

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: P776742

Luminaire Tested: HCDJBS4050CSD-HCD6TSQMW-5000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776742
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD6TSQMW-5000lm-3500K
Description: 6 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5001.3 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.27
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

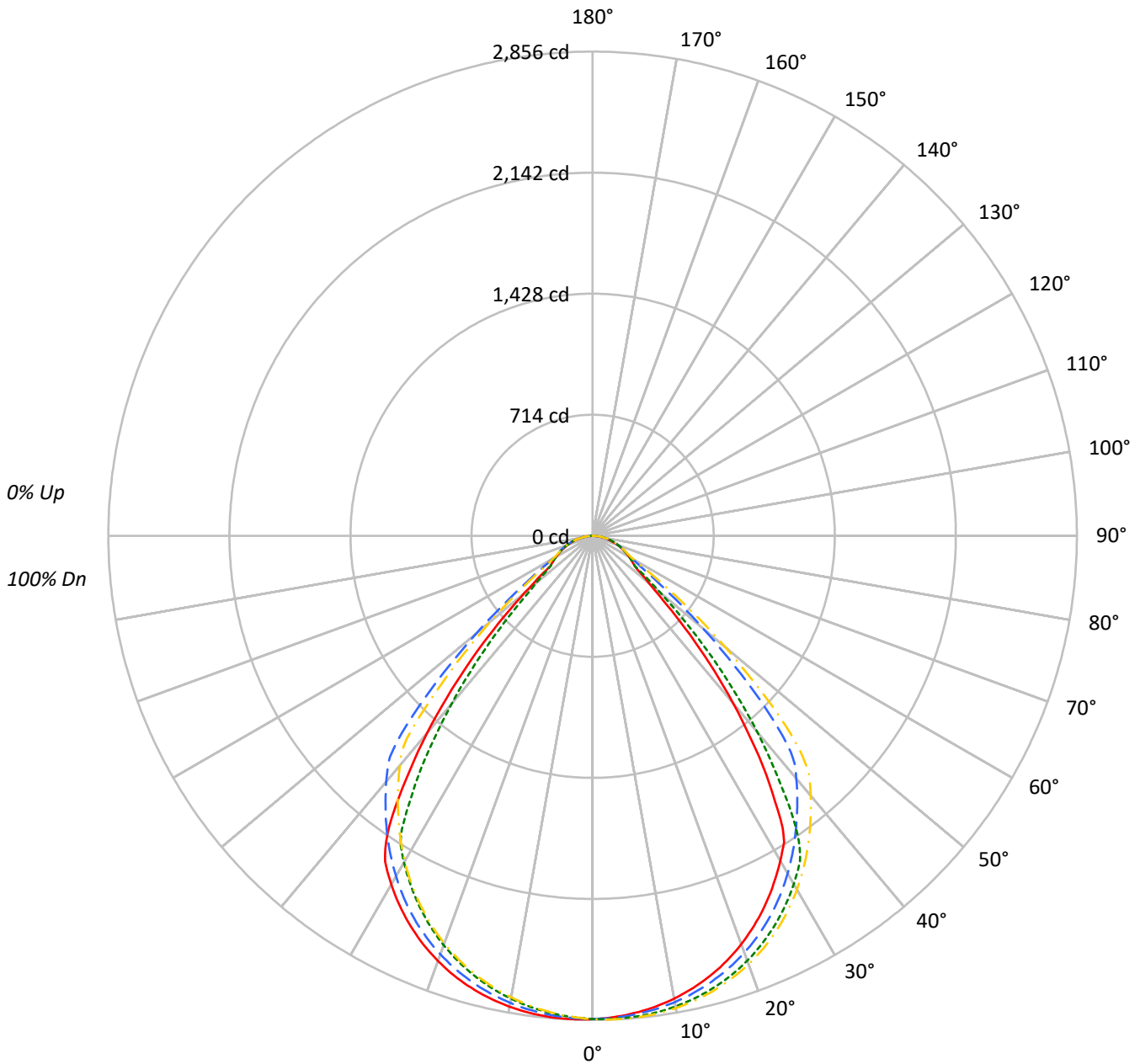
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89			89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79			79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70			70
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63			63
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	57			57
6	78	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51			51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46			46
8	69	57	50	45	67	57	49	45	55	49	44	54	48	44	53	48	44	42			42
9	65	53	46	41	63	52	46	41	51	45	41	50	45	40	49	44	40	39			39
10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	36			36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	122730	122730	122730	122730
5°	122140	123095	123177	122157
10°	121178	123242	123325	121222
15°	119700	123021	123084	119825
20°	117466	122199	122263	117727
25°	114268	120586	120676	114672
30°	110062	117987	118081	110624
35°	97049	109443	109790	97396
40°	72314	84825	85331	72550
45°	47068	58125	58497	47324
50°	28997	34623	35005	29191
55°	22377	22445	22445	22377
60°	21485	21399	21399	21485
65°	20467	20661	20467	20753
70°	19412	20003	19538	20129
75°	17966	19380	18432	19297
80°	15447	18596	16712	17902
85°	8645	16796	12597	14425

