

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: P776654

Luminaire Tested: HCDJBS4050CSD-HCD61TRH-5000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776654
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B036)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD61TRH-5000lm-5000K
Description: 6 INCH ROUND SHALLOW-WIDE HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5772.3 lumens
Efficiency: N/A
Efficacy: 120.3 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.2
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

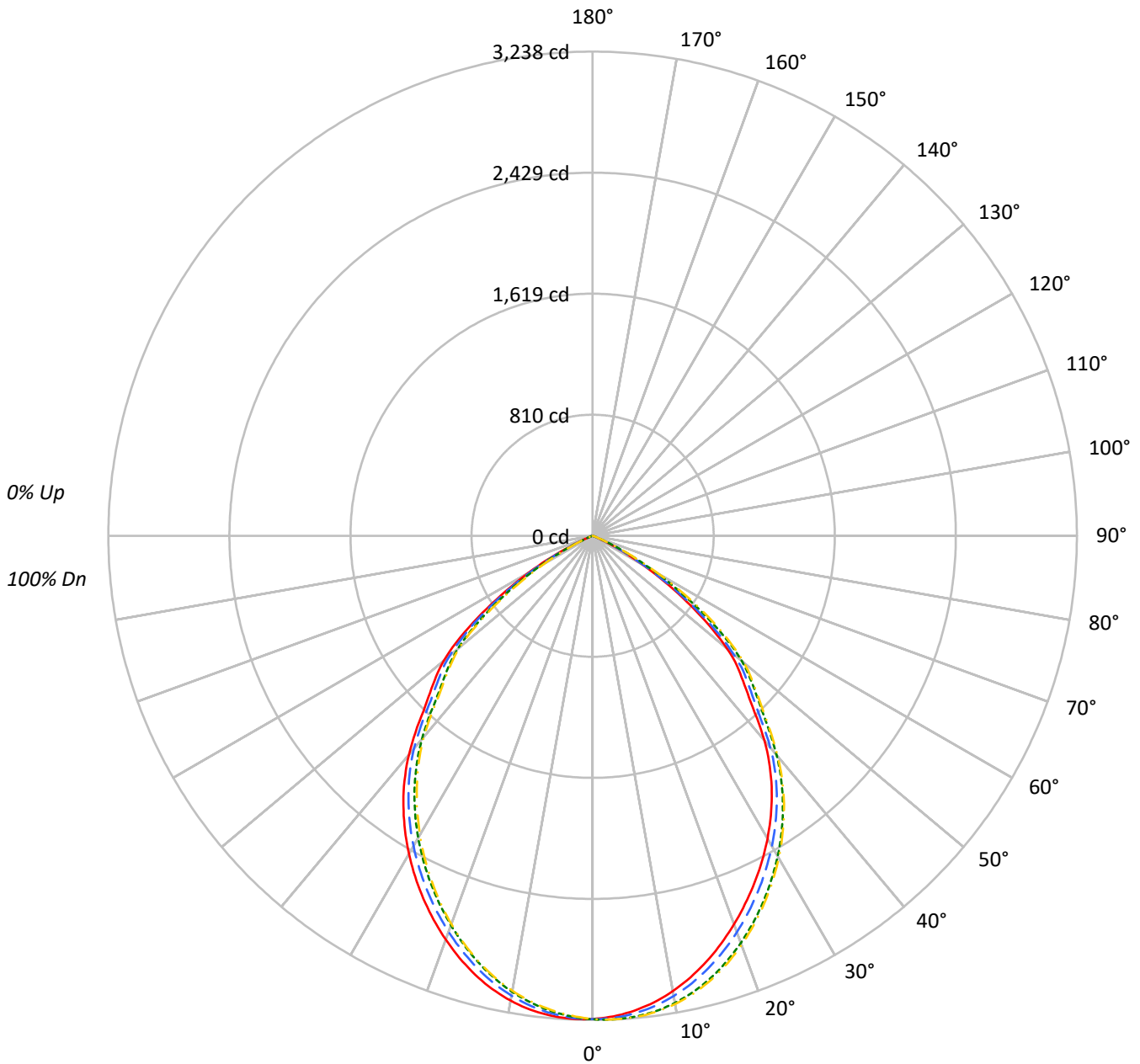
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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								
1	112	108	105	103	109	106	103	101	102	100	98	98	97	95	95	93	92	90								
2	104	98	93	89	102	96	91	87	93	89	86	90	87	84	87	84	82	80								
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71								
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63								
5	84	73	65	60	82	72	65	60	70	64	59	68	63	58	66	62	58	56								
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52	50								
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45								
8	68	56	49	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41								
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37								
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	177184	177184	177184	177184
5°	175462	177674	177278	175566
10°	172113	176572	175732	172408
15°	167209	173628	172419	167623
20°	161288	169047	167600	161656
25°	154896	163292	161943	154981
30°	148054	156689	155492	147656
35°	139729	148409	147626	138952
40°	127847	136878	136670	127117
45°	112492	121943	121524	111702
50°	100065	110956	110546	100525
55°	73775	85416	86018	75763
60°	42157	52638	53921	45238
65°	12154	19769	18640	15799
70°	305	465	305	930
75°	212	212	212	212
80°	158	158	158	158
85°	314	0	0	314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 123106 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.6	5.3
10°-20°	843.6	14.6
20°-30°	1206.9	20.9
30°-40°	1336.0	23.1
40°-50°	1173.8	20.3
