

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: P776706

Luminaire Tested: HCDJBS4050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776706  
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-3000K  
Description: 6 INCH ROUND MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

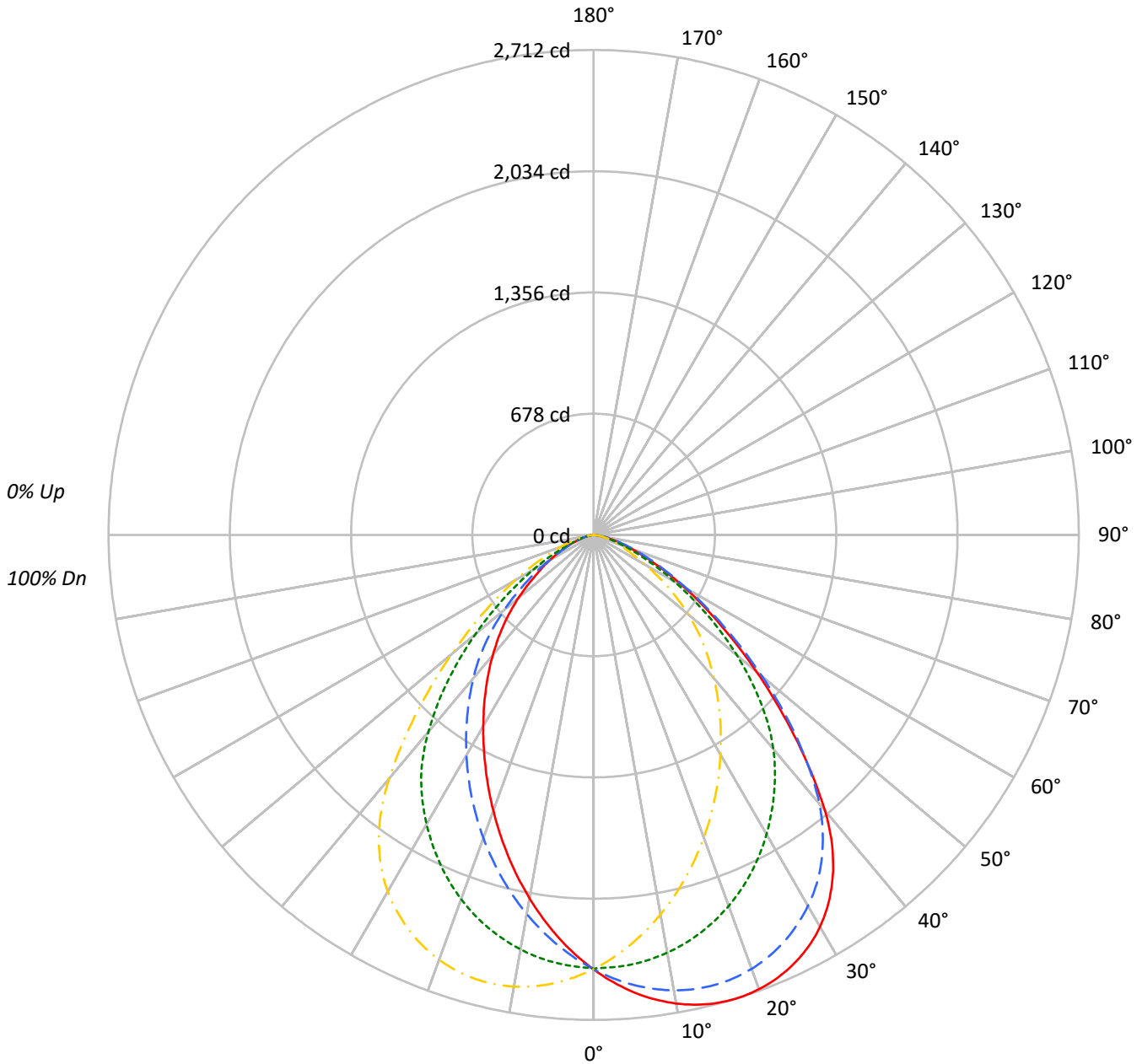
Lumens per Lamp: N/A  
Luminaire Lumens: 4773.0 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.23  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

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



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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°	133092	133092	133092	133092
5°	141272	132704	124345	132192
10°	148132	132039	114866	131010
15°	153661	130744	105194	129110
20°	157706	128811	95687	126402
25°	160086	125995	86563	122765
30°	160151	122297	78120	118240
35°	155978	117698	70276	112538
40°	143877	111795	62746	102878
45°	122873	102158	55114	89195
50°	101250	89123	46915	73550
55°	81221	73450	38011	57470
60°	63833	56903	31379	43100
65°	48514	41704	24529	30794
70°	35823	29268	18240	21222
75°	25396	20376	13577	13979
80°	15974	14522	9692	8808
85°	5284	11385	4969	4403

