

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: P776519

Luminaire Tested: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776519  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B005-HCD4TSQC)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K  
Description: 8 INCH SQUARE MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4021.3 lumens  
Efficiency: N/A  
Efficacy: 104.4 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')  
CIE Type: Direct

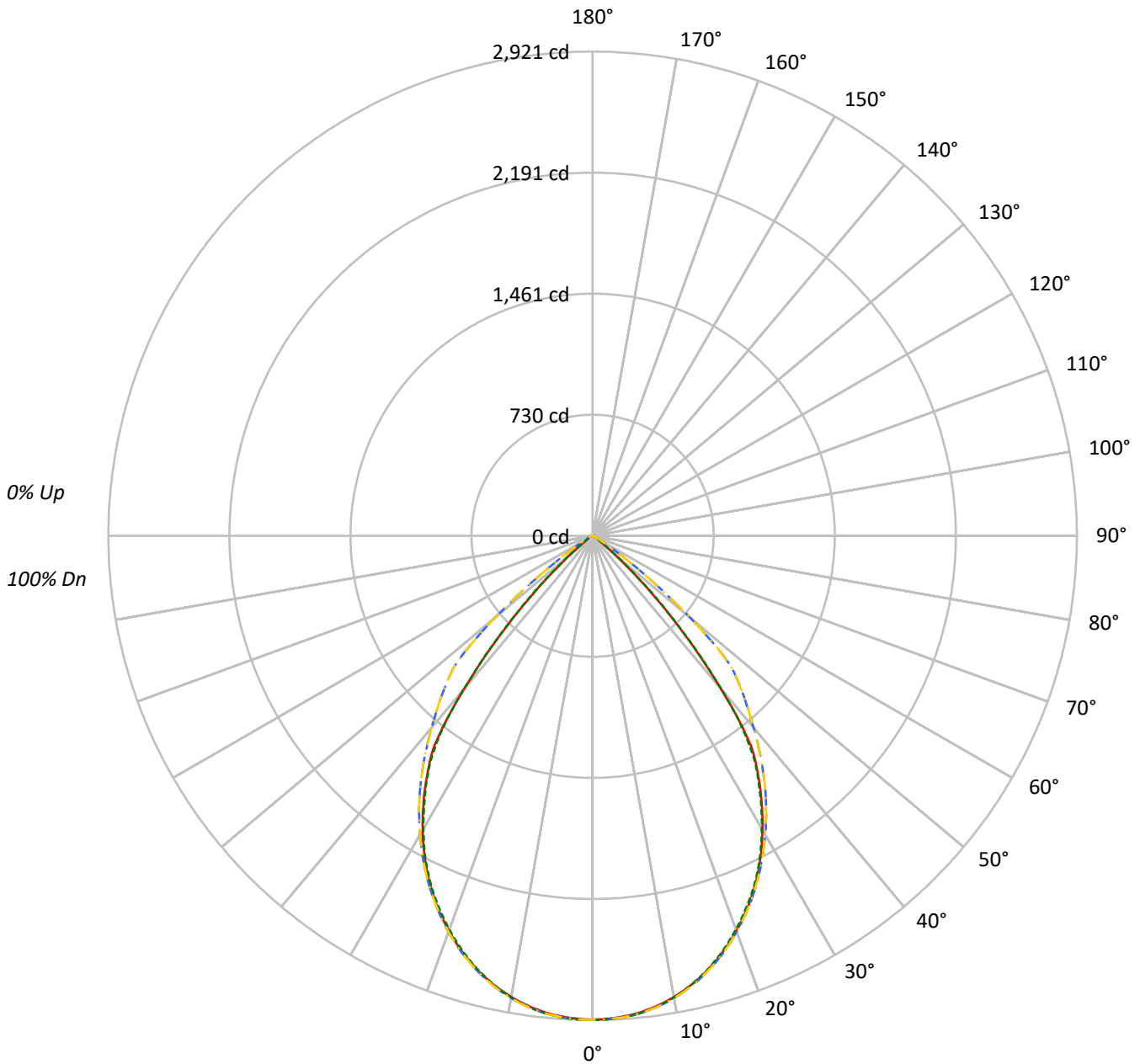
Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	113	110	107	104	110	107	105	103	103	101	99	100	98	97	96	95	94	92																			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84																			
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76																			
4	94	85	79	74	92	84	78	73	82	77	72	80	75	72	78	74	71	69																			
5	88	78	72	67	86	77	71	66	76	70	66	74	69	65	72	68	65	63																			
6	83	72	66	61	81	72	65	60	70	64	60	69	63	60	67	63	59	58																			
7	78	67	60	55	76	66	60	55	65	59	55	64	59	55	63	58	54	53																			
8	73	62	56	51	72	62	55	51	61	55	51	59	54	50	58	54	50	48																			
9	69	58	51	47	68	58	51	47	57	51	47	56	50	46	55	50	46	45																			
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43	41																			

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

	0°	90°	180°	270°
0°	70029	70029	70029	70029
5°	69697	69844	69697	69844
10°	68789	68850	68789	68850
15°	67150	67070	67150	67070
20°	64727	64487	64727	64487
25°	61389	61182	61389	61182
30°	56774	56511	56774	56511
35°	50735	50471	50735	50471
40°	37678	37881	37678	37881
45°	19743	20241	19743	20241
50°	6405	6924	6405	6924
55°	2120	1948	2120	1948
60°	1607	1511	1607	1511
65°	1231	1186	1231	1186
70°	975	946	975	946
75°	797	797	797	797
80°	621	677	621	677
85°	440	440	440	440