50°-60°	747.3	12.9
60°-70°	159.1	2.8
70°-80°	1.3	0.0
80°-90°	0.7	0.0
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°	2354.2	40.8
0°-40°	3690.1	63.9
0°-60°	5611.2	97.2
0°-90°	5772.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5772.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3232	3232	3232	3232	3232	
5°	3188	3229	3222	3190	3188	301
15°	2946	3059	3038	2954	2946	828
25°	2561	2700	2677	2562	2561	1178
35°	2088	2218	2206	2076	2088	1299
45°	1451	1573	1568	1441	1451	1128
55°	772	894	900	793	772	687
65°	94	152	144	122	94	125
75°	1	1	1	1	1	1
85°	0	0	0	0	0	1
90°	0	0	0	2	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°	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1
0.5°	3229.7	3231.2	3232.6	3232.1	3235.5	3235.1	3233.6	3233.1	3233.1	3233.1	3232.6
1°	3227.3	3229.2	3232.1	3232.1	3236.5	3236.5	3235.1	3234.6	3234.1	3233.1	3231.7
1.5°	3224.4	3227.3	3230.7	3232.1	3237.5	3238.0	3236.5	3235.5	3234.1	3232.6	3230.2
2°	3220.5	3224.4	3228.7	3231.2	3237.5	3238.5	3237.5	3236.0	3234.1	3231.2	3228.3
2.5°	3216.6	3221.0	3226.3	3229.7	3237.5	3238.9	3237.5	3236.0	3233.1	3229.7	3225.8
3°	3212.2	3217.1	3223.4	3228.3	3236.5	3238.5	3237.5	3235.1	3232.1	3227.8	3222.9
3.5°	3206.9	3212.7	3220.0	3225.8	3235.5	3237.5	3237.0	3234.1	3230.2	3224.9	3219.0
4°	3201.1	3207.9	3216.1	3222.9	3233.6	3236.5	3235.5	3232.6	3227.8	3222.0	3214.7
4.5°	3194.8	3202.5	3211.3	3219.0	3231.7	3235.1	3234.1	3230.7	3224.9	3218.1	3210.3
5°	3188.5	3196.2	3205.9	3215.2	3228.7	3232.6	3231.7	3227.8	3221.5	3213.7	3205.4
5.5°	3181.2	3189.4	3200.1	3210.8	3225.8	3229.7	3229.2	3224.9	3217.1	3208.8	3199.6
6°	3172.9	3182.1	3194.3	3205.9	3222.0	3226.8	3225.8	3221.0	3212.7	3203.0	3192.8
6.5°	3165.2	3174.4	3187.5	3200.1	3217.6	3222.9	3222.0	3216.6	3207.9	3197.2	3186.5
7°	3156.4	3166.1	3180.2	3193.8	3212.7	3218.6	3217.6	3211.8	3202.5	3190.9	3179.2
7.5°	3146.7	3157.4	3172.4	3187.0	3206.9	3213.7	3212.7	3206.4	3196.2	3183.6	3171.0
8°	3137.0	3147.7	3163.7	3179.7	3201.6	3208.4	3207.4	3200.1	3189.4	3176.3	3162.7
8.5°	3126.3	3138.0	3155.0	3172.4	3194.8	3202.5	3201.6	3193.8	3182.1	3168.1	3153.5
