

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: P776592

Luminaire Tested: HCDJBS4050CSD-HCD42TRMW-5000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776592  
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: HCDJBS4050CSD-HCD42TRMW-5000lm-3500K  
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4548.8 lumens  
Efficiency: N/A  
Efficacy: 94.8 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

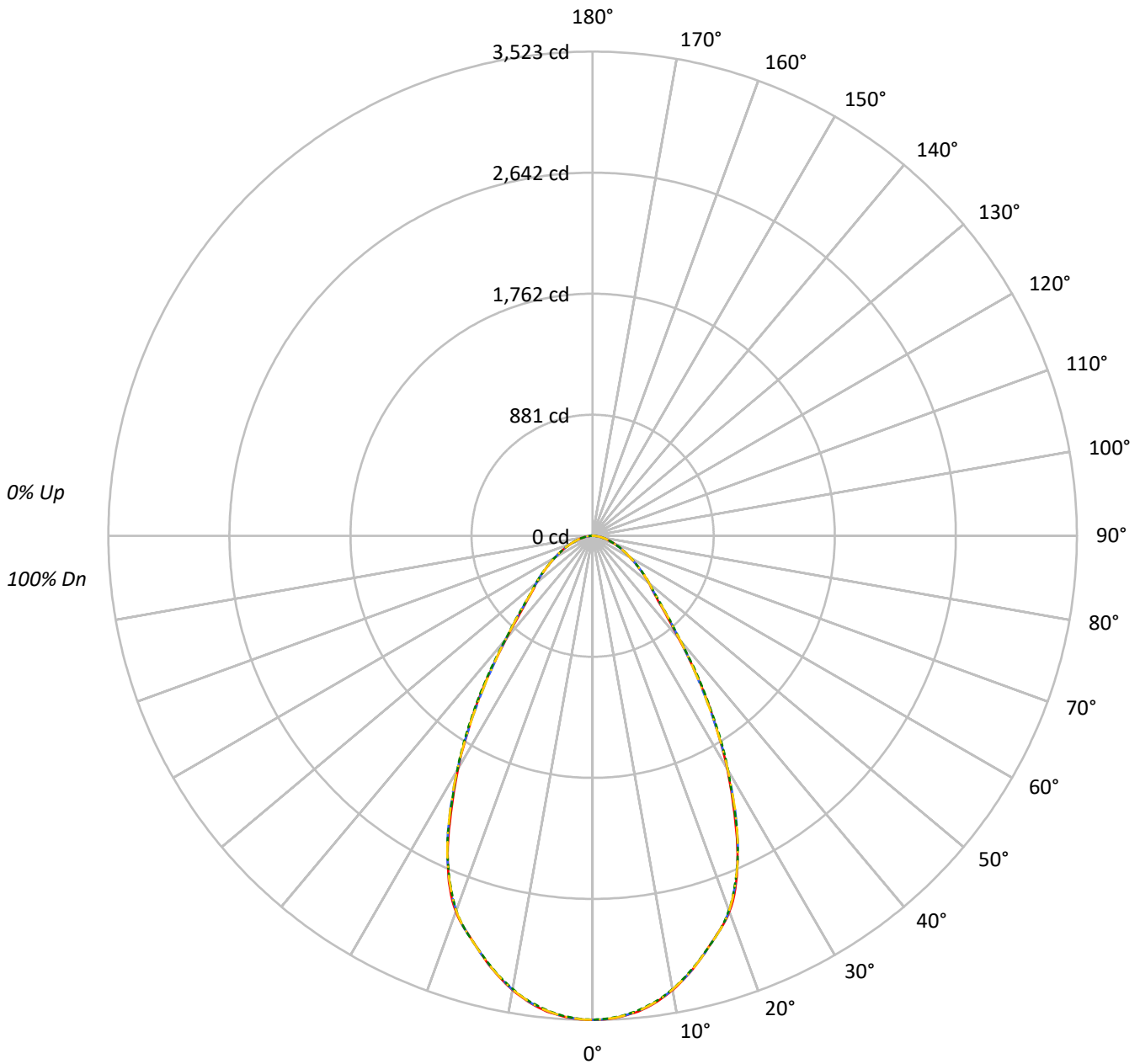
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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									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	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°	443344	443344	443344	443344
5°	440211	439251	440211	439251
10°	428842	427871	428842	427871
15°	409864	409369	409864	409369
20°	389713	388333	389713	388333
25°	345900	347011	345900	347011
30°	284592	286089	284592	286089
35°	220772	223169	220772	223169
40°	160359	163152	160359	163152
45°	121417	124443	121417	124443
50°	104570	105392	104570	105392
55°	90881	91912	90881	91912
60°	79436	80166	79436	80166
65°	69831	70397	69831	70397
70°	61633	61964	61633	61964
75°	54119	54119	54119	54119
80°	46818	46528	46818	46528
85°	37399	37399	37399	37399

