

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: P776792

Luminaire Tested: HCDJBS4050CSD-HCD82TRMW-5000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776792  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B064-HCD82TRMW)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD82TRMW-5000lm-3500K  
Description: 8 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

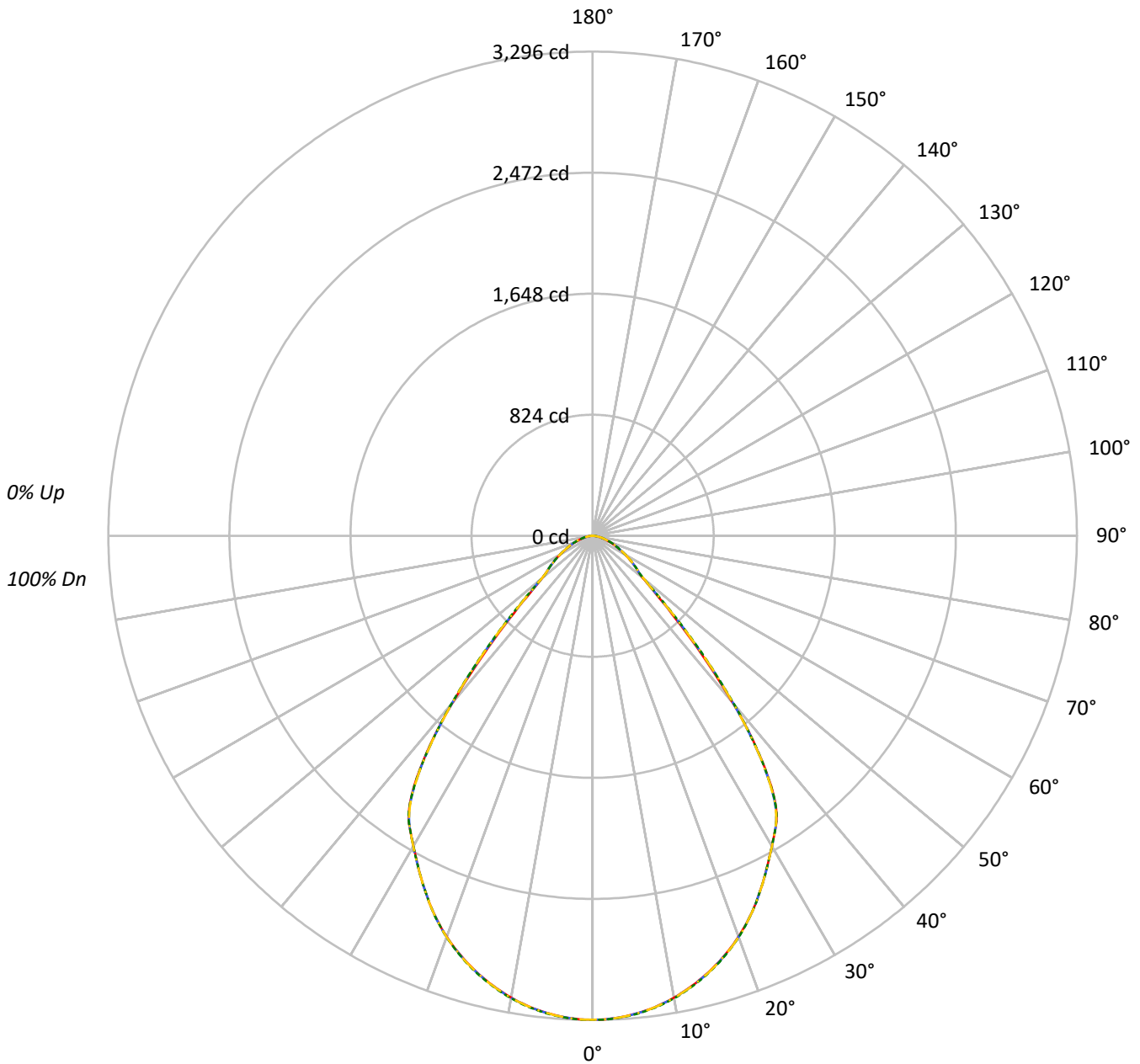
Lumens per Lamp: N/A  
Luminaire Lumens: 4968.3 lumens  
Efficiency: N/A  
Efficacy: 103.5 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.12  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

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					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	112	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	105	99	93	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72					72			
4	91	82	75	70	89	81	74	70	79	73	69	76	72	68	74	70	67	65					65			
5	86	75	68	63	84	74	68	63	72	67	62	71	65	61	69	64	61	59					59			
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54					54			
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49					49			
8	71	60	52	47	69	59	52	47	58	52	47	57	51	47	55	50	47	45					45			
9	67	55	48	44	66	55	48	44	54	48	43	53	47	43	52	47	43	42					42			
10	63	52	45	40	62	51	45	40	50	44	40	49	44	40	49	44	40	38					38			

