

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P776844

Luminaire Tested: HCDJBS4050CSD-HCD8TSQMW-5000lm-5000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776844  
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: HCDJBS4050CSD-HCD8TSQMW-5000lm-5000K  
Description: 8 INCH SQUARE MEDIUM MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

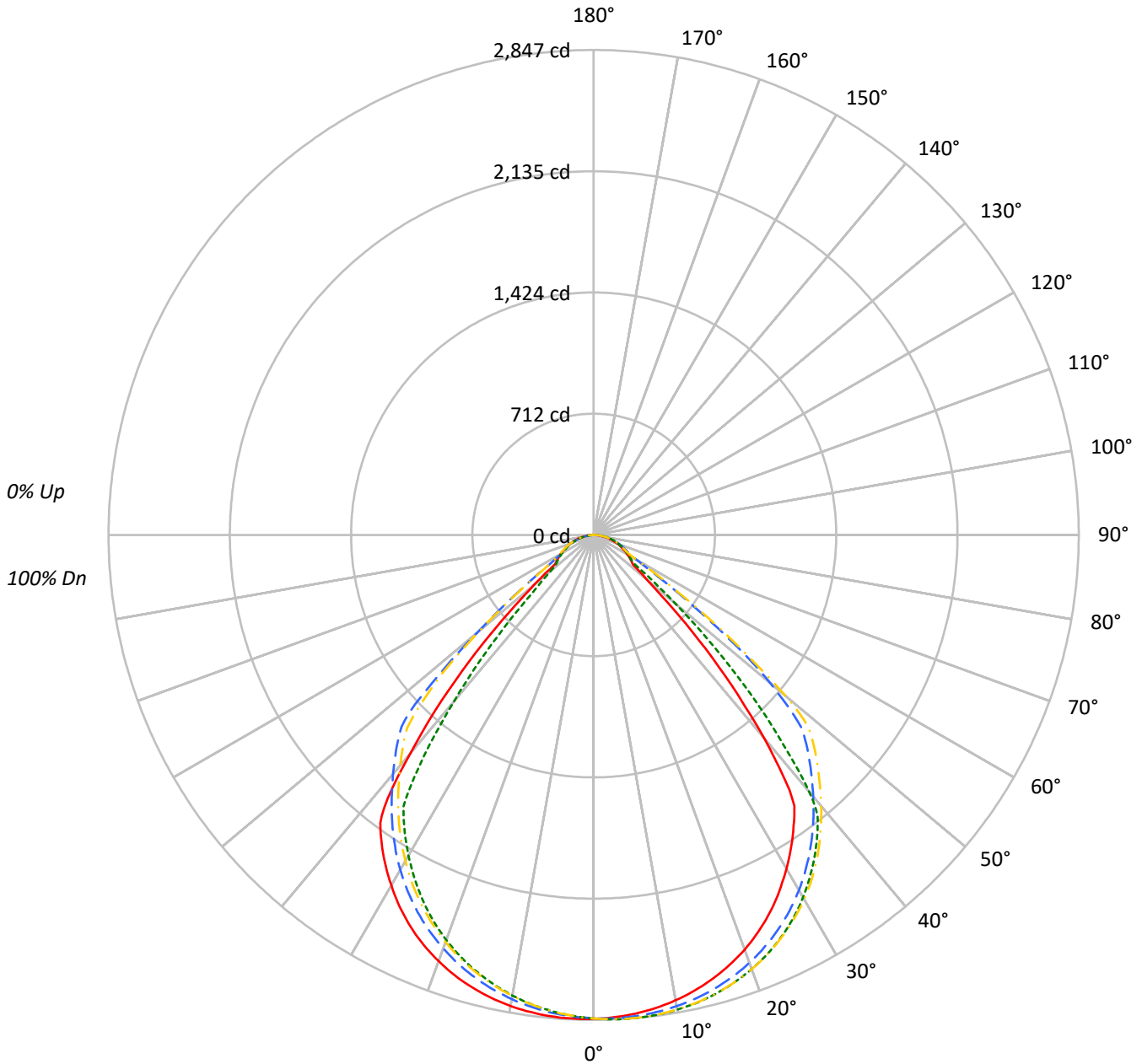
Lumens per Lamp: N/A  
Luminaire Lumens: 5141.7 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.29  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (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					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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70					70			
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63					63			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	48	58	52	48	57	52	48	46					46			
8	69	57	50	44	67	56	49	44	55	49	44	54	48	44	53	48	44	42					42			
9	65	53	45	41	63	52	45	40	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	37	60	49	42	37	48	41	37	47	41	37	46	41	37	35					35			

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

	0°	90°	180°	270°
0°	68072	68072	68072	68072
5°	67889	68532	68299	67550
10°	67540	68898	68377	66856
15°	66968	69160	68282	65886
20°	66103	69211	67935	64566
25°	64699	68897	67188	62683
30°	62672	68057	65762	60171
35°	60023	66442	63644	56911
40°	48630	61630	52427	39928
45°	29618	42402	33270	21950
50°	15186	23132	16977	12400
55°	11338	11848	11053	10610
60°	10958	11284	10656	10215
65°	10599	11092	10326	9855
70°	10271	10951	9969	9423
75°	9756	10969	9533	8764
80°	8782	11116	8782	7567
85°	6273	11885	6933	4402

