

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: P776541

Luminaire Tested: HCDJBS4050CSD-HCD42TRMW-4500lm-3000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776541  
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-4500lm-3000K  
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4108.3 lumens  
Efficiency: N/A  
Efficacy: 93.4 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

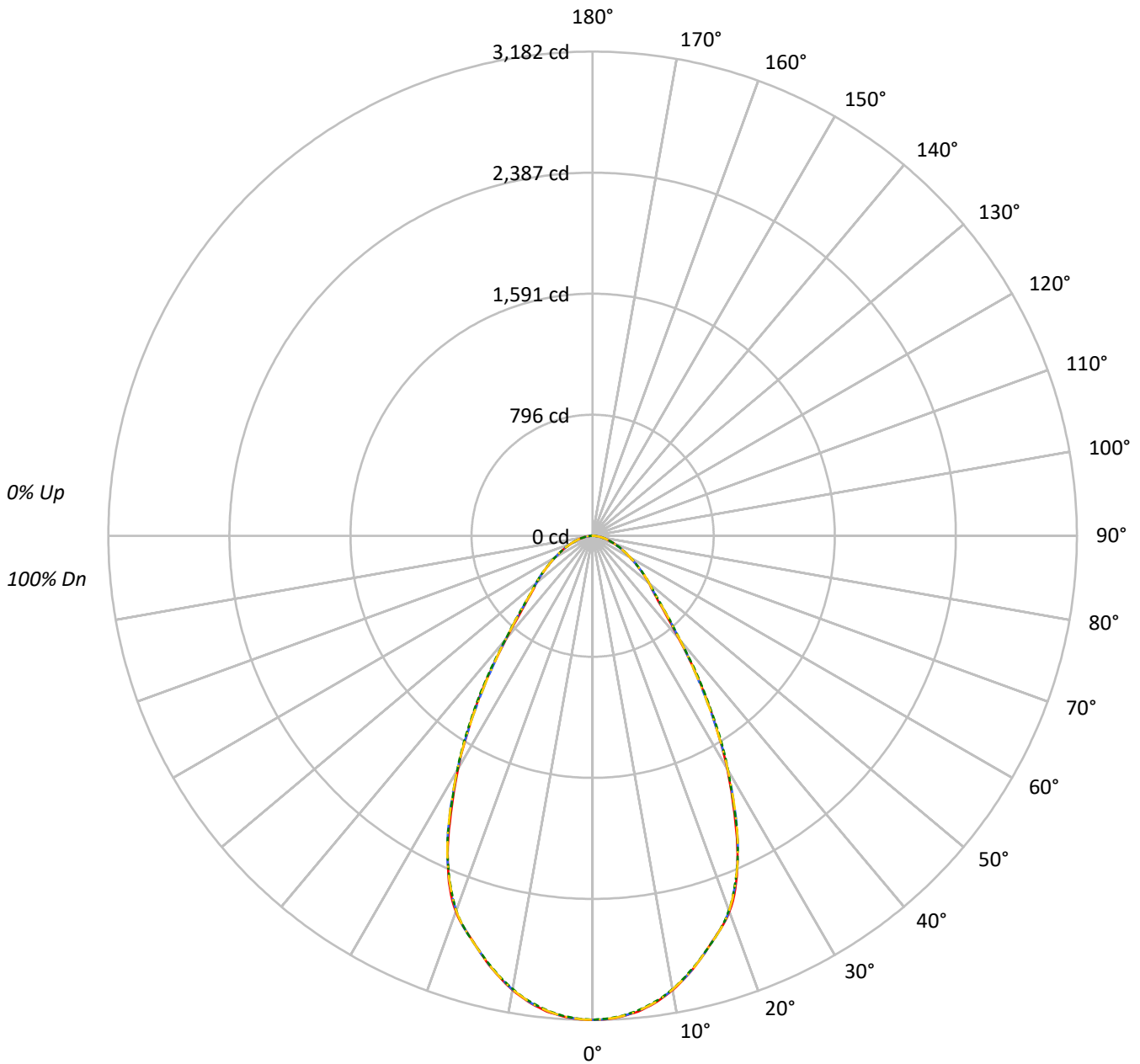
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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

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

	0°	90°	180°	270°
0°	400404	400404	400404	400404
5°	397575	396716	397575	396716
10°	387310	386441	387310	386441
15°	370178	369735	370178	369735
20°	351972	350727	351972	350727
25°	312407	313407	312407	313407
30°	257025	258391	257025	258391
35°	199402	201553	199402	201553
40°	144834	147347	144834	147347
45°	109653	112393	109653	112393
50°	94428	95192	94428	95192
55°	82082	83026	82082	83026
60°	71760	72389	71760	72389
65°	63071	63577	63071	63577
70°	55672	55967	55672	55967
75°	48916	48916	48916	48916
80°	42325	41962	42325	41962
85°	33789	33789	33789	33789

