

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: P776737

Luminaire Tested: HCDJBS4050CSD-HCD6TSQMB-5000lm-3500K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776737  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B015-HCD6TSQMB)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL54050CSD-HCD6TSQMB-5000lm-3500K  
Description: 6 INCH SQUARE MEDIUM MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

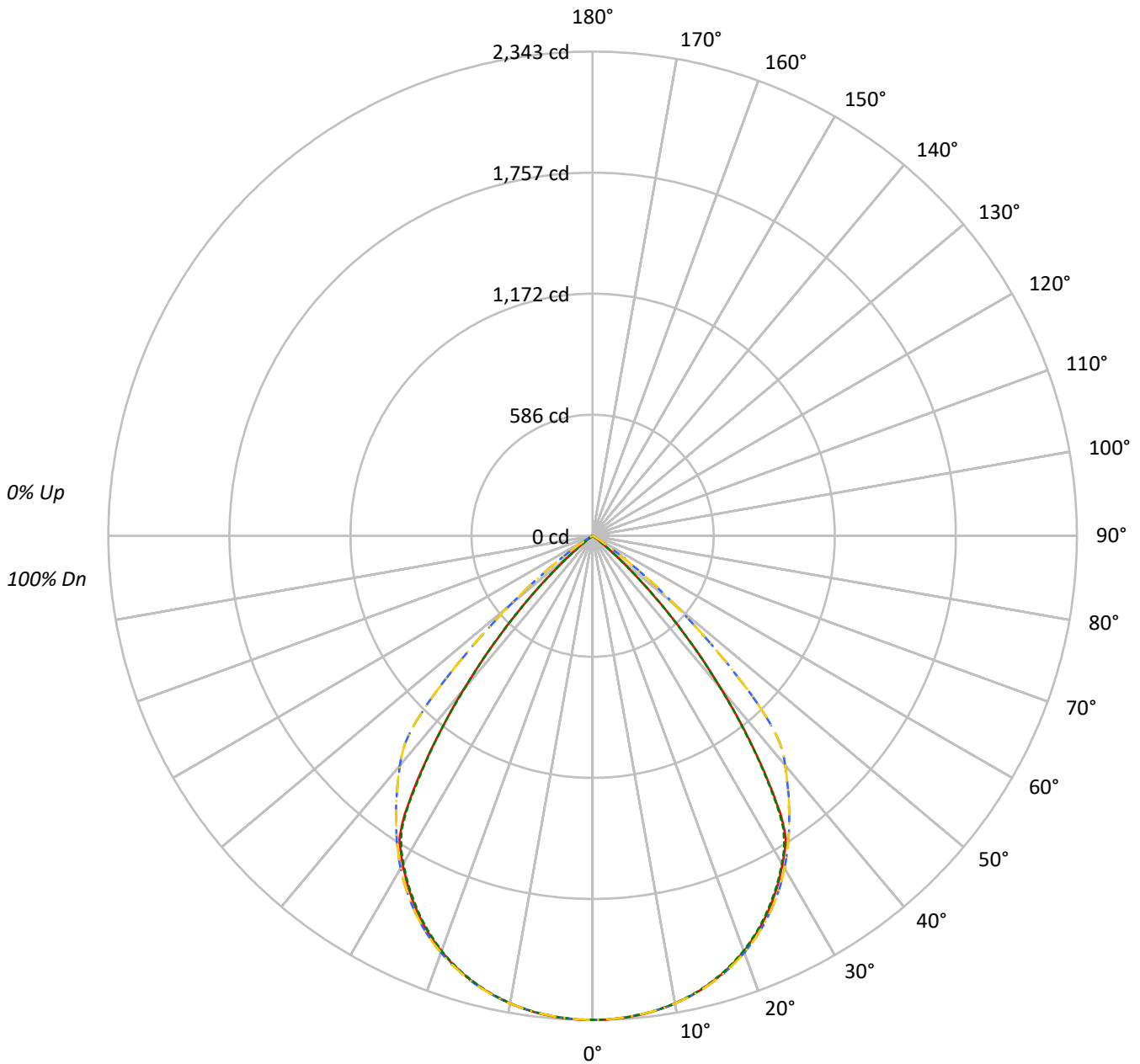
Lumens per Lamp: N/A  
Luminaire Lumens: 3379.8 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.23  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

