

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: P776535

Luminaire Tested: HCDJBS4050CSD-HCD42TRMW-4000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776535
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: HCDJBS4050CSD-HCD42TRMW-4000lm-2700K
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

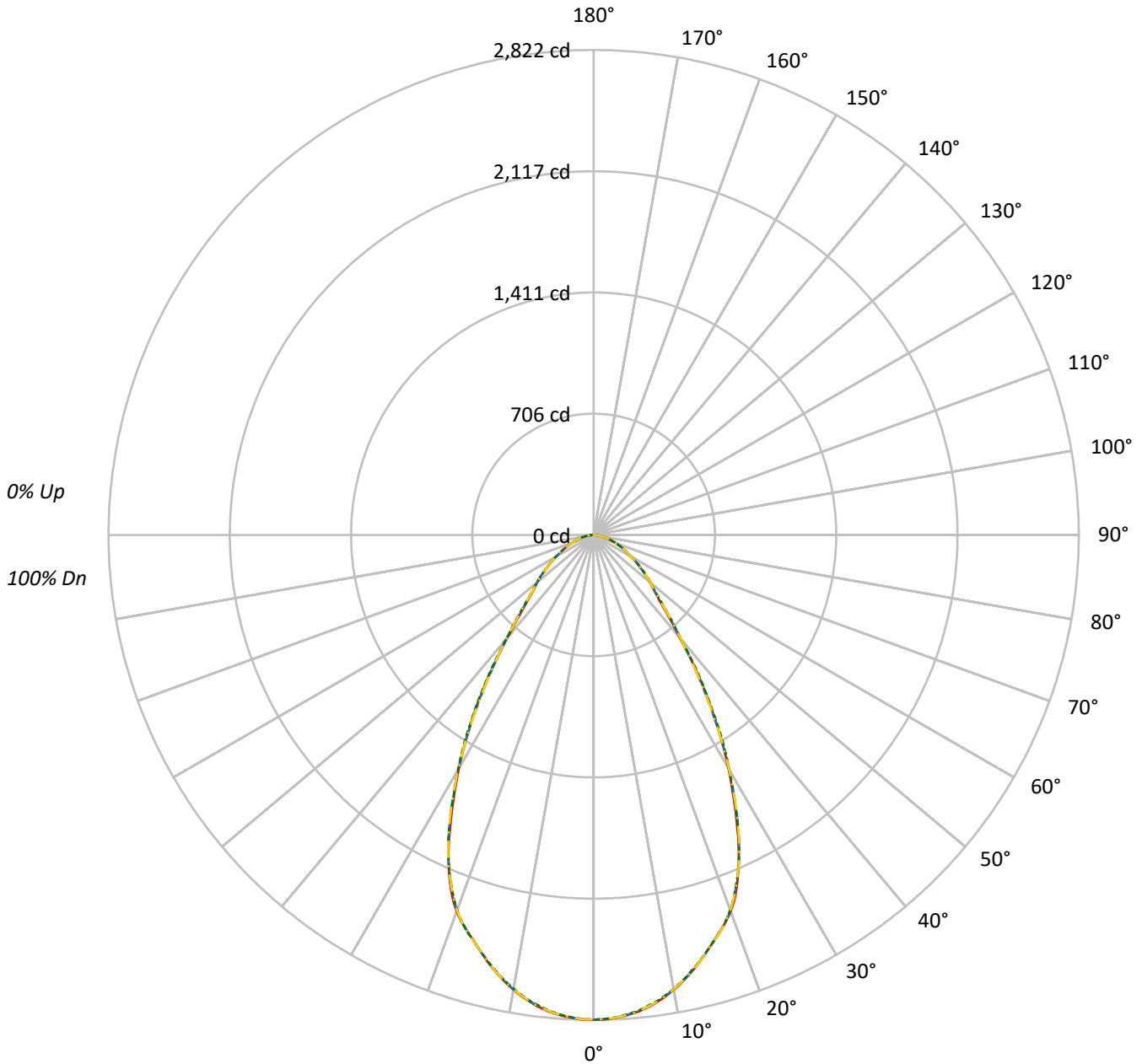
Lumens per Lamp: N/A
Luminaire Lumens: 3643.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 38
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	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°	355060	355060	355060	355060
5°	352551	351780	352551	351780
10°	343439	342672	343439	342672
15°	328251	327860	328251	327860
20°	312116	311004	312116	311004
25°	277025	277914	277025	277914
30°	227918	229124	227918	229124
35°	176818	178723	176818	178723
40°	128422	130656	128422	130656
45°	97230	99650	97230	99650
50°	83738	84404	83738	84404
55°	72779	73613	72779	73613
60°	63630	64183	63630	64183
65°	55924	56371	55924	56371
70°	49343	49638	49343	49638
75°	43373	43373	43373	43373
80°	37542	37252	37542	37252
85°	30034	30034	30034	30034

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 99650 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.8	7.2
10°-20°	707.7	19.4
20°-30°	906.3	24.9
30°-40°	718.2	19.7
40°-50°	439.7	12.1
50°-60°	300.6	8.3
60°-70°	188.2	5.2
70°-80°	95.4	2.6
80°-90°	24.1	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°	1876.9	51.5
0°-40°	2595.0	71.2
0°-60°	3335.4	91.6
0°-90°	3643.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3643.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2821	2821	2821	2821	2821	
5°	2791	2785	2791	2785	2791	263
15°	2519	2516	2519	2516	2519	708
25°	1995	2001	1995	2001	1995	904
35°	1151	1163	1151	1163	1151	717
45°	546	560	546	560	546	434
55°	332	336	332	336	332	299
65°	188	189	188	189	188	187
75°	89	89	89	89	89	95
85°	21	21	21	21	21	24
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°	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3
0.5°	2821.7	2821.3	2820.5	2820.1	2819.0	2820.1	2820.5	2821.3	2821.7	2821.3	2820.5
1°	2820.5	2820.1	2819.8	2819.4	2817.9	2819.4	2819.8	2820.1	2820.5	2820.1	2819.8
1.5°	2819.0	2818.3	2818.3	2817.5	2816.4	2817.5	2818.3	2818.3	2819.0	2818.3	2818.3
