

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: P776707

Luminaire Tested: HCDJBS4050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776707  
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-3500K  
Description: 6 INCH ROUND MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4845.8 lumens  
Efficiency: N/A  
Efficacy: 101.0 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

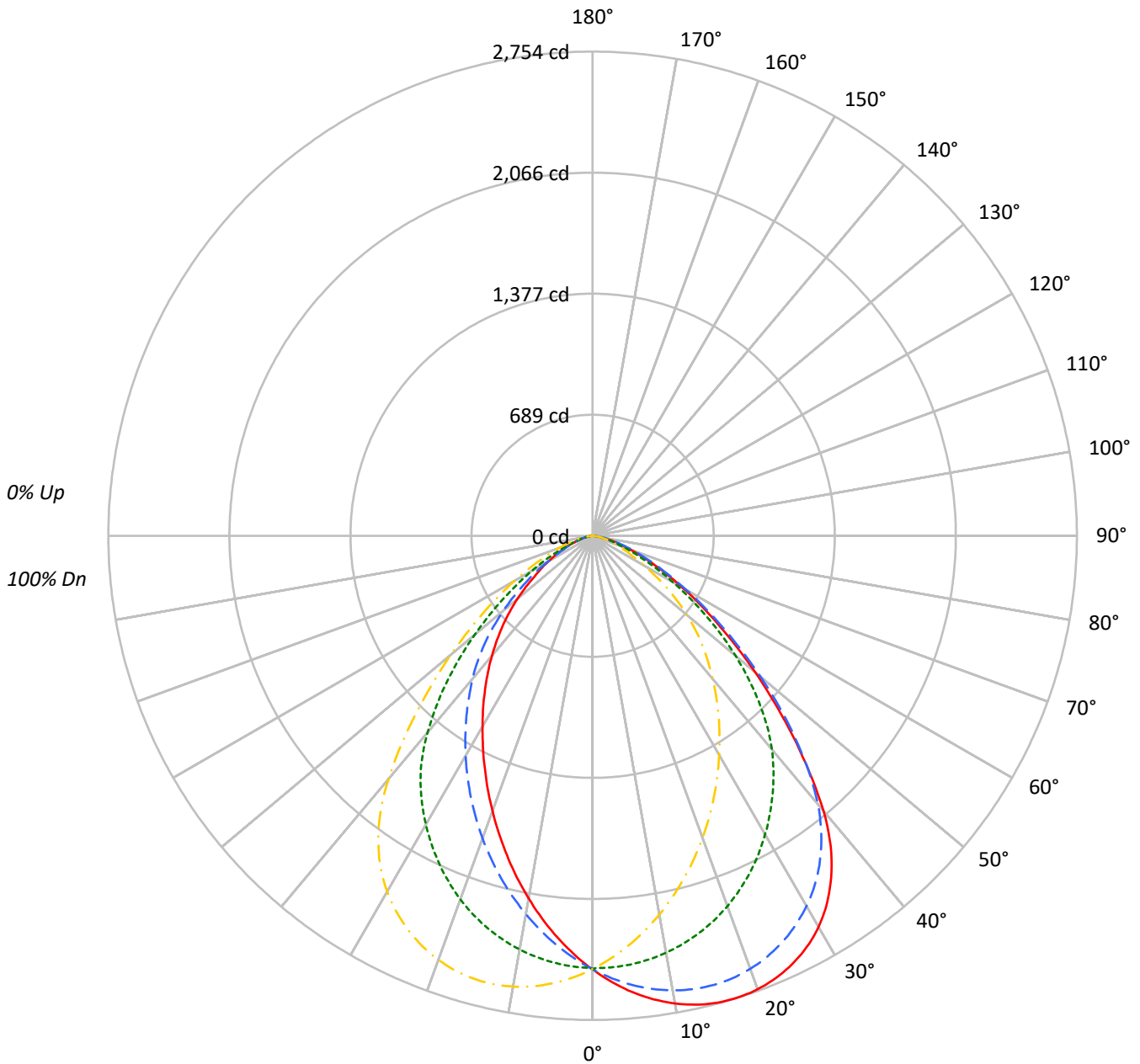
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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°	135121	135121	135121	135121
5°	143424	134729	126238	134212
10°	150387	134055	116620	133002
15°	156005	132742	106794	131079
20°	160110	130777	97145	128327
25°	162530	127919	87882	124634
30°	162595	124165	79310	120044
35°	158353	119491	71347	114251
40°	146074	113498	63705	104446
45°	124749	103716	55959	90552
50°	102794	90479	47632	74667
55°	82463	74568	38594	58340
60°	64808	57769	31861	43757
65°	49253	42339	24905	31274
70°	36368	29717	18529	21542
75°	25777	20673	13789	14191
80°	16227	14743	9818	8934
85°	5346	11573	5032	4466

