

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: P776415

Luminaire Tested: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776415  
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: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K  
Description: 6 INCH SQUARE MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

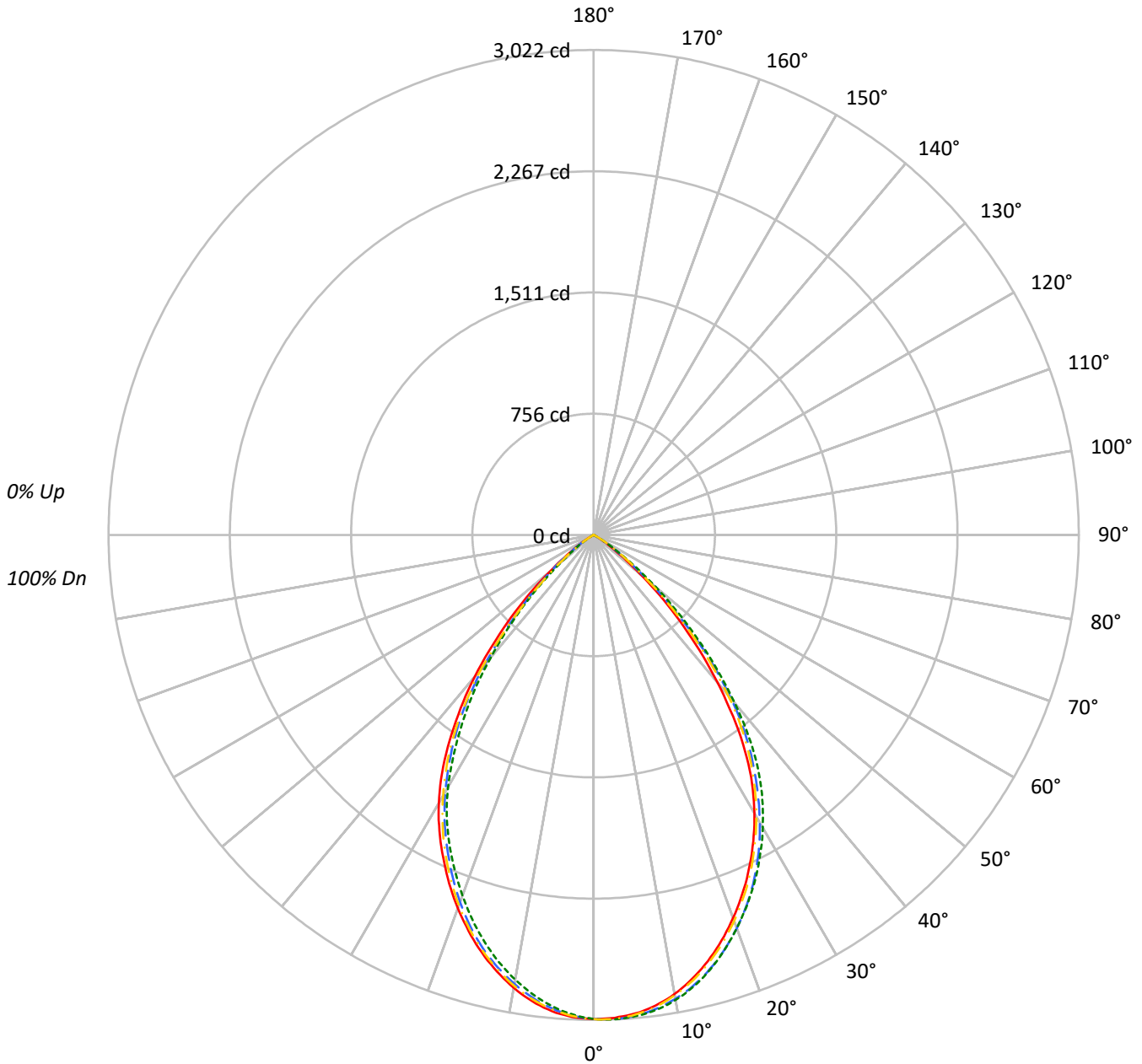
Lumens per Lamp: N/A  
Luminaire Lumens: 3794.1 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.02 / 1.06  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20										
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92								
2	106	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84								
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77								
4	94	86	80	75	92	85	79	74	82	77	73	80	76	73	78	75	72	70								
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66	64								
6	83	73	67	62	82	73	66	62	71	65	61	69	64	61	68	64	60	59								
7	78	68	61	57	77	67	61	56	66	60	56	65	60	56	64	59	55	54								
8	74	63	57	52	73	63	56	52	62	56	52	61	55	51	59	55	51	50								
9	70	59	53	48	69	59	52	48	58	52	48	57	51	48	56	51	47	46								
10	66	55	49	45	65	55	49	45	54	48	44	53	48	44	52	48	44	43								