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 100450 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.5	5.4
10°-20°	768.1	15.4
20°-30°	1140.6	22.8
30°-40°	1261.1	25.2
40°-50°	854.6	17.1
50°-60°	348.4	7.0
60°-70°	205.6	4.1
70°-80°	121.6	2.4
80°-90°	32.0	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°	2178.2	43.6
0°-40°	3439.2	68.8
0°-60°	4642.2	92.8
0°-90°	5001.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5001.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2850	2850	2850	2850	2850	
5°	2826	2848	2850	2826	2826	268
15°	2685	2760	2761	2688	2685	756
25°	2405	2538	2540	2414	2405	1106
35°	1846	2082	2089	1853	1846	1130
45°	773	955	961	777	773	611
55°	298	299	299	298	298	280
65°	201	203	201	204	201	199
75°	108	116	111	116	108	114
85°	18	34	26	29	18	25
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°	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5
0.5°	2850.5	2849.5	2849.5	2850.5	2851.0	2851.4	2852.4	2852.8	2852.8	2851.0	2849.5
1°	2848.6	2848.6	2848.6	2850.5	2851.9	2852.4	2853.8	2853.8	2853.3	2851.0	2849.5
1.5°	2846.7	2847.2	2848.1	2850.0	2852.4	2853.3	2854.7	2854.7	2853.8	2851.4	2848.6
2°	2844.8	2845.8	2847.2	2849.5	2852.4	2853.3	2855.2	2855.2	2854.3	2851.0	2848.1
2.5°	2842.5	2843.4	2845.8	2849.1	2852.4	2853.8	2855.7	2855.7	2854.3	2850.5	2846.7
3°	2839.6	2841.1	2843.9	2848.1	2851.9	2853.8	2855.7	2855.7	2853.8	2850.0	2845.3
3.5°	2836.8	2838.7	2842.0	2846.7	2851.4	2853.3	2855.7	2855.2	2853.3	2849.1	2843.9
4°	2833.5	2835.9	2840.1	2845.3	2850.5	2852.8	2855.2	2854.7	2852.4	2847.7	2842.0
4.5°	2829.7	2833.0	2837.8	2843.4	2849.5	2852.4	2854.3	2854.3	2851.4	2846.2	2840.1
5°	2826.0	2829.7	2834.9	2841.1	2848.1	2851.4	2853.3	2853.3	2850.0	2844.4	2837.8
5.5°	2822.2	2826.4	2832.1	2839.2	2846.2	2850.0	2852.4	2851.9	2848.6	2842.5	2834.9
6°	2817.5	2822.2	2828.8	2836.3	2844.4	2848.6	2851.0	2850.5	2846.7	2840.1	2832.1
6.5°	2813.2	2818.4	2825.0	2833.5	2842.5	2846.7	2849.1	2848.6	2844.4	2837.3	2828.8
7°	2808.0	2813.7	2821.2	2830.2	2840.1	2844.8	2847.2	2846.2	2842.0	2834.0	2825.0
7.5°	2802.9	2809.5	2817.5	2826.9	2836.8	2842.5	2844.8	2843.9	2839.2	2830.7	2821.2
8°	2797.2	2804.3	2813.2	2823.1	2834.0	2839.6	2842.5	2841.1	2835.9	2827.4	2817.5
8.5°	2791.1	2799.1	2808.5	2819.4	2830.7	2836.3	2839.6	2838.2	2832.6	2823.6	2812.8
9°	2784.9	2792.9	2803.3	2814.6	2826.9	2833.5	2836.3	2834.5	2828.8	2819.4	2808.0
9.5°	2778.8	2787.3	2798.1	2810.4	2823.1	2829.7	2833.0	2831.1	2825.0	2815.1	2802.9
10°	2771.7	2781.2	2792.9	2805.2	2818.9	2826.0	2829.3	2826.9	2820.8	2810.9	2797.7
10.5°	2764.7	2774.6	2786.8	2800.0	2814.6	2821.7	2825.0	2823.1	2816.1	2805.7	2792.0
11°	2757.1	2767.5	2781.2	2794.8	2809.5	2817.5	2820.8	2818.4	2811.3	2800.0	2786.3
11.5°	2749.1	2760.4	2774.6	2789.2	2804.3	2812.3	2816.1	2813.7	2806.2	2794.4	2780.2
12°	2741.1	2752.9	2768.0	2783.0	2799.1	2807.6	2811.3	2808.5	2801.0	2788.7	2773.6
12.5°	2732.6	2745.3	2760.9	2776.9	2793.4	2801.9	2805.7	2803.3	2794.8	2782.6	2767.0
13°	2724.1	2737.3	2753.3	2769.8	2787.3	2796.2	2800.0	2797.2	2789.2	2776.0	2759.9
13.5°	2715.1	2728.8	2745.8	2762.8	2780.7	2790.6	2794.4	2791.1	2782.6	2769.4	2752.4
14°	2705.7	2719.8	2738.2	2755.7	2774.1	2784.0	2788.2	2784.9	2776.0	2761.8	2744.8
14.5°	2695.8	2710.9	2729.8	2748.1	2767.0	2777.4	2781.6	2778.3	2768.9	2754.7	2736.4
15°	2685.4	2701.5	2721.3	2740.1	2759.9	2770.8	2775.0	2771.3	2761.3	2746.7	2728.3
15.5°	2675.0	2691.5	2711.8	2731.6	2752.4	2763.2	2768.0	2763.7	2753.8	2738.7	2719.8
16°	2664.2	2681.2	2702.9	2723.1	2744.4	2755.2	2760.4	2756.2	2745.3	2730.2	2710.4
16.5°	2652.9	2670.8	2693.4	2714.7	2735.9	2747.7	2752.9	2748.6	2737.3	2721.7	2701.5
17°	2641.1	2660.0	2684.0	2705.2	2726.9	2739.2	2744.8	2740.1	2728.3	2712.3	2691.5
17.5°	2629.3	2648.6	2673.6	2695.3	2718.4	2730.7	2736.4	2731.2	2719.4	2702.9	2681.6
18°	2616.6	2636.8	2662.8	2685.4	2708.5	2721.7	2727.9	2722.2	2709.9	2693.0	2671.3
18.5°	2604.3	2625.1	2651.5	2675.0	2699.1	2712.8	2718.4	2712.8	2700.0	2683.1	2660.9
19°	2591.1	2612.8	2640.6	2664.7	2688.7	2702.9	2709.0	2702.9	2689.7	2672.2	2649.1
19.5°	2577.4	2600.1	2628.8	2653.3	2677.9	2693.0	2699.6	2693.0	2679.3	2661.8	2638.3
20°	2563.7	2587.3	2617.0	2642.0	2667.0	2682.1	2689.2	2682.6	2668.4	2650.5	2626.9
20.5°	2549.6	2573.2	2604.8	2629.8	2656.2	2671.3	2678.8	2671.7	2657.1	2639.2	2614.7
21°	2535.0	2559.5	2592.0	2617.5	2643.9	2660.0	2668.0	2660.4	2645.8	2626.9	2602.4