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 128261 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.2	4.8
10°-20°	653.6	13.5
20°-30°	955.5	19.7
30°-40°	1073.8	22.2
40°-50°	926.2	19.1
50°-60°	594.8	12.3
60°-70°	288.5	6.0
70°-80°	103.3	2.1
80°-90°	17.9	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°	1841.3	38.0
0°-40°	2915.1	60.2
0°-60°	4436.1	91.5
0°-90°	4845.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4845.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2465	2465	2465	2465	2465	
5°	2606	2448	2294	2439	2606	252
15°	2749	2339	1882	2310	2749	777
25°	2687	2115	1453	2060	2687	1237
35°	2366	1786	1066	1707	2366	1467
45°	1609	1338	722	1168	1609	1241
55°	863	780	404	610	863	779
65°	380	326	192	241	380	384
75°	122	98	65	67	122	134
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°	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8
0.5°	2483.2	2481.3	2477.5	2471.9	2458.7	2455.4	2453.5	2452.5	2451.6	2452.1	2454.9
1°	2497.8	2495.5	2488.4	2477.5	2458.7	2449.7	2442.2	2437.9	2435.1	2436.5	2442.6
1.5°	2512.9	2509.6	2498.8	2483.2	2458.7	2442.6	2430.4	2422.4	2418.6	2420.9	2430.8
2°	2527.5	2523.3	2509.1	2488.9	2458.2	2436.0	2418.6	2406.8	2402.1	2405.8	2418.1
2.5°	2541.7	2536.0	2519.5	2493.6	2457.3	2429.0	2405.8	2390.7	2384.6	2389.3	2405.4
3°	2555.4	2548.8	2528.5	2498.3	2455.8	2421.9	2393.6	2374.7	2366.7	2372.8	2392.2
3.5°	2568.6	2561.0	2538.4	2503.0	2454.4	2414.3	2380.4	2357.7	2349.2	2356.3	2379.4
4°	2581.3	2573.8	2546.9	2506.8	2452.5	2406.3	2367.2	2340.7	2330.8	2339.3	2365.7
4.5°	2594.1	2584.6	2555.9	2510.6	2450.7	2397.8	2353.5	2323.8	2312.4	2322.3	2352.1
5°	2606.3	2596.4	2563.9	2513.9	2448.3	2389.8	2339.8	2306.3	2294.0	2304.4	2337.9
5.5°	2617.6	2606.8	2571.9	2517.2	2445.5	2380.4	2325.6	2288.9	2275.2	2287.0	2323.8
6°	2629.0	2617.2	2579.4	2520.0	2442.6	2371.4	2311.5	2270.5	2255.4	2269.0	2309.1
6.5°	2639.3	2627.1	2586.5	2522.4	2439.3	2362.4	2296.4	2252.5	2236.5	2250.6	2294.5
7°	2649.7	2636.5	2593.1	2524.7	2435.6	2352.5	2281.8	2234.1	2216.7	2232.7	2279.4
7.5°	2659.6	2645.5	2599.7	2526.1	2431.8	2342.6	2266.7	2215.3	2196.9	2214.3	2264.3
8°	2668.6	2654.4	2605.4	2527.5	2427.5	2332.7	2251.1	2196.9	2176.6	2195.0	2248.8
8.5°	2677.6	2662.9	2611.0	2529.0	2423.3	2322.3	2235.1	2177.0	2156.8	2176.1	2233.2
9°	2686.0	2670.5	2616.2	2529.4	2418.6	2311.5	2219.5	2158.2	2136.0	2157.2	2217.6
9.5°	2694.1	2678.0	2621.0	2530.4	2413.4	2300.6	2203.5	2138.8	2115.3	2137.4	2201.1
10°	2701.6	2685.1	2625.2	2530.4	2408.2	2289.3	2187.4	2119.5	2095.0	2118.1	2185.5
10.5°	2708.7	2691.7	2629.4	2529.9	2402.5	2278.0	2170.9	2099.7	2074.7	2098.7	2169.0
11°	2715.3	2697.4	2633.2	2529.4	2396.9	2266.2	2153.9	2079.4	2053.0	2078.9	2152.5
11.5°	2721.0	2703.0	2636.0	2528.5	2390.3	2253.9	2137.0	2059.6	2031.8	2059.1	2135.5
12°	2726.6	2707.7	2638.9	2527.1	2384.1	2242.1	2120.0	2039.3	2011.0	2039.3	2119.0
12.5°	2731.8	2712.5	2641.2	2525.7	2377.1	2229.4	2103.0	2019.0	1989.8	2018.5	2102.0
13°	2736.1	2716.2	2643.1	2523.8	2370.5	2217.1	2085.5	1998.7	1968.1	1998.7	2084.6
13.5°	2740.3	2720.0	2644.5	2520.9	2362.9	2204.4	2068.1	1978.4	1946.8	1978.4	2067.6
14°	2743.6	2722.8	2645.5	2518.6	2355.4	2191.2	2050.2	1957.2	1925.1	1958.2	2050.2
14.5°	2746.4	2725.7	2645.5	2515.3	2347.3	2178.0	2032.2	1936.5	1903.9	1936.9	2032.2
15°	2748.8	2727.6	2646.0	2511.5	2338.9	2164.3	2014.3	1915.7	1881.7	1916.7	2014.3
15.5°	2750.7	2729.0	2645.5	2507.7	2330.8	2150.6	1995.9	1895.4	1860.5	1896.4	1996.4
16°	2752.1	2730.4	2644.5	2504.0	2321.9	2137.0	1978.0	1874.2	1838.8	1875.6	1978.4
16.5°	2753.0	2730.4	2643.6	2499.2	2312.9	2122.3	1959.1	1853.0	1817.1	1854.9	1960.5
17°	2753.5	2730.4	2641.7	2494.1	2303.5	2108.2	1941.2	1832.2	1795.4	1834.1	1942.1
17.5°	2753.0	2730.4	2639.3	2488.4	2294.0	2093.6	1922.3	1811.0	1773.2	1812.9	1923.7
18°	2752.6	2729.4	2637.0	2483.2	2284.1	2078.9	1903.4	1789.8	1752.0	1792.6	1905.3
18.5°	2751.1	2728.0	2633.2	2476.6	2273.8	2063.8	1884.6	1769.0	1730.3	1771.4	1886.5
19°	2749.7	2726.1	2629.9	2470.5	2262.9	2048.7	1865.7	1747.8	1708.6	1750.1	1868.1
19.5°	2747.4	2723.8	2625.7	2463.4	2252.5	2033.6	1847.3	1726.5	1686.9	1729.8	1849.7
20°	2744.5	2721.0	2621.4	2455.8	2241.7	2018.1	1828.4	1705.8	1665.2	1709.1	1830.8
20.5°	2741.2	2717.2	2616.2	2448.3	2229.9	2002.5	1808.6	1685.0	1644.5	1687.9	1811.9
21°	2737.5	2713.4	2611.0	2440.3	2218.1	1986.5	1789.3	1663.8	1622.3	1667.1	1792.6