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

	0°	90°	180°	270°
0°	165387	165387	165387	165387
5°	164654	165656	163906	162249
10°	161681	163813	159527	156672
15°	156000	159172	152867	149042
20°	148185	152158	144347	139429
25°	138601	143803	134161	128620
30°	126754	133350	122107	114847
35°	110068	119585	104601	95131
40°	85804	97747	82462	71462
45°	58836	70961	56580	45935
50°	32400	42890	30993	22558
55°	12387	18838	13400	9605
60°	1634	4824	3223	1272
65°	221	389	298	221
70°	48	112	112	112
75°	64	64	64	64
80°	0	0	0	0
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 70961 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.6	7.4
10°-20°	763.5	20.1
20°-30°	1032.9	27.2
30°-40°	991.6	26.1
40°-50°	577.5	15.2
50°-60°	142.1	3.7
60°-70°	4.6	0.1
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	2078.0	54.8
0°-40°	3069.6	80.9
0°-60°	3789.3	99.9
0°-90°	3794.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3794.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3017	3017	3017	3017	3017	
5°	2992	3010	2978	2948	2992	283
15°	2749	2805	2694	2626	2749	771
25°	2291	2377	2218	2126	2291	1050
35°	1645	1787	1563	1422	1645	1012
45°	759	915	730	592	759	586
55°	130	197	140	100	130	134
65°	2	3	2	2	2	3
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	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°	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9
0.5°	3016.2	3016.6	3018.9	3020.9	3017.9	3019.2	3019.9	3018.5	3015.6	3014.2	3014.6
1°	3015.6	3016.9	3020.2	3022.5	3019.9	3020.5	3020.5	3018.2	3014.2	3011.6	3011.9
1.5°	3014.6	3016.9	3020.5	3023.5	3020.9	3021.5	3020.2	3017.2	3012.9	3009.0	3008.3
2°	3012.9	3016.6	3020.5	3023.5	3021.5	3021.5	3019.9	3015.6	3009.6	3005.7	3004.0
2.5°	3012.9	3015.2	3019.5	3022.8	3020.9	3020.5	3018.2	3013.3	3007.0	3001.4	2998.7
3°	3008.0	3013.3	3018.5	3021.9	3020.2	3019.5	3015.9	3009.6	3002.3	2996.4	2992.8
3.5°	3005.0	3010.9	3016.6	3020.2	3018.5	3016.9	3012.9	3006.0	2997.7	2990.8	2987.1
4°	3001.4	3008.3	3013.9	3017.9	3016.2	3014.6	3009.6	3001.0	2992.4	2984.8	2979.2
4.5°	2996.7	3005.0	3010.6	3014.9	3013.6	3011.3	3005.0	2995.7	2986.5	2977.2	2971.6
5°	2992.1	3000.7	3007.0	3011.6	3010.3	3007.3	3000.0	2989.8	2978.5	2969.3	2963.0
5.5°	2987.8	2995.7	3003.0	3007.3	3006.6	3003.0	2994.1	2982.8	2970.3	2960.7	2953.4
6°	2980.2	2990.1	2998.0	3002.7	3002.3	2997.7	2987.5	2974.6	2961.7	2951.4	2943.5
6.5°	2973.6	2984.5	2992.4	2997.7	2997.1	2991.8	2981.2	2965.6	2952.1	2941.5	2932.2
7°	2966.0	2977.5	2985.8	2992.1	2991.4	2985.8	2972.9	2956.7	2942.2	2930.6	2921.7
7.5°	2957.4	2969.9	2978.9	2985.1	2984.8	2978.9	2964.6	2946.1	2930.6	2918.7	2909.1
8°	2948.1	2961.7	2971.6	2977.5	2977.9	2971.6	2955.7	2935.6	2919.0	2906.5	2896.9
8.5°	2938.5	2952.7	2963.3	2969.6	2970.3	2963.0	2945.8	2924.3	2906.8	2893.9	2883.3
9°	2927.9	2942.8	2954.7	2961.0	2961.7	2954.1	2935.9	2912.4	2893.6	2880.7	2870.4
9.5°	2916.4	2932.9	2944.8	2951.8	2952.7	2944.8	2924.3	2899.5	2880.7	2866.4	2855.9
10°	2904.5	2922.0	2935.2	2941.8	2942.8	2934.2	2912.7	2886.6	2865.8	2852.2	2841.0
10.5°	2891.6	2910.1	2924.3	2931.3	2931.9	2923.3	2900.5	2872.4	2851.2	2837.3	2825.8
11°	2878.3	2898.2	2913.7	2920.0	2920.7	2911.1	2887.6	2858.2	2835.7	2821.8	2810.2
11.5°	2864.5	2885.3	2901.2	2907.8	2908.4	2898.8	2874.4	2843.3	2819.2	2805.9	2794.0
12°	2848.9	2871.7	2889.3	2894.9	2895.5	2885.3	2859.8	2827.8	2803.0	2789.4	2777.2
12.5°	2833.7	2857.5	2875.4	2882.0	2882.0	2871.4	2845.0	2811.9	2786.1	2772.2	2760.3
13°	2818.2	2843.3	2862.1	2868.8	2868.8	2857.2	2830.4	2795.7	2768.9	2754.7	2742.8
13.5°	2801.3	2827.4	2847.6	2853.5	2852.9	2841.3	2813.9	2778.5	2750.4	2736.8	2724.6
14°	2784.8	2811.9	2832.4	2838.7	2837.3	2825.8	2797.7	2761.0	2732.2	2718.0	2705.7
14.5°	2766.9	2795.0	2816.5	2823.1	2820.5	2808.6	2780.8	2742.4	2713.4	2698.1	2686.6
15°	2748.7	2778.5	2800.0	2806.9	2804.6	2791.7	2762.6	2723.9	2693.5	2678.0	2666.7
15.5°	2729.9	2760.6	2783.1	2790.7	2786.8	2774.2	2744.1	2704.8	2673.3	2658.5	2646.2
16°	2710.7	2742.1	2765.6	2772.5	2769.2	2756.0	2725.9	2685.2	2653.2	2637.6	2624.7
16.5°	2690.9	2723.6	2747.1	2754.7	2750.7	2736.8	2706.4	2665.1	2632.3	2615.8	2602.9
17°	2670.7	2704.4	2728.9	2736.5	2731.2	2717.7	2686.9	2644.6	2610.5	2593.3	2580.8
17.5°	2649.5	2684.9	2709.7	2718.0	2712.0	2697.8	2666.4	2622.8	2589.0	2570.8	2557.3
18°	2628.7	2664.4	2690.2	2698.1	2691.5	2677.6	2646.2	2601.6	2565.9	2547.7	2533.5
18.5°	2607.2	2643.6	2669.7	2678.3	2671.0	2657.1	2624.7	2579.1	2543.4	2523.9	2510.0
19°	2585.1	2622.4	2649.9	2658.1	2650.5	2636.3	2602.9	2556.6	2520.6	2500.7	2484.5
19.5°	2562.6	2600.6	2628.4	2637.3	2629.7	2614.5	2580.8	2533.5	2498.1	2475.6	2459.1
20°	2540.1	2578.8	2607.5	2616.1	2608.2	2592.0	2558.9	2511.0	2474.3	2450.8	2433.6
20.5°	2516.6	2555.6	2585.7	2593.3	2585.4	2570.2	2535.8	2487.2	2450.2	2425.7	2408.2
21°	2493.1	2532.5	2563.6	2571.5	2563.2	2547.4	2512.0	2463.7	2426.3	2400.9	2382.7