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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°	2488.8	2515.6	2551.5	2579.3	2607.1	2624.6	2633.1	2625.1	2609.0	2590.2	2563.3
23°	2472.7	2500.5	2537.3	2565.6	2593.9	2611.8	2620.8	2612.8	2595.8	2576.0	2549.1
23.5°	2456.7	2485.0	2522.7	2551.5	2580.7	2599.1	2608.5	2600.1	2582.6	2562.3	2535.0
24°	2440.2	2469.4	2508.1	2537.3	2566.6	2585.9	2595.3	2586.8	2568.5	2548.6	2520.3
24.5°	2422.7	2452.9	2492.5	2522.7	2552.4	2572.2	2581.7	2573.2	2554.3	2534.5	2505.7
25°	2405.3	2436.4	2477.0	2507.6	2538.3	2558.1	2568.0	2559.0	2540.2	2519.9	2490.2
25.5°	2387.4	2419.0	2460.9	2492.1	2523.2	2543.9	2554.3	2544.9	2525.1	2504.8	2475.1
26°	2369.4	2402.0	2444.4	2476.5	2507.6	2528.8	2539.7	2529.8	2510.0	2489.2	2459.5
26.5°	2351.0	2384.5	2427.4	2460.5	2492.1	2513.7	2524.6	2514.7	2493.9	2473.7	2443.0
27°	2332.2	2366.6	2410.5	2444.4	2476.0	2498.2	2509.0	2499.1	2478.4	2457.6	2426.0
27.5°	2312.8	2347.3	2393.0	2427.9	2460.0	2482.6	2493.9	2483.6	2462.3	2441.6	2410.0
28°	2293.5	2328.9	2375.1	2410.9	2442.5	2466.1	2477.4	2467.1	2445.4	2424.1	2392.1
28.5°	2274.2	2310.0	2356.7	2393.0	2426.0	2449.6	2460.9	2451.0	2427.9	2407.6	2374.6
29°	2254.4	2291.1	2339.2	2375.6	2408.6	2432.6	2443.9	2433.6	2410.9	2389.7	2356.2
29.5°	2234.1	2271.3	2319.9	2357.6	2391.1	2415.6	2427.4	2416.6	2393.5	2373.2	2337.8
30°	2213.8	2252.5	2300.6	2339.2	2373.2	2397.7	2409.5	2399.1	2375.1	2353.9	2319.4
30.5°	2193.0	2232.2	2281.2	2320.9	2354.3	2380.3	2391.6	2381.7	2356.2	2335.9	2300.6
31°	2172.3	2211.9	2261.4	2302.0	2335.0	2362.4	2373.7	2362.8	2337.4	2316.6	2281.2
31.5°	2151.5	2191.2	2241.1	2282.7	2316.1	2344.0	2355.3	2344.4	2318.5	2297.7	2261.4
32°	2131.3	2170.4	2220.9	2263.3	2295.4	2324.6	2335.9	2326.0	2298.2	2278.9	2241.6
32.5°	2094.9	2149.2	2200.1	2243.5	2275.6	2305.8	2317.6	2306.7	2277.9	2259.1	2221.8
33°	2057.2	2128.0	2179.8	2223.2	2246.8	2286.0	2297.7	2286.9	2246.8	2238.8	2201.1
33.5°	2007.2	2107.2	2158.1	2202.5	2213.3	2266.1	2277.9	2267.1	2214.7	2219.5	2180.3
34°	1953.5	2086.9	2136.9	2180.8	2175.1	2244.9	2257.2	2246.8	2177.5	2197.8	2159.1
34.5°	1898.8	2052.0	2115.2	2160.0	2131.7	2224.2	2237.4	2224.2	2135.0	2175.1	2138.3
35°	1846.4	2014.3	2093.5	2129.4	2082.2	2200.6	2217.1	2199.6	2088.8	2146.4	2116.6
35.5°	1794.5	1967.6	2071.4	2096.4	2029.9	2164.7	2196.3	2164.7	2036.5	2113.8	2094.9
36°	1742.2	1915.3	2049.7	2060.0	1971.4	2132.7	2175.1	2133.6	1978.9	2079.4	2073.3
36.5°	1687.9	1863.9	2027.0	2017.6	1912.9	2091.2	2154.4	2094.0	1921.4	2038.4	2051.6
37°	1629.9	1812.4	2004.9	1971.4	1850.2	2045.0	2133.1	2050.1	1861.5	1993.1	2028.4
37.5°	1571.4	1761.0	1982.2	1921.4	1791.2	1995.0	2111.0	2003.0	1801.1	1945.4	2006.3
38°	1512.5	1709.2	1959.6	1866.7	1732.7	1941.7	2089.3	1951.1	1743.6	1892.1	1984.1
38.5°	1454.5	1657.3	1937.4	1810.1	1677.6	1885.5	2067.1	1896.4	1687.0	1837.0	1961.9
39°	1397.4	1603.5	1914.3	1754.4	1621.4	1827.5	2045.9	1839.3	1630.9	1780.4	1938.8
39.5°	1341.8	1547.9	1892.1	1698.3	1566.3	1767.6	2023.3	1782.3	1575.2	1723.8	1916.2
40°	1286.6	1489.4	1868.6	1641.7	1509.2	1710.6	2001.6	1725.2	1518.2	1667.7	1893.6
40.5°	1233.8	1432.3	1845.5	1588.4	1451.7	1655.4	1978.5	1670.0	1460.6	1612.9	1870.9
41°	1179.5	1377.1	1822.3	1535.6	1392.2	1601.6	1955.8	1614.8	1400.7	1559.7	1847.3
41.5°	1126.2	1322.0	1800.7	1482.8	1333.7	1547.4	1931.8	1561.1	1342.2	1507.3	1823.3
42°	1072.0	1268.2	1766.7	1430.9	1276.2	1493.2	1907.7	1507.3	1284.2	1454.5	1798.8