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					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	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84								
3	100	93	87	83	98	91	86	82	89	84	81	86	83	80	84	81	78	77								
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	74	71	70								
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64								
6	83	73	66	61	81	72	66	61	71	65	61	69	64	60	68	63	60	58								
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53								
8	74	63	56	51	72	62	56	51	61	55	51	60	55	51	59	54	51	49								
9	69	58	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47	45								
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	52	47	43	42								

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

	0°	90°	180°	270°
0°	100849	100849	100849	100849
5°	100807	100763	100807	100763
10°	100464	100403	100464	100403
15°	99611	99526	99611	99526
20°	98025	97892	98025	97892
25°	95336	95089	95336	95089
30°	91324	91046	91324	91046
35°	79935	79415	79935	79415
40°	54581	54232	54581	54232
45°	28417	28442	28417	28442
50°	8279	8185	8279	8185
55°	248	315	248	315
60°	78	78	78	78
65°	51	51	51	51
70°	63	63	63	63
75°	0	83	0	83
80°	0	0	0	0
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 65706 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.5	6.6
10°-20°	629.9	18.6
20°-30°	924.5	27.4
30°-40°	981.0	29.0
40°-50°	547.7	16.2
50°-60°	74.1	2.2
60°-70°	0.9	0.0
70°-80°	0.3	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°	1775.9	52.5
0°-40°	2756.9	81.6
0°-60°	3378.7	100.0
0°-90°	3379.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3379.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2342	2342	2342	2342	2342	
5°	2332	2331	2332	2331	2332	222
15°	2235	2233	2235	2233	2235	630
25°	2007	2002	2007	2002	2007	922
35°	1521	1511	1521	1511	1521	918
45°	467	467	467	467	467	372
55°	3	4	3	4	3	21
65°	0	0	0	0	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	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°	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3
0.5°	2343.2	2342.3	2342.3	2341.8	2342.3	2341.8	2342.3	2342.3	2343.2	2342.3	2342.3
1°	2342.7	2342.3	2341.8	2341.8	2342.3	2341.8	2341.8	2342.3	2342.7	2342.3	2341.8
1.5°	2342.3	2341.3	2341.3	2341.3	2341.3	2341.3	2341.3	2341.3	2342.3	2341.3	2341.3
2°	2341.3	2340.9	2340.4	2340.4	2340.9	2340.4	2340.4	2340.9	2341.3	2340.9	2340.4
2.5°	2340.4	2339.9	2339.4	2339.4	2339.9	2339.4	2339.4	2339.9	2340.4	2339.9	2339.4
3°	2339.4	2338.5	2338.5	2338.5	2338.5	2338.5	2338.5	2338.5	2339.4	2338.5	2338.5
3.5°	2338.0	2337.6	2337.1	2337.1	2337.1	2337.1	2337.1	2337.6	2338.0	2337.6	2337.1
4°	2336.6	2335.7	2335.2	2335.2	2335.7	2335.2	2335.2	2335.7	2336.6	2335.7	2335.2
4.5°	2334.7	2333.8	2333.8	2333.3	2333.8	2333.3	2333.8	2333.8	2334.7	2333.8	2333.8
5°	2332.4	2331.9	2331.4	2331.4	2331.4	2331.4	2331.4	2331.9	2332.4	2331.9	2331.4
5.5°	2330.0	2329.5	2329.1	2329.1	2329.1	2329.1	2329.1	2329.5	2330.0	2329.5	2329.1
