

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: P776315

Luminaire Tested: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776315  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2310613A001)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K  
Description: 4 INCH SQUARE MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3855.5 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.05 / 1.09  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

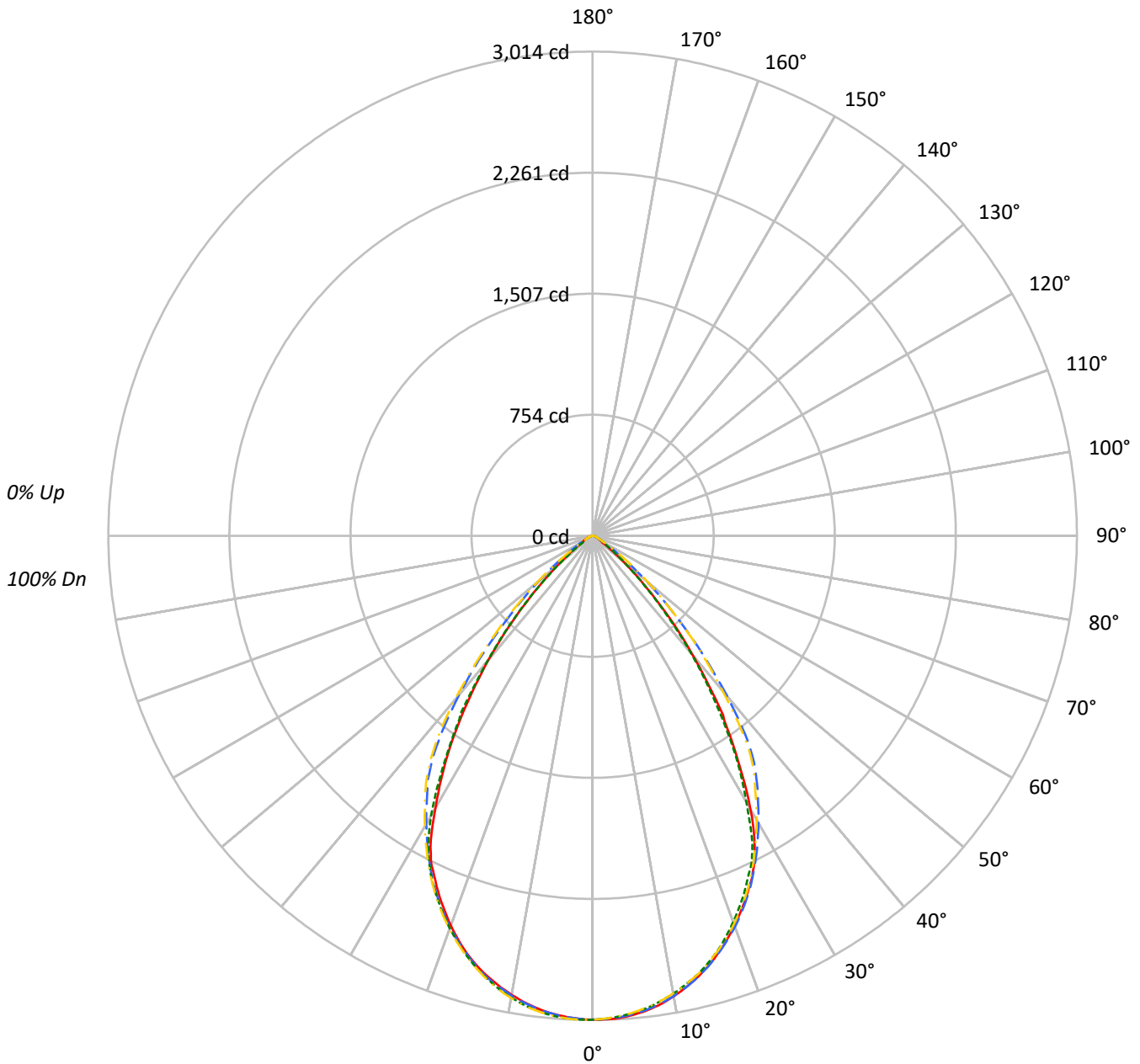
Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	85	84					84			
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	81	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70					70			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64					64			
6	83	73	66	61	82	72	66	61	71	65	61	69	64	60	68	63	60	58					58			
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	54					54			
8	74	63	56	52	73	63	56	52	61	56	51	60	55	51	59	55	51	49					49			
9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47	46					46			
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

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

	0°	90°	180°	270°
0°	297673	297673	297673	297673
5°	296875	295576	295963	297133
10°	292138	290362	291175	292981
15°	283871	282336	283830	285119
20°	271610	269065	271442	273546
25°	256084	251809	254492	258255
30°	224317	218496	223404	229271
35°	176025	172272	179452	181865
40°	125236	122565	130036	131326
45°	76560	74631	81173	81648
50°	37597	38781	41841	40488
55°	14079	19438	20507	15733
60°	10240	12968	13126	10398
65°	8069	10244	10408	8350
70°	6445	8207	8323	6762
75°	4965	6454	6454	5576
80°	3301	5009	4781	4383
85°	1361	3969	2155	3062

