

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: P776543

Luminaire Tested: HCDJBS4050CSD-HCD42TRMW-4500lm-4000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776543  
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-4000K  
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

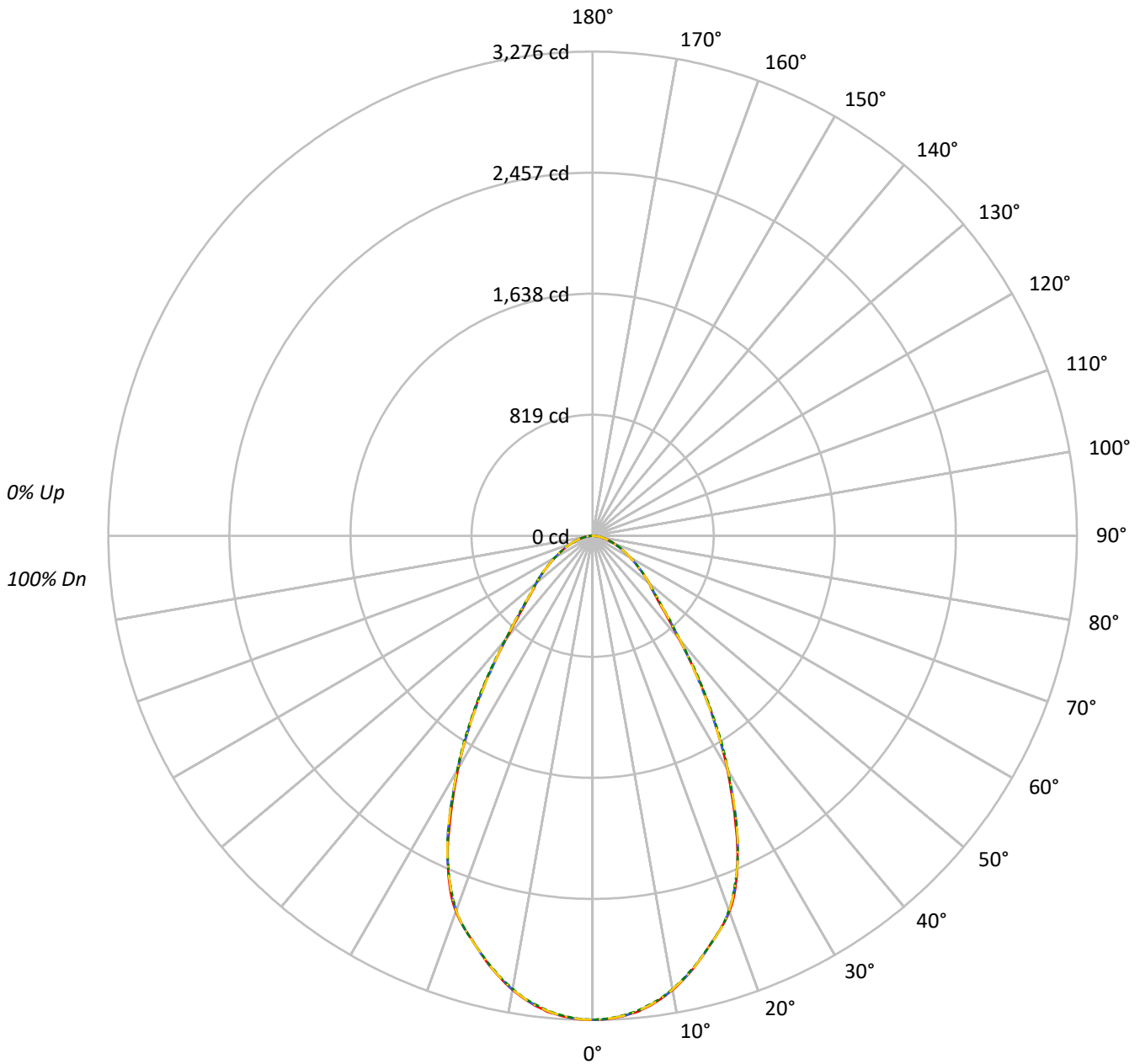
Lumens per Lamp: N/A  
Luminaire Lumens: 4229.4 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (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



TEST NUMBER: P776543  
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

### Luminous Intensity Polar Plot





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

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53								
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49								
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42								
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39								

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

	0°	90°	180°	270°
0°	412208	412208	412208	412208
5°	409298	408414	409298	408414
10°	398721	397827	398721	397827
15°	381083	380627	381083	380627
20°	362352	361066	362352	361066
25°	321613	322641	321613	322641
30°	264597	266006	264597	266006
35°	205271	207498	205271	207498
40°	149105	151701	149105	151701
45°	112892	115704	112892	115704
50°	97228	97992	97228	97992
55°	84496	85461	84496	85461
60°	73874	74528	73874	74528
65°	64917	65453	64917	65453
70°	57291	57623	57291	57623
75°	50326	50326	50326	50326
80°	43557	43267	43557	43267
85°	34800	34800	34800	34800