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 112393 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.4	7.2
10°-20°	798.1	19.4
20°-30°	1022.1	24.9
30°-40°	809.9	19.7
40°-50°	495.9	12.1
50°-60°	339.0	8.3
60°-70°	212.2	5.2
70°-80°	107.5	2.6
80°-90°	27.1	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°	2116.6	51.5
0°-40°	2926.5	71.2
0°-60°	3761.4	91.6
0°-90°	4108.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4108.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3182	3182	3182	3182	3182	
5°	3147	3140	3147	3140	3147	297
15°	2841	2838	2841	2838	2841	798
25°	2250	2257	2250	2257	2250	1020
35°	1298	1312	1298	1312	1298	809
45°	616	632	616	632	616	490
55°	374	378	374	378	374	337
65°	212	214	212	214	212	211
75°	101	101	101	101	101	107
85°	23	23	23	23	23	27
90°	0	1	0	1	0	



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CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6
0.5°	3182.1	3181.6	3180.8	3180.4	3179.1	3180.4	3180.8	3181.6	3182.1	3181.6	3180.8
1°	3180.8	3180.4	3179.9	3179.5	3177.8	3179.5	3179.9	3180.4	3180.8	3180.4	3179.9
1.5°	3179.1	3178.2	3178.2	3177.4	3176.1	3177.4	3178.2	3178.2	3179.1	3178.2	3178.2
2°	3176.5	3176.1	3175.3	3174.8	3173.1	3174.8	3175.3	3176.1	3176.5	3176.1	3175.3
2.5°	3173.5	3172.7	3171.8	3171.4	3169.3	3171.4	3171.8	3172.7	3173.5	3172.7	3171.8
3°	3169.3	3168.4	3167.6	3166.7	3164.6	3166.7	3167.6	3168.4	3169.3	3168.4	3167.6
3.5°	3164.6	3163.7	3162.5	3161.6	3160.3	3161.6	3162.5	3163.7	3164.6	3163.7	3162.5
4°	3159.1	3158.6	3156.9	3156.1	3153.9	3156.1	3156.9	3158.6	3159.1	3158.6	3156.9
4.5°	3153.1	3152.2	3150.5	3149.7	3147.1	3149.7	3150.5	3152.2	3153.1	3152.2	3150.5
5°	3147.1	3145.9	3144.1	3143.3	3140.3	3143.3	3144.1	3145.9	3147.1	3145.9	3144.1
5.5°	3140.7	3137.8	3135.6	3134.8	3132.2	3134.8	3135.6	3137.8	3140.7	3137.8	3135.6
6°	3130.9	3129.2	3127.1	3125.8	3122.4	3125.8	3127.1	3129.2	3130.9	3129.2	3127.1
6.5°	3121.1	3119.9	3117.3	3116.0	3112.6	3116.0	3117.3	3119.9	3121.1	3119.9	3117.3
7°	3110.9	3109.2	3107.9	3105.8	3102.8	3105.8	3107.9	3109.2	3110.9	3109.2	3107.9
7.5°	3099.4	3097.7	3096.0	3095.1	3092.2	3095.1	3096.0	3097.7	3099.4	3097.7	3096.0
8°	3087.1	3085.8	3084.1	3082.8	3081.1	3082.8	3084.1	3085.8	3087.1	3085.8	3084.1
8.5°	3074.3	3072.6	3070.9	3069.6	3067.9	3069.6	3070.9	3072.6	3074.3	3072.6	3070.9
9°	3060.6	3059.4	3057.2	3055.9	3054.2	3055.9	3057.2	3059.4	3060.6	3059.4	3057.2
9.5°	3045.7	3044.9	3042.7	3041.5	3039.8	3041.5	3042.7	3044.9	3045.7	3044.9	3042.7
10°	3030.8	3029.5	3027.8	3026.1	3024.0	3026.1	3027.8	3029.5	3030.8	3029.5	3027.8
10.5°	3014.2	3013.3	3011.2	3009.9	3008.2	3009.9	3011.2	3013.3	3014.2	3013.3	3011.2
11°	2997.6	2996.7	2995.0	2993.3	2991.2	2993.3	2995.0	2996.7	2997.6	2996.7	2995.0
11.5°	2980.1	2979.2	2977.5	2975.8	2974.1	2975.8	2977.5	2979.2	2980.1	2979.2	2977.5
12°	2962.2	2961.4	2960.1	2957.9	2956.2	2957.9	2960.1	2961.4	2962.2	2961.4	2960.1
12.5°	2943.5	2942.6	2941.3	2939.2	2937.1	2939.2	2941.3	2942.6	2943.5	2942.6	2941.3
13°	2924.3	2923.4	2922.2	2920.4	2918.3	2920.4	2922.2	2923.4	2924.3	2923.4	2922.2
13.5°	2904.3	2903.4	2902.6	2900.8	2899.1	2900.8	2902.6	2903.4	2904.3	2903.4	2902.6
14°	2883.8	2883.4	2882.5	2880.8	2879.1	2880.8	2882.5	2883.4	2883.8	2883.4	2882.5
14.5°	2862.5	2862.1	2861.6	2859.9	2858.2	2859.9	2861.6	2862.1	2862.5	2862.1	2861.6
15°	2841.2	2841.2	2840.3	2839.5	2837.8	2839.5	2840.3	2841.2	2841.2	2841.2	2840.3
15.5°	2819.0	2819.0	2819.9	2819.0	2818.2	2819.0	2819.9	2819.0	2819.0	2819.0	2819.9
16°	2797.7	2798.2	2799.4	2799.0	2798.2	2799.0	2799.4	2798.2	2797.7	2798.2	2799.4
16.5°	2776.4	2777.3	2779.0	2779.0	2778.6	2779.0	2779.0	2777.3	2776.4	2777.3	2779.0
17°	2756.4	2757.3	2759.0	2758.5	2759.0	2758.5	2759.0	2757.3	2756.4	2757.3	2759.0
17.5°	2736.8	2737.7	2738.9	2738.5	2738.1	2738.5	2738.9	2737.7	2736.8	2737.7	2738.9
18°	2717.6	2718.1	2718.9	2718.1	2717.2	2718.1	2718.9	2718.1	2717.6	2718.1	2718.9
18.5°	2697.2	2697.2	2697.2	2696.3	2695.0	2696.3	2697.2	2697.2	2697.2	2697.2	2697.2
19°	2676.3	2675.0	2674.2	2672.9	2671.6	2672.9	2674.2	2675.0	2676.3	2675.0	2674.2
19.5°	2653.3	2651.6	2649.0	2648.2	2646.9	2648.2	2649.0	2651.6	2653.3	2651.6	2649.0
20°	2628.1	2626.0	2621.3	2621.8	2618.8	2621.8	2621.3	2626.0	2628.1	2626.0	2621.3
20.5°	2600.5	2597.0	2591.5	2593.2	2589.8	2593.2	2591.5	2597.0	2600.5	2597.0	2591.5
21°	2571.5	2566.4	2560.0	2562.1	2557.8	2562.1	2560.0	2566.4	2571.5	2566.4	2560.0



