

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: P776708

Luminaire Tested: HCDJBS4050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776708  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B013)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K  
Description: 6 INCH ROUND MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4913.7 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.23  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

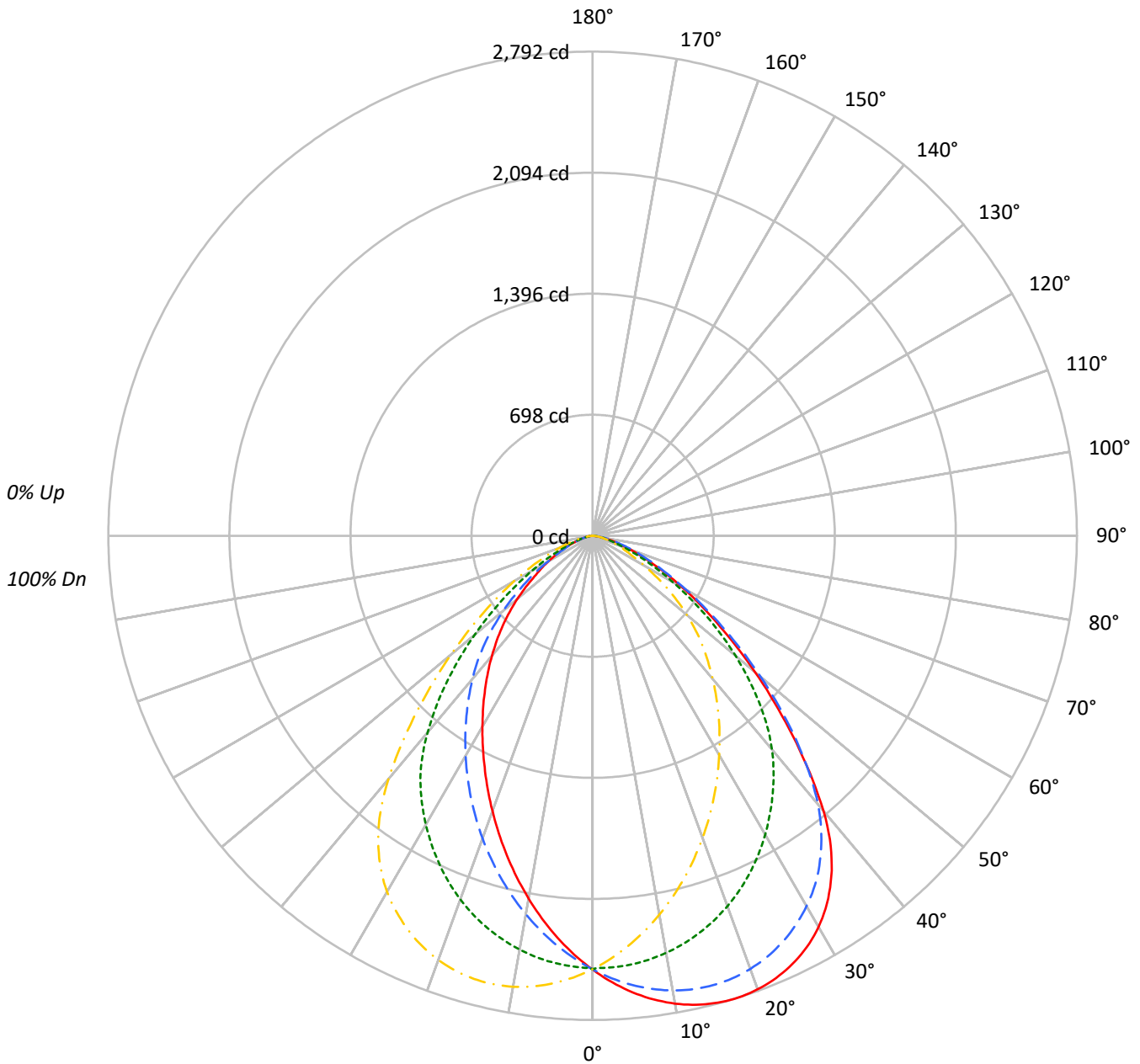
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P776708

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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									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89																			
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68																			
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60																			
5	82	70	63	57	80	69	62	56	67	61	56	66	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°	270°
0°	137012	137012	137012	137012
5°	145438	136616	128010	136088
10°	152497	135930	118251	134867
15°	158190	134598	108292	132918
20°	162356	132609	98510	130124
25°	164804	129709	89116	126382
30°	164873	125905	80424	121721
35°	160575	121164	72351	115851
40°	148120	115087	64592	105913
45°	126494	105174	56742	91823
50°	104235	91750	48305	75716
55°	83619	75620	39138	59162
60°	65718	58581	32311	44371
65°	49953	42936	25256	31702
70°	36881	30133	18785	21847
75°	26137	20969	13979	14382
80°	16448	14964	9976	9060
85°	5409	11762	5095	4529