6°	2327.6	2327.2	2326.7	2326.2	2326.7	2326.2	2326.7	2327.2	2327.6	2327.2	2326.7
6.5°	2324.8	2324.3	2323.9	2323.9	2323.9	2323.9	2323.9	2324.3	2324.8	2324.3	2323.9
7°	2322.0	2321.5	2321.0	2320.6	2320.6	2320.6	2321.0	2321.5	2322.0	2321.5	2321.0
7.5°	2318.7	2318.2	2317.7	2317.3	2317.3	2317.3	2317.7	2318.2	2318.7	2318.2	2317.7
8°	2314.9	2314.4	2314.4	2314.0	2314.0	2314.0	2314.4	2314.4	2314.9	2314.4	2314.4
8.5°	2311.1	2310.7	2310.7	2310.2	2309.7	2310.2	2310.7	2310.7	2311.1	2310.7	2310.7
9°	2306.9	2306.9	2306.4	2305.9	2305.5	2305.9	2306.4	2306.9	2306.9	2306.9	2306.4
9.5°	2302.6	2302.6	2302.2	2301.7	2301.2	2301.7	2302.2	2302.6	2302.6	2302.6	2302.2
10°	2297.9	2297.9	2297.9	2297.0	2296.5	2297.0	2297.9	2297.9	2297.9	2297.9	2297.9
10.5°	2293.2	2293.2	2293.2	2292.3	2291.8	2292.3	2293.2	2293.2	2293.2	2293.2	2293.2
11°	2287.5	2288.0	2288.0	2287.1	2286.1	2287.1	2288.0	2288.0	2287.5	2288.0	2288.0
11.5°	2282.3	2282.8	2282.8	2281.4	2280.5	2281.4	2282.8	2282.8	2282.3	2282.8	2282.8
12°	2276.7	2277.2	2277.2	2275.7	2274.8	2275.7	2277.2	2277.2	2276.7	2277.2	2277.2
12.5°	2270.5	2271.0	2271.5	2269.6	2268.7	2269.6	2271.5	2271.0	2270.5	2271.0	2271.5
13°	2263.9	2264.9	2265.4	2263.5	2262.1	2263.5	2265.4	2264.9	2263.9	2264.9	2265.4
13.5°	2257.3	2258.3	2258.8	2256.9	2255.4	2256.9	2258.8	2258.3	2257.3	2258.3	2258.8
14°	2249.8	2251.2	2252.1	2249.8	2248.4	2249.8	2252.1	2251.2	2249.8	2251.2	2252.1
14.5°	2242.7	2244.1	2245.1	2242.7	2240.8	2242.7	2245.1	2244.1	2242.7	2244.1	2245.1
15°	2234.7	2236.6	2237.5	2235.2	2232.8	2235.2	2237.5	2236.6	2234.7	2236.6	2237.5
15.5°	2227.1	2228.6	2230.0	2227.1	2224.8	2227.1	2230.0	2228.6	2227.1	2228.6	2230.0
16°	2218.6	2220.5	2221.9	2219.1	2216.3	2219.1	2221.9	2220.5	2218.6	2220.5	2221.9
16.5°	2210.2	2212.0	2213.5	2210.6	2207.8	2210.6	2213.5	2212.0	2210.2	2212.0	2213.5
17°	2200.7	2203.5	2205.0	2201.7	2198.4	2201.7	2205.0	2203.5	2200.7	2203.5	2205.0
17.5°	2191.7	2194.1	2196.0	2192.7	2188.9	2192.7	2196.0	2194.1	2191.7	2194.1	2196.0
18°	2181.8	2184.7	2186.6	2182.8	2179.0	2182.8	2186.6	2184.7	2181.8	2184.7	2186.6
18.5°	2171.9	2175.2	2177.1	2173.3	2169.1	2173.3	2177.1	2175.2	2171.9	2175.2	2177.1
19°	2161.6	2164.9	2167.2	2162.5	2158.2	2162.5	2167.2	2164.9	2161.6	2164.9	2167.2
19.5°	2150.7	2154.5	2156.8	2152.1	2147.9	2152.1	2156.8	2154.5	2150.7	2154.5	2156.8
20°	2139.4	2143.6	2146.5	2141.3	2136.5	2141.3	2146.5	2143.6	2139.4	2143.6	2146.5
20.5°	2128.0	2132.8	2135.6	2129.9	2124.7	2129.9	2135.6	2132.8	2128.0	2132.8	2135.6
21°	2116.3	2121.0	2124.3	2118.6	2112.5	2118.6	2124.3	2121.0	2116.3	2121.0	2124.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2078.0	2084.2	2087.9	2081.3	2073.8	2081.3	2087.9	2084.2	2078.0	2084.2	2087.9
23°	2064.8	2071.0	2075.2	2068.1	2060.1	2068.1	2075.2	2071.0	2064.8	2071.0	2075.2
23.5°	2051.1	2057.7	2062.5	2054.4	2045.9	2054.4	2062.5	2057.7	2051.1	2057.7	2062.5
24°	2036.5	2044.1	2048.8	2040.3	2031.8	2040.3	2048.8	2044.1	2036.5	2044.1	2048.8