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 315°

Vertical Angle: 45°

Luminance: 117433 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.5	7.3
10°-20°	778.8	20.2
20°-30°	1071.9	27.8
30°-40°	984.7	25.5
40°-50°	532.6	13.8
50°-60°	143.5	3.7
60°-70°	41.0	1.1
70°-80°	17.2	0.4
80°-90°	3.3	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°	2133.2	55.3
0°-40°	3118.0	80.9
0°-60°	3794.0	98.4
0°-90°	3855.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3855.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3012	3012	3012	3012	3012	
5°	2992	2979	2983	2995	2992	283
15°	2774	2759	2774	2786	2774	779
25°	2348	2309	2334	2368	2348	1066
35°	1459	1428	1487	1507	1459	907
45°	548	534	581	584	548	432
55°	82	113	119	91	82	96
65°	34	44	44	36	34	35
75°	13	17	17	15	13	14
85°	1	4	2	3	1	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°	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6
0.5°	3013.2	3012.0	3010.9	3009.7	3011.6	3009.7	3010.5	3010.9	3012.0	3012.0	3010.5
1°	3013.2	3011.3	3009.7	3009.0	3010.1	3008.2	3008.6	3009.0	3010.5	3011.3	3009.7
1.5°	3012.0	3009.7	3009.3	3007.0	3007.4	3005.1	3006.3	3006.6	3009.0	3009.3	3007.8
2°	3011.3	3008.6	3007.0	3005.1	3004.3	3002.8	3003.2	3004.0	3005.9	3007.4	3005.9
2.5°	3009.3	3006.6	3005.1	3002.4	3001.3	2999.4	3000.1	3000.5	3003.6	3004.7	3003.6
3°	3007.0	3003.2	3002.4	2999.7	2998.2	2995.5	2996.3	2997.1	3000.5	3002.4	3000.5
3.5°	3004.0	3000.1	2999.0	2996.3	2994.4	2991.3	2991.7	2992.8	2996.7	2999.0	2997.4
4°	3000.5	2996.3	2996.3	2992.4	2989.8	2987.1	2987.1	2988.6	2992.1	2995.5	2993.6
4.5°	2996.7	2991.7	2991.3	2988.2	2984.4	2981.3	2982.1	2983.6	2987.8	2991.7	2989.0
5°	2992.1	2986.7	2986.7	2982.9	2979.0	2975.9	2976.3	2978.2	2982.9	2986.3	2984.0
5.5°	2986.3	2981.3	2981.7	2977.5	2972.9	2969.4	2970.2	2972.1	2977.1	2981.7	2978.6
6°	2980.9	2974.8	2975.6	2971.3	2966.3	2962.5	2963.7	2966.0	2970.6	2975.6	2972.5
6.5°	2974.4	2968.3	2969.4	2965.2	2959.1	2955.2	2956.4	2958.7	2964.0	2969.8	2966.3
7°	2967.1	2960.6	2962.1	2957.5	2951.4	2947.2	2949.1	2951.8	2956.8	2962.9	2959.4
7.5°	2959.4	2952.9	2954.8	2950.6	2942.9	2939.1	2940.6	2943.7	2948.7	2955.6	2951.8
8°	2951.4	2944.5	2947.5	2941.4	2934.1	2929.5	2931.8	2934.5	2940.6	2947.5	2943.7
8.5°	2942.2	2935.6	2938.7	2932.2	2924.1	2920.7	2923.0	2925.7	2931.4	2938.7	2935.3
9°	2932.6	2926.4	2929.5	2923.0	2914.5	2910.3	2913.0	2916.1	2921.8	2929.5	2926.4
9.5°	2922.2	2915.3	2920.3	2913.4	2903.8	2900.0	2902.6	2905.7	2911.5	2920.3	2916.5
10°	2910.7	2904.6	2909.5	2902.3	2893.0	2889.2	2892.3	2895.3	2901.1	2910.3	2906.5
10.5°	2899.6	2892.7	2898.8	2891.1	2881.9	2878.1	2881.5	2884.2	2890.0	2900.0	2895.3
11°	2887.7	2880.8	2888.4	2879.6	2870.4	2866.6	2870.0	2872.7	2878.8	2888.8	2884.2
11.5°	2875.4	2868.5	2875.4	2867.7	2857.7	2853.9	2857.4	2862.0	2867.7	2877.3	2872.3
12°	2862.0	2855.0	2863.1	2854.7	2845.1	2841.6	2845.1	2849.3	2855.0	2866.2	2864.3
12.5°	2848.9	2841.2	2849.3	2841.6	2832.4	2829.0	2832.4	2837.0	2842.4	2853.1	2851.2
13°	2835.1	2827.4	2836.2	2827.8	2820.1	2816.3	2819.7	2824.3	2829.7	2840.5	2838.2
13.5°	2820.9	2812.4	2822.0	2813.6	2807.1	2803.6	2807.1	2812.1	2817.1	2827.8	2825.1
14°	2805.9	2797.9	2806.7	2799.0	2791.7	2787.9	2792.5	2796.7	2804.4	2815.1	2812.4
14.5°	2789.8	2781.4	2791.0	2784.0	2775.6	2772.1	2776.8	2781.0	2789.4	2802.5	2794.4
15°	2774.1	2765.2	2775.6	2768.7	2759.1	2756.4	2760.3	2765.6	2773.7	2787.1	2778.7
15.5°	2757.2	2748.7	2759.5	2751.8	2742.2	2739.1	2743.4	2748.7	2757.2	2771.4	2762.2
16°	2740.3	2731.5	2741.8	2734.5	2724.9	2722.3	2726.1	2732.2	2740.3	2754.9	2745.7
16.5°	2721.9	2714.6	2724.2	2717.3	2706.5	2703.8	2708.8	2714.6	2723.4	2737.6	2728.4
17°	2703.8	2695.4	2706.9	2699.6	2687.7	2685.8	2690.8	2696.9	2705.8	2720.3	2710.4
17.5°	2685.0	2677.0	2688.1	2680.8	2668.1	2667.0	2672.0	2677.7	2686.2	2702.7	2691.9
18°	2665.5	2657.4	2669.7	2661.2	2646.6	2647.0	2653.2	2658.9	2665.8	2684.3	2673.5
18.5°	2644.3	2637.1	2649.7	2642.0	2625.2	2626.3	2633.2	2639.0	2645.5	2664.7	2654.3
19°	2624.4	2616.3	2630.5	2621.7	2602.9	2604.8	2613.3	2618.2	2624.4	2644.3	2634.4
19.5°	2603.3	2595.6	2610.2	2599.8	2581.0	2582.9	2592.9	2597.1	2602.9	2623.2	2614.0
20°	2582.2	2574.1	2589.8	2577.6	2558.0	2559.9	2572.2	2575.3	2580.6	2601.7	2593.7
20.5°	2559.9	2552.2	2568.7	2554.9	2535.0	2536.9	2550.3	2552.6	2558.0	2579.9	2571.8
21°	2537.3	2529.2	2546.1	2531.5	2511.2	2513.5	2528.4	2529.6	2535.0	2556.8	2550.3