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

	0°	90°	180°	270°
0°	100588	100588	100588	100588
5°	100176	100264	100176	100264
10°	98965	99111	98965	99111
15°	97022	97170	97022	97170
20°	94363	94454	94363	94454
25°	90445	90462	90445	90462
30°	86018	86018	86018	86018
35°	79912	79752	79912	79752
40°	59060	59758	59060	59758
45°	34722	36415	34722	36415
50°	21250	21521	21250	21521
55°	18215	18236	18215	18236
60°	15534	15674	15534	15674
65°	13191	13502	13191	13502
70°	11203	11712	11203	11712
75°	9354	10074	9354	10074
80°	7472	8457	7472	8457
85°	4624	6445	4624	6445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 36700 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	309.7	6.2
10°-20°	864.3	17.4
20°-30°	1234.2	24.8
30°-40°	1288.7	25.9
40°-50°	669.4	13.5
50°-60°	306.9	6.2
60°-70°	186.1	3.7
70°-80°	89.2	1.8
80°-90°	20.0	0.4
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°	2408.1	48.5
0°-40°	3696.8	74.4
0°-60°	4673.1	94.1
0°-90°	4968.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4968.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3295	3295	3295	3295	3295	
5°	3269	3272	3269	3272	3269	310
15°	3070	3074	3070	3074	3070	864
25°	2685	2685	2685	2685	2685	1234
35°	2144	2140	2144	2140	2144	1291
45°	804	843	804	843	804	654
55°	342	343	342	343	342	306
65°	183	187	183	187	183	183
75°	79	85	79	85	79	85
85°	13	18	13	18	13	17
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°	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7
0.5°	3294.2	3293.3	3294.2	3294.2	3296.1	3294.2	3294.2	3293.3	3294.2	3293.3	3294.2
1°	3293.7	3292.8	3293.7	3293.7	3295.2	3293.7	3293.7	3292.8	3293.7	3292.8	3293.7
1.5°	3292.3	3291.4	3292.3	3292.3	3294.2	3292.3	3292.3	3291.4	3292.3	3291.4	3292.3
2°	3290.4	3289.5	3290.4	3290.4	3292.3	3290.4	3290.4	3289.5	3290.4	3289.5	3290.4
2.5°	3288.1	3287.1	3288.1	3288.5	3290.0	3288.5	3288.1	3287.1	3288.1	3287.1	3288.1
3°	3285.2	3284.3	3285.2	3285.7	3287.6	3285.7	3285.2	3284.3	3285.2	3284.3	3285.2
3.5°	3281.9	3281.0	3281.9	3282.4	3284.3	3282.4	3281.9	3281.0	3281.9	3281.0	3281.9
4°	3277.7	3277.2	3278.2	3278.6	3280.5	3278.6	3278.2	3277.2	3277.7	3277.2	3278.2
4.5°	3273.4	3273.0	3273.9	3274.4	3276.3	3274.4	3273.9	3273.0	3273.4	3273.0	3273.9
5°	3268.7	3267.8	3268.7	3269.7	3271.6	3269.7	3268.7	3267.8	3268.7	3267.8	3268.7
5.5°	3263.1	3262.6	3263.5	3264.5	3266.4	3264.5	3263.5	3262.6	3263.1	3262.6	3263.5
6°	3257.4	3256.5	3257.9	3258.8	3260.2	3258.8	3257.9	3256.5	3257.4	3256.5	3257.9
6.5°	3250.8	3250.3	3251.7	3252.7	3254.1	3252.7	3251.7	3250.3	3250.8	3250.3	3251.7
7°	3244.2	3243.2	3244.7	3245.6	3247.5	3245.6	3244.7	3243.2	3244.2	3243.2	3244.7
7.5°	3236.6	3235.7	3237.6	3238.5	3240.4	3238.5	3237.6	3235.7	3236.6	3235.7	3237.6
8°	3228.6	3228.1	3229.6	3230.5	3232.9	3230.5	3229.6	3228.1	3228.6	3228.1	3229.6
8.5°	3220.1	3219.6	3221.5	3222.5	3224.4	3222.5	3221.5	3219.6	3220.1	3219.6	3221.5
9°	3211.6	3211.1	3212.6	3214.0	3215.9	3214.0	3212.6	3211.1	3211.6	3211.1	3212.6
9.5°	3201.7	3201.7	3203.1	3204.5	3206.4	3204.5	3203.1	3201.7	3201.7	3201.7	3203.1
10°	3192.3	3191.8	3193.7	3195.1	3197.0	3195.1	3193.7	3191.8	3192.3	3191.8	3193.7
10.5°	3181.9	3181.4	3183.3	3184.7	3187.1	3184.7	3183.3	3181.4	3181.9	3181.4	3183.3
11°	3171.0	3171.0	3172.4	3174.3	3176.2	3174.3	3172.4	3171.0	3171.0	3171.0	3172.4
11.5°	3160.2	3159.7	3161.6	3163.0	3164.9	3163.0	3161.6	3159.7	3160.2	3159.7	3161.6
12°	3148.4	3148.4	3149.8	3151.7	3153.6	3151.7	3149.8	3148.4	3148.4	3148.4	3149.8
12.5°	3136.1	3136.1	3138.0	3139.9	3141.3	3139.9	3138.0	3136.1	3136.1	3136.1	3138.0
13°	3123.8	3123.8	3125.7	3127.1	3129.0	3127.1	3125.7	3123.8	3123.8	3123.8	3125.7
13.5°	3110.6	3110.6	3112.5	3114.9	3115.8	3114.9	3112.5	3110.6	3110.6	3110.6	3112.5
14°	3097.9	3097.4	3099.3	3101.2	3102.6	3101.2	3099.3	3097.4	3097.9	3097.4	3099.3
14.5°	3083.7	3083.7	3085.6	3087.5	3088.9	3087.5	3085.6	3083.7	3083.7	3083.7	3085.6
15°	3069.6	3070.0	3071.9	3073.3	3074.3	3073.3	3071.9	3070.0	3069.6	3070.0	3071.9
15.5°	3054.9	3055.4	3057.3	3058.7	3059.7	3058.7	3057.3	3055.4	3054.9	3055.4	3057.3
16°	3040.3	3040.3	3042.2	3043.6	3044.6	3043.6	3042.2	3040.3	3040.3	3040.3	3042.2
16.5°	3025.2	3025.2	3027.1	3028.0	3029.4	3028.0	3027.1	3025.2	3025.2	3025.2	3027.1
17°	3009.2	3009.2	3011.0	3012.5	3013.4	3012.5	3011.0	3009.2	3009.2	3009.2	3011.0
17.5°	2992.6	2993.1	2995.0	2995.9	2996.9	2995.9	2995.0	2993.1	2992.6	2993.1	2995.0
18°	2976.1	2976.1	2978.0	2978.9	2979.9	2978.9	2978.0	2976.1	2976.1	2976.1	2978.0
18.5°	2959.1	2959.1	2961.0	2961.5	2962.4	2961.5	2961.0	2959.1	2959.1	2959.1	2961.0
19°	2941.2	2941.2	2943.1	2944.0	2944.5	2944.0	2943.1	2941.2	2941.2	2941.2	2943.1
19.5°	2922.8	2923.3	2924.7	2925.6	2926.1	2925.6	2924.7	2923.3	2922.8	2923.3	2924.7
20°	2904.4	2904.4	2905.8	2906.3	2907.2	2906.3	2905.8	2904.4	2904.4	2904.4	2905.8
20.5°	2885.0	2885.0	2886.4	2886.4	2887.4	2886.4	2886.4	2885.0	2885.0	2885.0	2886.4
21°	2865.2	2865.2	2866.6	2866.6	2867.1	2866.6	2866.6	2865.2	2865.2	2865.2	2866.6

