

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: P776840

Luminaire Tested: HCDJBS4050CSD-HCD8TSQMW-5000lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776840  
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-2700K  
Description: 8 INCH SQUARE MEDIUM MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

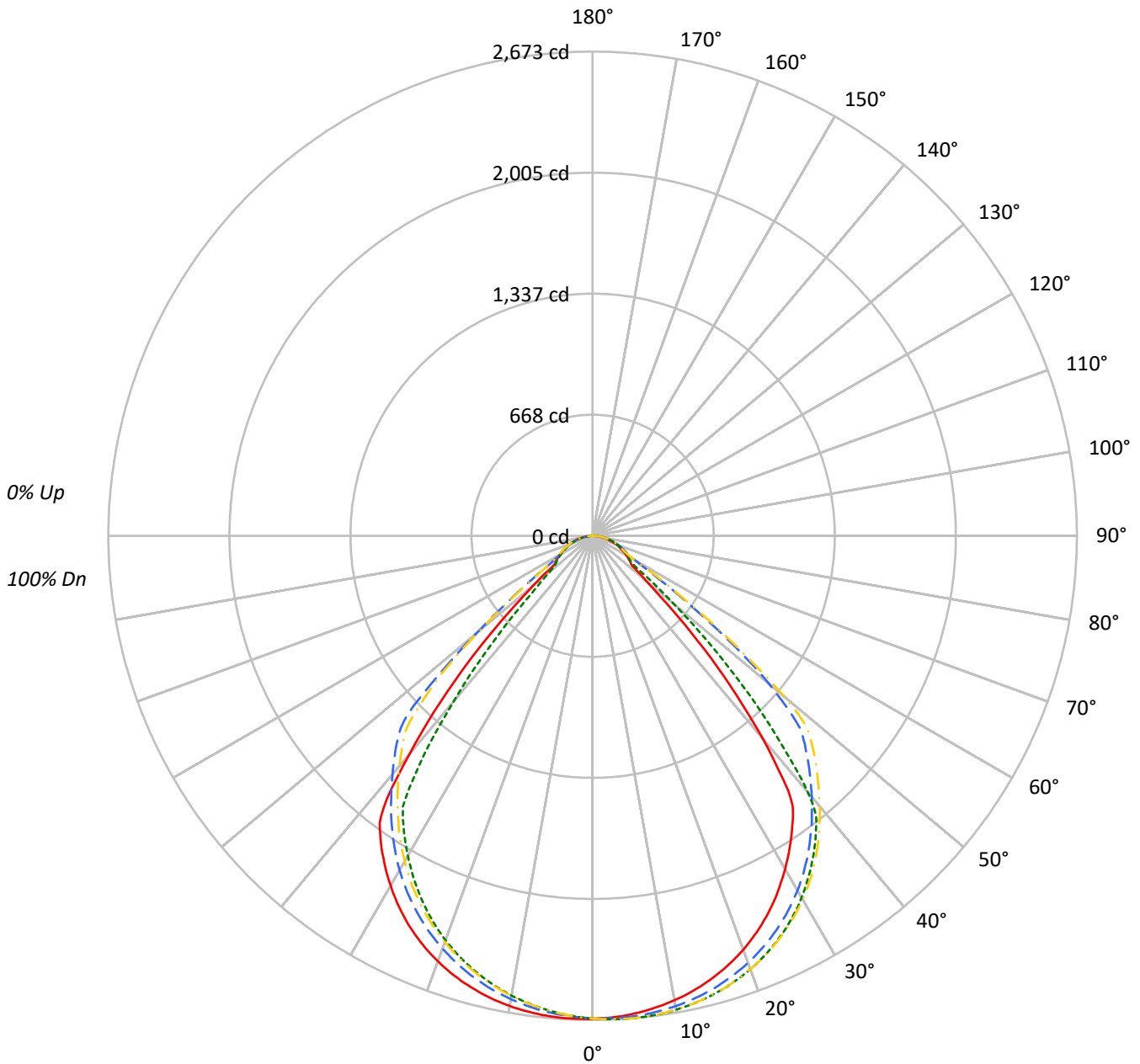
Lumens per Lamp: N/A  
Luminaire Lumens: 4826.6 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.29  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (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	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°	63900	63900	63900	63900
5°	63728	64332	64113	63410
10°	63401	64676	64187	62758
15°	62865	64923	64096	61847
20°	62050	64970	63770	60611
25°	60733	64675	63071	58841
30°	58828	63887	61730	56483
35°	56343	62370	59742	53425
40°	45650	57855	49216	37481
45°	27800	39801	31232	20604
50°	14254	21715	15936	11639
55°	10644	11120	10376	9958
60°	10287	10594	10004	9587
65°	9952	10417	9691	9254
70°	9647	10285	9359	8848
75°	9153	10293	8950	8227
80°	8244	10439	8244	7111
85°	5888	11142	6520	4127

