

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: P776783

Luminaire Tested: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776783
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B068)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K
Description: 8 INCH ROUND NARROW LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5324.8 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

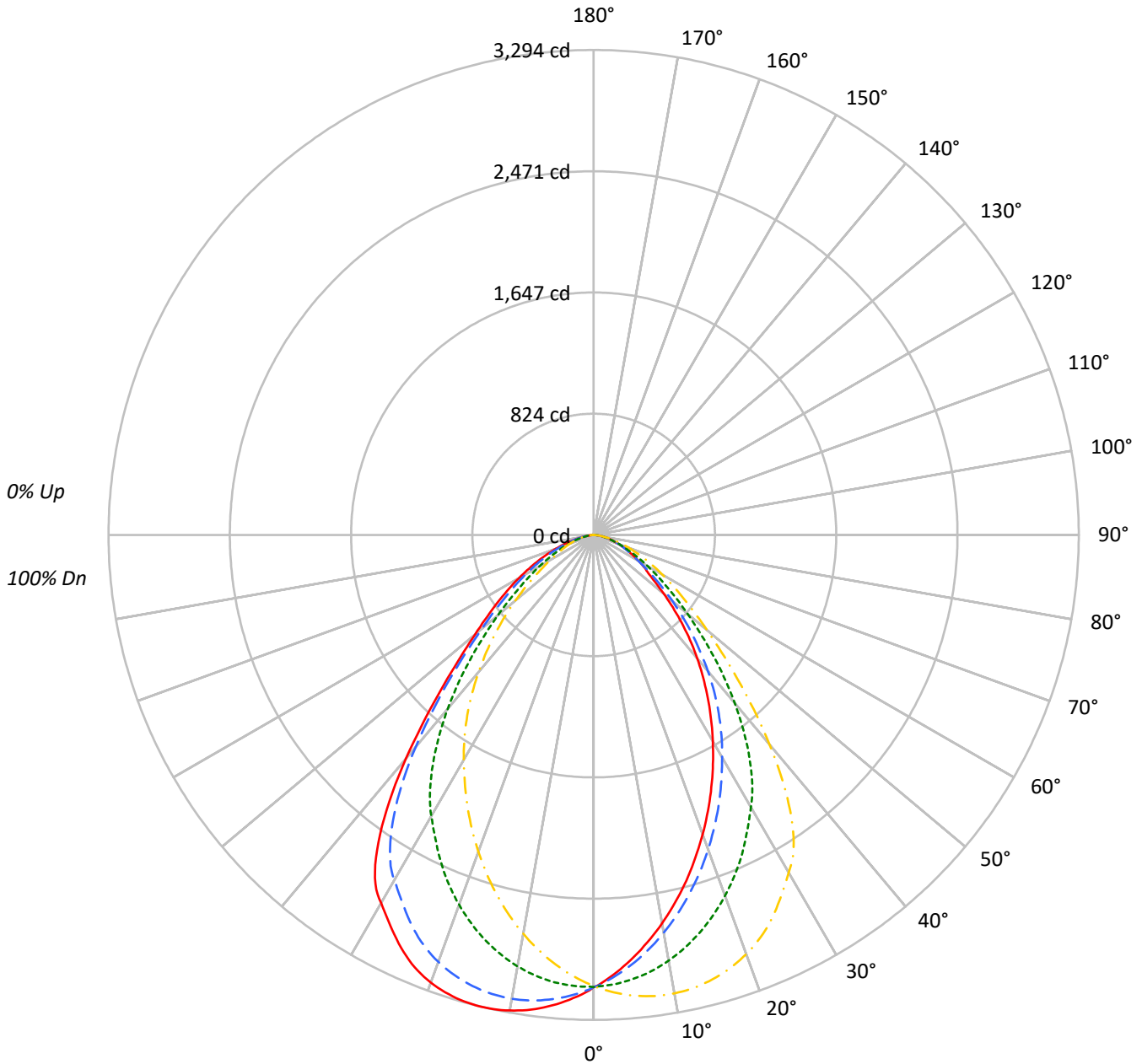
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89								
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78								
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	71	69								
4	89	79	71	66	87	77	71	65	75	69	64	73	68	64	71	66	63	61								
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54								
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49								
7	72	60	52	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44								
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40								
9	64	51	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37								
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	34								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	93765	93765	93765	93765
5°	88787	92833	98300	93476
10°	83021	91013	101690	92244
15°	76812	88289	104010	90011
20°	70334	84752	105110	86835
25°	63691	80383	104212	82640
30°	57043	75322	101794	77734
35°	50323	68705	95014	70948
40°	43597	59379	78996	61440
45°	36510	49005	62014	50616
50°	29467	39413	49981	40277
55°	24160	31798	42162	32001
60°	21524	25731	35775	25786
65°	18588	20798	29922	20697
70°	16094	16612	24164	16478
75°	13825	13200	18390	13035
80°	11428	10602	11850	10180
85°	8057	8057	3503	7356