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 135°  
 Vertical Angle: 45°  
 Luminance: 62653 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	268.6	5.2
10°-20°	767.8	14.9
20°-30°	1147.9	22.3
30°-40°	1317.1	25.6
40°-50°	956.4	18.6
50°-60°	350.5	6.8
60°-70°	188.0	3.7
70°-80°	113.6	2.2
80°-90°	31.8	0.6
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°	2184.2	42.5
0°-40°	3501.3	68.1
0°-60°	4808.3	93.5
0°-90°	5141.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5141.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2839	2839	2839	2839	2839	
5°	2820	2847	2838	2806	2820	268
15°	2698	2786	2751	2654	2698	760
25°	2445	2604	2540	2369	2445	1124
35°	2050	2270	2174	1944	2050	1252
45°	873	1250	981	647	873	689
55°	271	283	264	254	271	254
65°	187	196	182	174	187	185
75°	105	118	103	95	105	111
85°	23	43	25	16	23	28
90°	0	7	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°	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9
0.5°	2839.9	2840.4	2838.9	2838.4	2840.9	2840.9	2840.9	2841.8	2841.8	2840.4	2836.5
1°	2838.9	2839.9	2839.4	2839.9	2842.8	2842.3	2842.3	2842.8	2842.3	2839.9	2835.0
1.5°	2837.5	2839.4	2839.9	2840.9	2844.2	2843.8	2843.8	2843.8	2842.3	2839.4	2833.6
2°	2836.0	2838.4	2839.9	2841.3	2845.2	2845.2	2844.7	2844.2	2842.3	2838.9	2832.1
2.5°	2833.6	2837.5	2839.9	2842.3	2846.2	2846.2	2845.7	2844.2	2842.3	2837.9	2829.7
3°	2831.6	2836.0	2839.4	2842.8	2847.2	2847.2	2846.2	2844.2	2841.8	2837.0	2827.8
3.5°	2829.7	2834.5	2838.9	2842.8	2847.2	2847.6	2846.7	2844.7	2841.3	2835.5	2824.8
4°	2826.8	2832.6	2838.4	2842.8	2847.2	2847.6	2847.2	2844.2	2840.4	2833.6	2821.9
4.5°	2823.9	2830.7	2837.0	2841.8	2847.2	2847.6	2846.7	2843.8	2838.9	2831.6	2819.0
5°	2820.5	2828.2	2836.0	2841.3	2847.2	2847.6	2846.7	2842.8	2837.5	2829.2	2815.6
5.5°	2817.1	2825.8	2834.1	2840.4	2846.7	2846.7	2845.7	2841.8	2835.5	2826.3	2812.2
6°	2813.2	2822.9	2832.6	2839.4	2845.7	2846.2	2844.7	2840.4	2833.6	2823.9	2808.3
6.5°	2809.8	2819.5	2830.2	2837.9	2844.7	2845.2	2843.8	2838.9	2831.1	2821.0	2804.5
7°	2805.4	2816.1	2828.2	2836.5	2843.3	2844.2	2842.3	2837.0	2828.7	2817.6	2799.6
7.5°	2800.6	2812.7	2825.3	2834.5	2841.8	2843.3	2840.9	2835.0	2825.8	2814.2	2795.2
8°	2795.7	2808.8	2822.9	2832.6	2839.9	2841.3	2838.9	2832.6	2822.9	2810.3	2789.9
8.5°	2790.9	2804.5	2819.5	2829.7	2837.9	2839.4	2837.0	2830.2	2819.5	2805.9	2784.6
9°	2785.5	2800.1	2816.1	2827.3	2835.5	2837.5	2834.5	2827.3	2816.1	2801.6	2779.2
9.5°	2779.7	2795.2	2812.7	2824.4	2833.1	2834.5	2832.1	2824.4	2812.2	2796.7	2773.4
10°	2773.9	2789.9	2809.3	2821.4	2829.7	2832.1	2828.7	2820.5	2808.3	2791.8	2767.6
10.5°	2767.6	2784.6	2804.9	2818.0	2826.8	2829.2	2825.8	2816.6	2803.5	2787.0	2760.8
11°	2761.3	2779.2	2800.6	2814.2	2823.4	2826.3	2822.4	2812.7	2798.6	2781.2	2754.0
11.5°	2754.5	2773.4	2795.2	2810.3	2820.0	2822.4	2818.5	2808.3	2793.8	2775.8	2747.2
12°	2747.2	2767.1	2790.9	2805.9	2816.1	2818.5	2814.7	2804.0	2788.9	2769.5	2740.4
12.5°	2739.4	2760.8	2785.5	2801.6	2811.7	2814.7	2810.8	2799.6	2783.1	2762.7	2732.7
13°	2732.2	2753.5	2780.2	2796.7	2807.4	2810.3	2805.9	2794.3	2777.3	2755.9	2724.9
13.5°	2723.9	2746.7	2774.4	2791.8	2802.5	2805.9	2801.1	2788.9	2771.0	2749.1	2716.6
14°	2715.7	2739.0	2768.6	2786.5	2797.2	2800.6	2796.2	2783.1	2764.7	2741.9	2707.9
14.5°	2706.9	2731.7	2762.3	2781.2	2791.8	2795.7	2790.9	2777.3	2757.9	2734.6	2699.2
15°	2697.7	2723.4	2755.5	2774.9	2786.0	2790.4	2785.1	2771.0	2750.6	2726.3	2690.4
15.5°	2688.5	2715.2	2748.7	2768.6	2780.2	2784.1	2779.7	2764.7	2743.3	2718.6	2681.2
16°	2678.8	2706.0	2741.4	2762.3	2773.9	2778.3	2773.4	2757.9	2735.6	2709.8	2671.5
16.5°	2669.1	2697.7	2733.6	2755.5	2767.6	2772.0	2766.6	2750.6	2727.8	2701.1	2661.3
17°	2658.9	2688.5	2725.9	2748.2	2760.3	2765.2	2759.8	2743.3	2719.6	2692.4	2651.1
17.5°	2648.2	2678.8	2718.1	2740.9	2753.0	2758.4	2752.5	2735.6	2710.8	2683.2	2640.5
18°	2637.6	2669.1	2709.4	2733.1	2745.8	2751.1	2745.8	2726.8	2701.6	2673.5	2629.8
18.5°	2625.9	2658.9	2700.6	2725.4	2738.0	2743.3	2738.0	2719.1	2692.4	2663.3	2618.1
19°	2614.3	2648.2	2691.9	2716.6	2729.7	2735.6	2729.7	2709.8	2682.7	2653.1	2606.5
19.5°	2602.6	2637.1	2682.2	2707.9	2721.0	2727.3	2721.5	2701.6	2673.0	2642.4	2594.9
20°	2590.5	2625.9	2672.5	2699.2	2712.3	2719.1	2712.8	2691.4	2662.3	2631.7	2582.7
20.5°	2577.4	2614.3	2662.8	2690.0	2703.1	2709.8	2704.0	2682.2	2651.6	2620.6	2570.1
21°	2564.3	2602.6	2652.6	2680.3	2693.8	2701.1	2694.3	2672.0	2641.0	2608.4	2557.0