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 135°  
 Vertical Angle: 45°  
 Luminance: 58815 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	252.2	5.2
10°-20°	720.7	14.9
20°-30°	1077.5	22.3
30°-40°	1236.4	25.6
40°-50°	897.8	18.6
50°-60°	329.0	6.8
60°-70°	176.4	3.7
70°-80°	106.6	2.2
80°-90°	29.9	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°	2050.4	42.5
0°-40°	3286.8	68.1
0°-60°	4513.6	93.5
0°-90°	4826.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4826.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2665	2665	2665	2665	2665	
5°	2648	2673	2664	2634	2648	251
15°	2532	2615	2582	2491	2532	714
25°	2296	2444	2384	2224	2296	1055
35°	1925	2131	2041	1825	1925	1175
45°	820	1174	921	608	820	646
55°	255	266	248	238	255	238
65°	175	184	171	163	175	174
75°	99	111	97	89	99	104
85°	21	40	24	15	21	26
90°	0	6	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°	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9
0.5°	2665.8	2666.3	2664.9	2664.5	2666.8	2666.8	2666.8	2667.7	2667.7	2666.3	2662.7
1°	2664.9	2665.8	2665.4	2665.8	2668.6	2668.1	2668.1	2668.6	2668.1	2665.8	2661.3
1.5°	2663.6	2665.4	2665.8	2666.8	2669.9	2669.5	2669.5	2669.5	2668.1	2665.4	2659.9
2°	2662.2	2664.5	2665.8	2667.2	2670.9	2670.9	2670.4	2669.9	2668.1	2664.9	2658.6
2.5°	2659.9	2663.6	2665.8	2668.1	2671.8	2671.8	2671.3	2669.9	2668.1	2664.0	2656.3
3°	2658.1	2662.2	2665.4	2668.6	2672.7	2672.7	2671.8	2669.9	2667.7	2663.1	2654.5
3.5°	2656.3	2660.8	2664.9	2668.6	2672.7	2673.1	2672.2	2670.4	2667.2	2661.7	2651.7
4°	2653.5	2659.0	2664.5	2668.6	2672.7	2673.1	2672.7	2669.9	2666.3	2659.9	2649.0
4.5°	2650.8	2657.2	2663.1	2667.7	2672.7	2673.1	2672.2	2669.5	2664.9	2658.1	2646.3
5°	2647.6	2654.9	2662.2	2667.2	2672.7	2673.1	2672.2	2668.6	2663.6	2655.8	2643.1
5.5°	2644.4	2652.6	2660.4	2666.3	2672.2	2672.2	2671.3	2667.7	2661.7	2653.1	2639.9
6°	2640.8	2649.9	2659.0	2665.4	2671.3	2671.8	2670.4	2666.3	2659.9	2650.8	2636.2
6.5°	2637.6	2646.7	2656.7	2664.0	2670.4	2670.9	2669.5	2664.9	2657.6	2648.1	2632.6
7°	2633.5	2643.5	2654.9	2662.7	2669.0	2669.9	2668.1	2663.1	2655.4	2644.9	2628.0
7.5°	2629.0	2640.3	2652.2	2660.8	2667.7	2669.0	2666.8	2661.3	2652.6	2641.7	2623.9
8°	2624.4	2636.7	2649.9	2659.0	2665.8	2667.2	2664.9	2659.0	2649.9	2638.1	2618.9
8.5°	2619.8	2632.6	2646.7	2656.3	2664.0	2665.4	2663.1	2656.7	2646.7	2634.0	2613.9
9°	2614.8	2628.5	2643.5	2654.0	2661.7	2663.6	2660.8	2654.0	2643.5	2629.9	2608.9
9.5°	2609.4	2623.9	2640.3	2651.3	2659.5	2660.8	2658.6	2651.3	2639.9	2625.3	2603.4
10°	2603.9	2618.9	2637.1	2648.5	2656.3	2658.6	2655.4	2647.6	2636.2	2620.8	2598.0
10.5°	2598.0	2613.9	2633.0	2645.3	2653.5	2655.8	2652.6	2644.0	2631.7	2616.2	2591.6
11°	2592.1	2608.9	2629.0	2641.7	2650.4	2653.1	2649.4	2640.3	2627.1	2610.7	2585.2
11.5°	2585.7	2603.4	2623.9	2638.1	2647.2	2649.4	2645.8	2636.2	2622.6	2605.7	2578.8
12°	2578.8	2597.5	2619.8	2634.0	2643.5	2645.8	2642.2	2632.1	2618.0	2599.8	2572.5
12.5°	2571.6	2591.6	2614.8	2629.9	2639.4	2642.2	2638.5	2628.0	2612.6	2593.4	2565.2
13°	2564.7	2584.8	2609.8	2625.3	2635.3	2638.1	2634.0	2623.0	2607.1	2587.0	2557.9
13.5°	2557.0	2578.4	2604.4	2620.8	2630.8	2634.0	2629.4	2618.0	2601.2	2580.7	2550.2
14°	2549.2	2571.1	2598.9	2615.7	2625.8	2629.0	2624.9	2612.6	2595.2	2573.8	2542.0
14.5°	2541.0	2564.3	2593.0	2610.7	2620.8	2624.4	2619.8	2607.1	2588.9	2567.0	2533.8
15°	2532.4	2556.5	2586.6	2604.8	2615.3	2619.4	2614.4	2601.2	2582.0	2559.3	2525.6
15.5°	2523.7	2548.8	2580.2	2598.9	2609.8	2613.5	2609.4	2595.2	2575.2	2552.0	2516.9
16°	2514.6	2540.1	2573.4	2593.0	2603.9	2608.0	2603.4	2588.9	2567.9	2543.8	2507.8
16.5°	2505.5	2532.4	2566.1	2586.6	2598.0	2602.1	2597.1	2582.0	2560.6	2535.6	2498.2
17°	2496.0	2523.7	2558.8	2579.8	2591.1	2595.7	2590.7	2575.2	2552.9	2527.4	2488.7
17.5°	2485.9	2514.6	2551.5	2572.9	2584.3	2589.3	2583.9	2567.9	2544.7	2518.7	2478.6
18°	2475.9	2505.5	2543.3	2565.6	2577.5	2582.5	2577.5	2559.7	2536.0	2509.6	2468.6
18.5°	2465.0	2496.0	2535.1	2558.4	2570.2	2575.2	2570.2	2552.4	2527.4	2500.1	2457.7
19°	2454.1	2485.9	2526.9	2550.2	2562.5	2567.9	2562.5	2543.8	2518.3	2490.5	2446.8
19.5°	2443.1	2475.5	2517.8	2542.0	2554.3	2560.2	2554.7	2536.0	2509.2	2480.5	2435.8
20°	2431.7	2465.0	2508.7	2533.8	2546.1	2552.4	2546.5	2526.5	2499.1	2470.4	2424.4
20.5°	2419.4	2454.1	2499.6	2525.1	2537.4	2543.8	2538.3	2517.8	2489.1	2460.0	2412.6
21°	2407.1	2443.1	2490.0	2516.0	2528.7	2535.6	2529.2	2508.3	2479.1	2448.6	2400.3