2°	2816.7	2816.4	2815.6	2815.2	2813.7	2815.2	2815.6	2816.4	2816.7	2816.4	2815.6
2.5°	2814.1	2813.3	2812.6	2812.2	2810.3	2812.2	2812.6	2813.3	2814.1	2813.3	2812.6
3°	2810.3	2809.6	2808.8	2808.1	2806.2	2808.1	2808.8	2809.6	2810.3	2809.6	2808.8
3.5°	2806.2	2805.4	2804.3	2803.5	2802.4	2803.5	2804.3	2805.4	2806.2	2805.4	2804.3
4°	2801.3	2800.9	2799.4	2798.6	2796.7	2798.6	2799.4	2800.9	2801.3	2800.9	2799.4
4.5°	2796.0	2795.2	2793.7	2792.9	2790.7	2792.9	2793.7	2795.2	2796.0	2795.2	2793.7
5°	2790.7	2789.5	2788.0	2787.3	2784.6	2787.3	2788.0	2789.5	2790.7	2789.5	2788.0
5.5°	2785.0	2782.4	2780.5	2779.7	2777.4	2779.7	2780.5	2782.4	2785.0	2782.4	2780.5
6°	2776.3	2774.8	2772.9	2771.8	2768.8	2771.8	2772.9	2774.8	2776.3	2774.8	2772.9
6.5°	2767.6	2766.5	2764.2	2763.1	2760.1	2763.1	2764.2	2766.5	2767.6	2766.5	2764.2
7°	2758.6	2757.0	2755.9	2754.0	2751.4	2754.0	2755.9	2757.0	2758.6	2757.0	2755.9
7.5°	2748.4	2746.8	2745.3	2744.6	2741.9	2744.6	2745.3	2746.8	2748.4	2746.8	2745.3
8°	2737.4	2736.3	2734.8	2733.6	2732.1	2733.6	2734.8	2736.3	2737.4	2736.3	2734.8
8.5°	2726.1	2724.6	2723.0	2721.9	2720.4	2721.9	2723.0	2724.6	2726.1	2724.6	2723.0
9°	2714.0	2712.8	2710.9	2709.8	2708.3	2709.8	2710.9	2712.8	2714.0	2712.8	2710.9
9.5°	2700.7	2700.0	2698.1	2697.0	2695.5	2697.0	2698.1	2700.0	2700.7	2700.0	2698.1
10°	2687.5	2686.4	2684.9	2683.4	2681.5	2683.4	2684.9	2686.4	2687.5	2686.4	2684.9
10.5°	2672.8	2672.0	2670.1	2669.0	2667.5	2669.0	2670.1	2672.0	2672.8	2672.0	2670.1
11°	2658.1	2657.3	2655.8	2654.3	2652.4	2654.3	2655.8	2657.3	2658.1	2657.3	2655.8
11.5°	2642.6	2641.8	2640.3	2638.8	2637.3	2638.8	2640.3	2641.8	2642.6	2641.8	2640.3
12°	2626.7	2625.9	2624.8	2622.9	2621.4	2622.9	2624.8	2625.9	2626.7	2625.9	2624.8
12.5°	2610.1	2609.3	2608.2	2606.3	2604.4	2606.3	2608.2	2609.3	2610.1	2609.3	2608.2
13°	2593.1	2592.3	2591.2	2589.7	2587.8	2589.7	2591.2	2592.3	2593.1	2592.3	2591.2
13.5°	2575.3	2574.6	2573.8	2572.3	2570.8	2572.3	2573.8	2574.6	2575.3	2574.6	2573.8
14°	2557.2	2556.8	2556.0	2554.5	2553.0	2554.5	2556.0	2556.8	2557.2	2556.8	2556.0
14.5°	2538.3	2537.9	2537.5	2536.0	2534.5	2536.0	2537.5	2537.9	2538.3	2537.9	2537.5
15°	2519.4	2519.4	2518.6	2517.9	2516.4	2517.9	2518.6	2519.4	2519.4	2519.4	2518.6
15.5°	2499.7	2499.7	2500.5	2499.7	2499.0	2499.7	2500.5	2499.7	2499.7	2499.7	2500.5