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 115704 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.2	7.2
10°-20°	821.6	19.4
20°-30°	1052.2	24.9
30°-40°	833.8	19.7
40°-50°	510.5	12.1
50°-60°	349.0	8.3
60°-70°	218.5	5.2
70°-80°	110.7	2.6
80°-90°	27.9	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°	2179.0	51.5
0°-40°	3012.8	71.2
0°-60°	3872.3	91.6
0°-90°	4229.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4229.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3275	3275	3275	3275	3275	
5°	3240	3233	3240	3233	3240	305
15°	2925	2921	2925	2921	2925	822
25°	2316	2324	2316	2324	2316	1050
35°	1336	1351	1336	1351	1336	833
45°	634	650	634	650	634	504
55°	385	390	385	390	385	347
65°	218	220	218	220	218	218
75°	104	104	104	104	104	111
85°	24	24	24	24	24	28
90°	0	1	0	1	0	



TEST NUMBER: P776543

CATALOG NUMBER: HCDJBLS4050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4
0.5°	3275.8	3275.4	3274.5	3274.1	3272.8	3274.1	3274.5	3275.4	3275.8	3275.4	3274.5
1°	3274.5	3274.1	3273.7	3273.2	3271.5	3273.2	3273.7	3274.1	3274.5	3274.1	3273.7
1.5°	3272.8	3271.9	3271.9	3271.0	3269.7	3271.0	3271.9	3271.9	3272.8	3271.9	3271.9
2°	3270.1	3269.7	3268.8	3268.4	3266.6	3268.4	3268.8	3269.7	3270.1	3269.7	3268.8
2.5°	3267.1	3266.2	3265.3	3264.9	3262.7	3264.9	3265.3	3266.2	3267.1	3266.2	3265.3
3°	3262.7	3261.8	3260.9	3260.1	3257.9	3260.1	3260.9	3261.8	3262.7	3261.8	3260.9
3.5°	3257.9	3257.0	3255.7	3254.8	3253.5	3254.8	3255.7	3257.0	3257.9	3257.0	3255.7
4°	3252.2	3251.7	3250.0	3249.1	3246.9	3249.1	3250.0	3251.7	3252.2	3251.7	3250.0
4.5°	3246.0	3245.1	3243.4	3242.5	3239.9	3242.5	3243.4	3245.1	3246.0	3245.1	3243.4
5°	3239.9	3238.6	3236.8	3235.9	3232.9	3235.9	3236.8	3238.6	3239.9	3238.6	3236.8
5.5°	3233.3	3230.2	3228.0	3227.2	3224.5	3227.2	3228.0	3230.2	3233.3	3230.2	3228.0
6°	3223.2	3221.5	3219.3	3217.9	3214.4	3217.9	3219.3	3221.5	3223.2	3221.5	3219.3
6.5°	3213.1	3211.8	3209.2	3207.9	3204.3	3207.9	3209.2	3211.8	3213.1	3211.8	3209.2
7°	3202.6	3200.8	3199.5	3197.3	3194.3	3197.3	3199.5	3200.8	3202.6	3200.8	3199.5
7.5°	3190.8	3189.0	3187.2	3186.4	3183.3	3186.4	3187.2	3189.0	3190.8	3189.0	3187.2
8°	3178.0	3176.7	3175.0	3173.6	3171.9	3173.6	3175.0	3176.7	3178.0	3176.7	3175.0
8.5°	3164.9	3163.1	3161.4	3160.0	3158.3	3160.0	3161.4	3163.1	3164.9	3163.1	3161.4
9°	3150.8	3149.5	3147.3	3146.0	3144.3	3146.0	3147.3	3149.5	3150.8	3149.5	3147.3
9.5°	3135.5	3134.6	3132.4	3131.1	3129.3	3131.1	3132.4	3134.6	3135.5	3134.6	3132.4
10°	3120.1	3118.8	3117.1	3115.3	3113.1	3115.3	3117.1	3118.8	3120.1	3118.8	3117.1
10.5°	3103.0	3102.1	3100.0	3098.6	3096.9	3098.6	3100.0	3102.1	3103.0	3102.1	3100.0
11°	3085.9	3085.0	3083.3	3081.5	3079.3	3081.5	3083.3	3085.0	3085.9	3085.0	3083.3
11.5°	3067.9	3067.1	3065.3	3063.5	3061.8	3063.5	3065.3	3067.1	3067.9	3067.1	3065.3
12°	3049.5	3048.6	3047.3	3045.1	3043.4	3045.1	3047.3	3048.6	3049.5	3048.6	3047.3
12.5°	3030.2	3029.3	3028.0	3025.8	3023.6	3025.8	3028.0	3029.3	3030.2	3029.3	3028.0
13°	3010.5	3009.6	3008.3	3006.5	3004.3	3006.5	3008.3	3009.6	3010.5	3009.6	3008.3
13.5°	2989.8	2989.0	2988.1	2986.3	2984.6	2986.3	2988.1	2989.0	2989.8	2989.0	2988.1
14°	2968.8	2968.4	2967.5	2965.7	2964.0	2965.7	2967.5	2968.4	2968.8	2968.4	2967.5
14.5°	2946.9	2946.4	2946.0	2944.2	2942.5	2944.2	2946.0	2946.4	2946.9	2946.4	2946.0
15°	2924.9	2924.9	2924.1	2923.2	2921.4	2923.2	2924.1	2924.9	2924.9	2924.9	2924.1
15.5°	2902.1	2902.1	2903.0	2902.1	2901.2	2902.1	2903.0	2902.1	2902.1	2902.1	2903.0
16°	2880.2	2880.6	2881.9	2881.5	2880.6	2881.5	2881.9	2880.6	2880.2	2880.6	2881.9
16.5°	2858.3	2859.1	2860.9	2860.9	2860.4	2860.9	2860.9	2859.1	2858.3	2859.1	2860.9
17°	2837.6	2838.5	2840.3	2839.8	2840.3	2839.8	2840.3	2838.5	2837.6	2838.5	2840.3
17.5°	2817.5	2818.3	2819.7	2819.2	2818.8	2819.2	2819.7	2818.3	2817.5	2818.3	2819.7
18°	2797.7	2798.2	2799.0	2798.2	2797.3	2798.2	2799.0	2798.2	2797.7	2798.2	2799.0
18.5°	2776.7	2776.7	2776.7	2775.8	2774.5	2775.8	2776.7	2776.7	2776.7	2776.7	2776.7
19°	2755.2	2753.9	2753.0	2751.7	2750.3	2751.7	2753.0	2753.9	2755.2	2753.9	2753.0
19.5°	2731.5	2729.7	2727.1	2726.2	2724.9	2726.2	2727.1	2729.7	2731.5	2729.7	2727.1
20°	2705.6	2703.4	2698.6	2699.0	2696.0	2699.0	2698.6	2703.4	2705.6	2703.4	2698.6
20.5°	2677.1	2673.6	2667.9	2669.6	2666.1	2669.6	2667.9	2673.6	2677.1	2673.6	2667.9
21°	2647.3	2642.0	2635.4	2637.6	2633.2	2637.6	2635.4	2642.0	2647.3	2642.0	2635.4