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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°	2522.6	2564.8	2619.1	2649.2	2662.8	2671.0	2664.7	2640.0	2606.0	2571.6	2517.2
23°	2508.0	2551.2	2607.5	2638.5	2652.1	2660.4	2654.5	2628.8	2593.4	2558.5	2503.2
23.5°	2493.0	2537.6	2595.8	2626.9	2640.5	2649.7	2643.4	2617.2	2580.3	2544.9	2488.6
24°	2477.4	2523.0	2583.2	2615.2	2629.3	2638.5	2631.7	2604.6	2567.7	2531.3	2474.0
24.5°	2461.9	2508.5	2570.6	2603.6	2617.2	2626.9	2620.6	2592.4	2553.6	2517.2	2458.5
25°	2445.4	2493.4	2557.5	2590.5	2604.1	2614.7	2608.4	2579.8	2539.5	2502.7	2443.5
25.5°	2428.9	2477.9	2544.4	2577.9	2591.9	2602.1	2596.3	2566.7	2525.5	2487.6	2427.5
26°	2412.4	2462.4	2530.3	2564.8	2578.4	2590.0	2583.7	2553.1	2510.4	2472.6	2411.4
26.5°	2395.0	2446.4	2516.7	2551.2	2564.8	2576.9	2570.6	2538.6	2494.9	2456.6	2395.0
27°	2377.5	2429.9	2502.7	2537.6	2550.7	2562.3	2557.5	2524.0	2478.9	2440.6	2378.0
27.5°	2358.6	2412.9	2487.6	2523.5	2536.1	2548.8	2543.9	2509.5	2462.9	2424.1	2361.0
28°	2340.6	2395.9	2472.1	2508.5	2521.1	2534.7	2529.8	2494.4	2446.4	2407.1	2344.0
28.5°	2320.7	2378.5	2457.1	2493.9	2505.6	2519.6	2515.3	2478.4	2429.4	2389.6	2325.6
29°	2302.8	2360.5	2441.0	2477.9	2491.0	2504.1	2500.7	2462.9	2411.4	2372.1	2307.6
29.5°	2282.4	2342.1	2425.0	2462.4	2473.6	2488.6	2485.7	2445.9	2394.0	2353.2	2288.7
30°	2263.5	2323.1	2408.5	2446.4	2458.0	2472.6	2469.7	2429.4	2375.1	2335.3	2270.3
30.5°	2242.6	2304.2	2392.0	2429.9	2439.6	2456.1	2454.1	2411.9	2357.1	2316.4	2250.4
31°	2223.2	2285.3	2374.6	2412.4	2423.6	2439.6	2437.7	2394.5	2338.2	2296.9	2231.0
31.5°	2202.3	2264.9	2356.6	2395.4	2404.2	2421.6	2421.2	2376.5	2319.3	2277.5	2211.1
32°	2181.9	2245.0	2338.7	2377.5	2385.7	2404.7	2403.7	2358.1	2299.9	2258.1	2190.7
32.5°	2160.1	2225.1	2320.2	2359.0	2367.3	2386.2	2386.2	2339.6	2280.0	2238.2	2169.3
33°	2139.7	2205.2	2300.8	2340.6	2348.9	2368.3	2368.3	2320.7	2259.6	2218.3	2148.5
33.5°	2117.9	2184.4	2282.4	2322.2	2329.0	2349.3	2349.8	2301.8	2239.2	2198.4	2127.1
34°	2096.1	2164.0	2262.5	2302.8	2309.1	2329.9	2330.9	2281.9	2218.3	2178.1	2105.3
34.5°	2072.3	2142.6	2242.6	2283.4	2289.2	2310.5	2312.0	2262.5	2196.0	2157.2	2083.5
35°	2050.5	2121.3	2222.2	2263.5	2269.8	2291.6	2292.6	2242.6	2174.2	2135.9	2061.1
35.5°	2027.7	2099.5	2201.8	2243.6	2247.9	2271.7	2272.2	2222.7	2151.9	2114.0	2038.8
36°	2003.9	2077.6	2180.5	2223.2	2227.1	2251.3	2251.8	2201.8	2129.1	2092.2	2016.0
36.5°	1979.1	2054.8	2159.6	2203.3	2204.8	2231.4	2231.0	2180.5	2103.8	2069.9	1992.7
37°	1937.4	2032.0	2138.3	2182.4	2182.4	2210.1	2210.1	2158.7	2067.0	2046.6	1969.9
37.5°	1887.4	2009.2	2116.4	2161.1	2159.6	2188.7	2188.3	2136.8	2020.9	2023.8	1946.1
38°	1820.5	1985.4	2094.6	2139.7	2136.3	2166.4	2166.9	2114.0	1963.6	1999.0	1922.9
38.5°	1753.5	1961.2	2071.8	2117.9	2110.1	2144.6	2144.6	2091.7	1896.2	1971.4	1900.0
39°	1688.5	1924.8	2049.5	2096.1	2072.8	2121.8	2122.8	2068.4	1824.8	1926.2	1876.8
39.5°	1622.5	1876.3	2027.2	2073.3	2026.7	2098.5	2100.0	2042.2	1750.1	1876.3	1853.5
40°	1553.6	1812.7	2004.4	2050.0	1968.9	2074.7	2076.7	1999.5	1674.9	1816.6	1830.7
40.5°	1481.8	1746.2	1981.6	2026.2	1903.4	2049.0	2053.4	1956.3	1603.6	1750.1	1808.3
41°	1408.5	1682.7	1958.3	2002.4	1829.2	2008.7	2031.1	1899.6	1535.2	1684.1	1785.5
41.5°	1336.2	1618.6	1935.5	1976.7	1754.0	1964.1	2007.8	1836.5	1465.3	1609.9	1762.7
42°	1267.3	1551.7	1912.2	1942.3	1678.3	1909.8	1985.0	1768.1	1395.0	1542.0	1739.4