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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°	2368.0	2407.6	2458.6	2486.8	2499.6	2507.3	2501.4	2478.2	2446.3	2414.0	2363.0
23°	2354.3	2394.8	2447.7	2476.8	2489.6	2497.3	2491.9	2467.7	2434.5	2401.7	2349.7
23.5°	2340.2	2382.1	2436.7	2465.9	2478.6	2487.3	2481.4	2456.8	2422.2	2388.9	2336.1
24°	2325.6	2368.4	2424.9	2455.0	2468.2	2476.8	2470.4	2444.9	2410.3	2376.2	2322.4
24.5°	2311.0	2354.8	2413.1	2444.0	2456.8	2465.9	2460.0	2433.6	2397.1	2363.0	2307.8
25°	2295.5	2340.6	2400.8	2431.7	2444.5	2454.5	2448.6	2421.7	2383.9	2349.3	2293.7
25.5°	2280.1	2326.1	2388.5	2419.9	2433.1	2442.7	2437.2	2409.4	2370.7	2335.2	2278.7
26°	2264.6	2311.5	2375.3	2407.6	2420.3	2431.3	2425.4	2396.7	2356.6	2321.1	2263.7
26.5°	2248.2	2296.5	2362.5	2394.8	2407.6	2419.0	2413.1	2383.0	2342.0	2306.0	2248.2
27°	2231.8	2281.0	2349.3	2382.1	2394.4	2405.3	2400.8	2369.3	2327.0	2291.0	2232.2
27.5°	2214.0	2265.0	2335.2	2368.9	2380.7	2392.6	2388.0	2355.7	2311.9	2275.5	2216.3
28°	2197.2	2249.1	2320.6	2354.8	2366.6	2379.4	2374.8	2341.6	2296.5	2259.6	2200.4
28.5°	2178.5	2232.7	2306.5	2341.1	2352.0	2365.2	2361.1	2326.5	2280.5	2243.2	2183.0
29°	2161.6	2215.8	2291.4	2326.1	2338.4	2350.7	2347.5	2311.9	2263.7	2226.8	2166.2
29.5°	2142.5	2198.5	2276.4	2311.5	2322.0	2336.1	2333.4	2296.0	2247.3	2209.0	2148.4
30°	2124.7	2180.8	2260.9	2296.5	2307.4	2321.1	2318.3	2280.5	2229.5	2192.2	2131.1
30.5°	2105.2	2163.0	2245.4	2281.0	2290.1	2305.6	2303.7	2264.1	2212.7	2174.4	2112.5
31°	2086.9	2145.2	2229.1	2264.6	2275.1	2290.1	2288.3	2247.7	2194.9	2156.2	2094.2
31.5°	2067.4	2126.1	2212.2	2248.6	2256.8	2273.2	2272.8	2230.9	2177.1	2138.0	2075.6
32°	2048.2	2107.4	2195.3	2231.8	2239.5	2257.3	2256.4	2213.6	2158.9	2119.7	2056.4
32.5°	2027.7	2088.8	2178.0	2214.5	2222.2	2240.0	2240.0	2196.3	2140.2	2101.1	2036.4
33°	2008.6	2070.1	2159.8	2197.2	2204.9	2223.1	2223.1	2178.5	2121.1	2082.4	2016.8
33.5°	1988.1	2050.5	2142.5	2179.9	2186.2	2205.4	2205.8	2160.7	2102.0	2063.7	1996.8
34°	1967.6	2031.4	2123.8	2161.6	2167.6	2187.1	2188.1	2142.1	2082.4	2044.6	1976.3
34.5°	1945.3	2011.3	2105.2	2143.4	2148.9	2168.9	2170.3	2123.8	2061.4	2025.0	1955.8
35°	1924.8	1991.3	2086.0	2124.7	2130.7	2151.2	2152.1	2105.2	2040.9	2005.0	1934.8
35.5°	1903.4	1970.8	2066.9	2106.1	2110.2	2132.5	2132.9	2086.5	2020.0	1984.5	1913.9
36°	1881.1	1950.3	2046.9	2086.9	2090.6	2113.4	2113.8	2066.9	1998.6	1964.0	1892.5
36.5°	1857.8	1928.9	2027.3	2068.3	2069.6	2094.7	2094.2	2046.9	1974.9	1943.0	1870.6
37°	1818.7	1907.5	2007.2	2048.7	2048.7	2074.6	2074.6	2026.4	1940.3	1921.2	1849.2
37.5°	1771.8	1886.1	1986.7	2028.6	2027.3	2054.6	2054.2	2005.9	1897.0	1899.7	1826.9
38°	1708.9	1863.8	1966.2	2008.6	2005.4	2033.7	2034.1	1984.5	1843.3	1876.5	1805.0
38.5°	1646.1	1841.0	1944.8	1988.1	1980.8	2013.2	2013.2	1963.5	1780.0	1850.6	1783.6
39°	1585.0	1806.8	1923.9	1967.6	1945.8	1991.8	1992.7	1941.7	1713.0	1808.2	1761.7
39.5°	1523.1	1761.3	1902.9	1946.2	1902.5	1969.9	1971.3	1917.1	1642.9	1761.3	1739.9
40°	1458.4	1701.6	1881.5	1924.3	1848.3	1947.6	1949.4	1877.0	1572.3	1705.3	1718.5
40.5°	1391.0	1639.2	1860.1	1902.0	1786.8	1923.4	1927.5	1836.4	1505.3	1642.9	1697.5
41°	1322.2	1579.6	1838.3	1879.7	1717.1	1885.6	1906.6	1783.1	1441.1	1580.9	1676.1
41.5°	1254.4	1519.4	1816.9	1855.6	1646.5	1843.7	1884.7	1723.9	1375.5	1511.2	1654.7
42°	1189.7	1456.6	1795.0	1823.2	1575.5	1792.7	1863.3	1659.7	1309.5	1447.5	1632.8
