

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: P776232

Luminaire Tested: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776232  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156A001)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS3040CSD-HCD42TRMW-3500lm-3500K  
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

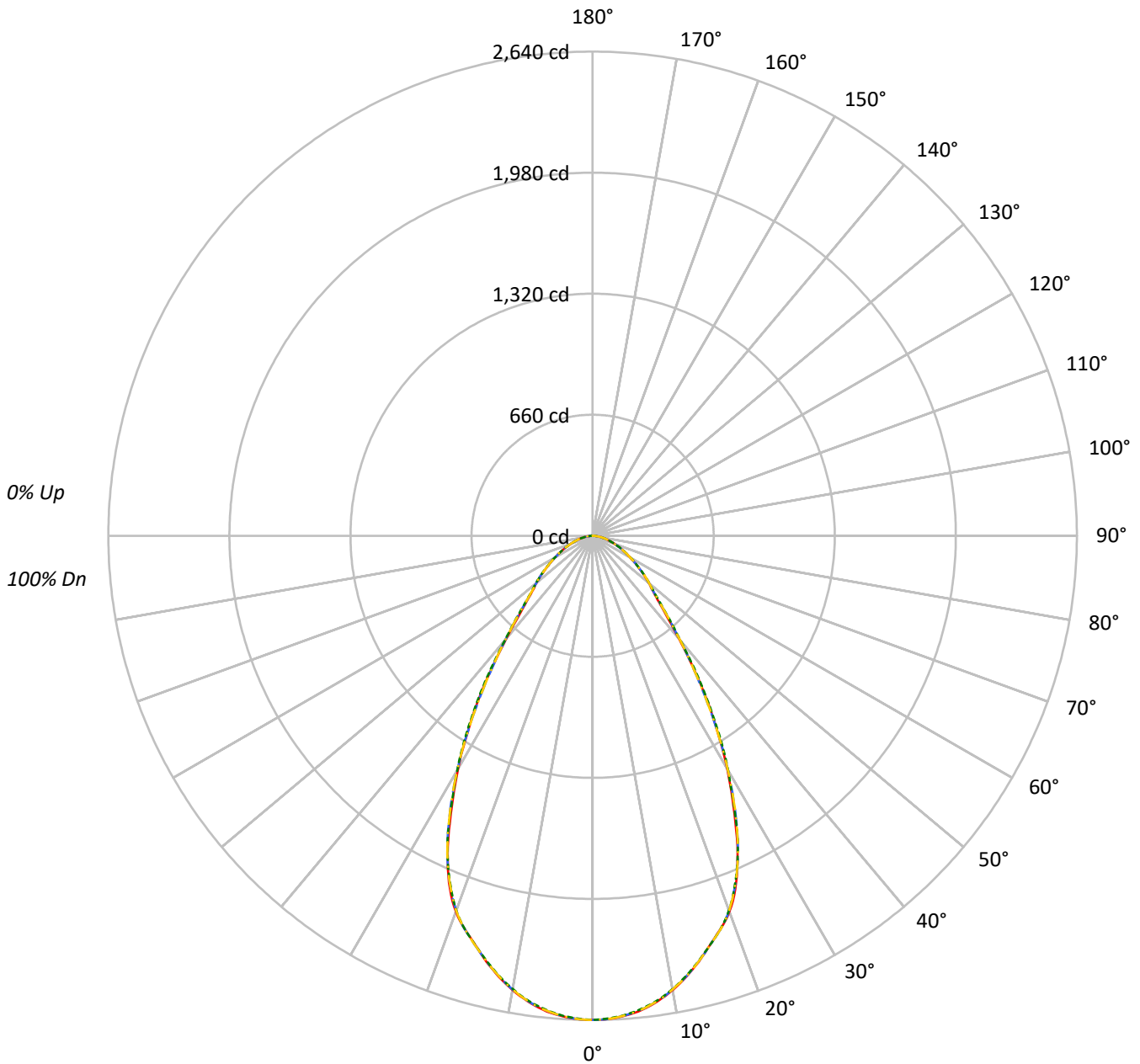
Lumens per Lamp: N/A  
Luminaire Lumens: 3409.0 lumens  
Efficiency: N/A  
Efficacy: 101.8 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.5  
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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53								
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49								
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42								
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39								

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

	0°	90°	180°	270°
0°	332256	332256	332256	332256
5°	329900	329192	329900	329192
10°	321382	320667	321382	320667
15°	307170	306792	307170	306792
20°	292067	291022	292067	291022
25°	259224	260057	259224	260057
30°	213284	214403	213284	214403
35°	165464	167246	165464	167246
40°	120175	122278	120175	122278
45°	91000	93261	91000	93261
50°	78354	78981	78354	78981
55°	68106	68895	68106	68895
60°	59527	60081	59527	60081
65°	52321	52738	52321	52738
70°	46179	46437	46179	46437
75°	40553	40553	40553	40553
80°	35077	34860	35077	34860
85°	28013	28013	28013	28013

