	2607.5	2724.1	2827.7	2895.0
11.5°	2380.8	2483.0	2594.0	2715.7	2823.5	2895.0
12°	2360.4	2464.9	2581.0	2706.9	2818.8	2894.1
12.5°	2340.0	2447.3	2567.1	2697.1	2813.7	2892.7
13°	2319.1	2429.1	2552.2	2686.9	2808.2	2890.4
13.5°	2297.2	2410.6	2536.9	2676.7	2801.7	2887.1
14°	2275.4	2391.1	2521.1	2664.6	2794.2	2883.9
14.5°	2253.6	2372.5	2506.3	2653.0	2787.3	2879.7
15°	2232.7	2353.4	2490.5	2641.9	2778.4	2875.0
15.5°	2210.9	2334.9	2476.1	2632.1	2771.5	2869.0
16°	2189.5	2315.8	2461.7	2623.3	2765.9	2862.5
16.5°	2167.7	2297.2	2447.3	2613.1	2760.3	2857.4
17°	2145.8	2278.2	2430.5	2601.0	2753.8	2853.2
17.5°	2123.5	2257.8	2411.5	2585.7	2745.0	2849.5
18°	2101.2	2235.9	2391.1	2569.4	2732.4	2845.8
18.5°	2078.0	2213.2	2369.2	2550.8	2717.6	2838.8
19°	2053.9	2188.6	2346.5	2531.3	2700.9	2830.0
19.5°	2029.2	2163.9	2323.3	2510.0	2683.7	2817.9
20°	2004.2	2138.4	2299.6	2487.7	2663.7	2804.4
20.5°	1978.2	2113.3	2274.0	2464.4	2643.3	2789.1
21°	1952.6	2086.4	2248.0	2439.4	2620.5	2771.0

TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1872.7	2005.1	2167.7	2359.9	2544.3	2705.0
23°	1845.8	1977.2	2139.3	2332.1	2516.0	2679.0
23.5°	1817.9	1948.9	2110.1	2302.4	2486.7	2652.1
24°	1790.5	1920.1	2081.3	2272.6	2455.6	2624.2
24.5°	1762.6	1891.3	2051.1	2241.0	2424.5	2594.5
25°	1735.2	1862.5	2020.9	2209.5	2391.5	2563.8
25.5°	1707.4	1833.7	1989.8	2177.4	2359.0	2532.7
26°	1679.5	1804.4	1958.6	2144.4	2325.1	2500.7
26.5°	1652.1	1774.7	1928.5	2111.5	2291.7	2467.2
27°	1624.2	1745.0	1896.4	2077.6	2257.3	2434.3
27.5°	1596.4	1715.3	1864.8	2043.6	2221.5	2400.4
28°	1568.5	1685.5	1831.8	2008.8	2185.8	2364.6
28.5°	1541.1	1655.4	1800.3	1974.4	2150.9	2329.3
29°	1513.2	1626.6	1768.7	1940.1	2115.6	2293.5
29.5°	1485.4	1596.8	1736.2	1904.8	2079.4	2256.8
30°	1458.0	1567.1	1703.7	1871.8	2043.2	2220.6
30.5°	1430.6	1537.4	1671.1	1837.0	2007.0	2183.4
31°	1403.1	1508.6	1639.1	1802.1	1971.7	2145.8
31.5°	1376.2	1478.9	1607.5	1768.2	1935.9	2109.1
32°	1348.3	1449.6	1575.5	1734.3	1899.2	2071.0
32.5°	1322.3	1420.8	1543.9	1699.9	1863.4	2033.0
33°	1295.4	1391.5	1512.3	1667.9	1827.7	1995.3
33.5°	1268.5	1362.7	1481.6	1634.5	1791.9	1957.3
34°	1242.4	1334.4	1450.5	1601.5	1758.0	1920.1
34.5°	1216.4	1306.1	1420.3	1569.0	1722.2	1882.9
35°	1190.4	1278.2	1390.1	1536.9	1687.9	1845.8
35.5°	1164.9	1249.9	1360.0	1504.9	1653.5	1808.6
36°	1139.8	1223.4	1331.6	1474.7	1620.1	1771.0
36.5°	1114.7	1196.0	1302.4	1442.2	1587.1	1735.2
37°	1089.6	1169.5	1275.0	1412.4	1553.2	1698.5
37.5°	1065.9	1142.6	1246.2	1382.2	1520.7	1663.2
38°	1041.8	1117.0	1218.8	1353.0	1488.1	1627.5
38.5°	1018.6	1091.5	1191.4	1322.8	1456.1	1593.1
39°	995.8	1066.4	1164.9	1294.9	1425.9	1558.7
39.5°	972.1	1041.3	1138.9	1266.6	1394.8	1525.3
40°	949.4	1017.6	1112.4	1238.7	1364.1	1491.4
40.5°	927.5	993.5	1087.3	1210.4	1334.4	1459.3
41°	905.7	970.7	1062.2	1183.9	1305.1	1427.3
41.5°	883.9	947.5	1038.1	1157.0	1276.3	1395.3
42°	863.4	925.2	1013.9	1131.4	1248.0	1364.6
42.5°	842.5	902.9	989.8	1105.9	1220.1	1334.9
43°	822.6	882.0	966.6	1080.8	1192.7	1305.1
43.5°	802.6	860.2	943.3	1055.7	1166.3	1276.3



TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	745.9	799.3	876.9	984.2	1089.2	1192.7
45.5°	727.8	779.4	856.0	961.0	1064.6	1165.8
46°	709.7	760.3	834.6	938.2	1040.4	1139.8
46.5°	692.1	741.3	814.7	915.9	1016.2	1114.3
47°	674.4	722.7	793.8	893.6	993.0	1089.2
47.5°	657.7	704.6	774.3	872.3	969.8	1065.0
48°	641.0	686.9	754.8	850.9	947.5	1040.4
48.5°	624.7	669.3	735.2	830.0	925.2	1016.2
49°	608.0	652.1	716.7	810.0	903.8	993.5
49.5°	592.2	634.9	698.1	790.1	882.5	970.7
50°	576.9	618.2	679.5	769.6	861.1	948.4
50.5°	561.5	601.9	661.9	750.1	840.7	926.6
51°	546.7	585.7	644.2	731.5	820.2	904.8
51.5°	531.8	569.4	627.0	712.5	800.7	883.4
52°	516.9	554.6	609.8	694.4	780.3	862.5
52.5°	502.6	539.2	593.6	676.3	761.3	842.1
53°	488.6	524.4	576.9	658.1	742.2	822.1
53.5°	474.7	509.5	561.1	641.0	723.2	801.7
54°	461.2	494.7	545.3	623.3	704.6	782.2
54.5°	448.2	480.7	530.0	606.1	686.9	762.7
55°	435.2	466.8	514.6	589.4	668.4	743.6
55.5°	422.2	453.3	499.8	573.1	651.2	724.6
56°	410.1	439.8	484.4	556.9	633.5	706.0
56.5°	398.5	426.8	470.5	541.1	616.3	687.9
57°	386.9	413.4	456.1	525.3	599.2	670.2
57.5°	375.3	401.3	442.2	510.0	582.4	651.6
58°	363.7	388.3	428.7	494.7	565.7	634.5
58.5°	352.1	376.2	415.7	480.3	549.9	617.3
59°	341.4	364.1	402.2	465.4	533.7	600.1
59.5°	330.7	352.5	389.7	451.0	518.3	583.4
60°	320.9	340.9	376.7	437.1	502.6	567.1
60.5°	310.7	329.8	364.6	423.1	487.7	550.9
61°	301.0	319.1	352.1	409.7	471.9	534.6
61.5°	291.2	307.9	340.5	396.2	458.0	518.8
62°	281.9	297.3	328.8	382.7	443.6	503.5
62.5°	272.6	287.0	317.2	370.2	429.2	488.6
63°	263.8	277.3	306.1	357.2	414.8	473.3
63.5°	255.0	267.5	295.4	345.1	401.3	458.4
64°	246.6	257.8	284.3	332.6	387.8	444.0
64.5°	238.7	248.5	274.0	320.5	374.4	429.6
65°	230.8	239.7	263.8	308.9	361.4	415.2
65.5°	223.4	230.4	254.1	297.3	348.8	400.8
66°	216.0	221.5	243.8	285.6	336.3	386.0

TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	194.6	196.9	215.5	253.1	298.2	343.2
68°	188.1	189.0	206.7	242.9	286.1	329.3
68.5°	181.1	181.6	198.3	232.7	274.0	314.9
69°	174.6	174.2	190.0	222.5	262.0	301.4
69.5°	168.1	166.3	181.1	213.2	250.3	288.0
70°	161.6	159.8	173.2	203.9	239.2	274.5
70.5°	155.6	153.7	165.8	194.6	228.1	262.0
71°	149.6	147.2	158.8	185.3	216.9	249.0
71.5°	143.1	140.7	151.4	176.5	206.2	236.4
72°	137.5	134.7	144.0	168.1	195.5	223.9
72.5°	131.9	128.7	136.6	159.8	185.3	212.3
73°	125.4	122.6	130.1	151.9	175.6	200.6
73.5°	119.8	117.0	123.1	143.5	164.9	188.6
74°	114.3	111.5	116.6	135.6	156.1	177.4
74.5°	109.1	105.9	110.5	127.7	147.2	165.8
75°	103.6	100.3	104.5	120.3	138.4	155.6
75.5°	98.5	95.2	98.5	112.9	129.6	145.4
76°	93.4	90.1	92.9	105.4	121.2	135.2
76.5°	88.2	85.0	86.9	98.9	112.9	124.9
77°	83.1	80.4	81.7	92.0	105.0	115.2
77.5°	78.5	75.7	76.2	85.5	97.1	105.4
78°	73.4	71.1	71.1	79.4	89.6	96.1
78.5°	68.7	66.4	66.4	72.9	82.2	87.3
79°	64.1	62.2	61.8	67.3	75.2	78.5
79.5°	59.5	57.6	56.7	61.3	68.3	70.6
80°	54.8	53.4	52.5	56.2	61.8	62.7
80.5°	50.6	49.7	47.8	51.1	55.3	55.7
81°	46.4	45.5	44.1	46.0	49.2	48.8
81.5°	42.3	41.3	39.9	40.9	43.2	42.3
82°	38.1	37.6	35.8	36.7	37.6	35.8
82.5°	33.9	33.9	32.0	32.5	32.0	29.7
83°	30.2	30.2	28.3	28.3	26.9	24.6
83.5°	26.0	26.0	24.6	24.6	22.8	20.0
84°	22.3	22.8	21.4	20.9	18.6	16.3
84.5°	18.6	19.0	18.1	17.6	15.8	13.9
85°	14.9	15.8	15.3	14.9	12.5	12.1
85.5°	11.1	13.0	12.1	12.1	9.8	9.8
86°	7.9	9.8	9.3	9.3	7.0	7.9
86.5°	4.6	6.5	6.0	6.5	5.1	6.5
87°	2.3	3.3	3.7	4.6	3.7	5.6
87.5°	0.5	0.9	1.4	2.3	2.3	4.2
88°	0.0	0.0	0.0	0.5	1.4	3.3
88.5°	0.0	0.0	0.0	0.0	0.5	2.3



TEST NUMBER: P776581

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRH-HCD42TRLWW-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°	2750.1	2786.3	2714.8	2562.5	2356.7	2178.8	2032.0	1925.2	1836.0	1819.8	1852.7
22°	2727.8	2767.7	2696.7	2542.5	2334.9	2156.0	2008.3	1901.1	1811.4	1795.6	1827.2



44°	1247.6	1281.5	1259.2	1183.0	1062.7	969.8	898.7	849.0	786.3	773.8	769.6
44.5°	1219.7	1252.7	1230.8	1156.1	1036.7	946.1	876.9	828.1	766.8	756.1	751.0



66.5°	371.6	383.2	362.3	324.2	282.4	261.0	261.0	262.0	244.8	236.4	223.9
67°	357.2	368.8	349.7	312.6	272.2	252.2	252.7	253.1	235.9	228.5	216.4



89°	1.4	2.8	7.4	10.7	9.8	9.8	7.4	3.3	0.0	0.5	0.0
89.5°	0.5	1.9	4.6	7.9	7.0	6.5	4.2	1.4	0.0	0.5	0.0



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21.5°	1926.6	2059.4	2222.0	2414.3	2596.8	2750.1
22°	1900.1	2033.0	2195.1	2387.8	2570.8	2727.8



44°	783.6	839.3	921.0	1031.1	1139.8	1247.6
44.5°	764.5	818.9	899.2	1007.4	1114.3	1219.7

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66.5°	208.5	213.2	234.1	274.5	323.3	371.6
67°	201.6	204.8	224.8	263.8	310.7	357.2

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

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)