42.5°	1128.2	1391.0	1773.1	1781.3	1508.0	1732.1	1841.9	1592.3	1241.1	1385.5	1611.4
43°	1064.9	1325.9	1751.7	1731.7	1442.5	1666.6	1820.0	1526.7	1173.7	1326.8	1589.6
43.5°	1002.0	1260.3	1729.4	1675.7	1376.4	1597.3	1799.1	1463.0	1106.8	1262.1	1567.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	819.8	1070.3	1663.8	1483.0	1173.7	1398.7	1734.4	1273.0	921.0	1074.9	1497.1
45.5°	762.0	1010.2	1641.5	1418.8	1105.4	1335.4	1712.1	1207.9	859.5	1009.8	1460.2
46°	707.8	949.6	1618.7	1358.2	1042.1	1270.8	1689.8	1143.2	801.2	951.9	1416.5
46.5°	654.5	888.2	1596.0	1297.6	980.2	1203.8	1667.5	1077.6	743.3	892.3	1355.5
47°	602.6	828.5	1572.3	1235.2	918.2	1136.8	1644.7	1015.7	688.2	838.5	1280.3
47.5°	555.7	771.6	1530.4	1172.4	857.2	1071.3	1621.0	955.6	634.9	779.8	1205.2
48°	510.6	716.4	1486.6	1109.5	796.6	1009.8	1596.4	897.3	587.6	726.9	1128.2
48.5°	470.5	663.6	1432.0	1046.2	739.2	949.2	1558.6	837.6	540.6	673.2	1053.9
49°	436.3	611.7	1378.2	987.9	683.7	888.2	1506.2	779.8	497.8	621.3	982.4
49.5°	407.2	563.4	1323.6	927.3	631.3	828.9	1448.4	723.7	457.3	574.3	911.8
50°	382.1	517.0	1270.8	872.7	582.1	769.7	1377.8	669.5	427.2	530.6	842.2
50.5°	361.2	474.6	1213.4	816.2	536.5	712.8	1302.6	618.5	397.6	487.3	776.1
51°	341.6	437.2	1146.9	760.2	492.8	658.6	1223.4	568.4	368.0	447.7	714.6
51.5°	322.0	407.2	1079.5	703.7	453.2	606.7	1143.7	523.3	338.4	416.3	657.2
52°	302.9	380.8	1008.9	652.7	421.8	557.9	1066.2	481.0	308.8	384.9	601.7
52.5°	286.0	358.5	936.4	602.1	389.9	512.4	990.2	448.2	285.6	353.9	551.1
53°	273.7	338.0	866.3	555.7	358.5	469.6	920.0	415.4	269.2	322.5	505.1
53.5°	267.8	319.3	798.4	510.1	327.0	437.2	853.1	382.6	261.9	297.4	462.8
54°	262.8	300.2	734.2	470.0	303.3	404.9	787.5	349.8	256.9	275.1	430.9
54.5°	258.7	281.9	672.3	430.0	281.0	372.6	723.3	317.0	252.3	258.7	399.4
55°	254.6	267.4	617.6	395.3	266.0	340.2	661.8	293.8	248.2	251.4	368.5
55.5°	250.1	258.7	565.7	363.5	259.2	307.9	603.9	271.5	243.7	246.4	337.0
56°	246.0	253.7	515.1	334.8	254.6	283.8	550.2	254.2	239.6	242.3	306.1
56.5°	241.9	249.6	469.6	308.4	250.1	262.8	503.7	246.9	235.5	237.8	285.6
57°	237.8	245.0	429.0	284.2	245.5	250.1	465.5	241.9	231.4	233.7	268.3
57.5°	233.7	240.9	392.2	262.8	241.4	244.6	427.2	237.8	227.7	229.6	253.7
58°	230.0	236.8	359.4	249.1	237.3	240.5	388.5	233.2	223.6	225.5	241.9
58.5°	225.9	232.7	331.1	243.7	233.2	235.9	350.3	229.6	220.0	221.8	231.8
59°	222.3	228.6	306.1	239.1	229.1	231.8	312.4	225.5	215.9	217.7	223.2
59.5°	218.2	225.0	286.0	234.6	225.0	227.7	286.9	221.4	212.2	214.1	215.9
60°	214.5	220.9	269.2	230.5	220.9	223.6	266.9	217.7	208.6	210.4	209.5
60.5°	210.4	217.3	255.5	226.4	216.8	219.5	251.4	213.6	205.0	206.8	204.5
61°	206.8	213.6	244.1	222.3	213.2	215.4	237.8	210.0	201.3	203.1	200.4
61.5°	202.7	210.0	233.7	218.6	209.5	211.8	227.7	206.3	197.2	199.5	196.3
62°	199.0	205.9	225.0	214.5	205.9	208.1	218.6	202.7	193.6	195.9	191.8
62.5°	194.9	202.2	217.3	210.9	202.2	204.5	211.3	199.0	189.5	192.2	187.7
63°	190.8	198.6	211.3	206.8	198.1	200.9	204.5	195.4	185.8	188.1	183.6
63.5°	187.2	194.9	206.8	203.1	194.5	197.2	199.5	191.8	182.2	184.5	179.9
64°	183.1	191.3	202.2	199.5	190.8	193.6	194.9	188.1	178.1	180.4	175.8
64.5°	179.5	187.2	198.1	195.4	187.2	189.9	190.8	184.5	174.4	176.7	171.7
65°	175.4	183.6	194.0	191.8	183.6	186.3	186.7	180.8	170.8	173.1	167.6
65.5°	171.3	179.9	189.5	188.1	179.5	182.6	182.6	177.2	166.7	169.0	164.0
66°	167.6	175.8	185.4	184.5	175.8	179.0	178.5	173.1	163.1	165.3	159.9