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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°	2801.5	2801.5	2802.4	2802.0	2802.9	2802.0	2802.4	2801.5	2801.5	2801.5	2802.4
23°	2779.3	2779.3	2779.8	2779.8	2780.3	2779.8	2779.8	2779.3	2779.3	2779.3	2779.8
23.5°	2756.7	2756.7	2757.1	2756.7	2757.1	2756.7	2757.1	2756.7	2756.7	2756.7	2757.1
24°	2733.5	2733.1	2733.5	2733.1	2733.5	2733.1	2733.5	2733.1	2733.5	2733.1	2733.5
24.5°	2709.0	2709.0	2709.9	2709.5	2709.5	2709.5	2709.9	2709.0	2709.0	2709.0	2709.9
25°	2684.9	2684.9	2685.4	2685.4	2685.4	2685.4	2685.4	2684.9	2684.9	2684.9	2685.4
25.5°	2660.9	2660.4	2661.3	2660.9	2660.9	2660.9	2661.3	2660.4	2660.9	2660.4	2661.3
26°	2636.3	2635.8	2636.3	2636.8	2636.3	2636.8	2636.3	2635.8	2636.3	2635.8	2636.3
26.5°	2611.3	2611.8	2611.8	2611.8	2611.8	2611.8	2611.8	2611.3	2611.8	2611.8	2611.8
27°	2586.8	2586.8	2587.2	2587.2	2586.8	2587.2	2587.2	2586.8	2586.8	2586.8	2587.2
27.5°	2561.7	2561.7	2562.7	2562.7	2561.7	2562.7	2562.7	2561.7	2561.7	2561.7	2562.7
28°	2537.2	2537.2	2538.1	2537.7	2537.7	2537.7	2538.1	2537.2	2537.2	2537.2	2538.1
28.5°	2512.7	2512.7	2513.6	2513.1	2512.7	2513.1	2513.6	2512.7	2512.7	2512.7	2513.6
29°	2487.6	2488.6	2489.1	2488.6	2488.6	2488.6	2489.1	2488.6	2487.6	2488.6	2489.1
29.5°	2463.6	2464.1	2465.0	2465.0	2464.1	2465.0	2465.0	2464.1	2463.6	2464.1	2465.0
30°	2440.0	2440.5	2440.9	2440.9	2440.0	2440.9	2440.9	2440.5	2440.0	2440.5	2440.9
30.5°	2416.4	2417.3	2417.8	2417.3	2415.9	2417.3	2417.8	2417.3	2416.4	2417.3	2417.8
31°	2393.3	2393.7	2394.7	2394.2	2393.7	2394.2	2394.7	2393.7	2393.3	2393.7	2394.7
31.5°	2371.1	2371.1	2371.5	2371.1	2370.1	2371.1	2371.5	2371.1	2371.1	2371.1	2371.5
32°	2348.0	2348.0	2348.0	2347.5	2347.5	2347.5	2348.0	2348.0	2348.0	2348.0	2348.0
32.5°	2324.8	2322.9	2322.5	2322.0	2324.4	2322.0	2322.5	2322.9	2324.8	2322.9	2322.5
33°	2299.3	2294.6	2293.7	2292.3	2300.3	2292.3	2293.7	2294.6	2299.3	2294.6	2293.7
33.5°	2268.2	2261.1	2261.6	2258.8	2269.1	2258.8	2261.6	2261.1	2268.2	2261.1	2261.6
34°	2230.9	2222.9	2225.7	2220.1	2232.3	2220.1	2225.7	2222.9	2230.9	2222.9	2225.7
34.5°	2190.8	2179.5	2184.2	2178.5	2189.8	2178.5	2184.2	2179.5	2190.8	2179.5	2184.2
35°	2144.1	2133.7	2136.0	2132.3	2139.8	2132.3	2136.0	2133.7	2144.1	2133.7	2136.0
35.5°	2091.7	2086.0	2083.2	2079.9	2085.1	2079.9	2083.2	2086.0	2091.7	2086.0	2083.2
36°	2034.1	2035.0	2026.6	2022.8	2030.8	2022.8	2026.6	2035.0	2034.1	2035.0	2026.6
36.5°	1973.7	1977.9	1966.6	1962.4	1970.9	1962.4	1966.6	1977.9	1973.7	1977.9	1966.6
37°	1911.4	1915.2	1904.8	1899.1	1909.5	1899.1	1904.8	1915.2	1911.4	1915.2	1904.8
37.5°	1846.7	1846.7	1839.7	1834.5	1843.9	1834.5	1839.7	1846.7	1846.7	1846.7	1839.7
38°	1779.3	1774.5	1773.1	1768.9	1777.8	1768.9	1773.1	1774.5	1779.3	1774.5	1773.1
38.5°	1708.9	1700.4	1704.2	1700.9	1709.9	1700.9	1704.2	1700.4	1708.9	1700.4	1704.2
39°	1635.3	1627.3	1632.9	1632.5	1641.9	1632.5	1632.9	1627.3	1635.3	1627.3	1632.9
39.5°	1560.3	1554.6	1561.2	1563.1	1571.6	1563.1	1561.2	1554.6	1560.3	1554.6	1561.2
40°	1481.9	1483.3	1489.9	1495.1	1499.4	1495.1	1489.9	1483.3	1481.9	1483.3	1489.9
40.5°	1403.6	1410.7	1417.7	1426.7	1427.2	1426.7	1417.7	1410.7	1403.6	1410.7	1417.7
41°	1327.6	1339.4	1348.4	1358.7	1355.4	1358.7	1348.4	1339.4	1327.6	1339.4	1348.4
41.5°	1252.6	1266.2	1279.0	1291.3	1284.2	1291.3	1279.0	1266.2	1252.6	1266.2	1279.0
42°	1180.8	1195.0	1210.1	1223.3	1215.7	1223.3	1210.1	1195.0	1180.8	1195.0	1210.1
42.5°	1111.4	1125.1	1141.6	1157.2	1148.3	1157.2	1141.6	1125.1	1111.4	1125.1	1141.6
43°	1044.0	1057.6	1076.0	1091.6	1084.1	1091.6	1076.0	1057.6	1044.0	1057.6	1076.0
43.5°	979.8	992.0	1011.9	1028.9	1020.8	1028.9	1011.9	992.0	979.8	992.0	1011.9