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 130060 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	235.4	4.8
10°-20°	662.8	13.5
20°-30°	968.9	19.7
30°-40°	1088.9	22.2
40°-50°	939.2	19.1
50°-60°	603.2	12.3
60°-70°	292.5	6.0
70°-80°	104.7	2.1
80°-90°	18.1	0.4
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°	1867.1	38.0
0°-40°	2956.0	60.2
0°-60°	4498.3	91.5
0°-90°	4913.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4913.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2499	2499	2499	2499	2499	
5°	2643	2483	2326	2473	2643	255
15°	2787	2372	1908	2342	2787	788
25°	2725	2144	1473	2089	2725	1254
35°	2399	1810	1081	1731	2399	1488
45°	1632	1357	732	1184	1632	1258
55°	875	791	410	619	875	790
65°	385	331	195	244	385	390
75°	123	99	66	68	123	136
85°	9	19	8	7	9	17
90°	0	1	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°	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3
0.5°	2518.0	2516.1	2512.3	2506.5	2493.1	2489.8	2487.9	2486.9	2486.0	2486.4	2489.3
1°	2532.8	2530.4	2523.3	2512.3	2493.1	2484.0	2476.4	2472.1	2469.2	2470.6	2476.9
1.5°	2548.1	2544.8	2533.8	2518.0	2493.1	2476.9	2464.4	2456.3	2452.5	2454.9	2464.9
2°	2563.0	2558.7	2544.3	2523.7	2492.7	2470.2	2452.5	2440.5	2435.7	2439.6	2452.0
2.5°	2577.3	2571.6	2554.8	2528.5	2491.7	2463.0	2439.6	2424.2	2418.0	2422.8	2439.1
3°	2591.2	2584.5	2563.9	2533.3	2490.3	2455.8	2427.1	2408.0	2399.9	2406.1	2425.7
3.5°	2604.6	2596.9	2574.0	2538.1	2488.8	2448.2	2413.7	2390.8	2382.2	2389.3	2412.8
4°	2617.5	2609.8	2582.6	2541.9	2486.9	2440.0	2400.3	2373.5	2363.5	2372.1	2398.9
4.5°	2630.4	2620.8	2591.7	2545.7	2485.0	2431.4	2386.5	2356.3	2344.8	2354.9	2385.0
5°	2642.9	2632.8	2599.8	2549.1	2482.6	2423.3	2372.6	2338.6	2326.2	2336.7	2370.7
5.5°	2654.3	2643.3	2607.9	2552.4	2479.7	2413.7	2358.2	2320.9	2307.1	2319.0	2356.3
6°	2665.8	2653.9	2615.6	2555.3	2476.9	2404.6	2343.9	2302.3	2287.0	2300.8	2341.5
6.5°	2676.3	2663.9	2622.8	2557.7	2473.5	2395.5	2328.6	2284.1	2267.8	2282.2	2326.7
7°	2686.9	2673.5	2629.5	2560.1	2469.7	2385.5	2313.8	2265.4	2247.7	2264.0	2311.4
7.5°	2696.9	2682.6	2636.2	2561.5	2465.9	2375.5	2298.4	2246.3	2227.6	2245.3	2296.1
8°	2706.0	2691.6	2641.9	2563.0	2461.6	2365.4	2282.7	2227.6	2207.1	2225.7	2280.3
8.5°	2715.1	2700.3	2647.6	2564.4	2457.3	2354.9	2266.4	2207.6	2187.0	2206.6	2264.5
9°	2723.7	2707.9	2652.9	2564.9	2452.5	2343.9	2250.6	2188.4	2165.9	2187.5	2248.7
9.5°	2731.8	2715.6	2657.7	2565.8	2447.2	2332.9	2234.3	2168.8	2144.9	2167.4	2232.0
10°	2739.5	2722.7	2662.0	2565.8	2441.9	2321.4	2218.1	2149.2	2124.3	2147.8	2216.2
10.5°	2746.7	2729.4	2666.3	2565.4	2436.2	2309.9	2201.3	2129.1	2103.8	2128.2	2199.4
11°	2753.3	2735.2	2670.1	2564.9	2430.5	2298.0	2184.1	2108.5	2081.8	2108.1	2182.7
11.5°	2759.1	2740.9	2673.0	2563.9	2423.8	2285.5	2166.9	2088.5	2060.2	2088.0	2165.5
12°	2764.8	2745.7	2675.9	2562.5	2417.6	2273.6	2149.7	2067.9	2039.2	2067.9	2148.7
12.5°	2770.1	2750.5	2678.2	2561.1	2410.4	2260.7	2132.5	2047.3	2017.7	2046.8	2131.5
13°	2774.4	2754.3	2680.2	2559.1	2403.7	2248.2	2114.8	2026.7	1995.7	2026.7	2113.8
13.5°	2778.7	2758.1	2681.6	2556.3	2396.0	2235.3	2097.1	2006.2	1974.1	2006.2	2096.6
14°	2782.0	2761.0	2682.6	2553.9	2388.4	2221.9	2078.9	1984.7	1952.1	1985.6	2078.9
14.5°	2784.9	2763.9	2682.6	2550.5	2380.2	2208.5	2060.7	1963.6	1930.6	1964.1	2060.7
15°	2787.3	2765.8	2683.0	2546.7	2371.6	2194.6	2042.5	1942.6	1908.1	1943.5	2042.5
15.5°	2789.2	2767.2	2682.6	2542.9	2363.5	2180.8	2023.9	1922.0	1886.6	1922.9	2024.4
16°	2790.7	2768.7	2681.6	2539.1	2354.4	2166.9	2005.7	1900.5	1864.6	1901.9	2006.2
16.5°	2791.6	2768.7	2680.6	2534.3	2345.3	2152.1	1986.6	1878.9	1842.6	1880.8	1988.0
17°	2792.1	2768.7	2678.7	2529.0	2335.8	2137.7	1968.4	1857.9	1820.6	1859.8	1969.3
17.5°	2791.6	2768.7	2676.3	2523.3	2326.2	2122.9	1949.3	1836.4	1798.1	1838.3	1950.7
18°	2791.1	2767.7	2673.9	2518.0	2316.1	2108.1	1930.1	1814.8	1776.6	1817.7	1932.0
18.5°	2789.7	2766.3	2670.1	2511.3	2305.6	2092.8	1911.0	1793.8	1754.6	1796.2	1912.9
19°	2788.3	2764.4	2666.8	2505.1	2294.6	2077.4	1891.9	1772.3	1732.6	1774.7	1894.2
19.5°	2785.9	2762.0	2662.5	2497.9	2284.1	2062.1	1873.2	1750.7	1710.6	1754.1	1875.6
20°	2783.0	2759.1	2658.2	2490.3	2273.1	2046.4	1854.1	1729.7	1688.6	1733.0	1856.5
20.5°	2779.7	2755.3	2652.9	2482.6	2261.1	2030.6	1834.0	1708.6	1667.5	1711.5	1837.3
21°	2775.8	2751.4	2647.6	2474.5	2249.2	2014.3	1814.4	1687.1	1645.0	1690.5	1817.7