TEST NUMBER: P776840

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	156.2	166.2	173.5	173.1	164.9	168.1	166.7	161.7	152.1	153.9	148.0
68°	152.6	162.1	169.4	169.0	161.2	164.4	162.6	158.0	148.5	149.8	143.9
68.5°	148.9	158.0	164.4	164.9	157.6	160.3	159.0	154.4	144.8	146.2	139.8
69°	145.3	153.5	160.8	161.2	153.9	156.7	154.9	150.3	141.2	142.1	136.2
69.5°	141.2	149.4	157.1	157.6	150.3	153.0	151.2	146.7	137.6	138.5	132.1
70°	137.6	145.7	153.0	154.4	146.7	149.4	147.1	143.0	133.5	134.8	128.0
70.5°	133.5	141.6	149.4	150.8	143.5	145.7	143.5	139.4	129.8	130.7	124.3
71°	129.8	138.0	145.3	146.7	139.8	142.1	139.4	135.3	126.2	127.1	120.2
71.5°	125.7	134.4	141.6	143.0	136.2	138.5	135.7	131.6	122.5	123.4	116.1
72°	122.1	130.3	137.6	139.4	132.5	134.8	131.6	128.0	118.9	119.3	112.5
72.5°	118.0	126.2	133.5	135.7	129.4	131.2	128.0	124.3	115.2	115.7	108.4
73°	114.3	122.5	129.4	131.6	125.7	127.5	123.9	120.2	111.6	112.0	104.8
73.5°	110.2	118.4	125.7	128.0	122.1	123.9	120.2	116.6	107.9	107.9	100.7
74°	106.6	114.8	121.6	124.3	118.4	120.2	116.6	113.0	104.3	104.3	96.6
74.5°	102.5	110.7	117.5	120.7	114.8	116.6	112.5	109.3	100.2	100.2	92.9
75°	98.8	107.0	113.9	117.1	111.1	113.0	108.9	105.2	96.6	96.6	88.8
75.5°	94.7	102.9	109.8	113.4	107.9	109.3	105.2	101.6	92.9	92.5	84.7
76°	90.6	98.8	105.7	109.3	104.3	105.7	101.1	97.5	89.3	88.4	81.1
76.5°	87.0	94.7	102.0	105.7	100.7	102.0	97.5	93.8	85.6	84.7	77.0
77°	82.9	91.1	97.9	102.0	97.0	98.4	93.8	90.2	81.5	81.1	73.3
77.5°	79.3	87.0	93.8	97.9	93.4	94.7	89.7	86.1	77.9	77.0	69.2
78°	75.2	82.9	90.2	94.3	89.7	91.1	86.1	82.4	74.2	73.3	65.6
78.5°	71.5	79.3	86.1	90.6	86.1	87.4	82.4	78.3	70.6	69.2	61.5
79°	67.4	75.2	82.4	86.5	82.9	83.8	78.3	74.7	67.0	65.6	57.8
79.5°	63.8	71.1	78.3	82.9	79.3	80.2	74.7	71.1	63.3	61.5	53.7
80°	59.7	67.4	74.2	79.3	75.6	76.1	71.1	67.0	59.7	57.8	50.1
80.5°	56.0	63.3	70.6	75.2	72.0	72.9	67.4	63.3	56.0	53.7	46.5
81°	52.4	59.2	67.0	71.5	68.8	69.2	63.8	59.7	52.4	50.1	42.4
81.5°	48.3	55.1	62.9	67.9	65.1	65.1	59.7	56.0	48.7	46.0	38.7
82°	44.6	51.5	58.8	63.8	61.5	61.9	56.0	51.9	45.1	42.4	35.1
82.5°	40.5	47.4	55.1	60.1	57.8	57.8	52.4	48.3	41.4	38.3	31.0
83°	36.9	43.7	51.5	56.5	54.7	54.2	48.7	44.6	37.8	34.6	27.3
83.5°	32.8	39.6	47.4	52.8	51.0	50.6	45.1	40.5	34.2	30.5	24.1
84°	29.1	35.5	43.7	49.2	47.4	46.9	41.4	36.9	30.5	26.9	21.0
84.5°	25.5	31.9	39.6	45.1	44.2	43.3	37.8	33.2	26.9	23.2	17.8
85°	21.4	27.8	36.0	41.4	40.5	40.1	34.2	29.1	23.7	19.1	14.6
85.5°	17.8	24.1	32.3	37.8	36.9	36.4	30.5	25.5	20.0	15.5	11.4
86°	15.0	20.0	28.2	34.2	33.7	32.8	26.9	21.9	16.9	12.3	8.7
86.5°	11.8	15.9	25.1	31.0	30.1	29.1	23.7	17.8	13.2	9.6	5.5
87°	9.1	13.2	21.9	27.3	26.4	25.5	20.5	14.6	10.0	7.3	2.7
87.5°	6.4	10.5	18.7	23.7	23.2	22.3	17.3	11.8	7.7	5.0	0.5
88°	3.6	7.7	15.9	20.5	19.6	18.7	14.6	9.1	5.5	2.7	0.0
88.5°	1.4	5.0	12.8	16.9	16.4	15.5	11.4	6.8	3.2	0.5	0.0