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CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	804.2	812.7	834.4	850.0	843.4	850.0	834.4	812.7	804.2	812.7	834.4
45.5°	752.8	760.3	781.1	795.7	790.5	795.7	781.1	760.3	752.8	760.3	781.1
46°	704.1	712.6	730.6	744.3	740.0	744.3	730.6	712.6	704.1	712.6	730.6
46.5°	659.8	669.2	682.0	696.1	692.8	696.1	682.0	669.2	659.8	669.2	682.0
47°	618.3	629.1	638.1	651.8	648.5	651.8	638.1	629.1	618.3	629.1	638.1
47.5°	581.4	592.8	597.5	610.7	606.9	610.7	597.5	592.8	581.4	592.8	597.5
48°	548.4	558.3	561.1	574.4	569.2	574.4	561.1	558.3	548.4	558.3	561.1
48.5°	518.7	526.7	529.1	540.4	534.2	540.4	529.1	526.7	518.7	526.7	529.1
49°	491.8	497.9	500.3	509.7	504.0	509.7	500.3	497.9	491.8	497.9	500.3
49.5°	468.6	472.9	475.7	482.8	476.2	482.8	475.7	472.9	468.6	472.9	475.7
50°	447.4	451.2	454.5	459.2	453.1	459.2	454.5	451.2	447.4	451.2	454.5
50.5°	429.9	432.8	435.6	439.4	433.3	439.4	435.6	432.8	429.9	432.8	435.6
51°	415.3	418.1	419.6	422.4	417.2	422.4	419.6	418.1	415.3	418.1	419.6
51.5°	403.0	405.4	406.8	407.8	404.5	407.8	406.8	405.4	403.0	405.4	406.8
52°	393.6	394.6	395.5	396.0	394.1	396.0	395.5	394.6	393.6	394.6	395.5
52.5°	384.6	385.1	385.6	385.6	385.6	385.6	385.6	385.1	384.6	385.1	385.6
53°	376.1	376.6	376.6	376.6	377.1	376.6	376.6	376.6	376.1	376.6	376.6
53.5°	368.1	368.1	368.1	367.6	368.6	367.6	368.1	368.1	368.1	368.1	368.1
54°	359.6	359.6	359.6	359.2	360.1	359.2	359.6	359.6	359.6	359.6	359.6
54.5°	351.1	351.1	351.1	350.7	351.6	350.7	351.1	351.1	351.1	351.1	351.1
55°	342.2	342.2	342.2	342.2	342.6	342.2	342.2	342.2	342.2	342.2	342.2
55.5°	333.2	333.2	333.7	333.2	333.7	333.2	333.7	333.2	333.2	333.2	333.7
56°	324.2	324.2	324.7	324.7	324.7	324.7	324.7	324.2	324.2	324.2	324.7
56.5°	315.3	315.7	315.7	315.7	315.7	315.7	315.7	315.7	315.3	315.7	315.7
57°	306.3	306.8	306.8	306.8	306.8	306.8	306.8	306.8	306.3	306.8	306.8
57.5°	297.3	297.8	298.3	298.3	298.3	298.3	298.3	297.8	297.3	297.8	298.3
58°	288.4	289.3	289.3	289.8	289.8	289.8	289.3	289.3	288.4	289.3	289.3
58.5°	279.4	280.8	280.8	281.3	281.3	281.3	280.8	280.8	279.4	280.8	280.8
59°	270.9	272.3	272.8	272.8	272.8	272.8	272.8	272.3	270.9	272.3	272.8
59.5°	262.9	264.3	264.8	264.8	264.8	264.8	264.8	264.3	262.9	264.3	264.8
60°	254.4	256.3	256.7	257.2	256.7	257.2	256.7	256.3	254.4	256.3	256.7
60.5°	246.4	248.2	249.2	249.2	249.2	249.2	249.2	248.2	246.4	248.2	249.2
61°	238.8	240.7	241.6	241.6	241.6	241.6	241.6	240.7	238.8	240.7	241.6
61.5°	231.3	233.1	234.1	234.6	234.6	234.6	234.1	233.1	231.3	233.1	234.1
62°	223.7	225.6	227.0	227.0	227.0	227.0	227.0	225.6	223.7	225.6	227.0
62.5°	216.6	218.5	219.9	219.9	219.9	219.9	219.9	218.5	216.6	218.5	219.9
63°	209.1	211.4	213.3	213.3	213.3	213.3	213.3	211.4	209.1	211.4	213.3
63.5°	202.5	204.8	206.2	206.7	206.7	206.7	206.2	204.8	202.5	204.8	206.2
64°	195.9	197.7	199.6	200.1	200.1	200.1	199.6	197.7	195.9	197.7	199.6
64.5°	189.3	191.1	193.5	193.5	193.5	193.5	193.5	191.1	189.3	191.1	193.5
65°	182.6	184.5	186.9	187.4	186.9	187.4	186.9	184.5	182.6	184.5	186.9
65.5°	176.5	178.4	180.8	181.2	181.2	181.2	180.8	178.4	176.5	178.4	180.8
66°	170.4	172.3	174.6	175.1	175.1	175.1	174.6	172.3	170.4	172.3	174.6