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 124443 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	328.2	7.2
10°-20°	883.7	19.4
20°-30°	1131.7	24.9
30°-40°	896.7	19.7
40°-50°	549.1	12.1
50°-60°	375.3	8.3
60°-70°	235.0	5.2
70°-80°	119.1	2.6
80°-90°	30.0	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°	2343.6	51.5
0°-40°	3240.3	71.2
0°-60°	4164.7	91.6
0°-90°	4548.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4548.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3523	3523	3523	3523	3523	
5°	3485	3477	3485	3477	3485	329
15°	3146	3142	3146	3142	3146	884
25°	2491	2499	2491	2499	2491	1129
35°	1437	1453	1437	1453	1437	896
45°	682	699	682	699	682	542
55°	414	419	414	419	414	373
65°	234	236	234	236	234	234
75°	111	111	111	111	111	119
85°	26	26	26	26	26	30
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°	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8
0.5°	3523.2	3522.8	3521.8	3521.4	3519.9	3521.4	3521.8	3522.8	3523.2	3522.8	3521.8
1°	3521.8	3521.4	3520.9	3520.4	3518.5	3520.4	3520.9	3521.4	3521.8	3521.4	3520.9
1.5°	3519.9	3519.0	3519.0	3518.1	3516.6	3518.1	3519.0	3519.0	3519.9	3519.0	3519.0
2°	3517.1	3516.6	3515.7	3515.2	3513.3	3515.2	3515.7	3516.6	3517.1	3516.6	3515.7
2.5°	3513.8	3512.9	3511.9	3511.5	3509.1	3511.5	3511.9	3512.9	3513.8	3512.9	3511.9
3°	3509.1	3508.1	3507.2	3506.3	3503.9	3506.3	3507.2	3508.1	3509.1	3508.1	3507.2
3.5°	3503.9	3503.0	3501.5	3500.6	3499.2	3500.6	3501.5	3503.0	3503.9	3503.0	3501.5
4°	3497.8	3497.3	3495.4	3494.5	3492.1	3494.5	3495.4	3497.3	3497.8	3497.3	3495.4
4.5°	3491.2	3490.2	3488.3	3487.4	3484.6	3487.4	3488.3	3490.2	3491.2	3490.2	3488.3
5°	3484.6	3483.1	3481.3	3480.3	3477.0	3480.3	3481.3	3483.1	3484.6	3483.1	3481.3
5.5°	3477.5	3474.2	3471.8	3470.9	3468.0	3470.9	3471.8	3474.2	3477.5	3474.2	3471.8
6°	3466.6	3464.7	3462.4	3461.0	3457.2	3461.0	3462.4	3464.7	3466.6	3464.7	3462.4
6.5°	3455.8	3454.4	3451.5	3450.1	3446.3	3450.1	3451.5	3454.4	3455.8	3454.4	3451.5
7°	3444.5	3442.6	3441.2	3438.8	3435.5	3438.8	3441.2	3442.6	3444.5	3442.6	3441.2
7.5°	3431.7	3429.8	3427.9	3427.0	3423.7	3427.0	3427.9	3429.8	3431.7	3429.8	3427.9
8°	3418.0	3416.6	3414.7	3413.3	3411.4	3413.3	3414.7	3416.6	3418.0	3416.6	3414.7
8.5°	3403.9	3402.0	3400.1	3398.7	3396.8	3398.7	3400.1	3402.0	3403.9	3402.0	3400.1
9°	3388.8	3387.4	3385.0	3383.6	3381.7	3383.6	3385.0	3387.4	3388.8	3387.4	3385.0
9.5°	3372.3	3371.3	3369.0	3367.6	3365.7	3367.6	3369.0	3371.3	3372.3	3371.3	3369.0
10°	3355.8	3354.3	3352.5	3350.6	3348.2	3350.6	3352.5	3354.3	3355.8	3354.3	3352.5
10.5°	3337.4	3336.4	3334.1	3332.6	3330.8	3332.6	3334.1	3336.4	3337.4	3336.4	3334.1
11°	3319.0	3318.0	3316.1	3314.2	3311.9	3314.2	3316.1	3318.0	3319.0	3318.0	3316.1
11.5°	3299.6	3298.7	3296.8	3294.9	3293.0	3294.9	3296.8	3298.7	3299.6	3298.7	3296.8
12°	3279.8	3278.9	3277.4	3275.1	3273.2	3275.1	3277.4	3278.9	3279.8	3278.9	3277.4
12.5°	3259.0	3258.1	3256.7	3254.3	3252.0	3254.3	3256.7	3258.1	3259.0	3258.1	3256.7
13°	3237.8	3236.9	3235.5	3233.6	3231.2	3233.6	3235.5	3236.9	3237.8	3236.9	3235.5
13.5°	3215.6	3214.7	3213.8	3211.9	3210.0	3211.9	3213.8	3214.7	3215.6	3214.7	3213.8
14°	3193.0	3192.5	3191.6	3189.7	3187.8	3189.7	3191.6	3192.5	3193.0	3192.5	3191.6
14.5°	3169.4	3168.9	3168.5	3166.6	3164.7	3166.6	3168.5	3168.9	3169.4	3168.9	3168.5
15°	3145.8	3145.8	3144.9	3143.9	3142.0	3143.9	3144.9	3145.8	3145.8	3145.8	3144.9
15.5°	3121.3	3121.3	3122.2	3121.3	3120.3	3121.3	3122.2	3121.3	3121.3	3121.3	3122.2
16°	3097.7	3098.2	3099.6	3099.1	3098.2	3099.1	3099.6	3098.2	3097.7	3098.2	3099.6
16.5°	3074.1	3075.1	3076.9	3076.9	3076.5	3076.9	3076.9	3075.1	3074.1	3075.1	3076.9
17°	3051.9	3052.9	3054.8	3054.3	3054.8	3054.3	3054.8	3052.9	3051.9	3052.9	3054.8
17.5°	3030.2	3031.2	3032.6	3032.1	3031.7	3032.1	3032.6	3031.2	3030.2	3031.2	3032.6
18°	3009.0	3009.5	3010.4	3009.5	3008.5	3009.5	3010.4	3009.5	3009.0	3009.5	3010.4
18.5°	2986.4	2986.4	2986.4	2985.4	2984.0	2985.4	2986.4	2986.4	2986.4	2986.4	2986.4
19°	2963.2	2961.8	2960.9	2959.5	2958.1	2959.5	2960.9	2961.8	2963.2	2961.8	2960.9
19.5°	2937.8	2935.9	2933.0	2932.1	2930.7	2932.1	2933.0	2935.9	2937.8	2935.9	2933.0
20°	2909.9	2907.6	2902.4	2902.9	2899.6	2902.9	2902.4	2907.6	2909.9	2907.6	2902.4
20.5°	2879.3	2875.5	2869.4	2871.2	2867.5	2871.2	2869.4	2875.5	2879.3	2875.5	2869.4
21°	2847.2	2841.5	2834.4	2836.8	2832.1	2836.8	2834.4	2841.5	2847.2	2841.5	2834.4