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 126331 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.7	4.8
10°-20°	643.8	13.5
20°-30°	941.2	19.7
30°-40°	1057.7	22.2
40°-50°	912.3	19.1
50°-60°	585.9	12.3
60°-70°	284.2	6.0
70°-80°	101.7	2.1
80°-90°	17.6	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°	1813.7	38.0
0°-40°	2871.4	60.2
0°-60°	4369.5	91.5
0°-90°	4773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4773.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2428	2428	2428	2428	2428	
5°	2567	2412	2260	2402	2567	248
15°	2708	2304	1854	2275	2708	766
25°	2647	2083	1431	2030	2647	1218
35°	2331	1759	1050	1682	2331	1445
45°	1585	1318	711	1150	1585	1222
55°	850	768	398	601	850	767
65°	374	322	189	237	374	379
75°	120	96	64	66	120	132
85°	8	18	8	7	8	16
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°	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8
0.5°	2445.9	2444.1	2440.3	2434.8	2421.8	2418.5	2416.6	2415.7	2414.8	2415.3	2418.0
1°	2460.3	2458.0	2451.0	2440.3	2421.8	2412.9	2405.5	2401.3	2398.5	2399.9	2406.0
1.5°	2475.2	2471.9	2461.3	2445.9	2421.8	2406.0	2393.9	2386.0	2382.3	2384.6	2394.3
2°	2489.6	2485.4	2471.5	2451.5	2421.3	2399.5	2382.3	2370.6	2366.0	2369.7	2381.8
2.5°	2503.5	2498.0	2481.7	2456.1	2420.4	2392.5	2369.7	2354.8	2348.8	2353.5	2369.3
3°	2517.0	2510.5	2490.5	2460.8	2419.0	2385.5	2357.6	2339.0	2331.2	2337.2	2356.2
3.5°	2530.0	2522.6	2500.3	2465.4	2417.6	2378.1	2344.6	2322.3	2314.0	2320.9	2343.7
4°	2542.6	2535.1	2508.6	2469.2	2415.7	2370.2	2331.6	2305.6	2295.8	2304.2	2330.2
4.5°	2555.1	2545.8	2517.5	2472.9	2413.9	2361.8	2318.1	2288.9	2277.7	2287.5	2316.7
5°	2567.2	2557.4	2525.4	2476.1	2411.5	2353.9	2304.7	2271.7	2259.6	2269.8	2302.8
5.5°	2578.3	2567.7	2533.3	2479.4	2408.7	2344.6	2290.7	2254.5	2241.0	2252.6	2288.9
6°	2589.5	2577.9	2540.7	2482.2	2406.0	2335.8	2276.8	2236.4	2221.5	2235.0	2274.5
6.5°	2599.7	2587.6	2547.7	2484.5	2402.7	2327.0	2261.9	2218.7	2202.9	2216.8	2260.1
7°	2609.9	2596.9	2554.2	2486.8	2399.0	2317.2	2247.5	2200.6	2183.4	2199.2	2245.2
7.5°	2619.7	2605.8	2560.7	2488.2	2395.3	2307.5	2232.6	2182.0	2163.9	2181.1	2230.3
8°	2628.5	2614.6	2566.3	2489.6	2391.1	2297.7	2217.3	2163.9	2143.9	2162.0	2215.0
8.5°	2637.4	2623.0	2571.8	2491.0	2386.9	2287.5	2201.5	2144.4	2124.4	2143.4	2199.7
9°	2645.7	2630.4	2577.0	2491.5	2382.3	2276.8	2186.2	2125.8	2103.9	2124.8	2184.3
9.5°	2653.6	2637.8	2581.6	2492.4	2377.2	2266.1	2170.4	2106.7	2083.5	2105.3	2168.1
10°	2661.1	2644.8	2585.8	2492.4	2372.0	2254.9	2154.6	2087.7	2063.5	2086.3	2152.7
10.5°	2668.0	2651.3	2590.0	2491.9	2366.5	2243.8	2138.3	2068.2	2043.5	2067.2	2136.5
11°	2674.5	2656.9	2593.7	2491.5	2360.9	2232.2	2121.6	2048.2	2022.2	2047.7	2120.2
11.5°	2680.1	2662.4	2596.5	2490.5	2354.4	2220.1	2104.9	2028.7	2001.2	2028.2	2103.5
12°	2685.7	2667.1	2599.3	2489.1	2348.3	2208.5	2088.1	2008.7	1980.8	2008.7	2087.2
12.5°	2690.8	2671.7	2601.6	2487.7	2341.4	2195.9	2071.4	1988.7	1959.9	1988.2	2070.5
13°	2695.0	2675.5	2603.4	2485.9	2334.9	2183.9	2054.2	1968.7	1938.5	1968.7	2053.3
13.5°	2699.2	2679.2	2604.8	2483.1	2327.4	2171.3	2037.0	1948.7	1917.6	1948.7	2036.6
14°	2702.4	2682.0	2605.8	2480.8	2320.0	2158.3	2019.4	1927.8	1896.2	1928.8	2019.4
14.5°	2705.2	2684.7	2605.8	2477.5	2312.1	2145.3	2001.7	1907.4	1875.3	1907.9	2001.7
15°	2707.5	2686.6	2606.2	2473.8	2303.7	2131.8	1984.1	1886.9	1853.5	1887.9	1984.1
15.5°	2709.4	2688.0	2605.8	2470.1	2295.8	2118.3	1965.9	1867.0	1832.6	1867.9	1966.4
16°	2710.8	2689.4	2604.8	2466.4	2287.0	2104.9	1948.3	1846.1	1811.2	1847.4	1948.7
16.5°	2711.7	2689.4	2603.9	2461.7	2278.2	2090.5	1929.7	1825.1	1789.8	1827.0	1931.1
17°	2712.2	2689.4	2602.0	2456.6	2268.9	2076.5	1912.0	1804.7	1768.5	1806.6	1913.0
17.5°	2711.7	2689.4	2599.7	2451.0	2259.6	2062.1	1893.4	1783.8	1746.6	1785.7	1894.8
18°	2711.2	2688.5	2597.4	2445.9	2249.8	2047.7	1874.9	1762.9	1725.7	1765.7	1876.7
18.5°	2709.8	2687.1	2593.7	2439.4	2239.6	2032.8	1856.3	1742.4	1704.3	1744.8	1858.1
19°	2708.4	2685.2	2590.4	2433.4	2228.9	2018.0	1837.7	1721.5	1683.0	1723.9	1840.0
19.5°	2706.1	2682.9	2586.2	2426.4	2218.7	2003.1	1819.6	1700.6	1661.6	1703.9	1821.9
20°	2703.3	2680.1	2582.1	2419.0	2208.0	1987.8	1801.0	1680.2	1640.2	1683.4	1803.3
20.5°	2700.1	2676.4	2577.0	2411.5	2196.4	1972.4	1781.5	1659.7	1619.8	1662.5	1784.7
21°	2696.4	2672.7	2571.8	2403.6	2184.8	1956.6	1762.4	1638.8	1597.9	1642.1	1765.7