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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°	2465.4	2460.3	2456.0	2455.6	2453.4	2455.6	2456.0	2460.3	2465.4	2460.3	2456.0
23°	2424.9	2420.6	2419.8	2416.8	2416.0	2416.8	2419.8	2420.6	2424.9	2420.6	2419.8
23.5°	2383.6	2379.7	2381.9	2376.8	2378.9	2376.8	2381.9	2379.7	2383.6	2379.7	2381.9
24°	2340.5	2337.6	2342.7	2335.8	2339.7	2335.8	2342.7	2337.6	2340.5	2337.6	2342.7
24.5°	2296.2	2294.9	2301.3	2294.5	2299.6	2294.5	2301.3	2294.9	2296.2	2294.9	2301.3
25°	2249.8	2250.6	2258.3	2253.2	2257.0	2253.2	2258.3	2250.6	2249.8	2250.6	2258.3
25.5°	2201.6	2207.2	2214.0	2211.9	2212.7	2211.9	2214.0	2207.2	2201.6	2207.2	2214.0
26°	2152.2	2162.0	2168.4	2168.8	2165.4	2168.8	2168.4	2162.0	2152.2	2162.0	2168.4
26.5°	2101.5	2116.0	2121.1	2124.1	2116.4	2124.1	2121.1	2116.0	2101.5	2116.0	2121.1
27°	2052.1	2068.3	2073.4	2078.1	2066.6	2078.1	2073.4	2068.3	2052.1	2068.3	2073.4
27.5°	2003.5	2018.8	2024.8	2030.8	2015.9	2030.8	2024.8	2018.8	2003.5	2018.8	2024.8
28°	1954.9	1969.4	1975.4	1981.3	1965.1	1981.3	1975.4	1969.4	1954.9	1969.4	1975.4
28.5°	1907.6	1919.1	1925.9	1931.1	1916.1	1931.1	1925.9	1919.1	1907.6	1919.1	1925.9
29°	1860.8	1868.4	1876.5	1879.9	1869.7	1879.9	1876.5	1868.4	1860.8	1868.4	1876.5
29.5°	1814.7	1818.6	1827.5	1828.8	1824.1	1828.8	1827.5	1818.6	1814.7	1818.6	1827.5
30°	1768.7	1767.4	1777.2	1777.7	1778.1	1777.7	1777.2	1767.4	1768.7	1767.4	1777.2
30.5°	1721.0	1718.0	1727.4	1728.2	1734.6	1728.2	1727.4	1718.0	1721.0	1718.0	1727.4
31°	1673.7	1667.3	1677.1	1678.8	1688.6	1678.8	1677.1	1667.3	1673.7	1667.3	1677.1
31.5°	1625.1	1618.7	1626.8	1629.8	1642.2	1629.8	1626.8	1618.7	1625.1	1618.7	1626.8
32°	1575.7	1569.7	1577.0	1581.7	1594.4	1581.7	1577.0	1569.7	1575.7	1569.7	1577.0
32.5°	1528.0	1522.9	1528.0	1533.9	1546.7	1533.9	1528.0	1522.9	1528.0	1522.9	1528.0
33°	1479.8	1476.0	1477.7	1486.2	1498.1	1486.2	1477.7	1476.0	1479.8	1476.0	1477.7
33.5°	1436.8	1429.1	1427.8	1438.5	1449.1	1438.5	1427.8	1429.1	1436.8	1429.1	1427.8
34°	1390.3	1382.2	1378.4	1391.6	1402.7	1391.6	1378.4	1382.2	1390.3	1382.2	1378.4
34.5°	1344.3	1335.8	1330.3	1344.3	1356.7	1344.3	1330.3	1335.8	1344.3	1335.8	1330.3
35°	1297.9	1290.6	1284.7	1298.7	1311.9	1298.7	1284.7	1290.6	1297.9	1290.6	1284.7
35.5°	1252.7	1245.9	1239.5	1253.6	1268.1	1253.6	1239.5	1245.9	1252.7	1245.9	1239.5
36°	1208.4	1201.2	1195.6	1210.1	1225.0	1210.1	1195.6	1201.2	1208.4	1201.2	1195.6
36.5°	1164.5	1158.1	1153.0	1167.1	1181.1	1167.1	1153.0	1158.1	1164.5	1158.1	1153.0
37°	1120.2	1115.5	1111.3	1125.3	1137.7	1125.3	1111.3	1115.5	1120.2	1115.5	1111.3
37.5°	1077.2	1074.2	1071.2	1085.3	1094.2	1085.3	1071.2	1074.2	1077.2	1074.2	1071.2
38°	1034.6	1034.1	1032.9	1046.1	1051.2	1046.1	1032.9	1034.1	1034.6	1034.1	1032.9
38.5°	994.5	995.4	996.2	1007.7	1009.8	1007.7	996.2	995.4	994.5	995.4	996.2
39°	955.7	957.9	959.6	970.6	970.2	970.6	959.6	957.9	955.7	957.9	959.6
39.5°	917.8	921.6	924.6	934.0	932.7	934.0	924.6	921.6	917.8	921.6	924.6
40°	881.6	885.8	891.0	898.6	896.9	898.6	891.0	885.8	881.6	885.8	891.0
40.5°	847.5	851.8	858.6	864.1	863.7	864.1	858.6	851.8	847.5	851.8	858.6
41°	814.7	819.0	827.9	831.7	833.0	831.7	827.9	819.0	814.7	819.0	827.9
41.5°	783.6	788.3	798.5	800.6	804.5	800.6	798.5	788.3	783.6	788.3	798.5
42°	754.6	759.3	770.4	771.7	776.8	771.7	770.4	759.3	754.6	759.3	770.4