42.5°	1019.2	1217.7	1730.9	1377.6	1220.6	1438.4	1884.6	1453.1	1227.6	1400.2	1770.5
43°	965.9	1164.9	1681.8	1322.0	1166.3	1382.3	1842.6	1396.9	1172.9	1345.5	1721.9
43.5°	916.4	1113.0	1628.0	1268.7	1112.1	1326.2	1801.1	1339.9	1119.2	1289.9	1679.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	773.0	957.4	1448.8	1109.7	954.6	1161.1	1649.7	1174.3	960.7	1129.5	1500.2
45.5°	727.7	907.4	1388.5	1060.2	901.7	1108.8	1589.8	1120.1	909.8	1078.1	1437.0
46°	684.3	858.4	1324.8	1010.7	851.3	1056.9	1525.2	1068.2	858.8	1028.1	1372.9
46.5°	643.3	812.1	1261.1	961.2	802.7	1004.6	1459.2	1016.8	809.8	979.1	1308.8
47°	603.2	765.0	1197.4	912.6	755.5	953.6	1391.8	965.4	763.1	930.0	1245.1
47.5°	566.4	721.1	1133.8	864.5	710.3	903.6	1323.4	914.9	717.8	881.9	1182.4
48°	532.9	678.2	1072.0	817.3	667.8	854.6	1258.3	866.4	674.9	835.7	1120.1
48.5°	503.7	636.7	1014.0	772.0	626.8	806.5	1193.7	816.8	633.4	789.0	1059.7
49°	477.8	596.6	958.3	728.2	588.1	758.4	1133.3	769.7	594.2	745.2	1001.3
49.5°	454.6	560.3	903.6	686.2	551.3	713.6	1074.4	724.4	557.5	701.3	944.7
50°	432.9	525.4	850.3	643.8	516.9	669.7	1016.8	680.6	522.6	659.8	890.4
50.5°	415.0	494.3	800.8	604.1	484.8	628.2	960.7	637.6	489.5	619.2	838.5
51°	397.6	466.0	752.7	566.9	455.1	589.1	906.0	598.0	459.8	582.0	787.1
51.5°	381.1	442.4	706.5	532.0	432.0	551.3	851.8	560.3	435.8	545.7	740.0
52°	364.1	420.7	661.7	498.5	408.4	516.4	800.8	524.0	411.3	512.2	694.2
52.5°	348.1	401.8	620.2	466.9	385.3	482.9	748.9	490.0	387.2	479.2	650.4
53°	332.0	383.9	580.6	437.7	361.7	453.2	699.9	457.9	362.7	448.5	609.3
53.5°	319.3	367.4	543.3	410.3	338.6	429.2	653.2	432.9	338.6	423.5	569.7
54°	309.4	351.4	508.9	385.8	320.2	404.7	611.7	408.0	320.2	398.5	533.4
54.5°	303.3	335.8	476.3	363.1	306.6	380.1	569.2	383.0	306.1	373.5	499.4
55°	298.1	319.3	446.6	341.9	299.0	355.6	531.0	358.0	299.0	348.5	468.3
55.5°	292.9	306.1	418.8	322.1	293.3	331.6	494.3	333.0	292.9	327.8	439.1
56°	287.7	295.2	394.3	304.2	288.2	312.2	461.2	313.2	287.7	309.4	416.0
56.5°	283.0	289.1	371.2	291.0	283.0	296.2	434.8	296.7	282.5	295.2	392.9
57°	278.3	283.9	350.4	283.9	277.8	286.3	408.0	285.8	277.8	287.2	369.8
57.5°	273.1	278.7	331.6	278.7	273.1	280.1	381.5	279.7	272.6	281.6	346.6
58°	268.4	274.0	316.0	273.5	267.9	275.0	354.7	274.5	267.9	276.4	328.2
58.5°	263.6	268.8	301.8	268.4	263.2	270.2	328.2	269.8	262.7	271.7	312.7
59°	258.9	264.1	289.1	263.6	258.4	265.1	309.9	265.1	258.0	266.5	299.0
59.5°	254.2	259.4	278.3	258.4	253.7	260.3	294.3	259.9	253.3	261.8	286.7
60°	249.5	254.7	268.8	253.7	248.5	255.6	281.1	255.1	248.5	257.0	275.9
60.5°	244.3	250.0	259.9	249.0	243.8	250.4	270.2	250.4	243.8	251.8	266.5
61°	239.6	245.2	251.8	243.8	239.6	245.7	259.9	245.7	238.6	247.1	258.0
61.5°	234.9	240.5	244.8	239.6	234.9	241.0	251.4	241.0	233.9	242.4	250.0
62°	230.2	235.8	238.2	234.9	230.2	236.8	243.4	236.3	229.2	237.7	242.9
62.5°	225.0	231.1	232.0	229.7	225.4	232.0	236.3	231.6	224.5	233.0	236.8
63°	220.2	226.4	226.9	225.0	220.7	227.3	230.2	226.4	219.3	227.8	230.6
63.5°	215.5	221.2	221.7	220.2	216.5	222.6	224.0	221.7	215.1	223.1	225.4
64°	210.8	216.5	216.5	215.5	211.8	217.9	219.3	216.9	210.3	218.4	220.7
64.5°	205.6	211.8	211.8	210.8	207.5	213.2	214.1	212.2	205.6	213.6	215.5
65°	200.9	207.0	207.0	206.6	202.8	208.9	209.4	207.5	200.9	208.9	210.8
65.5°	196.2	201.9	201.9	201.9	198.6	204.2	204.7	202.8	196.2	204.2	206.1
66°	191.5	197.1	197.1	197.1	193.8	199.5	199.5	198.1	191.5	199.5	200.9