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 41968 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.6	6.8
10°-20°	760.9	18.9
20°-30°	1065.8	26.5
30°-40°	1094.9	27.2
40°-50°	663.2	16.5
50°-60°	124.7	3.1
60°-70°	24.1	0.6
70°-80°	10.8	0.3
80°-90°	2.3	0.1
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°	2101.3	52.3
0°-40°	3196.1	79.5
0°-60°	3984.0	99.1
0°-90°	4021.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4021.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2920	2920	2920	2920	2920	
5°	2896	2902	2896	2902	2896	274
15°	2705	2702	2705	2702	2705	760
25°	2320	2312	2320	2312	2320	1063
35°	1733	1724	1733	1724	1733	1058
45°	582	597	582	597	582	465
55°	51	47	51	47	51	58
65°	22	21	22	21	22	22
75°	9	9	9	9	9	9
85°	2	2	2	2	2	2
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°	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5
0.5°	2917.7	2918.9	2920.9	2922.1	2921.3	2922.1	2920.9	2918.9	2917.7	2918.9	2920.9
1°	2917.2	2918.5	2920.1	2921.3	2920.9	2921.3	2920.1	2918.5	2917.2	2918.5	2920.1
1.5°	2916.0	2917.2	2919.3	2920.5	2920.1	2920.5	2919.3	2917.2	2916.0	2917.2	2919.3
2°	2914.4	2915.6	2917.7	2919.3	2918.5	2919.3	2917.7	2915.6	2914.4	2915.6	2917.7
2.5°	2912.3	2913.6	2916.0	2917.2	2916.8	2917.2	2916.0	2913.6	2912.3	2913.6	2916.0
3°	2909.9	2911.5	2913.6	2915.2	2914.8	2915.2	2913.6	2911.5	2909.9	2911.5	2913.6
3.5°	2907.0	2908.7	2911.1	2912.7	2912.3	2912.7	2911.1	2908.7	2907.0	2908.7	2911.1
4°	2903.8	2905.4	2907.8	2909.9	2909.5	2909.9	2907.8	2905.4	2903.8	2905.4	2907.8
4.5°	2900.1	2901.3	2904.2	2906.2	2905.8	2906.2	2904.2	2901.3	2900.1	2901.3	2904.2
5°	2895.6	2897.2	2900.5	2902.5	2901.7	2902.5	2900.5	2897.2	2895.6	2897.2	2900.5
5.5°	2891.1	2892.7	2896.0	2898.0	2896.8	2898.0	2896.0	2892.7	2891.1	2892.7	2896.0
6°	2885.4	2887.4	2891.1	2893.1	2891.9	2893.1	2891.1	2887.4	2885.4	2887.4	2891.1
6.5°	2879.6	2882.1	2885.8	2887.4	2885.8	2887.4	2885.8	2882.1	2879.6	2882.1	2885.8
7°	2873.5	2875.9	2879.6	2880.9	2879.2	2880.9	2879.6	2875.9	2873.5	2875.9	2879.6
7.5°	2866.5	2869.4	2873.1	2873.9	2871.9	2873.9	2873.1	2869.4	2866.5	2869.4	2873.1
8°	2859.2	2862.5	2866.1	2866.5	2864.5	2866.5	2866.1	2862.5	2859.2	2862.5	2866.1
8.5°	2851.4	2854.7	2858.4	2858.0	2855.9	2858.0	2858.4	2854.7	2851.4	2854.7	2858.4
9°	2843.2	2846.5	2850.2	2849.4	2846.9	2849.4	2850.2	2846.5	2843.2	2846.5	2850.2
9.5°	2834.7	2837.9	2841.6	2840.0	2837.5	2840.0	2841.6	2837.9	2834.7	2837.9	2841.6
10°	2825.2	2829.3	2832.2	2830.6	2827.7	2830.6	2832.2	2829.3	2825.2	2829.3	2832.2
10.5°	2815.4	2819.5	2822.4	2820.3	2817.5	2820.3	2822.4	2819.5	2815.4	2819.5	2822.4
11°	2805.2	2809.7	2812.2	2809.7	2806.4	2809.7	2812.2	2809.7	2805.2	2809.7	2812.2
11.5°	2794.6	2799.1	2801.1	2798.3	2795.0	2798.3	2801.1	2799.1	2794.6	2799.1	2801.1
12°	2783.1	2788.0	2789.7	2786.8	2783.5	2786.8	2789.7	2788.0	2783.1	2788.0	2789.7
12.5°	2771.3	2776.6	2777.8	2774.6	2770.9	2774.6	2777.8	2776.6	2771.3	2776.6	2777.8
13°	2759.0	2764.3	2765.6	2761.9	2758.2	2761.9	2765.6	2764.3	2759.0	2764.3	2765.6
13.5°	2746.3	2751.7	2752.5	2748.8	2744.7	2748.8	2752.5	2751.7	2746.3	2751.7	2752.5
14°	2732.8	2739.0	2739.4	2735.3	2730.8	2735.3	2739.4	2739.0	2732.8	2739.0	2739.4
14.5°	2719.4	2725.1	2725.5	2721.0	2716.5	2721.0	2725.5	2725.1	2719.4	2725.1	2725.5
15°	2705.0	2711.2	2711.6	2706.3	2701.8	2706.3	2711.6	2711.2	2705.0	2711.2	2711.6
15.5°	2690.3	2696.9	2696.5	2691.1	2686.2	2691.1	2696.5	2696.9	2690.3	2696.9	2696.5
16°	2675.2	2681.7	2681.3	2675.6	2670.7	2675.6	2681.3	2681.7	2675.2	2681.7	2681.3
16.5°	2659.7	2666.2	2665.4	2659.7	2654.3	2659.7	2665.4	2666.2	2659.7	2666.2	2665.4
17°	2643.7	2650.3	2649.4	2642.9	2637.6	2642.9	2649.4	2650.3	2643.7	2650.3	2649.4
17.5°	2627.0	2633.9	2632.7	2626.1	2620.4	2626.1	2632.7	2633.9	2627.0	2633.9	2632.7
18°	2609.8	2616.7	2615.1	2608.6	2602.4	2608.6	2615.1	2616.7	2609.8	2616.7	2615.1
18.5°	2592.2	2599.1	2597.9	2591.0	2584.0	2591.0	2597.9	2599.1	2592.2	2599.1	2597.9
19°	2574.2	2581.6	2579.9	2572.6	2565.6	2572.6	2579.9	2581.6	2574.2	2581.6	2579.9
19.5°	2555.4	2563.2	2561.1	2553.8	2546.4	2553.8	2561.1	2563.2	2555.4	2563.2	2561.1
20°	2536.6	2544.4	2542.3	2535.0	2527.2	2535.0	2542.3	2544.4	2536.6	2544.4	2542.3
20.5°	2517.4	2525.1	2523.1	2514.9	2507.2	2514.9	2523.1	2525.1	2517.4	2525.1	2523.1
21°	2497.3	2505.1	2503.5	2494.9	2486.7	2494.9	2503.5	2505.1	2497.3	2505.1	2503.5