42.5°	727.3	732.0	744.0	744.4	749.9	744.4	744.0	732.0	727.3	732.0	744.0
43°	701.4	706.5	718.0	718.8	723.9	718.8	718.0	706.5	701.4	706.5	718.0
43.5°	677.5	682.6	693.7	694.1	698.8	694.1	693.7	682.6	677.5	682.6	693.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	616.1	620.4	627.2	629.3	631.5	629.3	627.2	620.4	616.1	620.4	627.2
45.5°	598.2	601.6	608.0	610.2	611.9	610.2	608.0	601.6	598.2	601.6	608.0
46°	581.2	584.2	589.7	592.7	593.5	592.7	589.7	584.2	581.2	584.2	589.7
46.5°	565.4	568.0	572.2	575.7	576.5	575.7	572.2	568.0	565.4	568.0	572.2
47°	550.5	552.2	556.5	559.9	561.2	559.9	556.5	552.2	550.5	552.2	556.5
47.5°	536.5	537.7	541.6	545.4	547.1	545.4	541.6	537.7	536.5	537.7	541.6
48°	523.2	524.9	528.8	532.2	533.9	532.2	528.8	524.9	523.2	524.9	528.8
48.5°	512.6	513.4	516.4	519.8	521.1	519.8	516.4	513.4	512.6	513.4	516.4
49°	502.4	502.8	505.3	507.9	509.2	507.9	505.3	502.8	502.4	502.8	505.3
49.5°	492.6	493.0	494.7	496.8	497.3	496.8	494.7	493.0	492.6	493.0	494.7
50°	482.3	482.8	484.0	485.7	486.2	485.7	484.0	482.8	482.3	482.8	484.0
50.5°	472.1	472.5	473.4	475.1	475.1	475.1	473.4	472.5	472.1	472.5	473.4
51°	460.6	461.5	462.7	464.4	464.4	464.4	462.7	461.5	460.6	461.5	462.7
51.5°	449.5	450.0	451.7	453.8	454.2	453.8	451.7	450.0	449.5	450.0	451.7
52°	438.0	438.9	440.6	442.7	443.1	442.7	440.6	438.9	438.0	438.9	440.6
52.5°	426.5	427.4	429.5	431.2	432.1	431.2	429.5	427.4	426.5	427.4	429.5
53°	415.9	416.7	418.4	420.1	421.0	420.1	418.4	416.7	415.9	416.7	418.4
53.5°	404.8	405.6	407.3	409.5	410.3	409.5	407.3	405.6	404.8	405.6	407.3
54°	394.6	395.0	396.7	398.4	399.2	398.4	396.7	395.0	394.6	395.0	396.7
54.5°	384.3	384.8	386.5	388.2	389.0	388.2	386.5	384.8	384.3	384.8	386.5
55°	374.1	375.0	376.7	377.9	378.4	377.9	376.7	375.0	374.1	375.0	376.7
55.5°	364.3	365.2	366.9	368.1	368.6	368.1	366.9	365.2	364.3	365.2	366.9
56°	354.9	355.8	357.1	358.3	358.8	358.3	357.1	355.8	354.9	355.8	357.1
56.5°	345.6	346.4	347.7	349.0	349.4	349.0	347.7	346.4	345.6	346.4	347.7
57°	336.2	337.0	338.3	339.6	340.0	339.6	338.3	337.0	336.2	337.0	338.3
57.5°	326.8	328.1	329.4	330.2	331.1	330.2	329.4	328.1	326.8	328.1	329.4
58°	318.7	319.1	320.4	321.7	322.1	321.7	320.4	319.1	318.7	319.1	320.4
58.5°	310.2	310.6	311.9	312.8	313.2	312.8	311.9	310.6	310.2	310.6	311.9
59°	301.7	302.1	303.0	303.8	304.7	303.8	303.0	302.1	301.7	302.1	303.0
59.5°	293.2	293.6	294.4	295.7	296.1	295.7	294.4	293.6	293.2	293.6	294.4
60°	285.1	285.5	286.3	287.2	287.6	287.2	286.3	285.5	285.1	285.5	286.3
60.5°	277.0	277.4	278.2	279.1	279.5	279.1	278.2	277.4	277.0	277.4	278.2
61°	269.3	269.7	270.6	271.4	271.8	271.4	270.6	269.7	269.3	269.7	270.6
61.5°	261.6	262.0	262.9	263.8	264.2	263.8	262.9	262.0	261.6	262.0	262.9
62°	254.4	254.4	255.2	256.1	256.1	256.1	255.2	254.4	254.4	254.4	255.2
62.5°	246.7	247.1	247.6	248.4	248.8	248.4	247.6	247.1	246.7	247.1	247.6
63°	239.5	239.9	240.3	241.2	241.2	241.2	240.3	239.9	239.5	239.9	240.3
63.5°	232.2	232.6	233.1	233.9	234.4	233.9	233.1	232.6	232.2	232.6	233.1
64°	225.4	225.8	226.3	226.7	227.1	226.7	226.3	225.8	225.4	225.8	226.3
64.5°	218.6	219.0	219.4	219.9	220.3	219.9	219.4	219.0	218.6	219.0	219.4
65°	211.8	212.2	212.6	213.0	213.5	213.0	212.6	212.2	211.8	212.2	212.6
65.5°	205.4	205.4	205.8	206.7	206.7	206.7	205.8	205.4	205.4	205.4	205.8
66°	198.6	199.0	199.4	199.8	200.3	199.8	199.4	199.0	198.6	199.0	199.4





TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	179.8	180.2	180.7	181.1	181.1	181.1	180.7	180.2	179.8	180.2	180.7
68°	173.8	174.3	174.7	175.1	175.1	175.1	174.7	174.3	173.8	174.3	174.7
68.5°	167.9	168.3	168.7	168.7	169.2	168.7	168.7	168.3	167.9	168.3	168.7
69°	162.3	162.3	162.3	163.2	163.2	163.2	162.3	162.3	162.3	162.3	162.3
69.5°	156.4	156.8	156.8	157.2	157.7	157.2	156.8	156.8	156.4	156.8	156.8
70°	151.3	151.7	151.3	151.7	152.1	151.7	151.3	151.7	151.3	151.7	151.3
70.5°	145.7	146.2	146.2	146.2	146.6	146.2	146.2	146.2	145.7	146.2	146.2
71°	140.6	140.6	140.6	140.6	141.0	140.6	140.6	140.6	140.6	140.6	140.6
71.5°	135.1	135.1	135.5	135.5	135.5	135.5	135.5	135.1	135.1	135.1	135.5
72°	130.0	130.0	130.0	130.4	130.4	130.4	130.0	130.0	130.0	130.0	130.0
72.5°	124.8	124.8	124.8	125.3	125.3	125.3	124.8	124.8	124.8	124.8	124.8
73°	119.7	119.7	119.7	120.2	120.2	120.2	119.7	119.7	119.7	119.7	119.7
73.5°	114.6	114.6	115.0	115.0	115.0	115.0	115.0	114.6	114.6	114.6	115.0
74°	109.9	109.9	109.9	110.4	110.4	110.4	109.9	109.9	109.9	109.9	109.9
74.5°	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2
75°	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6
75.5°	95.9	95.9	95.9	95.9	96.3	95.9	95.9	95.9	95.9	95.9	95.9
76°	91.6	91.2	91.2	91.6	91.6	91.6	91.2	91.2	91.6	91.2	91.2
76.5°	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9
77°	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
77.5°	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4
78°	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1
78.5°	70.3	70.3	69.9	69.9	70.3	69.9	69.9	70.3	70.3	70.3	69.9
79°	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
79.5°	62.2	62.2	61.8	62.2	62.2	62.2	61.8	62.2	62.2	62.2	61.8
80°	58.4	58.4	57.9	57.9	57.9	57.9	57.9	58.4	58.4	58.4	57.9
80.5°	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
81°	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7
81.5°	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9
82°	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5
82.5°	40.1	40.1	40.1	40.1	39.6	40.1	40.1	40.1	40.1	40.1	40.1
83°	36.6	36.6	36.6	36.2	36.2	36.2	36.6	36.6	36.6	36.6	36.6
83.5°	33.2	33.2	33.2	32.8	32.8	32.8	33.2	33.2	33.2	33.2	33.2
84°	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
84.5°	26.8	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.8	26.4	26.4
85°	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
85.5°	20.5	20.0	20.5	20.0	20.5	20.0	20.5	20.0	20.5	20.0	20.5
86°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
86.5°	14.5	14.1	14.1	14.1	14.5	14.1	14.1	14.1	14.5	14.1	14.1
87°	11.5	11.5	11.5	11.1	11.5	11.1	11.5	11.5	11.5	11.5	11.5
87.5°	8.5	8.5	8.5	8.5	8.9	8.5	8.5	8.5	8.5	8.5	8.5
88°	5.5	6.0	6.0	6.4	6.4	6.4	6.0	6.0	5.5	6.0	6.0
88.5°	3.4	3.4	3.8	4.3	5.1	4.3	3.8	3.4	3.4	3.4	3.8