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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°	2729.7	2724.1	2719.3	2718.9	2716.5	2718.9	2719.3	2724.1	2729.7	2724.1	2719.3
23°	2684.9	2680.2	2679.2	2675.9	2675.0	2675.9	2679.2	2680.2	2684.9	2680.2	2679.2
23.5°	2639.1	2634.9	2637.2	2631.6	2633.9	2631.6	2637.2	2634.9	2639.1	2634.9	2637.2
24°	2591.5	2588.2	2593.8	2586.3	2590.5	2586.3	2593.8	2588.2	2591.5	2588.2	2593.8
24.5°	2542.4	2541.0	2548.1	2540.5	2546.2	2540.5	2548.1	2541.0	2542.4	2541.0	2548.1
25°	2491.0	2491.9	2500.4	2494.8	2499.0	2494.8	2500.4	2491.9	2491.0	2491.9	2500.4
25.5°	2437.7	2443.8	2451.4	2449.0	2449.9	2449.0	2451.4	2443.8	2437.7	2443.8	2451.4
26°	2383.0	2393.8	2400.9	2401.4	2397.6	2401.4	2400.9	2393.8	2383.0	2393.8	2400.9
26.5°	2326.8	2342.9	2348.5	2351.8	2343.3	2351.8	2348.5	2342.9	2326.8	2342.9	2348.5
27°	2272.1	2290.0	2295.7	2300.9	2288.1	2300.9	2295.7	2290.0	2272.1	2290.0	2295.7
27.5°	2218.3	2235.3	2241.9	2248.5	2232.0	2248.5	2241.9	2235.3	2218.3	2235.3	2241.9
28°	2164.5	2180.6	2187.2	2193.8	2175.8	2193.8	2187.2	2180.6	2164.5	2180.6	2187.2
28.5°	2112.2	2124.9	2132.4	2138.1	2121.6	2138.1	2132.4	2124.9	2112.2	2124.9	2132.4
29°	2060.3	2068.8	2077.7	2081.5	2070.2	2081.5	2077.7	2068.8	2060.3	2068.8	2077.7
29.5°	2009.3	2013.6	2023.5	2024.9	2019.7	2024.9	2023.5	2013.6	2009.3	2013.6	2023.5
30°	1958.4	1956.9	1967.8	1968.3	1968.7	1968.3	1967.8	1956.9	1958.4	1956.9	1967.8
30.5°	1905.5	1902.2	1912.6	1913.5	1920.6	1913.5	1912.6	1902.2	1905.5	1902.2	1912.6
31°	1853.1	1846.1	1856.9	1858.8	1869.7	1858.8	1856.9	1846.1	1853.1	1846.1	1856.9
31.5°	1799.4	1792.3	1801.3	1804.6	1818.2	1804.6	1801.3	1792.3	1799.4	1792.3	1801.3
32°	1744.6	1738.0	1746.1	1751.2	1765.4	1751.2	1746.1	1738.0	1744.6	1738.0	1746.1
32.5°	1691.8	1686.1	1691.8	1698.4	1712.6	1698.4	1691.8	1686.1	1691.8	1686.1	1691.8
33°	1638.5	1634.2	1636.1	1645.6	1658.8	1645.6	1636.1	1634.2	1638.5	1634.2	1636.1
33.5°	1590.8	1582.3	1580.9	1592.7	1604.5	1592.7	1580.9	1582.3	1590.8	1582.3	1580.9
34°	1539.4	1530.5	1526.2	1540.8	1553.1	1540.8	1526.2	1530.5	1539.4	1530.5	1526.2
34.5°	1488.5	1479.0	1472.9	1488.5	1502.1	1488.5	1472.9	1479.0	1488.5	1479.0	1472.9
35°	1437.0	1429.0	1422.4	1438.0	1452.6	1438.0	1422.4	1429.0	1437.0	1429.0	1422.4
35.5°	1387.0	1379.5	1372.4	1388.0	1404.0	1388.0	1372.4	1379.5	1387.0	1379.5	1372.4
36°	1338.0	1329.9	1323.8	1339.9	1356.4	1339.9	1323.8	1329.9	1338.0	1329.9	1323.8
36.5°	1289.4	1282.3	1276.6	1292.2	1307.8	1292.2	1276.6	1282.3	1289.4	1282.3	1276.6
37°	1240.3	1235.1	1230.4	1246.0	1259.6	1246.0	1230.4	1235.1	1240.3	1235.1	1230.4
37.5°	1192.7	1189.4	1186.1	1201.6	1211.5	1201.6	1186.1	1189.4	1192.7	1189.4	1186.1
38°	1145.5	1145.0	1143.6	1158.2	1163.9	1158.2	1143.6	1145.0	1145.5	1145.0	1143.6
38.5°	1101.1	1102.1	1103.0	1115.8	1118.1	1115.8	1103.0	1102.1	1101.1	1102.1	1103.0
39°	1058.2	1060.6	1062.4	1074.7	1074.2	1074.7	1062.4	1060.6	1058.2	1060.6	1062.4
39.5°	1016.2	1020.5	1023.8	1034.1	1032.7	1034.1	1023.8	1020.5	1016.2	1020.5	1023.8
40°	976.1	980.8	986.5	995.0	993.1	995.0	986.5	980.8	976.1	980.8	986.5
40.5°	938.4	943.1	950.6	956.8	956.3	956.8	950.6	943.1	938.4	943.1	950.6
41°	902.0	906.8	916.7	920.9	922.3	920.9	916.7	906.8	902.0	906.8	916.7
41.5°	867.6	872.8	884.1	886.5	890.7	886.5	884.1	872.8	867.6	872.8	884.1
42°	835.5	840.7	853.0	854.4	860.1	854.4	853.0	840.7	835.5	840.7	853.0