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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°	2722.8	2698.8	2592.2	2413.4	2181.8	1937.9	1732.2	1601.5	1558.6	1604.8	1735.5
23°	2716.7	2692.7	2584.6	2404.0	2169.0	1921.4	1712.4	1580.3	1536.9	1584.1	1716.2
23.5°	2710.6	2686.0	2577.1	2394.0	2155.8	1904.9	1693.1	1560.0	1516.2	1563.3	1696.8
24°	2703.0	2679.0	2568.6	2383.2	2142.6	1887.9	1673.7	1538.8	1494.9	1542.6	1678.0
24.5°	2695.5	2671.4	2560.1	2372.8	2128.9	1871.4	1653.9	1518.5	1473.7	1521.8	1658.6
25°	2687.0	2663.4	2550.7	2361.5	2114.8	1854.4	1634.1	1497.3	1452.9	1501.5	1639.3
25.5°	2678.0	2654.4	2541.2	2350.2	2101.1	1836.9	1615.2	1477.5	1432.7	1481.2	1619.9
26°	2669.1	2645.5	2531.3	2337.9	2086.5	1819.5	1595.9	1456.7	1412.4	1461.0	1600.1
26.5°	2658.7	2635.6	2520.5	2326.1	2071.9	1802.0	1576.1	1436.4	1391.6	1440.2	1580.8
27°	2648.3	2625.2	2509.1	2312.9	2057.2	1784.6	1556.2	1416.1	1371.3	1420.4	1561.4
27.5°	2637.0	2614.3	2497.8	2300.2	2041.7	1766.6	1536.9	1396.8	1351.0	1400.1	1542.1
28°	2625.2	2602.6	2485.6	2286.5	2026.1	1748.7	1517.6	1376.5	1331.2	1380.3	1522.8
28.5°	2612.5	2590.8	2472.8	2272.8	2010.5	1730.8	1498.2	1356.7	1311.4	1360.5	1503.4
29°	2598.8	2578.0	2459.6	2258.2	1994.5	1712.9	1478.4	1336.4	1292.1	1340.7	1483.6
29.5°	2584.2	2564.3	2446.4	2244.0	1978.4	1694.5	1459.1	1317.6	1272.3	1320.4	1464.3
30°	2568.6	2550.2	2432.3	2229.4	1961.5	1676.5	1439.3	1297.7	1252.9	1301.0	1444.4
30.5°	2552.5	2535.1	2417.6	2213.4	1945.0	1658.1	1420.4	1278.4	1233.6	1281.2	1425.1
31°	2536.0	2519.1	2402.5	2197.8	1928.4	1639.3	1401.0	1259.5	1214.7	1261.9	1405.8
31.5°	2518.1	2502.1	2387.0	2181.8	1910.5	1620.9	1381.7	1240.2	1195.4	1242.5	1386.0
32°	2500.2	2484.1	2370.5	2165.3	1893.5	1602.5	1362.4	1221.3	1177.0	1223.2	1367.1
32.5°	2480.4	2465.3	2353.0	2148.3	1876.1	1583.6	1343.0	1202.4	1158.1	1204.3	1347.7
33°	2458.7	2445.9	2335.1	2131.3	1858.2	1564.3	1323.7	1184.1	1139.7	1185.5	1327.5
33.5°	2436.0	2425.7	2316.2	2113.8	1840.7	1545.4	1304.8	1165.7	1121.3	1166.1	1308.1
34°	2414.3	2404.9	2296.4	2095.4	1822.3	1526.5	1285.5	1146.8	1102.9	1148.2	1289.2
34.5°	2390.3	2382.3	2275.6	2076.6	1803.9	1507.7	1266.6	1128.4	1084.0	1129.3	1269.9
35°	2366.2	2359.1	2254.4	2057.7	1785.5	1488.8	1247.7	1110.0	1066.1	1110.5	1250.6
35.5°	2340.3	2335.6	2232.2	2037.9	1767.1	1469.4	1228.9	1092.1	1048.2	1092.5	1231.2
36°	2312.4	2310.1	2209.6	2017.6	1748.2	1450.6	1210.5	1074.1	1030.7	1074.1	1212.4
36.5°	2284.1	2284.1	2186.0	1995.9	1728.4	1431.2	1191.6	1055.7	1012.3	1055.7	1193.0
37°	2253.9	2256.8	2161.5	1974.2	1709.6	1412.4	1172.7	1037.8	994.9	1037.3	1174.1
37.5°	2222.8	2228.0	2136.0	1951.1	1689.7	1392.6	1154.3	1020.4	977.0	1019.4	1154.8
38°	2190.3	2198.7	2109.6	1928.0	1669.5	1373.2	1135.5	1002.4	959.5	1001.5	1135.9
38.5°	2155.3	2168.1	2082.2	1903.9	1649.2	1354.3	1117.1	985.0	942.5	983.6	1117.1
39°	2120.0	2136.0	2053.9	1878.9	1628.9	1334.5	1099.1	967.1	925.1	965.6	1098.7
39.5°	2081.8	2101.1	2024.7	1853.0	1607.7	1315.7	1080.7	950.1	907.6	947.7	1080.3
40°	2041.2	2064.8	1993.5	1826.1	1586.0	1295.9	1061.9	932.6	890.2	930.3	1061.4
40.5°	1999.2	2027.5	1960.5	1798.7	1563.3	1276.5	1043.9	915.2	873.2	912.8	1043.0
41°	1956.7	1988.8	1926.6	1769.9	1540.7	1257.6	1025.5	897.7	856.2	894.9	1025.1
41.5°	1913.8	1947.3	1891.7	1740.7	1517.1	1238.3	1007.6	880.3	838.7	877.9	1006.2
42°	1869.0	1906.3	1856.3	1710.5	1493.5	1219.0	989.2	863.3	822.2	860.4	987.3
42.5°	1825.6	1864.8	1819.9	1680.3	1468.5	1199.1	971.8	846.3	805.2	843.5	968.0
43°	1782.2	1822.8	1782.7	1649.2	1442.6	1178.9	953.8	829.3	788.3	826.5	948.2
43.5°	1738.3	1780.8	1744.5	1617.6	1417.1	1158.1	936.4	812.3	771.8	809.5	928.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1609.1	1654.4	1631.7	1520.9	1337.8	1093.5	884.0	761.8	721.8	759.0	868.0
45.5°	1568.0	1612.9	1592.6	1487.8	1310.0	1070.8	866.6	745.3	705.2	742.5	847.2
46°	1526.1	1570.9	1553.9	1455.3	1283.1	1048.7	848.6	728.4	688.7	725.5	826.5
46.5°	1482.7	1528.4	1515.2	1421.3	1255.3	1026.0	830.7	711.8	671.7	708.5	806.7
47°	1442.6	1486.9	1476.5	1387.8	1227.5	1003.4	811.9	695.3	655.7	691.1	785.9
47.5°	1400.1	1445.9	1436.9	1353.4	1199.6	980.3	793.5	678.8	639.2	674.1	764.7
48°	1360.5	1405.3	1398.2	1319.9	1172.3	957.6	775.1	662.8	623.2	656.7	743.9
48.5°	1321.8	1365.7	1359.5	1285.5	1144.0	935.0	756.2	645.8	606.6	639.2	723.6
49°	1281.7	1326.0	1320.9	1252.0	1116.1	911.9	737.3	629.3	590.1	621.7	702.9
49.5°	1244.0	1286.4	1283.6	1217.5	1087.8	888.7	718.4	613.3	574.1	604.3	682.1
50°	1205.3	1247.3	1244.4	1183.1	1060.9	865.6	700.1	597.2	558.5	587.3	661.4
50.5°	1166.6	1209.1	1207.6	1148.7	1032.2	842.0	680.7	580.2	542.5	569.4	641.6
51°	1131.2	1171.3	1170.8	1115.6	1003.4	818.5	661.4	563.2	526.0	551.5	620.8
51.5°	1094.9	1134.5	1134.5	1082.2	975.5	796.3	642.5	547.2	510.4	534.5	601.5
52°	1058.6	1098.2	1098.7	1049.1	947.7	773.2	623.6	531.2	494.8	517.0	581.2
52.5°	1025.5	1062.3	1063.3	1015.2	918.9	750.1	604.3	514.2	478.8	500.0	561.4
53°	990.2	1027.9	1028.4	983.1	890.6	726.9	585.9	497.7	463.2	482.6	541.5
53.5°	957.6	993.5	994.4	951.0	862.8	704.3	567.0	481.6	447.2	465.6	522.2
54°	924.1	959.5	960.9	919.4	835.4	681.7	547.7	465.1	432.1	448.6	502.9
54.5°	892.0	927.0	928.8	887.8	807.6	659.5	529.3	448.6	416.5	432.1	484.0
55°	862.8	894.9	895.8	856.7	780.2	637.8	510.9	433.1	403.8	416.5	465.1
55.5°	831.7	863.7	864.7	826.5	752.9	615.1	492.5	417.0	391.5	400.5	447.2
56°	803.4	833.1	834.0	796.8	726.0	593.0	474.1	402.4	378.8	384.9	428.8
56.5°	773.6	803.4	803.8	767.0	700.1	571.7	456.2	387.8	366.1	369.4	411.8
57°	746.3	774.1	774.6	738.3	674.1	550.0	438.7	373.1	357.1	353.8	394.8
57.5°	719.4	745.8	745.3	710.4	648.6	528.3	421.3	358.5	346.3	338.7	377.4
58°	692.5	718.4	717.5	683.1	622.7	508.1	404.7	350.0	334.9	324.6	360.4
58.5°	667.0	691.6	690.6	656.7	598.2	487.3	387.8	340.1	323.6	312.3	343.4
59°	641.1	665.1	664.2	630.2	574.1	467.0	371.3	329.3	312.3	302.9	327.4
59.5°	616.6	640.6	638.7	604.8	550.0	447.2	354.7	317.9	301.4	292.9	311.8
60°	591.1	615.6	613.3	580.2	526.9	427.9	338.2	307.1	290.6	283.0	296.7
60.5°	567.0	591.1	588.7	555.7	503.8	409.0	322.7	295.8	279.7	272.7	282.6
61°	544.4	567.0	565.1	532.6	482.1	390.6	307.6	284.9	269.4	262.3	268.9
61.5°	521.7	544.4	542.0	509.5	460.9	371.7	293.9	274.1	259.5	252.4	255.2
62°	499.6	521.7	520.3	487.3	440.1	353.3	280.2	263.7	249.5	242.5	242.9
62.5°	477.9	500.0	498.6	466.1	420.8	336.8	267.0	253.8	239.6	233.0	230.7
63°	457.6	478.8	477.4	445.3	401.4	319.8	254.3	243.9	229.7	223.6	218.9
63.5°	437.3	458.5	457.1	425.0	382.1	303.8	243.9	234.5	220.3	214.6	208.0
64°	417.0	438.2	437.3	404.7	362.8	288.2	234.9	225.0	210.9	205.7	197.7
64.5°	397.7	419.8	418.4	385.9	343.9	273.1	226.0	216.1	201.4	196.7	187.7
65°	379.7	401.0	399.6	367.5	326.4	259.0	217.0	207.1	192.0	187.7	178.8
65.5°	362.3	383.0	381.6	350.0	309.9	244.8	208.5	198.6	183.5	179.3	170.3
66°	344.4	365.1	364.2	333.0	293.4	231.1	199.5	189.6	175.0	170.8	162.7