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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°	2420.7	2460.4	2493.8	2501.4	2497.1	2476.3	2439.9	2392.9	2351.0	2322.8	2299.7
23°	2395.9	2435.3	2469.3	2477.3	2473.6	2451.1	2416.1	2367.5	2324.2	2295.7	2271.9
23.5°	2370.8	2409.5	2444.5	2452.5	2450.2	2426.0	2392.0	2342.0	2298.0	2268.0	2243.2
24°	2344.7	2384.0	2418.4	2427.0	2426.7	2400.9	2366.2	2316.2	2271.3	2240.5	2214.7
24.5°	2318.2	2357.9	2392.6	2401.5	2403.2	2379.7	2339.4	2290.1	2245.5	2212.7	2185.6
25°	2291.4	2331.4	2366.2	2375.4	2377.4	2353.6	2312.3	2264.0	2218.0	2185.0	2157.5
25.5°	2264.7	2303.3	2339.4	2348.3	2351.6	2326.8	2285.2	2236.9	2190.9	2156.5	2128.4
26°	2237.9	2276.6	2311.6	2321.9	2326.2	2300.7	2257.7	2210.4	2163.8	2128.4	2099.7
26.5°	2209.4	2249.1	2283.2	2294.4	2300.4	2272.9	2229.3	2183.0	2136.4	2100.0	2070.2
27°	2181.7	2220.0	2255.1	2266.6	2274.2	2246.1	2201.5	2155.9	2107.6	2071.6	2041.1
27.5°	2152.6	2190.6	2225.6	2238.5	2246.8	2218.0	2173.4	2128.1	2080.1	2042.5	2011.0
28°	2123.8	2161.2	2195.2	2209.4	2219.4	2190.3	2145.0	2099.7	2051.4	2011.7	1980.0
28.5°	2094.4	2131.4	2164.8	2180.3	2192.2	2161.8	2116.2	2071.6	2022.6	1980.6	1947.9
29°	2064.3	2101.0	2133.7	2150.6	2164.5	2133.4	2086.4	2042.1	1992.5	1949.9	1915.8
29.5°	2033.5	2069.2	2101.6	2120.5	2135.4	2104.9	2056.7	2011.4	1961.1	1917.8	1881.8
30°	2002.4	2037.2	2069.6	2089.7	2106.6	2075.8	2026.3	1980.6	1929.0	1885.4	1848.0
30.5°	1970.7	2004.8	2037.2	2057.3	2077.2	2045.8	1995.5	1948.5	1897.3	1851.3	1813.6
31°	1938.3	1971.7	2002.8	2026.3	2048.4	2015.7	1963.8	1916.5	1863.2	1817.3	1778.6
31.5°	1904.9	1938.0	1970.0	1993.5	2017.3	1985.3	1931.7	1883.4	1828.5	1782.9	1743.2
32°	1870.2	1902.9	1935.3	1960.1	1986.6	1954.2	1899.6	1849.7	1792.8	1747.5	1706.8
32.5°	1836.1	1869.5	1900.9	1926.1	1955.5	1922.1	1866.5	1815.3	1756.8	1711.5	1671.1
33°	1800.4	1834.1	1866.9	1892.7	1923.7	1889.7	1833.1	1779.3	1719.7	1674.1	1635.4
33.5°	1763.7	1798.8	1833.5	1858.6	1890.4	1857.0	1799.4	1742.9	1681.7	1636.7	1599.4
34°	1725.0	1762.4	1798.1	1824.2	1857.6	1823.2	1765.0	1706.2	1643.4	1599.7	1562.7
34.5°	1685.7	1726.7	1762.7	1789.5	1821.9	1787.8	1731.0	1668.5	1602.7	1560.0	1525.0
35°	1644.7	1689.3	1726.7	1753.1	1786.9	1752.8	1695.9	1629.8	1563.0	1520.3	1487.6
35.5°	1603.7	1652.0	1692.3	1717.1	1749.8	1717.4	1660.9	1591.4	1523.7	1481.0	1449.3
36°	1559.7	1614.3	1654.6	1681.0	1712.8	1681.4	1624.8	1552.8	1484.0	1441.0	1409.6
36.5°	1515.7	1574.2	1619.2	1645.0	1673.1	1644.0	1587.5	1513.4	1443.6	1400.3	1368.6
37°	1470.4	1533.6	1581.5	1607.0	1632.8	1605.3	1549.1	1474.4	1402.0	1359.3	1325.6
37.5°	1425.5	1491.3	1542.8	1568.0	1591.1	1565.6	1510.4	1434.0	1362.6	1317.7	1283.6
38°	1378.8	1447.9	1502.5	1526.0	1548.1	1524.0	1470.1	1394.0	1321.3	1275.0	1239.3
38.5°	1334.5	1404.6	1462.2	1486.6	1502.8	1482.0	1429.1	1353.7	1280.3	1232.0	1195.3
39°	1288.2	1359.7	1419.5	1443.6	1458.2	1438.7	1386.4	1313.0	1238.3	1188.7	1151.3
39.5°	1243.6	1314.7	1376.2	1400.7	1412.2	1393.7	1343.1	1271.0	1196.6	1145.1	1105.7
40°	1199.0	1267.1	1330.9	1356.0	1365.9	1346.4	1298.8	1228.1	1152.3	1100.1	1060.1
40.5°	1154.6	1220.8	1287.2	1310.4	1320.3	1299.1	1254.5	1185.1	1109.0	1055.8	1013.5
41°	1109.7	1177.1	1242.6	1263.8	1274.7	1250.9	1206.9	1141.8	1064.7	1011.8	967.2