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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°	2468.2	2459.0	2478.2	2458.6	2439.0	2440.9	2459.7	2457.4	2463.2	2485.8	2482.8
23°	2442.5	2434.8	2454.4	2432.9	2413.3	2415.6	2436.3	2431.7	2439.0	2461.3	2459.0
23.5°	2418.7	2410.6	2429.4	2408.7	2386.4	2391.0	2411.4	2406.8	2413.3	2436.3	2434.0
24°	2394.1	2384.9	2405.2	2382.6	2358.8	2364.9	2386.1	2381.4	2387.2	2411.4	2408.7
24.5°	2371.9	2359.6	2379.5	2357.3	2333.1	2338.1	2359.2	2355.7	2360.0	2385.7	2382.6
25°	2348.1	2332.7	2353.0	2329.2	2308.9	2310.4	2332.7	2329.2	2333.5	2359.2	2356.5
25.5°	2317.0	2307.8	2325.8	2301.6	2284.7	2282.4	2305.1	2302.0	2308.5	2331.6	2329.6
26°	2289.0	2283.6	2297.4	2272.8	2260.6	2255.2	2277.4	2274.4	2285.1	2303.9	2302.8
26.5°	2258.6	2259.8	2270.1	2245.6	2225.2	2229.5	2248.7	2246.0	2256.3	2275.9	2274.4
27°	2222.6	2228.3	2241.7	2219.1	2188.0	2204.9	2219.9	2218.7	2218.7	2250.2	2246.0
27.5°	2184.9	2198.0	2213.0	2194.5	2153.1	2179.6	2190.7	2192.2	2185.7	2226.0	2217.2
28°	2145.4	2165.8	2183.0	2169.6	2105.1	2150.4	2161.1	2167.3	2145.0	2199.5	2188.0
28.5°	2104.0	2132.0	2154.2	2142.0	2056.4	2110.9	2131.6	2138.5	2098.6	2161.9	2159.2
29°	2061.0	2095.1	2123.9	2104.0	2009.5	2078.2	2102.0	2101.7	2051.8	2127.8	2129.3
29.5°	2013.8	2056.8	2095.1	2068.7	1961.6	2037.9	2071.0	2067.9	2003.8	2093.2	2100.1
30°	1965.4	2014.9	2065.6	2031.0	1914.4	1990.4	2041.0	2029.9	1957.4	2048.7	2070.2
30.5°	1914.4	1974.6	2035.3	1985.0	1868.3	1942.8	2009.9	1984.2	1909.8	2001.1	2040.3
31°	1862.9	1928.2	2004.6	1937.0	1822.6	1896.7	1978.5	1939.3	1864.9	1955.0	2009.5
31.5°	1810.7	1882.9	1973.9	1890.2	1776.6	1849.5	1946.6	1892.1	1820.0	1907.8	1978.1
32°	1757.4	1832.6	1942.8	1843.7	1731.7	1803.8	1915.9	1846.1	1774.7	1862.2	1947.8
32.5°	1706.0	1784.6	1914.0	1796.9	1684.1	1759.3	1884.4	1800.0	1728.6	1816.5	1916.7
33°	1655.7	1733.6	1886.0	1751.6	1636.1	1715.6	1854.9	1756.2	1682.9	1771.6	1887.5
33.5°	1605.8	1681.8	1856.0	1706.7	1584.3	1670.7	1826.1	1711.0	1636.5	1726.3	1861.8
34°	1557.1	1631.9	1821.9	1662.2	1533.6	1626.1	1798.1	1668.0	1588.1	1681.8	1835.3
34.5°	1507.9	1581.6	1792.3	1616.9	1479.9	1579.7	1768.5	1623.5	1537.5	1636.9	1796.5
35°	1458.8	1531.3	1762.0	1571.3	1427.7	1535.6	1735.9	1580.9	1487.2	1591.6	1757.4
35.5°	1410.8	1483.8	1729.4	1524.4	1375.1	1486.4	1699.8	1535.6	1436.9	1544.8	1723.6
36°	1381.3	1436.5	1691.0	1477.2	1325.6	1437.7	1663.4	1491.4	1386.3	1498.0	1681.8
36.5°	1327.5	1390.5	1646.9	1428.5	1275.3	1388.2	1616.9	1444.6	1336.0	1450.0	1635.3
37°	1272.7	1344.0	1605.4	1379.0	1227.4	1338.7	1570.5	1397.8	1284.9	1400.9	1587.8
37.5°	1217.8	1297.2	1560.9	1331.0	1180.2	1288.0	1520.6	1350.6	1237.0	1351.0	1539.8
38°	1162.9	1250.8	1509.1	1283.0	1134.1	1239.7	1466.5	1303.0	1190.1	1303.0	1491.0
38.5°	1113.8	1204.3	1455.3	1235.4	1087.7	1192.8	1412.7	1254.6	1143.7	1253.5	1442.3
39°	1065.0	1157.5	1403.2	1187.5	1043.2	1147.2	1359.0	1207.4	1097.3	1206.7	1392.4
39.5°	1017.4	1109.9	1351.3	1139.5	996.3	1104.2	1307.6	1161.0	1052.0	1160.2	1342.9
40°	970.6	1063.1	1299.5	1093.8	949.9	1058.9	1256.9	1116.5	1007.8	1114.5	1293.0
40.5°	925.7	1015.5	1247.7	1049.7	903.1	1015.5	1208.2	1070.8	961.8	1069.3	1243.9
41°	880.8	970.2	1195.5	1006.3	858.2	973.3	1160.6	1027.8	916.1	1025.5	1193.2
41.5°	836.3	925.7	1143.7	963.3	812.1	931.5	1113.8	985.6	869.7	982.9	1144.1
42°	793.3	882.7	1094.2	919.6	768.7	887.3	1068.1	943.4	825.2	939.5	1093.8
42.5°	750.3	839.7	1045.8	877.4	726.5	844.0	1024.0	901.9	781.8	896.9	1044.7
43°	708.5	798.3	997.9	834.8	685.5	801.7	980.2	859.7	739.6	853.6	994.8
43.5°	665.5	758.0	951.0	792.5	645.2	760.7	936.5	818.3	698.1	811.0	947.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	547.7	639.8	813.6	670.1	533.9	640.6	806.0	697.0	580.7	688.1	808.3
45.5°	510.8	601.0	768.7	632.1	498.2	604.5	764.1	657.4	543.8	649.4	765.3
46°	475.5	564.2	725.8	594.5	463.2	568.0	722.3	620.2	508.1	611.8	722.3
46.5°	441.0	528.1	683.9	559.2	430.6	533.1	682.4	583.4	473.6	575.7	681.2
47°	408.4	493.6	642.9	524.6	399.5	498.9	644.0	548.1	439.4	540.0	642.1
47.5°	378.0	459.8	603.3	490.5	370.4	465.9	606.8	512.7	407.6	504.7	603.7
48°	348.5	427.5	565.7	457.1	345.8	433.7	572.2	479.4	377.3	472.1	566.5
48.5°	320.9	397.2	529.6	425.2	321.2	403.0	537.7	447.5	350.8	439.4	530.4
49°	294.4	368.1	495.1	395.7	296.7	373.8	505.1	415.6	324.7	408.4	497.4
49.5°	268.7	340.0	462.5	366.5	272.5	348.5	474.0	385.7	298.2	378.4	462.5
50°	244.5	313.2	430.6	338.1	252.2	323.2	444.1	360.0	272.1	351.9	430.2
50.5°	222.2	287.1	399.1	310.9	233.3	297.8	415.6	334.3	251.0	325.1	400.3
51°	201.5	262.9	370.0	286.3	217.2	272.5	386.9	308.2	231.4	298.2	372.3
51.5°	182.3	240.3	342.0	263.3	201.9	251.8	361.9	282.5	213.8	271.7	346.2
52°	164.3	218.8	315.9	241.8	187.3	232.6	337.7	256.8	197.3	249.1	320.5
52.5°	147.8	198.0	290.1	222.6	173.5	214.9	313.2	235.3	182.7	228.7	294.8
53°	132.4	178.8	266.7	204.9	160.4	198.8	288.6	215.7	168.5	210.3	269.0
53.5°	119.7	161.6	244.5	189.2	148.5	184.2	264.1	198.0	155.4	193.4	245.6
54°	107.1	145.5	223.8	174.2	136.2	170.8	243.3	181.9	142.8	178.1	224.9
54.5°	94.4	130.1	203.8	160.4	124.3	157.7	223.8	167.0	130.5	163.5	205.7
55°	81.7	115.9	186.5	148.1	112.8	145.5	205.3	153.5	119.0	150.4	187.3
55.5°	73.3	105.5	169.6	135.9	102.5	133.9	188.1	140.9	107.5	138.2	170.4
56°	70.2	95.6	154.3	125.9	93.3	122.4	171.9	128.6	97.5	126.3	154.7
56.5°	67.5	85.2	140.1	115.5	86.7	111.3	157.0	117.4	89.4	115.1	140.5
57°	65.2	75.2	129.7	105.2	82.9	100.6	143.2	106.7	83.7	104.0	127.0
57.5°	62.6	64.9	119.0	94.8	79.8	91.0	130.5	96.3	80.6	93.6	115.1
58°	60.3	62.6	108.6	86.0	76.8	82.1	118.6	86.4	77.5	84.8	104.4
58.5°	58.0	60.3	98.3	78.3	74.1	75.6	108.2	78.3	74.5	77.9	94.4
59°	55.7	58.0	87.9	72.5	71.0	72.2	98.3	72.2	71.8	73.3	86.0
59.5°	53.7	55.7	80.2	69.5	68.3	69.1	89.8	68.7	69.1	70.6	78.7
60°	51.8	53.7	73.7	66.4	65.6	66.4	82.1	66.0	66.4	67.9	72.2
60.5°	49.5	51.8	67.5	64.1	62.9	64.1	75.2	63.3	63.7	65.2	66.0
61°	47.6	49.5	62.6	61.4	60.6	61.4	69.1	60.6	61.4	62.6	61.4
61.5°	46.1	48.0	58.0	59.1	58.3	59.1	63.7	58.3	59.1	60.3	56.8
62°	44.1	46.1	54.1	56.4	56.0	56.8	59.1	56.0	56.4	58.0	53.0
62.5°	42.2	44.1	50.3	54.5	53.7	54.5	55.3	53.7	54.5	55.7	49.5
63°	40.7	42.6	47.2	52.2	51.4	52.2	51.4	51.8	52.2	53.3	46.8
63.5°	39.1	40.7	44.5	49.9	49.5	50.3	48.4	49.5	50.3	51.4	44.1
64°	37.6	39.1	42.6	48.0	47.6	48.4	45.3	47.6	48.0	49.1	42.2
64.5°	36.1	37.6	41.1	46.1	45.7	46.4	43.0	45.7	46.1	47.2	40.3
65°	34.5	36.5	39.1	44.1	43.8	44.5	41.1	43.8	44.5	45.3	38.8
65.5°	33.4	34.9	37.6	42.6	41.8	42.6	39.5	41.8	42.6	43.4	37.2
66°	31.9	33.4	36.5	40.7	39.9	41.1	38.0	40.3	40.7	41.8	35.7





