

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: P776280

Luminaire Tested: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776280
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156A001)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD42TRMW-4000lm-2700K
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

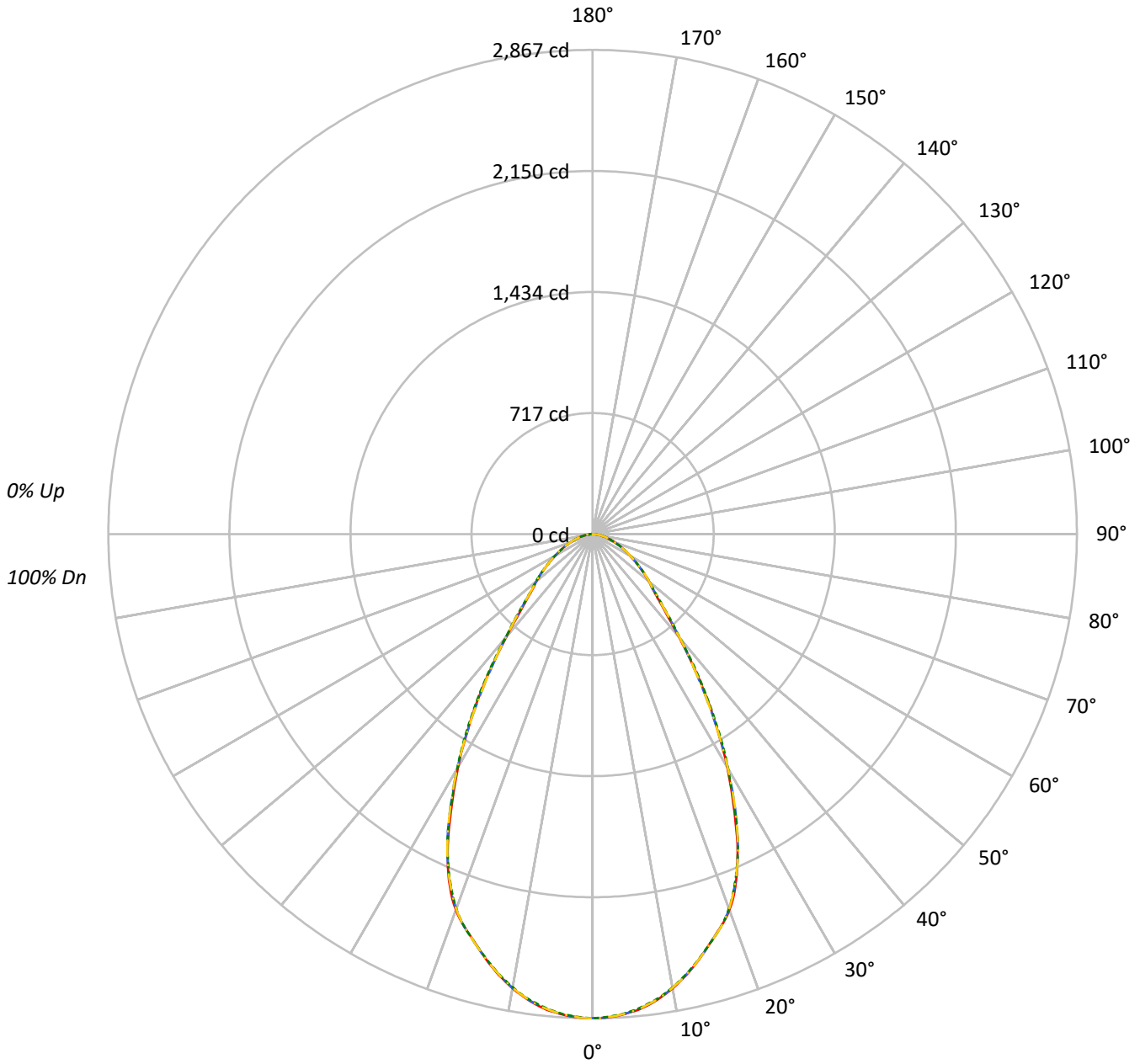
Lumens per Lamp: N/A
Luminaire Lumens: 3702.0 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					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	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53								
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49								
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42								
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	360811	360811	360811	360811
5°	358261	357477	358261	357477
10°	348998	348218	348998	348218
15°	333567	333163	333567	333163
20°	317165	316040	317165	316040
25°	281511	282413	281511	282413
30°	231609	232830	231609	232830
35°	179675	181626	179675	181626
40°	130508	132775	130508	132775
45°	98814	101270	98814	101270
50°	85089	85775	85089	85775
55°	73964	74798	73964	74798
60°	64662	65241	64662	65241
65°	56818	57294	56818	57294
70°	50153	50447	50153	50447
75°	44054	44054	44054	44054
80°	38121	37831	38121	37831
85°	30468	30468	30468	30468