42.5°	1201.8	1481.8	1888.9	1897.6	1606.5	1845.2	1962.2	1696.3	1322.2	1476.0	1716.6
43°	1134.4	1412.4	1866.1	1844.7	1536.6	1775.4	1938.9	1626.4	1250.4	1413.4	1693.4
43.5°	1067.4	1342.6	1842.3	1785.1	1466.3	1701.6	1916.5	1558.5	1179.0	1344.5	1669.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	873.4	1140.2	1772.4	1579.8	1250.4	1490.1	1847.6	1356.1	981.1	1145.1	1594.9
45.5°	811.7	1076.2	1748.7	1511.4	1177.6	1422.6	1823.9	1286.8	915.6	1075.7	1555.6
46°	754.0	1011.6	1724.4	1446.9	1110.1	1353.7	1800.1	1217.9	853.5	1014.1	1509.0
46.5°	697.2	946.1	1700.1	1382.3	1044.2	1282.4	1776.3	1148.0	791.8	950.5	1444.0
47°	641.9	882.6	1674.9	1315.9	978.2	1211.1	1752.1	1082.0	733.1	893.3	1363.9
47.5°	591.9	821.9	1630.3	1248.9	913.1	1141.2	1726.8	1018.0	676.4	830.7	1283.8
48°	543.9	763.2	1583.7	1182.0	848.6	1075.7	1700.6	955.8	625.9	774.4	1201.8
48.5°	501.2	706.9	1525.5	1114.5	787.5	1011.2	1660.4	892.3	575.9	717.1	1122.8
49°	464.8	651.6	1468.2	1052.4	728.3	946.1	1604.6	830.7	530.3	661.8	1046.6
49.5°	433.8	600.2	1410.0	987.9	672.5	883.1	1542.9	771.0	487.1	611.8	971.4
50°	407.1	550.7	1353.7	929.6	620.1	820.0	1467.7	713.2	455.1	565.3	897.1
50.5°	384.8	505.6	1292.6	869.5	571.6	759.3	1387.7	658.9	423.6	519.2	826.8
51°	363.9	465.8	1221.7	809.8	525.0	701.6	1303.3	605.5	392.0	477.0	761.3
51.5°	343.0	433.8	1149.9	749.6	482.8	646.3	1218.3	557.5	360.5	443.5	700.1
52°	322.7	405.6	1074.7	695.3	449.3	594.4	1135.9	512.4	329.0	410.0	641.0
52.5°	304.7	381.9	997.6	641.4	415.3	545.9	1054.8	477.4	304.2	377.0	587.1
53°	291.6	360.0	922.9	591.9	381.9	500.2	980.1	442.5	286.8	343.5	538.1
53.5°	285.3	340.1	850.6	543.4	348.4	465.8	908.8	407.6	279.0	316.8	493.0
54°	280.0	319.7	782.1	500.7	323.1	431.3	838.9	372.6	273.7	293.1	459.0
54.5°	275.6	300.3	716.2	458.0	299.4	396.9	770.5	337.7	268.8	275.6	425.5
55°	271.2	284.8	657.9	421.2	283.4	362.4	705.0	313.0	264.4	267.8	392.5
55.5°	266.4	275.6	602.6	387.2	276.1	328.0	643.4	289.2	259.6	262.5	359.0
56°	262.0	270.3	548.8	356.6	271.2	302.3	586.1	270.7	255.2	258.1	326.1
56.5°	257.6	265.9	500.2	328.5	266.4	280.0	536.6	263.0	250.8	253.3	304.2
57°	253.3	261.0	457.1	302.8	261.5	266.4	495.9	257.6	246.5	248.9	285.8
57.5°	248.9	256.7	417.8	280.0	257.2	260.6	455.1	253.3	242.6	244.5	270.3
58°	245.0	252.3	382.8	265.4	252.8	256.2	413.9	248.4	238.2	240.2	257.6
58.5°	240.7	247.9	352.7	259.6	248.4	251.3	373.1	244.5	234.4	236.3	247.0
59°	236.8	243.6	326.1	254.7	244.1	247.0	332.8	240.2	230.0	231.9	237.7
59.5°	232.4	239.7	304.7	249.9	239.7	242.6	305.7	235.8	226.1	228.0	230.0
60°	228.5	235.3	286.8	245.5	235.3	238.2	284.3	231.9	222.2	224.2	223.2
60.5°	224.2	231.4	272.2	241.1	231.0	233.9	267.8	227.6	218.3	220.3	217.9
61°	220.3	227.6	260.1	236.8	227.1	229.5	253.3	223.7	214.5	216.4	213.5
61.5°	215.9	223.7	248.9	232.9	223.2	225.6	242.6	219.8	210.1	212.5	209.1
62°	212.0	219.3	239.7	228.5	219.3	221.7	232.9	215.9	206.2	208.6	204.3
62.5°	207.7	215.4	231.4	224.6	215.4	217.9	225.1	212.0	201.8	204.8	199.9
63°	203.3	211.5	225.1	220.3	211.1	214.0	217.9	208.2	198.0	200.4	195.5
63.5°	199.4	207.7	220.3	216.4	207.2	210.1	212.5	204.3	194.1	196.5	191.7
64°	195.1	203.8	215.4	212.5	203.3	206.2	207.7	200.4	189.7	192.1	187.3
64.5°	191.2	199.4	211.1	208.2	199.4	202.3	203.3	196.5	185.8	188.3	182.9
65°	186.8	195.5	206.7	204.3	195.5	198.4	198.9	192.6	182.0	184.4	178.6
65.5°	182.4	191.7	201.8	200.4	191.2	194.6	194.6	188.7	177.6	180.0	174.7
66°	178.6	187.3	197.5	196.5	187.3	190.7	190.2	184.4	173.7	176.1	170.3