TEST NUMBER: P776742

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	177.3	183.0	183.0	183.5	180.6	185.8	185.3	183.9	177.8	185.3	186.8
68°	172.6	178.3	178.3	178.7	176.4	181.6	180.6	179.2	173.1	180.2	182.0
68.5°	167.9	173.6	173.6	174.0	172.1	176.9	176.4	175.0	168.4	175.9	177.3
69°	163.2	168.8	168.8	171.7	167.9	172.6	171.7	170.3	164.1	171.2	172.6
69.5°	158.9	164.1	164.1	167.0	163.7	167.9	166.5	165.5	159.4	166.5	167.9
70°	154.2	159.4	159.4	162.2	158.9	163.7	162.2	160.8	155.2	161.8	163.2
70.5°	149.5	154.7	154.7	157.1	154.7	159.4	157.5	156.6	150.4	157.1	158.5
71°	145.3	150.4	150.0	152.3	150.4	154.7	152.8	151.9	146.2	152.3	153.7
71.5°	140.5	145.3	145.7	148.1	146.2	150.4	148.1	147.1	141.5	147.6	149.0
72°	135.8	141.0	141.0	143.4	142.0	145.7	143.4	142.9	137.2	143.4	144.3
72.5°	131.1	135.8	136.3	139.1	137.7	141.5	139.1	138.2	132.5	138.7	139.6
73°	126.4	131.6	131.6	134.4	133.5	137.2	134.4	133.5	128.3	133.9	134.9
73.5°	121.7	126.9	126.9	130.2	129.2	133.0	129.7	129.2	124.0	129.2	130.2
74°	117.0	122.2	122.2	125.5	125.0	128.3	125.5	124.5	119.3	125.0	125.5
74.5°	112.7	117.4	117.4	121.2	120.7	124.0	120.7	120.3	115.1	120.3	121.2
75°	108.0	112.7	113.2	117.0	116.5	119.8	116.5	115.5	110.8	115.5	116.5
75.5°	103.3	108.0	108.5	112.7	112.2	115.5	111.8	111.3	106.1	111.3	111.8
76°	99.0	103.3	103.8	108.0	108.0	111.3	107.1	106.6	101.9	106.6	107.1
76.5°	94.3	98.6	99.0	103.8	103.8	107.1	102.8	101.9	97.6	101.9	102.8
77°	89.6	93.9	94.3	99.5	100.0	102.8	98.6	97.6	93.4	97.6	98.1
77.5°	84.9	89.1	90.1	94.8	95.7	98.6	93.9	92.9	89.1	92.9	93.4
78°	80.6	84.4	85.4	90.6	91.5	93.9	89.6	88.7	84.9	88.2	89.1
78.5°	75.9	80.2	80.6	86.3	87.3	89.6	84.9	83.9	80.2	83.9	84.4
79°	71.2	75.5	76.4	81.6	83.0	85.4	80.6	79.7	75.9	79.2	79.7
79.5°	66.5	70.7	71.7	77.3	78.8	81.1	76.4	75.0	72.2	74.5	75.5
80°	62.3	66.0	67.0	72.6	75.0	76.9	71.7	70.7	67.4	70.3	70.7
80.5°	57.5	61.3	62.7	68.4	70.7	72.6	67.4	66.0	63.2	65.6	66.5
81°	53.3	56.6	58.0	64.1	66.5	67.9	63.2	61.8	59.0	61.3	61.8
81.5°	48.6	51.9	53.8	59.9	62.3	63.7	59.0	57.1	54.7	56.6	57.5
82°	44.3	47.6	49.0	55.7	58.5	59.4	54.7	52.8	50.5	51.9	52.8
82.5°	39.6	42.9	44.8	51.4	54.2	55.7	50.5	48.1	46.2	47.6	48.6
83°	35.4	38.2	40.6	47.2	50.5	51.4	46.7	43.9	42.0	42.9	44.3
83.5°	30.7	33.5	36.8	42.9	46.2	47.2	42.9	39.6	37.7	38.7	40.6
84°	26.4	28.8	32.5	38.7	42.0	42.9	39.1	34.9	33.5	34.0	36.8
84.5°	21.7	24.5	28.8	34.9	38.2	39.1	34.9	30.7	29.2	29.7	33.0
85°	17.5	19.8	25.5	30.7	34.0	34.9	31.1	26.4	25.5	25.0	29.2
85.5°	14.6	17.0	21.7	26.4	30.2	31.1	27.4	22.6	21.2	21.2	25.5
86°	11.8	14.1	18.4	22.6	25.9	26.9	24.1	19.3	17.0	17.5	21.7
86.5°	9.4	10.8	15.1	18.4	22.2	22.6	20.3	16.0	13.7	14.6	18.4
87°	6.6	8.0	11.3	14.6	17.9	18.9	17.0	13.2	11.3	11.8	14.6
87.5°	4.2	5.2	8.0	10.8	14.1	15.1	13.7	10.4	9.0	9.4	11.3
88°	1.9	2.8	4.7	7.1	10.4	11.3	10.4	8.0	7.1	7.1	8.0
88.5°	0.5	0.9	1.9	3.3	6.6	7.1	7.1	5.7	4.7	4.2	4.2