24.5°	2021.9	2029.4	2035.1	2026.1	2017.2	2026.1	2035.1	2029.4	2021.9	2029.4	2035.1
25°	2006.8	2014.8	2020.5	2011.0	2001.6	2011.0	2020.5	2014.8	2006.8	2014.8	2020.5
25.5°	1991.7	1999.7	2006.3	1995.9	1986.0	1995.9	2006.3	1999.7	1991.7	1999.7	2006.3
26°	1976.1	1984.6	1991.2	1980.8	1970.0	1980.8	1991.2	1984.6	1976.1	1984.6	1991.2
26.5°	1960.1	1968.6	1975.6	1964.8	1953.9	1964.8	1975.6	1968.6	1960.1	1968.6	1975.6
27°	1943.1	1953.0	1960.1	1948.7	1937.4	1948.7	1960.1	1953.0	1943.1	1953.0	1960.1
27.5°	1926.1	1936.5	1944.0	1931.8	1920.9	1931.8	1944.0	1936.5	1926.1	1936.5	1944.0
28°	1909.1	1919.5	1927.5	1915.2	1903.0	1915.2	1927.5	1919.5	1909.1	1919.5	1927.5
28.5°	1891.7	1902.5	1910.5	1898.3	1885.5	1898.3	1910.5	1902.5	1891.7	1902.5	1910.5
29°	1873.7	1885.5	1893.1	1880.8	1867.6	1880.8	1893.1	1885.5	1873.7	1885.5	1893.1
29.5°	1855.8	1867.6	1875.6	1863.3	1849.7	1863.3	1875.6	1867.6	1855.8	1867.6	1875.6
30°	1836.9	1849.7	1857.2	1845.4	1831.3	1845.4	1857.2	1849.7	1836.9	1849.7	1857.2
30.5°	1818.5	1831.7	1838.8	1827.5	1812.4	1827.5	1838.8	1831.7	1818.5	1831.7	1838.8
31°	1799.2	1813.3	1819.9	1809.1	1793.0	1809.1	1819.9	1813.3	1799.2	1813.3	1819.9
31.5°	1779.8	1794.9	1800.6	1790.2	1773.2	1790.2	1800.6	1794.9	1779.8	1794.9	1800.6
32°	1760.0	1775.6	1781.2	1771.3	1748.2	1771.3	1781.2	1775.6	1760.0	1775.6	1781.2
32.5°	1739.2	1756.2	1761.4	1752.0	1722.7	1752.0	1761.4	1756.2	1739.2	1756.2	1761.4
33°	1705.7	1736.9	1741.1	1732.6	1694.9	1732.6	1741.1	1736.9	1705.7	1736.9	1741.1
33.5°	1669.4	1717.5	1720.8	1712.8	1657.1	1712.8	1720.8	1717.5	1669.4	1717.5	1720.8
34°	1625.1	1697.7	1700.1	1688.8	1615.1	1688.8	1700.1	1697.7	1625.1	1697.7	1700.1
34.5°	1573.6	1676.5	1679.3	1662.3	1565.1	1662.3	1679.3	1676.5	1573.6	1676.5	1679.3
35°	1520.8	1644.9	1658.6	1635.4	1510.9	1635.4	1658.6	1644.9	1520.8	1644.9	1658.6
35.5°	1467.9	1613.7	1637.8	1601.5	1456.1	1601.5	1637.8	1613.7	1467.9	1613.7	1637.8
36°	1413.2	1571.7	1616.6	1563.7	1401.9	1563.7	1616.6	1571.7	1413.2	1571.7	1616.6
36.5°	1358.0	1527.4	1595.8	1517.9	1348.6	1517.9	1595.8	1527.4	1358.0	1527.4	1595.8
37°	1301.8	1476.9	1575.0	1469.3	1293.8	1469.3	1575.0	1476.9	1301.8	1476.9	1575.0
37.5°	1247.6	1426.4	1553.8	1417.9	1240.0	1417.9	1553.8	1426.4	1247.6	1426.4	1553.8
38°	1191.0	1374.5	1533.0	1365.5	1185.8	1365.5	1533.0	1374.5	1191.0	1374.5	1533.0
38.5°	1136.2	1322.6	1511.8	1314.1	1131.0	1314.1	1511.8	1322.6	1136.2	1322.6	1511.8
39°	1081.5	1269.8	1491.5	1263.1	1075.3	1263.1	1491.5	1269.8	1081.5	1269.8	1491.5
39.5°	1026.7	1217.8	1470.8	1212.2	1020.1	1212.2	1470.8	1217.8	1026.7	1217.8	1470.8
40°	971.1	1165.0	1450.0	1160.8	964.9	1160.8	1450.0	1165.0	971.1	1165.0	1450.0
40.5°	916.8	1113.1	1429.2	1108.9	911.1	1108.9	1429.2	1113.1	916.8	1113.1	1429.2
41°	864.0	1061.2	1408.0	1057.4	857.8	1057.4	1408.0	1061.2	864.0	1061.2	1408.0
41.5°	811.1	1009.3	1384.4	1005.0	806.9	1005.0	1384.4	1009.3	811.1	1009.3	1384.4