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 93261 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	246.0	7.2
10°-20°	662.3	19.4
20°-30°	848.1	24.9
30°-40°	672.0	19.7
40°-50°	411.5	12.1
50°-60°	281.3	8.3
60°-70°	176.1	5.2
70°-80°	89.2	2.6
80°-90°	22.5	0.7
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°	1756.3	51.5
0°-40°	2428.4	71.2
0°-60°	3121.2	91.6
0°-90°	3409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3409.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2640	2640	2640	2640	2640	
5°	2611	2606	2611	2606	2611	246
15°	2358	2355	2358	2355	2358	663
25°	1867	1873	1867	1873	1867	846
35°	1077	1089	1077	1089	1077	671
45°	511	524	511	524	511	406
55°	310	314	310	314	310	280
65°	176	177	176	177	176	175
75°	83	83	83	83	83	89
85°	19	19	19	19	19	22
90°	0	1	0	1	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°	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1
0.5°	2640.4	2640.1	2639.4	2639.0	2638.0	2639.0	2639.4	2640.1	2640.4	2640.1	2639.4
1°	2639.4	2639.0	2638.7	2638.3	2636.9	2638.3	2638.7	2639.0	2639.4	2639.0	2638.7
1.5°	2638.0	2637.2	2637.2	2636.5	2635.5	2636.5	2637.2	2637.2	2638.0	2637.2	2637.2
2°	2635.8	2635.5	2634.8	2634.4	2633.0	2634.4	2634.8	2635.5	2635.8	2635.5	2634.8
2.5°	2633.4	2632.7	2631.9	2631.6	2629.8	2631.6	2631.9	2632.7	2633.4	2632.7	2631.9
3°	2629.8	2629.1	2628.4	2627.7	2625.9	2627.7	2628.4	2629.1	2629.8	2629.1	2628.4
3.5°	2625.9	2625.2	2624.2	2623.5	2622.4	2623.5	2624.2	2625.2	2625.9	2625.2	2624.2
4°	2621.3	2621.0	2619.6	2618.9	2617.1	2618.9	2619.6	2621.0	2621.3	2621.0	2619.6
4.5°	2616.4	2615.7	2614.3	2613.6	2611.4	2613.6	2614.3	2615.7	2616.4	2615.7	2614.3
5°	2611.4	2610.4	2609.0	2608.3	2605.8	2608.3	2609.0	2610.4	2611.4	2610.4	2609.0
5.5°	2606.1	2603.7	2601.9	2601.2	2599.1	2601.2	2601.9	2603.7	2606.1	2603.7	2601.9
6°	2598.0	2596.6	2594.8	2593.8	2590.9	2593.8	2594.8	2596.6	2598.0	2596.6	2594.8
6.5°	2589.9	2588.8	2586.7	2585.6	2582.8	2585.6	2586.7	2588.8	2589.9	2588.8	2586.7
7°	2581.4	2580.0	2578.9	2577.1	2574.7	2577.1	2578.9	2580.0	2581.4	2580.0	2578.9
7.5°	2571.8	2570.4	2569.0	2568.3	2565.8	2568.3	2569.0	2570.4	2571.8	2570.4	2569.0
8°	2561.6	2560.5	2559.1	2558.0	2556.6	2558.0	2559.1	2560.5	2561.6	2560.5	2559.1
8.5°	2551.0	2549.6	2548.1	2547.1	2545.7	2547.1	2548.1	2549.6	2551.0	2549.6	2548.1
9°	2539.7	2538.6	2536.8	2535.8	2534.4	2535.8	2536.8	2538.6	2539.7	2538.6	2536.8
9.5°	2527.3	2526.6	2524.8	2523.8	2522.3	2523.8	2524.8	2526.6	2527.3	2526.6	2524.8
10°	2514.9	2513.9	2512.4	2511.0	2509.3	2511.0	2512.4	2513.9	2514.9	2513.9	2512.4
10.5°	2501.1	2500.4	2498.6	2497.6	2496.2	2497.6	2498.6	2500.4	2501.1	2500.4	2498.6
11°	2487.3	2486.6	2485.2	2483.8	2482.0	2483.8	2485.2	2486.6	2487.3	2486.6	2485.2
11.5°	2472.8	2472.1	2470.7	2469.3	2467.9	2469.3	2470.7	2472.1	2472.8	2472.1	2470.7
12°	2458.0	2457.3	2456.2	2454.5	2453.0	2454.5	2456.2	2457.3	2458.0	2457.3	2456.2
12.5°	2442.4	2441.7	2440.7	2438.9	2437.1	2438.9	2440.7	2441.7	2442.4	2441.7	2440.7
13°	2426.5	2425.8	2424.8	2423.3	2421.6	2423.3	2424.8	2425.8	2426.5	2425.8	2424.8
13.5°	2409.9	2409.2	2408.5	2407.1	2405.7	2407.1	2408.5	2409.2	2409.9	2409.2	2408.5
14°	2392.9	2392.6	2391.9	2390.5	2389.0	2390.5	2391.9	2392.6	2392.9	2392.6	2391.9
14.5°	2375.3	2374.9	2374.5	2373.1	2371.7	2373.1	2374.5	2374.9	2375.3	2374.9	2374.5
15°	2357.6	2357.6	2356.9	2356.2	2354.7	2356.2	2356.9	2357.6	2357.6	2357.6	2356.9
15.5°	2339.2	2339.2	2339.9	2339.2	2338.5	2339.2	2339.9	2339.2	2339.2	2339.2	2339.9
16°	2321.5	2321.9	2322.9	2322.6	2321.9	2322.6	2322.9	2321.9	2321.5	2321.9	2322.9
16.5°	2303.8	2304.5	2306.0	2306.0	2305.6	2306.0	2306.0	2304.5	2303.8	2304.5	2306.0
17°	2287.2	2287.9	2289.3	2289.0	2289.3	2289.0	2289.3	2287.9	2287.2	2287.9	2289.3
17.5°	2271.0	2271.7	2272.7	2272.4	2272.0	2272.4	2272.7	2271.7	2271.0	2271.7	2272.7
18°	2255.0	2255.4	2256.1	2255.4	2254.7	2255.4	2256.1	2255.4	2255.0	2255.4	2256.1
18.5°	2238.1	2238.1	2238.1	2237.4	2236.3	2237.4	2238.1	2238.1	2238.1	2238.1	2238.1
19°	2220.7	2219.7	2219.0	2217.9	2216.9	2217.9	2219.0	2219.7	2220.7	2219.7	2219.0
19.5°	2201.7	2200.2	2198.1	2197.4	2196.4	2197.4	2198.1	2200.2	2201.7	2200.2	2198.1
20°	2180.8	2179.0	2175.1	2175.5	2173.0	2175.5	2175.1	2179.0	2180.8	2179.0	2175.1
20.5°	2157.8	2155.0	2150.4	2151.8	2149.0	2151.8	2150.4	2155.0	2157.8	2155.0	2150.4
21°	2133.8	2129.5	2124.2	2126.0	2122.5	2126.0	2124.2	2129.5	2133.8	2129.5	2124.2