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 101270 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.1	7.2
10°-20°	719.2	19.4
20°-30°	921.0	24.9
30°-40°	729.8	19.7
40°-50°	446.9	12.1
50°-60°	305.5	8.3
60°-70°	191.2	5.2
70°-80°	96.9	2.6
80°-90°	24.5	0.7
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°	1907.3	51.5
0°-40°	2637.1	71.2
0°-60°	3389.4	91.6
0°-90°	3702.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3702.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2867	2867	2867	2867	2867	
5°	2836	2830	2836	2830	2836	267
15°	2560	2557	2560	2557	2560	719
25°	2027	2034	2027	2034	2027	919
35°	1170	1182	1170	1182	1170	729
45°	555	569	555	569	555	441
55°	337	341	337	341	337	304
65°	191	192	191	192	191	190
75°	91	91	91	91	91	97
85°	21	21	21	21	21	24
90°	0	1	0	1	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°	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0
0.5°	2867.4	2867.0	2866.2	2865.8	2864.7	2865.8	2866.2	2867.0	2867.4	2867.0	2866.2
1°	2866.2	2865.8	2865.4	2865.0	2863.5	2865.0	2865.4	2865.8	2866.2	2865.8	2865.4
1.5°	2864.7	2863.9	2863.9	2863.1	2862.0	2863.1	2863.9	2863.9	2864.7	2863.9	2863.9
2°	2862.4	2862.0	2861.2	2860.8	2859.3	2860.8	2861.2	2862.0	2862.4	2862.0	2861.2
2.5°	2859.7	2858.9	2858.1	2857.8	2855.8	2857.8	2858.1	2858.9	2859.7	2858.9	2858.1
3°	2855.8	2855.1	2854.3	2853.5	2851.6	2853.5	2854.3	2855.1	2855.8	2855.1	2854.3
3.5°	2851.6	2850.8	2849.7	2848.9	2847.8	2848.9	2849.7	2850.8	2851.6	2850.8	2849.7
4°	2846.6	2846.2	2844.7	2843.9	2842.0	2843.9	2844.7	2846.2	2846.6	2846.2	2844.7
4.5°	2841.2	2840.5	2838.9	2838.2	2835.9	2838.2	2838.9	2840.5	2841.2	2840.5	2838.9
5°	2835.9	2834.7	2833.2	2832.4	2829.7	2832.4	2833.2	2834.7	2835.9	2834.7	2833.2
5.5°	2830.1	2827.4	2825.5	2824.7	2822.4	2824.7	2825.5	2827.4	2830.1	2827.4	2825.5
6°	2821.3	2819.7	2817.8	2816.7	2813.6	2816.7	2817.8	2819.7	2821.3	2819.7	2817.8
6.5°	2812.4	2811.3	2809.0	2807.8	2804.8	2807.8	2809.0	2811.3	2812.4	2811.3	2809.0
7°	2803.2	2801.7	2800.5	2798.6	2795.9	2798.6	2800.5	2801.7	2803.2	2801.7	2800.5
7.5°	2792.9	2791.3	2789.8	2789.0	2786.3	2789.0	2789.8	2791.3	2792.9	2791.3	2789.8
8°	2781.7	2780.6	2779.0	2777.9	2776.4	2777.9	2779.0	2780.6	2781.7	2780.6	2779.0
8.5°	2770.2	2768.7	2767.1	2766.0	2764.5	2766.0	2767.1	2768.7	2770.2	2768.7	2767.1
9°	2757.9	2756.8	2754.9	2753.7	2752.2	2753.7	2754.9	2756.8	2757.9	2756.8	2754.9
9.5°	2744.5	2743.7	2741.8	2740.6	2739.1	2740.6	2741.8	2743.7	2744.5	2743.7	2741.8
10°	2731.0	2729.9	2728.4	2726.8	2724.9	2726.8	2728.4	2729.9	2731.0	2729.9	2728.4
10.5°	2716.1	2715.3	2713.4	2712.2	2710.7	2712.2	2713.4	2715.3	2716.1	2715.3	2713.4
11°	2701.1	2700.3	2698.8	2697.3	2695.3	2697.3	2698.8	2700.3	2701.1	2700.3	2698.8
11.5°	2685.4	2684.6	2683.1	2681.5	2680.0	2681.5	2683.1	2684.6	2685.4	2684.6	2683.1
12°	2669.2	2668.5	2667.3	2665.4	2663.9	2665.4	2667.3	2668.5	2669.2	2668.5	2667.3
12.5°	2652.3	2651.6	2650.4	2648.5	2646.6	2648.5	2650.4	2651.6	2652.3	2651.6	2650.4
13°	2635.1	2634.3	2633.1	2631.6	2629.7	2631.6	2633.1	2634.3	2635.1	2634.3	2633.1
13.5°	2617.0	2616.2	2615.5	2613.9	2612.4	2613.9	2615.5	2616.2	2617.0	2616.2	2615.5
14°	2598.6	2598.2	2597.4	2595.9	2594.4	2595.9	2597.4	2598.2	2598.6	2598.2	2597.4
14.5°	2579.4	2579.0	2578.6	2577.1	2575.5	2577.1	2578.6	2579.0	2579.4	2579.0	2578.6
15°	2560.2	2560.2	2559.4	2558.7	2557.1	2558.7	2559.4	2560.2	2560.2	2560.2	2559.4
15.5°	2540.2	2540.2	2541.0	2540.2	2539.5	2540.2	2541.0	2540.2	2540.2	2540.2	2541.0
16°	2521.0	2521.4	2522.6	2522.2	2521.4	2522.2	2522.6	2521.4	2521.0	2521.4	2522.6
16.5°	2501.8	2502.6	2504.1	2504.1	2503.7	2504.1	2504.1	2502.6	2501.8	2502.6	2504.1
17°	2483.8	2484.6	2486.1	2485.7	2486.1	2485.7	2486.1	2484.6	2483.8	2484.6	2486.1
17.5°	2466.1	2466.9	2468.0	2467.7	2467.3	2467.7	2468.0	2466.9	2466.1	2466.9	2468.0
18°	2448.8	2449.2	2450.0	2449.2	2448.5	2449.2	2450.0	2449.2	2448.8	2449.2	2450.0
18.5°	2430.4	2430.4	2430.4	2429.6	2428.5	2429.6	2430.4	2430.4	2430.4	2430.4	2430.4
19°	2411.6	2410.4	2409.7	2408.5	2407.4	2408.5	2409.7	2410.4	2411.6	2410.4	2409.7
19.5°	2390.9	2389.3	2387.0	2386.3	2385.1	2386.3	2387.0	2389.3	2390.9	2389.3	2387.0
20°	2368.2	2366.3	2362.1	2362.5	2359.8	2362.5	2362.1	2366.3	2368.2	2366.3	2362.1
20.5°	2343.3	2340.2	2335.2	2336.7	2333.7	2336.7	2335.2	2340.2	2343.3	2340.2	2335.2
21°	2317.1	2312.5	2306.8	2308.7	2304.9	2308.7	2306.8	2312.5	2317.1	2312.5	2306.8