TEST NUMBER: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	296.7	316.5	315.6	285.4	248.6	195.3	175.5	165.6	150.5	146.7	142.5
68°	281.6	301.4	300.5	270.3	234.9	184.4	167.9	158.0	142.9	139.2	136.3
68.5°	267.5	286.8	285.4	256.2	221.2	174.1	160.4	150.5	135.9	132.1	130.2
69°	253.3	273.1	271.2	242.5	209.0	164.6	153.3	143.4	128.8	125.0	124.1
69.5°	239.6	259.5	258.0	229.3	196.7	155.2	146.7	136.3	122.2	118.4	118.4
70°	226.9	245.8	244.4	216.5	185.4	146.7	140.1	129.7	115.6	111.8	112.3
70.5°	214.6	233.5	232.1	204.7	174.1	138.7	134.0	123.6	109.9	105.7	106.6
71°	202.4	221.2	219.8	192.9	164.2	131.1	127.8	117.5	103.8	100.0	101.4
71.5°	190.6	209.9	208.0	182.1	154.3	123.6	121.7	111.3	98.1	94.3	96.2
72°	179.7	198.1	196.7	171.7	144.8	117.0	115.6	105.7	92.9	89.2	90.6
72.5°	167.9	187.3	185.9	162.7	135.9	110.4	110.4	100.5	87.7	84.4	85.9
73°	158.5	176.4	175.0	153.3	127.4	104.3	104.7	95.3	83.0	79.3	81.1
73.5°	149.1	168.9	166.1	144.4	119.3	98.6	99.5	90.1	78.3	75.0	76.4
74°	139.6	159.0	156.6	134.9	111.8	93.4	94.3	85.4	73.6	70.3	71.7
74.5°	130.2	149.5	147.7	125.5	104.7	88.2	89.6	80.7	69.3	66.0	67.5
75°	121.7	140.1	138.2	117.5	97.6	83.5	84.4	75.9	65.1	62.3	63.2
75.5°	112.7	130.7	129.3	109.9	91.0	79.3	80.2	71.7	61.3	58.0	59.4
76°	104.7	122.2	120.8	102.4	84.9	75.0	75.9	67.5	57.1	54.2	55.7
76.5°	97.2	114.2	112.7	95.3	79.3	70.8	71.7	63.7	53.3	50.5	51.9
77°	89.6	106.6	105.2	88.7	73.6	67.0	67.5	59.4	50.0	47.2	48.6
77.5°	82.6	99.5	97.6	82.6	68.4	63.2	63.7	55.7	46.7	43.9	45.3
78°	75.9	92.5	90.6	76.4	63.2	59.4	59.9	51.9	43.4	40.6	42.0
78.5°	69.3	85.9	84.0	70.3	58.5	56.1	56.1	48.1	40.1	37.7	39.2
79°	63.2	79.7	77.4	65.1	54.2	52.8	52.4	44.8	37.3	34.9	36.3
79.5°	57.1	73.6	71.2	59.9	50.0	49.5	49.1	41.5	34.4	31.6	33.5
80°	51.4	67.9	65.6	54.7	46.7	46.2	45.8	38.7	31.1	28.8	30.2
80.5°	46.2	62.3	60.4	50.5	42.9	43.4	42.5	35.4	28.3	25.9	27.4
81°	41.0	57.1	55.2	46.2	40.1	40.6	39.6	32.1	25.9	23.6	25.0
81.5°	35.9	51.9	50.0	42.0	36.8	37.7	36.3	28.8	23.1	21.2	22.6
82°	31.1	47.2	45.3	38.2	34.0	34.4	33.5	25.9	20.8	18.9	20.3
82.5°	26.9	42.5	41.0	34.9	30.7	31.6	30.2	23.6	18.4	16.5	17.9
83°	22.6	38.2	36.8	31.6	27.8	28.8	27.4	20.8	16.0	14.2	16.0
83.5°	18.4	34.0	33.0	28.3	25.5	26.4	24.5	18.4	14.2	12.3	14.2
84°	15.1	29.7	29.2	25.0	22.6	24.1	22.2	16.0	12.3	9.9	12.3
84.5°	11.8	25.9	25.9	22.2	20.8	21.7	19.8	13.7	9.9	8.5	10.4
85°	8.5	22.2	22.6	19.8	18.4	19.3	17.5	11.8	8.0	6.6	9.0
85.5°	5.2	18.4	19.3	17.0	16.0	17.0	15.1	9.9	6.6	5.7	7.1
86°	3.8	16.0	17.0	15.1	14.2	15.1	13.2	8.5	5.2	4.7	5.7
86.5°	2.8	13.2	14.6	12.7	12.3	12.7	11.3	7.1	4.2	3.8	4.2
87°	2.4	10.4	11.8	10.4	10.4	10.8	9.4	5.7	3.3	2.8	2.8
87.5°	1.4	8.0	9.4	8.5	8.5	9.0	7.5	4.7	2.4	1.9	1.4
88°	0.9	5.7	7.1	6.6	7.1	7.1	6.1	3.3	1.4	0.9	0.5
88.5°	0.5	3.3	4.7	4.7	5.7	5.2	4.2	2.4	0.9	0.5	0.0