TEST NUMBER: P776844

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	166.4	177.1	184.9	184.4	175.6	179.0	177.6	172.2	162.1	164.0	157.7
68°	162.5	172.7	180.5	180.0	171.8	175.2	173.2	168.4	158.2	159.6	153.3
68.5°	158.7	168.4	175.2	175.6	167.9	170.8	169.3	164.5	154.3	155.7	149.0
69°	154.8	163.5	171.3	171.8	164.0	166.9	165.0	160.1	150.4	151.4	145.1
69.5°	150.4	159.1	167.4	167.9	160.1	163.0	161.1	156.2	146.5	147.5	140.7
70°	146.5	155.3	163.0	164.5	156.2	159.1	156.7	152.4	142.2	143.6	136.3
70.5°	142.2	150.9	159.1	160.6	152.8	155.3	152.8	148.5	138.3	139.3	132.5
71°	138.3	147.0	154.8	156.2	149.0	151.4	148.5	144.1	134.4	135.4	128.1
71.5°	133.9	143.1	150.9	152.4	145.1	147.5	144.6	140.2	130.5	131.5	123.7
72°	130.0	138.8	146.5	148.5	141.2	143.6	140.2	136.3	126.6	127.1	119.8
72.5°	125.7	134.4	142.2	144.6	137.8	139.7	136.3	132.5	122.8	123.2	115.5
73°	121.8	130.5	137.8	140.2	133.9	135.9	132.0	128.1	118.9	119.4	111.6
73.5°	117.4	126.2	133.9	136.3	130.0	132.0	128.1	124.2	115.0	115.0	107.2
74°	113.5	122.3	129.5	132.5	126.2	128.1	124.2	120.3	111.1	111.1	102.9
74.5°	109.2	117.9	125.2	128.6	122.3	124.2	119.8	116.4	106.7	106.7	99.0
75°	105.3	114.0	121.3	124.7	118.4	120.3	116.0	112.1	102.9	102.9	94.6
75.5°	100.9	109.7	116.9	120.8	115.0	116.4	112.1	108.2	99.0	98.5	90.2
76°	96.6	105.3	112.6	116.4	111.1	112.6	107.7	103.8	95.1	94.1	86.4
76.5°	92.7	100.9	108.7	112.6	107.2	108.7	103.8	100.0	91.2	90.2	82.0
77°	88.3	97.0	104.3	108.7	103.3	104.8	100.0	96.1	86.9	86.4	78.1
77.5°	84.4	92.7	100.0	104.3	99.5	100.9	95.6	91.7	83.0	82.0	73.8
78°	80.1	88.3	96.1	100.4	95.6	97.0	91.7	87.8	79.1	78.1	69.9
78.5°	76.2	84.4	91.7	96.6	91.7	93.2	87.8	83.5	75.2	73.8	65.5
79°	71.8	80.1	87.8	92.2	88.3	89.3	83.5	79.6	71.3	69.9	61.6
79.5°	67.9	75.7	83.5	88.3	84.4	85.4	79.6	75.7	67.4	65.5	57.3
80°	63.6	71.8	79.1	84.4	80.5	81.0	75.7	71.3	63.6	61.6	53.4
80.5°	59.7	67.4	75.2	80.1	76.7	77.6	71.8	67.4	59.7	57.3	49.5
81°	55.8	63.1	71.3	76.2	73.3	73.8	67.9	63.6	55.8	53.4	45.1
81.5°	51.4	58.7	67.0	72.3	69.4	69.4	63.6	59.7	51.9	49.0	41.2
82°	47.5	54.8	62.6	67.9	65.5	66.0	59.7	55.3	48.0	45.1	37.4
82.5°	43.2	50.5	58.7	64.0	61.6	61.6	55.8	51.4	44.2	40.8	33.0
83°	39.3	46.6	54.8	60.2	58.2	57.7	51.9	47.5	40.3	36.9	29.1
83.5°	34.9	42.2	50.5	56.3	54.3	53.9	48.0	43.2	36.4	32.5	25.7
84°	31.1	37.8	46.6	52.4	50.5	50.0	44.2	39.3	32.5	28.6	22.3
84.5°	27.2	34.0	42.2	48.0	47.1	46.1	40.3	35.4	28.6	24.7	18.9
85°	22.8	29.6	38.3	44.2	43.2	42.7	36.4	31.1	25.2	20.4	15.5
85.5°	18.9	25.7	34.4	40.3	39.3	38.8	32.5	27.2	21.3	16.5	12.1
86°	16.0	21.3	30.1	36.4	35.9	34.9	28.6	23.3	18.0	13.1	9.2
86.5°	12.6	17.0	26.7	33.0	32.0	31.1	25.2	18.9	14.1	10.2	5.8
87°	9.7	14.1	23.3	29.1	28.1	27.2	21.8	15.5	10.7	7.8	2.9
87.5°	6.8	11.2	19.9	25.2	24.7	23.8	18.4	12.6	8.2	5.3	0.5
88°	3.9	8.2	17.0	21.8	20.9	19.9	15.5	9.7	5.8	2.9	0.0
88.5°	1.5	5.3	13.6	18.0	17.5	16.5	12.1	7.3	3.4	0.5	0.0



