

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: P776828

Luminaire Tested: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776828
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: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K
Description: 8 INCH SQUARE MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

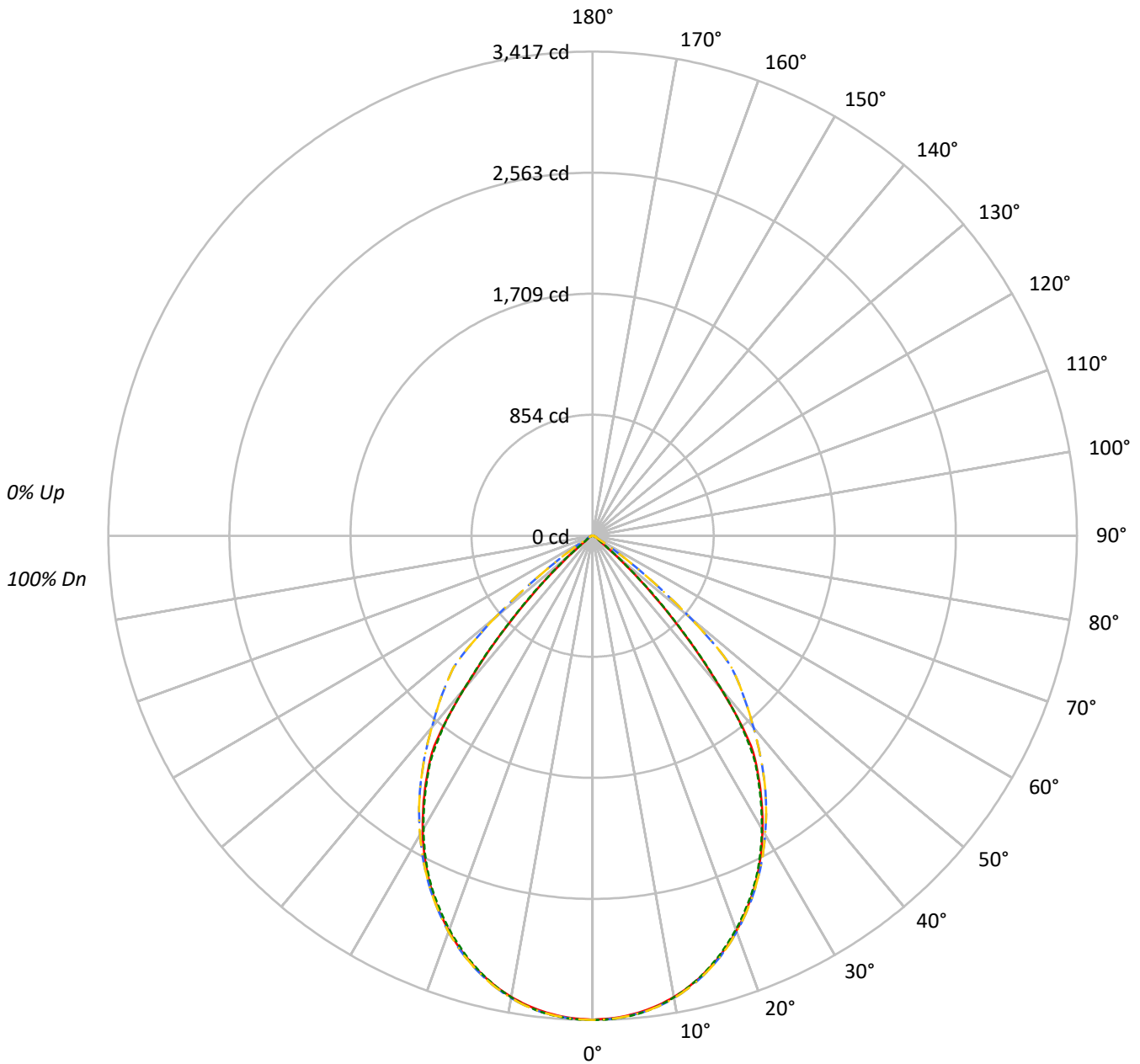
Lumens per Lamp: N/A
Luminaire Lumens: 4703.4 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	107	104	110	107	105	103	103	101	99	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84					84			
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	73	82	77	72	80	75	72	78	74	71	69					69			
5	88	78	72	67	86	77	71	66	76	70	66	74	69	65	72	68	65	63					63			
6	83	72	66	61	81	72	65	60	70	64	60	69	63	60	67	63	59	58					58			
7	78	67	60	55	76	66	60	55	65	59	55	64	59	55	63	58	54	53					53			
8	73	62	56	51	72	62	55	51	61	55	51	59	54	50	58	54	50	48					48			
9	69	58	51	47	68	58	51	47	57	51	47	56	50	46	55	50	46	45					45			
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43	41					41			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	81908	81908	81908	81908
5°	81518	81691	81518	81691
10°	80457	80527	80457	80527
15°	78539	78445	78539	78445
20°	75705	75424	75705	75424
25°	71800	71562	71800	71562
30°	66401	66097	66401	66097
35°	59338	59030	59338	59030
40°	44070	44307	44070	44307
45°	23093	23676	23093	23676
50°	7491	8099	7491	8099
55°	2479	2278	2479	2278
60°	1880	1765	1880	1765
65°	1435	1384	1435	1384
70°	1143	1108	1143	1108
75°	926	926	926	926
80°	732	787	732	787
85°	523	523	523	523