TEST NUMBER: P776840  
CATALOG NUMBER: HCDJBL4050CSD-HCD8TSQMW-5000lm-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	3.6	6.8	6.4	5.5	2.7	0.5	0.0	0.0	0.0



TEST NUMBER: P776840

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TSQMW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2664.9	2664.9	2664.9	2664.9	2664.9	2664.9
0.5°	2661.3	2663.1	2662.7	2663.1	2664.5	2665.8
1°	2659.5	2660.8	2659.9	2660.8	2662.7	2664.9
1.5°	2657.2	2658.6	2657.2	2658.1	2660.8	2663.6
2°	2654.9	2655.8	2654.5	2655.8	2658.6	2662.2
2.5°	2652.2	2652.6	2651.7	2652.6	2655.8	2659.9
3°	2649.4	2649.9	2648.1	2649.9	2653.1	2658.1
3.5°	2646.3	2646.3	2644.9	2646.3	2650.4	2656.3
4°	2643.1	2642.6	2640.8	2642.6	2647.2	2653.5
4.5°	2639.4	2638.5	2637.1	2639.0	2644.0	2650.8
5°	2635.8	2634.4	2632.6	2634.4	2639.9	2647.6
5.5°	2631.7	2629.9	2628.0	2630.3	2636.2	2644.4
6°	2627.1	2625.3	2623.0	2625.8	2632.1	2640.8
6.5°	2622.6	2620.3	2618.0	2620.8	2628.0	2637.6
7°	2617.6	2614.8	2612.6	2615.7	2623.0	2633.5
7.5°	2612.6	2609.4	2606.6	2610.3	2618.5	2629.0
8°	2607.1	2603.4	2600.7	2604.8	2613.0	2624.4
8.5°	2601.2	2597.5	2594.8	2598.9	2607.5	2619.8
9°	2595.2	2590.7	2588.4	2592.5	2602.1	2614.8
9.5°	2588.9	2584.3	2581.6	2586.1	2596.2	2609.4
10°	2582.5	2577.5	2574.3	2579.3	2589.8	2603.9
10.5°	2575.2	2570.2	2567.0	2572.5	2583.4	2598.0
11°	2568.4	2562.5	2559.7	2565.2	2576.6	2592.1
11.5°	2560.6	2554.7	2552.0	2557.9	2569.7	2585.7
12°	2553.3	2546.5	2543.3	2549.7	2562.0	2578.8
12.5°	2545.1	2537.9	2535.1	2542.0	2554.3	2571.6
13°	2536.9	2529.2	2526.0	2533.3	2547.0	2564.7
13.5°	2528.3	2520.1	2517.4	2525.1	2538.8	2557.0
14°	2519.6	2511.0	2507.8	2516.0	2530.1	2549.2
14.5°	2510.5	2501.4	2498.2	2506.9	2521.5	2541.0
15°	2501.0	2491.4	2487.8	2497.3	2512.4	2532.4
15.5°	2491.4	2481.4	2478.2	2487.8	2502.8	2523.7
16°	2481.4	2470.4	2467.7	2477.3	2493.7	2514.6
16.5°	2471.4	2460.0	2456.8	2467.3	2483.7	2505.5
17°	2460.4	2449.0	2445.4	2456.3	2473.6	2496.0
17.5°	2449.5	2437.2	2434.0	2445.9	2463.2	2485.9
18°	2438.6	2425.4	2422.6	2434.5	2452.2	2475.9
18.5°	2426.7	2413.1	2410.8	2422.6	2441.3	2465.0
19°	2414.9	2400.8	2397.6	2411.2	2429.9	2454.1
19.5°	2403.0	2388.5	2385.3	2398.9	2418.5	2443.1
20°	2390.7	2375.3	2372.5	2386.6	2406.2	2431.7
20.5°	2377.5	2361.6	2359.3	2374.3	2393.9	2419.4
21°	2364.8	2347.9	2345.7	2360.7	2381.2	2407.1