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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°	2221.5	2216.9	2213.1	2212.7	2210.8	2212.7	2213.1	2216.9	2221.5	2216.9	2213.1
23°	2185.1	2181.2	2180.5	2177.8	2177.0	2177.8	2180.5	2181.2	2185.1	2181.2	2180.5
23.5°	2147.8	2144.4	2146.3	2141.7	2143.6	2141.7	2146.3	2144.4	2147.8	2144.4	2146.3
24°	2109.0	2106.4	2111.0	2104.8	2108.3	2104.8	2111.0	2106.4	2109.0	2106.4	2111.0
24.5°	2069.1	2068.0	2073.7	2067.6	2072.2	2067.6	2073.7	2068.0	2069.1	2068.0	2073.7
25°	2027.3	2028.0	2034.9	2030.3	2033.8	2030.3	2034.9	2028.0	2027.3	2028.0	2034.9
25.5°	1983.9	1988.9	1995.0	1993.1	1993.9	1993.1	1995.0	1988.9	1983.9	1988.9	1995.0
26°	1939.3	1948.2	1953.9	1954.3	1951.2	1954.3	1953.9	1948.2	1939.3	1948.2	1953.9
26.5°	1893.7	1906.7	1911.3	1914.0	1907.1	1914.0	1911.3	1906.7	1893.7	1906.7	1911.3
27°	1849.1	1863.7	1868.3	1872.5	1862.2	1872.5	1868.3	1863.7	1849.1	1863.7	1868.3
27.5°	1805.3	1819.2	1824.5	1829.9	1816.5	1829.9	1824.5	1819.2	1805.3	1819.2	1824.5
28°	1761.6	1774.6	1780.0	1785.4	1770.8	1785.4	1780.0	1774.6	1761.6	1774.6	1780.0
28.5°	1719.0	1729.3	1735.5	1740.1	1726.6	1740.1	1735.5	1729.3	1719.0	1729.3	1735.5
29°	1676.7	1683.6	1690.9	1694.0	1684.8	1694.0	1690.9	1683.6	1676.7	1683.6	1690.9
29.5°	1635.3	1638.7	1646.8	1647.9	1643.7	1647.9	1646.8	1638.7	1635.3	1638.7	1646.8
30°	1593.8	1592.6	1601.5	1601.8	1602.2	1601.8	1601.5	1592.6	1593.8	1592.6	1601.5
30.5°	1550.8	1548.1	1556.5	1557.3	1563.1	1557.3	1556.5	1548.1	1550.8	1548.1	1556.5
31°	1508.2	1502.4	1511.2	1512.8	1521.6	1512.8	1511.2	1502.4	1508.2	1502.4	1511.2
31.5°	1464.4	1458.6	1465.9	1468.6	1479.8	1468.6	1465.9	1458.6	1464.4	1458.6	1465.9
32°	1419.9	1414.5	1421.0	1425.2	1436.7	1425.2	1421.0	1414.5	1419.9	1414.5	1421.0
32.5°	1376.9	1372.2	1376.9	1382.2	1393.7	1382.2	1376.9	1372.2	1376.9	1372.2	1376.9
33°	1333.5	1330.0	1331.5	1339.2	1350.0	1339.2	1331.5	1330.0	1333.5	1330.0	1331.5
33.5°	1294.7	1287.8	1286.6	1296.2	1305.8	1296.2	1286.6	1287.8	1294.7	1287.8	1286.6
34°	1252.8	1245.5	1242.1	1254.0	1264.0	1254.0	1242.1	1245.5	1252.8	1245.5	1242.1
34.5°	1211.4	1203.7	1198.7	1211.4	1222.5	1211.4	1198.7	1203.7	1211.4	1203.7	1198.7
35°	1169.5	1163.0	1157.6	1170.3	1182.2	1170.3	1157.6	1163.0	1169.5	1163.0	1157.6
35.5°	1128.8	1122.7	1116.9	1129.6	1142.6	1129.6	1116.9	1122.7	1128.8	1122.7	1116.9
36°	1088.9	1082.4	1077.4	1090.4	1103.9	1090.4	1077.4	1082.4	1088.9	1082.4	1077.4
36.5°	1049.3	1043.6	1039.0	1051.6	1064.3	1051.6	1039.0	1043.6	1049.3	1043.6	1039.0
37°	1009.4	1005.2	1001.3	1014.0	1025.2	1014.0	1001.3	1005.2	1009.4	1005.2	1001.3
37.5°	970.6	967.9	965.3	977.9	986.0	977.9	965.3	967.9	970.6	967.9	965.3
38°	932.2	931.9	930.7	942.6	947.2	942.6	930.7	931.9	932.2	931.9	930.7
38.5°	896.1	896.9	897.7	908.0	910.0	908.0	897.7	896.9	896.1	896.9	897.7
39°	861.2	863.1	864.7	874.6	874.3	874.6	864.7	863.1	861.2	863.1	864.7
39.5°	827.0	830.5	833.2	841.6	840.5	841.6	833.2	830.5	827.0	830.5	833.2
40°	794.4	798.2	802.8	809.8	808.2	809.8	802.8	798.2	794.4	798.2	802.8
40.5°	763.7	767.5	773.7	778.7	778.3	778.7	773.7	767.5	763.7	767.5	773.7
41°	734.1	738.0	746.0	749.5	750.6	749.5	746.0	738.0	734.1	738.0	746.0
41.5°	706.1	710.3	719.5	721.4	724.9	721.4	719.5	710.3	706.1	710.3	719.5
42°	680.0	684.2	694.2	695.3	699.9	695.3	694.2	684.2	680.0	684.2	694.2