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 49086 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.2	6.8
10°-20°	889.9	18.9
20°-30°	1246.6	26.5
30°-40°	1280.5	27.2
40°-50°	775.7	16.5
50°-60°	145.8	3.1
60°-70°	28.2	0.6
70°-80°	12.7	0.3
80°-90°	2.7	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°	2457.7	52.3
0°-40°	3738.2	79.5
0°-60°	4659.7	99.1
0°-90°	4703.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4703.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3416	3416	3416	3416	3416	
5°	3387	3394	3387	3394	3387	321
15°	3164	3160	3164	3160	3164	889
25°	2714	2705	2714	2705	2714	1243
35°	2027	2017	2027	2017	2027	1238
45°	681	698	681	698	681	544
55°	59	54	59	54	59	68
65°	25	24	25	24	25	26
75°	10	10	10	10	10	11
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°	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9
0.5°	3412.5	3413.9	3416.3	3417.8	3416.8	3417.8	3416.3	3413.9	3412.5	3413.9	3416.3
1°	3412.0	3413.5	3415.4	3416.8	3416.3	3416.8	3415.4	3413.5	3412.0	3413.5	3415.4
1.5°	3410.6	3412.0	3414.4	3415.9	3415.4	3415.9	3414.4	3412.0	3410.6	3412.0	3414.4
2°	3408.7	3410.1	3412.5	3414.4	3413.5	3414.4	3412.5	3410.1	3408.7	3410.1	3412.5
2.5°	3406.3	3407.7	3410.6	3412.0	3411.6	3412.0	3410.6	3407.7	3406.3	3407.7	3410.6
3°	3403.4	3405.3	3407.7	3409.6	3409.2	3409.6	3407.7	3405.3	3403.4	3405.3	3407.7
3.5°	3400.1	3402.0	3404.9	3406.8	3406.3	3406.8	3404.9	3402.0	3400.1	3402.0	3404.9
4°	3396.2	3398.2	3401.0	3403.4	3402.9	3403.4	3401.0	3398.2	3396.2	3398.2	3401.0
4.5°	3391.9	3393.4	3396.7	3399.1	3398.6	3399.1	3396.7	3393.4	3391.9	3393.4	3396.7
5°	3386.7	3388.6	3392.4	3394.8	3393.9	3394.8	3392.4	3388.6	3386.7	3388.6	3392.4
5.5°	3381.4	3383.3	3387.2	3389.6	3388.1	3389.6	3387.2	3383.3	3381.4	3383.3	3387.2
6°	3374.7	3377.1	3381.4	3383.8	3382.4	3383.8	3381.4	3377.1	3374.7	3377.1	3381.4
6.5°	3368.0	3370.9	3375.2	3377.1	3375.2	3377.1	3375.2	3370.9	3368.0	3370.9	3375.2
7°	3360.9	3363.7	3368.0	3369.5	3367.6	3369.5	3368.0	3363.7	3360.9	3363.7	3368.0
7.5°	3352.7	3356.1	3360.4	3361.3	3358.9	3361.3	3360.4	3356.1	3352.7	3356.1	3360.4
8°	3344.1	3347.9	3352.3	3352.7	3350.3	3352.7	3352.3	3347.9	3344.1	3347.9	3352.3
8.5°	3335.0	3338.9	3343.2	3342.7	3340.3	3342.7	3343.2	3338.9	3335.0	3338.9	3343.2
9°	3325.5	3329.3	3333.6	3332.6	3329.8	3332.6	3333.6	3329.3	3325.5	3329.3	3333.6
9.5°	3315.4	3319.3	3323.6	3321.6	3318.8	3321.6	3323.6	3319.3	3315.4	3319.3	3323.6
10°	3304.4	3309.2	3312.6	3310.6	3307.3	3310.6	3312.6	3309.2	3304.4	3309.2	3312.6
10.5°	3293.0	3297.7	3301.1	3298.7	3295.3	3298.7	3301.1	3297.7	3293.0	3297.7	3301.1
11°	3281.0	3286.3	3289.1	3286.3	3282.4	3286.3	3289.1	3286.3	3281.0	3286.3	3289.1
11.5°	3268.6	3273.8	3276.2	3272.9	3269.0	3272.9	3276.2	3273.8	3268.6	3273.8	3276.2
12°	3255.2	3260.9	3262.8	3259.5	3255.7	3259.5	3262.8	3260.9	3255.2	3260.9	3262.8
12.5°	3241.3	3247.5	3249.0	3245.1	3240.8	3245.1	3249.0	3247.5	3241.3	3247.5	3249.0
13°	3227.0	3233.2	3234.6	3230.3	3226.0	3230.3	3234.6	3233.2	3227.0	3233.2	3234.6
13.5°	3212.1	3218.4	3219.3	3215.0	3210.2	3215.0	3219.3	3218.4	3212.1	3218.4	3219.3
14°	3196.4	3203.5	3204.0	3199.2	3194.0	3199.2	3204.0	3203.5	3196.4	3203.5	3204.0
14.5°	3180.6	3187.3	3187.7	3182.5	3177.2	3182.5	3187.7	3187.3	3180.6	3187.3	3187.7
15°	3163.8	3171.0	3171.5	3165.3	3160.0	3165.3	3171.5	3171.0	3163.8	3171.0	3171.5
15.5°	3146.6	3154.3	3153.8	3147.6	3141.8	3147.6	3153.8	3154.3	3146.6	3154.3	3153.8
16°	3128.9	3136.6	3136.1	3129.4	3123.7	3129.4	3136.1	3136.6	3128.9	3136.6	3136.1
16.5°	3110.8	3118.4	3117.5	3110.8	3104.5	3110.8	3117.5	3118.4	3110.8	3118.4	3117.5
17°	3092.1	3099.8	3098.8	3091.1	3084.9	3091.1	3098.8	3099.8	3092.1	3099.8	3098.8
17.5°	3072.5	3080.6	3079.2	3071.5	3064.8	3071.5	3079.2	3080.6	3072.5	3080.6	3079.2
18°	3052.4	3060.5	3058.6	3051.0	3043.8	3051.0	3058.6	3060.5	3052.4	3060.5	3058.6
18.5°	3031.9	3040.0	3038.5	3030.4	3022.3	3030.4	3038.5	3040.0	3031.9	3040.0	3038.5
19°	3010.8	3019.4	3017.5	3008.9	3000.8	3008.9	3017.5	3019.4	3010.8	3019.4	3017.5
19.5°	2988.8	2997.9	2995.5	2986.9	2978.3	2986.9	2995.5	2997.9	2988.8	2997.9	2995.5
20°	2966.8	2975.9	2973.5	2964.9	2955.8	2964.9	2973.5	2975.9	2966.8	2975.9	2973.5
20.5°	2944.3	2953.4	2951.0	2941.5	2932.4	2941.5	2951.0	2953.4	2944.3	2953.4	2951.0
21°	2920.9	2930.0	2928.1	2918.0	2908.5	2918.0	2928.1	2930.0	2920.9	2930.0	2928.1