TEST NUMBER: P776844

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	3.9	7.3	6.8	5.8	2.9	0.5	0.0	0.0	0.0



TEST NUMBER: P776844

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9
0.5°	2835.0	2837.0	2836.5	2837.0	2838.4	2839.9
1°	2833.1	2834.5	2833.6	2834.5	2836.5	2838.9
1.5°	2830.7	2832.1	2830.7	2831.6	2834.5	2837.5
2°	2828.2	2829.2	2827.8	2829.2	2832.1	2836.0
2.5°	2825.3	2825.8	2824.8	2825.8	2829.2	2833.6
3°	2822.4	2822.9	2821.0	2822.9	2826.3	2831.6
3.5°	2819.0	2819.0	2817.6	2819.0	2823.4	2829.7
4°	2815.6	2815.1	2813.2	2815.1	2820.0	2826.8
4.5°	2811.7	2810.8	2809.3	2811.3	2816.6	2823.9
5°	2807.9	2806.4	2804.5	2806.4	2812.2	2820.5
5.5°	2803.5	2801.6	2799.6	2802.0	2808.3	2817.1
6°	2798.6	2796.7	2794.3	2797.2	2804.0	2813.2
6.5°	2793.8	2791.4	2788.9	2791.8	2799.6	2809.8
7°	2788.5	2785.5	2783.1	2786.5	2794.3	2805.4
7.5°	2783.1	2779.7	2776.8	2780.7	2789.4	2800.6
8°	2777.3	2773.4	2770.5	2774.9	2783.6	2795.7
8.5°	2771.0	2767.1	2764.2	2768.6	2777.8	2790.9
9°	2764.7	2759.8	2757.4	2761.8	2772.0	2785.5
9.5°	2757.9	2753.0	2750.1	2755.0	2765.6	2779.7
10°	2751.1	2745.8	2742.4	2747.7	2758.9	2773.9
10.5°	2743.3	2738.0	2734.6	2740.4	2752.1	2767.6
11°	2736.0	2729.7	2726.8	2732.7	2744.8	2761.3
11.5°	2727.8	2721.5	2718.6	2724.9	2737.5	2754.5
12°	2720.0	2712.8	2709.4	2716.2	2729.3	2747.2
12.5°	2711.3	2703.5	2700.6	2707.9	2721.0	2739.4
13°	2702.6	2694.3	2690.9	2698.7	2713.2	2732.2
13.5°	2693.4	2684.6	2681.7	2690.0	2704.5	2723.9
14°	2684.1	2674.9	2671.5	2680.3	2695.3	2715.7
14.5°	2674.4	2664.7	2661.3	2670.5	2686.1	2706.9
15°	2664.2	2654.1	2650.2	2660.4	2676.4	2697.7
15.5°	2654.1	2643.4	2640.0	2650.2	2666.2	2688.5
16°	2643.4	2631.7	2628.8	2639.0	2656.5	2678.8
16.5°	2632.7	2620.6	2617.2	2628.3	2645.8	2669.1
17°	2621.1	2608.9	2605.0	2616.7	2635.1	2658.9
17.5°	2609.4	2596.3	2592.9	2605.5	2624.0	2648.2
18°	2597.8	2583.7	2580.8	2593.4	2612.3	2637.6
18.5°	2585.2	2570.6	2568.2	2580.8	2600.7	2625.9
19°	2572.5	2557.5	2554.1	2568.7	2588.5	2614.3
19.5°	2559.9	2544.4	2541.0	2555.6	2576.4	2602.6
20°	2546.8	2530.3	2527.4	2542.5	2563.3	2590.5
20.5°	2532.8	2515.8	2513.3	2529.4	2550.2	2577.4
21°	2519.2	2501.2	2498.8	2514.8	2536.6	2564.3