42.5°	655.4	659.6	670.4	670.8	675.8	670.8	670.4	659.6	655.4	659.6	670.4
43°	632.0	636.6	647.0	647.7	652.3	647.7	647.0	636.6	632.0	636.6	647.0
43.5°	610.5	615.1	625.1	625.5	629.7	625.5	625.1	615.1	610.5	615.1	625.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	555.2	559.0	565.2	567.1	569.0	567.1	565.2	559.0	555.2	559.0	565.2
45.5°	539.1	542.1	547.9	549.8	551.4	549.8	547.9	542.1	539.1	542.1	547.9
46°	523.7	526.4	531.4	534.1	534.8	534.1	531.4	526.4	523.7	526.4	531.4
46.5°	509.5	511.8	515.6	518.7	519.5	518.7	515.6	511.8	509.5	511.8	515.6
47°	496.1	497.6	501.4	504.5	505.7	504.5	501.4	497.6	496.1	497.6	501.4
47.5°	483.4	484.5	488.0	491.5	493.0	491.5	488.0	484.5	483.4	484.5	488.0
48°	471.5	473.0	476.5	479.6	481.1	479.6	476.5	473.0	471.5	473.0	476.5
48.5°	461.9	462.7	465.3	468.4	469.6	468.4	465.3	462.7	461.9	462.7	465.3
49°	452.7	453.1	455.4	457.7	458.8	457.7	455.4	453.1	452.7	453.1	455.4
49.5°	443.8	444.2	445.8	447.7	448.1	447.7	445.8	444.2	443.8	444.2	445.8
50°	434.6	435.0	436.2	437.7	438.1	437.7	436.2	435.0	434.6	435.0	436.2
50.5°	425.4	425.8	426.6	428.1	428.1	428.1	426.6	425.8	425.4	425.8	426.6
51°	415.1	415.8	417.0	418.5	418.5	418.5	417.0	415.8	415.1	415.8	417.0
51.5°	405.1	405.5	407.0	408.9	409.3	408.9	407.0	405.5	405.1	405.5	407.0
52°	394.7	395.5	397.0	398.9	399.3	398.9	397.0	395.5	394.7	395.5	397.0
52.5°	384.3	385.1	387.0	388.6	389.3	388.6	387.0	385.1	384.3	385.1	387.0
53°	374.7	375.5	377.0	378.6	379.3	378.6	377.0	375.5	374.7	375.5	377.0
53.5°	364.8	365.5	367.1	369.0	369.7	369.0	367.1	365.5	364.8	365.5	367.1
54°	355.5	355.9	357.5	359.0	359.8	359.0	357.5	355.9	355.5	355.9	357.5
54.5°	346.3	346.7	348.2	349.8	350.5	349.8	348.2	346.7	346.3	346.7	348.2
55°	337.1	337.9	339.4	340.6	340.9	340.6	339.4	337.9	337.1	337.9	339.4
55.5°	328.3	329.0	330.6	331.7	332.1	331.7	330.6	329.0	328.3	329.0	330.6
56°	319.8	320.6	321.8	322.9	323.3	322.9	321.8	320.6	319.8	320.6	321.8
56.5°	311.4	312.2	313.3	314.5	314.8	314.5	313.3	312.2	311.4	312.2	313.3
57°	302.9	303.7	304.9	306.0	306.4	306.0	304.9	303.7	302.9	303.7	304.9
57.5°	294.5	295.6	296.8	297.6	298.3	297.6	296.8	295.6	294.5	295.6	296.8
58°	287.2	287.6	288.7	289.9	290.3	289.9	288.7	287.6	287.2	287.6	288.7
58.5°	279.5	279.9	281.1	281.8	282.2	281.8	281.1	279.9	279.5	279.9	281.1
59°	271.8	272.2	273.0	273.8	274.5	273.8	273.0	272.2	271.8	272.2	273.0
59.5°	264.2	264.5	265.3	266.5	266.8	266.5	265.3	264.5	264.2	264.5	265.3
60°	256.9	257.2	258.0	258.8	259.2	258.8	258.0	257.2	256.9	257.2	258.0
60.5°	249.6	250.0	250.7	251.5	251.9	251.5	250.7	250.0	249.6	250.0	250.7
61°	242.7	243.0	243.8	244.6	245.0	244.6	243.8	243.0	242.7	243.0	243.8
61.5°	235.7	236.1	236.9	237.7	238.1	237.7	236.9	236.1	235.7	236.1	236.9
62°	229.2	229.2	230.0	230.8	230.8	230.8	230.0	229.2	229.2	229.2	230.0
62.5°	222.3	222.7	223.1	223.8	224.2	223.8	223.1	222.7	222.3	222.7	223.1
63°	215.8	216.2	216.5	217.3	217.3	217.3	216.5	216.2	215.8	216.2	216.5
63.5°	209.3	209.6	210.0	210.8	211.2	210.8	210.0	209.6	209.3	209.6	210.0
64°	203.1	203.5	203.9	204.3	204.6	204.3	203.9	203.5	203.1	203.5	203.9
64.5°	197.0	197.4	197.7	198.1	198.5	198.1	197.7	197.4	197.0	197.4	197.7
65°	190.8	191.2	191.6	192.0	192.4	192.0	191.6	191.2	190.8	191.2	191.6
65.5°	185.1	185.1	185.4	186.2	186.2	186.2	185.4	185.1	185.1	185.1	185.4
66°	178.9	179.3	179.7	180.1	180.5	180.1	179.7	179.3	178.9	179.3	179.7