42°	758.3	957.4	1358.0	953.1	755.4	953.1	1358.0	957.4	758.3	957.4	1358.0
42.5°	707.8	906.4	1323.5	901.7	704.5	901.7	1323.5	906.4	707.8	906.4	1323.5
43°	657.3	855.0	1284.4	851.2	654.9	851.2	1284.4	855.0	657.3	855.0	1284.4
43.5°	608.2	805.0	1242.4	801.7	605.4	801.7	1242.4	805.0	608.2	805.0	1242.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	466.7	659.2	1079.1	657.3	467.1	657.3	1079.1	659.2	466.7	659.2	1079.1
45.5°	424.2	612.0	1017.8	610.6	424.2	610.6	1017.8	612.0	424.2	612.0	1017.8
46°	382.7	565.7	956.9	564.3	382.7	564.3	956.9	565.7	382.7	565.7	956.9
46.5°	341.6	520.5	897.0	519.0	340.7	519.0	897.0	520.5	341.6	520.5	897.0
47°	301.5	476.1	837.1	476.1	300.1	476.1	837.1	476.1	301.5	476.1	837.1
47.5°	262.8	434.1	780.0	434.6	263.3	434.6	780.0	434.1	262.8	434.1	780.0
48°	228.8	393.5	724.8	393.5	228.8	393.5	724.8	393.5	228.8	393.5	724.8
48.5°	197.7	353.9	671.4	353.4	197.2	353.4	671.4	353.9	197.7	353.9	671.4
49°	171.8	314.7	619.5	314.3	167.5	314.3	619.5	314.7	171.8	314.7	619.5
49.5°	147.2	277.0	569.1	277.0	144.4	277.0	569.1	277.0	147.2	277.0	569.1
50°	123.6	242.5	520.0	242.5	122.2	242.5	520.0	242.5	123.6	242.5	520.0
50.5°	101.9	212.3	472.8	209.5	101.0	209.5	472.8	212.3	101.9	212.3	472.8
51°	83.5	183.6	430.3	179.3	83.5	179.3	430.3	183.6	83.5	183.6	430.3
51.5°	67.0	158.5	388.8	154.8	65.6	154.8	388.8	158.5	67.0	158.5	388.8
52°	53.3	134.0	348.2	131.2	50.5	131.2	348.2	134.0	53.3	134.0	348.2
52.5°	40.1	111.4	308.6	108.5	35.9	108.5	308.6	111.4	40.1	111.4	308.6
53°	26.9	91.1	271.8	89.2	22.2	89.2	271.8	91.1	26.9	91.1	271.8
53.5°	17.9	72.7	238.3	69.8	13.2	69.8	238.3	72.7	17.9	72.7	238.3
54°	8.5	58.5	207.1	54.3	7.5	54.3	207.1	58.5	8.5	58.5	207.1
54.5°	5.2	44.8	180.2	40.1	5.7	40.1	180.2	44.8	5.2	44.8	180.2
55°	3.3	31.1	154.8	26.4	4.2	26.4	154.8	31.1	3.3	31.1	154.8
55.5°	1.4	19.8	131.2	17.9	2.8	17.9	131.2	19.8	1.4	19.8	131.2
56°	0.9	8.5	109.5	13.2	1.4	13.2	109.5	8.5	0.9	8.5	109.5
56.5°	0.9	4.2	88.7	8.0	0.9	8.0	88.7	4.2	0.9	4.2	88.7
57°	0.9	2.4	72.2	4.2	0.9	4.2	72.2	2.4	0.9	2.4	72.2
57.5°	0.9	1.9	58.0	1.9	0.9	1.9	58.0	1.9	0.9	1.9	58.0
58°	0.9	0.9	46.7	0.9	0.9	0.9	46.7	0.9	0.9	0.9	46.7
58.5°	0.9	0.9	36.3	0.9	0.9	0.9	36.3	0.9	0.9	0.9	36.3
59°	0.9	0.9	26.9	0.9	0.9	0.9	26.9	0.9	0.9	0.9	26.9
59.5°	0.9	0.9	19.8	0.9	0.9	0.9	19.8	0.9	0.9	0.9	19.8
60°	0.9	0.9	13.7	0.9	0.9	0.9	13.7	0.9	0.9	0.9	13.7
60.5°	0.9	0.9	9.4	0.9	0.9	0.9	9.4	0.9	0.9	0.9	9.4
61°	0.9	0.9	6.1	0.9	0.9	0.9	6.1	0.9	0.9	0.9	6.1
61.5°	0.9	0.9	3.8	0.9	0.9	0.9	3.8	0.9	0.9	0.9	3.8
62°	0.5	0.5	1.9	0.9	0.9	0.9	1.9	0.5	0.5	0.5	1.9
62.5°	0.5	0.5	1.4	0.5	0.5	0.5	1.4	0.5	0.5	0.5	1.4
63°	0.5	0.5	0.9	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.9
63.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
64°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
64.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
65.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
66°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5