TEST NUMBER: P776742
CATALOG NUMBER: HCDJBL4050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776742

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2850.5	2850.5	2850.5	2850.5	2850.5	2850.5
0.5°	2849.5	2848.6	2848.6	2849.5	2849.5	2850.5
1°	2848.6	2847.2	2846.7	2847.7	2847.7	2848.6
1.5°	2847.2	2845.3	2844.4	2844.8	2845.8	2846.7
2°	2845.8	2842.9	2842.0	2842.5	2843.4	2844.8
2.5°	2844.4	2841.1	2839.6	2839.6	2840.6	2842.5
3°	2842.5	2838.7	2836.3	2836.3	2837.8	2839.6
3.5°	2840.1	2836.3	2833.5	2833.5	2834.5	2836.8
4°	2837.8	2833.0	2830.2	2829.7	2830.7	2833.5
4.5°	2834.9	2829.7	2826.4	2826.0	2826.9	2829.7
5°	2832.1	2826.4	2822.2	2821.7	2823.1	2826.0
5.5°	2828.8	2822.2	2818.4	2817.0	2818.9	2822.2
6°	2825.5	2817.5	2814.2	2812.8	2814.2	2817.5
6.5°	2821.7	2813.2	2809.0	2808.0	2809.0	2813.2
7°	2817.5	2808.5	2803.8	2802.4	2803.8	2808.0
7.5°	2812.8	2803.3	2798.6	2796.7	2798.6	2802.9
8°	2808.0	2797.7	2792.9	2791.1	2792.5	2797.2
8.5°	2803.3	2792.0	2786.8	2784.9	2786.8	2791.1
9°	2797.7	2785.9	2780.2	2778.3	2780.2	2784.9
9.5°	2792.0	2779.3	2773.6	2771.7	2773.1	2778.8
10°	2786.3	2772.7	2766.5	2764.7	2766.5	2771.7
10.5°	2779.7	2765.6	2759.9	2757.6	2759.5	2764.7
11°	2773.1	2758.5	2751.9	2750.0	2751.4	2757.1
11.5°	2766.5	2751.0	2743.9	2742.0	2743.9	2749.1
12°	2759.5	2743.0	2736.4	2733.5	2735.4	2741.1
12.5°	2751.9	2734.9	2727.9	2725.0	2726.9	2732.6
13°	2743.9	2726.0	2718.9	2716.1	2717.5	2724.1
13.5°	2735.9	2717.0	2709.9	2707.1	2708.5	2715.1
14°	2727.9	2707.6	2700.5	2697.7	2699.1	2705.7
14.5°	2718.9	2698.2	2690.6	2688.2	2689.2	2695.8
15°	2709.5	2688.2	2680.7	2677.9	2678.8	2685.4
15.5°	2700.0	2677.9	2670.3	2667.5	2668.4	2675.0
16°	2690.1	2667.0	2659.5	2656.6	2657.1	2664.2
16.5°	2679.8	2656.2	2648.2	2645.8	2645.8	2652.9
17°	2669.4	2644.9	2636.8	2634.0	2634.5	2641.1
17.5°	2658.5	2633.5	2625.1	2622.2	2622.7	2629.3
18°	2647.7	2621.3	2612.8	2610.0	2610.0	2616.6
18.5°	2635.9	2609.0	2600.5	2597.2	2597.2	2604.3
19°	2624.1	2595.8	2587.3	2584.5	2584.0	2591.1
19.5°	2611.8	2582.6	2574.1	2571.3	2570.8	2577.4
20°	2599.1	2569.4	2560.4	2558.6	2557.1	2563.7
20.5°	2586.4	2555.3	2546.3	2544.4	2543.0	2549.6
21°	2572.7	2541.6	2532.1	2530.3	2528.4	2535.0