TEST NUMBER: P776280

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	162.0	162.4	162.8	163.2	163.2	163.2	162.8	162.4	162.0	162.4	162.8
68°	156.7	157.0	157.4	157.8	157.8	157.8	157.4	157.0	156.7	157.0	157.4
68.5°	151.3	151.7	152.0	152.0	152.4	152.0	152.0	151.7	151.3	151.7	152.0
69°	146.3	146.3	146.3	147.1	147.1	147.1	146.3	146.3	146.3	146.3	146.3
69.5°	140.9	141.3	141.3	141.7	142.1	141.7	141.3	141.3	140.9	141.3	141.3
70°	136.3	136.7	136.3	136.7	137.1	136.7	136.3	136.7	136.3	136.7	136.3
70.5°	131.3	131.7	131.7	131.7	132.1	131.7	131.7	131.7	131.3	131.7	131.7
71°	126.7	126.7	126.7	126.7	127.1	126.7	126.7	126.7	126.7	126.7	126.7
71.5°	121.7	121.7	122.1	122.1	122.1	122.1	122.1	121.7	121.7	121.7	122.1
72°	117.1	117.1	117.1	117.5	117.5	117.5	117.1	117.1	117.1	117.1	117.1
72.5°	112.5	112.5	112.5	112.9	112.9	112.9	112.5	112.5	112.5	112.5	112.5
73°	107.9	107.9	107.9	108.3	108.3	108.3	107.9	107.9	107.9	107.9	107.9
73.5°	103.3	103.3	103.7	103.7	103.7	103.7	103.7	103.3	103.3	103.3	103.7
74°	99.1	99.1	99.1	99.4	99.4	99.4	99.1	99.1	99.1	99.1	99.1
74.5°	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8
75°	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6
75.5°	86.4	86.4	86.4	86.4	86.8	86.4	86.4	86.4	86.4	86.4	86.4
76°	82.5	82.2	82.2	82.5	82.5	82.5	82.2	82.2	82.5	82.2	82.2
76.5°	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3
77°	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5
77.5°	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6
78°	66.8	66.8	66.8	66.8	66.8	66.8	66.8	66.8	66.8	66.8	66.8
78.5°	63.4	63.4	63.0	63.0	63.4	63.0	63.0	63.4	63.4	63.4	63.0
79°	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5
79.5°	56.1	56.1	55.7	56.1	56.1	56.1	55.7	56.1	56.1	56.1	55.7
80°	52.6	52.6	52.2	52.2	52.2	52.2	52.2	52.6	52.6	52.6	52.2
80.5°	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1
81°	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7
81.5°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
82°	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2
82.5°	36.1	36.1	36.1	36.1	35.7	36.1	36.1	36.1	36.1	36.1	36.1
83°	33.0	33.0	33.0	32.6	32.6	32.6	33.0	33.0	33.0	33.0	33.0
83.5°	29.9	29.9	29.9	29.6	29.6	29.6	29.9	29.9	29.9	29.9	29.9
84°	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9
84.5°	24.2	23.8	23.8	23.8	23.8	23.8	23.8	23.8	24.2	23.8	23.8
85°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
85.5°	18.4	18.0	18.4	18.0	18.4	18.0	18.4	18.0	18.4	18.0	18.4
86°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
86.5°	13.1	12.7	12.7	12.7	13.1	12.7	12.7	12.7	13.1	12.7	12.7
87°	10.4	10.4	10.4	10.0	10.4	10.0	10.4	10.4	10.4	10.4	10.4
87.5°	7.7	7.7	7.7	7.7	8.1	7.7	7.7	7.7	7.7	7.7	7.7
88°	5.0	5.4	5.4	5.8	5.8	5.8	5.4	5.4	5.0	5.4	5.4
88.5°	3.1	3.1	3.5	3.8	4.6	3.8	3.5	3.1	3.1	3.1	3.5