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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°	2682.0	2658.3	2553.3	2377.2	2149.0	1908.8	1706.2	1577.5	1535.2	1580.7	1709.4
23°	2675.9	2652.2	2545.8	2367.9	2136.5	1892.5	1686.7	1556.6	1513.8	1560.3	1690.4
23.5°	2669.9	2645.7	2538.4	2358.1	2123.5	1876.3	1667.6	1536.6	1493.4	1539.9	1671.3
24°	2662.4	2638.7	2530.0	2347.4	2110.4	1859.5	1648.6	1515.7	1472.5	1519.4	1652.8
24.5°	2655.0	2631.3	2521.7	2337.2	2097.0	1843.3	1629.1	1495.7	1451.6	1499.0	1633.7
25°	2646.6	2623.4	2512.4	2326.0	2083.0	1826.5	1609.5	1474.8	1431.1	1479.0	1614.7
25.5°	2637.8	2614.6	2503.1	2314.9	2069.6	1809.3	1591.0	1455.3	1411.1	1459.0	1595.6
26°	2629.0	2605.8	2493.3	2302.8	2055.1	1792.2	1571.9	1434.8	1391.2	1439.0	1576.1
26.5°	2618.8	2596.0	2482.6	2291.2	2040.7	1775.0	1552.4	1414.9	1370.7	1418.6	1557.0
27°	2608.5	2585.8	2471.5	2278.2	2026.3	1757.8	1532.9	1394.9	1350.7	1399.1	1538.0
27.5°	2597.4	2575.1	2460.3	2265.6	2011.0	1740.1	1513.8	1375.8	1330.8	1379.1	1518.9
28°	2585.8	2563.5	2448.2	2252.2	1995.7	1722.5	1494.8	1355.8	1311.2	1359.6	1499.9
28.5°	2573.2	2551.9	2435.7	2238.7	1980.3	1704.8	1475.7	1336.3	1291.7	1340.1	1480.8
29°	2559.8	2539.3	2422.7	2224.3	1964.5	1687.1	1456.2	1316.4	1272.7	1320.5	1461.3
29.5°	2545.4	2525.8	2409.7	2210.3	1948.7	1669.0	1437.2	1297.8	1253.2	1300.6	1442.3
30°	2530.0	2511.9	2395.7	2195.9	1932.0	1651.4	1417.6	1278.3	1234.1	1281.5	1422.8
30.5°	2514.2	2497.0	2381.3	2180.1	1915.8	1633.2	1399.1	1259.2	1215.1	1262.0	1403.7
31°	2498.0	2481.2	2366.5	2164.8	1899.5	1614.7	1380.0	1240.6	1196.5	1242.9	1384.7
31.5°	2480.3	2464.5	2351.1	2149.0	1881.8	1596.5	1361.0	1221.6	1177.4	1223.9	1365.1
32°	2462.6	2446.8	2334.9	2132.7	1865.1	1578.4	1341.9	1203.0	1159.3	1204.8	1346.6
32.5°	2443.1	2428.3	2317.7	2116.0	1847.9	1559.8	1322.9	1184.4	1140.7	1186.3	1327.5
33°	2421.8	2409.2	2300.0	2099.3	1830.3	1540.8	1303.8	1166.3	1122.6	1167.7	1307.5
33.5°	2399.5	2389.2	2281.4	2082.1	1813.1	1522.2	1285.2	1148.2	1104.5	1148.6	1288.5
34°	2378.1	2368.8	2261.9	2064.0	1794.9	1503.6	1266.2	1129.6	1086.4	1131.0	1269.9
34.5°	2354.4	2346.5	2241.5	2045.4	1776.8	1485.0	1247.6	1111.4	1067.8	1112.4	1250.8
35°	2330.7	2323.7	2220.6	2026.8	1758.7	1466.4	1229.0	1093.3	1050.1	1093.8	1231.8
35.5°	2305.1	2300.5	2198.7	2007.3	1740.6	1447.4	1210.4	1075.7	1032.5	1076.1	1212.7
36°	2277.7	2275.4	2176.4	1987.3	1722.0	1428.8	1192.3	1058.0	1015.3	1058.0	1194.2
36.5°	2249.8	2249.8	2153.2	1965.9	1702.5	1409.7	1173.7	1039.9	997.1	1039.9	1175.1
37°	2220.1	2222.9	2129.0	1944.6	1683.9	1391.2	1155.1	1022.2	979.9	1021.8	1156.5
37.5°	2189.4	2194.5	2103.9	1921.8	1664.4	1371.6	1137.0	1005.0	962.3	1004.1	1137.5
38°	2157.4	2165.7	2077.9	1899.0	1644.4	1352.6	1118.4	987.4	945.1	986.5	1118.9
38.5°	2123.0	2135.5	2051.0	1875.3	1624.4	1334.0	1100.3	970.2	928.4	968.8	1100.3
39°	2088.1	2103.9	2023.1	1850.7	1604.4	1314.5	1082.6	952.5	911.2	951.1	1082.2
39.5°	2050.5	2069.6	1994.3	1825.1	1583.5	1295.9	1064.5	935.8	894.0	933.5	1064.0
40°	2010.5	2033.8	1963.6	1798.7	1562.2	1276.4	1045.9	918.6	876.8	916.3	1045.5
40.5°	1969.2	1997.1	1931.1	1771.7	1539.9	1257.3	1028.3	901.4	860.1	899.1	1027.3
41°	1927.4	1959.0	1897.6	1743.4	1517.5	1238.8	1010.1	884.2	843.3	881.4	1009.7
41.5°	1885.1	1918.1	1863.2	1714.6	1494.3	1219.7	992.5	867.0	826.1	864.7	991.1
42°	1840.9	1877.7	1828.4	1684.8	1471.1	1200.7	974.4	850.3	809.9	847.5	972.5