TEST NUMBER: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	28.0	29.6	32.2	35.7	35.3	36.1	33.8	35.3	35.7	36.8	31.5
68°	26.9	28.4	30.7	34.2	33.8	34.5	32.2	33.8	34.2	35.3	30.3
68.5°	25.7	26.9	29.6	33.0	32.2	33.0	31.1	32.2	32.6	33.8	29.2
69°	24.6	25.7	28.4	31.5	31.1	31.9	29.6	31.1	31.5	32.2	28.0
69.5°	23.4	24.6	27.2	30.3	29.6	30.3	28.4	29.6	29.9	30.7	26.9
70°	22.3	23.4	26.1	28.8	28.4	29.2	27.2	28.4	28.8	29.6	25.3
70.5°	21.1	22.6	24.9	27.6	26.9	28.0	25.7	26.9	27.2	28.0	24.6
71°	20.3	21.5	23.8	26.5	25.7	26.5	24.6	25.7	26.1	26.9	23.4
71.5°	19.2	20.3	22.6	24.9	24.6	25.3	23.4	24.6	24.6	25.3	22.3
72°	18.4	19.6	21.5	24.2	23.4	24.2	22.6	23.4	23.4	24.2	21.1
72.5°	17.3	18.4	20.7	23.0	22.3	23.0	21.5	22.3	22.3	23.0	20.3
73°	16.5	17.7	19.6	21.9	21.1	21.9	20.3	21.1	21.1	21.9	19.2
73.5°	15.4	16.5	18.4	20.7	20.0	20.7	19.6	20.0	20.0	20.7	18.4
74°	14.6	15.7	17.7	19.6	19.2	20.0	18.4	18.8	19.2	20.0	17.7
74.5°	13.8	15.0	16.9	18.8	18.0	18.8	17.7	18.0	18.0	18.8	16.5
75°	13.0	13.8	15.7	17.7	16.9	18.0	16.5	16.9	16.9	17.7	15.7
75.5°	12.3	13.0	15.0	16.9	16.1	16.9	15.7	16.1	16.1	16.9	15.0
76°	11.1	12.3	14.2	16.1	15.4	16.1	15.0	15.0	15.0	15.7	14.2
76.5°	10.4	11.5	13.4	15.0	14.2	15.4	14.2	14.2	14.2	15.0	13.0
77°	10.0	10.7	12.7	14.2	13.4	14.2	13.4	13.0	13.0	13.8	12.3
77.5°	9.2	10.0	11.9	13.4	12.7	13.4	12.7	12.3	12.3	13.0	11.5
78°	8.4	9.2	11.1	12.7	11.9	12.7	11.9	11.5	11.5	12.3	10.7
78.5°	7.7	8.4	10.4	11.9	11.1	11.9	11.1	10.7	10.7	11.1	10.4
79°	7.3	7.7	9.6	11.1	10.4	11.1	10.4	10.0	10.0	10.4	9.6
79.5°	6.5	6.9	9.2	10.4	9.6	10.4	9.6	9.2	9.2	9.6	8.8
80°	5.8	6.5	8.4	9.6	8.8	9.6	9.2	8.4	8.4	8.8	8.1
80.5°	5.4	5.8	7.7	8.8	8.4	8.8	8.4	7.7	7.7	8.1	7.7
81°	4.6	5.0	7.3	8.1	7.7	8.1	7.7	6.9	6.9	7.3	6.9
81.5°	4.2	4.6	6.5	7.3	6.9	7.7	7.3	6.1	6.1	6.5	6.5
82°	3.8	3.8	6.1	6.9	6.5	6.9	6.5	5.8	5.8	5.8	5.8
82.5°	3.1	3.5	5.4	6.1	5.8	6.5	6.1	5.0	5.0	5.0	5.4
83°	2.7	3.1	5.0	5.8	5.4	5.8	5.4	4.6	4.2	4.6	4.6
83.5°	1.9	2.3	4.2	5.0	5.0	5.4	5.0	3.8	3.8	3.8	4.2
84°	1.5	1.9	3.8	4.6	4.2	4.6	4.6	3.5	3.1	3.5	3.8
84.5°	1.5	1.5	3.5	3.8	3.8	4.2	3.8	3.1	2.7	2.7	3.5
85°	1.2	1.5	3.1	3.5	3.5	3.8	3.5	2.3	1.9	2.3	3.1
85.5°	0.8	1.2	2.7	3.1	2.7	3.1	3.1	1.9	1.5	1.9	2.3
86°	0.8	0.8	1.9	2.3	2.3	2.7	2.7	1.5	1.5	1.5	1.9
86.5°	0.8	0.8	1.5	1.9	1.9	2.3	2.3	1.5	1.2	1.2	1.5
87°	0.4	0.4	1.2	1.5	1.5	1.5	1.9	1.2	1.2	1.2	1.2
87.5°	0.0	0.4	0.8	1.2	1.2	1.2	1.5	0.8	0.8	0.8	0.8
88°	0.0	0.0	0.4	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.4
88.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4