TEST NUMBER: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**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: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2464.8	2464.8	2464.8	2464.8	2464.8	2464.8
0.5°	2459.1	2457.7	2466.7	2474.7	2481.3	2483.2
1°	2452.5	2457.3	2471.9	2485.6	2495.5	2497.8
1.5°	2445.5	2455.8	2476.6	2495.0	2508.7	2512.9
2°	2437.9	2454.4	2481.3	2504.9	2521.9	2527.5
2.5°	2430.4	2452.5	2485.1	2514.3	2534.2	2541.7
3°	2422.8	2450.7	2488.9	2522.8	2546.9	2555.4
3.5°	2414.3	2448.3	2492.6	2531.3	2558.2	2568.6
4°	2405.8	2445.5	2495.5	2539.3	2570.0	2581.3
4.5°	2396.9	2442.2	2498.3	2546.9	2580.9	2594.1
5°	2387.9	2438.9	2500.7	2554.4	2591.7	2606.3
5.5°	2379.0	2435.6	2503.0	2561.0	2602.1	2617.6
6°	2369.0	2431.8	2504.9	2567.6	2611.5	2629.0
6.5°	2359.6	2427.5	2505.8	2573.8	2621.0	2639.3
7°	2349.7	2422.8	2506.8	2579.4	2629.4	2649.7
7.5°	2339.3	2418.1	2507.7	2584.6	2637.9	2659.6
8°	2328.9	2412.9	2507.7	2589.3	2646.0	2668.6
8.5°	2318.1	2407.3	2507.7	2593.6	2653.5	2677.6
9°	2307.2	2402.1	2507.3	2597.4	2660.6	2686.0
9.5°	2295.9	2395.5	2506.3	2601.1	2667.2	2694.1
10°	2284.6	2389.3	2504.9	2604.0	2673.3	2701.6
10.5°	2273.3	2383.2	2503.5	2606.3	2679.0	2708.7
11°	2261.0	2376.1	2501.1	2608.7	2684.2	2715.3
11.5°	2249.2	2368.6	2498.8	2610.1	2688.4	2721.0
12°	2236.5	2361.0	2495.9	2611.5	2692.7	2726.6
12.5°	2223.8	2353.0	2492.6	2612.0	2696.4	2731.8
13°	2211.0	2345.0	2489.3	2612.5	2699.3	2736.1
13.5°	2198.3	2337.0	2485.1	2612.0	2701.6	2740.3
14°	2185.1	2328.0	2480.8	2611.5	2704.0	2743.6
14.5°	2171.4	2319.0	2476.1	2610.1	2705.4	2746.4
15°	2157.7	2309.6	2470.5	2608.7	2706.3	2748.8
15.5°	2144.0	2299.7	2464.8	2606.3	2706.8	2750.7
16°	2129.9	2290.3	2459.1	2604.0	2706.8	2752.1
16.5°	2115.7	2279.9	2453.0	2600.7	2706.3	2753.0
17°	2101.1	2269.5	2445.9	2597.4	2705.4	2753.5
17.5°	2086.5	2258.7	2438.9	2593.1	2704.0	2753.0
18°	2071.4	2247.3	2431.3	2588.9	2702.1	2752.6
18.5°	2056.3	2236.0	2423.3	2583.7	2699.3	2751.1
19°	2041.2	2224.2	2414.8	2578.5	2696.4	2749.7
19.5°	2025.6	2212.4	2406.3	2572.4	2692.7	2747.4
20°	2010.1	2199.7	2396.9	2566.2	2688.9	2744.5
20.5°	1994.5	2187.4	2387.4	2559.2	2684.2	2741.2
21°	1978.0	2174.7	2377.5	2552.1	2679.0	2737.5