42.5°	1798.2	1836.8	1792.6	1655.1	1446.5	1181.1	957.2	833.6	793.2	830.8	953.5
43°	1755.4	1795.4	1755.9	1624.4	1420.9	1161.2	939.5	816.9	776.4	814.1	933.9
43.5°	1712.2	1754.1	1718.3	1593.3	1395.8	1140.7	922.3	800.1	760.2	797.3	914.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1584.9	1629.5	1607.2	1498.0	1317.7	1077.1	870.8	750.4	710.9	747.6	855.0
45.5°	1544.5	1588.6	1568.7	1465.5	1290.3	1054.8	853.6	734.1	694.7	731.4	834.5
46°	1503.1	1547.3	1530.6	1433.4	1263.8	1032.9	835.9	717.4	678.4	714.6	814.1
46.5°	1460.4	1505.5	1492.5	1400.0	1236.4	1010.6	818.2	701.2	661.7	697.9	794.6
47°	1420.9	1464.6	1454.4	1367.0	1209.0	988.3	799.7	684.9	645.9	680.7	774.1
47.5°	1379.1	1424.2	1415.3	1333.1	1181.6	965.5	781.5	668.6	629.6	664.0	753.2
48°	1340.1	1384.2	1377.2	1300.1	1154.7	943.2	763.4	652.8	613.8	646.8	732.8
48.5°	1302.0	1345.2	1339.1	1266.2	1126.8	920.9	744.8	636.1	597.5	629.6	712.8
49°	1262.5	1306.1	1301.0	1233.2	1099.4	898.2	726.2	619.8	581.3	612.4	692.3
49.5°	1225.3	1267.1	1264.3	1199.3	1071.5	875.4	707.7	604.0	565.5	595.2	671.9
50°	1187.2	1228.5	1225.7	1165.3	1045.0	852.6	689.5	588.2	550.1	578.5	651.4
50.5°	1149.1	1190.9	1189.5	1131.4	1016.7	829.4	670.5	571.5	534.3	560.8	631.9
51°	1114.2	1153.7	1153.3	1098.9	988.3	806.2	651.4	554.8	518.1	543.2	611.5
51.5°	1078.5	1117.5	1117.5	1065.9	960.9	784.3	632.9	539.0	502.8	526.4	592.4
52°	1042.7	1081.7	1082.2	1033.4	933.5	761.6	614.3	523.2	487.4	509.3	572.4
52.5°	1010.1	1046.4	1047.3	999.9	905.1	738.8	595.2	506.5	471.6	492.5	552.9
53°	975.3	1012.5	1012.9	968.3	877.3	716.0	577.1	490.2	456.3	475.3	533.4
53.5°	943.2	978.6	979.5	936.7	849.8	693.7	558.5	474.4	440.5	458.6	514.4
54°	910.2	945.1	946.5	905.6	822.9	671.4	539.5	458.1	425.6	441.9	495.3
54.5°	878.7	913.0	914.9	874.5	795.5	649.6	521.3	441.9	410.3	425.6	476.7
55°	849.8	881.4	882.4	843.8	768.5	628.2	503.2	426.5	397.7	410.3	458.1
55.5°	819.2	850.8	851.7	814.1	741.6	605.9	485.1	410.8	385.7	394.5	440.5
56°	791.3	820.6	821.5	784.8	715.1	584.1	467.0	396.3	373.1	379.2	422.4
56.5°	762.0	791.3	791.8	755.5	689.5	563.2	449.3	381.9	360.6	363.8	405.6
57°	735.1	762.5	763.0	727.2	664.0	541.8	432.1	367.5	351.7	348.5	388.9
57.5°	708.6	734.6	734.1	699.8	638.9	520.4	414.9	353.1	341.1	333.6	371.7
58°	682.1	707.7	706.7	672.8	613.3	500.4	398.7	344.8	329.9	319.7	355.0
58.5°	657.0	681.2	680.2	646.8	589.2	480.0	381.9	335.0	318.8	307.6	338.3
59°	631.5	655.2	654.2	620.8	565.5	460.0	365.7	324.3	307.6	298.3	322.5
59.5°	607.3	631.0	629.1	595.7	541.8	440.5	349.4	313.2	296.9	288.5	307.1
60°	582.2	606.4	604.0	571.5	519.0	421.4	333.2	302.5	286.2	278.8	292.3
60.5°	558.5	582.2	579.9	547.4	496.2	402.9	317.8	291.3	275.5	268.6	278.3
61°	536.2	558.5	556.7	524.6	474.9	384.7	303.0	280.6	265.3	258.3	264.9
61.5°	513.9	536.2	533.9	501.8	454.0	366.1	289.5	270.0	255.6	248.6	251.4
62°	492.1	513.9	512.5	480.0	433.5	348.0	276.0	259.7	245.8	238.8	239.3
62.5°	470.7	492.5	491.1	459.1	414.5	331.8	263.0	250.0	236.0	229.5	227.2
63°	450.7	471.6	470.2	438.6	395.4	315.0	250.4	240.2	226.3	220.2	215.6
63.5°	430.7	451.6	450.2	418.6	376.4	299.2	240.2	230.9	217.0	211.4	204.9
64°	410.8	431.7	430.7	398.7	357.3	283.9	231.4	221.6	207.7	202.6	194.7
64.5°	391.7	413.5	412.1	380.1	338.7	269.0	222.6	212.8	198.4	193.8	184.9
65°	374.0	395.0	393.6	362.0	321.5	255.1	213.7	204.0	189.1	184.9	176.1
65.5°	356.9	377.3	375.9	344.8	305.3	241.2	205.4	195.6	180.7	176.6	167.7
66°	339.2	359.6	358.7	328.0	289.0	227.7	196.5	186.8	172.4	168.2	160.3