TEST NUMBER: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**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: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3011.6	3011.6	3011.6	3011.6	3011.6	3011.6
0.5°	3010.9	3013.6	3012.0	3012.8	3012.0	3013.2
1°	3010.5	3013.2	3012.0	3012.8	3012.0	3013.2
1.5°	3009.3	3013.2	3012.0	3012.4	3012.0	3012.0
2°	3007.8	3012.0	3011.6	3011.6	3011.3	3011.3
2.5°	3005.9	3011.3	3010.1	3011.3	3009.7	3009.3
3°	3003.2	3009.3	3008.2	3009.0	3007.8	3007.0
3.5°	3000.1	3006.3	3005.9	3006.6	3005.1	3004.0
4°	2996.3	3002.8	3002.8	3003.6	3002.4	3000.5
4.5°	2992.1	2999.0	2999.4	3000.1	2998.6	2996.7
5°	2987.5	2994.7	2995.1	2995.9	2994.4	2992.1
5.5°	2982.1	2990.1	2990.5	2990.9	2989.4	2986.3
6°	2976.3	2984.4	2985.2	2985.9	2984.0	2980.9
6.5°	2969.8	2978.2	2979.4	2979.8	2977.9	2974.4
7°	2962.9	2971.7	2972.9	2973.6	2971.3	2967.1
7.5°	2955.2	2964.8	2966.3	2966.3	2964.0	2959.4
8°	2946.8	2956.4	2958.3	2959.1	2956.0	2951.4
8.5°	2938.3	2948.3	2950.2	2950.6	2947.5	2942.2
9°	2929.5	2938.7	2941.8	2942.2	2937.9	2932.6
9.5°	2919.5	2928.7	2931.8	2932.6	2929.1	2922.2
10°	2909.2	2919.1	2921.4	2923.0	2918.4	2910.7
10.5°	2898.0	2908.4	2911.1	2912.2	2907.6	2899.6
11°	2887.3	2896.5	2899.6	2900.7	2896.1	2887.7
11.5°	2875.4	2885.0	2887.7	2889.2	2884.2	2875.4
12°	2863.1	2871.9	2875.4	2876.9	2870.8	2862.0
12.5°	2849.3	2859.3	2862.3	2863.5	2858.1	2848.9
13°	2835.9	2845.8	2849.3	2850.8	2844.7	2835.1
13.5°	2822.4	2832.0	2835.5	2836.2	2830.1	2820.9
14°	2808.6	2817.8	2821.3	2820.9	2815.5	2805.9
14.5°	2797.9	2802.5	2806.3	2805.2	2800.2	2789.8
15°	2782.1	2786.3	2791.0	2789.4	2784.4	2774.1
15.5°	2765.6	2770.6	2773.7	2773.3	2767.9	2757.2
16°	2748.7	2753.7	2757.6	2757.2	2751.0	2740.3
16.5°	2731.5	2736.5	2740.7	2739.5	2734.2	2721.9
17°	2713.4	2718.0	2723.0	2721.5	2716.5	2703.8
17.5°	2695.0	2700.0	2704.6	2703.4	2697.7	2685.0
18°	2675.8	2680.4	2685.8	2684.6	2678.9	2665.5
18.5°	2656.2	2661.2	2666.6	2664.7	2658.5	2644.3
19°	2636.7	2641.3	2646.6	2645.5	2638.2	2624.4
19.5°	2615.6	2621.3	2625.9	2625.2	2617.9	2603.3
20°	2594.5	2600.6	2605.6	2604.8	2596.8	2582.2
20.5°	2573.0	2578.7	2584.1	2583.3	2574.9	2559.9
21°	2550.7	2556.8	2561.4	2561.8	2551.9	2537.3