9°	3115.6	3127.3	3145.7	3163.7	3187.5	3195.7	3194.8	3186.5	3173.9	3159.3	3143.8
9.5°	3104.0	3116.6	3135.5	3155.0	3179.7	3188.9	3187.5	3179.2	3165.6	3150.1	3134.1
10°	3091.9	3104.5	3124.9	3145.7	3172.0	3181.2	3180.2	3171.0	3156.9	3140.4	3123.4
10.5°	3079.2	3092.3	3114.2	3135.5	3163.2	3172.9	3172.0	3162.2	3147.7	3130.2	3112.2
11°	3066.1	3080.2	3102.5	3124.9	3154.0	3164.2	3163.2	3152.5	3137.0	3119.5	3100.6
11.5°	3052.5	3067.1	3090.4	3113.7	3143.8	3154.5	3153.5	3142.8	3126.3	3107.9	3088.5
12°	3038.9	3053.5	3078.3	3102.0	3133.6	3144.8	3143.8	3132.1	3115.6	3095.7	3075.8
12.5°	3024.4	3039.9	3065.2	3090.4	3122.4	3134.1	3133.1	3121.5	3104.0	3083.6	3062.7
13°	3009.3	3025.8	3051.6	3077.8	3110.8	3123.4	3121.9	3109.8	3091.4	3070.5	3049.1
13.5°	2994.3	3010.8	3037.5	3064.7	3098.6	3111.8	3110.3	3097.7	3079.2	3057.4	3035.5
14°	2978.7	2995.7	3023.4	3050.6	3086.0	3099.6	3098.2	3085.1	3065.6	3043.3	3021.0
14.5°	2962.7	2979.7	3008.4	3037.5	3072.9	3086.5	3085.1	3071.9	3051.6	3029.2	3005.4
15°	2946.2	2963.7	2993.3	3022.4	3059.3	3073.4	3071.9	3057.9	3038.0	3014.2	2990.4
15.5°	2929.7	2947.7	2977.3	3007.9	3045.2	3059.3	3057.9	3043.8	3023.4	2999.1	2974.9
16°	2912.2	2930.7	2961.3	2991.4	3030.7	3045.7	3043.3	3029.2	3007.4	2983.6	2958.4
16.5°	2895.2	2913.7	2945.2	2976.8	3015.2	3030.7	3028.3	3014.2	2992.3	2967.6	2941.8
17°	2876.8	2896.2	2928.3	2960.3	2999.6	3015.6	3013.2	2998.6	2976.3	2951.6	2925.3
17.5°	2858.8	2878.7	2910.8	2943.3	2983.6	2999.1	2997.7	2982.1	2960.3	2934.6	2908.4
18°	2840.4	2860.8	2893.8	2925.8	2967.1	2983.1	2980.7	2965.6	2943.3	2917.6	2889.9
18.5°	2821.9	2842.3	2875.8	2909.3	2950.1	2966.1	2964.2	2949.1	2925.8	2900.1	2872.9
19°	2803.0	2824.4	2857.9	2891.4	2932.6	2949.1	2947.2	2931.7	2908.8	2882.6	2854.5
19.5°	2784.6	2805.9	2839.4	2873.9	2915.1	2931.7	2929.7	2914.7	2890.9	2864.7	2836.5
20°	2764.7	2786.5	2820.5	2855.0	2897.7	2913.7	2911.7	2896.7	2872.9	2846.2	2817.6
20.5°	2745.2	2767.1	2801.6	2836.0	2878.7	2895.7	2893.8	2878.3	2855.0	2827.8	2799.1
21°	2725.3	2748.2	2782.6	2817.6	2860.3	2876.8	2874.9	2859.8	2836.0	2808.8	2779.2