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CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2538.0	2532.8	2528.4	2527.9	2525.8	2527.9	2528.4	2532.8	2538.0	2532.8	2528.4
23°	2496.4	2492.0	2491.1	2488.0	2487.2	2488.0	2491.1	2492.0	2496.4	2492.0	2491.1
23.5°	2453.8	2449.9	2452.1	2446.8	2449.0	2446.8	2452.1	2449.9	2453.8	2449.9	2452.1
24°	2409.5	2406.4	2411.7	2404.7	2408.6	2404.7	2411.7	2406.4	2409.5	2406.4	2411.7
24.5°	2363.9	2362.6	2369.2	2362.1	2367.4	2362.1	2369.2	2362.6	2363.9	2362.6	2369.2
25°	2316.1	2317.0	2324.9	2319.6	2323.5	2319.6	2324.9	2317.0	2316.1	2317.0	2324.9
25.5°	2266.5	2272.2	2279.2	2277.0	2277.9	2277.0	2279.2	2272.2	2266.5	2272.2	2279.2
26°	2215.6	2225.7	2232.3	2232.7	2229.2	2232.7	2232.3	2225.7	2215.6	2225.7	2232.3
26.5°	2163.4	2178.3	2183.6	2186.7	2178.8	2186.7	2183.6	2178.3	2163.4	2178.3	2183.6
27°	2112.5	2129.2	2134.5	2139.3	2127.5	2139.3	2134.5	2129.2	2112.5	2129.2	2134.5
27.5°	2062.5	2078.3	2084.5	2090.6	2075.3	2090.6	2084.5	2078.3	2062.5	2078.3	2084.5
28°	2012.5	2027.4	2033.6	2039.7	2023.1	2039.7	2033.6	2027.4	2012.5	2027.4	2033.6
28.5°	1963.8	1975.7	1982.7	1988.0	1972.6	1988.0	1982.7	1975.7	1963.8	1975.7	1982.7
29°	1915.6	1923.5	1931.8	1935.3	1924.8	1935.3	1931.8	1923.5	1915.6	1923.5	1931.8
29.5°	1868.2	1872.2	1881.4	1882.7	1877.9	1882.7	1881.4	1872.2	1868.2	1872.2	1881.4
30°	1820.8	1819.5	1829.6	1830.1	1830.5	1830.1	1829.6	1819.5	1820.8	1819.5	1829.6
30.5°	1771.7	1768.6	1778.3	1779.2	1785.8	1779.2	1778.3	1768.6	1771.7	1768.6	1778.3
31°	1723.0	1716.4	1726.5	1728.3	1738.4	1728.3	1726.5	1716.4	1723.0	1716.4	1726.5
31.5°	1673.0	1666.4	1674.8	1677.8	1690.6	1677.8	1674.8	1666.4	1673.0	1666.4	1674.8
32°	1622.1	1616.0	1623.4	1628.3	1641.4	1628.3	1623.4	1616.0	1622.1	1616.0	1623.4
32.5°	1573.0	1567.7	1573.0	1579.1	1592.3	1579.1	1573.0	1567.7	1573.0	1567.7	1573.0
33°	1523.4	1519.5	1521.2	1530.0	1542.3	1530.0	1521.2	1519.5	1523.4	1519.5	1521.2
33.5°	1479.1	1471.2	1469.9	1480.9	1491.9	1480.9	1469.9	1471.2	1479.1	1471.2	1469.9
34°	1431.3	1423.0	1419.0	1432.6	1444.0	1432.6	1419.0	1423.0	1431.3	1423.0	1419.0
34.5°	1383.9	1375.2	1369.5	1383.9	1396.7	1383.9	1369.5	1375.2	1383.9	1375.2	1369.5
35°	1336.1	1328.7	1322.5	1337.0	1350.6	1337.0	1322.5	1328.7	1336.1	1328.7	1322.5
35.5°	1289.6	1282.6	1276.0	1290.5	1305.4	1290.5	1276.0	1282.6	1289.6	1282.6	1276.0
36°	1244.0	1236.6	1230.9	1245.8	1261.1	1245.8	1230.9	1236.6	1244.0	1236.6	1230.9
36.5°	1198.8	1192.3	1187.0	1201.5	1215.9	1201.5	1187.0	1192.3	1198.8	1192.3	1187.0
37°	1153.2	1148.4	1144.0	1158.5	1171.2	1158.5	1144.0	1148.4	1153.2	1148.4	1144.0
37.5°	1108.9	1105.8	1102.8	1117.2	1126.5	1117.2	1102.8	1105.8	1108.9	1105.8	1102.8
38°	1065.0	1064.6	1063.3	1076.9	1082.2	1076.9	1063.3	1064.6	1065.0	1064.6	1063.3
38.5°	1023.8	1024.7	1025.6	1037.4	1039.6	1037.4	1025.6	1024.7	1023.8	1024.7	1025.6
39°	983.9	986.1	987.8	999.2	998.8	999.2	987.8	986.1	983.9	986.1	987.8
39.5°	944.9	948.8	951.9	961.5	960.2	961.5	951.9	948.8	944.9	948.8	951.9
40°	907.6	912.0	917.2	925.1	923.4	925.1	917.2	912.0	907.6	912.0	917.2
40.5°	872.5	876.9	883.9	889.6	889.1	889.6	883.9	876.9	872.5	876.9	883.9
41°	838.7	843.1	852.3	856.2	857.6	856.2	852.3	843.1	838.7	843.1	852.3
41.5°	806.7	811.5	822.0	824.2	828.2	824.2	822.0	811.5	806.7	811.5	822.0
42°	776.9	781.7	793.1	794.4	799.7	794.4	793.1	781.7	776.9	781.7	793.1