TEST NUMBER: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2481.6	2487.8	2492.7	2493.9	2482.4	2468.2
23°	2458.2	2464.0	2468.6	2470.1	2458.2	2442.5
23.5°	2433.6	2439.4	2444.4	2445.5	2433.6	2418.7
24°	2407.9	2414.1	2419.4	2420.6	2409.1	2394.1
24.5°	2383.0	2389.9	2394.1	2394.9	2383.7	2371.9
25°	2357.7	2368.0	2367.6	2369.2	2357.7	2348.1
25.5°	2330.8	2338.1	2341.1	2342.7	2330.8	2317.0
26°	2303.5	2309.3	2316.2	2315.0	2305.5	2289.0
26.5°	2280.1	2280.1	2292.8	2288.2	2281.7	2258.6
27°	2254.0	2246.0	2261.3	2260.9	2257.5	2222.6
27.5°	2221.4	2212.2	2232.1	2232.5	2226.4	2184.9
28°	2192.6	2175.7	2201.8	2203.4	2195.3	2145.4
28.5°	2160.8	2137.4	2168.4	2175.3	2165.0	2104.0
29°	2127.8	2095.9	2134.7	2146.9	2130.8	2061.0
29.5°	2091.7	2054.1	2097.8	2117.8	2095.1	2013.8
30°	2055.2	2008.8	2059.8	2088.6	2057.1	1965.4
30.5°	2016.1	1960.8	2020.7	2059.1	2016.1	1914.4
31°	1975.8	1909.8	1977.7	2029.1	1974.2	1862.9
31.5°	1933.2	1861.4	1933.6	1998.8	1929.7	1810.7
32°	1889.8	1809.2	1888.3	1968.9	1884.4	1757.4
32.5°	1843.0	1756.2	1840.3	1942.0	1836.8	1706.0
33°	1794.6	1706.0	1790.0	1912.4	1786.9	1655.7
33.5°	1745.1	1655.3	1739.7	1881.0	1736.7	1605.8
34°	1696.0	1605.8	1689.5	1853.0	1686.4	1557.1
34.5°	1644.9	1555.1	1640.0	1820.0	1636.1	1507.9
35°	1595.8	1507.2	1589.7	1782.7	1585.8	1458.8
35.5°	1547.5	1459.2	1540.2	1746.3	1537.9	1410.8
36°	1499.5	1411.6	1493.0	1709.4	1490.7	1381.3
36.5°	1451.1	1384.0	1446.1	1668.4	1443.5	1327.5
37°	1404.7	1329.8	1399.3	1625.8	1397.4	1272.7
37.5°	1358.6	1274.2	1352.5	1581.6	1351.0	1217.8
38°	1313.0	1218.5	1305.7	1535.2	1304.9	1162.9
38.5°	1266.5	1162.9	1258.8	1488.0	1258.5	1113.8
39°	1220.1	1114.9	1212.0	1438.1	1212.0	1065.0
39.5°	1173.6	1065.8	1165.2	1389.0	1166.0	1017.4
40°	1126.8	1017.8	1117.2	1336.4	1117.6	970.6
40.5°	1080.0	971.4	1069.3	1283.4	1070.8	925.7
41°	1033.2	926.9	1022.8	1230.8	1025.1	880.8
41.5°	987.9	880.8	976.8	1178.2	979.8	836.3
42°	943.8	837.4	932.6	1125.7	936.1	793.3
42.5°	900.0	794.8	888.5	1075.0	892.3	750.3
43°	857.4	749.9	846.3	1025.5	850.1	708.5
43.5°	815.6	706.9	804.0	977.1	807.9	665.5