16°	2480.8	2481.2	2482.4	2482.0	2481.2	2482.0	2482.4	2481.2	2480.8	2481.2	2482.4
16.5°	2462.0	2462.7	2464.2	2464.2	2463.8	2464.2	2464.2	2462.7	2462.0	2462.7	2464.2
17°	2444.2	2445.0	2446.5	2446.1	2446.5	2446.1	2446.5	2445.0	2444.2	2445.0	2446.5
17.5°	2426.8	2427.6	2428.7	2428.3	2428.0	2428.3	2428.7	2427.6	2426.8	2427.6	2428.7
18°	2409.8	2410.2	2410.9	2410.2	2409.4	2410.2	2410.9	2410.2	2409.8	2410.2	2410.9
18.5°	2391.7	2391.7	2391.7	2390.9	2389.8	2390.9	2391.7	2391.7	2391.7	2391.7	2391.7
19°	2373.2	2372.0	2371.3	2370.1	2369.0	2370.1	2371.3	2372.0	2373.2	2372.0	2371.3
19.5°	2352.8	2351.3	2349.0	2348.2	2347.1	2348.2	2349.0	2351.3	2352.8	2351.3	2349.0
20°	2330.5	2328.6	2324.4	2324.8	2322.2	2324.8	2324.4	2328.6	2330.5	2328.6	2324.4
20.5°	2305.9	2302.9	2298.0	2299.5	2296.5	2299.5	2298.0	2302.9	2305.9	2302.9	2298.0
21°	2280.2	2275.7	2270.0	2271.9	2268.1	2271.9	2270.0	2275.7	2280.2	2275.7	2270.0



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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°	2186.1	2181.6	2177.8	2177.4	2175.6	2177.4	2177.8	2181.6	2186.1	2181.6	2177.8
23°	2150.2	2146.5	2145.7	2143.1	2142.3	2143.1	2145.7	2146.5	2150.2	2146.5	2145.7
23.5°	2113.6	2110.2	2112.1	2107.6	2109.4	2107.6	2112.1	2110.2	2113.6	2110.2	2112.1
24°	2075.4	2072.8	2077.3	2071.3	2074.7	2071.3	2077.3	2072.8	2075.4	2072.8	2077.3
24.5°	2036.1	2035.0	2040.7	2034.6	2039.2	2034.6	2040.7	2035.0	2036.1	2035.0	2040.7
25°	1995.0	1995.7	2002.5	1998.0	2001.4	1998.0	2002.5	1995.7	1995.0	1995.7	2002.5
25.5°	1952.3	1957.2	1963.2	1961.3	1962.1	1961.3	1963.2	1957.2	1952.3	1957.2	1963.2
26°	1908.4	1917.1	1922.8	1923.2	1920.1	1923.2	1922.8	1917.1	1908.4	1917.1	1922.8
26.5°	1863.5	1876.3	1880.9	1883.5	1876.7	1883.5	1880.9	1876.3	1863.5	1876.3	1880.9
27°	1819.6	1834.0	1838.5	1842.7	1832.5	1842.7	1838.5	1834.0	1819.6	1834.0	1838.5
27.5°	1776.6	1790.2	1795.5	1800.8	1787.5	1800.8	1795.5	1790.2	1776.6	1790.2	1795.5
28°	1733.5	1746.3	1751.6	1756.9	1742.6	1756.9	1751.6	1746.3	1733.5	1746.3	1751.6
28.5°	1691.6	1701.8	1707.8	1712.3	1699.1	1712.3	1707.8	1701.8	1691.6	1701.8	1707.8
29°	1650.0	1656.8	1664.0	1667.0	1657.9	1667.0	1664.0	1656.8	1650.0	1656.8	1664.0
29.5°	1609.2	1612.6	1620.5	1621.7	1617.5	1621.7	1620.5	1612.6	1609.2	1612.6	1620.5