42.5°	748.8	753.6	765.9	766.3	772.0	766.3	765.9	753.6	748.8	753.6	765.9
43°	722.0	727.3	739.1	740.0	745.3	740.0	739.1	727.3	722.0	727.3	739.1
43.5°	697.5	702.7	714.1	714.6	719.4	714.6	714.1	702.7	697.5	702.7	714.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	634.3	638.7	645.7	647.9	650.1	647.9	645.7	638.7	634.3	638.7	645.7
45.5°	615.9	619.4	626.0	628.1	629.9	628.1	626.0	619.4	615.9	619.4	626.0
46°	598.3	601.4	607.1	610.2	611.0	610.2	607.1	601.4	598.3	601.4	607.1
46.5°	582.1	584.7	589.1	592.6	593.5	592.6	589.1	584.7	582.1	584.7	589.1
47°	566.7	568.5	572.9	576.4	577.7	576.4	572.9	568.5	566.7	568.5	572.9
47.5°	552.3	553.6	557.5	561.5	563.2	561.5	557.5	553.6	552.3	553.6	557.5
48°	538.7	540.4	544.4	547.9	549.6	547.9	544.4	540.4	538.7	540.4	544.4
48.5°	527.7	528.6	531.6	535.2	536.5	535.2	531.6	528.6	527.7	528.6	531.6
49°	517.2	517.6	520.2	522.9	524.2	522.9	520.2	517.6	517.2	517.6	520.2
49.5°	507.1	507.5	509.3	511.5	511.9	511.5	509.3	507.5	507.1	507.5	509.3
50°	496.6	497.0	498.3	500.1	500.5	500.1	498.3	497.0	496.6	497.0	498.3
50.5°	486.0	486.5	487.3	489.1	489.1	489.1	487.3	486.5	486.0	486.5	487.3
51°	474.2	475.1	476.4	478.1	478.1	478.1	476.4	475.1	474.2	475.1	476.4
51.5°	462.8	463.2	465.0	467.2	467.6	467.2	465.0	463.2	462.8	463.2	465.0
52°	450.9	451.8	453.6	455.8	456.2	455.8	453.6	451.8	450.9	451.8	453.6
52.5°	439.1	440.0	442.2	443.9	444.8	443.9	442.2	440.0	439.1	440.0	442.2
53°	428.1	429.0	430.8	432.5	433.4	432.5	430.8	429.0	428.1	429.0	430.8
53.5°	416.7	417.6	419.4	421.5	422.4	421.5	419.4	417.6	416.7	417.6	419.4
54°	406.2	406.6	408.4	410.1	411.0	410.1	408.4	406.6	406.2	406.6	408.4
54.5°	395.7	396.1	397.9	399.6	400.5	399.6	397.9	396.1	395.7	396.1	397.9
55°	385.1	386.0	387.8	389.1	389.5	389.1	387.8	386.0	385.1	386.0	387.8
55.5°	375.0	375.9	377.7	379.0	379.4	379.0	377.7	375.9	375.0	375.9	377.7
56°	365.4	366.3	367.6	368.9	369.3	368.9	367.6	366.3	365.4	366.3	367.6
56.5°	355.7	356.6	357.9	359.3	359.7	359.3	357.9	356.6	355.7	356.6	357.9
57°	346.1	347.0	348.3	349.6	350.0	349.6	348.3	347.0	346.1	347.0	348.3
57.5°	336.4	337.8	339.1	340.0	340.8	340.0	339.1	337.8	336.4	337.8	339.1
58°	328.1	328.6	329.9	331.2	331.6	331.2	329.9	328.6	328.1	328.6	329.9
58.5°	319.3	319.8	321.1	322.0	322.4	322.0	321.1	319.8	319.3	319.8	321.1
59°	310.6	311.0	311.9	312.8	313.6	312.8	311.9	311.0	310.6	311.0	311.9
59.5°	301.8	302.2	303.1	304.4	304.9	304.4	303.1	302.2	301.8	302.2	303.1
60°	293.5	293.9	294.8	295.7	296.1	295.7	294.8	293.9	293.5	293.9	294.8
60.5°	285.1	285.6	286.4	287.3	287.8	287.3	286.4	285.6	285.1	285.6	286.4
61°	277.2	277.7	278.5	279.4	279.9	279.4	278.5	277.7	277.2	277.7	278.5
61.5°	269.3	269.8	270.6	271.5	272.0	271.5	270.6	269.8	269.3	269.8	270.6
62°	261.9	261.9	262.8	263.6	263.6	263.6	262.8	261.9	261.9	261.9	262.8
62.5°	254.0	254.4	254.9	255.7	256.2	255.7	254.9	254.4	254.0	254.4	254.9
63°	246.5	247.0	247.4	248.3	248.3	248.3	247.4	247.0	246.5	247.0	247.4
63.5°	239.1	239.5	239.9	240.8	241.3	240.8	239.9	239.5	239.1	239.5	239.9
64°	232.0	232.5	232.9	233.4	233.8	233.4	232.9	232.5	232.0	232.5	232.9
64.5°	225.0	225.5	225.9	226.3	226.8	226.3	225.9	225.5	225.0	225.5	225.9
65°	218.0	218.4	218.9	219.3	219.8	219.3	218.9	218.4	218.0	218.4	218.9
65.5°	211.4	211.4	211.9	212.7	212.7	212.7	211.9	211.4	211.4	211.4	211.9
66°	204.4	204.9	205.3	205.7	206.2	205.7	205.3	204.9	204.4	204.9	205.3