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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°	2045.7	2041.5	2038.0	2037.6	2035.8	2037.6	2038.0	2041.5	2045.7	2041.5	2038.0
23°	2012.1	2008.6	2007.9	2005.4	2004.7	2005.4	2007.9	2008.6	2012.1	2008.6	2007.9
23.5°	1977.8	1974.7	1976.4	1972.2	1974.0	1972.2	1976.4	1974.7	1977.8	1974.7	1976.4
24°	1942.1	1939.7	1943.9	1938.2	1941.4	1938.2	1943.9	1939.7	1942.1	1939.7	1943.9
24.5°	1905.4	1904.3	1909.6	1904.0	1908.2	1904.0	1909.6	1904.3	1905.4	1904.3	1909.6
25°	1866.8	1867.5	1873.9	1869.7	1872.8	1869.7	1873.9	1867.5	1866.8	1867.5	1873.9
25.5°	1826.9	1831.5	1837.1	1835.4	1836.1	1835.4	1837.1	1831.5	1826.9	1831.5	1837.1
26°	1785.9	1794.0	1799.3	1799.6	1796.8	1799.6	1799.3	1794.0	1785.9	1794.0	1799.3
26.5°	1743.8	1755.8	1760.1	1762.5	1756.2	1762.5	1760.1	1755.8	1743.8	1755.8	1760.1
27°	1702.8	1716.2	1720.5	1724.3	1714.8	1724.3	1720.5	1716.2	1702.8	1716.2	1720.5
27.5°	1662.5	1675.2	1680.1	1685.1	1672.7	1685.1	1680.1	1675.2	1662.5	1675.2	1680.1
28°	1622.2	1634.2	1639.1	1644.1	1630.6	1644.1	1639.1	1634.2	1622.2	1634.2	1639.1
28.5°	1582.9	1592.5	1598.1	1602.4	1590.0	1602.4	1598.1	1592.5	1582.9	1592.5	1598.1
29°	1544.0	1550.4	1557.1	1559.9	1551.4	1559.9	1557.1	1550.4	1544.0	1550.4	1557.1
29.5°	1505.8	1509.0	1516.4	1517.5	1513.6	1517.5	1516.4	1509.0	1505.8	1509.0	1516.4
30°	1467.7	1466.6	1474.7	1475.1	1475.4	1475.1	1474.7	1466.6	1467.7	1466.6	1474.7
30.5°	1428.1	1425.6	1433.4	1434.1	1439.4	1434.1	1433.4	1425.6	1428.1	1425.6	1433.4
31°	1388.8	1383.5	1391.6	1393.0	1401.2	1393.0	1391.6	1383.5	1388.8	1383.5	1391.6
31.5°	1348.5	1343.2	1349.9	1352.4	1362.6	1352.4	1349.9	1343.2	1348.5	1343.2	1349.9
32°	1307.5	1302.5	1308.5	1312.4	1323.0	1312.4	1308.5	1302.5	1307.5	1302.5	1308.5
32.5°	1267.9	1263.6	1267.9	1272.8	1283.4	1272.8	1267.9	1263.6	1267.9	1263.6	1267.9
33°	1227.9	1224.8	1226.2	1233.2	1243.1	1233.2	1226.2	1224.8	1227.9	1224.8	1226.2
33.5°	1192.2	1185.9	1184.8	1193.6	1202.5	1193.6	1184.8	1185.9	1192.2	1185.9	1184.8
34°	1153.7	1147.0	1143.8	1154.7	1163.9	1154.7	1143.8	1147.0	1153.7	1147.0	1143.8
34.5°	1115.5	1108.4	1103.8	1115.5	1125.8	1115.5	1103.8	1108.4	1115.5	1108.4	1103.8
35°	1077.0	1071.0	1066.0	1077.7	1088.6	1077.7	1066.0	1071.0	1077.0	1071.0	1066.0
35.5°	1039.5	1033.8	1028.5	1040.2	1052.2	1040.2	1028.5	1033.8	1039.5	1033.8	1028.5
36°	1002.7	996.7	992.1	1004.1	1016.5	1004.1	992.1	996.7	1002.7	996.7	992.1
36.5°	966.3	961.0	956.7	968.4	980.1	968.4	956.7	961.0	966.3	961.0	956.7
37°	929.5	925.6	922.1	933.8	944.0	933.8	922.1	925.6	929.5	925.6	922.1
37.5°	893.8	891.3	888.9	900.5	908.0	900.5	888.9	891.3	893.8	891.3	888.9
38°	858.5	858.1	857.0	868.0	872.2	868.0	857.0	858.1	858.5	858.1	857.0
38.5°	825.2	825.9	826.6	836.2	838.0	836.2	826.6	825.9	825.2	825.9	826.6
39°	793.0	794.8	796.2	805.4	805.1	805.4	796.2	794.8	793.0	794.8	796.2
39.5°	761.6	764.8	767.2	775.0	774.0	775.0	767.2	764.8	761.6	764.8	767.2
40°	731.5	735.1	739.3	745.7	744.3	745.7	739.3	735.1	731.5	735.1	739.3
40.5°	703.2	706.8	712.4	717.0	716.7	717.0	712.4	706.8	703.2	706.8	712.4
41°	676.0	679.6	687.0	690.2	691.2	690.2	687.0	679.6	676.0	679.6	687.0
41.5°	650.2	654.1	662.6	664.4	667.5	664.4	662.6	654.1	650.2	654.1	662.6
42°	626.2	630.1	639.2	640.3	644.6	640.3	639.2	630.1	626.2	630.1	639.2
42.5°	603.5	607.4	617.3	617.7	622.3	617.7	617.3	607.4	603.5	607.4	617.3
43°	582.0	586.2	595.8	596.5	600.7	596.5	595.8	586.2	582.0	586.2	595.8
43.5°	562.2	566.4	575.6	576.0	579.8	576.0	575.6	566.4	562.2	566.4	575.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	511.3	514.8	520.4	522.2	524.0	522.2	520.4	514.8	511.3	514.8	520.4
45.5°	496.4	499.2	504.5	506.3	507.7	506.3	504.5	499.2	496.4	499.2	504.5
46°	482.3	484.7	489.3	491.8	492.5	491.8	489.3	484.7	482.3	484.7	489.3
46.5°	469.2	471.3	474.8	477.7	478.4	477.7	474.8	471.3	469.2	471.3	474.8
47°	456.8	458.2	461.8	464.6	465.6	464.6	461.8	458.2	456.8	458.2	461.8
47.5°	445.1	446.2	449.4	452.6	454.0	452.6	449.4	446.2	445.1	446.2	449.4
48°	434.2	435.6	438.8	441.6	443.0	441.6	438.8	435.6	434.2	435.6	438.8
48.5°	425.3	426.0	428.5	431.4	432.4	431.4	428.5	426.0	425.3	426.0	428.5
49°	416.9	417.2	419.3	421.5	422.5	421.5	419.3	417.2	416.9	417.2	419.3
49.5°	408.7	409.1	410.5	412.3	412.6	412.3	410.5	409.1	408.7	409.1	410.5
50°	400.2	400.6	401.7	403.1	403.4	403.1	401.7	400.6	400.2	400.6	401.7
50.5°	391.8	392.1	392.8	394.2	394.2	394.2	392.8	392.1	391.8	392.1	392.8
51°	382.2	382.9	384.0	385.4	385.4	385.4	384.0	382.9	382.2	382.9	384.0
51.5°	373.0	373.4	374.8	376.5	376.9	376.5	374.8	373.4	373.0	373.4	374.8
52°	363.5	364.2	365.6	367.4	367.7	367.4	365.6	364.2	363.5	364.2	365.6
52.5°	353.9	354.6	356.4	357.8	358.5	357.8	356.4	354.6	353.9	354.6	356.4
53°	345.1	345.8	347.2	348.6	349.3	348.6	347.2	345.8	345.1	345.8	347.2
53.5°	335.9	336.6	338.0	339.8	340.5	339.8	338.0	336.6	335.9	336.6	338.0
54°	327.4	327.8	329.2	330.6	331.3	330.6	329.2	327.8	327.4	327.8	329.2
54.5°	318.9	319.3	320.7	322.1	322.8	322.1	320.7	319.3	318.9	319.3	320.7
55°	310.4	311.1	312.6	313.6	314.0	313.6	312.6	311.1	310.4	311.1	312.6
55.5°	302.3	303.0	304.4	305.5	305.8	305.5	304.4	303.0	302.3	303.0	304.4
56°	294.5	295.2	296.3	297.3	297.7	297.3	296.3	295.2	294.5	295.2	296.3
56.5°	286.7	287.4	288.5	289.6	289.9	289.6	288.5	287.4	286.7	287.4	288.5
57°	279.0	279.7	280.7	281.8	282.1	281.8	280.7	279.7	279.0	279.7	280.7
57.5°	271.2	272.2	273.3	274.0	274.7	274.0	273.3	272.2	271.2	272.2	273.3
58°	264.5	264.8	265.9	266.9	267.3	266.9	265.9	264.8	264.5	264.8	265.9
58.5°	257.4	257.7	258.8	259.5	259.9	259.5	258.8	257.7	257.4	257.7	258.8
59°	250.3	250.7	251.4	252.1	252.8	252.1	251.4	250.7	250.3	250.7	251.4
59.5°	243.3	243.6	244.3	245.4	245.7	245.4	244.3	243.6	243.3	243.6	244.3
60°	236.5	236.9	237.6	238.3	238.7	238.3	237.6	236.9	236.5	236.9	237.6
60.5°	229.8	230.2	230.9	231.6	231.9	231.6	230.9	230.2	229.8	230.2	230.9
61°	223.5	223.8	224.5	225.2	225.6	225.2	224.5	223.8	223.5	223.8	224.5
61.5°	217.1	217.4	218.2	218.9	219.2	218.9	218.2	217.4	217.1	217.4	218.2
62°	211.1	211.1	211.8	212.5	212.5	212.5	211.8	211.1	211.1	211.1	211.8
62.5°	204.7	205.1	205.4	206.1	206.5	206.1	205.4	205.1	204.7	205.1	205.4
63°	198.7	199.1	199.4	200.1	200.1	200.1	199.4	199.1	198.7	199.1	199.4
63.5°	192.7	193.0	193.4	194.1	194.5	194.1	193.4	193.0	192.7	193.0	193.4
64°	187.0	187.4	187.7	188.1	188.5	188.1	187.7	187.4	187.0	187.4	187.7
64.5°	181.4	181.7	182.1	182.4	182.8	182.4	182.1	181.7	181.4	181.7	182.1
65°	175.7	176.1	176.4	176.8	177.1	176.8	176.4	176.1	175.7	176.1	176.4
65.5°	170.4	170.4	170.8	171.5	171.5	171.5	170.8	170.4	170.4	170.4	170.8
66°	164.8	165.1	165.5	165.8	166.2	165.8	165.5	165.1	164.8	165.1	165.5





TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	149.2	149.6	149.9	150.3	150.3	150.3	149.9	149.6	149.2	149.6	149.9
68°	144.3	144.6	145.0	145.3	145.3	145.3	145.0	144.6	144.3	144.6	145.0
68.5°	139.3	139.7	140.0	140.0	140.4	140.0	140.0	139.7	139.3	139.7	140.0
69°	134.7	134.7	134.7	135.4	135.4	135.4	134.7	134.7	134.7	134.7	134.7
69.5°	129.8	130.1	130.1	130.5	130.8	130.5	130.1	130.1	129.8	130.1	130.1
70°	125.5	125.9	125.5	125.9	126.2	125.9	125.5	125.9	125.5	125.9	125.5
70.5°	120.9	121.3	121.3	121.3	121.6	121.3	121.3	121.3	120.9	121.3	121.3
71°	116.7	116.7	116.7	116.7	117.0	116.7	116.7	116.7	116.7	116.7	116.7
71.5°	112.1	112.1	112.4	112.4	112.4	112.4	112.4	112.1	112.1	112.1	112.4
72°	107.8	107.8	107.8	108.2	108.2	108.2	107.8	107.8	107.8	107.8	107.8
72.5°	103.6	103.6	103.6	103.9	103.9	103.9	103.6	103.6	103.6	103.6	103.6
73°	99.4	99.4	99.4	99.7	99.7	99.7	99.4	99.4	99.4	99.4	99.4
73.5°	95.1	95.1	95.5	95.5	95.5	95.5	95.5	95.1	95.1	95.1	95.5
74°	91.2	91.2	91.2	91.6	91.6	91.6	91.2	91.2	91.2	91.2	91.2
74.5°	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
75°	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4
75.5°	79.6	79.6	79.6	79.6	79.9	79.6	79.6	79.6	79.6	79.6	79.6
76°	76.0	75.7	75.7	76.0	76.0	76.0	75.7	75.7	76.0	75.7	75.7
76.5°	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1
77°	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6
77.5°	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1
78°	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5
78.5°	58.3	58.3	58.0	58.0	58.3	58.0	58.0	58.3	58.3	58.3	58.0
79°	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
79.5°	51.6	51.6	51.3	51.6	51.6	51.6	51.3	51.6	51.6	51.6	51.3
80°	48.4	48.4	48.1	48.1	48.1	48.1	48.1	48.4	48.4	48.4	48.1
80.5°	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3
81°	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1
81.5°	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9
82°	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1
82.5°	33.2	33.2	33.2	33.2	32.9	33.2	33.2	33.2	33.2	33.2	33.2
83°	30.4	30.4	30.4	30.1	30.1	30.1	30.4	30.4	30.4	30.4	30.4
83.5°	27.6	27.6	27.6	27.2	27.2	27.2	27.6	27.6	27.6	27.6	27.6
84°	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7
84.5°	22.3	21.9	21.9	21.9	21.9	21.9	21.9	21.9	22.3	21.9	21.9
85°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
85.5°	17.0	16.6	17.0	16.6	17.0	16.6	17.0	16.6	17.0	16.6	17.0
86°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
86.5°	12.0	11.7	11.7	11.7	12.0	11.7	11.7	11.7	12.0	11.7	11.7
87°	9.5	9.5	9.5	9.2	9.5	9.2	9.5	9.5	9.5	9.5	9.5
87.5°	7.1	7.1	7.1	7.1	7.4	7.1	7.1	7.1	7.1	7.1	7.1
88°	4.6	4.9	4.9	5.3	5.3	5.3	4.9	4.9	4.6	4.9	4.9
88.5°	2.8	2.8	3.2	3.5	4.2	3.5	3.2	2.8	2.8	2.8	3.2



TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-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	0.4	0.7	1.1	0.7	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2640.1	2640.1	2640.1	2640.1	2640.1	2640.1
0.5°	2639.0	2638.0	2639.0	2639.4	2640.1	2640.4
1°	2638.3	2636.9	2638.3	2638.7	2639.0	2639.4
1.5°	2636.5	2635.5	2636.5	2637.2	2637.2	2638.0
2°	2634.4	2633.0	2634.4	2634.8	2635.5	2635.8
2.5°	2631.6	2629.8	2631.6	2631.9	2632.7	2633.4
3°	2627.7	2625.9	2627.7	2628.4	2629.1	2629.8
3.5°	2623.5	2622.4	2623.5	2624.2	2625.2	2625.9
4°	2618.9	2617.1	2618.9	2619.6	2621.0	2621.3
4.5°	2613.6	2611.4	2613.6	2614.3	2615.7	2616.4
5°	2608.3	2605.8	2608.3	2609.0	2610.4	2611.4
5.5°	2601.2	2599.1	2601.2	2601.9	2603.7	2606.1
6°	2593.8	2590.9	2593.8	2594.8	2596.6	2598.0
6.5°	2585.6	2582.8	2585.6	2586.7	2588.8	2589.9
7°	2577.1	2574.7	2577.1	2578.9	2580.0	2581.4
7.5°	2568.3	2565.8	2568.3	2569.0	2570.4	2571.8
8°	2558.0	2556.6	2558.0	2559.1	2560.5	2561.6
8.5°	2547.1	2545.7	2547.1	2548.1	2549.6	2551.0
9°	2535.8	2534.4	2535.8	2536.8	2538.6	2539.7
9.5°	2523.8	2522.3	2523.8	2524.8	2526.6	2527.3
10°	2511.0	2509.3	2511.0	2512.4	2513.9	2514.9
10.5°	2497.6	2496.2	2497.6	2498.6	2500.4	2501.1
11°	2483.8	2482.0	2483.8	2485.2	2486.6	2487.3
11.5°	2469.3	2467.9	2469.3	2470.7	2472.1	2472.8
12°	2454.5	2453.0	2454.5	2456.2	2457.3	2458.0
12.5°	2438.9	2437.1	2438.9	2440.7	2441.7	2442.4
13°	2423.3	2421.6	2423.3	2424.8	2425.8	2426.5
13.5°	2407.1	2405.7	2407.1	2408.5	2409.2	2409.9
14°	2390.5	2389.0	2390.5	2391.9	2392.6	2392.9
14.5°	2373.1	2371.7	2373.1	2374.5	2374.9	2375.3
15°	2356.2	2354.7	2356.2	2356.9	2357.6	2357.6
15.5°	2339.2	2338.5	2339.2	2339.9	2339.2	2339.2
16°	2322.6	2321.9	2322.6	2322.9	2321.9	2321.5
16.5°	2306.0	2305.6	2306.0	2306.0	2304.5	2303.8
17°	2289.0	2289.3	2289.0	2289.3	2287.9	2287.2
17.5°	2272.4	2272.0	2272.4	2272.7	2271.7	2271.0
18°	2255.4	2254.7	2255.4	2256.1	2255.4	2255.0
18.5°	2237.4	2236.3	2237.4	2238.1	2238.1	2238.1
19°	2217.9	2216.9	2217.9	2219.0	2219.7	2220.7
19.5°	2197.4	2196.4	2197.4	2198.1	2200.2	2201.7
20°	2175.5	2173.0	2175.5	2175.1	2179.0	2180.8
20.5°	2151.8	2149.0	2151.8	2150.4	2155.0	2157.8
21°	2126.0	2122.5	2126.0	2124.2	2129.5	2133.8



TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2037.6	2035.8	2037.6	2038.0	2041.5	2045.7
23°	2005.4	2004.7	2005.4	2007.9	2008.6	2012.1
23.5°	1972.2	1974.0	1972.2	1976.4	1974.7	1977.8
24°	1938.2	1941.4	1938.2	1943.9	1939.7	1942.1
24.5°	1904.0	1908.2	1904.0	1909.6	1904.3	1905.4
25°	1869.7	1872.8	1869.7	1873.9	1867.5	1866.8
25.5°	1835.4	1836.1	1835.4	1837.1	1831.5	1826.9
26°	1799.6	1796.8	1799.6	1799.3	1794.0	1785.9
26.5°	1762.5	1756.2	1762.5	1760.1	1755.8	1743.8
27°	1724.3	1714.8	1724.3	1720.5	1716.2	1702.8
27.5°	1685.1	1672.7	1685.1	1680.1	1675.2	1662.5
28°	1644.1	1630.6	1644.1	1639.1	1634.2	1622.2
28.5°	1602.4	1590.0	1602.4	1598.1	1592.5	1582.9
29°	1559.9	1551.4	1559.9	1557.1	1550.4	1544.0
29.5°	1517.5	1513.6	1517.5	1516.4	1509.0	1505.8
30°	1475.1	1475.4	1475.1	1474.7	1466.6	1467.7
30.5°	1434.1	1439.4	1434.1	1433.4	1425.6	1428.1
31°	1393.0	1401.2	1393.0	1391.6	1383.5	1388.8
31.5°	1352.4	1362.6	1352.4	1349.9	1343.2	1348.5
32°	1312.4	1323.0	1312.4	1308.5	1302.5	1307.5
32.5°	1272.8	1283.4	1272.8	1267.9	1263.6	1267.9
33°	1233.2	1243.1	1233.2	1226.2	1224.8	1227.9
33.5°	1193.6	1202.5	1193.6	1184.8	1185.9	1192.2
34°	1154.7	1163.9	1154.7	1143.8	1147.0	1153.7
34.5°	1115.5	1125.8	1115.5	1103.8	1108.4	1115.5
35°	1077.7	1088.6	1077.7	1066.0	1071.0	1077.0
35.5°	1040.2	1052.2	1040.2	1028.5	1033.8	1039.5
36°	1004.1	1016.5	1004.1	992.1	996.7	1002.7
36.5°	968.4	980.1	968.4	956.7	961.0	966.3
37°	933.8	944.0	933.8	922.1	925.6	929.5
37.5°	900.5	908.0	900.5	888.9	891.3	893.8
38°	868.0	872.2	868.0	857.0	858.1	858.5
38.5°	836.2	838.0	836.2	826.6	825.9	825.2
39°	805.4	805.1	805.4	796.2	794.8	793.0
39.5°	775.0	774.0	775.0	767.2	764.8	761.6
40°	745.7	744.3	745.7	739.3	735.1	731.5
40.5°	717.0	716.7	717.0	712.4	706.8	703.2
41°	690.2	691.2	690.2	687.0	679.6	676.0
41.5°	664.4	667.5	664.4	662.6	654.1	650.2
42°	640.3	644.6	640.3	639.2	630.1	626.2
42.5°	617.7	622.3	617.7	617.3	607.4	603.5
43°	596.5	600.7	596.5	595.8	586.2	582.0
43.5°	576.0	579.8	576.0	575.6	566.4	562.2



TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	522.2	524.0	522.2	520.4	514.8	511.3
45.5°	506.3	507.7	506.3	504.5	499.2	496.4
46°	491.8	492.5	491.8	489.3	484.7	482.3
46.5°	477.7	478.4	477.7	474.8	471.3	469.2
47°	464.6	465.6	464.6	461.8	458.2	456.8
47.5°	452.6	454.0	452.6	449.4	446.2	445.1
48°	441.6	443.0	441.6	438.8	435.6	434.2
48.5°	431.4	432.4	431.4	428.5	426.0	425.3
49°	421.5	422.5	421.5	419.3	417.2	416.9
49.5°	412.3	412.6	412.3	410.5	409.1	408.7
50°	403.1	403.4	403.1	401.7	400.6	400.2
50.5°	394.2	394.2	394.2	392.8	392.1	391.8
51°	385.4	385.4	385.4	384.0	382.9	382.2
51.5°	376.5	376.9	376.5	374.8	373.4	373.0
52°	367.4	367.7	367.4	365.6	364.2	363.5
52.5°	357.8	358.5	357.8	356.4	354.6	353.9
53°	348.6	349.3	348.6	347.2	345.8	345.1
53.5°	339.8	340.5	339.8	338.0	336.6	335.9
54°	330.6	331.3	330.6	329.2	327.8	327.4
54.5°	322.1	322.8	322.1	320.7	319.3	318.9
55°	313.6	314.0	313.6	312.6	311.1	310.4
55.5°	305.5	305.8	305.5	304.4	303.0	302.3
56°	297.3	297.7	297.3	296.3	295.2	294.5
56.5°	289.6	289.9	289.6	288.5	287.4	286.7
57°	281.8	282.1	281.8	280.7	279.7	279.0
57.5°	274.0	274.7	274.0	273.3	272.2	271.2
58°	266.9	267.3	266.9	265.9	264.8	264.5
58.5°	259.5	259.9	259.5	258.8	257.7	257.4
59°	252.1	252.8	252.1	251.4	250.7	250.3
59.5°	245.4	245.7	245.4	244.3	243.6	243.3
60°	238.3	238.7	238.3	237.6	236.9	236.5
60.5°	231.6	231.9	231.6	230.9	230.2	229.8
61°	225.2	225.6	225.2	224.5	223.8	223.5
61.5°	218.9	219.2	218.9	218.2	217.4	217.1
62°	212.5	212.5	212.5	211.8	211.1	211.1
62.5°	206.1	206.5	206.1	205.4	205.1	204.7
63°	200.1	200.1	200.1	199.4	199.1	198.7
63.5°	194.1	194.5	194.1	193.4	193.0	192.7
64°	188.1	188.5	188.1	187.7	187.4	187.0
64.5°	182.4	182.8	182.4	182.1	181.7	181.4
65°	176.8	177.1	176.8	176.4	176.1	175.7
65.5°	171.5	171.5	171.5	170.8	170.4	170.4
66°	165.8	166.2	165.8	165.5	165.1	164.8



TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	150.3	150.3	150.3	149.9	149.6	149.2
68°	145.3	145.3	145.3	145.0	144.6	144.3
68.5°	140.0	140.4	140.0	140.0	139.7	139.3
69°	135.4	135.4	135.4	134.7	134.7	134.7
69.5°	130.5	130.8	130.5	130.1	130.1	129.8
70°	125.9	126.2	125.9	125.5	125.9	125.5
70.5°	121.3	121.6	121.3	121.3	121.3	120.9
71°	116.7	117.0	116.7	116.7	116.7	116.7
71.5°	112.4	112.4	112.4	112.4	112.1	112.1
72°	108.2	108.2	108.2	107.8	107.8	107.8
72.5°	103.9	103.9	103.9	103.6	103.6	103.6
73°	99.7	99.7	99.7	99.4	99.4	99.4
73.5°	95.5	95.5	95.5	95.5	95.1	95.1
74°	91.6	91.6	91.6	91.2	91.2	91.2
74.5°	87.3	87.3	87.3	87.3	87.3	87.3
75°	83.4	83.4	83.4	83.4	83.4	83.4
75.5°	79.6	79.9	79.6	79.6	79.6	79.6
76°	76.0	76.0	76.0	75.7	75.7	76.0
76.5°	72.1	72.1	72.1	72.1	72.1	72.1
77°	68.6	68.6	68.6	68.6	68.6	68.6
77.5°	65.1	65.1	65.1	65.1	65.1	65.1
78°	61.5	61.5	61.5	61.5	61.5	61.5
78.5°	58.0	58.3	58.0	58.0	58.3	58.3
79°	54.8	54.8	54.8	54.8	54.8	54.8
79.5°	51.6	51.6	51.6	51.3	51.6	51.6
80°	48.1	48.1	48.1	48.1	48.4	48.4
80.5°	45.3	45.3	45.3	45.3	45.3	45.3
81°	42.1	42.1	42.1	42.1	42.1	42.1
81.5°	38.9	38.9	38.9	38.9	38.9	38.9
82°	36.1	36.1	36.1	36.1	36.1	36.1
82.5°	33.2	32.9	33.2	33.2	33.2	33.2
83°	30.1	30.1	30.1	30.4	30.4	30.4
83.5°	27.2	27.2	27.2	27.6	27.6	27.6
84°	24.7	24.7	24.7	24.7	24.7	24.7
84.5°	21.9	21.9	21.9	21.9	21.9	22.3
85°	19.4	19.4	19.4	19.4	19.4	19.4
85.5°	16.6	17.0	16.6	17.0	16.6	17.0
86°	14.1	14.1	14.1	14.1	14.1	14.1
86.5°	11.7	12.0	11.7	11.7	11.7	12.0
87°	9.2	9.5	9.2	9.5	9.5	9.5
87.5°	7.1	7.4	7.1	7.1	7.1	7.1
88°	5.3	5.3	5.3	4.9	4.9	4.6
88.5°	3.5	4.2	3.5	3.2	2.8	2.8



TEST NUMBER: P776232

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.7	1.1	0.7	0.4	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°	2105.8	2102.3	2096.3	2098.1	2094.5	2098.1	2096.3	2102.3	2105.8	2102.3	2096.3
22°	2076.5	2073.0	2067.7	2068.4	2064.8	2068.4	2067.7	2073.0	2076.5	2073.0	2067.7



44°	543.8	548.0	556.2	556.9	560.4	556.9	556.2	548.0	543.8	548.0	556.2
44.5°	526.8	531.1	538.1	539.2	541.7	539.2	538.1	531.1	526.8	531.1	538.1



66.5°	159.5	159.8	160.2	160.5	160.9	160.5	160.2	159.8	159.5	159.8	160.2
67°	154.5	154.5	154.9	155.2	155.6	155.2	154.9	154.5	154.5	154.5	154.9



89°	1.1	1.4	2.1	2.5	2.8	2.5	2.1	1.4	1.1	1.4	2.1
89.5°	0.0	0.4	1.1	1.4	1.8	1.4	1.1	0.4	0.0	0.4	1.1



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21.5°	2098.1	2094.5	2098.1	2096.3	2102.3	2105.8
22°	2068.4	2064.8	2068.4	2067.7	2073.0	2076.5



44°	556.9	560.4	556.9	556.2	548.0	543.8
44.5°	539.2	541.7	539.2	538.1	531.1	526.8

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66.5°	160.5	160.9	160.5	160.2	159.8	159.5
67°	155.2	155.6	155.2	154.9	154.5	154.5

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89°	2.5	2.8	2.5	2.1	1.4	1.1
89.5°	1.4	1.8	1.4	1.1	0.4	0.0

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Scaled Data Report



(END OF REPORT)