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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°	2847.7	2857.8	2855.4	2844.9	2835.8	2844.9	2855.4	2857.8	2847.7	2857.8	2855.4
23°	2822.4	2832.4	2830.5	2819.5	2810.4	2819.5	2830.5	2832.4	2822.4	2832.4	2830.5
23.5°	2796.1	2807.1	2805.2	2794.2	2785.6	2794.2	2805.2	2807.1	2796.1	2807.1	2805.2
24°	2769.8	2780.3	2779.4	2768.4	2759.8	2768.4	2779.4	2780.3	2769.8	2780.3	2779.4
24.5°	2742.1	2753.5	2753.1	2742.5	2732.5	2742.5	2753.1	2753.5	2742.1	2753.5	2753.1
25°	2713.8	2726.3	2725.8	2716.2	2704.8	2716.2	2725.8	2726.3	2713.8	2726.3	2725.8
25.5°	2685.6	2698.5	2698.5	2688.5	2677.0	2688.5	2698.5	2698.5	2685.6	2698.5	2698.5
26°	2656.0	2669.8	2670.8	2661.7	2648.3	2661.7	2670.8	2669.8	2656.0	2669.8	2670.8
26.5°	2626.3	2640.7	2642.6	2633.5	2618.2	2633.5	2642.6	2640.7	2626.3	2640.7	2642.6
27°	2595.2	2611.0	2613.9	2604.8	2587.1	2604.8	2613.9	2611.0	2595.2	2611.0	2613.9
27.5°	2564.6	2580.9	2585.2	2575.2	2556.0	2575.2	2585.2	2580.9	2564.6	2580.9	2585.2
28°	2532.6	2549.8	2556.0	2544.6	2523.0	2544.6	2556.0	2549.8	2532.6	2549.8	2556.0
28.5°	2500.1	2518.3	2525.9	2513.5	2489.6	2513.5	2525.9	2518.3	2500.1	2518.3	2525.9
29°	2466.1	2487.2	2496.3	2481.9	2456.1	2481.9	2496.3	2487.2	2466.1	2487.2	2496.3
29.5°	2432.2	2455.1	2466.6	2448.9	2421.7	2448.9	2466.6	2455.1	2432.2	2455.1	2466.6
30°	2398.2	2422.1	2435.5	2415.9	2387.2	2415.9	2435.5	2422.1	2398.2	2422.1	2435.5
30.5°	2363.3	2388.7	2404.9	2382.0	2351.8	2382.0	2404.9	2388.7	2363.3	2388.7	2404.9
31°	2327.0	2354.7	2373.4	2348.5	2316.4	2348.5	2373.4	2354.7	2327.0	2354.7	2373.4
31.5°	2291.6	2320.8	2342.3	2314.1	2280.1	2314.1	2342.3	2320.8	2291.6	2320.8	2342.3
32°	2255.2	2285.8	2310.7	2279.6	2243.3	2279.6	2310.7	2285.8	2255.2	2285.8	2310.7
32.5°	2218.4	2250.5	2278.7	2243.8	2206.5	2243.8	2278.7	2250.5	2218.4	2250.5	2278.7
33°	2181.1	2215.1	2246.2	2209.3	2169.6	2209.3	2246.2	2215.1	2181.1	2215.1	2246.2
33.5°	2143.8	2180.2	2213.2	2173.9	2131.9	2173.9	2213.2	2180.2	2143.8	2180.2	2213.2
34°	2105.1	2144.3	2179.7	2138.6	2093.6	2138.6	2179.7	2144.3	2105.1	2144.3	2179.7
34.5°	2066.8	2107.9	2146.2	2103.2	2054.9	2103.2	2146.2	2107.9	2066.8	2107.9	2146.2
35°	2027.1	2071.6	2112.7	2066.8	2016.6	2066.8	2112.7	2071.6	2027.1	2071.6	2112.7
35.5°	1988.9	2035.7	2077.8	2031.0	1978.4	2031.0	2077.8	2035.7	1988.9	2035.7	2077.8
36°	1949.2	1998.9	2042.9	1994.6	1932.9	1994.6	2042.9	1998.9	1949.2	1998.9	2042.9
36.5°	1906.6	1961.1	2009.0	1957.8	1881.8	1957.8	2009.0	1961.1	1906.6	1961.1	2009.0
37°	1855.5	1924.3	1974.1	1921.0	1825.3	1921.0	1974.1	1924.3	1855.5	1924.3	1974.1
37.5°	1788.5	1886.5	1939.6	1883.7	1767.0	1883.7	1939.6	1886.5	1788.5	1886.5	1939.6
38°	1721.1	1849.2	1903.8	1846.8	1704.8	1846.8	1903.8	1849.2	1721.1	1849.2	1903.8
38.5°	1646.5	1811.5	1869.3	1806.2	1641.2	1806.2	1869.3	1811.5	1646.5	1811.5	1869.3
39°	1569.0	1772.2	1834.9	1758.9	1570.0	1758.9	1834.9	1772.2	1569.0	1772.2	1834.9
39.5°	1488.2	1715.3	1800.9	1705.8	1494.9	1705.8	1800.9	1715.3	1488.2	1715.3	1800.9
40°	1407.9	1654.1	1766.5	1647.9	1415.5	1647.9	1766.5	1654.1	1407.9	1654.1	1766.5
40.5°	1327.5	1584.8	1732.6	1586.2	1337.1	1586.2	1732.6	1584.8	1327.5	1584.8	1732.6
41°	1251.5	1513.1	1699.6	1520.2	1261.5	1520.2	1699.6	1513.1	1251.5	1513.1	1699.6