TEST NUMBER: P776543

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	185.1	185.5	186.0	186.4	186.4	186.4	186.0	185.5	185.1	185.5	186.0
68°	179.0	179.4	179.8	180.3	180.3	180.3	179.8	179.4	179.0	179.4	179.8
68.5°	172.8	173.3	173.7	173.7	174.1	173.7	173.7	173.3	172.8	173.3	173.7
69°	167.1	167.1	167.1	168.0	168.0	168.0	167.1	167.1	167.1	167.1	167.1
69.5°	161.0	161.4	161.4	161.9	162.3	161.9	161.4	161.4	161.0	161.4	161.4
70°	155.7	156.2	155.7	156.2	156.6	156.2	155.7	156.2	155.7	156.2	155.7
70.5°	150.0	150.5	150.5	150.5	150.9	150.5	150.5	150.5	150.0	150.5	150.5
71°	144.8	144.8	144.8	144.8	145.2	144.8	144.8	144.8	144.8	144.8	144.8
71.5°	139.1	139.1	139.5	139.5	139.5	139.5	139.5	139.1	139.1	139.1	139.5
72°	133.8	133.8	133.8	134.2	134.2	134.2	133.8	133.8	133.8	133.8	133.8
72.5°	128.5	128.5	128.5	129.0	129.0	129.0	128.5	128.5	128.5	128.5	128.5
73°	123.3	123.3	123.3	123.7	123.7	123.7	123.3	123.3	123.3	123.3	123.3
73.5°	118.0	118.0	118.4	118.4	118.4	118.4	118.4	118.0	118.0	118.0	118.4
74°	113.2	113.2	113.2	113.6	113.6	113.6	113.2	113.2	113.2	113.2	113.2
74.5°	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3
75°	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
75.5°	98.7	98.7	98.7	98.7	99.1	98.7	98.7	98.7	98.7	98.7	98.7
76°	94.3	93.9	93.9	94.3	94.3	94.3	93.9	93.9	94.3	93.9	93.9
76.5°	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5
77°	85.1	85.1	85.1	85.1	85.1	85.1	85.1	85.1	85.1	85.1	85.1
77.5°	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
78°	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3
78.5°	72.4	72.4	71.9	71.9	72.4	71.9	71.9	72.4	72.4	72.4	71.9
79°	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
79.5°	64.0	64.0	63.6	64.0	64.0	64.0	63.6	64.0	64.0	64.0	63.6
80°	60.1	60.1	59.7	59.7	59.7	59.7	59.7	60.1	60.1	60.1	59.7
80.5°	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
81°	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2
81.5°	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
82°	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
82.5°	41.2	41.2	41.2	41.2	40.8	41.2	41.2	41.2	41.2	41.2	41.2
83°	37.7	37.7	37.7	37.3	37.3	37.3	37.7	37.7	37.7	37.7	37.7
83.5°	34.2	34.2	34.2	33.8	33.8	33.8	34.2	34.2	34.2	34.2	34.2
84°	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
84.5°	27.6	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.6	27.2	27.2
85°	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1
85.5°	21.1	20.6	21.1	20.6	21.1	20.6	21.1	20.6	21.1	20.6	21.1
86°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
86.5°	14.9	14.5	14.5	14.5	14.9	14.5	14.5	14.5	14.9	14.5	14.5
87°	11.8	11.8	11.8	11.4	11.8	11.4	11.8	11.8	11.8	11.8	11.8
87.5°	8.8	8.8	8.8	8.8	9.2	8.8	8.8	8.8	8.8	8.8	8.8
88°	5.7	6.1	6.1	6.6	6.6	6.6	6.1	6.1	5.7	6.1	6.1
88.5°	3.5	3.5	3.9	4.4	5.3	4.4	3.9	3.5	3.5	3.5	3.9