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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°	2761.0	2736.6	2628.5	2447.2	2212.3	1965.0	1756.5	1624.0	1580.4	1627.3	1759.8
23°	2754.8	2730.4	2620.8	2437.6	2199.4	1948.3	1736.4	1602.5	1558.4	1606.3	1740.2
23.5°	2748.6	2723.7	2613.2	2427.6	2186.0	1931.6	1716.8	1581.9	1537.4	1585.2	1720.6
24°	2740.9	2716.5	2604.6	2416.6	2172.6	1914.3	1697.2	1560.4	1515.9	1564.2	1701.5
24.5°	2733.3	2708.9	2596.0	2406.1	2158.8	1897.6	1677.1	1539.8	1494.3	1543.1	1681.9
25°	2724.6	2700.7	2586.4	2394.6	2144.4	1880.4	1657.0	1518.3	1473.3	1522.6	1662.2
25.5°	2715.6	2691.6	2576.8	2383.1	2130.5	1862.7	1637.9	1498.2	1452.7	1502.0	1642.6
26°	2706.5	2682.6	2566.8	2370.7	2115.7	1845.0	1618.2	1477.1	1432.2	1481.4	1622.5
26.5°	2695.9	2672.5	2555.8	2358.7	2100.9	1827.3	1598.1	1456.6	1411.1	1460.4	1602.9
27°	2685.4	2662.0	2544.3	2345.3	2086.1	1809.6	1578.1	1436.0	1390.5	1440.3	1583.3
27.5°	2673.9	2651.0	2532.8	2332.4	2070.3	1791.4	1558.4	1416.4	1370.0	1419.7	1563.7
28°	2662.0	2639.0	2520.4	2318.5	2054.5	1773.2	1538.8	1395.8	1349.9	1399.6	1544.1
28.5°	2649.1	2627.1	2507.5	2304.7	2038.7	1755.0	1519.2	1375.7	1329.8	1379.5	1524.5
29°	2635.2	2614.2	2494.1	2289.8	2022.4	1736.9	1499.1	1355.1	1310.2	1359.5	1504.4
29.5°	2620.4	2600.3	2480.7	2275.5	2006.2	1718.2	1479.5	1336.0	1290.1	1338.9	1484.8
30°	2604.6	2585.9	2466.3	2260.7	1989.0	1700.0	1459.4	1315.9	1270.5	1319.3	1464.7
30.5°	2588.3	2570.6	2451.5	2244.4	1972.2	1681.4	1440.3	1296.3	1250.9	1299.2	1445.1
31°	2571.6	2554.4	2436.2	2228.6	1955.5	1662.2	1420.7	1277.2	1231.7	1279.6	1425.5
31.5°	2553.4	2537.1	2420.4	2212.3	1937.3	1643.6	1401.1	1257.6	1212.1	1260.0	1405.4
32°	2535.2	2519.0	2403.7	2195.6	1920.1	1624.9	1381.5	1238.4	1193.5	1240.3	1386.2
32.5°	2515.1	2499.8	2386.0	2178.4	1902.4	1605.8	1361.8	1219.3	1174.3	1221.2	1366.6
33°	2493.1	2480.2	2367.8	2161.2	1884.2	1586.2	1342.2	1200.6	1155.7	1202.1	1346.1
33.5°	2470.2	2459.6	2348.7	2143.5	1866.5	1567.1	1323.1	1182.0	1137.0	1182.5	1326.4
34°	2448.2	2438.6	2328.6	2124.8	1847.8	1547.9	1303.5	1162.9	1118.4	1164.3	1307.3
34.5°	2423.8	2415.6	2307.5	2105.7	1829.2	1528.8	1284.4	1144.2	1099.2	1145.2	1287.7
35°	2399.4	2392.2	2286.0	2086.5	1810.5	1509.7	1265.2	1125.5	1081.1	1126.0	1268.1
35.5°	2373.1	2368.3	2263.5	2066.4	1791.9	1490.0	1246.1	1107.4	1062.9	1107.8	1248.5
36°	2344.8	2342.5	2240.6	2045.9	1772.7	1470.9	1227.4	1089.2	1045.2	1089.2	1229.3
36.5°	2316.1	2316.1	2216.6	2023.9	1752.7	1451.3	1208.3	1070.5	1026.5	1070.5	1209.7
37°	2285.5	2288.4	2191.8	2001.9	1733.5	1432.2	1189.2	1052.4	1008.8	1051.9	1190.6
37.5°	2254.0	2259.2	2165.9	1978.4	1713.4	1412.1	1170.5	1034.7	990.7	1033.7	1171.0
38°	2221.0	2229.6	2139.2	1955.0	1692.9	1392.5	1151.4	1016.5	973.0	1015.5	1151.9
38.5°	2185.6	2198.5	2111.4	1930.6	1672.3	1373.3	1132.7	998.8	955.7	997.3	1132.7
39°	2149.7	2165.9	2082.7	1905.2	1651.7	1353.2	1114.5	980.6	938.0	979.2	1114.1
39.5°	2110.9	2130.5	2053.1	1878.9	1630.2	1334.1	1095.9	963.4	920.3	961.0	1095.4
40°	2069.8	2093.7	2021.5	1851.7	1608.2	1314.0	1076.8	945.7	902.6	943.3	1076.3
40.5°	2027.2	2055.9	1988.0	1823.9	1585.2	1294.4	1058.6	928.0	885.4	925.6	1057.6
41°	1984.2	2016.7	1953.6	1794.7	1562.3	1275.3	1039.9	910.3	868.2	907.4	1039.4
41.5°	1940.6	1974.6	1918.2	1765.1	1538.4	1255.7	1021.7	892.6	850.5	890.2	1020.3
42°	1895.2	1933.0	1882.3	1734.5	1514.4	1236.0	1003.1	875.4	833.8	872.5	1001.2