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°
 Vertical Angle: 45°
 Luminance: 62014 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.1	5.4
10°-20°	798.3	15.0
20°-30°	1128.0	21.2
30°-40°	1185.8	22.3
40°-50°	894.0	16.8
50°-60°	554.1	10.4
60°-70°	311.7	5.9
70°-80°	137.6	2.6
80°-90°	27.2	0.5
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°	2214.4	41.6
0°-40°	3400.1	63.9
0°-60°	4848.3	91.1
0°-90°	5324.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5324.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3071	3071	3071	3071	3071	
5°	2897	3029	3208	3050	2897	270
15°	2430	2793	3291	2848	2430	680
25°	1891	2386	3094	2453	1891	867
35°	1350	1843	2549	1904	1350	843
45°	846	1135	1436	1172	846	653
55°	454	597	792	601	454	416
65°	257	288	414	286	257	257
75°	117	112	156	110	117	125
85°	23	23	10	21	23	28
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°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
0.5°	3061.1	3062.6	3062.1	3062.1	3066.9	3070.2	3073.6	3089.3	3092.7	3092.7	3086.0
1°	3044.9	3047.2	3049.6	3054.4	3064.9	3074.5	3083.1	3102.7	3107.0	3106.6	3096.5
1.5°	3028.1	3031.0	3036.7	3046.3	3062.6	3078.3	3092.7	3115.6	3121.9	3120.4	3107.5
2°	3010.4	3014.2	3022.9	3037.2	3059.7	3081.7	3101.3	3127.6	3135.7	3133.3	3117.1
2.5°	2992.7	2997.0	3009.0	3027.6	3055.9	3084.1	3108.9	3139.1	3148.6	3145.8	3127.1
3°	2974.5	2979.8	2993.7	3018.1	3051.6	3086.0	3116.6	3149.6	3162.0	3157.7	3135.3
3.5°	2955.9	2962.1	2979.3	3007.5	3047.2	3087.4	3123.8	3160.6	3174.0	3169.2	3143.4
4°	2936.8	2943.5	2963.5	2997.0	3041.5	3088.4	3130.0	3170.2	3185.5	3180.2	3151.0
4.5°	2917.1	2924.3	2947.3	2985.5	3035.8	3088.9	3136.2	3179.7	3196.5	3190.3	3158.7
5°	2897.1	2905.7	2930.5	2973.6	3029.1	3088.4	3141.0	3188.3	3207.5	3200.3	3164.9
5.5°	2877.0	2886.1	2914.3	2961.2	3022.4	3087.9	3145.8	3196.5	3217.5	3209.4	3171.1
6°	2856.4	2865.5	2896.6	2947.8	3014.7	3086.0	3150.1	3204.1	3226.6	3218.0	3176.4
6.5°	2835.4	2844.9	2878.9	2934.4	3006.6	3084.1	3153.4	3210.8	3235.2	3226.1	3181.6
7°	2813.4	2824.4	2860.2	2920.5	2998.5	3081.7	3156.3	3217.5	3243.8	3233.3	3185.5
7.5°	2792.3	2803.8	2842.1	2906.1	2988.9	3078.8	3158.7	3223.3	3251.5	3240.5	3189.3
8°	2769.8	2781.8	2822.9	2891.3	2979.3	3074.5	3160.6	3228.5	3258.7	3246.7	3192.2
8.5°	2747.4	2760.3	2803.8	2876.0	2969.3	3070.7	3161.6	3232.8	3264.9	3252.4	3194.6
9°	2723.9	2737.8	2783.2	2860.2	2958.3	3065.9	3162.0	3237.1	3270.6	3257.2	3197.0
9.5°	2701.4	2715.3	2763.6	2844.0	2947.3	3060.6	3162.0	3240.5	3275.9	3261.5	3197.9
10°	2678.0	2692.3	2743.0	2826.8	2935.8	3054.4	3161.6	3242.9	3280.2	3265.4	3198.9
10.5°	2654.1	2669.4	2722.0	2810.5	2923.4	3047.7	3160.6	3245.3	3284.0	3268.7	3198.9
11°	2630.2	2646.0	2700.5	2792.8	2910.5	3041.0	3158.7	3246.7	3287.4	3271.1	3198.4
11.5°	2606.3	2622.5	2679.4	2774.6	2897.5	3033.4	3156.8	3247.7	3290.2	3273.5	3197.0
12°	2581.9	2598.1	2657.4	2756.0	2884.1	3025.7	3153.9	3247.7	3292.1	3274.4	3195.5
12.5°	2556.5	2574.2	2635.0	2737.8	2869.8	3017.1	3150.1	3247.7	3293.6	3275.4	3193.1
13°	2531.2	2549.3	2612.5	2718.2	2855.4	3008.0	3146.3	3246.7	3294.5	3275.4	3190.3
13.5°	2506.8	2524.5	2590.0	2699.5	2841.1	2998.5	3141.5	3245.3	3294.5	3274.9	3186.9
14°	2481.4	2500.1	2567.0	2679.4	2824.8	2988.4	3136.2	3242.9	3294.0	3273.5	3182.6
14.5°	2455.6	2474.7	2543.6	2659.3	2809.1	2977.4	3130.5	3240.5	3292.6	3271.6	3177.8
15°	2430.2	2449.9	2519.7	2638.8	2793.3	2966.4	3124.3	3236.7	3290.7	3269.2	3172.6
15.5°	2403.5	2424.0	2495.8	2617.7	2776.5	2954.5	3117.1	3232.8	3288.3	3266.3	3166.8
16°	2377.6	2398.2	2471.9	2596.7	2759.3	2942.5	3109.9	3228.0	3285.0	3262.5	3160.1
16.5°	2351.3	2372.4	2447.9	2575.6	2741.6	2929.6	3101.8	3222.8	3281.6	3258.2	3153.0
17°	2325.0	2347.0	2424.0	2553.6	2723.9	2916.7	3093.2	3217.0	3276.8	3252.9	3145.3
17.5°	2298.2	2320.7	2398.7	2532.1	2705.7	2903.3	3084.1	3210.3	3271.6	3247.2	3136.7
18°	2271.4	2294.4	2374.3	2509.2	2687.1	2888.9	3074.5	3203.2	3265.8	3240.5	3128.1
18.5°	2244.7	2267.6	2348.9	2487.2	2667.5	2874.6	3064.0	3195.0	3259.1	3233.3	3118.5
19°	2218.4	2241.3	2324.1	2464.2	2648.3	2859.3	3053.0	3186.4	3252.0	3225.7	3108.0
19.5°	2190.6	2214.5	2298.7	2441.2	2628.7	2844.0	3041.5	3177.3	3244.3	3217.0	3097.0
20°	2164.8	2188.2	2272.9	2418.3	2608.6	2827.7	3029.6	3167.3	3235.2	3207.0	3085.5
20.5°	2137.0	2161.9	2247.5	2394.4	2587.6	2811.4	3017.1	3156.8	3225.7	3197.0	3073.6
21°	2110.3	2135.1	2221.7	2370.5	2567.0	2794.2	3003.2	3145.3	3215.1	3186.4	3060.2