TEST NUMBER: P776737

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
68°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
68.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
75°	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	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	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: P776737

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMB-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776737

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2342.3	2342.3	2342.3	2342.3	2342.3	2342.3
0.5°	2341.8	2342.3	2341.8	2342.3	2342.3	2343.2
1°	2341.8	2342.3	2341.8	2341.8	2342.3	2342.7
1.5°	2341.3	2341.3	2341.3	2341.3	2341.3	2342.3
2°	2340.4	2340.9	2340.4	2340.4	2340.9	2341.3
2.5°	2339.4	2339.9	2339.4	2339.4	2339.9	2340.4
3°	2338.5	2338.5	2338.5	2338.5	2338.5	2339.4
3.5°	2337.1	2337.1	2337.1	2337.1	2337.6	2338.0
4°	2335.2	2335.7	2335.2	2335.2	2335.7	2336.6
4.5°	2333.3	2333.8	2333.3	2333.8	2333.8	2334.7
5°	2331.4	2331.4	2331.4	2331.4	2331.9	2332.4
5.5°	2329.1	2329.1	2329.1	2329.1	2329.5	2330.0
6°	2326.2	2326.7	2326.2	2326.7	2327.2	2327.6
6.5°	2323.9	2323.9	2323.9	2323.9	2324.3	2324.8
7°	2320.6	2320.6	2320.6	2321.0	2321.5	2322.0
7.5°	2317.3	2317.3	2317.3	2317.7	2318.2	2318.7
8°	2314.0	2314.0	2314.0	2314.4	2314.4	2314.9
8.5°	2310.2	2309.7	2310.2	2310.7	2310.7	2311.1
9°	2305.9	2305.5	2305.9	2306.4	2306.9	2306.9
9.5°	2301.7	2301.2	2301.7	2302.2	2302.6	2302.6
10°	2297.0	2296.5	2297.0	2297.9	2297.9	2297.9
10.5°	2292.3	2291.8	2292.3	2293.2	2293.2	2293.2
11°	2287.1	2286.1	2287.1	2288.0	2288.0	2287.5
11.5°	2281.4	2280.5	2281.4	2282.8	2282.8	2282.3
12°	2275.7	2274.8	2275.7	2277.2	2277.2	2276.7
12.5°	2269.6	2268.7	2269.6	2271.5	2271.0	2270.5
13°	2263.5	2262.1	2263.5	2265.4	2264.9	2263.9
13.5°	2256.9	2255.4	2256.9	2258.8	2258.3	2257.3
14°	2249.8	2248.4	2249.8	2252.1	2251.2	2249.8
14.5°	2242.7	2240.8	2242.7	2245.1	2244.1	2242.7
15°	2235.2	2232.8	2235.2	2237.5	2236.6	2234.7
15.5°	2227.1	2224.8	2227.1	2230.0	2228.6	2227.1
16°	2219.1	2216.3	2219.1	2221.9	2220.5	2218.6
16.5°	2210.6	2207.8	2210.6	2213.5	2212.0	2210.2
17°	2201.7	2198.4	2201.7	2205.0	2203.5	2200.7
17.5°	2192.7	2188.9	2192.7	2196.0	2194.1	2191.7
18°	2182.8	2179.0	2182.8	2186.6	2184.7	2181.8
18.5°	2173.3	2169.1	2173.3	2177.1	2175.2	2171.9
19°	2162.5	2158.2	2162.5	2167.2	2164.9	2161.6
19.5°	2152.1	2147.9	2152.1	2156.8	2154.5	2150.7
20°	2141.3	2136.5	2141.3	2146.5	2143.6	2139.4
20.5°	2129.9	2124.7	2129.9	2135.6	2132.8	2128.0
21°	2118.6	2112.5	2118.6	2124.3	2121.0	2116.3