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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°	2434.8	2443.4	2441.3	2432.3	2424.6	2432.3	2441.3	2443.4	2434.8	2443.4	2441.3
23°	2413.1	2421.7	2420.1	2410.7	2402.9	2410.7	2420.1	2421.7	2413.1	2421.7	2420.1
23.5°	2390.6	2400.0	2398.4	2389.0	2381.6	2389.0	2398.4	2400.0	2390.6	2400.0	2398.4
24°	2368.1	2377.1	2376.3	2366.9	2359.6	2366.9	2376.3	2377.1	2368.1	2377.1	2376.3
24.5°	2344.4	2354.2	2353.8	2344.8	2336.2	2344.8	2353.8	2354.2	2344.4	2354.2	2353.8
25°	2320.3	2330.9	2330.5	2322.3	2312.5	2322.3	2330.5	2330.9	2320.3	2330.9	2330.5
25.5°	2296.2	2307.2	2307.2	2298.6	2288.8	2298.6	2307.2	2307.2	2296.2	2307.2	2307.2
26°	2270.8	2282.7	2283.5	2275.7	2264.3	2275.7	2283.5	2282.7	2270.8	2282.7	2283.5
26.5°	2245.5	2257.7	2259.4	2251.6	2238.5	2251.6	2259.4	2257.7	2245.5	2257.7	2259.4
27°	2218.9	2232.4	2234.8	2227.1	2212.0	2227.1	2234.8	2232.4	2218.9	2232.4	2234.8
27.5°	2192.7	2206.6	2210.3	2201.7	2185.4	2201.7	2210.3	2206.6	2192.7	2206.6	2210.3
28°	2165.3	2180.1	2185.4	2175.6	2157.2	2175.6	2185.4	2180.1	2165.3	2180.1	2185.4
28.5°	2137.5	2153.1	2159.6	2149.0	2128.5	2149.0	2159.6	2153.1	2137.5	2153.1	2159.6
29°	2108.5	2126.5	2134.3	2122.0	2099.9	2122.0	2134.3	2126.5	2108.5	2126.5	2134.3
29.5°	2079.5	2099.1	2108.9	2093.8	2070.5	2093.8	2108.9	2099.1	2079.5	2099.1	2108.9
30°	2050.5	2070.9	2082.3	2065.6	2041.0	2065.6	2082.3	2070.9	2050.5	2070.9	2082.3
30.5°	2020.6	2042.3	2056.2	2036.6	2010.8	2036.6	2056.2	2042.3	2020.6	2042.3	2056.2
31°	1989.5	2013.2	2029.2	2007.9	1980.5	2007.9	2029.2	2013.2	1989.5	2013.2	2029.2
31.5°	1959.3	1984.2	2002.6	1978.5	1949.5	1978.5	2002.6	1984.2	1959.3	1984.2	2002.6
32°	1928.2	1954.4	1975.6	1949.1	1918.0	1949.1	1975.6	1954.4	1928.2	1954.4	1975.6
32.5°	1896.7	1924.1	1948.2	1918.4	1886.5	1918.4	1948.2	1924.1	1896.7	1924.1	1948.2
33°	1864.8	1893.9	1920.4	1889.0	1855.0	1889.0	1920.4	1893.9	1864.8	1893.9	1920.4
33.5°	1832.9	1864.0	1892.2	1858.7	1822.7	1858.7	1892.2	1864.0	1832.9	1864.0	1892.2
34°	1799.8	1833.3	1863.6	1828.4	1790.0	1828.4	1863.6	1833.3	1799.8	1833.3	1863.6
34.5°	1767.1	1802.3	1835.0	1798.2	1756.9	1798.2	1835.0	1802.3	1767.1	1802.3	1835.0
35°	1733.2	1771.2	1806.4	1767.1	1724.2	1767.1	1806.4	1771.2	1733.2	1771.2	1806.4
35.5°	1700.5	1740.5	1776.5	1736.4	1691.5	1736.4	1776.5	1740.5	1700.5	1740.5	1776.5
36°	1666.5	1709.1	1746.7	1705.4	1652.6	1705.4	1746.7	1709.1	1666.5	1709.1	1746.7
36.5°	1630.1	1676.8	1717.6	1673.9	1608.9	1673.9	1717.6	1676.8	1630.1	1676.8	1717.6
37°	1586.4	1645.3	1687.8	1642.4	1560.6	1642.4	1687.8	1645.3	1586.4	1645.3	1687.8
37.5°	1529.2	1613.0	1658.4	1610.5	1510.8	1610.5	1658.4	1613.0	1529.2	1613.0	1658.4
38°	1471.5	1581.1	1627.7	1579.0	1457.6	1579.0	1627.7	1581.1	1471.5	1581.1	1627.7
38.5°	1407.7	1548.8	1598.2	1544.3	1403.2	1544.3	1598.2	1548.8	1407.7	1548.8	1598.2
39°	1341.5	1515.2	1568.8	1503.8	1342.3	1503.8	1568.8	1515.2	1341.5	1515.2	1568.8
39.5°	1272.4	1466.6	1539.8	1458.4	1278.1	1458.4	1539.8	1466.6	1272.4	1466.6	1539.8
40°	1203.7	1414.3	1510.3	1408.9	1210.2	1408.9	1510.3	1414.3	1203.7	1414.3	1510.3
40.5°	1135.0	1355.0	1481.3	1356.2	1143.2	1356.2	1481.3	1355.0	1135.0	1355.0	1481.3
41°	1070.0	1293.6	1453.1	1299.8	1078.6	1299.8	1453.1	1293.6	1070.0	1293.6	1453.1