42.5°	1851.2	1890.9	1845.5	1703.9	1489.1	1216.0	985.4	858.1	816.5	855.3	981.6
43°	1807.2	1848.3	1807.7	1672.3	1462.8	1195.4	967.2	840.9	799.3	838.1	961.5
43.5°	1762.7	1805.7	1768.9	1640.2	1436.9	1174.3	949.5	823.7	782.6	820.8	941.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1631.6	1677.6	1654.6	1542.2	1356.6	1108.8	896.4	772.5	731.9	769.7	880.2
45.5°	1590.0	1635.5	1614.9	1508.7	1328.4	1085.8	878.7	755.8	715.1	752.9	859.1
46°	1547.4	1592.9	1575.7	1475.7	1301.1	1063.4	860.5	738.6	698.4	735.7	838.1
46.5°	1503.4	1549.8	1536.4	1441.3	1272.9	1040.4	842.4	721.8	681.2	718.5	818.0
47°	1462.8	1507.7	1497.2	1407.3	1244.7	1017.4	823.2	705.1	664.9	700.8	796.9
47.5°	1419.7	1466.1	1457.0	1372.4	1216.4	994.0	804.6	688.3	648.2	683.6	775.4
48°	1379.5	1425.0	1417.8	1338.4	1188.7	971.0	785.9	672.1	631.9	665.9	754.3
48.5°	1340.3	1384.8	1378.6	1303.5	1160.0	948.1	766.8	654.9	615.2	648.2	733.8
49°	1299.7	1344.6	1339.4	1269.5	1131.8	924.6	747.7	638.1	598.4	630.5	712.7
49.5°	1261.4	1304.4	1301.6	1234.6	1103.1	901.2	728.5	621.8	582.1	612.8	691.7
50°	1222.2	1264.7	1261.9	1199.7	1075.8	877.8	709.9	605.6	566.4	595.5	670.6
50.5°	1182.9	1226.0	1224.6	1164.8	1046.6	853.8	690.3	588.4	550.1	577.4	650.5
51°	1147.1	1187.7	1187.3	1131.3	1017.4	829.9	670.6	571.1	533.4	559.2	629.5
51.5°	1110.2	1150.4	1150.4	1097.3	989.2	807.4	651.5	554.9	517.6	542.0	609.9
52°	1073.4	1113.6	1114.1	1063.8	961.0	784.0	632.4	538.6	501.8	524.3	589.3
52.5°	1039.9	1077.2	1078.2	1029.4	931.8	760.6	612.8	521.4	485.5	507.0	569.2
53°	1004.0	1042.3	1042.8	996.9	903.1	737.1	594.1	504.7	469.7	489.3	549.1
53.5°	971.0	1007.4	1008.3	964.3	874.9	714.2	575.0	488.4	453.5	472.1	529.5
54°	937.1	973.0	974.4	932.3	847.1	691.2	555.4	471.6	438.2	454.9	509.9
54.5°	904.5	939.9	941.9	900.2	818.9	668.7	536.7	454.9	422.4	438.2	490.8
55°	874.9	907.4	908.4	868.7	791.2	646.7	518.0	439.1	409.5	422.4	471.6
55.5°	843.3	875.8	876.8	838.1	763.4	623.8	499.4	422.9	397.0	406.1	453.5
56°	814.6	844.8	845.7	807.9	736.2	601.3	480.7	408.0	384.1	390.3	434.8
56.5°	784.5	814.6	815.1	777.8	709.9	579.8	462.6	393.2	371.2	374.5	417.6
57°	756.7	785.0	785.4	748.6	683.6	557.7	444.9	378.4	362.1	358.8	400.4
57.5°	729.5	756.3	755.8	720.4	657.7	535.7	427.2	363.5	351.1	343.5	382.7
58°	702.2	728.5	727.6	692.6	631.4	515.2	410.4	354.9	339.6	329.1	365.5
58.5°	676.4	701.3	700.3	665.9	606.5	494.1	393.2	344.9	328.1	316.7	348.2
59°	650.1	674.5	673.5	639.1	582.1	473.6	376.5	333.9	316.7	307.1	332.0
59.5°	625.2	649.6	647.7	613.2	557.7	453.5	359.7	322.4	305.7	297.1	316.2
60°	599.4	624.2	621.8	588.4	534.3	433.9	343.0	311.4	294.7	287.0	300.9
60.5°	575.0	599.4	597.0	563.5	510.9	414.7	327.2	299.9	283.7	276.5	286.5
61°	552.0	575.0	573.1	540.1	488.9	396.1	311.9	288.9	273.1	266.0	272.7
61.5°	529.0	552.0	549.6	516.6	467.3	376.9	298.0	277.9	263.1	255.9	258.8
62°	506.6	529.0	527.6	494.1	446.3	358.3	284.1	267.4	253.0	245.9	246.3
62.5°	484.6	507.0	505.6	472.6	426.7	341.5	270.7	257.3	243.0	236.3	233.9
63°	464.0	485.5	484.1	451.6	407.1	324.3	257.8	247.3	233.0	226.7	222.0
63.5°	443.4	465.0	463.5	431.0	387.5	308.1	247.3	237.7	223.4	217.6	210.9
64°	422.9	444.4	443.4	410.4	367.8	292.3	238.2	228.2	213.8	208.6	200.4
64.5°	403.2	425.7	424.3	391.3	348.7	277.0	229.1	219.1	204.3	199.5	190.4
65°	385.1	406.6	405.2	372.6	331.0	262.6	220.0	210.0	194.7	190.4	181.3
65.5°	367.4	388.4	387.0	354.9	314.3	248.3	211.4	201.4	186.1	181.8	172.7
66°	349.2	370.2	369.3	337.7	297.5	234.4	202.3	192.3	177.5	173.2	165.0





TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	300.9	321.0	320.0	289.4	252.1	198.0	177.9	167.9	152.6	148.8	144.5
68°	285.6	305.7	304.7	274.1	238.2	187.0	170.3	160.2	144.9	141.1	138.2
68.5°	271.2	290.8	289.4	259.7	224.3	176.5	162.6	152.6	137.8	133.9	132.0
69°	256.9	277.0	275.0	245.9	211.9	166.9	155.5	145.4	130.6	126.8	125.8
69.5°	243.0	263.1	261.7	232.5	199.5	157.4	148.8	138.2	123.9	120.1	120.1
70°	230.1	249.2	247.8	219.6	188.0	148.8	142.1	131.5	117.2	113.4	113.8
70.5°	217.6	236.8	235.3	207.6	176.5	140.6	135.8	125.3	111.5	107.1	108.1
71°	205.2	224.3	222.9	195.6	166.5	133.0	129.6	119.1	105.2	101.4	102.8
71.5°	193.3	212.9	210.9	184.6	156.4	125.3	123.4	112.9	99.5	95.7	97.6
72°	182.2	200.9	199.5	174.1	146.9	118.6	117.2	107.1	94.2	90.4	91.8
72.5°	170.3	189.9	188.5	165.0	137.8	111.9	111.9	101.9	89.0	85.6	87.1
73°	160.7	178.9	177.5	155.5	129.2	105.7	106.2	96.6	84.2	80.4	82.3
73.5°	151.2	171.2	168.4	146.4	121.0	100.0	100.9	91.4	79.4	76.1	77.5
74°	141.6	161.2	158.8	136.8	113.4	94.7	95.7	86.6	74.6	71.3	72.7
74.5°	132.0	151.6	149.7	127.2	106.2	89.5	90.9	81.8	70.3	67.0	68.4
75°	123.4	142.1	140.2	119.1	99.0	84.7	85.6	77.0	66.0	63.1	64.1
75.5°	114.3	132.5	131.1	111.5	92.3	80.4	81.3	72.7	62.2	58.8	60.3
76°	106.2	123.9	122.5	103.8	86.1	76.1	77.0	68.4	57.9	55.0	56.4
76.5°	98.5	115.8	114.3	96.6	80.4	71.8	72.7	64.6	54.1	51.2	52.6
77°	90.9	108.1	106.7	89.9	74.6	67.9	68.4	60.3	50.7	47.8	49.3
77.5°	83.7	100.9	99.0	83.7	69.4	64.1	64.6	56.4	47.4	44.5	45.9
78°	77.0	93.8	91.8	77.5	64.1	60.3	60.7	52.6	44.0	41.1	42.6
78.5°	70.3	87.1	85.1	71.3	59.3	56.9	56.9	48.8	40.7	38.3	39.7
79°	64.1	80.8	78.4	66.0	55.0	53.6	53.1	45.4	37.8	35.4	36.8
79.5°	57.9	74.6	72.2	60.7	50.7	50.2	49.7	42.1	34.9	32.0	34.0
80°	52.1	68.9	66.5	55.5	47.4	46.9	46.4	39.2	31.6	29.2	30.6
80.5°	46.9	63.1	61.2	51.2	43.5	44.0	43.1	35.9	28.7	26.3	27.7
81°	41.6	57.9	56.0	46.9	40.7	41.1	40.2	32.5	26.3	23.9	25.4
81.5°	36.4	52.6	50.7	42.6	37.3	38.3	36.8	29.2	23.4	21.5	23.0
82°	31.6	47.8	45.9	38.7	34.4	34.9	34.0	26.3	21.0	19.1	20.6
82.5°	27.3	43.1	41.6	35.4	31.1	32.0	30.6	23.9	18.7	16.7	18.2
83°	23.0	38.7	37.3	32.0	28.2	29.2	27.7	21.0	16.3	14.4	16.3
83.5°	18.7	34.4	33.5	28.7	25.8	26.8	24.9	18.7	14.4	12.4	14.4
84°	15.3	30.1	29.7	25.4	23.0	24.4	22.5	16.3	12.4	10.0	12.4
84.5°	12.0	26.3	26.3	22.5	21.0	22.0	20.1	13.9	10.0	8.6	10.5
85°	8.6	22.5	23.0	20.1	18.7	19.6	17.7	12.0	8.1	6.7	9.1
85.5°	5.3	18.7	19.6	17.2	16.3	17.2	15.3	10.0	6.7	5.7	7.2
86°	3.8	16.3	17.2	15.3	14.4	15.3	13.4	8.6	5.3	4.8	5.7
86.5°	2.9	13.4	14.8	12.9	12.4	12.9	11.5	7.2	4.3	3.8	4.3
87°	2.4	10.5	12.0	10.5	10.5	11.0	9.6	5.7	3.3	2.9	2.9
87.5°	1.4	8.1	9.6	8.6	8.6	9.1	7.7	4.8	2.4	1.9	1.4
88°	1.0	5.7	7.2	6.7	7.2	7.2	6.2	3.3	1.4	1.0	0.5
88.5°	0.5	3.3	4.8	4.8	5.7	5.3	4.3	2.4	1.0	0.5	0.0



TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-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	0.0	0.5	1.0	1.0	0.5	0.0	0.0	0.0	0.0



TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2499.3	2499.3	2499.3	2499.3	2499.3	2499.3
0.5°	2493.6	2492.2	2501.3	2509.4	2516.1	2518.0
1°	2486.9	2491.7	2506.5	2520.4	2530.4	2532.8
1.5°	2479.7	2490.3	2511.3	2530.0	2543.8	2548.1
2°	2472.1	2488.8	2516.1	2540.0	2557.2	2563.0
2.5°	2464.4	2486.9	2519.9	2549.6	2569.7	2577.3
3°	2456.8	2485.0	2523.7	2558.2	2582.6	2591.2
3.5°	2448.2	2482.6	2527.6	2566.8	2594.1	2604.6
4°	2439.6	2479.7	2530.4	2574.9	2606.0	2617.5
4.5°	2430.5	2476.4	2533.3	2582.6	2617.0	2630.4
5°	2421.4	2473.0	2535.7	2590.2	2628.0	2642.9
5.5°	2412.3	2469.7	2538.1	2596.9	2638.5	2654.3
6°	2402.2	2465.9	2540.0	2603.6	2648.1	2665.8
6.5°	2392.7	2461.6	2541.0	2609.8	2657.7	2676.3
7°	2382.6	2456.8	2541.9	2615.6	2666.3	2686.9
7.5°	2372.1	2452.0	2542.9	2620.8	2674.9	2696.9
8°	2361.6	2446.7	2542.9	2625.6	2683.0	2706.0
8.5°	2350.6	2441.0	2542.9	2629.9	2690.7	2715.1
9°	2339.6	2435.7	2542.4	2633.8	2697.9	2723.7
9.5°	2328.1	2429.0	2541.4	2637.6	2704.6	2731.8
10°	2316.6	2422.8	2540.0	2640.5	2710.8	2739.5
10.5°	2305.1	2416.6	2538.6	2642.9	2716.5	2746.7
11°	2292.7	2409.4	2536.2	2645.2	2721.8	2753.3
11.5°	2280.7	2401.8	2533.8	2646.7	2726.1	2759.1
12°	2267.8	2394.1	2530.9	2648.1	2730.4	2764.8
12.5°	2254.9	2386.0	2527.6	2648.6	2734.2	2770.1
13°	2242.0	2377.8	2524.2	2649.1	2737.1	2774.4
13.5°	2229.1	2369.7	2519.9	2648.6	2739.5	2778.7
14°	2215.7	2360.6	2515.6	2648.1	2741.9	2782.0
14.5°	2201.8	2351.5	2510.8	2646.7	2743.3	2784.9
15°	2187.9	2342.0	2505.1	2645.2	2744.3	2787.3
15.5°	2174.1	2331.9	2499.3	2642.9	2744.7	2789.2
16°	2159.7	2322.4	2493.6	2640.5	2744.7	2790.7
16.5°	2145.4	2311.8	2487.4	2637.1	2744.3	2791.6
17°	2130.5	2301.3	2480.2	2633.8	2743.3	2792.1
17.5°	2115.7	2290.3	2473.0	2629.5	2741.9	2791.6
18°	2100.4	2278.8	2465.4	2625.2	2740.0	2791.1
18.5°	2085.1	2267.4	2457.3	2619.9	2737.1	2789.7
19°	2069.8	2255.4	2448.6	2614.6	2734.2	2788.3
19.5°	2054.0	2243.4	2440.0	2608.4	2730.4	2785.9
20°	2038.2	2230.5	2430.5	2602.2	2726.6	2783.0
20.5°	2022.4	2218.1	2420.9	2595.0	2721.8	2779.7
21°	2005.7	2205.2	2410.9	2587.8	2716.5	2775.8

TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1956.4	2163.6	2378.3	2563.0	2697.9	2761.0
23°	1939.2	2149.7	2366.4	2553.4	2690.7	2754.8
23.5°	1922.9	2135.3	2354.4	2543.8	2683.0	2748.6
24°	1905.2	2120.5	2342.0	2533.8	2674.4	2740.9
24.5°	1887.5	2105.7	2329.1	2522.8	2665.3	2733.3
25°	1870.3	2089.4	2315.7	2511.3	2655.8	2724.6
25.5°	1853.1	2074.1	2302.3	2499.3	2645.2	2715.6
26°	1835.4	2058.3	2288.4	2487.4	2635.2	2706.5
26.5°	1816.8	2043.0	2274.5	2474.5	2623.7	2695.9
27°	1799.1	2025.8	2259.7	2461.1	2612.2	2685.4
27.5°	1780.9	2008.6	2244.4	2447.7	2599.8	2673.9
28°	1762.7	1992.8	2228.6	2433.3	2586.4	2662.0
28.5°	1744.0	1975.6	2212.8	2418.5	2572.5	2649.1
29°	1725.4	1958.3	2196.6	2403.2	2558.2	2635.2
29.5°	1707.2	1941.1	2179.3	2386.9	2542.4	2620.4
30°	1688.1	1922.9	2163.1	2370.2	2526.1	2604.6
30.5°	1668.9	1905.2	2144.9	2352.5	2508.4	2588.3
31°	1650.3	1886.6	2127.7	2334.3	2490.3	2571.6
31.5°	1631.2	1869.4	2109.0	2314.7	2470.6	2553.4
32°	1612.0	1849.3	2089.9	2294.6	2451.0	2535.2
32.5°	1592.9	1830.6	2069.8	2274.0	2430.5	2515.1
33°	1573.3	1811.0	2048.7	2252.0	2409.4	2493.1
33.5°	1554.1	1792.4	2028.2	2229.6	2386.9	2470.2
34°	1534.5	1772.3	2005.2	2205.2	2362.1	2448.2
34.5°	1515.4	1751.7	1981.8	2180.3	2336.2	2423.8
35°	1495.3	1731.1	1957.9	2154.9	2309.9	2399.4
35.5°	1476.2	1709.1	1933.0	2128.6	2283.1	2373.1
36°	1456.6	1686.2	1907.6	2100.9	2254.9	2344.8
36.5°	1436.5	1663.7	1881.3	2072.2	2225.3	2316.1
37°	1416.4	1639.8	1853.1	2041.6	2193.7	2285.5
37.5°	1395.8	1613.9	1824.9	2010.0	2160.7	2254.0
38°	1375.7	1588.6	1793.8	1977.5	2125.8	2221.0
38.5°	1355.1	1562.8	1763.7	1943.0	2089.9	2185.6
39°	1334.1	1536.0	1730.6	1906.7	2052.1	2149.7
39.5°	1312.1	1507.7	1699.1	1868.4	2011.9	2110.9
40°	1289.6	1480.0	1664.6	1829.2	1969.8	2069.8
40.5°	1265.7	1451.3	1631.2	1791.4	1927.7	2027.2
41°	1242.3	1422.6	1597.2	1751.2	1884.7	1984.2
41.5°	1217.9	1394.4	1562.8	1711.5	1841.1	1940.6
42°	1193.0	1364.2	1528.8	1671.8	1796.7	1895.2
42.5°	1169.1	1334.6	1493.9	1632.1	1754.1	1851.2
43°	1144.2	1304.9	1458.0	1591.5	1711.5	1807.2
43.5°	1119.3	1275.7	1423.1	1551.3	1668.0	1762.7

TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1044.2	1184.4	1316.4	1432.2	1541.2	1631.6
45.5°	1019.4	1155.2	1281.0	1393.4	1500.1	1590.0
46°	994.0	1124.6	1245.6	1353.7	1458.5	1547.4
46.5°	969.1	1095.4	1211.2	1316.4	1418.8	1503.4
47°	943.3	1065.3	1176.7	1278.6	1378.1	1462.8
47.5°	917.5	1034.7	1140.9	1241.8	1337.9	1419.7
48°	892.6	1005.0	1106.9	1204.9	1298.7	1379.5
48.5°	867.7	975.3	1073.9	1170.0	1260.9	1340.3
49°	841.9	947.1	1041.4	1134.2	1222.6	1299.7
49.5°	817.5	917.0	1008.3	1099.2	1186.3	1261.4
50°	792.6	887.8	975.3	1065.3	1148.5	1222.2
50.5°	767.7	858.6	945.2	1031.3	1113.6	1182.9
51°	743.3	830.4	913.6	998.8	1078.2	1147.1
51.5°	720.4	801.7	884.0	966.3	1043.3	1110.2
52°	695.0	774.9	854.8	935.2	1009.8	1073.4
52.5°	671.1	748.1	825.6	904.5	976.8	1039.9
53°	647.7	720.4	796.9	873.9	944.3	1004.0
53.5°	624.7	694.1	769.2	844.8	913.2	971.0
54°	601.3	669.2	742.4	815.1	881.6	937.1
54.5°	579.3	643.9	715.6	787.8	851.9	904.5
55°	556.8	619.0	689.8	759.6	822.8	874.9
55.5°	534.3	595.5	664.9	733.3	794.1	843.3
56°	512.8	572.1	639.5	707.0	766.3	814.6
56.5°	491.7	549.1	615.6	681.6	738.1	784.5
57°	471.2	527.1	591.7	656.3	711.8	756.7
57.5°	451.1	505.1	569.2	631.9	685.9	729.5
58°	431.5	484.1	546.7	608.9	661.1	702.2
58.5°	413.3	463.0	524.3	585.5	636.2	676.4
59°	394.6	443.4	504.2	563.0	612.3	650.1
59.5°	376.0	423.8	482.2	541.0	589.8	625.2
60°	357.8	404.7	463.0	520.0	566.8	599.4
60.5°	341.1	386.5	443.4	498.9	545.8	575.0
61°	324.8	368.3	424.3	478.3	523.3	552.0
61.5°	308.5	351.1	406.1	459.7	502.7	529.0
62°	292.7	334.4	388.4	440.6	482.6	506.6
62.5°	277.9	318.1	370.7	421.9	462.6	484.6
63°	263.6	301.8	354.0	403.7	442.9	464.0
63.5°	249.7	286.5	337.2	387.0	423.8	443.4
64°	236.3	272.2	321.4	369.8	405.2	422.9
64.5°	223.9	257.8	306.6	353.5	387.9	403.2
65°	211.9	244.4	291.8	337.2	370.2	385.1
65.5°	199.9	231.5	277.4	322.4	353.5	367.4
66°	188.9	218.6	263.1	307.6	336.8	349.2



TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	158.8	183.7	225.3	266.0	291.3	300.9
68°	149.7	173.6	212.9	252.6	277.4	285.6
68.5°	140.6	164.1	201.4	240.1	263.6	271.2
69°	133.0	155.0	190.4	227.7	250.7	256.9
69.5°	124.8	145.9	179.9	216.2	237.3	243.0
70°	117.7	136.3	170.3	204.7	225.3	230.1
70.5°	110.5	127.2	160.7	193.7	213.3	217.6
71°	104.3	119.6	151.6	183.2	202.3	205.2
71.5°	97.6	111.9	142.5	173.2	190.9	193.3
72°	91.8	104.3	133.0	164.1	180.3	182.2
72.5°	86.1	97.6	124.8	155.0	169.8	170.3
73°	80.8	90.9	116.7	145.9	160.7	160.7
73.5°	75.6	85.1	109.5	136.8	151.6	151.2
74°	70.8	78.9	102.4	127.7	142.1	141.6
74.5°	66.0	73.2	95.7	119.6	133.0	132.0
75°	61.7	67.9	88.5	111.9	124.8	123.4
75.5°	57.9	62.7	82.3	104.3	116.7	114.3
76°	54.1	57.9	76.1	97.1	108.6	106.2
76.5°	50.7	53.1	70.3	89.9	100.9	98.5
77°	47.4	49.3	65.1	83.2	94.2	90.9
77.5°	44.0	45.4	59.8	77.0	87.5	83.7
78°	41.1	41.6	55.0	71.3	80.8	77.0
78.5°	38.3	38.3	50.2	65.5	74.6	70.3
79°	35.9	34.9	45.9	59.8	68.4	64.1
79.5°	33.0	31.6	42.1	54.5	62.7	57.9
80°	30.1	28.7	37.8	49.7	57.4	52.1
80.5°	27.7	26.3	34.4	45.0	52.1	46.9
81°	25.4	23.4	30.6	40.7	46.9	41.6
81.5°	23.0	21.0	27.7	36.4	42.1	36.4
82°	20.6	18.7	24.4	32.0	37.8	31.6
82.5°	18.7	16.7	21.5	28.7	33.5	27.3
83°	16.3	14.8	18.7	24.9	29.7	23.0
83.5°	14.4	12.4	16.3	21.5	25.8	18.7
84°	12.4	10.5	13.9	18.7	22.5	15.3
84.5°	10.5	8.6	11.5	15.8	19.1	12.0
85°	8.6	7.2	9.1	13.4	16.7	8.6
85.5°	6.7	5.3	7.2	10.5	13.9	5.3
86°	5.3	3.8	5.3	7.7	11.0	3.8
86.5°	3.8	2.4	3.3	5.3	8.6	2.9
87°	1.9	1.0	1.4	3.3	5.7	2.4
87.5°	1.0	0.5	0.5	1.4	3.3	1.4
88°	0.0	0.0	0.0	0.0	1.4	1.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.5



TEST NUMBER: P776708

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-4000K

**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°	2771.5	2747.1	2641.9	2465.9	2237.2	1998.0	1795.2	1666.1	1623.5	1668.9	1798.6
22°	2766.7	2741.9	2635.2	2456.8	2225.3	1981.8	1775.6	1644.5	1601.5	1648.4	1779.0



44°	1719.2	1763.2	1730.6	1607.7	1410.2	1152.8	931.8	806.5	765.4	803.6	920.8
44.5°	1676.1	1720.1	1693.3	1575.2	1383.4	1131.3	914.1	789.3	748.1	786.4	900.7



66.5°	332.0	353.5	352.5	320.5	281.7	222.0	193.7	183.7	168.4	164.6	157.9
67°	316.2	337.2	335.3	304.7	266.9	209.5	185.6	176.0	160.2	156.9	151.2



89°	0.0	1.4	2.9	2.9	3.8	3.8	2.9	1.4	0.0	0.0	0.0
89.5°	0.0	0.5	1.0	1.4	2.4	2.4	1.4	0.5	0.0	0.0	0.0



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21.5°	1989.9	2190.8	2400.3	2579.7	2711.3	2771.5
22°	1972.7	2178.4	2389.3	2571.6	2704.6	2766.7



44°	1094.0	1245.6	1387.7	1511.1	1624.9	1719.2
44.5°	1069.1	1215.0	1352.3	1471.4	1583.3	1676.1

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66.5°	177.9	206.6	250.2	293.2	321.4	332.0
67°	167.9	194.7	237.3	278.9	306.1	316.2

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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)