TEST NUMBER: P776706

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	292.3	311.8	310.9	281.1	244.9	192.4	172.8	163.1	148.2	144.5	140.3
68°	277.4	296.9	296.0	266.2	231.4	181.7	165.4	155.7	140.8	137.1	134.3
68.5°	263.5	282.5	281.1	252.3	217.9	171.5	158.0	148.2	133.8	130.1	128.2
69°	249.5	269.0	267.2	238.8	205.8	162.2	151.0	141.3	126.8	123.1	122.2
69.5°	236.0	255.6	254.2	225.8	193.8	152.9	144.5	134.3	120.3	116.6	116.6
70°	223.5	242.1	240.7	213.3	182.6	144.5	138.0	127.8	113.8	110.1	110.6
70.5°	211.4	230.0	228.6	201.7	171.5	136.6	132.0	121.7	108.3	104.1	105.0
71°	199.3	217.9	216.5	190.0	161.7	129.2	125.9	115.7	102.2	98.5	99.9
71.5°	187.7	206.8	204.9	179.4	151.9	121.7	119.9	109.7	96.6	92.9	94.8
72°	177.0	195.2	193.8	169.1	142.6	115.2	113.8	104.1	91.5	87.8	89.2
72.5°	165.4	184.5	183.1	160.3	133.8	108.7	108.7	99.0	86.4	83.2	84.6
73°	156.1	173.8	172.4	151.0	125.5	102.7	103.2	93.9	81.8	78.1	79.9
73.5°	146.8	166.3	163.6	142.2	117.6	97.1	98.0	88.7	77.1	73.9	75.3
74°	137.5	156.6	154.3	132.9	110.1	92.0	92.9	84.1	72.5	69.2	70.6
74.5°	128.2	147.3	145.4	123.6	103.2	86.9	88.3	79.5	68.3	65.1	66.4
75°	119.9	138.0	136.1	115.7	96.2	82.2	83.2	74.8	64.1	61.3	62.3
75.5°	111.1	128.7	127.3	108.3	89.7	78.1	79.0	70.6	60.4	57.2	58.5
76°	103.2	120.3	119.0	100.8	83.6	73.9	74.8	66.4	56.2	53.4	54.8
76.5°	95.7	112.4	111.1	93.9	78.1	69.7	70.6	62.7	52.5	49.7	51.1
77°	88.3	105.0	103.6	87.4	72.5	66.0	66.4	58.5	49.3	46.5	47.9
77.5°	81.3	98.0	96.2	81.3	67.4	62.3	62.7	54.8	46.0	43.2	44.6
78°	74.8	91.1	89.2	75.3	62.3	58.5	59.0	51.1	42.7	40.0	41.4
78.5°	68.3	84.6	82.7	69.2	57.6	55.3	55.3	47.4	39.5	37.2	38.6
79°	62.3	78.5	76.2	64.1	53.4	52.0	51.6	44.1	36.7	34.4	35.8
79.5°	56.2	72.5	70.2	59.0	49.3	48.8	48.3	40.9	33.9	31.1	33.0
80°	50.6	66.9	64.6	53.9	46.0	45.5	45.1	38.1	30.7	28.3	29.7
80.5°	45.5	61.3	59.5	49.7	42.3	42.7	41.8	34.8	27.9	25.6	26.9
81°	40.4	56.2	54.4	45.5	39.5	40.0	39.0	31.6	25.6	23.2	24.6
81.5°	35.3	51.1	49.3	41.4	36.2	37.2	35.8	28.3	22.8	20.9	22.3
82°	30.7	46.5	44.6	37.6	33.5	33.9	33.0	25.6	20.4	18.6	20.0
82.5°	26.5	41.8	40.4	34.4	30.2	31.1	29.7	23.2	18.1	16.3	17.7
83°	22.3	37.6	36.2	31.1	27.4	28.3	26.9	20.4	15.8	13.9	15.8
83.5°	18.1	33.5	32.5	27.9	25.1	26.0	24.2	18.1	13.9	12.1	13.9
84°	14.9	29.3	28.8	24.6	22.3	23.7	21.8	15.8	12.1	9.8	12.1
84.5°	11.6	25.6	25.6	21.8	20.4	21.4	19.5	13.5	9.8	8.4	10.2
85°	8.4	21.8	22.3	19.5	18.1	19.1	17.2	11.6	7.9	6.5	8.8
85.5°	5.1	18.1	19.1	16.7	15.8	16.7	14.9	9.8	6.5	5.6	7.0
86°	3.7	15.8	16.7	14.9	13.9	14.9	13.0	8.4	5.1	4.6	5.6
86.5°	2.8	13.0	14.4	12.5	12.1	12.5	11.2	7.0	4.2	3.7	4.2
87°	2.3	10.2	11.6	10.2	10.2	10.7	9.3	5.6	3.3	2.8	2.8
87.5°	1.4	7.9	9.3	8.4	8.4	8.8	7.4	4.6	2.3	1.9	1.4
88°	0.9	5.6	7.0	6.5	7.0	7.0	6.0	3.3	1.4	0.9	0.5
88.5°	0.5	3.3	4.6	4.6	5.6	5.1	4.2	2.3	0.9	0.5	0.0