TEST NUMBER: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	696.6	584.1	681.2	840.1	688.1	547.7
45.5°	658.2	545.8	641.3	797.5	649.4	510.8
46°	620.2	508.5	602.9	755.3	611.8	475.5
46.5°	582.2	472.8	563.8	712.7	574.2	441.0
47°	546.1	438.7	527.7	671.6	538.8	408.4
47.5°	510.8	405.3	492.0	631.3	503.5	378.0
48°	476.7	373.4	457.5	593.3	469.8	348.5
48.5°	444.1	343.9	424.9	554.6	436.4	320.9
49°	412.2	315.5	393.4	518.1	406.1	294.4
49.5°	382.6	289.0	362.3	482.8	375.7	268.7
50°	355.4	263.3	333.9	448.3	345.8	244.5
50.5°	328.1	238.7	306.7	416.0	318.2	222.2
51°	300.9	216.5	279.8	384.9	292.1	201.5
51.5°	274.0	196.1	255.6	355.0	267.1	182.3
52°	249.5	177.3	233.0	327.0	243.7	164.3
52.5°	226.8	159.3	210.7	300.1	221.1	147.8
53°	205.3	142.8	190.7	274.8	199.6	132.4
53.5°	185.0	130.1	171.6	251.4	180.0	119.7
54°	165.8	117.1	154.3	227.6	162.0	107.1
54.5°	148.9	104.0	138.5	206.9	145.5	94.4
55°	133.2	91.3	125.5	187.3	132.0	81.7
55.5°	119.0	78.3	112.8	168.5	119.0	73.3
56°	104.8	72.2	99.8	151.2	105.9	70.2
56.5°	92.1	69.1	87.1	135.1	92.9	67.5
57°	81.0	66.4	74.1	124.0	79.8	65.2
57.5°	71.4	63.7	66.8	113.2	70.2	62.6
58°	64.1	61.4	64.1	102.1	64.1	60.3
58.5°	61.4	59.1	61.8	91.0	61.4	58.0
59°	58.7	56.8	59.5	80.2	59.1	55.7
59.5°	56.8	54.9	57.2	72.9	56.8	53.7
60°	54.5	52.6	54.9	66.8	54.9	51.8
60.5°	52.6	50.7	53.0	61.4	52.6	49.5
61°	50.7	48.7	51.0	56.8	50.7	47.6
61.5°	48.7	46.8	49.1	52.6	48.7	46.1
62°	46.8	45.3	47.2	49.1	46.8	44.1
62.5°	44.9	43.4	45.3	46.1	45.3	42.2
63°	43.4	41.8	43.8	43.4	43.4	40.7
63.5°	41.8	40.3	41.8	41.4	41.4	39.1
64°	39.9	38.8	40.3	39.9	39.9	37.6
64.5°	38.8	37.2	38.8	38.4	38.4	36.1
65°	37.2	35.7	37.2	36.8	36.8	34.5
65.5°	35.7	34.2	36.1	35.3	35.3	33.4
66°	34.2	33.0	34.5	34.2	34.2	31.9