TEST NUMBER: P776737

CATALOG NUMBER: HCDJBLS4050CSD-HCD6TSQMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2081.3	2073.8	2081.3	2087.9	2084.2	2078.0
23°	2068.1	2060.1	2068.1	2075.2	2071.0	2064.8
23.5°	2054.4	2045.9	2054.4	2062.5	2057.7	2051.1
24°	2040.3	2031.8	2040.3	2048.8	2044.1	2036.5
24.5°	2026.1	2017.2	2026.1	2035.1	2029.4	2021.9
25°	2011.0	2001.6	2011.0	2020.5	2014.8	2006.8
25.5°	1995.9	1986.0	1995.9	2006.3	1999.7	1991.7
26°	1980.8	1970.0	1980.8	1991.2	1984.6	1976.1
26.5°	1964.8	1953.9	1964.8	1975.6	1968.6	1960.1
27°	1948.7	1937.4	1948.7	1960.1	1953.0	1943.1
27.5°	1931.8	1920.9	1931.8	1944.0	1936.5	1926.1
28°	1915.2	1903.0	1915.2	1927.5	1919.5	1909.1
28.5°	1898.3	1885.5	1898.3	1910.5	1902.5	1891.7
29°	1880.8	1867.6	1880.8	1893.1	1885.5	1873.7
29.5°	1863.3	1849.7	1863.3	1875.6	1867.6	1855.8
30°	1845.4	1831.3	1845.4	1857.2	1849.7	1836.9
30.5°	1827.5	1812.4	1827.5	1838.8	1831.7	1818.5
31°	1809.1	1793.0	1809.1	1819.9	1813.3	1799.2
31.5°	1790.2	1773.2	1790.2	1800.6	1794.9	1779.8
32°	1771.3	1748.2	1771.3	1781.2	1775.6	1760.0
32.5°	1752.0	1722.7	1752.0	1761.4	1756.2	1739.2
33°	1732.6	1694.9	1732.6	1741.1	1736.9	1705.7
33.5°	1712.8	1657.1	1712.8	1720.8	1717.5	1669.4
34°	1688.8	1615.1	1688.8	1700.1	1697.7	1625.1
34.5°	1662.3	1565.1	1662.3	1679.3	1676.5	1573.6
35°	1635.4	1510.9	1635.4	1658.6	1644.9	1520.8
35.5°	1601.5	1456.1	1601.5	1637.8	1613.7	1467.9
36°	1563.7	1401.9	1563.7	1616.6	1571.7	1413.2
36.5°	1517.9	1348.6	1517.9	1595.8	1527.4	1358.0
37°	1469.3	1293.8	1469.3	1575.0	1476.9	1301.8
37.5°	1417.9	1240.0	1417.9	1553.8	1426.4	1247.6
38°	1365.5	1185.8	1365.5	1533.0	1374.5	1191.0
38.5°	1314.1	1131.0	1314.1	1511.8	1322.6	1136.2
39°	1263.1	1075.3	1263.1	1491.5	1269.8	1081.5
39.5°	1212.2	1020.1	1212.2	1470.8	1217.8	1026.7
40°	1160.8	964.9	1160.8	1450.0	1165.0	971.1
40.5°	1108.9	911.1	1108.9	1429.2	1113.1	916.8
41°	1057.4	857.8	1057.4	1408.0	1061.2	864.0
41.5°	1005.0	806.9	1005.0	1384.4	1009.3	811.1
42°	953.1	755.4	953.1	1358.0	957.4	758.3
42.5°	901.7	704.5	901.7	1323.5	906.4	707.8
43°	851.2	654.9	851.2	1284.4	855.0	657.3
43.5°	801.7	605.4	801.7	1242.4	805.0	608.2