TEST NUMBER: P776706

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**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	0.9	0.9	0.5	0.0	0.0	0.0	0.0



TEST NUMBER: P776706

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2427.8	2427.8	2427.8	2427.8	2427.8	2427.8
0.5°	2422.2	2420.8	2429.7	2437.6	2444.1	2445.9
1°	2415.7	2420.4	2434.8	2448.2	2458.0	2460.3
1.5°	2408.7	2419.0	2439.4	2457.5	2471.0	2475.2
2°	2401.3	2417.6	2444.1	2467.3	2484.0	2489.6
2.5°	2393.9	2415.7	2447.8	2476.6	2496.1	2503.5
3°	2386.4	2413.9	2451.5	2484.9	2508.6	2517.0
3.5°	2378.1	2411.5	2455.2	2493.3	2519.8	2530.0
4°	2369.7	2408.7	2458.0	2501.2	2531.4	2542.6
4.5°	2360.9	2405.5	2460.8	2508.6	2542.1	2555.1
5°	2352.1	2402.2	2463.1	2516.1	2552.8	2567.2
5.5°	2343.2	2399.0	2465.4	2522.6	2563.0	2578.3
6°	2333.5	2395.3	2467.3	2529.1	2572.3	2589.5
6.5°	2324.2	2391.1	2468.2	2535.1	2581.6	2599.7
7°	2314.4	2386.4	2469.2	2540.7	2590.0	2609.9
7.5°	2304.2	2381.8	2470.1	2545.8	2598.3	2619.7
8°	2294.0	2376.7	2470.1	2550.5	2606.2	2628.5
8.5°	2283.3	2371.1	2470.1	2554.6	2613.7	2637.4
9°	2272.6	2366.0	2469.6	2558.4	2620.6	2645.7
9.5°	2261.5	2359.5	2468.7	2562.1	2627.1	2653.6
10°	2250.3	2353.5	2467.3	2564.9	2633.2	2661.1
10.5°	2239.1	2347.4	2465.9	2567.2	2638.7	2668.0
11°	2227.1	2340.4	2463.6	2569.5	2643.9	2674.5
11.5°	2215.5	2333.0	2461.3	2570.9	2648.0	2680.1
12°	2202.9	2325.6	2458.5	2572.3	2652.2	2685.7
12.5°	2190.4	2317.7	2455.2	2572.8	2655.9	2690.8
13°	2177.8	2309.8	2452.0	2573.2	2658.7	2695.0
13.5°	2165.3	2301.9	2447.8	2572.8	2661.1	2699.2
14°	2152.3	2293.0	2443.6	2572.3	2663.4	2702.4
14.5°	2138.8	2284.2	2438.9	2570.9	2664.8	2705.2
15°	2125.3	2274.9	2433.4	2569.5	2665.7	2707.5
15.5°	2111.8	2265.2	2427.8	2567.2	2666.2	2709.4
16°	2097.9	2255.9	2422.2	2564.9	2666.2	2710.8
16.5°	2084.0	2245.7	2416.2	2561.6	2665.7	2711.7
17°	2069.6	2235.4	2409.2	2558.4	2664.8	2712.2
17.5°	2055.1	2224.7	2402.2	2554.2	2663.4	2711.7
18°	2040.3	2213.6	2394.8	2550.0	2661.5	2711.2
18.5°	2025.4	2202.4	2386.9	2544.9	2658.7	2709.8
19°	2010.5	2190.8	2378.5	2539.8	2655.9	2708.4
19.5°	1995.2	2179.2	2370.2	2533.7	2652.2	2706.1
20°	1979.9	2166.7	2360.9	2527.7	2648.5	2703.3
20.5°	1964.5	2154.6	2351.6	2520.7	2643.9	2700.1
21°	1948.3	2142.0	2341.8	2513.8	2638.7	2696.4