TEST NUMBER: P776543  
CATALOG NUMBER: HCDJBL4050CSD-HCD42TRMW-4500lm-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	0.4	0.9	1.3	0.9	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776543

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3275.4	3275.4	3275.4	3275.4	3275.4	3275.4
0.5°	3274.1	3272.8	3274.1	3274.5	3275.4	3275.8
1°	3273.2	3271.5	3273.2	3273.7	3274.1	3274.5
1.5°	3271.0	3269.7	3271.0	3271.9	3271.9	3272.8
2°	3268.4	3266.6	3268.4	3268.8	3269.7	3270.1
2.5°	3264.9	3262.7	3264.9	3265.3	3266.2	3267.1
3°	3260.1	3257.9	3260.1	3260.9	3261.8	3262.7
3.5°	3254.8	3253.5	3254.8	3255.7	3257.0	3257.9
4°	3249.1	3246.9	3249.1	3250.0	3251.7	3252.2
4.5°	3242.5	3239.9	3242.5	3243.4	3245.1	3246.0
5°	3235.9	3232.9	3235.9	3236.8	3238.6	3239.9
5.5°	3227.2	3224.5	3227.2	3228.0	3230.2	3233.3
6°	3217.9	3214.4	3217.9	3219.3	3221.5	3223.2
6.5°	3207.9	3204.3	3207.9	3209.2	3211.8	3213.1
7°	3197.3	3194.3	3197.3	3199.5	3200.8	3202.6
7.5°	3186.4	3183.3	3186.4	3187.2	3189.0	3190.8
8°	3173.6	3171.9	3173.6	3175.0	3176.7	3178.0
8.5°	3160.0	3158.3	3160.0	3161.4	3163.1	3164.9
9°	3146.0	3144.3	3146.0	3147.3	3149.5	3150.8
9.5°	3131.1	3129.3	3131.1	3132.4	3134.6	3135.5
10°	3115.3	3113.1	3115.3	3117.1	3118.8	3120.1
10.5°	3098.6	3096.9	3098.6	3100.0	3102.1	3103.0
11°	3081.5	3079.3	3081.5	3083.3	3085.0	3085.9
11.5°	3063.5	3061.8	3063.5	3065.3	3067.1	3067.9
12°	3045.1	3043.4	3045.1	3047.3	3048.6	3049.5
12.5°	3025.8	3023.6	3025.8	3028.0	3029.3	3030.2
13°	3006.5	3004.3	3006.5	3008.3	3009.6	3010.5
13.5°	2986.3	2984.6	2986.3	2988.1	2989.0	2989.8
14°	2965.7	2964.0	2965.7	2967.5	2968.4	2968.8
14.5°	2944.2	2942.5	2944.2	2946.0	2946.4	2946.9
15°	2923.2	2921.4	2923.2	2924.1	2924.9	2924.9
15.5°	2902.1	2901.2	2902.1	2903.0	2902.1	2902.1
16°	2881.5	2880.6	2881.5	2881.9	2880.6	2880.2
16.5°	2860.9	2860.4	2860.9	2860.9	2859.1	2858.3
17°	2839.8	2840.3	2839.8	2840.3	2838.5	2837.6
17.5°	2819.2	2818.8	2819.2	2819.7	2818.3	2817.5
18°	2798.2	2797.3	2798.2	2799.0	2798.2	2797.7
18.5°	2775.8	2774.5	2775.8	2776.7	2776.7	2776.7
19°	2751.7	2750.3	2751.7	2753.0	2753.9	2755.2
19.5°	2726.2	2724.9	2726.2	2727.1	2729.7	2731.5
20°	2699.0	2696.0	2699.0	2698.6	2703.4	2705.6
20.5°	2669.6	2666.1	2669.6	2667.9	2673.6	2677.1
21°	2637.6	2633.2	2637.6	2635.4	2642.0	2647.3