TEST NUMBER: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1929.4	2133.6	2345.5	2527.5	2660.6	2722.8
23°	1912.4	2120.0	2333.7	2518.1	2653.5	2716.7
23.5°	1896.4	2105.8	2321.9	2508.7	2646.0	2710.6
24°	1878.9	2091.2	2309.6	2498.8	2637.5	2703.0
24.5°	1861.5	2076.6	2296.9	2487.9	2628.5	2695.5
25°	1844.5	2060.5	2283.7	2476.6	2619.1	2687.0
25.5°	1827.5	2045.4	2270.5	2464.8	2608.7	2678.0
26°	1810.0	2029.9	2256.8	2453.0	2598.8	2669.1
26.5°	1791.6	2014.8	2243.1	2440.3	2587.5	2658.7
27°	1774.2	1997.8	2228.5	2427.1	2576.1	2648.3
27.5°	1756.3	1980.8	2213.4	2413.9	2563.9	2637.0
28°	1738.3	1965.2	2197.8	2399.7	2550.7	2625.2
28.5°	1719.9	1948.3	2182.2	2385.1	2537.0	2612.5
29°	1701.5	1931.3	2166.2	2370.0	2522.8	2598.8
29.5°	1683.6	1914.3	2149.2	2353.9	2507.3	2584.2
30°	1664.7	1896.4	2133.2	2337.4	2491.2	2568.6
30.5°	1645.9	1878.9	2115.3	2320.0	2473.8	2552.5
31°	1627.5	1860.5	2098.3	2302.1	2455.8	2536.0
31.5°	1608.6	1843.5	2079.9	2282.7	2436.5	2518.1
32°	1589.7	1823.7	2061.0	2262.9	2417.2	2500.2
32.5°	1570.9	1805.3	2041.2	2242.6	2396.9	2480.4
33°	1551.5	1786.0	2020.4	2220.9	2376.1	2458.7
33.5°	1532.7	1767.6	2000.1	2198.7	2353.9	2436.0
34°	1513.3	1747.8	1977.5	2174.7	2329.4	2414.3
34.5°	1494.5	1727.5	1954.4	2150.2	2303.9	2390.3
35°	1474.6	1707.2	1930.8	2125.2	2278.0	2366.2
35.5°	1455.8	1685.5	1906.3	2099.2	2251.6	2340.3
36°	1436.4	1662.9	1881.3	2071.9	2223.8	2312.4
36.5°	1416.6	1640.7	1855.3	2043.5	2194.5	2284.1
37°	1396.8	1617.1	1827.5	2013.4	2163.4	2253.9
37.5°	1376.5	1591.6	1799.7	1982.2	2130.8	2222.8
38°	1356.7	1566.6	1769.0	1950.1	2096.4	2190.3
38.5°	1336.4	1541.2	1739.3	1916.2	2061.0	2155.3
39°	1315.7	1514.7	1706.7	1880.3	2023.7	2120.0
39.5°	1294.0	1486.9	1675.6	1842.6	1984.1	2081.8
40°	1271.8	1459.5	1641.6	1803.9	1942.6	2041.2
40.5°	1248.2	1431.2	1608.6	1766.6	1901.1	1999.2
41°	1225.1	1402.9	1575.1	1727.0	1858.6	1956.7
41.5°	1201.0	1375.1	1541.2	1687.9	1815.7	1913.8
42°	1176.5	1345.4	1507.7	1648.7	1771.8	1869.0
42.5°	1152.9	1316.1	1473.2	1609.6	1729.8	1825.6
43°	1128.4	1286.9	1437.8	1569.5	1687.9	1782.2
43.5°	1103.9	1258.1	1403.4	1529.8	1644.9	1738.3