TEST NUMBER: P776792

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	152.4	154.8	157.2	158.1	157.6	158.1	157.2	154.8	152.4	154.8	157.2
68°	146.8	149.1	152.0	152.4	152.4	152.4	152.0	149.1	146.8	149.1	152.0
68.5°	141.6	143.5	146.3	146.8	146.8	146.8	146.3	143.5	141.6	143.5	146.3
69°	135.9	138.3	141.1	141.6	141.6	141.6	141.1	138.3	135.9	138.3	141.1
69.5°	130.7	132.6	135.9	136.4	136.4	136.4	135.9	132.6	130.7	132.6	135.9
70°	125.5	127.4	130.7	131.2	131.2	131.2	130.7	127.4	125.5	127.4	130.7
70.5°	120.3	122.2	125.5	126.0	126.0	126.0	125.5	122.2	120.3	122.2	125.5
71°	115.6	117.5	120.3	121.3	121.3	121.3	120.3	117.5	115.6	117.5	120.3
71.5°	110.4	112.3	115.6	116.6	116.6	116.6	115.6	112.3	110.4	112.3	115.6
72°	105.7	107.6	110.9	111.9	111.9	111.9	110.9	107.6	105.7	107.6	110.9
72.5°	101.0	102.9	106.2	107.1	106.7	107.1	106.2	102.9	101.0	102.9	106.2
73°	96.3	98.2	101.5	102.4	102.4	102.4	101.5	98.2	96.3	98.2	101.5
73.5°	92.0	93.9	97.2	98.2	98.2	98.2	97.2	93.9	92.0	93.9	97.2
74°	87.8	89.7	92.5	93.9	93.4	93.9	92.5	89.7	87.8	89.7	92.5
74.5°	83.5	85.0	88.3	89.7	89.2	89.7	88.3	85.0	83.5	85.0	88.3
75°	79.3	80.7	84.0	85.4	85.4	85.4	84.0	80.7	79.3	80.7	84.0
75.5°	75.0	76.9	79.8	81.2	81.2	81.2	79.8	76.9	75.0	76.9	79.8
76°	71.3	72.7	76.0	77.4	76.9	77.4	76.0	72.7	71.3	72.7	76.0
76.5°	67.0	68.9	71.7	73.2	73.2	73.2	71.7	68.9	67.0	68.9	71.7
77°	63.2	65.1	68.0	69.4	69.4	69.4	68.0	65.1	63.2	65.1	68.0
77.5°	59.9	61.4	64.2	65.6	65.6	65.6	64.2	61.4	59.9	61.4	64.2
78°	56.2	57.6	60.4	62.3	61.8	62.3	60.4	57.6	56.2	57.6	60.4
78.5°	52.4	53.8	57.1	58.5	58.5	58.5	57.1	53.8	52.4	53.8	57.1
79°	49.1	50.5	53.3	55.2	54.7	55.2	53.3	50.5	49.1	50.5	53.3
79.5°	45.8	46.7	50.0	51.4	51.4	51.4	50.0	46.7	45.8	46.7	50.0
80°	42.5	43.4	46.7	48.1	48.1	48.1	46.7	43.4	42.5	43.4	46.7
80.5°	39.2	40.1	43.4	44.8	44.8	44.8	43.4	40.1	39.2	40.1	43.4
81°	35.9	36.8	40.1	41.5	41.5	41.5	40.1	36.8	35.9	36.8	40.1
81.5°	33.0	33.5	36.8	38.7	38.7	38.7	36.8	33.5	33.0	33.5	36.8
82°	29.7	30.7	33.5	35.4	35.4	35.4	33.5	30.7	29.7	30.7	33.5
82.5°	26.9	27.4	30.7	32.6	32.6	32.6	30.7	27.4	26.9	27.4	30.7
83°	24.1	24.5	27.8	29.7	29.3	29.7	27.8	24.5	24.1	24.5	27.8
83.5°	21.2	21.7	25.0	26.4	26.4	26.4	25.0	21.7	21.2	21.7	25.0
84°	18.4	18.9	22.2	23.6	23.6	23.6	22.2	18.9	18.4	18.9	22.2
84.5°	15.6	16.0	19.3	21.2	21.2	21.2	19.3	16.0	15.6	16.0	19.3
85°	13.2	13.7	17.0	18.4	18.4	18.4	17.0	13.7	13.2	13.7	17.0
85.5°	10.9	11.3	14.6	15.6	15.6	15.6	14.6	11.3	10.9	11.3	14.6
86°	8.5	9.4	12.3	13.2	13.2	13.2	12.3	9.4	8.5	9.4	12.3
86.5°	6.6	7.6	9.9	10.9	10.9	10.9	9.9	7.6	6.6	7.6	9.9
87°	5.2	5.7	7.6	8.5	8.5	8.5	7.6	5.7	5.2	5.7	7.6
87.5°	3.8	4.2	5.7	6.6	6.1	6.6	5.7	4.2	3.8	4.2	5.7
88°	2.4	2.8	4.2	4.7	3.8	4.7	4.2	2.8	2.4	2.8	4.2
88.5°	1.4	1.9	2.8	3.3	2.4	3.3	2.8	1.9	1.4	1.9	2.8