TEST NUMBER: P776737

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	657.3	467.1	657.3	1079.1	659.2	466.7
45.5°	610.6	424.2	610.6	1017.8	612.0	424.2
46°	564.3	382.7	564.3	956.9	565.7	382.7
46.5°	519.0	340.7	519.0	897.0	520.5	341.6
47°	476.1	300.1	476.1	837.1	476.1	301.5
47.5°	434.6	263.3	434.6	780.0	434.1	262.8
48°	393.5	228.8	393.5	724.8	393.5	228.8
48.5°	353.4	197.2	353.4	671.4	353.9	197.7
49°	314.3	167.5	314.3	619.5	314.7	171.8
49.5°	277.0	144.4	277.0	569.1	277.0	147.2
50°	242.5	122.2	242.5	520.0	242.5	123.6
50.5°	209.5	101.0	209.5	472.8	212.3	101.9
51°	179.3	83.5	179.3	430.3	183.6	83.5
51.5°	154.8	65.6	154.8	388.8	158.5	67.0
52°	131.2	50.5	131.2	348.2	134.0	53.3
52.5°	108.5	35.9	108.5	308.6	111.4	40.1
53°	89.2	22.2	89.2	271.8	91.1	26.9
53.5°	69.8	13.2	69.8	238.3	72.7	17.9
54°	54.3	7.5	54.3	207.1	58.5	8.5
54.5°	40.1	5.7	40.1	180.2	44.8	5.2
55°	26.4	4.2	26.4	154.8	31.1	3.3
55.5°	17.9	2.8	17.9	131.2	19.8	1.4
56°	13.2	1.4	13.2	109.5	8.5	0.9
56.5°	8.0	0.9	8.0	88.7	4.2	0.9
57°	4.2	0.9	4.2	72.2	2.4	0.9
57.5°	1.9	0.9	1.9	58.0	1.9	0.9
58°	0.9	0.9	0.9	46.7	0.9	0.9
58.5°	0.9	0.9	0.9	36.3	0.9	0.9
59°	0.9	0.9	0.9	26.9	0.9	0.9
59.5°	0.9	0.9	0.9	19.8	0.9	0.9
60°	0.9	0.9	0.9	13.7	0.9	0.9
60.5°	0.9	0.9	0.9	9.4	0.9	0.9
61°	0.9	0.9	0.9	6.1	0.9	0.9
61.5°	0.9	0.9	0.9	3.8	0.9	0.9
62°	0.9	0.9	0.9	1.9	0.5	0.5
62.5°	0.5	0.5	0.5	1.4	0.5	0.5
63°	0.5	0.5	0.5	0.9	0.5	0.5
63.5°	0.5	0.5	0.5	0.5	0.5	0.5
64°	0.5	0.5	0.5	0.5	0.5	0.5
64.5°	0.5	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.5	0.5	0.5	0.5
65.5°	0.5	0.5	0.5	0.5	0.5	0.5
66°	0.5	0.5	0.5	0.5	0.5	0.5



TEST NUMBER: P776737

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.5	0.5	0.5	0.5	0.5	0.5
68°	0.5	0.5	0.5	0.5	0.5	0.5
68.5°	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.0	0.5	0.5
75°	0.5	0.5	0.5	0.0	0.0	0.0
75.5°	0.5	0.5	0.5	0.0	0.0	0.0
76°	0.0	0.5	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: P776737

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQMB-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°	2104.0	2109.2	2112.5	2106.3	2099.7	2106.3	2112.5	2109.2	2104.0	2109.2	2112.5
22°	2091.2	2096.9	2100.2	2094.1	2087.0	2094.1	2100.2	2096.9	2091.2	2096.9	2100.2



44°	559.6	755.0	1191.4	752.6	557.3	752.6	1191.4	755.0	559.6	755.0	1191.4
44.5°	512.9	706.8	1136.2	704.9	511.0	704.9	1136.2	706.8	512.9	706.8	1136.2



66.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
67°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



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°	2106.3	2099.7	2106.3	2112.5	2109.2	2104.0
22°	2094.1	2087.0	2094.1	2100.2	2096.9	2091.2



44°	752.6	557.3	752.6	1191.4	755.0	559.6
44.5°	704.9	511.0	704.9	1136.2	706.8	512.9

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66.5°	0.5	0.5	0.5	0.5	0.5	0.5
67°	0.5	0.5	0.5	0.5	0.5	0.5

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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)