TEST NUMBER: P776706

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1900.4	2101.6	2310.2	2489.6	2620.6	2682.0
23°	1883.7	2088.1	2298.6	2480.3	2613.7	2675.9
23.5°	1867.9	2074.2	2287.0	2471.0	2606.2	2669.9
24°	1850.7	2059.8	2274.9	2461.3	2597.9	2662.4
24.5°	1833.5	2045.4	2262.4	2450.6	2589.0	2655.0
25°	1816.8	2029.6	2249.4	2439.4	2579.7	2646.6
25.5°	1800.1	2014.7	2236.4	2427.8	2569.5	2637.8
26°	1782.9	1999.4	2222.9	2416.2	2559.8	2629.0
26.5°	1764.7	1984.5	2209.4	2403.6	2548.6	2618.8
27°	1747.5	1967.8	2195.0	2390.6	2537.5	2608.5
27.5°	1729.9	1951.1	2180.1	2377.6	2525.4	2597.4
28°	1712.2	1935.7	2164.8	2363.7	2512.4	2585.8
28.5°	1694.1	1919.0	2149.5	2349.3	2498.9	2573.2
29°	1676.0	1902.3	2133.7	2334.4	2484.9	2559.8
29.5°	1658.3	1885.6	2116.9	2318.6	2469.6	2545.4
30°	1639.8	1867.9	2101.1	2302.3	2453.8	2530.0
30.5°	1621.2	1850.7	2083.5	2285.1	2436.6	2514.2
31°	1603.0	1832.6	2066.8	2267.5	2419.0	2498.0
31.5°	1584.5	1815.9	2048.6	2248.4	2399.9	2480.3
32°	1565.9	1796.3	2030.1	2228.9	2380.9	2462.6
32.5°	1547.3	1778.2	2010.5	2208.9	2360.9	2443.1
33°	1528.2	1759.2	1990.1	2187.6	2340.4	2421.8
33.5°	1509.6	1741.0	1970.1	2165.7	2318.6	2399.5
34°	1490.6	1721.5	1947.8	2142.0	2294.4	2378.1
34.5°	1472.0	1701.5	1925.0	2117.9	2269.4	2354.4
35°	1452.5	1681.6	1901.8	2093.2	2243.8	2330.7
35.5°	1433.9	1660.2	1877.7	2067.7	2217.8	2305.1
36°	1414.9	1637.9	1853.0	2040.7	2190.4	2277.7
36.5°	1395.3	1616.1	1827.5	2012.9	2161.6	2249.8
37°	1375.8	1592.8	1800.1	1983.1	2130.9	2220.1
37.5°	1355.8	1567.7	1772.6	1952.5	2098.8	2189.4
38°	1336.3	1543.1	1742.4	1920.9	2064.9	2157.4
38.5°	1316.4	1518.0	1713.2	1887.4	2030.1	2123.0
39°	1295.9	1492.0	1681.1	1852.1	1993.3	2088.1
39.5°	1274.5	1464.6	1650.4	1814.9	1954.3	2050.5
40°	1252.7	1437.6	1617.0	1776.8	1913.4	2010.5
40.5°	1229.5	1409.7	1584.5	1740.1	1872.5	1969.2
41°	1206.7	1381.9	1551.5	1701.1	1830.7	1927.4
41.5°	1183.0	1354.5	1518.0	1662.5	1788.4	1885.1
42°	1158.8	1325.2	1485.0	1624.0	1745.2	1840.9
42.5°	1135.6	1296.4	1451.1	1585.4	1703.9	1798.2
43°	1111.4	1267.6	1416.3	1545.9	1662.5	1755.4
43.5°	1087.3	1239.2	1382.3	1506.9	1620.2	1712.2

TEST NUMBER: P776706

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1014.3	1150.5	1278.7	1391.2	1497.1	1584.9
45.5°	990.2	1122.1	1244.3	1353.5	1457.1	1544.5
46°	965.5	1092.4	1209.9	1315.0	1416.7	1503.1
46.5°	941.4	1064.0	1176.5	1278.7	1378.2	1460.4
47°	916.3	1034.8	1143.0	1242.0	1338.7	1420.9
47.5°	891.2	1005.0	1108.2	1206.2	1299.6	1379.1
48°	867.0	976.2	1075.2	1170.5	1261.5	1340.1
48.5°	842.9	947.4	1043.1	1136.5	1224.8	1302.0
49°	817.8	920.0	1011.5	1101.7	1187.6	1262.5
49.5°	794.1	890.7	979.5	1067.8	1152.3	1225.3
50°	769.9	862.4	947.4	1034.8	1115.6	1187.2
50.5°	745.8	834.0	918.1	1001.8	1081.7	1149.1
51°	722.1	806.6	887.5	970.2	1047.3	1114.2
51.5°	699.8	778.8	858.7	938.6	1013.4	1078.5
52°	675.1	752.7	830.3	908.4	980.9	1042.7
52.5°	651.9	726.7	802.0	878.7	948.8	1010.1
53°	629.1	699.8	774.1	848.9	917.2	975.3
53.5°	606.8	674.2	747.2	820.6	887.0	943.2
54°	584.1	650.0	721.1	791.8	856.4	910.2
54.5°	562.7	625.4	695.1	765.3	827.5	878.7
55°	540.9	601.3	670.0	737.9	799.2	849.8
55.5°	519.0	578.5	645.9	712.3	771.3	819.2
56°	498.1	555.7	621.2	686.8	744.4	791.3
56.5°	477.7	533.4	598.0	662.1	717.0	762.0
57°	457.7	512.0	574.8	637.5	691.4	735.1
57.5°	438.2	490.7	552.9	613.8	666.3	708.6
58°	419.1	470.2	531.1	591.5	642.1	682.1
58.5°	401.5	449.8	509.3	568.7	618.0	657.0
59°	383.3	430.7	489.7	546.9	594.8	631.5
59.5°	365.2	411.7	468.4	525.5	572.9	607.3
60°	347.6	393.1	449.8	505.1	550.6	582.2
60.5°	331.3	375.4	430.7	484.6	530.2	558.5
61°	315.5	357.8	412.1	464.7	508.3	536.2
61.5°	299.7	341.1	394.5	446.5	488.3	513.9
62°	284.4	324.8	377.3	427.9	468.8	492.1
62.5°	270.0	309.0	360.1	409.8	449.3	470.7
63°	256.0	293.2	343.8	392.2	430.3	450.7
63.5°	242.5	278.3	327.6	375.9	411.7	430.7
64°	229.5	264.4	312.2	359.2	393.6	410.8
64.5°	217.5	250.4	297.8	343.4	376.8	391.7
65°	205.8	237.4	283.4	327.6	359.6	374.0
65.5°	194.2	224.9	269.5	313.2	343.4	356.9
66°	183.5	212.3	255.6	298.8	327.1	339.2