TEST NUMBER: P776844

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TSQMW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2475.0	2454.6	2453.2	2471.6	2493.9	2522.6
23°	2460.0	2438.1	2437.2	2456.6	2479.4	2508.0
23.5°	2444.0	2422.1	2421.2	2441.5	2464.3	2493.0
24°	2427.9	2404.7	2404.7	2425.5	2448.8	2477.4
24.5°	2411.4	2387.2	2387.2	2409.5	2432.8	2461.9
25°	2394.5	2369.2	2369.7	2393.0	2416.8	2445.4
25.5°	2377.5	2351.3	2352.3	2376.5	2399.8	2428.9
26°	2359.5	2332.8	2334.3	2359.0	2383.3	2412.4
26.5°	2341.6	2314.4	2315.9	2341.6	2365.8	2395.0
27°	2323.6	2295.0	2296.9	2324.1	2348.4	2377.5
27.5°	2304.7	2275.1	2278.0	2306.2	2329.9	2358.6
28°	2285.8	2255.2	2258.1	2287.2	2311.5	2340.6
28.5°	2266.4	2234.8	2238.7	2268.8	2293.1	2320.7
29°	2247.0	2214.5	2218.8	2249.4	2274.6	2302.8
29.5°	2227.1	2194.1	2198.4	2230.0	2254.7	2282.4
30°	2206.7	2173.2	2177.6	2210.6	2235.3	2263.5
30.5°	2186.3	2151.9	2157.2	2190.2	2215.4	2242.6
31°	2165.9	2130.5	2136.3	2170.3	2195.1	2223.2
31.5°	2145.1	2108.7	2114.5	2149.4	2174.7	2202.3
32°	2124.2	2086.4	2093.2	2128.6	2153.8	2181.9
32.5°	2103.3	2064.0	2072.3	2106.7	2132.9	2160.1
33°	2081.5	2041.2	2050.5	2085.9	2112.1	2139.7
33.5°	2059.7	2018.0	2027.7	2064.0	2090.2	2117.9
34°	2037.4	1994.7	2005.8	2042.2	2069.9	2096.1
34.5°	2015.5	1969.9	1982.5	2018.9	2048.0	2072.3
35°	1992.7	1944.2	1959.7	1997.1	2026.2	2050.5
35.5°	1969.9	1892.8	1936.0	1974.8	2004.4	2027.7
36°	1946.6	1834.1	1912.7	1951.5	1982.0	2003.9
36.5°	1922.9	1768.1	1886.9	1928.7	1958.8	1979.1
37°	1897.6	1702.1	1851.0	1905.9	1936.0	1937.4
37.5°	1868.0	1634.2	1800.1	1882.6	1912.7	1887.4
38°	1818.0	1564.3	1737.5	1859.3	1888.9	1820.5
38.5°	1757.9	1492.5	1673.0	1836.0	1865.6	1753.5
39°	1694.3	1418.7	1612.3	1813.2	1840.4	1688.5
39.5°	1630.3	1344.5	1546.8	1789.9	1800.6	1622.5
40°	1566.2	1275.6	1479.9	1767.1	1752.5	1553.6
40.5°	1498.8	1207.2	1409.5	1743.3	1690.4	1481.8
41°	1429.4	1141.2	1341.1	1720.0	1628.3	1408.5
41.5°	1358.6	1073.3	1272.7	1696.7	1568.2	1336.2
42°	1289.7	1008.2	1206.2	1673.9	1506.1	1267.3
42.5°	1221.7	941.3	1142.6	1650.7	1444.0	1201.8
43°	1155.7	877.7	1081.5	1627.4	1378.5	1134.4
43.5°	1092.2	816.6	1018.0	1603.1	1312.0	1067.4

TEST NUMBER: P776844

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	902.0	647.3	831.6	1488.1	1119.4	873.4
45.5°	840.9	594.4	773.9	1433.8	1059.2	811.7
46°	781.7	546.3	719.1	1378.0	998.1	754.0
46.5°	724.9	503.6	664.7	1325.1	936.9	697.2
47°	670.1	468.2	611.8	1270.3	875.8	641.9
47.5°	617.7	438.1	563.3	1214.0	817.6	591.9
48°	566.2	413.4	518.2	1146.0	761.3	543.9
48.5°	521.1	391.6	479.4	1075.7	706.9	501.2
49°	479.4	371.7	446.4	1001.5	653.6	464.8
49.5°	452.7	351.8	417.8	931.6	604.1	433.8
50°	427.0	332.4	394.0	865.1	554.6	407.1
50.5°	401.3	312.5	373.1	802.5	509.9	384.8
51°	375.1	296.9	353.7	740.9	469.2	363.9
51.5°	349.3	286.8	334.3	685.6	434.7	343.0
52°	329.5	280.9	314.9	632.2	404.7	322.7
52.5°	310.5	276.1	296.5	579.8	378.9	304.7
53°	291.6	271.7	282.4	532.8	356.6	291.6
53.5°	276.6	267.3	275.6	490.1	336.2	285.3
54°	268.3	262.5	270.3	449.3	315.9	280.0
54.5°	263.5	258.1	265.9	415.8	296.9	275.6
55°	258.6	253.8	261.0	383.3	280.9	271.2
55.5°	254.2	249.4	256.7	355.2	271.2	266.4
56°	249.9	245.5	252.3	329.5	266.4	262.0
56.5°	245.5	241.1	247.9	309.6	261.5	257.6
57°	241.6	237.3	243.6	291.6	257.2	253.3
57.5°	237.3	232.9	239.7	277.0	252.8	248.9
58°	233.4	229.0	235.8	264.4	248.4	245.0
58.5°	229.5	225.1	231.4	254.2	244.1	240.7
59°	225.1	221.3	227.6	244.5	240.2	236.8
59.5°	221.3	217.4	223.7	236.3	235.8	232.4
60°	217.4	213.0	219.3	230.0	231.4	228.5
60.5°	213.5	209.1	215.9	225.1	227.6	224.2
61°	209.6	205.2	212.0	220.8	223.2	220.3
61.5°	205.2	201.4	208.2	216.4	219.3	215.9
62°	201.4	197.0	203.8	211.5	214.9	212.0
62.5°	197.5	193.1	199.9	207.2	211.1	207.7
63°	193.1	189.2	196.0	202.8	206.7	203.3
63.5°	189.2	184.9	191.7	198.4	202.3	199.4
64°	185.3	181.0	187.8	194.1	198.0	195.1
64.5°	181.0	177.6	183.4	189.7	193.6	191.2
65°	177.1	173.7	179.5	185.3	189.7	186.8
65.5°	172.7	169.8	174.7	181.5	185.3	182.4
66°	168.9	165.9	171.3	177.1	181.0	178.6