42.5°	805.3	810.5	823.7	824.2	830.3	824.2	823.7	810.5	805.3	810.5	823.7
43°	776.5	782.2	794.9	795.9	801.6	795.9	794.9	782.2	776.5	782.2	794.9
43.5°	750.1	755.8	768.1	768.5	773.7	768.5	768.1	755.8	750.1	755.8	768.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	682.2	686.9	694.5	696.8	699.2	696.8	694.5	686.9	682.2	686.9	694.5
45.5°	662.4	666.2	673.2	675.6	677.5	675.6	673.2	666.2	662.4	666.2	673.2
46°	643.5	646.8	652.9	656.2	657.2	656.2	652.9	646.8	643.5	646.8	652.9
46.5°	626.1	628.9	633.6	637.4	638.3	637.4	633.6	628.9	626.1	628.9	633.6
47°	609.5	611.4	616.1	619.9	621.3	619.9	616.1	611.4	609.5	611.4	616.1
47.5°	594.0	595.4	599.6	603.9	605.8	603.9	599.6	595.4	594.0	595.4	599.6
48°	579.3	581.2	585.5	589.3	591.1	589.3	585.5	581.2	579.3	581.2	585.5
48.5°	567.6	568.5	571.8	575.6	577.0	575.6	571.8	568.5	567.6	568.5	571.8
49°	556.2	556.7	559.5	562.4	563.8	562.4	559.5	556.7	556.2	556.7	559.5
49.5°	545.4	545.8	547.7	550.1	550.6	550.1	547.7	545.8	545.4	545.8	547.7
50°	534.1	534.5	535.9	537.8	538.3	537.8	535.9	534.5	534.1	534.5	535.9
50.5°	522.7	523.2	524.1	526.0	526.0	526.0	524.1	523.2	522.7	523.2	524.1
51°	510.0	510.9	512.4	514.2	514.2	514.2	512.4	510.9	510.0	510.9	512.4
51.5°	497.7	498.2	500.1	502.4	502.9	502.4	500.1	498.2	497.7	498.2	500.1
52°	485.0	485.9	487.8	490.2	490.7	490.2	487.8	485.9	485.0	485.9	487.8
52.5°	472.3	473.2	475.6	477.4	478.4	477.4	475.6	473.2	472.3	473.2	475.6
53°	460.5	461.4	463.3	465.2	466.1	465.2	463.3	461.4	460.5	461.4	463.3
53.5°	448.2	449.1	451.0	453.4	454.3	453.4	451.0	449.1	448.2	449.1	451.0
54°	436.9	437.3	439.2	441.1	442.1	441.1	439.2	437.3	436.9	437.3	439.2
54.5°	425.5	426.0	427.9	429.8	430.7	429.8	427.9	426.0	425.5	426.0	427.9
55°	414.2	415.2	417.1	418.5	418.9	418.5	417.1	415.2	414.2	415.2	417.1
55.5°	403.4	404.3	406.2	407.6	408.1	407.6	406.2	404.3	403.4	404.3	406.2
56°	393.0	393.9	395.4	396.8	397.2	396.8	395.4	393.9	393.0	393.9	395.4
56.5°	382.6	383.6	385.0	386.4	386.9	386.4	385.0	383.6	382.6	383.6	385.0
57°	372.2	373.2	374.6	376.0	376.5	376.0	374.6	373.2	372.2	373.2	374.6
57.5°	361.9	363.3	364.7	365.6	366.6	365.6	364.7	363.3	361.9	363.3	364.7
58°	352.9	353.4	354.8	356.2	356.7	356.2	354.8	353.4	352.9	353.4	354.8
58.5°	343.5	343.9	345.3	346.3	346.8	346.3	345.3	343.9	343.5	343.9	345.3
59°	334.0	334.5	335.4	336.4	337.3	336.4	335.4	334.5	334.0	334.5	335.4
59.5°	324.6	325.1	326.0	327.4	327.9	327.4	326.0	325.1	324.6	325.1	326.0
60°	315.6	316.1	317.0	318.0	318.5	318.0	317.0	316.1	315.6	316.1	317.0
60.5°	306.7	307.1	308.1	309.0	309.5	309.0	308.1	307.1	306.7	307.1	308.1
61°	298.2	298.6	299.6	300.5	301.0	300.5	299.6	298.6	298.2	298.6	299.6
61.5°	289.7	290.1	291.1	292.0	292.5	292.0	291.1	290.1	289.7	290.1	291.1
62°	281.7	281.7	282.6	283.5	283.5	283.5	282.6	281.7	281.7	281.7	282.6
62.5°	273.2	273.6	274.1	275.0	275.5	275.0	274.1	273.6	273.2	273.6	274.1
63°	265.1	265.6	266.1	267.0	267.0	267.0	266.1	265.6	265.1	265.6	266.1
63.5°	257.1	257.6	258.1	259.0	259.5	259.0	258.1	257.6	257.1	257.6	258.1
64°	249.6	250.0	250.5	251.0	251.5	251.0	250.5	250.0	249.6	250.0	250.5
64.5°	242.0	242.5	243.0	243.4	243.9	243.4	243.0	242.5	242.0	242.5	243.0
65°	234.5	234.9	235.4	235.9	236.4	235.9	235.4	234.9	234.5	234.9	235.4
65.5°	227.4	227.4	227.9	228.8	228.8	228.8	227.9	227.4	227.4	227.4	227.9
66°	219.8	220.3	220.8	221.3	221.7	221.3	220.8	220.3	219.8	220.3	220.8





TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	199.1	199.6	200.0	200.5	200.5	200.5	200.0	199.6	199.1	199.6	200.0
68°	192.5	193.0	193.4	193.9	193.9	193.9	193.4	193.0	192.5	193.0	193.4
68.5°	185.9	186.4	186.8	186.8	187.3	186.8	186.8	186.4	185.9	186.4	186.8
69°	179.7	179.7	179.7	180.7	180.7	180.7	179.7	179.7	179.7	179.7	179.7
69.5°	173.1	173.6	173.6	174.1	174.6	174.1	173.6	173.6	173.1	173.6	173.6
70°	167.5	168.0	167.5	168.0	168.4	168.0	167.5	168.0	167.5	168.0	167.5
70.5°	161.3	161.8	161.8	161.8	162.3	161.8	161.8	161.8	161.3	161.8	161.8
71°	155.7	155.7	155.7	155.7	156.2	155.7	155.7	155.7	155.7	155.7	155.7
71.5°	149.6	149.6	150.0	150.0	150.0	150.0	150.0	149.6	149.6	149.6	150.0
72°	143.9	143.9	143.9	144.4	144.4	144.4	143.9	143.9	143.9	143.9	143.9
72.5°	138.2	138.2	138.2	138.7	138.7	138.7	138.2	138.2	138.2	138.2	138.2
73°	132.6	132.6	132.6	133.0	133.0	133.0	132.6	132.6	132.6	132.6	132.6
73.5°	126.9	126.9	127.4	127.4	127.4	127.4	127.4	126.9	126.9	126.9	127.4
74°	121.7	121.7	121.7	122.2	122.2	122.2	121.7	121.7	121.7	121.7	121.7
74.5°	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5
75°	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3
75.5°	106.2	106.2	106.2	106.2	106.6	106.2	106.2	106.2	106.2	106.2	106.2
76°	101.4	101.0	101.0	101.4	101.4	101.4	101.0	101.0	101.4	101.0	101.0
76.5°	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2
77°	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5
77.5°	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8
78°	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1
78.5°	77.8	77.8	77.4	77.4	77.8	77.4	77.4	77.8	77.8	77.8	77.4
79°	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1
79.5°	68.9	68.9	68.4	68.9	68.9	68.9	68.4	68.9	68.9	68.9	68.4
80°	64.6	64.6	64.2	64.2	64.2	64.2	64.2	64.6	64.6	64.6	64.2
80.5°	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4
81°	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
81.5°	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9
82°	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1
82.5°	44.3	44.3	44.3	44.3	43.9	44.3	44.3	44.3	44.3	44.3	44.3
83°	40.6	40.6	40.6	40.1	40.1	40.1	40.6	40.6	40.6	40.6	40.6
83.5°	36.8	36.8	36.8	36.3	36.3	36.3	36.8	36.8	36.8	36.8	36.8
84°	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
84.5°	29.7	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.7	29.3	29.3
85°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
85.5°	22.6	22.2	22.6	22.2	22.6	22.2	22.6	22.2	22.6	22.2	22.6
86°	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
86.5°	16.0	15.6	15.6	15.6	16.0	15.6	15.6	15.6	16.0	15.6	15.6
87°	12.7	12.7	12.7	12.3	12.7	12.3	12.7	12.7	12.7	12.7	12.7
87.5°	9.4	9.4	9.4	9.4	9.9	9.4	9.4	9.4	9.4	9.4	9.4
88°	6.1	6.6	6.6	7.1	7.1	7.1	6.6	6.6	6.1	6.6	6.6
88.5°	3.8	3.8	4.2	4.7	5.7	4.7	4.2	3.8	3.8	3.8	4.2



TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL4050CSD-HCD42TRMW-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	0.9	1.4	0.9	0.5	0.0	0.0	0.0	0.5



TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3522.8	3522.8	3522.8	3522.8	3522.8	3522.8
0.5°	3521.4	3519.9	3521.4	3521.8	3522.8	3523.2
1°	3520.4	3518.5	3520.4	3520.9	3521.4	3521.8
1.5°	3518.1	3516.6	3518.1	3519.0	3519.0	3519.9
2°	3515.2	3513.3	3515.2	3515.7	3516.6	3517.1
2.5°	3511.5	3509.1	3511.5	3511.9	3512.9	3513.8
3°	3506.3	3503.9	3506.3	3507.2	3508.1	3509.1
3.5°	3500.6	3499.2	3500.6	3501.5	3503.0	3503.9
4°	3494.5	3492.1	3494.5	3495.4	3497.3	3497.8
4.5°	3487.4	3484.6	3487.4	3488.3	3490.2	3491.2
5°	3480.3	3477.0	3480.3	3481.3	3483.1	3484.6
5.5°	3470.9	3468.0	3470.9	3471.8	3474.2	3477.5
6°	3461.0	3457.2	3461.0	3462.4	3464.7	3466.6
6.5°	3450.1	3446.3	3450.1	3451.5	3454.4	3455.8
7°	3438.8	3435.5	3438.8	3441.2	3442.6	3444.5
7.5°	3427.0	3423.7	3427.0	3427.9	3429.8	3431.7
8°	3413.3	3411.4	3413.3	3414.7	3416.6	3418.0
8.5°	3398.7	3396.8	3398.7	3400.1	3402.0	3403.9
9°	3383.6	3381.7	3383.6	3385.0	3387.4	3388.8
9.5°	3367.6	3365.7	3367.6	3369.0	3371.3	3372.3
10°	3350.6	3348.2	3350.6	3352.5	3354.3	3355.8
10.5°	3332.6	3330.8	3332.6	3334.1	3336.4	3337.4
11°	3314.2	3311.9	3314.2	3316.1	3318.0	3319.0
11.5°	3294.9	3293.0	3294.9	3296.8	3298.7	3299.6
12°	3275.1	3273.2	3275.1	3277.4	3278.9	3279.8
12.5°	3254.3	3252.0	3254.3	3256.7	3258.1	3259.0
13°	3233.6	3231.2	3233.6	3235.5	3236.9	3237.8
13.5°	3211.9	3210.0	3211.9	3213.8	3214.7	3215.6
14°	3189.7	3187.8	3189.7	3191.6	3192.5	3193.0
14.5°	3166.6	3164.7	3166.6	3168.5	3168.9	3169.4
15°	3143.9	3142.0	3143.9	3144.9	3145.8	3145.8
15.5°	3121.3	3120.3	3121.3	3122.2	3121.3	3121.3
16°	3099.1	3098.2	3099.1	3099.6	3098.2	3097.7
16.5°	3076.9	3076.5	3076.9	3076.9	3075.1	3074.1
17°	3054.3	3054.8	3054.3	3054.8	3052.9	3051.9
17.5°	3032.1	3031.7	3032.1	3032.6	3031.2	3030.2
18°	3009.5	3008.5	3009.5	3010.4	3009.5	3009.0
18.5°	2985.4	2984.0	2985.4	2986.4	2986.4	2986.4
19°	2959.5	2958.1	2959.5	2960.9	2961.8	2963.2
19.5°	2932.1	2930.7	2932.1	2933.0	2935.9	2937.8
20°	2902.9	2899.6	2902.9	2902.4	2907.6	2909.9
20.5°	2871.2	2867.5	2871.2	2869.4	2875.5	2879.3
21°	2836.8	2832.1	2836.8	2834.4	2841.5	2847.2



TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2718.9	2716.5	2718.9	2719.3	2724.1	2729.7
23°	2675.9	2675.0	2675.9	2679.2	2680.2	2684.9
23.5°	2631.6	2633.9	2631.6	2637.2	2634.9	2639.1
24°	2586.3	2590.5	2586.3	2593.8	2588.2	2591.5
24.5°	2540.5	2546.2	2540.5	2548.1	2541.0	2542.4
25°	2494.8	2499.0	2494.8	2500.4	2491.9	2491.0
25.5°	2449.0	2449.9	2449.0	2451.4	2443.8	2437.7
26°	2401.4	2397.6	2401.4	2400.9	2393.8	2383.0
26.5°	2351.8	2343.3	2351.8	2348.5	2342.9	2326.8
27°	2300.9	2288.1	2300.9	2295.7	2290.0	2272.1
27.5°	2248.5	2232.0	2248.5	2241.9	2235.3	2218.3
28°	2193.8	2175.8	2193.8	2187.2	2180.6	2164.5
28.5°	2138.1	2121.6	2138.1	2132.4	2124.9	2112.2
29°	2081.5	2070.2	2081.5	2077.7	2068.8	2060.3
29.5°	2024.9	2019.7	2024.9	2023.5	2013.6	2009.3
30°	1968.3	1968.7	1968.3	1967.8	1956.9	1958.4
30.5°	1913.5	1920.6	1913.5	1912.6	1902.2	1905.5
31°	1858.8	1869.7	1858.8	1856.9	1846.1	1853.1
31.5°	1804.6	1818.2	1804.6	1801.3	1792.3	1799.4
32°	1751.2	1765.4	1751.2	1746.1	1738.0	1744.6
32.5°	1698.4	1712.6	1698.4	1691.8	1686.1	1691.8
33°	1645.6	1658.8	1645.6	1636.1	1634.2	1638.5
33.5°	1592.7	1604.5	1592.7	1580.9	1582.3	1590.8
34°	1540.8	1553.1	1540.8	1526.2	1530.5	1539.4
34.5°	1488.5	1502.1	1488.5	1472.9	1479.0	1488.5
35°	1438.0	1452.6	1438.0	1422.4	1429.0	1437.0
35.5°	1388.0	1404.0	1388.0	1372.4	1379.5	1387.0
36°	1339.9	1356.4	1339.9	1323.8	1329.9	1338.0
36.5°	1292.2	1307.8	1292.2	1276.6	1282.3	1289.4
37°	1246.0	1259.6	1246.0	1230.4	1235.1	1240.3
37.5°	1201.6	1211.5	1201.6	1186.1	1189.4	1192.7
38°	1158.2	1163.9	1158.2	1143.6	1145.0	1145.5
38.5°	1115.8	1118.1	1115.8	1103.0	1102.1	1101.1
39°	1074.7	1074.2	1074.7	1062.4	1060.6	1058.2
39.5°	1034.1	1032.7	1034.1	1023.8	1020.5	1016.2
40°	995.0	993.1	995.0	986.5	980.8	976.1
40.5°	956.8	956.3	956.8	950.6	943.1	938.4
41°	920.9	922.3	920.9	916.7	906.8	902.0
41.5°	886.5	890.7	886.5	884.1	872.8	867.6
42°	854.4	860.1	854.4	853.0	840.7	835.5
42.5°	824.2	830.3	824.2	823.7	810.5	805.3
43°	795.9	801.6	795.9	794.9	782.2	776.5
43.5°	768.5	773.7	768.5	768.1	755.8	750.1



TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	696.8	699.2	696.8	694.5	686.9	682.2
45.5°	675.6	677.5	675.6	673.2	666.2	662.4
46°	656.2	657.2	656.2	652.9	646.8	643.5
46.5°	637.4	638.3	637.4	633.6	628.9	626.1
47°	619.9	621.3	619.9	616.1	611.4	609.5
47.5°	603.9	605.8	603.9	599.6	595.4	594.0
48°	589.3	591.1	589.3	585.5	581.2	579.3
48.5°	575.6	577.0	575.6	571.8	568.5	567.6
49°	562.4	563.8	562.4	559.5	556.7	556.2
49.5°	550.1	550.6	550.1	547.7	545.8	545.4
50°	537.8	538.3	537.8	535.9	534.5	534.1
50.5°	526.0	526.0	526.0	524.1	523.2	522.7
51°	514.2	514.2	514.2	512.4	510.9	510.0
51.5°	502.4	502.9	502.4	500.1	498.2	497.7
52°	490.2	490.7	490.2	487.8	485.9	485.0
52.5°	477.4	478.4	477.4	475.6	473.2	472.3
53°	465.2	466.1	465.2	463.3	461.4	460.5
53.5°	453.4	454.3	453.4	451.0	449.1	448.2
54°	441.1	442.1	441.1	439.2	437.3	436.9
54.5°	429.8	430.7	429.8	427.9	426.0	425.5
55°	418.5	418.9	418.5	417.1	415.2	414.2
55.5°	407.6	408.1	407.6	406.2	404.3	403.4
56°	396.8	397.2	396.8	395.4	393.9	393.0
56.5°	386.4	386.9	386.4	385.0	383.6	382.6
57°	376.0	376.5	376.0	374.6	373.2	372.2
57.5°	365.6	366.6	365.6	364.7	363.3	361.9
58°	356.2	356.7	356.2	354.8	353.4	352.9
58.5°	346.3	346.8	346.3	345.3	343.9	343.5
59°	336.4	337.3	336.4	335.4	334.5	334.0
59.5°	327.4	327.9	327.4	326.0	325.1	324.6
60°	318.0	318.5	318.0	317.0	316.1	315.6
60.5°	309.0	309.5	309.0	308.1	307.1	306.7
61°	300.5	301.0	300.5	299.6	298.6	298.2
61.5°	292.0	292.5	292.0	291.1	290.1	289.7
62°	283.5	283.5	283.5	282.6	281.7	281.7
62.5°	275.0	275.5	275.0	274.1	273.6	273.2
63°	267.0	267.0	267.0	266.1	265.6	265.1
63.5°	259.0	259.5	259.0	258.1	257.6	257.1
64°	251.0	251.5	251.0	250.5	250.0	249.6
64.5°	243.4	243.9	243.4	243.0	242.5	242.0
65°	235.9	236.4	235.9	235.4	234.9	234.5
65.5°	228.8	228.8	228.8	227.9	227.4	227.4
66°	221.3	221.7	221.3	220.8	220.3	219.8



TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	200.5	200.5	200.5	200.0	199.6	199.1
68°	193.9	193.9	193.9	193.4	193.0	192.5
68.5°	186.8	187.3	186.8	186.8	186.4	185.9
69°	180.7	180.7	180.7	179.7	179.7	179.7
69.5°	174.1	174.6	174.1	173.6	173.6	173.1
70°	168.0	168.4	168.0	167.5	168.0	167.5
70.5°	161.8	162.3	161.8	161.8	161.8	161.3
71°	155.7	156.2	155.7	155.7	155.7	155.7
71.5°	150.0	150.0	150.0	150.0	149.6	149.6
72°	144.4	144.4	144.4	143.9	143.9	143.9
72.5°	138.7	138.7	138.7	138.2	138.2	138.2
73°	133.0	133.0	133.0	132.6	132.6	132.6
73.5°	127.4	127.4	127.4	127.4	126.9	126.9
74°	122.2	122.2	122.2	121.7	121.7	121.7
74.5°	116.5	116.5	116.5	116.5	116.5	116.5
75°	111.3	111.3	111.3	111.3	111.3	111.3
75.5°	106.2	106.6	106.2	106.2	106.2	106.2
76°	101.4	101.4	101.4	101.0	101.0	101.4
76.5°	96.2	96.2	96.2	96.2	96.2	96.2
77°	91.5	91.5	91.5	91.5	91.5	91.5
77.5°	86.8	86.8	86.8	86.8	86.8	86.8
78°	82.1	82.1	82.1	82.1	82.1	82.1
78.5°	77.4	77.8	77.4	77.4	77.8	77.8
79°	73.1	73.1	73.1	73.1	73.1	73.1
79.5°	68.9	68.9	68.9	68.4	68.9	68.9
80°	64.2	64.2	64.2	64.2	64.6	64.6
80.5°	60.4	60.4	60.4	60.4	60.4	60.4
81°	56.1	56.1	56.1	56.1	56.1	56.1
81.5°	51.9	51.9	51.9	51.9	51.9	51.9
82°	48.1	48.1	48.1	48.1	48.1	48.1
82.5°	44.3	43.9	44.3	44.3	44.3	44.3
83°	40.1	40.1	40.1	40.6	40.6	40.6
83.5°	36.3	36.3	36.3	36.8	36.8	36.8
84°	33.0	33.0	33.0	33.0	33.0	33.0
84.5°	29.3	29.3	29.3	29.3	29.3	29.7
85°	25.9	25.9	25.9	25.9	25.9	25.9
85.5°	22.2	22.6	22.2	22.6	22.2	22.6
86°	18.9	18.9	18.9	18.9	18.9	18.9
86.5°	15.6	16.0	15.6	15.6	15.6	16.0
87°	12.3	12.7	12.3	12.7	12.7	12.7
87.5°	9.4	9.9	9.4	9.4	9.4	9.4
88°	7.1	7.1	7.1	6.6	6.6	6.1
88.5°	4.7	5.7	4.7	4.2	3.8	3.8



TEST NUMBER: P776592

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.9	1.4	0.9	0.5	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	2809.9	2805.2	2797.2	2799.5	2794.8	2799.5	2797.2	2805.2	2809.9	2805.2	2797.2
22°	2770.8	2766.0	2759.0	2759.9	2755.2	2759.9	2759.0	2766.0	2770.8	2766.0	2759.0



44°	725.6	731.3	742.1	743.1	747.8	743.1	742.1	731.3	725.6	731.3	742.1
44.5°	703.0	708.6	718.0	719.5	722.8	719.5	718.0	708.6	703.0	708.6	718.0



66.5°	212.8	213.2	213.7	214.2	214.7	214.2	213.7	213.2	212.8	213.2	213.7
67°	206.2	206.2	206.6	207.1	207.6	207.1	206.6	206.2	206.2	206.2	206.6



89°	1.4	1.9	2.8	3.3	3.8	3.3	2.8	1.9	1.4	1.9	2.8
89.5°	0.0	0.5	1.4	1.9	2.4	1.9	1.4	0.5	0.0	0.5	1.4



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Scaled Data Report



21.5°	2799.5	2794.8	2799.5	2797.2	2805.2	2809.9
22°	2759.9	2755.2	2759.9	2759.0	2766.0	2770.8



44°	743.1	747.8	743.1	742.1	731.3	725.6
44.5°	719.5	722.8	719.5	718.0	708.6	703.0



66.5°	214.2	214.7	214.2	213.7	213.2	212.8
67°	207.1	207.6	207.1	206.6	206.2	206.2

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89°	3.3	3.8	3.3	2.8	1.9	1.4
89.5°	1.9	2.4	1.9	1.4	0.5	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)