TEST NUMBER: P776280

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.4	0.8	1.2	0.8	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776280

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2867.0	2867.0	2867.0	2867.0	2867.0	2867.0
0.5°	2865.8	2864.7	2865.8	2866.2	2867.0	2867.4
1°	2865.0	2863.5	2865.0	2865.4	2865.8	2866.2
1.5°	2863.1	2862.0	2863.1	2863.9	2863.9	2864.7
2°	2860.8	2859.3	2860.8	2861.2	2862.0	2862.4
2.5°	2857.8	2855.8	2857.8	2858.1	2858.9	2859.7
3°	2853.5	2851.6	2853.5	2854.3	2855.1	2855.8
3.5°	2848.9	2847.8	2848.9	2849.7	2850.8	2851.6
4°	2843.9	2842.0	2843.9	2844.7	2846.2	2846.6
4.5°	2838.2	2835.9	2838.2	2838.9	2840.5	2841.2
5°	2832.4	2829.7	2832.4	2833.2	2834.7	2835.9
5.5°	2824.7	2822.4	2824.7	2825.5	2827.4	2830.1
6°	2816.7	2813.6	2816.7	2817.8	2819.7	2821.3
6.5°	2807.8	2804.8	2807.8	2809.0	2811.3	2812.4
7°	2798.6	2795.9	2798.6	2800.5	2801.7	2803.2
7.5°	2789.0	2786.3	2789.0	2789.8	2791.3	2792.9
8°	2777.9	2776.4	2777.9	2779.0	2780.6	2781.7
8.5°	2766.0	2764.5	2766.0	2767.1	2768.7	2770.2
9°	2753.7	2752.2	2753.7	2754.9	2756.8	2757.9
9.5°	2740.6	2739.1	2740.6	2741.8	2743.7	2744.5
10°	2726.8	2724.9	2726.8	2728.4	2729.9	2731.0
10.5°	2712.2	2710.7	2712.2	2713.4	2715.3	2716.1
11°	2697.3	2695.3	2697.3	2698.8	2700.3	2701.1
11.5°	2681.5	2680.0	2681.5	2683.1	2684.6	2685.4
12°	2665.4	2663.9	2665.4	2667.3	2668.5	2669.2
12.5°	2648.5	2646.6	2648.5	2650.4	2651.6	2652.3
13°	2631.6	2629.7	2631.6	2633.1	2634.3	2635.1
13.5°	2613.9	2612.4	2613.9	2615.5	2616.2	2617.0
14°	2595.9	2594.4	2595.9	2597.4	2598.2	2598.6
14.5°	2577.1	2575.5	2577.1	2578.6	2579.0	2579.4
15°	2558.7	2557.1	2558.7	2559.4	2560.2	2560.2
15.5°	2540.2	2539.5	2540.2	2541.0	2540.2	2540.2
16°	2522.2	2521.4	2522.2	2522.6	2521.4	2521.0
16.5°	2504.1	2503.7	2504.1	2504.1	2502.6	2501.8
17°	2485.7	2486.1	2485.7	2486.1	2484.6	2483.8
17.5°	2467.7	2467.3	2467.7	2468.0	2466.9	2466.1
18°	2449.2	2448.5	2449.2	2450.0	2449.2	2448.8
18.5°	2429.6	2428.5	2429.6	2430.4	2430.4	2430.4
19°	2408.5	2407.4	2408.5	2409.7	2410.4	2411.6
19.5°	2386.3	2385.1	2386.3	2387.0	2389.3	2390.9
20°	2362.5	2359.8	2362.5	2362.1	2366.3	2368.2
20.5°	2336.7	2333.7	2336.7	2335.2	2340.2	2343.3
21°	2308.7	2304.9	2308.7	2306.8	2312.5	2317.1