TEST NUMBER: P776543

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2527.9	2525.8	2527.9	2528.4	2532.8	2538.0
23°	2488.0	2487.2	2488.0	2491.1	2492.0	2496.4
23.5°	2446.8	2449.0	2446.8	2452.1	2449.9	2453.8
24°	2404.7	2408.6	2404.7	2411.7	2406.4	2409.5
24.5°	2362.1	2367.4	2362.1	2369.2	2362.6	2363.9
25°	2319.6	2323.5	2319.6	2324.9	2317.0	2316.1
25.5°	2277.0	2277.9	2277.0	2279.2	2272.2	2266.5
26°	2232.7	2229.2	2232.7	2232.3	2225.7	2215.6
26.5°	2186.7	2178.8	2186.7	2183.6	2178.3	2163.4
27°	2139.3	2127.5	2139.3	2134.5	2129.2	2112.5
27.5°	2090.6	2075.3	2090.6	2084.5	2078.3	2062.5
28°	2039.7	2023.1	2039.7	2033.6	2027.4	2012.5
28.5°	1988.0	1972.6	1988.0	1982.7	1975.7	1963.8
29°	1935.3	1924.8	1935.3	1931.8	1923.5	1915.6
29.5°	1882.7	1877.9	1882.7	1881.4	1872.2	1868.2
30°	1830.1	1830.5	1830.1	1829.6	1819.5	1820.8
30.5°	1779.2	1785.8	1779.2	1778.3	1768.6	1771.7
31°	1728.3	1738.4	1728.3	1726.5	1716.4	1723.0
31.5°	1677.8	1690.6	1677.8	1674.8	1666.4	1673.0
32°	1628.3	1641.4	1628.3	1623.4	1616.0	1622.1
32.5°	1579.1	1592.3	1579.1	1573.0	1567.7	1573.0
33°	1530.0	1542.3	1530.0	1521.2	1519.5	1523.4
33.5°	1480.9	1491.9	1480.9	1469.9	1471.2	1479.1
34°	1432.6	1444.0	1432.6	1419.0	1423.0	1431.3
34.5°	1383.9	1396.7	1383.9	1369.5	1375.2	1383.9
35°	1337.0	1350.6	1337.0	1322.5	1328.7	1336.1
35.5°	1290.5	1305.4	1290.5	1276.0	1282.6	1289.6
36°	1245.8	1261.1	1245.8	1230.9	1236.6	1244.0
36.5°	1201.5	1215.9	1201.5	1187.0	1192.3	1198.8
37°	1158.5	1171.2	1158.5	1144.0	1148.4	1153.2
37.5°	1117.2	1126.5	1117.2	1102.8	1105.8	1108.9
38°	1076.9	1082.2	1076.9	1063.3	1064.6	1065.0
38.5°	1037.4	1039.6	1037.4	1025.6	1024.7	1023.8
39°	999.2	998.8	999.2	987.8	986.1	983.9
39.5°	961.5	960.2	961.5	951.9	948.8	944.9
40°	925.1	923.4	925.1	917.2	912.0	907.6
40.5°	889.6	889.1	889.6	883.9	876.9	872.5
41°	856.2	857.6	856.2	852.3	843.1	838.7
41.5°	824.2	828.2	824.2	822.0	811.5	806.7
42°	794.4	799.7	794.4	793.1	781.7	776.9
42.5°	766.3	772.0	766.3	765.9	753.6	748.8
43°	740.0	745.3	740.0	739.1	727.3	722.0
43.5°	714.6	719.4	714.6	714.1	702.7	697.5



TEST NUMBER: P776543

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	647.9	650.1	647.9	645.7	638.7	634.3
45.5°	628.1	629.9	628.1	626.0	619.4	615.9
46°	610.2	611.0	610.2	607.1	601.4	598.3
46.5°	592.6	593.5	592.6	589.1	584.7	582.1
47°	576.4	577.7	576.4	572.9	568.5	566.7
47.5°	561.5	563.2	561.5	557.5	553.6	552.3
48°	547.9	549.6	547.9	544.4	540.4	538.7
48.5°	535.2	536.5	535.2	531.6	528.6	527.7
49°	522.9	524.2	522.9	520.2	517.6	517.2
49.5°	511.5	511.9	511.5	509.3	507.5	507.1
50°	500.1	500.5	500.1	498.3	497.0	496.6
50.5°	489.1	489.1	489.1	487.3	486.5	486.0
51°	478.1	478.1	478.1	476.4	475.1	474.2
51.5°	467.2	467.6	467.2	465.0	463.2	462.8
52°	455.8	456.2	455.8	453.6	451.8	450.9
52.5°	443.9	444.8	443.9	442.2	440.0	439.1
53°	432.5	433.4	432.5	430.8	429.0	428.1
53.5°	421.5	422.4	421.5	419.4	417.6	416.7
54°	410.1	411.0	410.1	408.4	406.6	406.2
54.5°	399.6	400.5	399.6	397.9	396.1	395.7
55°	389.1	389.5	389.1	387.8	386.0	385.1
55.5°	379.0	379.4	379.0	377.7	375.9	375.0
56°	368.9	369.3	368.9	367.6	366.3	365.4
56.5°	359.3	359.7	359.3	357.9	356.6	355.7
57°	349.6	350.0	349.6	348.3	347.0	346.1
57.5°	340.0	340.8	340.0	339.1	337.8	336.4
58°	331.2	331.6	331.2	329.9	328.6	328.1
58.5°	322.0	322.4	322.0	321.1	319.8	319.3
59°	312.8	313.6	312.8	311.9	311.0	310.6
59.5°	304.4	304.9	304.4	303.1	302.2	301.8
60°	295.7	296.1	295.7	294.8	293.9	293.5
60.5°	287.3	287.8	287.3	286.4	285.6	285.1
61°	279.4	279.9	279.4	278.5	277.7	277.2
61.5°	271.5	272.0	271.5	270.6	269.8	269.3
62°	263.6	263.6	263.6	262.8	261.9	261.9
62.5°	255.7	256.2	255.7	254.9	254.4	254.0
63°	248.3	248.3	248.3	247.4	247.0	246.5
63.5°	240.8	241.3	240.8	239.9	239.5	239.1
64°	233.4	233.8	233.4	232.9	232.5	232.0
64.5°	226.3	226.8	226.3	225.9	225.5	225.0
65°	219.3	219.8	219.3	218.9	218.4	218.0
65.5°	212.7	212.7	212.7	211.9	211.4	211.4
66°	205.7	206.2	205.7	205.3	204.9	204.4