TEST NUMBER: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1029.8	1168.0	1298.2	1412.4	1519.9	1609.1
45.5°	1005.3	1139.2	1263.3	1374.2	1479.4	1568.0
46°	980.3	1109.0	1228.4	1335.0	1438.3	1526.1
46.5°	955.7	1080.3	1194.4	1298.2	1399.2	1482.7
47°	930.3	1050.6	1160.5	1260.9	1359.1	1442.6
47.5°	904.8	1020.4	1125.1	1224.6	1319.4	1400.1
48°	880.3	991.1	1091.6	1188.3	1280.8	1360.5
48.5°	855.7	961.9	1059.0	1153.9	1243.5	1321.8
49°	830.3	934.0	1027.0	1118.5	1205.8	1281.7
49.5°	806.2	904.3	994.4	1084.0	1169.9	1244.0
50°	781.7	875.5	961.9	1050.6	1132.6	1205.3
50.5°	757.1	846.8	932.1	1017.1	1098.2	1166.6
51°	733.1	818.9	901.0	985.0	1063.3	1131.2
51.5°	710.4	790.6	871.8	952.9	1028.9	1094.9
52°	685.4	764.2	843.0	922.2	995.8	1058.6
52.5°	661.8	737.8	814.2	892.0	963.3	1025.5
53°	638.7	710.4	785.9	861.9	931.2	990.2
53.5°	616.1	684.5	758.5	833.1	900.5	957.6
54°	593.0	660.0	732.1	803.8	869.4	924.1
54.5°	571.3	635.0	705.7	776.9	840.2	892.0
55°	549.1	610.4	680.2	749.1	811.4	862.8
55.5°	526.9	587.3	655.7	723.2	783.1	831.7
56°	505.7	564.2	630.7	697.2	755.7	803.4
56.5°	484.9	541.5	607.1	672.2	727.9	773.6
57°	464.7	519.9	583.5	647.2	701.9	746.3
57.5°	444.8	498.2	561.4	623.2	676.5	719.4
58°	425.5	477.4	539.2	600.5	651.9	692.5
58.5°	407.6	456.6	517.0	577.4	627.4	667.0
59°	389.2	437.3	497.2	555.2	603.8	641.1
59.5°	370.8	418.0	475.5	533.5	581.6	616.6
60°	352.9	399.1	456.6	512.8	559.0	591.1
60.5°	336.3	381.2	437.3	492.0	538.2	567.0
61°	320.3	363.2	418.4	471.7	516.1	544.4
61.5°	304.3	346.3	400.5	453.3	495.8	521.7
62°	288.7	329.7	383.0	434.5	476.0	499.6
62.5°	274.1	313.7	365.6	416.1	456.2	477.9
63°	259.9	297.7	349.1	398.1	436.8	457.6
63.5°	246.2	282.6	332.6	381.6	418.0	437.3
64°	233.0	268.4	317.0	364.6	399.6	417.0
64.5°	220.8	254.3	302.4	348.6	382.6	397.7
65°	209.0	241.1	287.8	332.6	365.1	379.7
65.5°	197.2	228.3	273.6	317.9	348.6	362.3
66°	186.3	215.6	259.5	303.3	332.1	344.4