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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°	2664.7	2688.4	2723.4	2758.3	2802.0	2818.5	2817.1	2801.6	2778.7	2750.6	2720.5
23°	2644.7	2668.5	2703.0	2738.4	2781.6	2798.6	2797.2	2782.1	2758.8	2730.7	2699.6
23.5°	2623.9	2648.1	2682.6	2718.1	2761.7	2778.7	2776.8	2762.2	2738.4	2710.8	2679.7
24°	2603.0	2627.3	2661.3	2697.2	2741.8	2758.3	2756.9	2741.4	2718.5	2690.4	2658.8
24.5°	2582.1	2606.4	2640.9	2676.8	2721.0	2736.5	2736.0	2720.5	2697.7	2669.0	2638.4
25°	2560.8	2585.5	2619.5	2654.9	2699.6	2715.6	2714.7	2699.6	2677.3	2648.6	2617.1
25.5°	2539.9	2564.6	2598.6	2634.1	2678.2	2694.3	2693.3	2678.7	2656.4	2627.3	2596.2
26°	2518.0	2543.8	2577.3	2612.7	2656.9	2671.9	2671.4	2657.9	2635.0	2605.9	2574.4
26.5°	2496.2	2521.9	2554.9	2590.9	2635.0	2650.6	2650.1	2636.0	2613.2	2584.1	2553.0
27°	2474.8	2500.6	2533.1	2569.0	2613.2	2627.8	2628.2	2613.2	2591.8	2562.2	2531.2
27.5°	2452.5	2478.7	2511.2	2545.7	2590.4	2605.4	2605.9	2591.3	2570.0	2540.4	2508.8
28°	2430.2	2456.4	2488.4	2523.4	2568.0	2583.6	2582.6	2569.5	2547.7	2518.0	2486.0
28.5°	2407.4	2433.6	2465.6	2500.1	2544.7	2559.3	2559.3	2546.7	2525.3	2495.2	2464.2
29°	2384.5	2411.7	2442.8	2477.3	2521.9	2536.0	2536.5	2522.9	2502.5	2472.4	2441.3
29.5°	2361.7	2388.4	2420.0	2453.5	2498.6	2512.2	2513.2	2499.6	2479.7	2449.6	2418.5
30°	2338.9	2365.6	2396.7	2430.2	2475.3	2489.4	2488.9	2476.8	2456.4	2426.3	2394.7
30.5°	2314.6	2342.3	2372.9	2406.9	2450.1	2464.2	2464.2	2453.0	2432.1	2402.5	2371.0
31°	2290.4	2318.5	2349.1	2382.1	2426.3	2439.4	2440.4	2427.8	2408.8	2379.2	2347.7
31.5°	2266.6	2294.7	2324.4	2357.4	2401.1	2414.6	2415.1	2404.0	2384.1	2354.9	2323.9
32°	2242.3	2271.0	2300.1	2332.6	2376.3	2390.4	2389.9	2379.2	2360.3	2330.2	2299.6
32.5°	2217.6	2245.7	2275.3	2307.8	2351.1	2364.2	2363.7	2354.4	2335.5	2305.9	2274.3
33°	2192.3	2220.9	2250.1	2282.6	2325.3	2337.9	2338.9	2328.7	2310.3	2281.1	2249.6
33.5°	2167.1	2195.2	2224.8	2256.4	2298.6	2311.7	2312.2	2303.0	2284.1	2256.4	2224.8
34°	2140.8	2170.0	2199.1	2231.1	2272.4	2286.0	2285.5	2276.8	2258.3	2230.2	2199.1
34.5°	2114.6	2144.2	2172.9	2203.5	2245.7	2257.4	2258.3	2249.6	2232.1	2204.0	2173.4
35°	2087.9	2117.5	2146.7	2176.8	2217.6	2230.7	2231.1	2222.4	2205.9	2178.2	2146.7
35.5°	2060.3	2090.8	2120.0	2149.1	2190.4	2202.0	2203.0	2195.2	2178.2	2152.0	2120.0
36°	2032.6	2064.1	2092.3	2121.4	2162.2	2174.3	2174.8	2167.5	2151.5	2125.3	2094.2
36.5°	2004.0	2035.5	2064.6	2092.8	2134.1	2144.2	2146.2	2138.4	2123.4	2097.2	2067.1
37°	1975.8	2006.9	2036.5	2064.1	2103.5	2115.1	2116.1	2109.3	2095.7	2069.5	2038.9
37.5°	1946.7	1977.3	2007.3	2035.0	2073.9	2084.1	2085.5	2079.7	2066.1	2041.8	2010.7
38°	1916.1	1948.1	1977.7	2004.0	2043.3	2053.5	2055.4	2049.1	2036.0	2012.7	1983.6
38.5°	1885.5	1917.5	1947.2	1972.9	2011.7	2022.4	2024.3	2017.5	2006.4	1983.1	1953.0
39°	1853.5	1886.5	1915.6	1941.8	1979.7	1989.4	1991.8	1986.0	1975.8	1953.0	1922.4
39.5°	1820.4	1852.0	1882.1	1907.8	1946.2	1956.4	1958.8	1953.5	1943.8	1920.9	1889.9
40°	1786.5	1818.0	1847.1	1873.4	1912.7	1922.9	1924.8	1920.5	1909.8	1888.4	1859.3
40.5°	1749.6	1782.1	1811.7	1837.9	1876.8	1887.4	1890.8	1886.0	1875.8	1854.4	1823.8
41°	1714.1	1746.2	1775.8	1802.5	1841.8	1852.5	1854.9	1850.5	1841.3	1819.0	1788.4
41.5°	1679.2	1710.3	1739.9	1767.0	1806.9	1817.1	1820.4	1815.1	1805.4	1782.6	1752.5
42°	1643.7	1674.3	1703.9	1731.1	1771.4	1783.6	1786.5	1781.6	1770.9	1748.6	1719.5
42.5°	1604.9	1636.5	1666.6	1694.2	1736.0	1747.6	1751.5	1747.1	1736.0	1713.6	1683.1