TEST NUMBER: P776543

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	186.4	186.4	186.4	186.0	185.5	185.1
68°	180.3	180.3	180.3	179.8	179.4	179.0
68.5°	173.7	174.1	173.7	173.7	173.3	172.8
69°	168.0	168.0	168.0	167.1	167.1	167.1
69.5°	161.9	162.3	161.9	161.4	161.4	161.0
70°	156.2	156.6	156.2	155.7	156.2	155.7
70.5°	150.5	150.9	150.5	150.5	150.5	150.0
71°	144.8	145.2	144.8	144.8	144.8	144.8
71.5°	139.5	139.5	139.5	139.5	139.1	139.1
72°	134.2	134.2	134.2	133.8	133.8	133.8
72.5°	129.0	129.0	129.0	128.5	128.5	128.5
73°	123.7	123.7	123.7	123.3	123.3	123.3
73.5°	118.4	118.4	118.4	118.4	118.0	118.0
74°	113.6	113.6	113.6	113.2	113.2	113.2
74.5°	108.3	108.3	108.3	108.3	108.3	108.3
75°	103.5	103.5	103.5	103.5	103.5	103.5
75.5°	98.7	99.1	98.7	98.7	98.7	98.7
76°	94.3	94.3	94.3	93.9	93.9	94.3
76.5°	89.5	89.5	89.5	89.5	89.5	89.5
77°	85.1	85.1	85.1	85.1	85.1	85.1
77.5°	80.7	80.7	80.7	80.7	80.7	80.7
78°	76.3	76.3	76.3	76.3	76.3	76.3
78.5°	71.9	72.4	71.9	71.9	72.4	72.4
79°	68.0	68.0	68.0	68.0	68.0	68.0
79.5°	64.0	64.0	64.0	63.6	64.0	64.0
80°	59.7	59.7	59.7	59.7	60.1	60.1
80.5°	56.1	56.1	56.1	56.1	56.1	56.1
81°	52.2	52.2	52.2	52.2	52.2	52.2
81.5°	48.3	48.3	48.3	48.3	48.3	48.3
82°	44.7	44.7	44.7	44.7	44.7	44.7
82.5°	41.2	40.8	41.2	41.2	41.2	41.2
83°	37.3	37.3	37.3	37.7	37.7	37.7
83.5°	33.8	33.8	33.8	34.2	34.2	34.2
84°	30.7	30.7	30.7	30.7	30.7	30.7
84.5°	27.2	27.2	27.2	27.2	27.2	27.6
85°	24.1	24.1	24.1	24.1	24.1	24.1
85.5°	20.6	21.1	20.6	21.1	20.6	21.1
86°	17.5	17.5	17.5	17.5	17.5	17.5
86.5°	14.5	14.9	14.5	14.5	14.5	14.9
87°	11.4	11.8	11.4	11.8	11.8	11.8
87.5°	8.8	9.2	8.8	8.8	8.8	8.8
88°	6.6	6.6	6.6	6.1	6.1	5.7
88.5°	4.4	5.3	4.4	3.9	3.5	3.5



TEST NUMBER: P776543  
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4500lm-4000K

**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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Scaled Data Report





21.5°	2612.6	2608.2	2600.8	2603.0	2598.6	2603.0	2600.8	2608.2	2612.6	2608.2	2600.8
22°	2576.2	2571.8	2565.2	2566.1	2561.7	2566.1	2565.2	2571.8	2576.2	2571.8	2565.2



44°	674.6	679.9	690.0	690.9	695.3	690.9	690.0	679.9	674.6	679.9	690.0
44.5°	653.6	658.9	667.6	668.9	672.0	668.9	667.6	658.9	653.6	658.9	667.6



66.5°	197.8	198.3	198.7	199.1	199.6	199.1	198.7	198.3	197.8	198.3	198.7
67°	191.7	191.7	192.1	192.6	193.0	192.6	192.1	191.7	191.7	191.7	192.1



89°	1.3	1.8	2.6	3.1	3.5	3.1	2.6	1.8	1.3	1.8	2.6
89.5°	0.0	0.4	1.3	1.8	2.2	1.8	1.3	0.4	0.0	0.4	1.3



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21.5°	2603.0	2598.6	2603.0	2600.8	2608.2	2612.6
22°	2566.1	2561.7	2566.1	2565.2	2571.8	2576.2



44°	690.9	695.3	690.9	690.0	679.9	674.6
44.5°	668.9	672.0	668.9	667.6	658.9	653.6



66.5°	199.1	199.6	199.1	198.7	198.3	197.8
67°	192.6	193.0	192.6	192.1	191.7	191.7

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89°	3.1	3.5	3.1	2.6	1.8	1.3
89.5°	1.8	2.2	1.8	1.3	0.4	0.0

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Scaled Data Report



(END OF REPORT)