41.5°	1065.4	1131.8	1197.0	1217.5	1230.7	1203.3	1160.3	1099.1	1020.4	969.8	921.5
42°	1020.7	1086.2	1150.0	1190.0	1185.7	1155.3	1113.0	1053.8	975.8	925.8	876.6
42.5°	976.1	1040.9	1103.1	1139.8	1142.4	1107.7	1066.4	1009.2	934.4	883.2	833.2
43°	930.8	995.3	1056.1	1088.5	1098.4	1060.7	1020.1	963.5	891.8	840.9	791.6
43.5°	886.5	951.3	1009.5	1037.6	1051.8	1014.8	973.8	919.2	851.8	799.2	750.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	758.9	819.4	868.3	895.4	915.3	878.5	836.2	786.6	729.8	677.5	634.5
45.5°	718.5	775.4	822.0	851.4	870.3	832.9	791.3	745.3	689.7	638.8	598.2
46°	676.9	732.7	776.0	807.5	827.0	789.3	747.6	702.6	650.7	600.5	562.8
46.5°	635.8	690.4	730.4	763.8	785.0	746.3	703.6	661.3	611.0	565.1	528.7
47°	595.8	648.4	686.8	719.8	743.0	704.3	661.3	619.3	572.7	528.4	495.3
47.5°	556.8	607.1	644.8	677.2	701.3	663.3	620.0	579.6	535.7	494.7	463.9
48°	518.8	567.1	603.4	635.2	660.3	624.6	580.0	539.6	499.9	461.6	433.8
48.5°	482.4	528.4	562.8	594.5	620.0	587.2	541.6	501.6	464.9	430.8	405.4
49°	446.7	490.4	524.4	554.5	580.0	549.9	503.9	464.2	429.9	400.1	377.9
49.5°	412.3	453.3	486.7	515.8	540.3	513.8	469.2	428.9	396.1	371.0	350.8
50°	379.9	416.6	450.4	476.8	502.9	477.8	434.8	395.1	363.4	343.6	326.0
50.5°	347.8	380.9	414.6	439.8	466.2	443.7	402.4	363.1	332.6	319.4	303.2
51°	317.8	347.8	381.6	404.1	430.5	410.3	371.7	333.0	305.9	295.6	280.4
51.5°	288.0	316.4	349.2	370.3	397.1	378.6	342.2	307.5	279.4	271.5	257.9
52°	260.2	287.0	318.8	338.3	364.7	347.5	317.8	282.0	252.6	247.7	235.1
52.5°	233.8	258.6	289.0	306.8	333.3	321.1	293.0	256.3	226.2	223.9	213.9
53°	209.3	232.8	261.5	277.4	305.2	294.3	268.2	230.8	205.3	203.4	195.1
53.5°	186.2	209.0	234.8	250.0	277.1	267.8	243.4	209.3	186.5	184.8	176.6
54°	165.7	186.8	210.6	224.8	248.7	241.0	218.6	189.8	169.6	167.3	159.7
54.5°	146.8	166.0	186.8	201.0	220.9	214.6	198.4	171.9	154.4	150.4	142.5
55°	129.6	147.5	165.7	179.5	197.1	194.1	179.2	156.1	140.2	135.2	127.0
55.5°	113.1	129.3	145.5	159.4	175.6	172.9	161.0	140.2	126.3	120.0	111.8
56°	100.2	112.8	127.6	140.5	155.7	154.4	143.5	126.0	113.1	106.1	97.9
56.5°	87.0	99.5	112.1	122.7	137.6	136.6	127.0	112.4	100.5	92.9	84.6
57°	74.1	86.6	98.5	108.5	120.7	120.0	111.8	99.2	88.3	80.7	72.7
57.5°	61.2	73.4	84.6	94.6	104.5	104.2	97.2	86.6	77.0	69.4	61.5
58°	48.9	60.2	71.1	80.3	89.9	89.6	84.0	75.1	66.1	57.9	49.3
58.5°	37.0	47.3	57.5	66.5	76.7	76.4	71.8	63.8	54.6	49.3	42.0
59°	27.1	35.7	44.6	52.6	63.8	64.5	59.5	51.6	46.3	40.7	34.4
59.5°	19.8	26.1	32.7	39.3	53.9	55.5	50.3	43.6	38.0	31.7	27.1
60°	14.9	18.8	23.8	28.8	44.0	46.6	41.3	35.7	29.4	23.1	19.8
60.5°	10.9	14.2	17.2	20.5	34.1	37.7	32.1	27.8	21.2	14.5	12.2
61°	9.3	12.2	12.9	15.2	24.1	28.8	22.8	19.8	13.2	11.2	9.6
61.5°	7.6	10.3	10.9	11.2	14.2	19.8	13.9	11.9	9.9	8.9	7.6
62°	6.0	8.3	8.9	9.6	10.6	10.9	10.6	8.9	7.6	6.9	6.3
62.5°	4.3	6.3	6.9	7.9	8.3	8.3	7.9	7.3	6.0	5.6	5.0
63°	3.6	4.6	5.3	6.3	6.6	6.6	6.3	5.6	5.0	4.6	4.3
63.5°	3.0	3.6	4.3	4.6	5.3	5.3	5.0	4.6	4.0	4.0	3.6
64°	2.3	3.0	3.6	4.0	4.3	4.3	4.3	4.0	3.3	3.3	3.0
64.5°	2.0	2.6	3.0	3.3	3.6	3.6	3.3	3.3	2.6	2.6	2.6
65°	1.7	2.3	2.6	2.6	3.0	3.0	3.0	2.6	2.3	2.3	2.3
65.5°	1.7	2.0	2.0	2.3	2.6	2.3	2.3	2.3	2.0	2.0	2.0
66°	1.3	1.7	2.0	2.0	2.0	2.0	2.0	2.0	1.7	1.7	1.7





TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.0	1.0	1.0
68°	0.7	1.0	1.0	1.0	1.3	1.0	1.3	1.0	1.0	1.0	1.0
68.5°	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
69°	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7
69.5°	0.7	0.7	0.7	0.7	1.0	0.7	0.7	0.7	0.7	0.7	0.7
70°	0.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
70.5°	0.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
71°	0.3	0.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
71.5°	0.3	0.3	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
73°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
73.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
74°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
74.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
75°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
75.5°	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
76°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
76.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.3
77°	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3016.9	3016.9	3016.9	3016.9	3016.9	3016.9
0.5°	3015.9	3012.3	3014.2	3015.9	3016.9	3016.2
1°	3012.6	3008.3	3010.6	3013.3	3014.9	3015.6
1.5°	3008.3	3003.7	3006.6	3009.6	3013.3	3014.6
2°	3003.0	2998.0	3001.4	3005.7	3009.6	3012.9
2.5°	2997.4	2991.8	2995.1	3001.0	3006.3	3012.9
3°	2990.8	2984.5	2988.8	2995.1	3003.0	3008.0
3.5°	2983.5	2976.6	2981.2	2989.4	2998.4	3005.0
4°	2975.9	2968.3	2973.2	2982.8	2993.7	3001.4
4.5°	2967.3	2958.7	2964.6	2975.6	2987.8	2996.7
5°	2957.7	2948.4	2955.1	2967.3	2981.5	2992.1
5.5°	2947.5	2938.2	2944.8	2958.7	2974.2	2987.8
6°	2936.5	2927.0	2934.6	2949.8	2967.0	2980.2
6.5°	2925.0	2914.4	2923.0	2939.5	2958.7	2973.6
7°	2913.1	2902.5	2911.1	2928.9	2950.1	2966.0
7.5°	2900.2	2888.9	2898.5	2918.4	2940.5	2957.4
8°	2887.3	2874.7	2885.6	2906.5	2930.3	2948.1
8.5°	2873.4	2860.2	2871.7	2893.9	2918.7	2938.5
9°	2859.5	2845.6	2857.2	2881.0	2907.1	2927.9
9.5°	2844.0	2830.1	2842.6	2867.1	2894.6	2916.4
10°	2828.8	2814.5	2827.1	2853.2	2881.7	2904.5
10.5°	2812.5	2797.3	2811.6	2838.3	2868.1	2891.6
11°	2796.0	2780.1	2795.0	2822.5	2853.9	2878.3
11.5°	2779.2	2762.9	2777.8	2806.3	2839.0	2864.5
12°	2761.3	2744.4	2760.3	2789.7	2823.1	2848.9
12.5°	2743.4	2726.2	2742.4	2772.2	2806.9	2833.7
13°	2724.6	2707.1	2723.6	2754.7	2790.7	2818.2
13.5°	2705.4	2687.6	2704.1	2736.2	2773.2	2801.3
14°	2685.2	2667.7	2684.3	2718.0	2755.7	2784.8
14.5°	2664.7	2647.2	2664.1	2698.8	2737.2	2766.9
15°	2643.6	2626.1	2643.3	2679.0	2719.3	2748.7
15.5°	2623.1	2603.9	2621.8	2658.5	2699.1	2729.9
16°	2600.9	2582.4	2600.3	2638.3	2679.6	2710.7
16.5°	2578.8	2559.3	2577.8	2617.8	2659.8	2690.9
17°	2555.6	2536.8	2555.3	2596.3	2639.3	2670.7
17.5°	2533.1	2513.0	2532.2	2573.5	2617.1	2649.5
18°	2510.0	2488.8	2509.0	2551.0	2595.3	2628.7
18.5°	2485.9	2464.4	2485.5	2527.9	2573.2	2607.2
19°	2462.1	2440.6	2460.7	2504.0	2550.0	2585.1
19.5°	2437.9	2415.8	2436.9	2480.6	2526.9	2562.6
20°	2413.8	2390.0	2412.8	2455.8	2503.1	2540.1
20.5°	2390.0	2364.8	2388.0	2430.6	2478.3	2516.6
21°	2364.2	2339.4	2362.9	2405.5	2453.5	2493.1



TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2285.2	2262.0	2285.2	2325.8	2375.8	2420.7
23°	2258.0	2235.2	2258.0	2298.7	2349.0	2395.9
23.5°	2231.3	2208.8	2232.2	2271.6	2321.9	2370.8
24°	2203.5	2181.7	2204.5	2243.8	2294.1	2344.7
24.5°	2175.7	2154.5	2177.7	2215.4	2267.0	2318.2
25°	2147.9	2126.4	2149.6	2186.9	2239.2	2291.4
25.5°	2119.5	2098.7	2121.8	2158.5	2210.8	2264.7
26°	2091.7	2070.6	2092.4	2128.4	2182.7	2237.9
26.5°	2062.6	2041.5	2062.6	2099.7	2153.9	2209.4
27°	2032.9	2011.7	2032.5	2068.2	2124.8	2181.7
27.5°	2002.4	1981.9	2001.5	2037.5	2095.0	2152.6
28°	1971.4	1949.2	1968.7	2006.1	2064.6	2123.8
28.5°	1939.0	1916.8	1937.6	1974.3	2033.9	2094.4
29°	1906.6	1883.4	1904.2	1942.3	2002.8	2064.3
29.5°	1873.5	1849.7	1870.2	1908.9	1971.0	2033.5
30°	1839.1	1814.3	1835.5	1875.8	1939.3	2002.4
30.5°	1804.1	1776.6	1800.4	1841.7	1905.9	1970.7
31°	1768.3	1738.9	1763.4	1807.7	1872.5	1938.3
31.5°	1732.0	1700.6	1726.3	1774.0	1838.8	1904.9
32°	1695.3	1661.2	1687.7	1737.6	1804.7	1870.2
32.5°	1656.9	1622.2	1649.3	1702.9	1770.0	1836.1
33°	1617.9	1581.5	1610.0	1667.2	1733.6	1800.4
33.5°	1578.2	1541.5	1570.6	1631.1	1697.6	1763.7
34°	1538.2	1501.5	1531.6	1593.8	1660.2	1725.0
34.5°	1497.2	1461.2	1491.6	1554.4	1622.9	1685.7
35°	1456.9	1421.5	1450.9	1515.1	1583.2	1644.7
35.5°	1416.2	1381.5	1411.9	1474.7	1543.8	1603.7
36°	1374.5	1342.1	1372.2	1433.7	1501.2	1559.7
36.5°	1333.2	1302.1	1332.2	1391.7	1457.9	1515.7
37°	1291.2	1261.4	1291.5	1345.4	1413.2	1470.4
37.5°	1248.9	1219.8	1250.2	1302.1	1369.6	1425.5
38°	1206.2	1178.8	1207.6	1256.2	1322.0	1378.8
38.5°	1162.3	1133.8	1163.2	1211.8	1275.0	1334.5
39°	1119.6	1088.8	1118.9	1166.4	1226.4	1288.2
39.5°	1076.0	1043.5	1074.6	1134.8	1171.5	1243.6
40°	1032.0	998.6	1030.0	1082.9	1125.9	1199.0
40.5°	988.3	955.3	985.7	1031.3	1080.2	1154.6
41°	945.0	913.6	939.4	979.7	1034.9	1109.7
41.5°	903.7	872.3	894.8	934.1	989.3	1065.4
42°	860.0	832.3	851.1	888.1	943.4	1020.7
42.5°	818.0	791.6	809.1	842.8	898.4	976.1
43°	776.7	751.6	767.4	797.9	852.4	930.8
43.5°	734.7	711.2	724.8	753.9	808.1	886.5



TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	618.0	592.5	602.1	626.6	682.8	758.9
45.5°	580.6	555.5	561.8	586.9	644.1	718.5
46°	544.3	519.1	523.4	548.9	605.8	676.9
46.5°	510.5	482.4	485.7	512.2	569.4	635.8
47°	475.5	447.7	450.0	476.5	532.4	595.8
47.5°	443.4	413.6	416.0	442.7	498.0	556.8
48°	412.7	380.9	382.9	410.3	462.9	518.8
48.5°	382.9	348.8	352.1	379.6	429.5	482.4
49°	354.8	319.4	322.7	350.5	396.5	446.7
49.5°	328.0	291.0	294.9	322.4	365.7	412.3
50°	304.2	264.5	269.8	296.3	335.0	379.9
50.5°	280.7	240.7	245.7	271.1	306.5	347.8
51°	256.9	219.2	224.2	248.0	279.7	317.8
51.5°	233.4	199.7	204.0	225.5	254.3	288.0
52°	213.3	182.2	185.8	205.3	230.5	260.2
52.5°	193.8	166.3	168.6	186.2	208.0	233.8
53°	175.2	151.1	153.4	167.6	186.5	209.3
53.5°	158.7	137.2	138.5	150.1	166.6	186.2
54°	142.8	124.0	124.7	134.2	148.5	165.7
54.5°	127.6	112.1	112.8	119.0	131.6	146.8
55°	113.7	100.5	100.8	106.5	114.7	129.6
55.5°	99.9	88.9	89.3	93.9	101.8	113.1
56°	87.3	77.4	77.4	81.3	88.9	100.2
56.5°	75.7	65.8	65.5	69.1	76.1	87.0
57°	64.8	53.9	53.6	56.5	63.2	74.1
57.5°	52.9	42.0	42.0	44.3	50.9	61.2
58°	45.0	32.1	31.7	33.7	39.0	48.9
58.5°	37.0	24.1	23.5	24.8	29.1	37.0
59°	29.1	17.9	17.5	18.5	21.5	27.1
59.5°	21.2	13.6	13.2	13.9	15.9	19.8
60°	13.2	11.6	11.2	11.9	11.9	14.9
60.5°	10.3	9.3	9.3	9.9	10.3	10.9
61°	8.3	7.3	6.9	8.3	8.3	9.3
61.5°	6.6	5.3	5.0	6.3	6.6	7.6
62°	5.3	4.3	4.3	4.3	5.0	6.0
62.5°	4.3	3.6	3.3	3.6	4.0	4.3
63°	3.6	3.0	3.0	3.0	3.3	3.6
63.5°	3.0	2.6	2.3	2.3	2.6	3.0
64°	2.6	2.3	2.0	2.0	2.3	2.3
64.5°	2.3	2.0	1.7	1.7	2.0	2.0
65°	2.0	1.7	1.3	1.7	1.7	1.7
65.5°	1.7	1.3	1.3	1.3	1.3	1.7
66°	1.3	1.3	1.0	1.0	1.3	1.3



TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.0	1.0	0.7	0.7	1.0	1.0
68°	1.0	0.7	0.7	0.7	0.7	0.7
68.5°	0.7	0.7	0.7	0.7	0.7	0.7
69°	0.7	0.7	0.7	0.7	0.7	0.7
69.5°	0.7	0.7	0.7	0.7	0.7	0.7
70°	0.7	0.7	0.3	0.3	0.3	0.3
70.5°	0.7	0.3	0.3	0.3	0.3	0.3
71°	0.3	0.3	0.3	0.3	0.3	0.3
71.5°	0.3	0.3	0.3	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3	0.3
73°	0.3	0.3	0.3	0.3	0.3	0.3
73.5°	0.3	0.3	0.3	0.3	0.3	0.3
74°	0.3	0.3	0.3	0.3	0.3	0.3
74.5°	0.3	0.3	0.3	0.3	0.3	0.3
75°	0.3	0.3	0.3	0.0	0.0	0.3
75.5°	0.3	0.0	0.0	0.0	0.0	0.0
76°	0.3	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776415

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQH-4000lm-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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21.5°	2469.0	2508.7	2541.1	2548.7	2541.4	2524.2	2488.2	2440.2	2402.5	2376.1	2355.3
22°	2445.2	2484.9	2517.3	2525.2	2518.9	2501.4	2464.0	2416.4	2376.4	2349.6	2328.1



44°	842.5	907.0	962.5	986.0	1005.9	969.5	926.8	873.6	809.4	757.2	710.9
44.5°	800.2	863.3	915.3	940.7	960.2	924.2	882.2	829.9	770.8	717.9	673.2



66.5°	1.0	1.3	1.7	1.7	1.7	1.7	1.7	1.7	1.3	1.3	1.3
67°	1.0	1.3	1.3	1.3	1.7	1.7	1.7	1.3	1.3	1.3	1.3



89°	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0



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21.5°	2337.7	2313.9	2337.1	2379.1	2427.7	2469.0
22°	2311.6	2287.8	2311.3	2352.9	2401.9	2445.2



44°	695.0	670.6	683.1	710.6	765.8	842.5
44.5°	656.7	630.9	642.8	668.3	724.1	800.2

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66.5°	1.3	1.0	1.0	1.0	1.0	1.0
67°	1.0	1.0	1.0	1.0	1.0	1.0

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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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(END OF REPORT)