41.5°	1005.4	1230.7	1425.7	1240.5	1014.4	1240.5	1425.7	1230.7	1005.4	1230.7	1425.7
42°	942.4	1167.7	1398.3	1178.3	952.2	1178.3	1398.3	1167.7	942.4	1167.7	1398.3
42.5°	879.5	1105.6	1371.3	1116.2	889.3	1116.2	1371.3	1105.6	879.5	1105.6	1371.3
43°	817.3	1042.6	1344.3	1053.6	828.4	1053.6	1344.3	1042.6	817.3	1042.6	1344.3
43.5°	754.8	981.3	1317.8	992.3	767.0	992.3	1317.8	981.3	754.8	981.3	1317.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	582.2	803.0	1237.6	816.9	596.9	816.9	1237.6	803.0	582.2	803.0	1237.6
45.5°	528.3	744.5	1211.1	758.9	545.0	758.9	1211.1	744.5	528.3	744.5	1211.1
46°	478.0	688.1	1184.1	701.6	495.1	701.6	1184.1	688.1	478.0	688.1	1184.1
46.5°	428.5	633.3	1156.3	646.0	444.4	646.0	1156.3	633.3	428.5	633.3	1156.3
47°	379.8	579.4	1117.4	591.6	395.4	591.6	1117.4	579.4	379.8	579.4	1117.4
47.5°	333.2	527.4	1070.0	540.9	351.6	540.9	1070.0	527.4	333.2	527.4	1070.0
48°	293.6	477.1	1013.6	491.0	313.2	491.0	1013.6	477.1	293.6	477.1	1013.6
48.5°	257.2	429.3	953.9	442.8	277.2	442.8	953.9	429.3	257.2	429.3	953.9
49°	224.9	382.7	891.3	395.4	244.5	395.4	891.3	382.7	224.9	382.7	891.3
49.5°	196.7	337.7	827.1	352.8	213.8	352.8	827.1	337.7	196.7	337.7	827.1
50°	171.7	295.6	762.1	312.0	185.6	312.0	762.1	295.6	171.7	295.6	762.1
50.5°	148.4	257.6	697.9	274.3	159.0	274.3	697.9	257.6	148.4	257.6	697.9
51°	127.2	223.6	634.6	239.2	133.7	239.2	634.6	223.6	127.2	223.6	634.6
51.5°	110.0	193.8	575.3	207.3	112.4	207.3	575.3	193.8	110.0	193.8	575.3
52°	92.8	167.6	520.9	179.5	95.7	179.5	520.9	167.6	92.8	167.6	520.9
52.5°	78.1	144.3	467.7	153.7	84.2	153.7	467.7	144.3	78.1	144.3	467.7
53°	67.5	123.1	418.3	130.0	73.2	130.0	418.3	123.1	67.5	123.1	418.3
53.5°	57.6	105.1	369.6	107.9	61.7	107.9	369.6	105.1	57.6	105.1	369.6
54°	55.2	87.9	325.0	88.3	50.7	88.3	325.0	87.9	55.2	87.9	325.0
54.5°	52.7	73.6	282.5	73.2	48.2	73.2	282.5	73.6	52.7	73.6	282.5
55°	50.7	60.9	244.9	61.3	46.6	61.3	244.9	60.9	50.7	60.9	244.9
55.5°	48.7	51.9	211.0	52.7	44.6	52.7	211.0	51.9	48.7	51.9	211.0
56°	46.6	47.8	180.3	46.2	42.9	46.2	180.3	47.8	46.6	47.8	180.3
56.5°	44.6	45.8	152.9	42.9	41.3	42.9	152.9	45.8	44.6	45.8	152.9
57°	42.9	44.2	130.0	41.3	39.7	41.3	130.0	44.2	42.9	44.2	130.0
57.5°	40.9	42.5	110.0	39.7	38.0	39.7	110.0	42.5	40.9	42.5	110.0
58°	39.3	40.9	93.6	38.4	36.8	38.4	93.6	40.9	39.3	40.9	93.6
58.5°	37.6	39.3	78.9	36.8	35.2	36.8	78.9	39.3	37.6	39.3	78.9
59°	36.4	38.0	67.1	35.6	33.9	35.6	67.1	38.0	36.4	38.0	67.1
59.5°	34.8	36.8	56.8	34.3	32.7	34.3	56.8	36.8	34.8	36.8	56.8
60°	33.5	35.2	47.8	33.1	31.5	33.1	47.8	35.2	33.5	35.2	47.8
60.5°	31.9	33.9	42.5	31.9	29.8	31.9	42.5	33.9	31.9	33.9	42.5
61°	30.7	32.7	38.4	31.1	29.0	31.1	38.4	32.7	30.7	32.7	38.4
61.5°	29.4	31.5	35.2	29.8	27.8	29.8	35.2	31.5	29.4	31.5	35.2
62°	28.2	30.7	33.1	28.6	26.6	28.6	33.1	30.7	28.2	30.7	33.1
62.5°	27.0	29.4	31.5	27.8	25.8	27.8	31.5	29.4	27.0	29.4	31.5
63°	25.8	28.2	30.3	27.0	24.5	27.0	30.3	28.2	25.8	28.2	30.3
63.5°	24.9	27.4	29.0	25.8	23.7	25.8	29.0	27.4	24.9	27.4	29.0
64°	23.7	26.2	28.2	24.9	22.5	24.9	28.2	26.2	23.7	26.2	28.2
64.5°	22.9	25.3	27.0	24.1	21.7	24.1	27.0	25.3	22.9	25.3	27.0
65°	21.7	24.5	26.2	23.3	20.9	23.3	26.2	24.5	21.7	24.5	26.2
65.5°	20.9	23.3	24.9	22.5	20.0	22.5	24.9	23.3	20.9	23.3	24.9
66°	20.0	22.5	24.1	21.7	19.2	21.7	24.1	22.5	20.0	22.5	24.1





TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	17.6	20.0	21.7	19.2	16.8	19.2	21.7	20.0	17.6	20.0	21.7
68°	16.8	19.2	20.9	18.4	16.4	18.4	20.9	19.2	16.8	19.2	20.9
68.5°	15.9	18.4	20.0	18.0	15.5	18.0	20.0	18.4	15.9	18.4	20.0
69°	15.5	17.6	19.2	17.2	14.7	17.2	19.2	17.6	15.5	17.6	19.2
69.5°	14.7	17.2	18.4	16.4	14.3	16.4	18.4	17.2	14.7	17.2	18.4
70°	13.9	16.4	17.6	15.9	13.5	15.9	17.6	16.4	13.9	16.4	17.6
70.5°	13.5	15.5	17.2	15.1	13.1	15.1	17.2	15.5	13.5	15.5	17.2
71°	12.7	15.1	16.4	14.7	12.7	14.7	16.4	15.1	12.7	15.1	16.4
71.5°	12.3	14.3	15.5	13.9	11.9	13.9	15.5	14.3	12.3	14.3	15.5
72°	11.4	13.9	15.1	13.5	11.4	13.5	15.1	13.9	11.4	13.9	15.1
72.5°	11.0	13.1	14.3	12.7	11.0	12.7	14.3	13.1	11.0	13.1	14.3
73°	10.6	12.7	13.5	12.3	10.2	12.3	13.5	12.7	10.6	12.7	13.5
73.5°	9.8	11.9	13.1	11.9	9.8	11.9	13.1	11.9	9.8	11.9	13.1
74°	9.4	11.4	12.3	11.0	9.4	11.0	12.3	11.4	9.4	11.4	12.3
74.5°	9.0	11.0	11.9	10.6	9.0	10.6	11.9	11.0	9.0	11.0	11.9
75°	8.6	10.2	11.0	10.2	8.6	10.2	11.0	10.2	8.6	10.2	11.0
75.5°	8.2	9.8	10.6	9.8	8.2	9.8	10.6	9.8	8.2	9.8	10.6
76°	7.8	9.4	10.2	9.0	7.8	9.0	10.2	9.4	7.8	9.4	10.2
76.5°	7.4	8.6	9.4	8.6	7.4	8.6	9.4	8.6	7.4	8.6	9.4
77°	6.5	8.2	9.0	8.2	7.0	8.2	9.0	8.2	6.5	8.2	9.0
77.5°	6.1	7.8	8.6	7.8	6.5	7.8	8.6	7.8	6.1	7.8	8.6
78°	6.1	7.4	7.8	7.4	6.1	7.4	7.8	7.4	6.1	7.4	7.8
78.5°	5.7	7.0	7.4	7.0	5.7	7.0	7.4	7.0	5.7	7.0	7.4
79°	5.3	6.5	7.0	6.5	5.3	6.5	7.0	6.5	5.3	6.5	7.0
79.5°	4.9	5.7	6.5	6.1	4.9	6.1	6.5	5.7	4.9	5.7	6.5
80°	4.5	5.3	6.1	5.7	4.9	5.7	6.1	5.3	4.5	5.3	6.1
80.5°	4.1	4.9	5.7	5.3	4.5	5.3	5.7	4.9	4.1	4.9	5.7
81°	3.7	4.5	5.3	4.9	4.1	4.9	5.3	4.5	3.7	4.5	5.3
81.5°	3.7	4.1	4.9	4.5	3.7	4.5	4.9	4.1	3.7	4.1	4.9
82°	3.3	3.7	4.5	4.1	3.7	4.1	4.5	3.7	3.3	3.7	4.5
82.5°	2.9	3.3	4.1	3.7	3.3	3.7	4.1	3.3	2.9	3.3	4.1
83°	2.5	3.3	3.7	3.3	2.9	3.3	3.7	3.3	2.5	3.3	3.7
83.5°	2.5	2.9	3.3	3.3	2.5	3.3	3.3	2.9	2.5	2.9	3.3
84°	2.0	2.5	2.9	2.9	2.5	2.9	2.9	2.5	2.0	2.5	2.9
84.5°	1.6	2.0	2.5	2.5	2.0	2.5	2.5	2.0	1.6	2.0	2.5
85°	1.6	1.6	2.0	2.0	1.6	2.0	2.0	1.6	1.6	1.6	2.0
85.5°	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.6
86°	0.8	1.2	1.6	1.6	1.2	1.6	1.6	1.2	0.8	1.2	1.6
86.5°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
87°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.8
87.5°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8
88°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
88.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