TEST NUMBER: P776840

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TSQMW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2323.3	2304.2	2302.8	2320.1	2341.1	2368.0
23°	2309.2	2288.7	2287.8	2306.0	2327.4	2354.3
23.5°	2294.2	2273.7	2272.8	2291.9	2313.3	2340.2
24°	2279.2	2257.3	2257.3	2276.9	2298.7	2325.6
24.5°	2263.7	2240.9	2240.9	2261.8	2283.7	2311.0
25°	2247.7	2224.0	2224.5	2246.4	2268.7	2295.5
25.5°	2231.8	2207.2	2208.1	2230.9	2252.7	2280.1
26°	2214.9	2189.9	2191.2	2214.5	2237.2	2264.6
26.5°	2198.1	2172.6	2173.9	2198.1	2220.9	2248.2
27°	2181.2	2154.4	2156.2	2181.7	2204.5	2231.8
27.5°	2163.5	2135.7	2138.4	2164.8	2187.1	2214.0
28°	2145.7	2117.0	2119.7	2147.1	2169.8	2197.2
28.5°	2127.5	2097.9	2101.5	2129.8	2152.5	2178.5
29°	2109.3	2078.7	2082.8	2111.5	2135.2	2161.6
29.5°	2090.6	2059.6	2063.7	2093.3	2116.6	2142.5
30°	2071.5	2040.0	2044.1	2075.1	2098.3	2124.7
30.5°	2052.3	2020.0	2025.0	2056.0	2079.7	2105.2
31°	2033.2	2000.0	2005.4	2037.3	2060.5	2086.9
31.5°	2013.6	1979.5	1984.9	2017.7	2041.4	2067.4
32°	1994.0	1958.5	1964.9	1998.1	2021.8	2048.2
32.5°	1974.4	1937.6	1945.3	1977.6	2002.2	2027.7
33°	1953.9	1916.1	1924.8	1958.0	1982.6	2008.6
33.5°	1933.5	1894.3	1903.4	1937.6	1962.1	1988.1
34°	1912.5	1872.4	1882.9	1917.1	1943.0	1967.6
34.5°	1892.0	1849.2	1861.0	1895.2	1922.5	1945.3
35°	1870.6	1825.1	1839.6	1874.7	1902.0	1924.8
35.5°	1849.2	1776.8	1817.3	1853.7	1881.5	1903.4
36°	1827.3	1721.7	1795.4	1831.9	1860.6	1881.1
36.5°	1805.0	1659.7	1771.3	1810.5	1838.7	1857.8
37°	1781.3	1597.8	1737.6	1789.1	1817.3	1818.7
37.5°	1753.5	1534.0	1689.8	1767.2	1795.4	1771.8
38°	1706.6	1468.4	1631.0	1745.3	1773.1	1708.9
38.5°	1650.2	1401.0	1570.4	1723.5	1751.3	1646.1
39°	1590.5	1331.8	1513.5	1702.1	1727.6	1585.0
39.5°	1530.4	1262.1	1452.0	1680.2	1690.2	1523.1
40°	1470.2	1197.4	1389.2	1658.8	1645.1	1458.4
40.5°	1406.9	1133.2	1323.1	1636.5	1586.8	1391.0
41°	1341.8	1071.3	1258.9	1614.6	1528.5	1322.2
41.5°	1275.3	1007.5	1194.7	1592.8	1472.1	1254.4
42°	1210.6	946.5	1132.3	1571.4	1413.8	1189.7
42.5°	1146.9	883.6	1072.6	1549.5	1355.5	1128.2
43°	1084.9	823.9	1015.2	1527.6	1294.0	1064.9
43.5°	1025.3	766.5	955.6	1504.9	1231.6	1002.0



TEST NUMBER: P776840

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	846.7	607.6	780.7	1396.9	1050.8	819.8
45.5°	789.3	557.9	726.5	1345.9	994.3	762.0
46°	733.8	512.9	675.0	1293.5	936.9	707.8
46.5°	680.5	472.8	624.0	1243.9	879.5	654.5
47°	629.0	439.5	574.3	1192.4	822.1	602.6
47.5°	579.8	411.3	528.8	1139.6	767.5	555.7
48°	531.5	388.1	486.4	1075.8	714.6	510.6
48.5°	489.2	367.6	450.0	1009.8	663.6	470.5
49°	450.0	348.9	419.0	940.1	613.5	436.3
49.5°	424.9	330.2	392.2	874.5	567.1	407.2
50°	400.8	312.0	369.8	812.1	520.6	382.1
50.5°	376.7	293.3	350.3	753.3	478.7	361.2
51°	352.1	278.7	332.0	695.5	440.4	341.6
51.5°	327.9	269.2	313.8	643.6	408.1	322.0
52°	309.3	263.7	295.6	593.5	379.9	302.9
52.5°	291.5	259.2	278.3	544.3	355.7	286.0
53°	273.7	255.1	265.1	500.1	334.8	273.7
53.5°	259.6	251.0	258.7	460.0	315.6	267.8
54°	251.9	246.4	253.7	421.8	296.5	262.8
54.5°	247.3	242.3	249.6	390.3	278.7	258.7
55°	242.8	238.2	245.0	359.8	263.7	254.6
55.5°	238.7	234.1	240.9	333.4	254.6	250.1
56°	234.6	230.5	236.8	309.3	250.1	246.0
56.5°	230.5	226.4	232.7	290.6	245.5	241.9
57°	226.8	222.7	228.6	273.7	241.4	237.8
57.5°	222.7	218.6	225.0	260.1	237.3	233.7
58°	219.1	215.0	221.4	248.2	233.2	230.0
58.5°	215.4	211.3	217.3	238.7	229.1	225.9
59°	211.3	207.7	213.6	229.6	225.5	222.3
59.5°	207.7	204.0	210.0	221.8	221.4	218.2
60°	204.0	199.9	205.9	215.9	217.3	214.5
60.5°	200.4	196.3	202.7	211.3	213.6	210.4
61°	196.8	192.7	199.0	207.2	209.5	206.8
61.5°	192.7	189.0	195.4	203.1	205.9	202.7
62°	189.0	184.9	191.3	198.6	201.8	199.0
62.5°	185.4	181.3	187.7	194.5	198.1	194.9
63°	181.3	177.6	184.0	190.4	194.0	190.8
63.5°	177.6	173.5	179.9	186.3	189.9	187.2
64°	174.0	169.9	176.3	182.2	185.8	183.1
64.5°	169.9	166.7	172.2	178.1	181.7	179.5
65°	166.2	163.1	168.5	174.0	178.1	175.4
65.5°	162.1	159.4	164.0	170.3	174.0	171.3
66°	158.5	155.8	160.8	166.2	169.9	167.6