TEST NUMBER: P776844

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	156.7	153.8	160.1	164.0	168.4	166.4
68°	152.8	149.9	155.7	160.1	164.0	162.5
68.5°	148.5	146.0	151.9	155.7	159.6	158.7
69°	144.6	142.2	148.0	151.4	155.7	154.8
69.5°	140.2	138.3	143.6	147.0	151.4	150.4
70°	136.3	134.4	139.7	142.6	147.0	146.5
70.5°	132.5	130.5	135.4	138.3	142.6	142.2
71°	128.6	126.6	131.5	133.9	138.8	138.3
71.5°	124.2	122.8	127.6	129.5	134.4	133.9
72°	120.3	118.4	123.2	125.2	130.0	130.0
72.5°	116.0	114.5	118.9	120.8	125.7	125.7
73°	112.1	110.6	115.0	116.9	121.3	121.8
73.5°	107.7	106.3	110.6	112.6	116.9	117.4
74°	103.8	102.4	106.7	108.2	113.1	113.5
74.5°	99.5	98.5	102.4	103.8	108.7	109.2
75°	95.6	94.6	98.0	99.5	104.3	105.3
75.5°	91.2	90.2	94.1	95.1	99.5	100.9
76°	87.3	86.4	89.8	90.7	95.6	96.6
76.5°	83.0	82.5	85.9	86.4	91.2	92.7
77°	79.1	78.6	81.5	82.5	86.9	88.3
77.5°	74.7	74.7	77.6	78.1	82.5	84.4
78°	70.8	70.8	73.3	73.8	78.1	80.1
78.5°	66.5	66.5	69.4	69.4	73.8	76.2
79°	62.6	62.6	65.0	65.0	69.4	71.8
79.5°	58.2	58.7	60.7	60.7	65.0	67.9
80°	54.3	54.8	56.8	56.8	60.7	63.6
80.5°	50.0	50.9	52.4	52.4	56.3	59.7
81°	46.1	47.1	48.5	48.0	51.9	55.8
81.5°	42.2	43.2	44.6	44.2	47.5	51.4
82°	38.3	39.3	40.3	40.3	43.2	47.5
82.5°	34.4	34.9	36.4	36.4	39.3	43.2
83°	30.1	31.1	32.5	32.5	34.9	39.3
83.5°	26.2	27.2	28.1	28.6	30.1	34.9
84°	22.3	23.3	24.3	25.2	26.2	31.1
84.5°	18.9	19.9	20.4	21.3	21.8	27.2
85°	15.0	16.0	16.5	18.0	18.4	22.8
85.5°	11.2	12.1	13.1	14.6	15.5	18.9
86°	7.3	8.7	9.2	11.2	12.6	16.0
86.5°	3.9	4.9	5.3	7.8	9.2	12.6
87°	1.0	1.5	1.9	3.9	6.3	9.7
87.5°	0.0	0.0	0.5	1.5	3.9	6.8
88°	0.0	0.0	0.0	0.0	1.5	3.9
88.5°	0.0	0.0	0.0	0.0	0.0	1.5



TEST NUMBER: P776844  
CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-5000K

**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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Scaled Data Report



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Scaled Data Report





21.5°	2550.7	2590.5	2641.4	2670.5	2683.6	2691.4	2685.1	2661.8	2629.8	2596.3	2544.4
22°	2536.6	2577.9	2630.8	2659.9	2673.5	2681.7	2675.4	2651.1	2618.1	2583.7	2530.8



44°	1001.5	1273.2	1818.5	1717.6	1394.5	1628.8	1893.7	1492.5	1110.6	1277.5	1645.8
44.5°	936.4	1205.7	1794.8	1648.7	1322.7	1557.5	1870.9	1423.6	1044.2	1207.2	1622.0



66.5°	174.7	183.4	193.1	192.1	183.4	186.8	185.8	180.5	169.8	171.8	165.9
67°	170.8	179.0	188.7	188.3	179.5	182.9	182.0	176.6	165.9	167.9	162.1



89°	0.0	2.9	10.2	14.6	13.6	12.6	9.2	4.4	1.5	0.0	0.0
89.5°	0.0	0.5	7.3	10.7	10.2	9.2	5.8	1.9	0.0	0.0	0.0



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21.5°	2504.6	2485.7	2484.2	2500.7	2523.0	2550.7
22°	2490.1	2470.2	2468.2	2486.7	2509.0	2536.6



44°	1029.6	758.9	954.4	1577.4	1246.5	1001.5
44.5°	966.0	700.6	891.3	1534.2	1182.0	936.4

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66.5°	165.0	162.1	167.4	172.7	176.6	174.7
67°	161.1	158.2	163.5	168.4	172.2	170.8

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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)