TEST NUMBER: P776792

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-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	0.5	0.0	0.5	0.5	0.0	0.0	0.0	0.5



TEST NUMBER: P776792

CATALOG NUMBER: HCDJBLS4050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3294.7	3294.7	3294.7	3294.7	3294.7	3294.7
0.5°	3294.2	3296.1	3294.2	3294.2	3293.3	3294.2
1°	3293.7	3295.2	3293.7	3293.7	3292.8	3293.7
1.5°	3292.3	3294.2	3292.3	3292.3	3291.4	3292.3
2°	3290.4	3292.3	3290.4	3290.4	3289.5	3290.4
2.5°	3288.5	3290.0	3288.5	3288.1	3287.1	3288.1
3°	3285.7	3287.6	3285.7	3285.2	3284.3	3285.2
3.5°	3282.4	3284.3	3282.4	3281.9	3281.0	3281.9
4°	3278.6	3280.5	3278.6	3278.2	3277.2	3277.7
4.5°	3274.4	3276.3	3274.4	3273.9	3273.0	3273.4
5°	3269.7	3271.6	3269.7	3268.7	3267.8	3268.7
5.5°	3264.5	3266.4	3264.5	3263.5	3262.6	3263.1
6°	3258.8	3260.2	3258.8	3257.9	3256.5	3257.4
6.5°	3252.7	3254.1	3252.7	3251.7	3250.3	3250.8
7°	3245.6	3247.5	3245.6	3244.7	3243.2	3244.2
7.5°	3238.5	3240.4	3238.5	3237.6	3235.7	3236.6
8°	3230.5	3232.9	3230.5	3229.6	3228.1	3228.6
8.5°	3222.5	3224.4	3222.5	3221.5	3219.6	3220.1
9°	3214.0	3215.9	3214.0	3212.6	3211.1	3211.6
9.5°	3204.5	3206.4	3204.5	3203.1	3201.7	3201.7
10°	3195.1	3197.0	3195.1	3193.7	3191.8	3192.3
10.5°	3184.7	3187.1	3184.7	3183.3	3181.4	3181.9
11°	3174.3	3176.2	3174.3	3172.4	3171.0	3171.0
11.5°	3163.0	3164.9	3163.0	3161.6	3159.7	3160.2
12°	3151.7	3153.6	3151.7	3149.8	3148.4	3148.4
12.5°	3139.9	3141.3	3139.9	3138.0	3136.1	3136.1
13°	3127.1	3129.0	3127.1	3125.7	3123.8	3123.8
13.5°	3114.9	3115.8	3114.9	3112.5	3110.6	3110.6
14°	3101.2	3102.6	3101.2	3099.3	3097.4	3097.9
14.5°	3087.5	3088.9	3087.5	3085.6	3083.7	3083.7
15°	3073.3	3074.3	3073.3	3071.9	3070.0	3069.6
15.5°	3058.7	3059.7	3058.7	3057.3	3055.4	3054.9
16°	3043.6	3044.6	3043.6	3042.2	3040.3	3040.3
16.5°	3028.0	3029.4	3028.0	3027.1	3025.2	3025.2
17°	3012.5	3013.4	3012.5	3011.0	3009.2	3009.2
17.5°	2995.9	2996.9	2995.9	2995.0	2993.1	2992.6
18°	2978.9	2979.9	2978.9	2978.0	2976.1	2976.1
18.5°	2961.5	2962.4	2961.5	2961.0	2959.1	2959.1
19°	2944.0	2944.5	2944.0	2943.1	2941.2	2941.2
19.5°	2925.6	2926.1	2925.6	2924.7	2923.3	2922.8
20°	2906.3	2907.2	2906.3	2905.8	2904.4	2904.4
20.5°	2886.4	2887.4	2886.4	2886.4	2885.0	2885.0
21°	2866.6	2867.1	2866.6	2866.6	2865.2	2865.2