41.5°	1175.9	1439.4	1667.5	1450.9	1186.4	1450.9	1667.5	1439.4	1175.9	1439.4	1667.5
42°	1102.3	1365.8	1635.5	1378.2	1113.8	1378.2	1635.5	1365.8	1102.3	1365.8	1635.5
42.5°	1028.6	1293.1	1603.9	1305.5	1040.1	1305.5	1603.9	1293.1	1028.6	1293.1	1603.9
43°	955.9	1219.4	1572.4	1232.3	968.9	1232.3	1572.4	1219.4	955.9	1219.4	1572.4
43.5°	882.8	1147.7	1541.3	1160.6	897.1	1160.6	1541.3	1147.7	882.8	1147.7	1541.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	681.0	939.2	1447.5	955.5	698.2	955.5	1447.5	939.2	681.0	939.2	1447.5
45.5°	617.8	870.8	1416.5	887.6	637.5	887.6	1416.5	870.8	617.8	870.8	1416.5
46°	559.0	804.8	1384.9	820.6	579.1	820.6	1384.9	804.8	559.0	804.8	1384.9
46.5°	501.2	740.7	1352.4	755.6	519.8	755.6	1352.4	740.7	501.2	740.7	1352.4
47°	444.3	677.6	1306.9	692.0	462.4	692.0	1306.9	677.6	444.3	677.6	1306.9
47.5°	389.7	616.9	1251.5	632.7	411.3	632.7	1251.5	616.9	389.7	616.9	1251.5
48°	343.4	558.1	1185.5	574.3	366.3	574.3	1185.5	558.1	343.4	558.1	1185.5
48.5°	300.8	502.1	1115.7	517.9	324.2	517.9	1115.7	502.1	300.8	502.1	1115.7
49°	263.0	447.6	1042.5	462.4	286.0	462.4	1042.5	447.6	263.0	447.6	1042.5
49.5°	230.0	395.0	967.4	412.7	250.1	412.7	967.4	395.0	230.0	395.0	967.4
50°	200.8	345.7	891.4	364.9	217.1	364.9	891.4	345.7	200.8	345.7	891.4
50.5°	173.6	301.3	816.3	320.9	186.0	320.9	816.3	301.3	173.6	301.3	816.3
51°	148.7	261.6	742.2	279.8	156.4	279.8	742.2	261.6	148.7	261.6	742.2
51.5°	128.6	226.7	672.8	242.5	131.5	242.5	672.8	226.7	128.6	226.7	672.8
52°	108.6	196.1	609.2	209.9	111.9	209.9	609.2	196.1	108.6	196.1	609.2
52.5°	91.3	168.8	547.1	179.8	98.5	179.8	547.1	168.8	91.3	168.8	547.1
53°	78.9	143.9	489.2	152.1	85.6	152.1	489.2	143.9	78.9	143.9	489.2
53.5°	67.4	122.9	432.3	126.2	72.2	126.2	432.3	122.9	67.4	122.9	432.3
54°	64.6	102.8	380.2	103.3	59.3	103.3	380.2	102.8	64.6	102.8	380.2
54.5°	61.7	86.1	330.4	85.6	56.4	85.6	330.4	86.1	61.7	86.1	330.4
55°	59.3	71.3	286.4	71.7	54.5	71.7	286.4	71.3	59.3	71.3	286.4
55.5°	56.9	60.7	246.8	61.7	52.1	61.7	246.8	60.7	56.9	60.7	246.8
56°	54.5	56.0	210.9	54.0	50.2	54.0	210.9	56.0	54.5	56.0	210.9
56.5°	52.1	53.6	178.9	50.2	48.3	50.2	178.9	53.6	52.1	53.6	178.9
57°	50.2	51.6	152.1	48.3	46.4	48.3	152.1	51.6	50.2	51.6	152.1
57.5°	47.8	49.7	128.6	46.4	44.5	46.4	128.6	49.7	47.8	49.7	128.6
58°	45.9	47.8	109.5	45.0	43.0	45.0	109.5	47.8	45.9	47.8	109.5
58.5°	44.0	45.9	92.3	43.0	41.1	43.0	92.3	45.9	44.0	45.9	92.3
59°	42.6	44.5	78.4	41.6	39.7	41.6	78.4	44.5	42.6	44.5	78.4
59.5°	40.6	43.0	66.5	40.2	38.3	40.2	66.5	43.0	40.6	43.0	66.5
60°	39.2	41.1	56.0	38.7	36.8	38.7	56.0	41.1	39.2	41.1	56.0
60.5°	37.3	39.7	49.7	37.3	34.9	37.3	49.7	39.7	37.3	39.7	49.7
61°	35.9	38.3	45.0	36.3	34.0	36.3	45.0	38.3	35.9	38.3	45.0
61.5°	34.4	36.8	41.1	34.9	32.5	34.9	41.1	36.8	34.4	36.8	41.1
62°	33.0	35.9	38.7	33.5	31.1	33.5	38.7	35.9	33.0	35.9	38.7
62.5°	31.6	34.4	36.8	32.5	30.1	32.5	36.8	34.4	31.6	34.4	36.8
63°	30.1	33.0	35.4	31.6	28.7	31.6	35.4	33.0	30.1	33.0	35.4
63.5°	29.2	32.0	34.0	30.1	27.7	30.1	34.0	32.0	29.2	32.0	34.0
64°	27.7	30.6	33.0	29.2	26.3	29.2	33.0	30.6	27.7	30.6	33.0
64.5°	26.8	29.6	31.6	28.2	25.3	28.2	31.6	29.6	26.8	29.6	31.6
65°	25.3	28.7	30.6	27.3	24.4	27.3	30.6	28.7	25.3	28.7	30.6
65.5°	24.4	27.3	29.2	26.3	23.4	26.3	29.2	27.3	24.4	27.3	29.2
66°	23.4	26.3	28.2	25.3	22.5	25.3	28.2	26.3	23.4	26.3	28.2