TEST NUMBER: P776840

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	147.1	144.4	150.3	153.9	158.0	156.2
68°	143.5	140.7	146.2	150.3	153.9	152.6
68.5°	139.4	137.1	142.6	146.2	149.8	148.9
69°	135.7	133.5	138.9	142.1	146.2	145.3
69.5°	131.6	129.8	134.8	138.0	142.1	141.2
70°	128.0	126.2	131.2	133.9	138.0	137.6
70.5°	124.3	122.5	127.1	129.8	133.9	133.5
71°	120.7	118.9	123.4	125.7	130.3	129.8
71.5°	116.6	115.2	119.8	121.6	126.2	125.7
72°	113.0	111.1	115.7	117.5	122.1	122.1
72.5°	108.9	107.5	111.6	113.4	118.0	118.0
73°	105.2	103.8	107.9	109.8	113.9	114.3
73.5°	101.1	99.7	103.8	105.7	109.8	110.2
74°	97.5	96.1	100.2	101.6	106.1	106.6
74.5°	93.4	92.5	96.1	97.5	102.0	102.5
75°	89.7	88.8	92.0	93.4	97.9	98.8
75.5°	85.6	84.7	88.4	89.3	93.4	94.7
76°	82.0	81.1	84.3	85.2	89.7	90.6
76.5°	77.9	77.4	80.6	81.1	85.6	87.0
77°	74.2	73.8	76.5	77.4	81.5	82.9
77.5°	70.1	70.1	72.9	73.3	77.4	79.3
78°	66.5	66.5	68.8	69.2	73.3	75.2
78.5°	62.4	62.4	65.1	65.1	69.2	71.5
79°	58.8	58.8	61.0	61.0	65.1	67.4
79.5°	54.7	55.1	56.9	56.9	61.0	63.8
80°	51.0	51.5	53.3	53.3	56.9	59.7
80.5°	46.9	47.8	49.2	49.2	52.8	56.0
81°	43.3	44.2	45.5	45.1	48.7	52.4
81.5°	39.6	40.5	41.9	41.4	44.6	48.3
82°	36.0	36.9	37.8	37.8	40.5	44.6
82.5°	32.3	32.8	34.2	34.2	36.9	40.5
83°	28.2	29.1	30.5	30.5	32.8	36.9
83.5°	24.6	25.5	26.4	26.9	28.2	32.8
84°	21.0	21.9	22.8	23.7	24.6	29.1
84.5°	17.8	18.7	19.1	20.0	20.5	25.5
85°	14.1	15.0	15.5	16.9	17.3	21.4
85.5°	10.5	11.4	12.3	13.7	14.6	17.8
86°	6.8	8.2	8.7	10.5	11.8	15.0
86.5°	3.6	4.6	5.0	7.3	8.7	11.8
87°	0.9	1.4	1.8	3.6	5.9	9.1
87.5°	0.0	0.0	0.5	1.4	3.6	6.4
88°	0.0	0.0	0.0	0.0	1.4	3.6
88.5°	0.0	0.0	0.0	0.0	0.0	1.4



TEST NUMBER: P776840  
CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMW-5000lm-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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Scaled Data Report



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Scaled Data Report





21.5°	2394.4	2431.7	2479.6	2506.9	2519.2	2526.5	2520.5	2498.7	2468.6	2437.2	2388.5
22°	2381.2	2419.9	2469.5	2496.9	2509.6	2517.4	2511.4	2488.7	2457.7	2425.4	2375.7



44°	940.1	1195.1	1707.1	1612.3	1309.0	1529.0	1777.7	1401.0	1042.6	1199.2	1544.9
44.5°	879.0	1131.8	1684.8	1547.7	1241.6	1462.0	1756.3	1336.3	980.2	1133.2	1522.6



66.5°	164.0	172.2	181.3	180.4	172.2	175.4	174.4	169.4	159.4	161.2	155.8
67°	160.3	168.1	177.2	176.7	168.5	171.7	170.8	165.8	155.8	157.6	152.1



89°	0.0	2.7	9.6	13.7	12.8	11.8	8.7	4.1	1.4	0.0	0.0
89.5°	0.0	0.5	6.8	10.0	9.6	8.7	5.5	1.8	0.0	0.0	0.0



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21.5°	2351.1	2333.4	2332.0	2347.5	2368.4	2394.4
22°	2337.5	2318.8	2317.0	2334.3	2355.2	2381.2



44°	966.5	712.3	895.9	1480.7	1170.1	940.1
44.5°	906.8	657.7	836.7	1440.2	1109.5	879.0



66.5°	154.9	152.1	157.1	162.1	165.8	164.0
67°	151.2	148.5	153.5	158.0	161.7	160.3

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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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Peachtree City, GA 30269

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(END OF REPORT)