TEST NUMBER: P776792

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2802.0	2802.9	2802.0	2802.4	2801.5	2801.5
23°	2779.8	2780.3	2779.8	2779.8	2779.3	2779.3
23.5°	2756.7	2757.1	2756.7	2757.1	2756.7	2756.7
24°	2733.1	2733.5	2733.1	2733.5	2733.1	2733.5
24.5°	2709.5	2709.5	2709.5	2709.9	2709.0	2709.0
25°	2685.4	2685.4	2685.4	2685.4	2684.9	2684.9
25.5°	2660.9	2660.9	2660.9	2661.3	2660.4	2660.9
26°	2636.8	2636.3	2636.8	2636.3	2635.8	2636.3
26.5°	2611.8	2611.8	2611.8	2611.8	2611.8	2611.3
27°	2587.2	2586.8	2587.2	2587.2	2586.8	2586.8
27.5°	2562.7	2561.7	2562.7	2562.7	2561.7	2561.7
28°	2537.7	2537.7	2537.7	2538.1	2537.2	2537.2
28.5°	2513.1	2512.7	2513.1	2513.6	2512.7	2512.7
29°	2488.6	2488.6	2488.6	2489.1	2488.6	2487.6
29.5°	2465.0	2464.1	2465.0	2465.0	2464.1	2463.6
30°	2440.9	2440.0	2440.9	2440.9	2440.5	2440.0
30.5°	2417.3	2415.9	2417.3	2417.8	2417.3	2416.4
31°	2394.2	2393.7	2394.2	2394.7	2393.7	2393.3
31.5°	2371.1	2370.1	2371.1	2371.5	2371.1	2371.1
32°	2347.5	2347.5	2347.5	2348.0	2348.0	2348.0
32.5°	2322.0	2324.4	2322.0	2322.5	2322.9	2324.8
33°	2292.3	2300.3	2292.3	2293.7	2294.6	2299.3
33.5°	2258.8	2269.1	2258.8	2261.6	2261.1	2268.2
34°	2220.1	2232.3	2220.1	2225.7	2222.9	2230.9
34.5°	2178.5	2189.8	2178.5	2184.2	2179.5	2190.8
35°	2132.3	2139.8	2132.3	2136.0	2133.7	2144.1
35.5°	2079.9	2085.1	2079.9	2083.2	2086.0	2091.7
36°	2022.8	2030.8	2022.8	2026.6	2035.0	2034.1
36.5°	1962.4	1970.9	1962.4	1966.6	1977.9	1973.7
37°	1899.1	1909.5	1899.1	1904.8	1915.2	1911.4
37.5°	1834.5	1843.9	1834.5	1839.7	1846.7	1846.7
38°	1768.9	1777.8	1768.9	1773.1	1774.5	1779.3
38.5°	1700.9	1709.9	1700.9	1704.2	1700.4	1708.9
39°	1632.5	1641.9	1632.5	1632.9	1627.3	1635.3
39.5°	1563.1	1571.6	1563.1	1561.2	1554.6	1560.3
40°	1495.1	1499.4	1495.1	1489.9	1483.3	1481.9
40.5°	1426.7	1427.2	1426.7	1417.7	1410.7	1403.6
41°	1358.7	1355.4	1358.7	1348.4	1339.4	1327.6
41.5°	1291.3	1284.2	1291.3	1279.0	1266.2	1252.6
42°	1223.3	1215.7	1223.3	1210.1	1195.0	1180.8
42.5°	1157.2	1148.3	1157.2	1141.6	1125.1	1111.4
43°	1091.6	1084.1	1091.6	1076.0	1057.6	1044.0
43.5°	1028.9	1020.8	1028.9	1011.9	992.0	979.8



TEST NUMBER: P776792

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	850.0	843.4	850.0	834.4	812.7	804.2
45.5°	795.7	790.5	795.7	781.1	760.3	752.8
46°	744.3	740.0	744.3	730.6	712.6	704.1
46.5°	696.1	692.8	696.1	682.0	669.2	659.8
47°	651.8	648.5	651.8	638.1	629.1	618.3
47.5°	610.7	606.9	610.7	597.5	592.8	581.4
48°	574.4	569.2	574.4	561.1	558.3	548.4
48.5°	540.4	534.2	540.4	529.1	526.7	518.7
49°	509.7	504.0	509.7	500.3	497.9	491.8
49.5°	482.8	476.2	482.8	475.7	472.9	468.6
50°	459.2	453.1	459.2	454.5	451.2	447.4
50.5°	439.4	433.3	439.4	435.6	432.8	429.9
51°	422.4	417.2	422.4	419.6	418.1	415.3
51.5°	407.8	404.5	407.8	406.8	405.4	403.0
52°	396.0	394.1	396.0	395.5	394.6	393.6
52.5°	385.6	385.6	385.6	385.6	385.1	384.6
53°	376.6	377.1	376.6	376.6	376.6	376.1
53.5°	367.6	368.6	367.6	368.1	368.1	368.1
54°	359.2	360.1	359.2	359.6	359.6	359.6
54.5°	350.7	351.6	350.7	351.1	351.1	351.1
55°	342.2	342.6	342.2	342.2	342.2	342.2
55.5°	333.2	333.7	333.2	333.7	333.2	333.2
56°	324.7	324.7	324.7	324.7	324.2	324.2
56.5°	315.7	315.7	315.7	315.7	315.7	315.3
57°	306.8	306.8	306.8	306.8	306.8	306.3
57.5°	298.3	298.3	298.3	298.3	297.8	297.3
58°	289.8	289.8	289.8	289.3	289.3	288.4
58.5°	281.3	281.3	281.3	280.8	280.8	279.4
59°	272.8	272.8	272.8	272.8	272.3	270.9
59.5°	264.8	264.8	264.8	264.8	264.3	262.9
60°	257.2	256.7	257.2	256.7	256.3	254.4
60.5°	249.2	249.2	249.2	249.2	248.2	246.4
61°	241.6	241.6	241.6	241.6	240.7	238.8
61.5°	234.6	234.6	234.6	234.1	233.1	231.3
62°	227.0	227.0	227.0	227.0	225.6	223.7
62.5°	219.9	219.9	219.9	219.9	218.5	216.6
63°	213.3	213.3	213.3	213.3	211.4	209.1
63.5°	206.7	206.7	206.7	206.2	204.8	202.5
64°	200.1	200.1	200.1	199.6	197.7	195.9
64.5°	193.5	193.5	193.5	193.5	191.1	189.3
65°	187.4	186.9	187.4	186.9	184.5	182.6
65.5°	181.2	181.2	181.2	180.8	178.4	176.5
66°	175.1	175.1	175.1	174.6	172.3	170.4