TEST NUMBER: P776828

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	20.6	23.4	25.3	22.5	19.6	22.5	25.3	23.4	20.6	23.4	25.3
68°	19.6	22.5	24.4	21.5	19.1	21.5	24.4	22.5	19.6	22.5	24.4
68.5°	18.7	21.5	23.4	21.0	18.2	21.0	23.4	21.5	18.7	21.5	23.4
69°	18.2	20.6	22.5	20.1	17.2	20.1	22.5	20.6	18.2	20.6	22.5
69.5°	17.2	20.1	21.5	19.1	16.7	19.1	21.5	20.1	17.2	20.1	21.5
70°	16.3	19.1	20.6	18.7	15.8	18.7	20.6	19.1	16.3	19.1	20.6
70.5°	15.8	18.2	20.1	17.7	15.3	17.7	20.1	18.2	15.8	18.2	20.1
71°	14.8	17.7	19.1	17.2	14.8	17.2	19.1	17.7	14.8	17.7	19.1
71.5°	14.3	16.7	18.2	16.3	13.9	16.3	18.2	16.7	14.3	16.7	18.2
72°	13.4	16.3	17.7	15.8	13.4	15.8	17.7	16.3	13.4	16.3	17.7
72.5°	12.9	15.3	16.7	14.8	12.9	14.8	16.7	15.3	12.9	15.3	16.7
73°	12.4	14.8	15.8	14.3	12.0	14.3	15.8	14.8	12.4	14.8	15.8
73.5°	11.5	13.9	15.3	13.9	11.5	13.9	15.3	13.9	11.5	13.9	15.3
74°	11.0	13.4	14.3	12.9	11.0	12.9	14.3	13.4	11.0	13.4	14.3
74.5°	10.5	12.9	13.9	12.4	10.5	12.4	13.9	12.9	10.5	12.9	13.9
75°	10.0	12.0	12.9	12.0	10.0	12.0	12.9	12.0	10.0	12.0	12.9
75.5°	9.6	11.5	12.4	11.5	9.6	11.5	12.4	11.5	9.6	11.5	12.4
76°	9.1	11.0	12.0	10.5	9.1	10.5	12.0	11.0	9.1	11.0	12.0
76.5°	8.6	10.0	11.0	10.0	8.6	10.0	11.0	10.0	8.6	10.0	11.0
77°	7.7	9.6	10.5	9.6	8.1	9.6	10.5	9.6	7.7	9.6	10.5
77.5°	7.2	9.1	10.0	9.1	7.7	9.1	10.0	9.1	7.2	9.1	10.0
78°	7.2	8.6	9.1	8.6	7.2	8.6	9.1	8.6	7.2	8.6	9.1
78.5°	6.7	8.1	8.6	8.1	6.7	8.1	8.6	8.1	6.7	8.1	8.6
79°	6.2	7.7	8.1	7.7	6.2	7.7	8.1	7.7	6.2	7.7	8.1
79.5°	5.7	6.7	7.7	7.2	5.7	7.2	7.7	6.7	5.7	6.7	7.7
80°	5.3	6.2	7.2	6.7	5.7	6.7	7.2	6.2	5.3	6.2	7.2
80.5°	4.8	5.7	6.7	6.2	5.3	6.2	6.7	5.7	4.8	5.7	6.7
81°	4.3	5.3	6.2	5.7	4.8	5.7	6.2	5.3	4.3	5.3	6.2
81.5°	4.3	4.8	5.7	5.3	4.3	5.3	5.7	4.8	4.3	4.8	5.7
82°	3.8	4.3	5.3	4.8	4.3	4.8	5.3	4.3	3.8	4.3	5.3
82.5°	3.3	3.8	4.8	4.3	3.8	4.3	4.8	3.8	3.3	3.8	4.8
83°	2.9	3.8	4.3	3.8	3.3	3.8	4.3	3.8	2.9	3.8	4.3
83.5°	2.9	3.3	3.8	3.8	2.9	3.8	3.8	3.3	2.9	3.3	3.8
84°	2.4	2.9	3.3	3.3	2.9	3.3	3.3	2.9	2.4	2.9	3.3
84.5°	1.9	2.4	2.9	2.9	2.4	2.9	2.9	2.4	1.9	2.4	2.9
85°	1.9	1.9	2.4	2.4	1.9	2.4	2.4	1.9	1.9	1.9	2.4
85.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.9
86°	1.0	1.4	1.9	1.9	1.4	1.9	1.9	1.4	1.0	1.4	1.9
86.5°	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.4
87°	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0
87.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
88°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
88.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5