TEST NUMBER: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	156.6	181.1	222.2	262.3	287.3	296.7
68°	147.7	171.2	209.9	249.1	273.6	281.6
68.5°	138.7	161.8	198.6	236.8	259.9	267.5
69°	131.1	152.8	187.7	224.5	247.2	253.3
69.5°	123.1	143.9	177.4	213.2	234.0	239.6
70°	116.0	134.4	167.9	201.9	222.2	226.9
70.5°	109.0	125.5	158.5	191.1	210.4	214.6
71°	102.8	117.9	149.5	180.7	199.5	202.4
71.5°	96.2	110.4	140.6	170.8	188.2	190.6
72°	90.6	102.8	131.1	161.8	177.8	179.7
72.5°	84.9	96.2	123.1	152.8	167.5	167.9
73°	79.7	89.6	115.1	143.9	158.5	158.5
73.5°	74.5	84.0	108.0	134.9	149.5	149.1
74°	69.8	77.8	101.0	126.0	140.1	139.6
74.5°	65.1	72.2	94.3	117.9	131.1	130.2
75°	60.9	67.0	87.3	110.4	123.1	121.7
75.5°	57.1	61.8	81.1	102.8	115.1	112.7
76°	53.3	57.1	75.0	95.8	107.1	104.7
76.5°	50.0	52.4	69.3	88.7	99.5	97.2
77°	46.7	48.6	64.2	82.1	92.9	89.6
77.5°	43.4	44.8	59.0	75.9	86.3	82.6
78°	40.6	41.0	54.2	70.3	79.7	75.9
78.5°	37.7	37.7	49.5	64.6	73.6	69.3
79°	35.4	34.4	45.3	59.0	67.5	63.2
79.5°	32.5	31.1	41.5	53.8	61.8	57.1
80°	29.7	28.3	37.3	49.1	56.6	51.4
80.5°	27.4	25.9	34.0	44.3	51.4	46.2
81°	25.0	23.1	30.2	40.1	46.2	41.0
81.5°	22.6	20.8	27.4	35.9	41.5	35.9
82°	20.3	18.4	24.1	31.6	37.3	31.1
82.5°	18.4	16.5	21.2	28.3	33.0	26.9
83°	16.0	14.6	18.4	24.5	29.2	22.6
83.5°	14.2	12.3	16.0	21.2	25.5	18.4
84°	12.3	10.4	13.7	18.4	22.2	15.1
84.5°	10.4	8.5	11.3	15.6	18.9	11.8
85°	8.5	7.1	9.0	13.2	16.5	8.5
85.5°	6.6	5.2	7.1	10.4	13.7	5.2
86°	5.2	3.8	5.2	7.5	10.8	3.8
86.5°	3.8	2.4	3.3	5.2	8.5	2.8
87°	1.9	0.9	1.4	3.3	5.7	2.4
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: P776707

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRH-HCD6TRLWW-5000lm-3500K

**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°	2733.2	2709.2	2605.4	2431.8	2206.3	1970.4	1770.4	1643.0	1601.1	1645.9	1773.7
22°	2728.5	2704.0	2598.8	2422.8	2194.5	1954.4	1751.1	1621.8	1579.4	1625.6	1754.4



44°	1695.4	1738.8	1706.7	1585.5	1390.7	1136.9	918.9	795.3	754.8	792.5	908.1
44.5°	1653.0	1696.4	1669.9	1553.4	1364.3	1115.6	901.5	778.4	737.8	775.5	888.3



66.5°	327.4	348.6	347.7	316.1	277.9	218.9	191.1	181.1	166.1	162.3	155.7
67°	311.8	332.6	330.7	300.5	263.2	206.6	183.0	173.6	158.0	154.7	149.1



89°	0.0	1.4	2.8	2.8	3.8	3.8	2.8	1.4	0.0	0.0	0.0
89.5°	0.0	0.5	0.9	1.4	2.4	2.4	1.4	0.5	0.0	0.0	0.0



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21.5°	1962.4	2160.5	2367.2	2544.1	2673.8	2733.2
22°	1945.4	2148.3	2356.3	2536.0	2667.2	2728.5



44°	1078.9	1228.4	1368.5	1490.2	1602.5	1695.4
44.5°	1054.3	1198.2	1333.6	1451.1	1561.4	1653.0

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66.5°	175.5	203.8	246.7	289.2	317.0	327.4
67°	165.6	192.0	234.0	275.0	301.9	311.8

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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)