TEST NUMBER: P776742

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2530.7	2496.8	2487.3	2485.4	2482.6	2488.8
23°	2516.1	2480.7	2471.8	2469.9	2466.6	2472.7
23.5°	2501.0	2464.7	2455.3	2453.9	2450.5	2456.7
24°	2485.4	2448.2	2439.2	2437.3	2433.6	2440.2
24.5°	2469.9	2431.2	2422.7	2420.4	2416.6	2422.7
25°	2453.9	2413.8	2406.2	2403.9	2399.6	2405.3
25.5°	2437.3	2396.3	2387.8	2386.4	2382.2	2387.4
26°	2420.4	2378.9	2370.8	2369.0	2364.2	2369.4
26.5°	2403.4	2360.9	2352.9	2351.0	2345.8	2351.0
27°	2385.5	2342.5	2334.5	2333.1	2327.5	2332.2
27.5°	2367.5	2323.2	2316.1	2314.3	2308.6	2312.8
28°	2349.6	2304.3	2296.8	2294.9	2289.7	2293.5
28.5°	2331.7	2284.5	2277.5	2275.6	2269.9	2274.2
29°	2312.4	2265.2	2258.1	2256.2	2250.6	2254.4
29.5°	2293.5	2245.4	2238.3	2236.4	2230.8	2234.1
30°	2273.7	2225.1	2218.5	2216.2	2210.5	2213.8
30.5°	2253.9	2203.9	2197.8	2195.4	2190.2	2193.0
31°	2233.6	2182.7	2177.5	2174.7	2169.5	2172.3
31.5°	2214.3	2160.5	2155.8	2153.4	2148.2	2151.5
32°	2193.5	2139.8	2134.6	2132.2	2127.5	2131.3
32.5°	2172.8	2104.4	2113.3	2110.5	2106.3	2094.9
33°	2151.5	2066.6	2091.6	2089.3	2084.6	2057.2
33.5°	2129.8	2014.8	2068.1	2067.1	2062.4	2007.2
34°	2107.2	1961.0	2047.3	2045.0	2042.1	1953.5
34.5°	2086.0	1906.8	2008.6	2022.3	2017.6	1898.8
35°	2052.5	1853.0	1971.9	1999.7	1976.1	1846.4
35.5°	2015.2	1800.7	1919.0	1977.0	1937.4	1794.5
36°	1967.1	1748.3	1870.9	1954.4	1887.9	1742.2
36.5°	1913.8	1693.6	1818.6	1931.8	1835.6	1687.9
37°	1863.4	1636.5	1768.1	1908.2	1784.6	1629.9
37.5°	1810.6	1578.0	1716.7	1885.1	1735.6	1571.4
38°	1758.7	1517.2	1666.7	1862.0	1686.0	1512.5
38.5°	1707.3	1458.3	1615.3	1838.9	1635.1	1454.5
39°	1656.8	1401.2	1562.0	1815.7	1584.7	1397.4
39.5°	1600.7	1345.1	1505.9	1792.2	1530.9	1341.8
40°	1544.6	1290.8	1450.7	1768.6	1476.2	1286.6
40.5°	1486.6	1238.0	1395.5	1745.0	1421.0	1233.8
41°	1431.4	1184.2	1339.9	1721.9	1365.8	1179.5
41.5°	1373.8	1129.5	1285.6	1696.9	1313.0	1126.2
42°	1319.1	1075.3	1236.6	1660.6	1261.6	1072.0
42.5°	1266.3	1022.9	1186.6	1621.4	1212.1	1019.2
43°	1215.8	969.7	1135.2	1563.9	1161.1	965.9
43.5°	1162.1	920.1	1085.7	1507.3	1110.7	916.4



TEST NUMBER: P776742

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1008.8	777.2	933.8	1316.8	959.8	773.0
45.5°	956.0	731.0	887.6	1257.8	912.6	727.7
46°	906.5	687.6	840.0	1200.8	865.4	684.3
46.5°	857.9	645.7	795.2	1145.1	819.2	643.3
47°	811.2	606.0	749.9	1089.4	774.4	603.2
47.5°	765.4	569.2	707.4	1033.8	731.5	566.4
48°	721.1	535.3	665.0	978.6	688.1	532.9
48.5°	678.2	505.6	624.9	926.7	647.5	503.7
49°	636.7	479.2	587.6	876.3	608.9	477.8
49.5°	597.5	456.1	552.7	827.7	572.5	454.6
50°	559.8	435.8	518.8	780.1	536.7	432.9
50.5°	524.9	416.4	490.0	737.1	505.6	415.0
51°	493.8	399.0	463.1	695.6	477.3	397.6
51.5°	466.4	382.5	440.0	655.6	452.3	381.1
52°	442.4	366.5	419.3	617.8	429.6	364.1
52.5°	421.2	349.9	400.9	581.5	409.8	348.1
53°	403.7	333.9	383.9	547.1	391.4	332.0
53.5°	386.3	320.2	366.9	515.0	374.5	319.3
54°	368.8	309.9	350.9	484.4	358.0	309.4
54.5°	351.8	303.3	334.9	456.1	342.4	303.3
55°	335.8	298.1	319.3	430.1	326.4	298.1
55.5°	319.3	292.9	306.6	405.6	311.7	292.9
56°	305.6	288.2	296.7	383.4	300.0	287.7
56.5°	294.8	283.0	291.0	363.6	292.9	283.0
57°	288.2	278.3	285.8	344.8	287.2	278.3
57.5°	283.0	273.1	280.6	327.8	282.0	273.1
58°	278.3	268.4	275.9	312.7	277.3	268.4
58.5°	273.1	263.6	270.7	299.0	272.1	263.6
59°	268.4	258.9	266.0	287.7	267.4	258.9
59.5°	263.6	254.2	261.3	277.3	262.7	254.2
60°	258.9	249.5	256.6	267.9	257.5	249.5
60.5°	254.2	244.8	251.8	259.9	252.8	244.3
61°	249.5	240.1	247.1	252.3	248.1	239.6
61.5°	244.8	235.8	242.4	245.2	243.4	234.9
62°	240.1	231.1	237.7	239.1	238.2	230.2
62.5°	235.3	226.4	233.0	233.5	233.5	225.0
63°	230.6	222.1	228.3	228.7	228.7	220.2
63.5°	225.9	217.4	223.5	223.5	223.5	215.5
64°	221.2	212.7	218.8	218.8	218.8	210.8
64.5°	216.5	208.5	214.1	213.6	213.6	205.6
65°	212.2	203.7	209.4	208.9	208.9	200.9
65.5°	207.5	199.5	204.7	203.7	203.7	196.2
66°	202.8	194.8	200.0	199.0	199.0	191.5