TEST NUMBER: P776828

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776828

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TSQH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3415.9	3415.9	3415.9	3415.9	3415.9	3415.9
0.5°	3417.8	3416.8	3417.8	3416.3	3413.9	3412.5
1°	3416.8	3416.3	3416.8	3415.4	3413.5	3412.0
1.5°	3415.9	3415.4	3415.9	3414.4	3412.0	3410.6
2°	3414.4	3413.5	3414.4	3412.5	3410.1	3408.7
2.5°	3412.0	3411.6	3412.0	3410.6	3407.7	3406.3
3°	3409.6	3409.2	3409.6	3407.7	3405.3	3403.4
3.5°	3406.8	3406.3	3406.8	3404.9	3402.0	3400.1
4°	3403.4	3402.9	3403.4	3401.0	3398.2	3396.2
4.5°	3399.1	3398.6	3399.1	3396.7	3393.4	3391.9
5°	3394.8	3393.9	3394.8	3392.4	3388.6	3386.7
5.5°	3389.6	3388.1	3389.6	3387.2	3383.3	3381.4
6°	3383.8	3382.4	3383.8	3381.4	3377.1	3374.7
6.5°	3377.1	3375.2	3377.1	3375.2	3370.9	3368.0
7°	3369.5	3367.6	3369.5	3368.0	3363.7	3360.9
7.5°	3361.3	3358.9	3361.3	3360.4	3356.1	3352.7
8°	3352.7	3350.3	3352.7	3352.3	3347.9	3344.1
8.5°	3342.7	3340.3	3342.7	3343.2	3338.9	3335.0
9°	3332.6	3329.8	3332.6	3333.6	3329.3	3325.5
9.5°	3321.6	3318.8	3321.6	3323.6	3319.3	3315.4
10°	3310.6	3307.3	3310.6	3312.6	3309.2	3304.4
10.5°	3298.7	3295.3	3298.7	3301.1	3297.7	3293.0
11°	3286.3	3282.4	3286.3	3289.1	3286.3	3281.0
11.5°	3272.9	3269.0	3272.9	3276.2	3273.8	3268.6
12°	3259.5	3255.7	3259.5	3262.8	3260.9	3255.2
12.5°	3245.1	3240.8	3245.1	3249.0	3247.5	3241.3
13°	3230.3	3226.0	3230.3	3234.6	3233.2	3227.0
13.5°	3215.0	3210.2	3215.0	3219.3	3218.4	3212.1
14°	3199.2	3194.0	3199.2	3204.0	3203.5	3196.4
14.5°	3182.5	3177.2	3182.5	3187.7	3187.3	3180.6
15°	3165.3	3160.0	3165.3	3171.5	3171.0	3163.8
15.5°	3147.6	3141.8	3147.6	3153.8	3154.3	3146.6
16°	3129.4	3123.7	3129.4	3136.1	3136.6	3128.9
16.5°	3110.8	3104.5	3110.8	3117.5	3118.4	3110.8
17°	3091.1	3084.9	3091.1	3098.8	3099.8	3092.1
17.5°	3071.5	3064.8	3071.5	3079.2	3080.6	3072.5
18°	3051.0	3043.8	3051.0	3058.6	3060.5	3052.4
18.5°	3030.4	3022.3	3030.4	3038.5	3040.0	3031.9
19°	3008.9	3000.8	3008.9	3017.5	3019.4	3010.8
19.5°	2986.9	2978.3	2986.9	2995.5	2997.9	2988.8
20°	2964.9	2955.8	2964.9	2973.5	2975.9	2966.8
20.5°	2941.5	2932.4	2941.5	2951.0	2953.4	2944.3
21°	2918.0	2908.5	2918.0	2928.1	2930.0	2920.9