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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°	2028.0	2053.8	2143.7	2298.2	2502.5	2739.7	2959.7	3105.6	3177.8	3147.7	3016.2
23°	2000.7	2027.0	2117.4	2273.4	2480.0	2720.6	2943.5	3090.3	3163.5	3132.9	2999.9
23.5°	1973.5	1999.3	2090.6	2248.5	2457.0	2701.0	2926.2	3074.5	3147.7	3117.1	2982.7
24°	1946.2	1972.5	2065.3	2223.6	2434.1	2680.4	2908.5	3056.3	3130.9	3099.4	2964.0
24.5°	1918.5	1945.2	2038.0	2198.3	2410.6	2658.9	2889.4	3037.7	3112.8	3081.2	2944.4
25°	1890.7	1918.0	2011.7	2172.4	2386.2	2636.9	2869.3	3018.1	3093.6	3061.6	2923.8
25.5°	1863.5	1890.2	1984.9	2146.6	2360.9	2613.4	2848.3	2998.5	3074.0	3042.5	2902.8
26°	1836.2	1863.9	1958.2	2120.8	2336.5	2590.0	2826.8	2976.9	3053.9	3020.9	2880.8
26.5°	1808.9	1836.7	1931.4	2095.0	2310.7	2565.6	2804.3	2955.4	3033.4	3000.4	2859.3
27°	1782.1	1809.4	1905.1	2068.6	2284.8	2542.2	2782.3	2934.4	3012.3	2979.8	2836.8
27.5°	1754.4	1782.1	1878.3	2041.9	2260.0	2518.2	2759.8	2913.8	2991.3	2958.3	2814.8
28°	1726.7	1755.4	1851.0	2015.6	2234.6	2494.3	2737.8	2891.8	2969.8	2936.8	2792.8
28.5°	1698.9	1727.6	1824.2	1989.2	2209.7	2469.9	2714.4	2870.8	2949.2	2916.2	2771.3
29°	1672.1	1700.8	1798.4	1963.4	2184.9	2446.5	2692.3	2849.2	2927.7	2894.7	2748.8
29.5°	1645.4	1673.6	1771.6	1937.6	2160.5	2423.1	2669.9	2828.7	2907.1	2873.6	2727.3
30°	1618.1	1646.8	1744.8	1912.7	2136.6	2400.1	2648.3	2808.6	2887.5	2854.0	2707.2
30.5°	1590.3	1620.0	1718.5	1886.9	2111.7	2377.1	2627.3	2789.4	2868.8	2835.4	2687.1
31°	1563.6	1593.2	1693.2	1862.0	2087.3	2354.7	2607.2	2768.4	2848.3	2813.8	2664.1
31.5°	1536.8	1566.4	1667.4	1835.7	2060.5	2328.8	2583.3	2742.6	2823.9	2789.0	2637.8
32°	1510.0	1540.1	1641.0	1809.9	2032.8	2301.6	2556.5	2712.9	2795.2	2759.8	2607.2
32.5°	1482.3	1512.9	1615.2	1782.1	2003.1	2270.5	2526.4	2681.3	2762.7	2726.8	2574.7
33°	1455.9	1487.0	1588.4	1755.4	1973.0	2238.9	2493.9	2644.5	2725.8	2690.4	2539.8
33.5°	1430.1	1461.2	1562.6	1726.7	1940.9	2204.5	2458.0	2605.8	2686.1	2651.2	2501.5
34°	1403.3	1434.9	1535.3	1697.0	1908.9	2169.6	2420.7	2562.7	2643.1	2609.6	2462.3
34.5°	1377.0	1409.1	1508.1	1667.8	1876.4	2133.2	2380.5	2518.7	2597.6	2565.1	2421.2
35°	1350.2	1382.8	1480.8	1638.7	1843.4	2095.0	2339.4	2470.4	2549.3	2517.3	2379.1
35.5°	1323.9	1356.5	1453.6	1608.5	1808.9	2057.2	2295.4	2421.2	2498.2	2469.5	2334.6
36°	1298.6	1330.2	1426.3	1578.4	1775.0	2018.4	2251.4	2369.5	2445.1	2418.3	2287.7
36.5°	1272.3	1304.3	1399.0	1547.8	1739.6	1978.2	2206.4	2317.8	2390.5	2365.2	2239.9
37°	1246.9	1278.5	1371.8	1518.1	1704.7	1937.1	2157.6	2262.4	2334.6	2310.7	2191.6
37.5°	1220.6	1252.2	1343.5	1487.5	1669.3	1896.5	2109.8	2206.9	2277.7	2254.2	2141.3
38°	1195.3	1226.4	1316.3	1456.4	1632.9	1854.4	2059.6	2151.4	2219.8	2197.8	2090.6
38.5°	1169.4	1199.6	1288.5	1424.9	1597.5	1813.2	2009.8	2097.8	2161.4	2140.9	2038.5
39°	1144.1	1174.2	1260.8	1394.2	1563.1	1770.7	1960.1	2039.5	2101.2	2083.0	1986.4
39.5°	1119.2	1148.4	1233.5	1363.6	1526.7	1727.6	1909.4	1983.5	2041.4	2023.7	1933.8
40°	1093.9	1122.6	1204.8	1332.5	1489.9	1684.6	1858.7	1926.1	1982.1	1965.3	1880.7
40.5°	1068.5	1096.7	1177.6	1300.5	1454.0	1642.0	1807.0	1871.6	1922.3	1907.5	1827.1
41°	1043.6	1071.4	1149.8	1269.9	1417.7	1599.0	1757.3	1815.1	1864.9	1850.1	1774.5
41.5°	1018.3	1046.0	1123.0	1239.3	1382.3	1555.4	1707.5	1759.2	1805.6	1792.7	1721.9
42°	993.0	1020.7	1095.8	1208.7	1345.9	1512.9	1658.3	1705.6	1749.6	1735.7	1670.2
42.5°	968.6	995.8	1068.5	1179.0	1310.1	1470.3	1610.0	1653.0	1693.7	1680.3	1619.0
43°	943.7	970.9	1042.7	1148.9	1274.7	1429.2	1561.2	1601.3	1639.1	1627.2	1568.3
43.5°	919.3	946.1	1016.4	1119.2	1238.8	1387.5	1513.8	1550.6	1585.6	1573.1	1518.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	845.6	872.9	938.4	1031.2	1135.0	1266.5	1378.5	1406.7	1436.3	1425.3	1377.5
45.5°	821.7	848.0	913.1	1003.0	1101.5	1228.3	1335.4	1362.2	1389.9	1378.0	1332.1
46°	798.3	824.6	887.7	975.3	1068.5	1191.0	1293.8	1318.7	1345.5	1334.0	1288.1
46.5°	775.3	801.6	863.8	947.5	1036.5	1153.2	1253.1	1276.1	1302.4	1290.5	1245.5
47°	751.9	777.7	838.5	918.8	1004.4	1116.4	1213.4	1236.9	1261.8	1249.3	1205.8
47.5°	728.9	755.7	814.1	893.0	973.3	1081.4	1175.2	1198.6	1223.5	1210.1	1166.6
48°	706.4	733.2	790.2	865.7	943.7	1048.4	1138.4	1161.8	1186.2	1173.3	1128.8
48.5°	684.4	711.2	766.2	839.4	915.0	1015.0	1103.4	1126.4	1149.8	1136.4	1092.0
49°	662.0	690.2	743.3	813.6	885.8	981.9	1068.5	1092.9	1116.8	1103.0	1058.0
49.5°	641.9	669.1	719.8	788.7	857.1	951.8	1036.0	1059.9	1083.8	1068.5	1023.6
50°	620.4	648.1	697.4	763.4	829.8	921.7	1004.0	1028.8	1052.3	1037.4	991.5
50.5°	599.8	628.5	674.9	738.5	803.5	892.0	972.4	998.2	1021.6	1006.3	960.4
51°	580.2	607.9	653.4	714.6	777.7	863.3	942.7	969.5	992.5	976.7	930.8
51.5°	561.5	588.8	631.8	691.6	752.8	836.1	914.5	941.3	964.7	948.9	902.1
52°	542.9	569.2	610.3	669.1	728.5	809.3	886.3	915.0	937.5	921.2	874.3
52.5°	525.2	551.0	590.2	646.7	705.0	784.4	859.5	888.2	911.6	894.4	847.1
53°	508.9	532.8	570.1	624.7	682.1	759.1	833.2	863.3	886.3	869.1	821.2
53.5°	493.1	515.1	550.5	603.6	660.1	734.7	808.3	838.9	861.9	844.2	795.9
54°	478.8	497.9	531.4	583.0	638.5	710.8	783.9	815.0	838.5	820.3	772.5
54.5°	465.9	481.6	512.7	563.9	618.0	688.8	760.0	792.1	815.0	796.8	749.0
55°	453.9	466.3	495.0	544.3	597.4	666.3	737.5	769.6	792.1	774.4	726.1
55.5°	442.9	451.0	477.8	526.1	577.8	644.7	715.5	747.6	770.1	752.4	704.1
56°	432.9	437.2	461.1	507.5	558.2	624.2	693.5	726.5	748.1	731.3	682.5
56.5°	425.2	423.8	445.3	490.3	539.5	603.6	672.5	705.5	726.5	709.3	661.5
57°	416.1	411.3	429.5	473.0	520.9	583.5	651.9	684.9	705.5	688.8	641.4
57.5°	405.6	399.9	414.7	456.3	503.2	564.4	631.8	665.3	684.9	669.1	621.8
58°	395.1	390.3	400.3	440.0	486.0	546.2	612.2	645.2	664.4	649.5	602.7
58.5°	384.6	380.7	386.5	424.7	469.2	528.0	593.6	625.6	643.8	629.4	583.0
59°	374.0	371.2	373.1	409.4	452.9	510.3	574.4	606.5	624.2	609.8	564.9
59.5°	363.0	361.1	360.6	394.6	437.2	493.1	556.3	587.4	604.6	590.7	546.7
60°	352.5	351.6	348.2	380.2	421.4	476.4	538.6	569.2	585.9	572.5	529.0
60.5°	342.0	341.5	336.7	366.4	407.0	460.6	520.4	551.0	566.8	553.9	511.8
61°	331.9	331.5	325.2	352.5	392.7	444.3	503.2	533.3	548.6	536.2	494.6
61.5°	321.9	321.9	314.2	339.6	377.9	428.6	486.4	515.6	530.4	519.0	478.3
62°	312.3	312.3	304.2	326.7	363.5	414.2	470.6	498.4	512.7	502.2	462.0
62.5°	302.3	302.8	294.2	314.2	350.6	399.4	454.4	481.2	495.5	484.0	446.3
63°	293.2	293.7	284.6	302.3	337.2	385.0	438.6	464.9	478.3	467.8	430.9
63.5°	283.6	284.6	275.5	290.8	324.3	370.7	423.3	449.1	461.6	451.5	416.1
64°	275.0	275.5	267.4	279.8	311.9	356.3	408.5	432.9	445.3	435.7	401.3
64.5°	265.9	266.9	259.2	269.3	299.4	342.9	393.6	418.0	429.5	420.4	386.9
65°	257.3	258.8	251.6	258.8	287.9	330.0	378.8	403.2	414.2	405.6	372.1
65.5°	249.2	250.2	243.9	248.7	276.5	317.1	364.5	388.4	398.9	390.8	357.3
66°	240.6	242.0	236.3	239.1	265.0	304.2	351.1	373.6	384.1	375.9	343.9



TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	216.7	218.6	213.8	211.9	233.4	268.8	311.4	330.5	338.6	332.4	304.2
68°	209.5	210.9	207.1	203.8	222.9	257.3	298.5	316.6	324.3	318.5	291.3
68.5°	201.8	203.3	199.9	195.6	213.3	246.3	285.5	303.7	310.9	305.6	279.3
69°	194.7	196.1	192.8	188.0	204.2	235.3	273.6	290.3	297.0	292.2	266.9
69.5°	187.0	188.9	186.1	180.3	195.1	225.3	261.6	277.9	284.1	279.3	255.4
70°	180.3	181.8	179.4	172.7	186.1	215.2	250.2	265.5	270.7	266.9	243.9
70.5°	173.1	175.1	172.2	166.0	177.9	205.2	238.7	253.5	258.3	255.4	232.9
71°	166.4	168.4	166.0	159.8	169.3	195.6	228.1	241.5	245.8	243.0	221.5
71.5°	160.2	162.1	160.2	153.5	161.7	186.1	217.1	230.5	233.9	231.5	210.9
72°	154.0	155.9	154.0	147.3	153.5	177.0	206.6	218.6	221.5	220.0	200.4
72.5°	147.3	149.2	148.3	140.6	145.9	168.4	196.1	208.1	210.0	208.5	189.9
73°	141.1	143.0	142.1	134.9	138.7	159.8	186.1	197.1	198.5	198.0	179.8
73.5°	134.9	136.8	135.8	129.1	131.5	151.1	176.0	186.5	187.5	187.5	170.8
74°	129.1	130.6	130.1	123.9	124.8	143.0	166.9	176.5	177.0	177.4	161.2
74.5°	122.9	124.8	124.4	118.1	118.1	135.4	157.4	166.9	166.0	167.4	151.6
75°	117.2	119.1	119.1	112.9	111.9	127.7	148.3	156.9	155.9	157.4	143.0
75.5°	111.4	113.4	113.4	108.1	106.2	120.5	139.7	147.8	145.9	148.3	134.4
76°	106.2	107.6	108.1	102.8	100.0	113.4	131.1	138.7	135.8	139.2	125.8
76.5°	100.4	102.4	102.8	98.1	94.7	106.2	122.9	129.6	126.3	130.1	117.7
77°	95.2	96.6	97.6	93.3	89.0	100.0	115.3	121.0	117.2	121.5	110.0
77.5°	89.9	91.4	92.3	88.5	83.7	93.3	107.1	112.9	108.1	113.4	102.4
78°	84.7	86.6	87.5	83.7	78.9	87.5	100.0	104.7	99.5	105.2	94.7
78.5°	79.9	81.3	82.3	79.4	73.7	81.3	92.8	97.1	90.9	97.1	88.0
79°	74.6	76.5	77.5	74.6	69.4	75.6	85.6	89.4	82.7	89.9	80.8
79.5°	69.8	71.7	72.7	70.3	64.6	70.3	78.9	82.3	75.1	82.3	74.6
80°	65.0	66.5	67.9	66.0	60.3	65.0	72.2	75.1	67.4	75.6	67.9
80.5°	60.7	61.7	63.6	61.7	56.0	59.8	66.5	67.9	60.3	68.4	61.7
81°	56.0	57.4	59.3	57.9	51.7	55.0	60.3	61.2	53.1	61.7	56.0
81.5°	51.7	53.1	55.0	53.6	47.8	50.2	54.5	54.5	46.9	55.5	50.2
82°	47.4	48.3	50.7	49.7	44.0	45.4	49.3	48.8	40.7	49.7	45.4
82.5°	43.0	44.0	46.4	45.4	40.2	41.6	44.5	43.0	34.9	44.0	40.7
83°	38.7	40.2	42.6	41.6	36.8	37.8	39.7	37.3	28.7	38.3	35.4
83.5°	34.4	35.9	38.3	38.3	33.5	33.5	34.9	31.6	22.5	32.5	30.6
84°	30.6	31.6	34.4	34.4	29.7	29.7	30.1	25.8	17.7	26.8	25.8
84.5°	26.8	27.7	30.6	30.6	26.3	25.8	25.3	20.6	13.4	21.0	22.0
85°	23.0	23.9	26.8	27.3	23.0	22.5	21.5	16.3	10.0	16.3	18.2
85.5°	19.1	19.6	23.4	23.4	19.6	19.1	18.2	12.9	7.7	12.9	14.8
86°	16.3	17.2	20.1	20.1	16.7	15.8	14.8	9.6	6.2	9.6	11.5
86.5°	13.4	14.3	16.7	17.2	13.9	12.9	11.5	6.7	4.8	6.7	8.6
87°	10.5	11.5	13.9	13.9	11.0	10.0	8.6	4.3	3.3	4.3	6.2
87.5°	7.7	8.6	11.0	11.0	8.1	7.2	6.2	2.4	2.4	2.4	3.8
88°	5.3	6.2	8.1	7.7	5.7	4.8	3.8	1.0	1.0	1.0	1.9
88.5°	3.3	3.8	4.8	4.8	2.9	2.4	1.9	0.5	0.5	0.5	0.5



TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
0.5°	3075.9	3069.2	3060.2	3052.0	3061.6	3061.1
1°	3081.7	3069.2	3053.9	3041.0	3046.8	3044.9
1.5°	3086.9	3069.2	3047.2	3029.1	3031.5	3028.1
2°	3092.2	3067.8	3040.1	3016.2	3015.7	3010.4
2.5°	3096.5	3066.4	3031.9	3002.8	2999.4	2992.7
3°	3100.3	3064.0	3023.8	2989.9	2982.7	2974.5
3.5°	3103.2	3061.1	3014.7	2976.0	2965.9	2955.9
4°	3106.1	3058.2	3005.6	2961.6	2948.2	2936.8
4.5°	3108.0	3054.4	2995.6	2946.3	2930.1	2917.1
5°	3108.9	3050.1	2985.5	2930.5	2911.9	2897.1
5.5°	3109.9	3045.3	2974.1	2914.8	2892.8	2877.0
6°	3110.4	3039.6	2963.1	2898.5	2873.6	2856.4
6.5°	3109.9	3033.4	2951.1	2881.3	2854.0	2835.4
7°	3108.9	3027.2	2938.2	2864.5	2833.4	2813.4
7.5°	3107.5	3019.5	2925.3	2845.9	2813.4	2792.3
8°	3105.6	3011.9	2911.9	2828.2	2792.3	2769.8
8.5°	3103.2	3003.7	2897.5	2809.1	2771.3	2747.4
9°	3099.9	2994.6	2882.7	2790.4	2749.3	2723.9
9.5°	3096.0	2985.1	2867.4	2770.3	2727.3	2701.4
10°	3091.7	2975.5	2852.1	2751.2	2705.3	2678.0
10.5°	3086.9	2965.0	2836.3	2730.6	2682.8	2654.1
11°	3081.2	2953.5	2820.1	2710.5	2659.8	2630.2
11.5°	3075.5	2942.0	2802.8	2689.0	2636.4	2606.3
12°	3068.3	2930.1	2785.6	2668.0	2613.0	2581.9
12.5°	3061.6	2917.6	2767.9	2646.4	2589.0	2556.5
13°	3053.5	2904.7	2750.2	2624.4	2565.1	2531.2
13.5°	3045.3	2891.3	2731.6	2602.4	2541.2	2506.8
14°	3036.2	2877.5	2712.4	2579.5	2516.3	2481.4
14.5°	3027.2	2863.1	2692.8	2556.5	2491.9	2455.6
15°	3017.1	2847.8	2673.7	2534.0	2466.6	2430.2
15.5°	3006.6	2832.5	2653.1	2509.6	2441.2	2403.5
16°	2995.6	2816.2	2633.0	2486.2	2415.9	2377.6
16.5°	2984.1	2800.4	2612.5	2461.8	2390.1	2351.3
17°	2971.7	2783.2	2590.9	2438.4	2364.7	2325.0
17.5°	2959.2	2766.0	2569.9	2414.5	2338.9	2298.2
18°	2945.8	2748.3	2547.9	2389.1	2313.1	2271.4
18.5°	2932.5	2730.1	2525.9	2364.2	2286.8	2244.7
19°	2917.6	2711.5	2503.4	2339.8	2260.0	2218.4
19.5°	2902.8	2692.8	2480.9	2315.0	2233.7	2190.6
20°	2887.5	2672.7	2458.0	2289.6	2207.4	2164.8
20.5°	2871.2	2653.6	2435.0	2263.8	2181.0	2137.0
21°	2855.0	2633.0	2411.1	2238.4	2154.3	2110.3

TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2801.9	2569.9	2339.4	2161.0	2073.9	2028.0
23°	2782.7	2547.4	2314.5	2134.7	2046.2	2000.7
23.5°	2762.2	2524.9	2289.6	2108.8	2019.9	1973.5
24°	2741.6	2502.0	2264.3	2081.6	1993.1	1946.2
24.5°	2719.6	2478.1	2238.9	2056.2	1965.3	1918.5
25°	2696.7	2453.2	2213.1	2028.9	1938.1	1890.7
25.5°	2673.7	2428.8	2187.3	2002.2	1911.3	1863.5
26°	2649.8	2403.9	2161.0	1975.9	1884.0	1836.2
26.5°	2626.3	2378.1	2134.7	1949.5	1856.8	1808.9
27°	2602.9	2352.3	2107.9	1922.3	1830.0	1782.1
27.5°	2579.0	2327.4	2081.6	1895.0	1802.2	1754.4
28°	2555.1	2302.5	2055.3	1868.2	1775.4	1726.7
28.5°	2531.6	2277.2	2029.9	1842.4	1747.7	1698.9
29°	2508.7	2252.8	2004.1	1815.6	1721.4	1672.1
29.5°	2486.2	2228.9	1979.2	1789.8	1694.1	1645.4
30°	2464.2	2205.0	1953.9	1763.0	1667.4	1618.1
30.5°	2441.2	2181.0	1928.0	1737.2	1640.6	1590.3
31°	2415.4	2155.2	1901.7	1711.4	1614.3	1563.6
31.5°	2388.2	2128.4	1875.9	1685.0	1587.5	1536.8
32°	2357.5	2098.8	1848.1	1658.7	1560.7	1510.0
32.5°	2325.0	2068.2	1819.9	1632.0	1533.9	1482.3
33°	2290.6	2037.6	1791.2	1605.2	1508.1	1455.9
33.5°	2255.2	2004.6	1762.1	1578.4	1481.8	1430.1
34°	2218.4	1971.6	1731.9	1551.1	1455.5	1403.3
34.5°	2181.0	1938.1	1701.3	1523.4	1429.2	1377.0
35°	2142.8	1903.6	1670.7	1495.6	1403.3	1350.2
35.5°	2103.1	1869.2	1640.1	1467.4	1376.5	1323.9
36°	2062.9	1833.8	1609.0	1440.2	1350.7	1298.6
36.5°	2021.3	1798.9	1577.9	1411.9	1324.4	1272.3
37°	1979.2	1762.5	1545.9	1383.2	1298.1	1246.9
37.5°	1936.6	1726.7	1514.8	1355.0	1271.8	1220.6
38°	1893.6	1689.4	1482.7	1326.8	1245.5	1195.3
38.5°	1850.5	1653.0	1451.2	1298.6	1219.2	1169.4
39°	1807.0	1615.7	1420.1	1270.8	1192.9	1144.1
39.5°	1763.0	1578.9	1387.5	1242.6	1167.1	1119.2
40°	1717.1	1541.6	1356.0	1214.4	1141.2	1093.9
40.5°	1672.1	1503.8	1324.4	1186.7	1114.9	1068.5
41°	1628.1	1466.0	1292.8	1158.9	1089.1	1043.6
41.5°	1583.2	1428.7	1261.3	1130.7	1062.8	1018.3
42°	1538.7	1391.9	1230.2	1103.9	1037.4	993.0
42.5°	1493.3	1353.6	1199.6	1077.1	1012.1	968.6
43°	1449.2	1317.2	1168.5	1049.4	987.2	943.7
43.5°	1405.7	1280.4	1136.9	1022.1	962.3	919.3

TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1279.5	1172.3	1046.5	942.7	887.2	845.6
45.5°	1237.8	1136.4	1016.4	916.4	863.3	821.7
46°	1199.1	1102.0	987.2	891.1	838.9	798.3
46.5°	1158.9	1067.6	958.0	865.7	815.5	775.3
47°	1121.1	1034.6	929.3	839.9	792.1	751.9
47.5°	1084.3	1001.1	900.6	814.5	769.1	728.9
48°	1049.4	969.0	873.4	790.2	746.6	706.4
48.5°	1014.0	937.5	845.6	765.3	723.7	684.4
49°	980.0	907.3	818.8	741.8	702.1	662.0
49.5°	948.0	877.7	792.1	717.9	680.6	641.9
50°	916.9	848.0	766.2	694.5	659.1	620.4
50.5°	885.8	819.3	740.4	671.1	638.5	599.8
51°	857.1	792.1	716.0	649.1	617.0	580.2
51.5°	829.4	765.8	691.6	626.6	597.4	561.5
52°	802.1	739.9	668.2	606.0	577.8	542.9
52.5°	775.3	715.1	645.2	584.5	558.2	525.2
53°	750.0	690.7	622.7	563.9	539.0	508.9
53.5°	725.1	667.2	601.2	543.8	520.4	493.1
54°	702.1	644.7	579.7	524.7	502.2	478.8
54.5°	679.2	623.2	559.6	505.6	485.0	465.9
55°	656.7	601.2	540.0	487.4	468.7	453.9
55.5°	635.7	581.1	520.9	469.7	452.9	442.9
56°	614.6	561.5	502.2	452.9	437.6	432.9
56.5°	594.5	541.9	484.0	436.7	423.3	425.2
57°	574.9	522.8	466.8	420.4	410.4	416.1
57.5°	555.8	505.1	450.1	405.6	397.5	405.6
58°	537.6	487.9	433.8	391.2	386.0	395.1
58.5°	519.4	470.6	418.0	377.4	375.5	384.6
59°	501.7	453.4	402.7	364.0	365.9	374.0
59.5°	485.0	438.1	387.9	350.6	356.8	363.0
60°	468.3	422.3	373.6	338.6	347.2	352.5
60.5°	452.0	407.0	359.7	326.7	337.7	342.0
61°	436.2	391.2	346.3	315.2	328.1	331.9
61.5°	421.4	377.4	332.9	304.2	318.5	321.9
62°	406.6	363.5	320.0	294.2	309.5	312.3
62.5°	392.2	350.1	308.0	283.6	299.9	302.3
63°	377.4	336.2	296.1	274.1	290.8	293.2
63.5°	363.0	323.3	284.6	265.0	282.2	283.6
64°	349.2	310.9	273.1	255.9	273.1	275.0
64.5°	336.2	298.5	262.6	247.3	265.0	265.9
65°	322.4	286.5	252.1	239.6	256.4	257.3
65.5°	309.9	275.0	242.0	232.0	248.2	249.2
66°	297.5	263.5	232.5	224.8	240.1	240.6



TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	262.1	232.0	205.2	203.3	216.2	216.7
68°	251.1	221.9	196.6	196.6	209.0	209.5
68.5°	240.1	211.9	188.5	189.9	201.4	201.8
69°	229.6	202.8	180.8	182.7	194.7	194.7
69.5°	219.1	193.7	173.1	176.5	187.5	187.0
70°	209.0	184.6	166.4	170.3	180.3	180.3
70.5°	199.0	176.0	159.8	164.1	173.6	173.1
71°	189.4	168.4	153.1	158.3	167.4	166.4
71.5°	180.3	160.7	146.4	152.1	160.7	160.2
72°	171.2	153.1	139.2	145.9	154.5	154.0
72.5°	162.6	145.4	133.4	139.7	148.3	147.3
73°	154.0	137.3	127.2	133.9	142.1	141.1
73.5°	145.9	130.6	121.5	128.2	135.8	134.9
74°	137.8	123.4	116.2	122.9	129.6	129.1
74.5°	130.1	116.7	110.5	117.2	123.9	122.9
75°	122.4	110.5	105.2	111.4	118.1	117.2
75.5°	115.3	104.3	100.4	106.2	112.4	111.4
76°	108.1	98.5	95.2	100.9	106.7	106.2
76.5°	101.4	92.8	90.4	96.1	101.4	100.4
77°	95.2	87.1	85.6	90.9	96.1	95.2
77.5°	89.0	81.8	81.3	86.1	90.4	89.9
78°	82.7	76.5	77.0	81.3	85.6	84.7
78.5°	77.0	71.7	72.2	76.5	80.4	79.9
79°	71.3	67.0	68.4	71.7	75.6	74.6
79.5°	66.0	62.2	64.1	67.4	70.8	69.8
80°	60.3	57.9	59.8	62.7	66.0	65.0
80.5°	55.5	53.6	56.0	58.4	61.2	60.7
81°	50.7	49.3	52.1	54.0	56.9	56.0
81.5°	45.9	45.4	47.8	49.7	52.1	51.7
82°	42.1	41.6	44.0	45.9	47.8	47.4
82.5°	37.8	37.8	40.2	41.6	43.5	43.0
83°	34.0	34.0	36.8	37.8	39.2	38.7
83.5°	29.7	30.6	33.0	34.0	35.4	34.4
84°	25.8	27.3	29.7	30.1	31.1	30.6
84.5°	22.0	23.9	26.3	26.8	27.3	26.8
85°	18.7	21.0	23.0	23.4	23.4	23.0
85.5°	15.3	17.7	19.6	20.1	19.6	19.1
86°	12.4	14.8	16.3	16.7	16.7	16.3
86.5°	9.6	12.0	13.4	13.9	14.3	13.4
87°	7.2	9.1	10.5	11.0	11.5	10.5
87.5°	4.3	6.7	7.7	7.7	8.6	7.7
88°	2.4	3.8	4.3	4.8	6.2	5.3
88.5°	0.5	1.4	1.9	2.4	3.8	3.3



TEST NUMBER: P776783

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-HCD82TRLWW-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



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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2082.5	2107.9	2194.9	2346.5	2546.0	2776.5	2989.4	3132.9	3203.7	3174.0	3045.8
22°	2055.3	2080.6	2169.6	2322.6	2524.5	2758.4	2975.0	3119.5	3191.2	3161.6	3031.5



44°	894.4	921.2	990.6	1088.6	1203.9	1346.4	1467.9	1500.9	1533.4	1522.4	1469.3
44.5°	870.0	896.8	964.3	1060.9	1169.4	1305.8	1422.9	1453.1	1484.2	1471.7	1422.5



66.5°	232.5	233.9	228.6	229.6	254.0	291.8	337.7	358.7	368.8	361.1	330.5
67°	224.8	226.2	221.5	220.5	243.5	280.3	324.3	344.4	353.5	346.3	317.1



89°	1.4	1.9	2.4	1.9	1.0	0.5	0.5	0.0	0.0	0.0	0.0
89.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	2837.3	2612.5	2387.7	2212.6	2127.5	2082.5
22°	2819.6	2590.5	2363.3	2186.8	2100.7	2055.3



44°	1362.7	1243.6	1106.8	995.8	936.5	894.4
44.5°	1321.1	1207.2	1076.7	969.0	912.1	870.0



66.5°	285.5	253.0	222.9	217.6	232.0	232.5
67°	273.6	242.5	213.8	210.5	224.3	224.8

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89°	0.0	0.5	0.5	0.5	1.9	1.4
89.5°	0.0	0.0	0.0	0.0	0.5	0.5

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)