TEST NUMBER: P776541  
CATALOG NUMBER: HCDJBL4050CSD-HCD42TRMW-4500lm-3000K

**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	0.9	1.3	0.9	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3181.6	3181.6	3181.6	3181.6	3181.6	3181.6
0.5°	3180.4	3179.1	3180.4	3180.8	3181.6	3182.1
1°	3179.5	3177.8	3179.5	3179.9	3180.4	3180.8
1.5°	3177.4	3176.1	3177.4	3178.2	3178.2	3179.1
2°	3174.8	3173.1	3174.8	3175.3	3176.1	3176.5
2.5°	3171.4	3169.3	3171.4	3171.8	3172.7	3173.5
3°	3166.7	3164.6	3166.7	3167.6	3168.4	3169.3
3.5°	3161.6	3160.3	3161.6	3162.5	3163.7	3164.6
4°	3156.1	3153.9	3156.1	3156.9	3158.6	3159.1
4.5°	3149.7	3147.1	3149.7	3150.5	3152.2	3153.1
5°	3143.3	3140.3	3143.3	3144.1	3145.9	3147.1
5.5°	3134.8	3132.2	3134.8	3135.6	3137.8	3140.7
6°	3125.8	3122.4	3125.8	3127.1	3129.2	3130.9
6.5°	3116.0	3112.6	3116.0	3117.3	3119.9	3121.1
7°	3105.8	3102.8	3105.8	3107.9	3109.2	3110.9
7.5°	3095.1	3092.2	3095.1	3096.0	3097.7	3099.4
8°	3082.8	3081.1	3082.8	3084.1	3085.8	3087.1
8.5°	3069.6	3067.9	3069.6	3070.9	3072.6	3074.3
9°	3055.9	3054.2	3055.9	3057.2	3059.4	3060.6
9.5°	3041.5	3039.8	3041.5	3042.7	3044.9	3045.7
10°	3026.1	3024.0	3026.1	3027.8	3029.5	3030.8
10.5°	3009.9	3008.2	3009.9	3011.2	3013.3	3014.2
11°	2993.3	2991.2	2993.3	2995.0	2996.7	2997.6
11.5°	2975.8	2974.1	2975.8	2977.5	2979.2	2980.1
12°	2957.9	2956.2	2957.9	2960.1	2961.4	2962.2
12.5°	2939.2	2937.1	2939.2	2941.3	2942.6	2943.5
13°	2920.4	2918.3	2920.4	2922.2	2923.4	2924.3
13.5°	2900.8	2899.1	2900.8	2902.6	2903.4	2904.3
14°	2880.8	2879.1	2880.8	2882.5	2883.4	2883.8
14.5°	2859.9	2858.2	2859.9	2861.6	2862.1	2862.5
15°	2839.5	2837.8	2839.5	2840.3	2841.2	2841.2
15.5°	2819.0	2818.2	2819.0	2819.9	2819.0	2819.0
16°	2799.0	2798.2	2799.0	2799.4	2798.2	2797.7
16.5°	2779.0	2778.6	2779.0	2779.0	2777.3	2776.4
17°	2758.5	2759.0	2758.5	2759.0	2757.3	2756.4
17.5°	2738.5	2738.1	2738.5	2738.9	2737.7	2736.8
18°	2718.1	2717.2	2718.1	2718.9	2718.1	2717.6
18.5°	2696.3	2695.0	2696.3	2697.2	2697.2	2697.2
19°	2672.9	2671.6	2672.9	2674.2	2675.0	2676.3
19.5°	2648.2	2646.9	2648.2	2649.0	2651.6	2653.3
20°	2621.8	2618.8	2621.8	2621.3	2626.0	2628.1
20.5°	2593.2	2589.8	2593.2	2591.5	2597.0	2600.5
21°	2562.1	2557.8	2562.1	2560.0	2566.4	2571.5



TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2455.6	2453.4	2455.6	2456.0	2460.3	2465.4
23°	2416.8	2416.0	2416.8	2419.8	2420.6	2424.9
23.5°	2376.8	2378.9	2376.8	2381.9	2379.7	2383.6
24°	2335.8	2339.7	2335.8	2342.7	2337.6	2340.5
24.5°	2294.5	2299.6	2294.5	2301.3	2294.9	2296.2
25°	2253.2	2257.0	2253.2	2258.3	2250.6	2249.8
25.5°	2211.9	2212.7	2211.9	2214.0	2207.2	2201.6
26°	2168.8	2165.4	2168.8	2168.4	2162.0	2152.2
26.5°	2124.1	2116.4	2124.1	2121.1	2116.0	2101.5
27°	2078.1	2066.6	2078.1	2073.4	2068.3	2052.1
27.5°	2030.8	2015.9	2030.8	2024.8	2018.8	2003.5
28°	1981.3	1965.1	1981.3	1975.4	1969.4	1954.9
28.5°	1931.1	1916.1	1931.1	1925.9	1919.1	1907.6
29°	1879.9	1869.7	1879.9	1876.5	1868.4	1860.8
29.5°	1828.8	1824.1	1828.8	1827.5	1818.6	1814.7
30°	1777.7	1778.1	1777.7	1777.2	1767.4	1768.7
30.5°	1728.2	1734.6	1728.2	1727.4	1718.0	1721.0
31°	1678.8	1688.6	1678.8	1677.1	1667.3	1673.7
31.5°	1629.8	1642.2	1629.8	1626.8	1618.7	1625.1
32°	1581.7	1594.4	1581.7	1577.0	1569.7	1575.7
32.5°	1533.9	1546.7	1533.9	1528.0	1522.9	1528.0
33°	1486.2	1498.1	1486.2	1477.7	1476.0	1479.8
33.5°	1438.5	1449.1	1438.5	1427.8	1429.1	1436.8
34°	1391.6	1402.7	1391.6	1378.4	1382.2	1390.3
34.5°	1344.3	1356.7	1344.3	1330.3	1335.8	1344.3
35°	1298.7	1311.9	1298.7	1284.7	1290.6	1297.9
35.5°	1253.6	1268.1	1253.6	1239.5	1245.9	1252.7
36°	1210.1	1225.0	1210.1	1195.6	1201.2	1208.4
36.5°	1167.1	1181.1	1167.1	1153.0	1158.1	1164.5
37°	1125.3	1137.7	1125.3	1111.3	1115.5	1120.2
37.5°	1085.3	1094.2	1085.3	1071.2	1074.2	1077.2
38°	1046.1	1051.2	1046.1	1032.9	1034.1	1034.6
38.5°	1007.7	1009.8	1007.7	996.2	995.4	994.5
39°	970.6	970.2	970.6	959.6	957.9	955.7
39.5°	934.0	932.7	934.0	924.6	921.6	917.8
40°	898.6	896.9	898.6	891.0	885.8	881.6
40.5°	864.1	863.7	864.1	858.6	851.8	847.5
41°	831.7	833.0	831.7	827.9	819.0	814.7
41.5°	800.6	804.5	800.6	798.5	788.3	783.6
42°	771.7	776.8	771.7	770.4	759.3	754.6
42.5°	744.4	749.9	744.4	744.0	732.0	727.3
43°	718.8	723.9	718.8	718.0	706.5	701.4
43.5°	694.1	698.8	694.1	693.7	682.6	677.5



TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	629.3	631.5	629.3	627.2	620.4	616.1
45.5°	610.2	611.9	610.2	608.0	601.6	598.2
46°	592.7	593.5	592.7	589.7	584.2	581.2
46.5°	575.7	576.5	575.7	572.2	568.0	565.4
47°	559.9	561.2	559.9	556.5	552.2	550.5
47.5°	545.4	547.1	545.4	541.6	537.7	536.5
48°	532.2	533.9	532.2	528.8	524.9	523.2
48.5°	519.8	521.1	519.8	516.4	513.4	512.6
49°	507.9	509.2	507.9	505.3	502.8	502.4
49.5°	496.8	497.3	496.8	494.7	493.0	492.6
50°	485.7	486.2	485.7	484.0	482.8	482.3
50.5°	475.1	475.1	475.1	473.4	472.5	472.1
51°	464.4	464.4	464.4	462.7	461.5	460.6
51.5°	453.8	454.2	453.8	451.7	450.0	449.5
52°	442.7	443.1	442.7	440.6	438.9	438.0
52.5°	431.2	432.1	431.2	429.5	427.4	426.5
53°	420.1	421.0	420.1	418.4	416.7	415.9
53.5°	409.5	410.3	409.5	407.3	405.6	404.8
54°	398.4	399.2	398.4	396.7	395.0	394.6
54.5°	388.2	389.0	388.2	386.5	384.8	384.3
55°	377.9	378.4	377.9	376.7	375.0	374.1
55.5°	368.1	368.6	368.1	366.9	365.2	364.3
56°	358.3	358.8	358.3	357.1	355.8	354.9
56.5°	349.0	349.4	349.0	347.7	346.4	345.6
57°	339.6	340.0	339.6	338.3	337.0	336.2
57.5°	330.2	331.1	330.2	329.4	328.1	326.8
58°	321.7	322.1	321.7	320.4	319.1	318.7
58.5°	312.8	313.2	312.8	311.9	310.6	310.2
59°	303.8	304.7	303.8	303.0	302.1	301.7
59.5°	295.7	296.1	295.7	294.4	293.6	293.2
60°	287.2	287.6	287.2	286.3	285.5	285.1
60.5°	279.1	279.5	279.1	278.2	277.4	277.0
61°	271.4	271.8	271.4	270.6	269.7	269.3
61.5°	263.8	264.2	263.8	262.9	262.0	261.6
62°	256.1	256.1	256.1	255.2	254.4	254.4
62.5°	248.4	248.8	248.4	247.6	247.1	246.7
63°	241.2	241.2	241.2	240.3	239.9	239.5
63.5°	233.9	234.4	233.9	233.1	232.6	232.2
64°	226.7	227.1	226.7	226.3	225.8	225.4
64.5°	219.9	220.3	219.9	219.4	219.0	218.6
65°	213.0	213.5	213.0	212.6	212.2	211.8
65.5°	206.7	206.7	206.7	205.8	205.4	205.4
66°	199.8	200.3	199.8	199.4	199.0	198.6



TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	181.1	181.1	181.1	180.7	180.2	179.8
68°	175.1	175.1	175.1	174.7	174.3	173.8
68.5°	168.7	169.2	168.7	168.7	168.3	167.9
69°	163.2	163.2	163.2	162.3	162.3	162.3
69.5°	157.2	157.7	157.2	156.8	156.8	156.4
70°	151.7	152.1	151.7	151.3	151.7	151.3
70.5°	146.2	146.6	146.2	146.2	146.2	145.7
71°	140.6	141.0	140.6	140.6	140.6	140.6
71.5°	135.5	135.5	135.5	135.5	135.1	135.1
72°	130.4	130.4	130.4	130.0	130.0	130.0
72.5°	125.3	125.3	125.3	124.8	124.8	124.8
73°	120.2	120.2	120.2	119.7	119.7	119.7
73.5°	115.0	115.0	115.0	115.0	114.6	114.6
74°	110.4	110.4	110.4	109.9	109.9	109.9
74.5°	105.2	105.2	105.2	105.2	105.2	105.2
75°	100.6	100.6	100.6	100.6	100.6	100.6
75.5°	95.9	96.3	95.9	95.9	95.9	95.9
76°	91.6	91.6	91.6	91.2	91.2	91.6
76.5°	86.9	86.9	86.9	86.9	86.9	86.9
77°	82.7	82.7	82.7	82.7	82.7	82.7
77.5°	78.4	78.4	78.4	78.4	78.4	78.4
78°	74.1	74.1	74.1	74.1	74.1	74.1
78.5°	69.9	70.3	69.9	69.9	70.3	70.3
79°	66.0	66.0	66.0	66.0	66.0	66.0
79.5°	62.2	62.2	62.2	61.8	62.2	62.2
80°	57.9	57.9	57.9	57.9	58.4	58.4
80.5°	54.5	54.5	54.5	54.5	54.5	54.5
81°	50.7	50.7	50.7	50.7	50.7	50.7
81.5°	46.9	46.9	46.9	46.9	46.9	46.9
82°	43.5	43.5	43.5	43.5	43.5	43.5
82.5°	40.1	39.6	40.1	40.1	40.1	40.1
83°	36.2	36.2	36.2	36.6	36.6	36.6
83.5°	32.8	32.8	32.8	33.2	33.2	33.2
84°	29.8	29.8	29.8	29.8	29.8	29.8
84.5°	26.4	26.4	26.4	26.4	26.4	26.8
85°	23.4	23.4	23.4	23.4	23.4	23.4
85.5°	20.0	20.5	20.0	20.5	20.0	20.5
86°	17.0	17.0	17.0	17.0	17.0	17.0
86.5°	14.1	14.5	14.1	14.1	14.1	14.5
87°	11.1	11.5	11.1	11.5	11.5	11.5
87.5°	8.5	8.9	8.5	8.5	8.5	8.5
88°	6.4	6.4	6.4	6.0	6.0	5.5
88.5°	4.3	5.1	4.3	3.8	3.4	3.4



TEST NUMBER: P776541

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.9	1.3	0.9	0.4	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°	2537.8	2533.6	2526.3	2528.4	2524.2	2528.4	2526.3	2533.6	2537.8	2533.6	2526.3
22°	2502.4	2498.2	2491.8	2492.6	2488.4	2492.6	2491.8	2498.2	2502.4	2498.2	2491.8



44°	655.3	660.4	670.2	671.1	675.4	671.1	670.2	660.4	655.3	660.4	670.2
44.5°	634.9	640.0	648.5	649.8	652.8	649.8	648.5	640.0	634.9	640.0	648.5



66.5°	192.2	192.6	193.0	193.4	193.9	193.4	193.0	192.6	192.2	192.6	193.0
67°	186.2	186.2	186.6	187.1	187.5	187.1	186.6	186.2	186.2	186.2	186.6



89°	1.3	1.7	2.6	3.0	3.4	3.0	2.6	1.7	1.3	1.7	2.6
89.5°	0.0	0.4	1.3	1.7	2.1	1.7	1.3	0.4	0.0	0.4	1.3



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21.5°	2528.4	2524.2	2528.4	2526.3	2533.6	2537.8
22°	2492.6	2488.4	2492.6	2491.8	2498.2	2502.4



44°	671.1	675.4	671.1	670.2	660.4	655.3
44.5°	649.8	652.8	649.8	648.5	640.0	634.9



66.5°	193.4	193.9	193.4	193.0	192.6	192.2
67°	187.1	187.5	187.1	186.6	186.2	186.2



89°	3.0	3.4	3.0	2.6	1.7	1.3
89.5°	1.7	2.1	1.7	1.3	0.4	0.0

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Scaled Data Report



(END OF REPORT)