TEST NUMBER: P776828

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2844.9	2835.8	2844.9	2855.4	2857.8	2847.7
23°	2819.5	2810.4	2819.5	2830.5	2832.4	2822.4
23.5°	2794.2	2785.6	2794.2	2805.2	2807.1	2796.1
24°	2768.4	2759.8	2768.4	2779.4	2780.3	2769.8
24.5°	2742.5	2732.5	2742.5	2753.1	2753.5	2742.1
25°	2716.2	2704.8	2716.2	2725.8	2726.3	2713.8
25.5°	2688.5	2677.0	2688.5	2698.5	2698.5	2685.6
26°	2661.7	2648.3	2661.7	2670.8	2669.8	2656.0
26.5°	2633.5	2618.2	2633.5	2642.6	2640.7	2626.3
27°	2604.8	2587.1	2604.8	2613.9	2611.0	2595.2
27.5°	2575.2	2556.0	2575.2	2585.2	2580.9	2564.6
28°	2544.6	2523.0	2544.6	2556.0	2549.8	2532.6
28.5°	2513.5	2489.6	2513.5	2525.9	2518.3	2500.1
29°	2481.9	2456.1	2481.9	2496.3	2487.2	2466.1
29.5°	2448.9	2421.7	2448.9	2466.6	2455.1	2432.2
30°	2415.9	2387.2	2415.9	2435.5	2422.1	2398.2
30.5°	2382.0	2351.8	2382.0	2404.9	2388.7	2363.3
31°	2348.5	2316.4	2348.5	2373.4	2354.7	2327.0
31.5°	2314.1	2280.1	2314.1	2342.3	2320.8	2291.6
32°	2279.6	2243.3	2279.6	2310.7	2285.8	2255.2
32.5°	2243.8	2206.5	2243.8	2278.7	2250.5	2218.4
33°	2209.3	2169.6	2209.3	2246.2	2215.1	2181.1
33.5°	2173.9	2131.9	2173.9	2213.2	2180.2	2143.8
34°	2138.6	2093.6	2138.6	2179.7	2144.3	2105.1
34.5°	2103.2	2054.9	2103.2	2146.2	2107.9	2066.8
35°	2066.8	2016.6	2066.8	2112.7	2071.6	2027.1
35.5°	2031.0	1978.4	2031.0	2077.8	2035.7	1988.9
36°	1994.6	1932.9	1994.6	2042.9	1998.9	1949.2
36.5°	1957.8	1881.8	1957.8	2009.0	1961.1	1906.6
37°	1921.0	1825.3	1921.0	1974.1	1924.3	1855.5
37.5°	1883.7	1767.0	1883.7	1939.6	1886.5	1788.5
38°	1846.8	1704.8	1846.8	1903.8	1849.2	1721.1
38.5°	1806.2	1641.2	1806.2	1869.3	1811.5	1646.5
39°	1758.9	1570.0	1758.9	1834.9	1772.2	1569.0
39.5°	1705.8	1494.9	1705.8	1800.9	1715.3	1488.2
40°	1647.9	1415.5	1647.9	1766.5	1654.1	1407.9
40.5°	1586.2	1337.1	1586.2	1732.6	1584.8	1327.5
41°	1520.2	1261.5	1520.2	1699.6	1513.1	1251.5
41.5°	1450.9	1186.4	1450.9	1667.5	1439.4	1175.9
42°	1378.2	1113.8	1378.2	1635.5	1365.8	1102.3
42.5°	1305.5	1040.1	1305.5	1603.9	1293.1	1028.6
43°	1232.3	968.9	1232.3	1572.4	1219.4	955.9
43.5°	1160.6	897.1	1160.6	1541.3	1147.7	882.8



TEST NUMBER: P776828

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	955.5	698.2	955.5	1447.5	939.2	681.0
45.5°	887.6	637.5	887.6	1416.5	870.8	617.8
46°	820.6	579.1	820.6	1384.9	804.8	559.0
46.5°	755.6	519.8	755.6	1352.4	740.7	501.2
47°	692.0	462.4	692.0	1306.9	677.6	444.3
47.5°	632.7	411.3	632.7	1251.5	616.9	389.7
48°	574.3	366.3	574.3	1185.5	558.1	343.4
48.5°	517.9	324.2	517.9	1115.7	502.1	300.8
49°	462.4	286.0	462.4	1042.5	447.6	263.0
49.5°	412.7	250.1	412.7	967.4	395.0	230.0
50°	364.9	217.1	364.9	891.4	345.7	200.8
50.5°	320.9	186.0	320.9	816.3	301.3	173.6
51°	279.8	156.4	279.8	742.2	261.6	148.7
51.5°	242.5	131.5	242.5	672.8	226.7	128.6
52°	209.9	111.9	209.9	609.2	196.1	108.6
52.5°	179.8	98.5	179.8	547.1	168.8	91.3
53°	152.1	85.6	152.1	489.2	143.9	78.9
53.5°	126.2	72.2	126.2	432.3	122.9	67.4
54°	103.3	59.3	103.3	380.2	102.8	64.6
54.5°	85.6	56.4	85.6	330.4	86.1	61.7
55°	71.7	54.5	71.7	286.4	71.3	59.3
55.5°	61.7	52.1	61.7	246.8	60.7	56.9
56°	54.0	50.2	54.0	210.9	56.0	54.5
56.5°	50.2	48.3	50.2	178.9	53.6	52.1
57°	48.3	46.4	48.3	152.1	51.6	50.2
57.5°	46.4	44.5	46.4	128.6	49.7	47.8
58°	45.0	43.0	45.0	109.5	47.8	45.9
58.5°	43.0	41.1	43.0	92.3	45.9	44.0
59°	41.6	39.7	41.6	78.4	44.5	42.6
59.5°	40.2	38.3	40.2	66.5	43.0	40.6
60°	38.7	36.8	38.7	56.0	41.1	39.2
60.5°	37.3	34.9	37.3	49.7	39.7	37.3
61°	36.3	34.0	36.3	45.0	38.3	35.9
61.5°	34.9	32.5	34.9	41.1	36.8	34.4
62°	33.5	31.1	33.5	38.7	35.9	33.0
62.5°	32.5	30.1	32.5	36.8	34.4	31.6
63°	31.6	28.7	31.6	35.4	33.0	30.1
63.5°	30.1	27.7	30.1	34.0	32.0	29.2
64°	29.2	26.3	29.2	33.0	30.6	27.7
64.5°	28.2	25.3	28.2	31.6	29.6	26.8
65°	27.3	24.4	27.3	30.6	28.7	25.3
65.5°	26.3	23.4	26.3	29.2	27.3	24.4
66°	25.3	22.5	25.3	28.2	26.3	23.4