43°	1570.0	1601.0	1631.6	1658.8	1699.6	1711.7	1715.6	1710.3	1699.6	1676.3	1647.1
43.5°	1537.4	1568.0	1598.6	1625.8	1665.6	1677.7	1681.1	1674.8	1662.2	1638.9	1609.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1451.0	1481.1	1510.2	1536.0	1572.9	1584.5	1587.9	1581.1	1567.5	1543.7	1516.1
45.5°	1423.8	1454.4	1483.5	1508.8	1544.7	1555.9	1559.3	1552.5	1538.9	1516.1	1487.9
46°	1398.6	1429.2	1457.3	1482.6	1517.5	1528.2	1531.6	1524.8	1511.7	1488.9	1461.2
46.5°	1373.3	1403.9	1431.6	1456.4	1490.8	1502.0	1505.4	1499.1	1485.5	1462.7	1435.0
47°	1348.6	1378.7	1406.8	1431.1	1464.6	1475.8	1479.2	1472.9	1459.3	1437.4	1410.2
47.5°	1323.8	1353.9	1381.6	1405.9	1438.9	1450.5	1453.9	1446.7	1433.5	1412.2	1385.0
48°	1298.6	1328.7	1355.4	1380.6	1413.2	1425.3	1428.2	1421.4	1408.8	1387.4	1360.2
48.5°	1270.4	1300.0	1328.2	1353.9	1387.9	1400.0	1403.4	1397.1	1383.5	1362.2	1335.5
49°	1239.8	1267.5	1296.2	1324.3	1360.2	1373.3	1377.7	1370.9	1356.4	1334.0	1308.3
49.5°	1208.8	1235.0	1264.1	1293.2	1331.1	1345.2	1349.1	1341.3	1326.7	1303.4	1277.2
50°	1173.3	1198.6	1227.7	1259.3	1301.0	1316.5	1320.4	1312.2	1296.2	1272.9	1246.6
50.5°	1136.0	1161.7	1191.8	1224.3	1268.0	1284.0	1287.4	1281.6	1264.1	1240.8	1212.7
51°	1097.6	1124.3	1152.5	1186.4	1232.6	1247.1	1252.5	1246.6	1230.1	1205.4	1177.7
51.5°	1058.8	1085.0	1113.6	1146.6	1195.2	1210.7	1217.5	1209.3	1194.7	1169.0	1141.3
52°	1019.0	1044.7	1072.9	1104.9	1154.4	1172.9	1179.7	1171.9	1156.3	1131.1	1103.9
52.5°	978.7	1003.9	1033.0	1062.7	1112.7	1134.0	1140.8	1133.0	1115.6	1091.3	1065.6
53°	937.4	962.7	989.8	1018.5	1069.5	1093.7	1102.5	1092.3	1072.4	1049.5	1026.7
53.5°	896.1	920.4	948.1	974.3	1025.8	1053.4	1063.6	1052.5	1030.1	1008.8	986.0
54°	854.4	878.2	903.9	929.2	981.6	1010.7	1022.8	1008.8	986.9	966.1	944.7
54.5°	813.1	837.9	860.2	885.0	937.9	968.5	980.6	966.1	942.8	923.3	902.9
55°	771.9	795.2	815.6	840.3	893.7	927.2	939.8	924.3	900.0	880.6	862.2
55.5°	730.1	752.9	772.4	796.1	851.0	883.5	898.6	881.6	858.3	836.9	819.4
56°	689.3	710.2	728.7	751.0	806.8	839.8	854.9	836.9	815.1	792.7	777.2
56.5°	649.1	669.4	684.5	707.8	763.6	797.6	812.2	794.7	772.8	749.5	735.0
57°	609.2	627.2	640.8	664.6	720.4	752.9	769.0	752.5	730.6	707.3	693.7
57.5°	569.4	586.4	599.0	623.3	679.6	710.7	726.7	711.2	690.3	665.1	651.0
58°	530.6	545.6	558.3	581.6	638.4	667.5	683.0	669.0	649.1	622.8	610.2
58.5°	492.7	506.3	517.5	542.3	598.6	626.2	640.3	628.7	610.2	583.0	570.4
59°	455.4	466.5	477.7	502.9	558.3	584.5	597.6	587.4	569.9	543.7	530.1
59.5°	420.4	429.1	439.8	464.1	518.9	544.2	555.4	549.0	530.1	505.8	491.8
60°	384.5	390.8	402.4	427.2	480.1	503.9	514.6	508.3	491.8	470.4	455.4
60.5°	350.0	355.4	366.5	391.3	443.7	466.5	476.2	471.4	455.8	435.0	419.4
61°	317.0	320.4	331.1	354.9	407.8	429.1	437.9	435.0	419.9	399.5	383.5
61.5°	285.0	287.9	298.1	323.3	371.4	391.8	399.5	398.1	384.0	364.1	347.6
62°	253.4	255.3	267.0	290.3	335.0	354.4	361.2	361.2	348.1	328.7	311.7
62.5°	224.3	225.3	236.4	259.2	301.0	317.0	322.8	324.3	312.1	296.6	280.1
63°	195.6	196.1	208.3	230.1	268.5	283.0	288.4	290.3	275.3	266.0	249.5
63.5°	166.5	169.9	180.6	201.9	236.9	249.5	255.3	256.8	240.8	236.4	220.9
64°	142.2	148.5	159.2	174.8	207.3	218.9	224.3	225.7	207.3	207.8	193.7
64.5°	118.0	127.7	137.9	152.9	178.6	189.3	194.7	195.2	174.8	181.1	168.0
65°	93.7	107.3	116.5	131.1	152.4	161.2	167.0	167.0	143.7	154.9	144.2
65.5°	69.4	86.4	95.1	109.2	127.2	135.4	140.8	139.8	116.0	131.1	122.8
66°	51.0	65.5	73.8	87.4	103.9	111.2	116.5	114.6	90.3	108.3	101.5



TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	16.0	27.7	32.0	35.4	54.4	58.7	63.1	61.7	41.3	60.2	56.8
68°	12.6	18.9	22.3	23.8	40.3	43.7	47.1	46.6	24.8	46.1	44.2
68.5°	9.2	14.6	13.6	15.0	25.7	28.6	31.6	31.6	8.3	32.0	31.1
69°	5.8	10.7	10.7	11.7	11.7	14.1	16.0	16.5	3.9	18.4	18.4
69.5°	2.4	6.3	7.8	8.3	5.8	7.3	8.3	9.2	2.4	11.2	10.7
70°	1.9	2.4	4.9	4.9	2.9	3.4	3.9	4.4	1.9	5.8	5.8
70.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	1.9	2.9	2.9
71°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
71.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.9
72°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
73°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
73.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
74°	1.0	1.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5
74.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
76°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
76.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	1.0	1.0
78°	1.0	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0
78.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
85.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
86°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
86.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
87°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
87.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
88°	0.5	1.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
88.5°	0.5	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5



TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.5	1.5	1.5	1.0	0.5	0.0	0.0	0.5	0.0	1.0	0.5



TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3232.1	3232.1	3232.1	3232.1	3232.1	3232.1
0.5°	3230.2	3231.7	3230.2	3228.3	3228.7	3229.7
1°	3228.7	3229.2	3227.3	3225.4	3225.8	3227.3
1.5°	3226.3	3225.8	3223.4	3221.5	3222.0	3224.4
2°	3223.9	3222.4	3219.5	3217.6	3218.6	3220.5
2.5°	3220.5	3218.1	3215.2	3212.7	3213.7	3216.6
3°	3216.6	3213.7	3210.3	3207.9	3208.8	3212.2
3.5°	3212.7	3208.4	3205.0	3202.5	3203.5	3206.9
4°	3207.9	3203.0	3199.1	3196.7	3197.7	3201.1
4.5°	3202.5	3196.7	3192.8	3189.9	3191.4	3194.8
5°	3196.7	3190.4	3186.5	3183.6	3184.6	3188.5
5.5°	3190.4	3183.1	3179.2	3175.8	3176.8	3181.2
6°	3183.6	3175.8	3171.5	3168.6	3169.0	3172.9
6.5°	3175.8	3168.1	3163.7	3160.3	3160.3	3165.2
7°	3168.1	3159.3	3155.0	3151.6	3152.0	3156.4
7.5°	3159.8	3150.1	3145.7	3142.3	3142.8	3146.7
8°	3150.6	3140.9	3136.0	3132.6	3132.6	3137.0
8.5°	3140.9	3130.7	3126.3	3122.4	3122.4	3126.3
9°	3130.7	3120.0	3115.6	3112.2	3111.3	3115.6
9.5°	3120.0	3108.8	3104.5	3101.1	3100.1	3104.0
10°	3108.8	3097.2	3092.8	3089.4	3088.0	3091.9
10.5°	3097.2	3085.1	3080.7	3077.3	3075.8	3079.2
11°	3084.6	3072.4	3068.1	3064.7	3062.7	3066.1
11.5°	3071.9	3058.8	3055.0	3051.6	3049.6	3052.5
12°	3059.3	3045.7	3041.4	3038.0	3035.5	3038.9
12.5°	3045.2	3031.2	3027.3	3023.9	3021.5	3024.4
13°	3031.2	3016.6	3013.2	3009.8	3006.4	3009.3
13.5°	3016.1	3001.1	2998.2	2994.3	2991.4	2994.3
14°	3001.1	2985.5	2982.6	2978.7	2975.8	2978.7
14.5°	2986.0	2970.0	2967.1	2963.2	2959.8	2962.7
15°	2969.5	2953.5	2950.6	2946.7	2942.8	2946.2
15.5°	2953.0	2937.0	2933.6	2930.2	2926.3	2929.7
16°	2936.5	2919.5	2916.1	2912.7	2909.3	2912.2
16.5°	2919.5	2902.0	2899.1	2895.7	2891.4	2895.2
17°	2902.5	2884.6	2881.2	2877.8	2873.9	2876.8
17.5°	2885.0	2866.1	2862.7	2859.3	2855.0	2858.8
18°	2866.6	2847.7	2844.3	2840.9	2836.5	2840.4
18.5°	2848.2	2828.7	2824.9	2821.9	2817.6	2821.9
19°	2829.2	2809.8	2805.9	2802.5	2798.6	2803.0
19.5°	2810.8	2790.9	2786.5	2783.1	2779.2	2784.6
20°	2791.8	2771.0	2766.1	2762.7	2759.3	2764.7
20.5°	2772.4	2751.1	2746.2	2742.8	2739.4	2745.2
21°	2753.0	2730.2	2725.8	2721.9	2719.0	2725.3



TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2692.8	2669.0	2662.7	2658.8	2657.4	2664.7
23°	2672.4	2647.7	2641.4	2636.0	2636.5	2644.7
23.5°	2652.0	2626.3	2619.5	2615.1	2615.1	2623.9
24°	2631.2	2604.9	2597.2	2592.3	2593.8	2603.0
24.5°	2609.8	2583.6	2575.3	2570.5	2571.4	2582.1
25°	2588.9	2562.2	2552.5	2547.2	2549.6	2560.8
25.5°	2567.6	2540.4	2530.2	2525.3	2528.2	2539.9
26°	2545.7	2518.0	2506.9	2501.1	2505.9	2518.0
26.5°	2523.9	2495.2	2484.5	2478.7	2483.6	2496.2
27°	2502.0	2472.9	2460.8	2454.9	2460.8	2474.8
27.5°	2480.2	2450.1	2437.5	2431.1	2437.5	2452.5
28°	2457.8	2426.8	2413.7	2407.4	2414.2	2430.2
28.5°	2435.0	2403.5	2389.9	2383.1	2390.9	2407.4
29°	2412.2	2380.2	2365.6	2358.3	2367.6	2384.5
29.5°	2389.4	2356.4	2341.3	2334.1	2343.3	2361.7
30°	2366.1	2332.6	2316.1	2309.8	2319.0	2338.9
30.5°	2342.3	2308.3	2291.3	2284.5	2294.7	2314.6
31°	2319.0	2283.6	2266.1	2258.8	2270.0	2290.4
31.5°	2294.3	2258.8	2240.9	2233.6	2244.7	2266.6
32°	2269.5	2234.1	2214.6	2207.8	2220.0	2242.3
32.5°	2245.2	2208.8	2188.9	2182.1	2194.2	2217.6
33°	2220.0	2182.6	2163.2	2156.4	2168.5	2192.3
33.5°	2194.7	2156.4	2137.0	2129.7	2142.8	2167.1
34°	2168.5	2130.2	2110.8	2103.0	2116.6	2140.8
34.5°	2142.3	2103.5	2083.1	2076.3	2089.9	2114.6
35°	2116.1	2076.3	2055.9	2049.1	2062.7	2087.9
35.5°	2089.4	2048.6	2029.2	2021.9	2035.5	2060.3
36°	2062.7	2020.5	2001.0	1994.2	2007.8	2032.6
36.5°	2034.5	1992.3	1973.4	1966.1	1980.2	2004.0
37°	2005.9	1963.2	1944.2	1937.9	1951.5	1975.8
37.5°	1977.3	1933.6	1915.1	1909.3	1922.4	1946.7
38°	1947.6	1903.9	1886.0	1879.7	1892.8	1916.1
38.5°	1917.5	1872.9	1855.4	1849.6	1862.2	1885.5
39°	1886.0	1841.8	1825.3	1819.5	1832.1	1853.5
39.5°	1854.9	1809.3	1792.8	1787.9	1798.6	1820.4
40°	1822.4	1776.3	1759.3	1754.4	1764.6	1786.5
40.5°	1787.9	1741.8	1724.8	1720.0	1729.2	1749.6
41°	1752.5	1706.4	1689.9	1684.5	1694.7	1714.1
41.5°	1717.0	1670.9	1654.4	1650.1	1658.8	1679.2
42°	1683.1	1637.4	1620.4	1615.1	1624.8	1643.7
42.5°	1648.1	1602.5	1585.0	1578.2	1587.4	1604.9
43°	1612.7	1566.1	1549.1	1543.7	1552.0	1570.0
43.5°	1576.3	1530.6	1514.1	1508.8	1518.0	1537.4

TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1482.6	1440.8	1425.3	1420.9	1430.6	1451.0
45.5°	1454.9	1413.2	1397.6	1394.2	1403.9	1423.8
46°	1428.7	1387.4	1372.4	1368.5	1378.7	1398.6
46.5°	1402.5	1362.7	1347.1	1343.7	1353.4	1373.3
47°	1378.7	1338.4	1322.4	1319.0	1328.7	1348.6
47.5°	1353.4	1312.7	1298.1	1294.2	1304.4	1323.8
48°	1329.2	1289.4	1273.8	1269.9	1279.7	1298.6
48.5°	1304.9	1263.6	1249.6	1244.7	1253.9	1270.4
49°	1278.2	1237.9	1222.9	1217.5	1225.3	1239.8
49.5°	1248.6	1207.8	1195.2	1189.4	1194.7	1208.8
50°	1218.0	1178.7	1165.1	1159.3	1162.2	1173.3
50.5°	1185.0	1144.7	1133.0	1125.3	1126.3	1136.0
51°	1149.1	1109.7	1097.1	1088.9	1089.4	1097.6
51.5°	1113.1	1071.9	1059.7	1049.5	1051.5	1058.8
52°	1076.7	1034.0	1019.9	1009.3	1010.2	1019.0
52.5°	1038.4	993.7	979.2	968.5	969.0	978.7
53°	999.5	953.9	937.9	926.2	927.2	937.4
53.5°	959.3	913.1	895.7	884.0	885.0	896.1
54°	919.4	872.8	853.9	841.8	842.7	854.4
54.5°	879.2	833.0	812.6	799.5	800.5	813.1
55°	839.8	792.7	770.4	756.8	758.8	771.9
55.5°	799.1	751.5	729.6	713.6	718.0	730.1
56°	757.8	711.7	688.4	671.9	677.2	689.3
56.5°	718.0	672.4	648.6	631.1	637.4	649.1
57°	676.7	633.5	607.8	590.3	597.1	609.2
57.5°	637.4	595.2	569.0	551.0	557.8	569.4
58°	598.1	557.3	531.1	513.1	519.4	530.6
58.5°	558.3	519.4	494.2	475.3	483.0	492.7
59°	519.4	483.0	458.3	439.3	445.2	455.4
59.5°	483.0	447.6	422.3	404.4	410.7	420.4
60°	447.1	412.6	387.9	370.4	376.7	384.5
60.5°	411.2	377.2	354.9	338.4	343.2	350.0
61°	375.3	344.2	322.3	307.8	310.2	317.0
61.5°	339.3	311.7	292.2	279.1	281.1	285.0
62°	305.8	279.6	262.6	250.0	251.5	253.4
62.5°	273.8	249.0	234.5	223.8	222.8	224.3
63°	242.7	219.9	207.8	198.1	195.6	195.6
63.5°	213.1	192.2	183.0	174.8	171.4	166.5
64°	185.0	165.5	162.1	155.3	151.5	142.2
64.5°	159.7	143.7	141.8	135.4	131.6	118.0
65°	135.0	121.8	121.4	116.0	111.2	93.7
65.5°	112.6	100.5	100.5	96.6	91.3	69.4
66°	92.2	78.6	80.1	77.2	70.9	51.0



TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	50.5	35.4	37.4	36.9	30.6	16.0
68°	38.8	25.2	27.2	26.2	21.4	12.6
68.5°	27.2	17.5	18.0	17.5	17.5	9.2
69°	15.5	13.6	14.1	13.6	13.6	5.8
69.5°	9.2	9.7	10.2	9.7	9.7	2.4
70°	4.9	5.8	5.8	5.8	5.8	1.9
70.5°	2.4	1.9	1.9	1.9	1.9	1.9
71°	1.9	1.9	1.9	1.9	1.9	1.9
71.5°	1.9	1.5	1.5	1.5	1.5	1.5
72°	1.5	1.5	1.5	1.5	1.5	1.5
72.5°	1.5	1.5	1.5	1.5	1.5	1.5
73°	1.5	1.5	1.5	1.5	1.5	1.5
73.5°	1.5	1.5	1.5	1.5	1.5	1.5
74°	1.5	1.5	1.5	1.5	1.0	1.0
74.5°	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0	1.0
75.5°	1.0	1.0	1.0	1.0	1.0	1.0
76°	1.0	1.0	1.0	1.0	1.0	1.0
76.5°	1.0	1.0	1.0	1.0	1.0	1.0
77°	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0
78°	1.0	1.0	1.0	1.0	1.0	1.0
78.5°	0.5	1.0	1.0	1.0	1.0	0.5
79°	0.5	0.5	1.0	1.0	1.0	0.5
79.5°	0.5	0.5	1.0	1.0	0.5	0.5
80°	0.5	0.5	1.0	1.0	0.5	0.5
80.5°	0.5	0.5	1.0	1.0	0.5	0.5
81°	0.5	0.5	1.0	1.0	0.5	0.5
81.5°	0.5	0.5	1.0	1.0	0.5	0.5
82°	0.5	0.5	1.0	1.0	0.5	0.5
82.5°	0.5	0.5	1.0	1.0	0.5	0.5
83°	0.5	0.5	1.0	1.0	0.5	0.5
83.5°	0.5	0.5	1.0	1.0	0.5	0.5
84°	0.5	0.5	1.0	1.0	0.5	0.5
84.5°	0.5	0.5	1.0	1.0	0.5	0.5
85°	0.5	0.5	1.0	1.0	1.0	0.5
85.5°	0.5	0.5	1.0	1.0	1.0	0.5
86°	0.5	0.5	1.0	1.0	1.0	0.5
86.5°	0.5	0.5	1.0	1.5	1.0	0.5
87°	0.5	0.5	1.5	1.5	1.5	0.5
87.5°	0.5	1.0	1.5	1.9	1.5	0.5
88°	0.5	1.0	1.9	2.4	1.9	0.5
88.5°	0.5	1.0	2.4	2.9	2.4	0.5



TEST NUMBER: P776654

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.5	1.9	3.4	2.4	3.4	0.5



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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°	2705.4	2728.2	2762.7	2797.7	2841.4	2857.4	2855.4	2840.4	2816.6	2789.9	2759.8
22°	2685.0	2708.3	2742.8	2778.7	2821.9	2838.4	2836.5	2821.0	2797.7	2770.5	2739.9



44°	1506.8	1537.9	1567.5	1594.7	1633.6	1645.7	1648.6	1641.8	1628.2	1604.4	1576.8
44.5°	1478.2	1508.8	1538.4	1564.6	1602.5	1614.1	1617.0	1611.2	1597.1	1573.4	1544.2



66.5°	36.9	50.5	57.8	65.5	83.0	88.8	94.2	91.8	73.8	87.9	83.0
67°	25.2	37.9	44.2	49.5	68.9	73.8	78.6	76.7	57.3	73.8	69.9



89°	0.5	1.0	1.5	1.0	0.0	0.0	0.0	0.5	0.0	0.5	0.5
89.5°	0.5	1.5	1.5	1.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5

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21.5°	2733.6	2709.8	2704.9	2701.1	2699.1	2705.4
22°	2712.7	2689.4	2684.1	2679.2	2677.8	2685.0



44°	1542.8	1499.1	1483.5	1477.7	1487.9	1506.8
44.5°	1511.7	1469.5	1453.4	1449.1	1458.8	1478.2



66.5°	74.3	61.7	64.6	62.1	55.8	36.9
67°	62.1	47.1	50.0	48.5	42.2	25.2



89°	0.5	1.5	2.4	3.4	2.4	0.5
89.5°	0.5	1.5	2.9	3.4	2.9	0.5

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(END OF REPORT)