TEST NUMBER: P776742

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	189.1	181.6	186.3	184.9	184.4	177.3
68°	184.4	176.9	181.6	180.2	179.2	172.6
68.5°	179.7	172.6	176.9	175.0	174.5	167.9
69°	175.0	168.4	172.6	169.3	172.1	163.2
69.5°	170.7	164.1	167.9	165.1	167.0	158.9
70°	166.0	159.9	163.7	160.4	161.8	154.2
70.5°	161.3	155.2	158.9	156.1	156.1	149.5
71°	157.1	150.9	154.2	151.9	150.9	145.3
71.5°	152.3	146.7	150.0	146.7	146.2	140.5
72°	148.1	142.4	145.3	142.0	141.5	135.8
72.5°	143.4	137.7	141.0	137.2	136.8	131.1
73°	138.7	133.5	136.3	132.5	131.6	126.4
73.5°	134.4	128.8	131.6	127.8	126.9	121.7
74°	129.7	124.5	126.9	123.1	122.2	117.0
74.5°	125.5	120.3	122.6	118.4	117.4	112.7
75°	120.7	116.0	117.9	113.7	112.7	108.0
75.5°	116.5	111.3	113.2	108.9	108.0	103.3
76°	111.8	107.1	108.9	104.2	102.8	99.0
76.5°	107.5	102.8	104.2	99.5	98.1	94.3
77°	102.8	98.6	100.0	94.8	93.4	89.6
77.5°	98.6	93.9	95.3	90.1	88.7	84.9
78°	93.9	89.6	90.6	85.4	83.9	80.6
78.5°	89.6	85.4	86.3	80.6	79.2	75.9
79°	84.9	80.6	81.6	75.9	74.5	71.2
79.5°	80.2	76.4	76.9	71.2	69.8	66.5
80°	75.9	72.2	72.2	67.0	64.6	62.3
80.5°	71.2	67.9	67.9	62.3	59.9	57.5
81°	67.0	63.7	63.2	58.0	55.2	53.3
81.5°	62.3	59.4	59.0	53.3	50.5	48.6
82°	58.0	54.7	54.2	49.0	45.7	44.3
82.5°	53.8	50.5	50.0	44.8	41.0	39.6
83°	49.5	46.2	45.7	40.6	36.3	35.4
83.5°	45.3	42.0	41.0	36.3	31.6	30.7
84°	40.6	37.7	36.8	32.5	27.4	26.4
84.5°	36.3	33.5	32.5	28.3	23.6	21.7
85°	32.1	29.2	28.3	24.5	19.8	17.5
85.5°	27.8	25.0	23.6	20.8	16.5	14.6
86°	23.6	20.8	19.3	17.0	13.7	11.8
86.5°	19.3	16.5	15.6	13.2	10.8	9.4
87°	15.6	12.7	11.8	9.4	7.5	6.6
87.5°	11.3	9.0	8.0	6.1	4.7	4.2
88°	7.5	4.7	4.2	2.4	1.9	1.9
88.5°	3.3	0.9	0.5	0.5	0.5	0.5



TEST NUMBER: P776742

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMW-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.5	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2519.4	2545.3	2578.8	2605.2	2631.7	2648.6	2656.2	2648.6	2633.5	2614.7	2589.7
22°	2504.3	2530.7	2565.2	2592.5	2619.4	2636.8	2644.9	2637.3	2621.3	2602.4	2576.5



44°	866.4	1059.7	1570.0	1214.4	1058.3	1269.1	1757.7	1283.3	1065.4	1235.2	1622.4
44.5°	819.2	1008.8	1511.1	1162.1	1006.0	1214.4	1704.9	1228.1	1013.0	1181.9	1562.0



66.5°	186.8	192.4	192.4	192.4	189.6	194.8	194.8	193.4	186.8	194.8	196.2
67°	182.0	187.7	187.7	188.2	185.3	190.5	190.1	188.6	182.0	190.1	191.5



89°	0.0	0.5	0.5	0.9	2.8	3.8	3.8	2.8	2.4	1.9	1.4
89.5°	0.0	0.0	0.5	0.5	0.5	0.9	1.4	0.9	0.5	0.5	0.5

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21.5°	2559.0	2527.0	2517.5	2515.6	2513.3	2519.4
22°	2545.3	2511.9	2502.4	2501.0	2498.7	2504.3



44°	1110.2	869.7	1034.3	1439.4	1060.2	866.4
44.5°	1058.8	823.5	984.3	1378.6	1010.2	819.2



66.5°	198.1	190.5	195.3	194.3	193.8	186.8
67°	193.4	185.8	191.0	189.6	189.1	182.0

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Peachtree City, GA 30269

Scaled Data Report



89°	0.9	0.0	0.5	0.5	0.5	0.0
89.5°	0.0	0.0	0.0	0.5	0.5	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)