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



TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5
0.5°	2922.1	2921.3	2922.1	2920.9	2918.9	2917.7
1°	2921.3	2920.9	2921.3	2920.1	2918.5	2917.2
1.5°	2920.5	2920.1	2920.5	2919.3	2917.2	2916.0
2°	2919.3	2918.5	2919.3	2917.7	2915.6	2914.4
2.5°	2917.2	2916.8	2917.2	2916.0	2913.6	2912.3
3°	2915.2	2914.8	2915.2	2913.6	2911.5	2909.9
3.5°	2912.7	2912.3	2912.7	2911.1	2908.7	2907.0
4°	2909.9	2909.5	2909.9	2907.8	2905.4	2903.8
4.5°	2906.2	2905.8	2906.2	2904.2	2901.3	2900.1
5°	2902.5	2901.7	2902.5	2900.5	2897.2	2895.6
5.5°	2898.0	2896.8	2898.0	2896.0	2892.7	2891.1
6°	2893.1	2891.9	2893.1	2891.1	2887.4	2885.4
6.5°	2887.4	2885.8	2887.4	2885.8	2882.1	2879.6
7°	2880.9	2879.2	2880.9	2879.6	2875.9	2873.5
7.5°	2873.9	2871.9	2873.9	2873.1	2869.4	2866.5
8°	2866.5	2864.5	2866.5	2866.1	2862.5	2859.2
8.5°	2858.0	2855.9	2858.0	2858.4	2854.7	2851.4
9°	2849.4	2846.9	2849.4	2850.2	2846.5	2843.2
9.5°	2840.0	2837.5	2840.0	2841.6	2837.9	2834.7
10°	2830.6	2827.7	2830.6	2832.2	2829.3	2825.2
10.5°	2820.3	2817.5	2820.3	2822.4	2819.5	2815.4
11°	2809.7	2806.4	2809.7	2812.2	2809.7	2805.2
11.5°	2798.3	2795.0	2798.3	2801.1	2799.1	2794.6
12°	2786.8	2783.5	2786.8	2789.7	2788.0	2783.1
12.5°	2774.6	2770.9	2774.6	2777.8	2776.6	2771.3
13°	2761.9	2758.2	2761.9	2765.6	2764.3	2759.0
13.5°	2748.8	2744.7	2748.8	2752.5	2751.7	2746.3
14°	2735.3	2730.8	2735.3	2739.4	2739.0	2732.8
14.5°	2721.0	2716.5	2721.0	2725.5	2725.1	2719.4
15°	2706.3	2701.8	2706.3	2711.6	2711.2	2705.0
15.5°	2691.1	2686.2	2691.1	2696.5	2696.9	2690.3
16°	2675.6	2670.7	2675.6	2681.3	2681.7	2675.2
16.5°	2659.7	2654.3	2659.7	2665.4	2666.2	2659.7
17°	2642.9	2637.6	2642.9	2649.4	2650.3	2643.7
17.5°	2626.1	2620.4	2626.1	2632.7	2633.9	2627.0
18°	2608.6	2602.4	2608.6	2615.1	2616.7	2609.8
18.5°	2591.0	2584.0	2591.0	2597.9	2599.1	2592.2
19°	2572.6	2565.6	2572.6	2579.9	2581.6	2574.2
19.5°	2553.8	2546.4	2553.8	2561.1	2563.2	2555.4
20°	2535.0	2527.2	2535.0	2542.3	2544.4	2536.6
20.5°	2514.9	2507.2	2514.9	2523.1	2525.1	2517.4
21°	2494.9	2486.7	2494.9	2503.5	2505.1	2497.3



TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2432.3	2424.6	2432.3	2441.3	2443.4	2434.8
23°	2410.7	2402.9	2410.7	2420.1	2421.7	2413.1
23.5°	2389.0	2381.6	2389.0	2398.4	2400.0	2390.6
24°	2366.9	2359.6	2366.9	2376.3	2377.1	2368.1
24.5°	2344.8	2336.2	2344.8	2353.8	2354.2	2344.4
25°	2322.3	2312.5	2322.3	2330.5	2330.9	2320.3
25.5°	2298.6	2288.8	2298.6	2307.2	2307.2	2296.2
26°	2275.7	2264.3	2275.7	2283.5	2282.7	2270.8
26.5°	2251.6	2238.5	2251.6	2259.4	2257.7	2245.5
27°	2227.1	2212.0	2227.1	2234.8	2232.4	2218.9
27.5°	2201.7	2185.4	2201.7	2210.3	2206.6	2192.7
28°	2175.6	2157.2	2175.6	2185.4	2180.1	2165.3
28.5°	2149.0	2128.5	2149.0	2159.6	2153.1	2137.5
29°	2122.0	2099.9	2122.0	2134.3	2126.5	2108.5
29.5°	2093.8	2070.5	2093.8	2108.9	2099.1	2079.5
30°	2065.6	2041.0	2065.6	2082.3	2070.9	2050.5
30.5°	2036.6	2010.8	2036.6	2056.2	2042.3	2020.6
31°	2007.9	1980.5	2007.9	2029.2	2013.2	1989.5
31.5°	1978.5	1949.5	1978.5	2002.6	1984.2	1959.3
32°	1949.1	1918.0	1949.1	1975.6	1954.4	1928.2
32.5°	1918.4	1886.5	1918.4	1948.2	1924.1	1896.7
33°	1889.0	1855.0	1889.0	1920.4	1893.9	1864.8
33.5°	1858.7	1822.7	1858.7	1892.2	1864.0	1832.9
34°	1828.4	1790.0	1828.4	1863.6	1833.3	1799.8
34.5°	1798.2	1756.9	1798.2	1835.0	1802.3	1767.1
35°	1767.1	1724.2	1767.1	1806.4	1771.2	1733.2
35.5°	1736.4	1691.5	1736.4	1776.5	1740.5	1700.5
36°	1705.4	1652.6	1705.4	1746.7	1709.1	1666.5
36.5°	1673.9	1608.9	1673.9	1717.6	1676.8	1630.1
37°	1642.4	1560.6	1642.4	1687.8	1645.3	1586.4
37.5°	1610.5	1510.8	1610.5	1658.4	1613.0	1529.2
38°	1579.0	1457.6	1579.0	1627.7	1581.1	1471.5
38.5°	1544.3	1403.2	1544.3	1598.2	1548.8	1407.7
39°	1503.8	1342.3	1503.8	1568.8	1515.2	1341.5
39.5°	1458.4	1278.1	1458.4	1539.8	1466.6	1272.4
40°	1408.9	1210.2	1408.9	1510.3	1414.3	1203.7
40.5°	1356.2	1143.2	1356.2	1481.3	1355.0	1135.0
41°	1299.8	1078.6	1299.8	1453.1	1293.6	1070.0
41.5°	1240.5	1014.4	1240.5	1425.7	1230.7	1005.4
42°	1178.3	952.2	1178.3	1398.3	1167.7	942.4
42.5°	1116.2	889.3	1116.2	1371.3	1105.6	879.5
43°	1053.6	828.4	1053.6	1344.3	1042.6	817.3
43.5°	992.3	767.0	992.3	1317.8	981.3	754.8



TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	816.9	596.9	816.9	1237.6	803.0	582.2
45.5°	758.9	545.0	758.9	1211.1	744.5	528.3
46°	701.6	495.1	701.6	1184.1	688.1	478.0
46.5°	646.0	444.4	646.0	1156.3	633.3	428.5
47°	591.6	395.4	591.6	1117.4	579.4	379.8
47.5°	540.9	351.6	540.9	1070.0	527.4	333.2
48°	491.0	313.2	491.0	1013.6	477.1	293.6
48.5°	442.8	277.2	442.8	953.9	429.3	257.2
49°	395.4	244.5	395.4	891.3	382.7	224.9
49.5°	352.8	213.8	352.8	827.1	337.7	196.7
50°	312.0	185.6	312.0	762.1	295.6	171.7
50.5°	274.3	159.0	274.3	697.9	257.6	148.4
51°	239.2	133.7	239.2	634.6	223.6	127.2
51.5°	207.3	112.4	207.3	575.3	193.8	110.0
52°	179.5	95.7	179.5	520.9	167.6	92.8
52.5°	153.7	84.2	153.7	467.7	144.3	78.1
53°	130.0	73.2	130.0	418.3	123.1	67.5
53.5°	107.9	61.7	107.9	369.6	105.1	57.6
54°	88.3	50.7	88.3	325.0	87.9	55.2
54.5°	73.2	48.2	73.2	282.5	73.6	52.7
55°	61.3	46.6	61.3	244.9	60.9	50.7
55.5°	52.7	44.6	52.7	211.0	51.9	48.7
56°	46.2	42.9	46.2	180.3	47.8	46.6
56.5°	42.9	41.3	42.9	152.9	45.8	44.6
57°	41.3	39.7	41.3	130.0	44.2	42.9
57.5°	39.7	38.0	39.7	110.0	42.5	40.9
58°	38.4	36.8	38.4	93.6	40.9	39.3
58.5°	36.8	35.2	36.8	78.9	39.3	37.6
59°	35.6	33.9	35.6	67.1	38.0	36.4
59.5°	34.3	32.7	34.3	56.8	36.8	34.8
60°	33.1	31.5	33.1	47.8	35.2	33.5
60.5°	31.9	29.8	31.9	42.5	33.9	31.9
61°	31.1	29.0	31.1	38.4	32.7	30.7
61.5°	29.8	27.8	29.8	35.2	31.5	29.4
62°	28.6	26.6	28.6	33.1	30.7	28.2
62.5°	27.8	25.8	27.8	31.5	29.4	27.0
63°	27.0	24.5	27.0	30.3	28.2	25.8
63.5°	25.8	23.7	25.8	29.0	27.4	24.9
64°	24.9	22.5	24.9	28.2	26.2	23.7
64.5°	24.1	21.7	24.1	27.0	25.3	22.9
65°	23.3	20.9	23.3	26.2	24.5	21.7
65.5°	22.5	20.0	22.5	24.9	23.3	20.9
66°	21.7	19.2	21.7	24.1	22.5	20.0



TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	19.2	16.8	19.2	21.7	20.0	17.6
68°	18.4	16.4	18.4	20.9	19.2	16.8
68.5°	18.0	15.5	18.0	20.0	18.4	15.9
69°	17.2	14.7	17.2	19.2	17.6	15.5
69.5°	16.4	14.3	16.4	18.4	17.2	14.7
70°	15.9	13.5	15.9	17.6	16.4	13.9
70.5°	15.1	13.1	15.1	17.2	15.5	13.5
71°	14.7	12.7	14.7	16.4	15.1	12.7
71.5°	13.9	11.9	13.9	15.5	14.3	12.3
72°	13.5	11.4	13.5	15.1	13.9	11.4
72.5°	12.7	11.0	12.7	14.3	13.1	11.0
73°	12.3	10.2	12.3	13.5	12.7	10.6
73.5°	11.9	9.8	11.9	13.1	11.9	9.8
74°	11.0	9.4	11.0	12.3	11.4	9.4
74.5°	10.6	9.0	10.6	11.9	11.0	9.0
75°	10.2	8.6	10.2	11.0	10.2	8.6
75.5°	9.8	8.2	9.8	10.6	9.8	8.2
76°	9.0	7.8	9.0	10.2	9.4	7.8
76.5°	8.6	7.4	8.6	9.4	8.6	7.4
77°	8.2	7.0	8.2	9.0	8.2	6.5
77.5°	7.8	6.5	7.8	8.6	7.8	6.1
78°	7.4	6.1	7.4	7.8	7.4	6.1
78.5°	7.0	5.7	7.0	7.4	7.0	5.7
79°	6.5	5.3	6.5	7.0	6.5	5.3
79.5°	6.1	4.9	6.1	6.5	5.7	4.9
80°	5.7	4.9	5.7	6.1	5.3	4.5
80.5°	5.3	4.5	5.3	5.7	4.9	4.1
81°	4.9	4.1	4.9	5.3	4.5	3.7
81.5°	4.5	3.7	4.5	4.9	4.1	3.7
82°	4.1	3.7	4.1	4.5	3.7	3.3
82.5°	3.7	3.3	3.7	4.1	3.3	2.9
83°	3.3	2.9	3.3	3.7	3.3	2.5
83.5°	3.3	2.5	3.3	3.3	2.9	2.5
84°	2.9	2.5	2.9	2.9	2.5	2.0
84.5°	2.5	2.0	2.5	2.5	2.0	1.6
85°	2.0	1.6	2.0	2.0	1.6	1.6
85.5°	1.6	1.6	1.6	1.6	1.2	1.2
86°	1.6	1.2	1.6	1.6	1.2	0.8
86.5°	1.2	1.2	1.2	1.2	0.8	0.8
87°	0.8	0.8	0.8	0.8	0.8	0.4
87.5°	0.8	0.8	0.8	0.8	0.4	0.4
88°	0.4	0.4	0.4	0.4	0.4	0.4
88.5°	0.4	0.4	0.4	0.4	0.0	0.0



TEST NUMBER: P776519

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-5000K

**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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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°	2477.3	2485.1	2483.0	2474.4	2466.7	2474.4	2483.0	2485.1	2477.3	2485.1	2483.0
22°	2455.6	2464.6	2462.2	2453.6	2445.4	2453.6	2462.2	2464.6	2455.6	2464.6	2462.2



44°	694.7	921.6	1290.8	933.4	707.3	933.4	1290.8	921.6	694.7	921.6	1290.8
44.5°	638.2	863.1	1264.6	875.0	648.9	875.0	1264.6	863.1	638.2	863.1	1264.6



66.5°	19.2	21.7	23.3	20.9	18.4	20.9	23.3	21.7	19.2	21.7	23.3
67°	18.4	20.9	22.5	20.0	17.6	20.0	22.5	20.9	18.4	20.9	22.5



89°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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21.5°	2474.4	2466.7	2474.4	2483.0	2485.1	2477.3
22°	2453.6	2445.4	2453.6	2462.2	2464.6	2455.6



44°	933.4	707.3	933.4	1290.8	921.6	694.7
44.5°	875.0	648.9	875.0	1264.6	863.1	638.2

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66.5°	20.9	18.4	20.9	23.3	21.7	19.2
67°	20.0	17.6	20.0	22.5	20.9	18.4

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Scaled Data Report



89°	0.0	0.4	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)