TEST NUMBER: P776280

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2212.7	2210.8	2212.7	2213.1	2216.9	2221.5
23°	2177.8	2177.0	2177.8	2180.5	2181.2	2185.1
23.5°	2141.7	2143.6	2141.7	2146.3	2144.4	2147.8
24°	2104.8	2108.3	2104.8	2111.0	2106.4	2109.0
24.5°	2067.6	2072.2	2067.6	2073.7	2068.0	2069.1
25°	2030.3	2033.8	2030.3	2034.9	2028.0	2027.3
25.5°	1993.1	1993.9	1993.1	1995.0	1988.9	1983.9
26°	1954.3	1951.2	1954.3	1953.9	1948.2	1939.3
26.5°	1914.0	1907.1	1914.0	1911.3	1906.7	1893.7
27°	1872.5	1862.2	1872.5	1868.3	1863.7	1849.1
27.5°	1829.9	1816.5	1829.9	1824.5	1819.2	1805.3
28°	1785.4	1770.8	1785.4	1780.0	1774.6	1761.6
28.5°	1740.1	1726.6	1740.1	1735.5	1729.3	1719.0
29°	1694.0	1684.8	1694.0	1690.9	1683.6	1676.7
29.5°	1647.9	1643.7	1647.9	1646.8	1638.7	1635.3
30°	1601.8	1602.2	1601.8	1601.5	1592.6	1593.8
30.5°	1557.3	1563.1	1557.3	1556.5	1548.1	1550.8
31°	1512.8	1521.6	1512.8	1511.2	1502.4	1508.2
31.5°	1468.6	1479.8	1468.6	1465.9	1458.6	1464.4
32°	1425.2	1436.7	1425.2	1421.0	1414.5	1419.9
32.5°	1382.2	1393.7	1382.2	1376.9	1372.2	1376.9
33°	1339.2	1350.0	1339.2	1331.5	1330.0	1333.5
33.5°	1296.2	1305.8	1296.2	1286.6	1287.8	1294.7
34°	1254.0	1264.0	1254.0	1242.1	1245.5	1252.8
34.5°	1211.4	1222.5	1211.4	1198.7	1203.7	1211.4
35°	1170.3	1182.2	1170.3	1157.6	1163.0	1169.5
35.5°	1129.6	1142.6	1129.6	1116.9	1122.7	1128.8
36°	1090.4	1103.9	1090.4	1077.4	1082.4	1088.9
36.5°	1051.6	1064.3	1051.6	1039.0	1043.6	1049.3
37°	1014.0	1025.2	1014.0	1001.3	1005.2	1009.4
37.5°	977.9	986.0	977.9	965.3	967.9	970.6
38°	942.6	947.2	942.6	930.7	931.9	932.2
38.5°	908.0	910.0	908.0	897.7	896.9	896.1
39°	874.6	874.3	874.6	864.7	863.1	861.2
39.5°	841.6	840.5	841.6	833.2	830.5	827.0
40°	809.8	808.2	809.8	802.8	798.2	794.4
40.5°	778.7	778.3	778.7	773.7	767.5	763.7
41°	749.5	750.6	749.5	746.0	738.0	734.1
41.5°	721.4	724.9	721.4	719.5	710.3	706.1
42°	695.3	699.9	695.3	694.2	684.2	680.0
42.5°	670.8	675.8	670.8	670.4	659.6	655.4
43°	647.7	652.3	647.7	647.0	636.6	632.0
43.5°	625.5	629.7	625.5	625.1	615.1	610.5

TEST NUMBER: P776280

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	567.1	569.0	567.1	565.2	559.0	555.2
45.5°	549.8	551.4	549.8	547.9	542.1	539.1
46°	534.1	534.8	534.1	531.4	526.4	523.7
46.5°	518.7	519.5	518.7	515.6	511.8	509.5
47°	504.5	505.7	504.5	501.4	497.6	496.1
47.5°	491.5	493.0	491.5	488.0	484.5	483.4
48°	479.6	481.1	479.6	476.5	473.0	471.5
48.5°	468.4	469.6	468.4	465.3	462.7	461.9
49°	457.7	458.8	457.7	455.4	453.1	452.7
49.5°	447.7	448.1	447.7	445.8	444.2	443.8
50°	437.7	438.1	437.7	436.2	435.0	434.6
50.5°	428.1	428.1	428.1	426.6	425.8	425.4
51°	418.5	418.5	418.5	417.0	415.8	415.1
51.5°	408.9	409.3	408.9	407.0	405.5	405.1
52°	398.9	399.3	398.9	397.0	395.5	394.7
52.5°	388.6	389.3	388.6	387.0	385.1	384.3
53°	378.6	379.3	378.6	377.0	375.5	374.7
53.5°	369.0	369.7	369.0	367.1	365.5	364.8
54°	359.0	359.8	359.0	357.5	355.9	355.5
54.5°	349.8	350.5	349.8	348.2	346.7	346.3
55°	340.6	340.9	340.6	339.4	337.9	337.1
55.5°	331.7	332.1	331.7	330.6	329.0	328.3
56°	322.9	323.3	322.9	321.8	320.6	319.8
56.5°	314.5	314.8	314.5	313.3	312.2	311.4
57°	306.0	306.4	306.0	304.9	303.7	302.9
57.5°	297.6	298.3	297.6	296.8	295.6	294.5
58°	289.9	290.3	289.9	288.7	287.6	287.2
58.5°	281.8	282.2	281.8	281.1	279.9	279.5
59°	273.8	274.5	273.8	273.0	272.2	271.8
59.5°	266.5	266.8	266.5	265.3	264.5	264.2
60°	258.8	259.2	258.8	258.0	257.2	256.9
60.5°	251.5	251.9	251.5	250.7	250.0	249.6
61°	244.6	245.0	244.6	243.8	243.0	242.7
61.5°	237.7	238.1	237.7	236.9	236.1	235.7
62°	230.8	230.8	230.8	230.0	229.2	229.2
62.5°	223.8	224.2	223.8	223.1	222.7	222.3
63°	217.3	217.3	217.3	216.5	216.2	215.8
63.5°	210.8	211.2	210.8	210.0	209.6	209.3
64°	204.3	204.6	204.3	203.9	203.5	203.1
64.5°	198.1	198.5	198.1	197.7	197.4	197.0
65°	192.0	192.4	192.0	191.6	191.2	190.8
65.5°	186.2	186.2	186.2	185.4	185.1	185.1
66°	180.1	180.5	180.1	179.7	179.3	178.9