30°	1568.4	1567.2	1575.9	1576.3	1576.7	1576.3	1575.9	1567.2	1568.4	1567.2	1575.9
30.5°	1526.1	1523.4	1531.7	1532.5	1538.2	1532.5	1531.7	1523.4	1526.1	1523.4	1531.7
31°	1484.1	1478.5	1487.1	1488.7	1497.4	1488.7	1487.1	1478.5	1484.1	1478.5	1487.1
31.5°	1441.1	1435.4	1442.6	1445.2	1456.2	1445.2	1442.6	1435.4	1441.1	1435.4	1442.6
32°	1397.2	1391.9	1398.4	1402.5	1413.8	1402.5	1398.4	1391.9	1397.2	1391.9	1398.4
32.5°	1354.9	1350.4	1354.9	1360.2	1371.5	1360.2	1354.9	1350.4	1354.9	1350.4	1354.9
33°	1312.2	1308.8	1310.3	1317.9	1328.5	1317.9	1310.3	1308.8	1312.2	1308.8	1310.3
33.5°	1274.1	1267.3	1266.1	1275.6	1285.0	1275.6	1266.1	1267.3	1274.1	1267.3	1266.1
34°	1232.9	1225.7	1222.3	1234.0	1243.8	1234.0	1222.3	1225.7	1232.9	1225.7	1222.3
34.5°	1192.1	1184.5	1179.6	1192.1	1203.0	1192.1	1179.6	1184.5	1192.1	1184.5	1179.6
35°	1150.9	1144.5	1139.2	1151.6	1163.3	1151.6	1139.2	1144.5	1150.9	1144.5	1139.2
35.5°	1110.8	1104.8	1099.1	1111.6	1124.4	1111.6	1099.1	1104.8	1110.8	1104.8	1099.1
36°	1071.5	1065.1	1060.2	1073.0	1086.3	1073.0	1060.2	1065.1	1071.5	1065.1	1060.2
36.5°	1032.6	1026.9	1022.4	1034.9	1047.4	1034.9	1022.4	1026.9	1032.6	1026.9	1022.4
37°	993.3	989.2	985.4	997.9	1008.8	997.9	985.4	989.2	993.3	989.2	985.4
37.5°	955.2	952.5	949.9	962.3	970.3	962.3	949.9	952.5	955.2	952.5	949.9
38°	917.4	917.0	915.9	927.6	932.1	927.6	915.9	917.0	917.4	917.0	915.9
38.5°	881.9	882.6	883.4	893.6	895.5	893.6	883.4	882.6	881.9	882.6	883.4
39°	847.5	849.4	850.9	860.7	860.3	860.7	850.9	849.4	847.5	849.4	850.9
39.5°	813.9	817.3	819.9	828.2	827.1	828.2	819.9	817.3	813.9	817.3	819.9
40°	781.7	785.5	790.0	796.8	795.3	796.8	790.0	785.5	781.7	785.5	790.0
40.5°	751.5	755.3	761.3	766.2	765.9	766.2	761.3	755.3	751.5	755.3	761.3
41°	722.4	726.2	734.1	737.5	738.7	737.5	734.1	726.2	722.4	726.2	734.1
41.5°	694.8	699.0	708.1	709.9	713.3	709.9	708.1	699.0	694.8	699.0	708.1
42°	669.1	673.3	683.1	684.3	688.8	684.3	683.1	673.3	669.1	673.3	683.1
42.5°	645.0	649.1	659.7	660.1	665.0	660.1	659.7	649.1	645.0	649.1	659.7
43°	621.9	626.4	636.6	637.4	641.9	637.4	636.6	626.4	621.9	626.4	636.6
43.5°	600.8	605.3	615.1	615.5	619.6	615.5	615.1	605.3	600.8	605.3	615.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	546.3	550.1	556.2	558.1	559.9	558.1	556.2	550.1	546.3	550.1	556.2