TEST NUMBER: P776828

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	22.5	19.6	22.5	25.3	23.4	20.6
68°	21.5	19.1	21.5	24.4	22.5	19.6
68.5°	21.0	18.2	21.0	23.4	21.5	18.7
69°	20.1	17.2	20.1	22.5	20.6	18.2
69.5°	19.1	16.7	19.1	21.5	20.1	17.2
70°	18.7	15.8	18.7	20.6	19.1	16.3
70.5°	17.7	15.3	17.7	20.1	18.2	15.8
71°	17.2	14.8	17.2	19.1	17.7	14.8
71.5°	16.3	13.9	16.3	18.2	16.7	14.3
72°	15.8	13.4	15.8	17.7	16.3	13.4
72.5°	14.8	12.9	14.8	16.7	15.3	12.9
73°	14.3	12.0	14.3	15.8	14.8	12.4
73.5°	13.9	11.5	13.9	15.3	13.9	11.5
74°	12.9	11.0	12.9	14.3	13.4	11.0
74.5°	12.4	10.5	12.4	13.9	12.9	10.5
75°	12.0	10.0	12.0	12.9	12.0	10.0
75.5°	11.5	9.6	11.5	12.4	11.5	9.6
76°	10.5	9.1	10.5	12.0	11.0	9.1
76.5°	10.0	8.6	10.0	11.0	10.0	8.6
77°	9.6	8.1	9.6	10.5	9.6	7.7
77.5°	9.1	7.7	9.1	10.0	9.1	7.2
78°	8.6	7.2	8.6	9.1	8.6	7.2
78.5°	8.1	6.7	8.1	8.6	8.1	6.7
79°	7.7	6.2	7.7	8.1	7.7	6.2
79.5°	7.2	5.7	7.2	7.7	6.7	5.7
80°	6.7	5.7	6.7	7.2	6.2	5.3
80.5°	6.2	5.3	6.2	6.7	5.7	4.8
81°	5.7	4.8	5.7	6.2	5.3	4.3
81.5°	5.3	4.3	5.3	5.7	4.8	4.3
82°	4.8	4.3	4.8	5.3	4.3	3.8
82.5°	4.3	3.8	4.3	4.8	3.8	3.3
83°	3.8	3.3	3.8	4.3	3.8	2.9
83.5°	3.8	2.9	3.8	3.8	3.3	2.9
84°	3.3	2.9	3.3	3.3	2.9	2.4
84.5°	2.9	2.4	2.9	2.9	2.4	1.9
85°	2.4	1.9	2.4	2.4	1.9	1.9
85.5°	1.9	1.9	1.9	1.9	1.4	1.4
86°	1.9	1.4	1.9	1.9	1.4	1.0
86.5°	1.4	1.4	1.4	1.4	1.0	1.0
87°	1.0	1.0	1.0	1.0	1.0	0.5
87.5°	1.0	1.0	1.0	1.0	0.5	0.5
88°	0.5	0.5	0.5	0.5	0.5	0.5
88.5°	0.5	0.5	0.5	0.5	0.0	0.0



TEST NUMBER: P776828

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-4000K

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
1121 Highway 74 South
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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Peachtree City, GA 30269

Scaled Data Report





21.5°	2897.5	2906.6	2904.2	2894.1	2885.0	2894.1	2904.2	2906.6	2897.5	2906.6	2904.2
22°	2872.1	2882.7	2879.8	2869.7	2860.2	2869.7	2879.8	2882.7	2872.1	2882.7	2879.8



44°	812.5	1077.9	1509.7	1091.8	827.3	1091.8	1509.7	1077.9	812.5	1077.9	1509.7
44.5°	746.5	1009.5	1479.1	1023.4	758.9	1023.4	1479.1	1009.5	746.5	1009.5	1479.1



66.5°	22.5	25.3	27.3	24.4	21.5	24.4	27.3	25.3	22.5	25.3	27.3
67°	21.5	24.4	26.3	23.4	20.6	23.4	26.3	24.4	21.5	24.4	26.3



89°	0.0	0.0	0.0	0.0	0.5	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

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21.5°	2894.1	2885.0	2894.1	2904.2	2906.6	2897.5
22°	2869.7	2860.2	2869.7	2879.8	2882.7	2872.1



44°	1091.8	827.3	1091.8	1509.7	1077.9	812.5
44.5°	1023.4	758.9	1023.4	1479.1	1009.5	746.5

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66.5°	24.4	21.5	24.4	27.3	25.3	22.5
67°	23.4	20.6	23.4	26.3	24.4	21.5

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Peachtree City, GA 30269

Scaled Data Report



89°	0.0	0.5	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)