TEST NUMBER: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	30.7	29.2	30.7	30.3	29.9	28.0
68°	29.2	28.0	29.2	28.8	28.8	26.9
68.5°	28.0	26.9	28.0	27.6	27.6	25.7
69°	26.9	25.7	26.9	26.5	26.5	24.6
69.5°	25.7	24.6	25.7	25.3	25.3	23.4
70°	24.6	23.4	24.9	24.2	24.2	22.3
70.5°	23.8	22.6	23.8	23.4	23.0	21.1
71°	22.6	21.5	22.6	22.3	21.9	20.3
71.5°	21.5	20.7	21.5	21.1	20.7	19.2
72°	20.7	19.6	20.7	20.3	20.0	18.4
72.5°	20.0	18.8	19.6	19.2	18.8	17.3
73°	18.8	17.7	18.8	18.4	17.7	16.5
73.5°	18.0	16.9	18.0	17.7	16.9	15.4
74°	17.3	16.1	16.9	16.5	16.1	14.6
74.5°	16.5	15.4	16.1	15.7	15.0	13.8
75°	15.4	14.6	15.4	15.0	14.2	13.0
75.5°	14.6	13.8	14.6	14.2	13.4	12.3
76°	13.8	13.0	13.8	13.4	12.7	11.1
76.5°	13.0	12.3	13.0	12.7	11.9	10.4
77°	12.3	11.5	12.3	11.5	11.1	10.0
77.5°	11.5	10.7	11.5	11.1	10.0	9.2
78°	10.7	10.0	10.7	10.4	9.2	8.4
78.5°	10.4	9.6	10.0	9.6	8.8	7.7
79°	9.6	8.8	9.2	8.8	8.1	7.3
79.5°	8.8	8.1	8.8	8.1	7.3	6.5
80°	8.1	7.7	8.1	7.7	6.5	5.8
80.5°	7.7	7.3	7.7	6.9	5.8	5.4
81°	6.9	6.5	6.9	6.5	5.4	4.6
81.5°	6.5	6.1	6.1	5.8	4.6	4.2
82°	5.8	5.4	5.8	5.4	3.8	3.8
82.5°	5.4	5.0	5.4	4.6	3.5	3.1
83°	5.0	4.6	4.6	4.2	3.1	2.7
83.5°	4.2	4.2	4.2	3.8	2.7	1.9
84°	3.8	3.8	3.8	3.5	1.9	1.5
84.5°	3.5	3.5	3.1	3.1	1.5	1.5
85°	3.1	2.7	2.7	2.3	1.5	1.2
85.5°	2.3	2.3	2.3	1.9	1.2	0.8
86°	1.9	1.9	1.9	1.5	0.8	0.8
86.5°	1.5	1.5	1.5	1.2	0.8	0.8
87°	1.2	1.2	1.2	0.8	0.4	0.4
87.5°	0.8	0.8	0.8	0.4	0.4	0.0
88°	0.4	0.4	0.4	0.4	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776315

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQH-4000lm-2700K

**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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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°	2514.6	2505.8	2523.8	2507.3	2487.8	2489.3	2506.2	2505.8	2511.2	2533.4	2528.1
22°	2491.6	2482.8	2501.2	2483.2	2464.0	2465.5	2482.8	2481.6	2487.4	2509.6	2506.2



44°	624.8	718.1	904.6	750.3	607.2	718.5	891.9	777.2	656.7	769.5	899.6
44.5°	585.7	678.5	858.9	708.9	569.6	679.7	848.6	736.5	618.3	728.4	853.2



66.5°	30.7	32.2	34.9	39.1	38.4	39.1	36.5	38.4	39.1	39.9	34.2
67°	29.2	30.7	33.4	37.2	36.8	37.6	34.9	36.8	37.2	38.4	33.0



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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°	2527.7	2533.8	2539.2	2539.6	2529.2	2514.6
22°	2505.0	2511.2	2516.2	2516.9	2506.2	2491.6



44°	775.3	665.9	762.2	930.3	767.6	624.8
44.5°	736.1	624.4	721.5	884.3	727.3	585.7



66.5°	33.0	31.5	33.0	32.6	32.6	30.7
67°	31.9	30.3	31.9	31.5	31.1	29.2



89°	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

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Scaled Data Report



(END OF REPORT)