TEST NUMBER: P776792

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	158.1	157.6	158.1	157.2	154.8	152.4
68°	152.4	152.4	152.4	152.0	149.1	146.8
68.5°	146.8	146.8	146.8	146.3	143.5	141.6
69°	141.6	141.6	141.6	141.1	138.3	135.9
69.5°	136.4	136.4	136.4	135.9	132.6	130.7
70°	131.2	131.2	131.2	130.7	127.4	125.5
70.5°	126.0	126.0	126.0	125.5	122.2	120.3
71°	121.3	121.3	121.3	120.3	117.5	115.6
71.5°	116.6	116.1	116.6	115.6	112.3	110.4
72°	111.9	111.4	111.9	110.9	107.6	105.7
72.5°	107.1	106.7	107.1	106.2	102.9	101.0
73°	102.4	102.4	102.4	101.5	98.2	96.3
73.5°	98.2	98.2	98.2	97.2	93.9	92.0
74°	93.9	93.4	93.9	92.5	89.7	87.8
74.5°	89.7	89.2	89.7	88.3	85.0	83.5
75°	85.4	85.4	85.4	84.0	80.7	79.3
75.5°	81.2	81.2	81.2	79.8	76.9	75.0
76°	77.4	76.9	77.4	76.0	72.7	71.3
76.5°	73.2	73.2	73.2	71.7	68.9	67.0
77°	69.4	69.4	69.4	68.0	65.1	63.2
77.5°	65.6	65.6	65.6	64.2	61.4	59.9
78°	62.3	61.8	62.3	60.4	57.6	56.2
78.5°	58.5	58.5	58.5	57.1	53.8	52.4
79°	55.2	54.7	55.2	53.3	50.5	49.1
79.5°	51.4	51.4	51.4	50.0	46.7	45.8
80°	48.1	48.1	48.1	46.7	43.4	42.5
80.5°	44.8	44.8	44.8	43.4	40.1	39.2
81°	41.5	41.5	41.5	40.1	36.8	35.9
81.5°	38.7	38.7	38.7	36.8	33.5	33.0
82°	35.4	35.4	35.4	33.5	30.7	29.7
82.5°	32.6	32.6	32.6	30.7	27.4	26.9
83°	29.7	29.3	29.7	27.8	24.5	24.1
83.5°	26.4	26.4	26.4	25.0	21.7	21.2
84°	23.6	23.6	23.6	22.2	18.9	18.4
84.5°	21.2	21.2	21.2	19.3	16.0	15.6
85°	18.4	18.4	18.4	17.0	13.7	13.2
85.5°	15.6	15.6	15.6	14.6	11.3	10.9
86°	13.2	13.2	13.2	12.3	9.4	8.5
86.5°	10.9	10.9	10.9	9.9	7.6	6.6
87°	8.5	8.5	8.5	7.6	5.7	5.2
87.5°	6.6	6.1	6.6	5.7	4.2	3.8
88°	4.7	3.8	4.7	4.2	2.8	2.4
88.5°	3.3	2.4	3.3	2.8	1.9	1.4



TEST NUMBER: P776792

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

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



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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°	2844.4	2844.9	2845.9	2845.9	2846.3	2845.9	2845.9	2844.9	2844.4	2844.9	2845.9
22°	2823.7	2823.7	2824.1	2824.1	2825.1	2824.1	2824.1	2823.7	2823.7	2823.7	2824.1



44°	918.4	928.8	950.5	966.6	959.5	966.6	950.5	928.8	918.4	928.8	950.5
44.5°	860.4	868.9	891.0	907.6	900.0	907.6	891.0	868.9	860.4	868.9	891.0



66.5°	163.8	166.1	168.5	169.0	169.4	169.0	168.5	166.1	163.8	166.1	168.5
67°	158.1	160.0	162.8	163.8	163.8	163.8	162.8	160.0	158.1	160.0	162.8



89°	0.5	0.9	1.4	2.4	1.4	2.4	1.4	0.9	0.5	0.9	1.4
89.5°	0.0	0.5	0.9	1.4	0.5	1.4	0.9	0.5	0.0	0.5	0.9



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21.5°	2845.9	2846.3	2845.9	2845.9	2844.9	2844.4
22°	2824.1	2825.1	2824.1	2824.1	2823.7	2823.7



44°	966.6	959.5	966.6	950.5	928.8	918.4
44.5°	907.6	900.0	907.6	891.0	868.9	860.4



66.5°	169.0	169.4	169.0	168.5	166.1	163.8
67°	163.8	163.8	163.8	162.8	160.0	158.1

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89°	2.4	1.4	2.4	1.4	0.9	0.5
89.5°	1.4	0.5	1.4	0.9	0.5	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)