TEST NUMBER: P776280

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	163.2	163.2	163.2	162.8	162.4	162.0
68°	157.8	157.8	157.8	157.4	157.0	156.7
68.5°	152.0	152.4	152.0	152.0	151.7	151.3
69°	147.1	147.1	147.1	146.3	146.3	146.3
69.5°	141.7	142.1	141.7	141.3	141.3	140.9
70°	136.7	137.1	136.7	136.3	136.7	136.3
70.5°	131.7	132.1	131.7	131.7	131.7	131.3
71°	126.7	127.1	126.7	126.7	126.7	126.7
71.5°	122.1	122.1	122.1	122.1	121.7	121.7
72°	117.5	117.5	117.5	117.1	117.1	117.1
72.5°	112.9	112.9	112.9	112.5	112.5	112.5
73°	108.3	108.3	108.3	107.9	107.9	107.9
73.5°	103.7	103.7	103.7	103.7	103.3	103.3
74°	99.4	99.4	99.4	99.1	99.1	99.1
74.5°	94.8	94.8	94.8	94.8	94.8	94.8
75°	90.6	90.6	90.6	90.6	90.6	90.6
75.5°	86.4	86.8	86.4	86.4	86.4	86.4
76°	82.5	82.5	82.5	82.2	82.2	82.5
76.5°	78.3	78.3	78.3	78.3	78.3	78.3
77°	74.5	74.5	74.5	74.5	74.5	74.5
77.5°	70.6	70.6	70.6	70.6	70.6	70.6
78°	66.8	66.8	66.8	66.8	66.8	66.8
78.5°	63.0	63.4	63.0	63.0	63.4	63.4
79°	59.5	59.5	59.5	59.5	59.5	59.5
79.5°	56.1	56.1	56.1	55.7	56.1	56.1
80°	52.2	52.2	52.2	52.2	52.6	52.6
80.5°	49.1	49.1	49.1	49.1	49.1	49.1
81°	45.7	45.7	45.7	45.7	45.7	45.7
81.5°	42.2	42.2	42.2	42.2	42.2	42.2
82°	39.2	39.2	39.2	39.2	39.2	39.2
82.5°	36.1	35.7	36.1	36.1	36.1	36.1
83°	32.6	32.6	32.6	33.0	33.0	33.0
83.5°	29.6	29.6	29.6	29.9	29.9	29.9
84°	26.9	26.9	26.9	26.9	26.9	26.9
84.5°	23.8	23.8	23.8	23.8	23.8	24.2
85°	21.1	21.1	21.1	21.1	21.1	21.1
85.5°	18.0	18.4	18.0	18.4	18.0	18.4
86°	15.4	15.4	15.4	15.4	15.4	15.4
86.5°	12.7	13.1	12.7	12.7	12.7	13.1
87°	10.0	10.4	10.0	10.4	10.4	10.4
87.5°	7.7	8.1	7.7	7.7	7.7	7.7
88°	5.8	5.8	5.8	5.4	5.4	5.0
88.5°	3.8	4.6	3.8	3.5	3.1	3.1



TEST NUMBER: P776280
CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.8	1.2	0.8	0.4	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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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2286.8	2283.0	2276.5	2278.4	2274.5	2278.4	2276.5	2283.0	2286.8	2283.0	2276.5
22°	2254.9	2251.1	2245.4	2246.1	2242.3	2246.1	2245.4	2251.1	2254.9	2251.1	2245.4



44°	590.5	595.1	604.0	604.7	608.6	604.7	604.0	595.1	590.5	595.1	604.0
44.5°	572.1	576.7	584.4	585.5	588.2	585.5	584.4	576.7	572.1	576.7	584.4



66.5°	173.2	173.5	173.9	174.3	174.7	174.3	173.9	173.5	173.2	173.5	173.9
67°	167.8	167.8	168.2	168.6	168.9	168.6	168.2	167.8	167.8	167.8	168.2



89°	1.2	1.5	2.3	2.7	3.1	2.7	2.3	1.5	1.2	1.5	2.3
89.5°	0.0	0.4	1.2	1.5	1.9	1.5	1.2	0.4	0.0	0.4	1.2

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21.5°	2278.4	2274.5	2278.4	2276.5	2283.0	2286.8
22°	2246.1	2242.3	2246.1	2245.4	2251.1	2254.9



44°	604.7	608.6	604.7	604.0	595.1	590.5
44.5°	585.5	588.2	585.5	584.4	576.7	572.1



66.5°	174.3	174.7	174.3	173.9	173.5	173.2
67°	168.6	168.9	168.6	168.2	167.8	167.8



89°	2.7	3.1	2.7	2.3	1.5	1.2
89.5°	1.5	1.9	1.5	1.2	0.4	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)