TEST NUMBER: P776706

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	154.3	178.4	218.9	258.3	283.0	292.3
68°	145.4	168.7	206.8	245.3	269.5	277.4
68.5°	136.6	159.4	195.6	233.3	256.0	263.5
69°	129.2	150.5	184.9	221.2	243.5	249.5
69.5°	121.3	141.7	174.7	210.0	230.5	236.0
70°	114.3	132.4	165.4	198.9	218.9	223.5
70.5°	107.3	123.6	156.1	188.2	207.2	211.4
71°	101.3	116.2	147.3	178.0	196.5	199.3
71.5°	94.8	108.7	138.5	168.2	185.4	187.7
72°	89.2	101.3	129.2	159.4	175.2	177.0
72.5°	83.6	94.8	121.3	150.5	165.0	165.4
73°	78.5	88.3	113.4	141.7	156.1	156.1
73.5°	73.4	82.7	106.4	132.9	147.3	146.8
74°	68.8	76.7	99.4	124.1	138.0	137.5
74.5°	64.1	71.1	92.9	116.2	129.2	128.2
75°	59.9	66.0	86.0	108.7	121.3	119.9
75.5°	56.2	60.9	79.9	101.3	113.4	111.1
76°	52.5	56.2	73.9	94.3	105.5	103.2
76.5°	49.3	51.6	68.3	87.4	98.0	95.7
77°	46.0	47.9	63.2	80.8	91.5	88.3
77.5°	42.7	44.1	58.1	74.8	85.0	81.3
78°	40.0	40.4	53.4	69.2	78.5	74.8
78.5°	37.2	37.2	48.8	63.7	72.5	68.3
79°	34.8	33.9	44.6	58.1	66.4	62.3
79.5°	32.1	30.7	40.9	53.0	60.9	56.2
80°	29.3	27.9	36.7	48.3	55.8	50.6
80.5°	26.9	25.6	33.5	43.7	50.6	45.5
81°	24.6	22.8	29.7	39.5	45.5	40.4
81.5°	22.3	20.4	26.9	35.3	40.9	35.3
82°	20.0	18.1	23.7	31.1	36.7	30.7
82.5°	18.1	16.3	20.9	27.9	32.5	26.5
83°	15.8	14.4	18.1	24.2	28.8	22.3
83.5°	13.9	12.1	15.8	20.9	25.1	18.1
84°	12.1	10.2	13.5	18.1	21.8	14.9
84.5°	10.2	8.4	11.2	15.3	18.6	11.6
85°	8.4	7.0	8.8	13.0	16.3	8.4
85.5°	6.5	5.1	7.0	10.2	13.5	5.1
86°	5.1	3.7	5.1	7.4	10.7	3.7
86.5°	3.7	2.3	3.3	5.1	8.4	2.8
87°	1.9	0.9	1.4	3.3	5.6	2.3
87.5°	0.9	0.5	0.5	1.4	3.3	1.4
88°	0.0	0.0	0.0	0.0	1.4	0.9
88.5°	0.0	0.0	0.0	0.0	0.0	0.5



TEST NUMBER: P776706  
CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3000K

**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°	2692.2	2668.5	2566.3	2395.3	2173.2	1940.8	1743.8	1618.4	1577.0	1621.2	1747.1
22°	2687.5	2663.4	2559.8	2386.4	2161.6	1925.0	1724.8	1597.5	1555.6	1601.2	1728.0



44°	1670.0	1712.7	1681.1	1561.7	1369.8	1119.8	905.1	783.4	743.4	780.6	894.5
44.5°	1628.1	1670.9	1644.9	1530.1	1343.8	1098.9	887.9	766.7	726.7	763.9	874.9



66.5°	322.5	343.4	342.4	311.3	273.7	215.6	188.2	178.4	163.6	159.8	153.3
67°	307.1	327.6	325.7	296.0	259.3	203.5	180.3	171.0	155.7	152.4	146.8



89°	0.0	1.4	2.8	2.8	3.7	3.7	2.8	1.4	0.0	0.0	0.0
89.5°	0.0	0.5	0.9	1.4	2.3	2.3	1.4	0.5	0.0	0.0	0.0



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21.5°	1932.9	2128.1	2331.6	2505.9	2633.6	2692.2
22°	1916.2	2116.0	2320.9	2498.0	2627.1	2687.5



44°	1062.7	1209.9	1348.0	1467.8	1578.4	1670.0
44.5°	1038.5	1180.2	1313.6	1429.3	1538.0	1628.1

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66.5°	172.8	200.7	243.0	284.8	312.2	322.5
67°	163.1	189.1	230.5	270.9	297.4	307.1

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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)