45.5°	530.5	533.5	539.2	541.1	542.6	541.1	539.2	533.5	530.5	533.5	539.2
46°	515.4	518.0	522.9	525.6	526.3	525.6	522.9	518.0	515.4	518.0	522.9
46.5°	501.4	503.7	507.4	510.5	511.2	510.5	507.4	503.7	501.4	503.7	507.4
47°	488.2	489.7	493.4	496.5	497.6	496.5	493.4	489.7	488.2	489.7	493.4
47.5°	475.7	476.8	480.2	483.6	485.1	483.6	480.2	476.8	475.7	476.8	480.2
48°	464.0	465.5	468.9	471.9	473.4	471.9	468.9	465.5	464.0	465.5	468.9
48.5°	454.5	455.3	457.9	461.0	462.1	461.0	457.9	455.3	454.5	455.3	457.9
49°	445.5	445.8	448.1	450.4	451.5	450.4	448.1	445.8	445.5	445.8	448.1
49.5°	436.8	437.2	438.7	440.6	440.9	440.6	438.7	437.2	436.8	437.2	438.7
50°	427.7	428.1	429.2	430.7	431.1	430.7	429.2	428.1	427.7	428.1	429.2
50.5°	418.6	419.0	419.8	421.3	421.3	421.3	419.8	419.0	418.6	419.0	419.8
51°	408.4	409.2	410.3	411.8	411.8	411.8	410.3	409.2	408.4	409.2	410.3
51.5°	398.6	399.0	400.5	402.4	402.8	402.4	400.5	399.0	398.6	399.0	400.5
52°	388.4	389.2	390.7	392.6	392.9	392.6	390.7	389.2	388.4	389.2	390.7
52.5°	378.2	379.0	380.9	382.4	383.1	382.4	380.9	379.0	378.2	379.0	380.9
53°	368.8	369.5	371.0	372.5	373.3	372.5	371.0	369.5	368.8	369.5	371.0
53.5°	358.9	359.7	361.2	363.1	363.9	363.1	361.2	359.7	358.9	359.7	361.2
54°	349.9	350.3	351.8	353.3	354.0	353.3	351.8	350.3	349.9	350.3	351.8
54.5°	340.8	341.2	342.7	344.2	345.0	344.2	342.7	341.2	340.8	341.2	342.7
55°	331.7	332.5	334.0	335.1	335.5	335.1	334.0	332.5	331.7	332.5	334.0
55.5°	323.0	323.8	325.3	326.4	326.8	326.4	325.3	323.8	323.0	323.8	325.3
56°	314.7	315.5	316.6	317.8	318.1	317.8	316.6	315.5	314.7	315.5	316.6
56.5°	306.4	307.2	308.3	309.4	309.8	309.4	308.3	307.2	306.4	307.2	308.3
57°	298.1	298.9	300.0	301.1	301.5	301.1	300.0	298.9	298.1	298.9	300.0
57.5°	289.8	290.9	292.1	292.8	293.6	292.8	292.1	290.9	289.8	290.9	292.1
58°	282.6	283.0	284.1	285.3	285.6	285.3	284.1	283.0	282.6	283.0	284.1
58.5°	275.1	275.4	276.6	277.3	277.7	277.3	276.6	275.4	275.1	275.4	276.6
59°	267.5	267.9	268.6	269.4	270.2	269.4	268.6	267.9	267.5	267.9	268.6
59.5°	259.9	260.3	261.1	262.2	262.6	262.2	261.1	260.3	259.9	260.3	261.1
60°	252.8	253.1	253.9	254.7	255.0	254.7	253.9	253.1	252.8	253.1	253.9
60.5°	245.6	246.0	246.7	247.5	247.9	247.5	246.7	246.0	245.6	246.0	246.7
61°	238.8	239.2	239.9	240.7	241.1	240.7	239.9	239.2	238.8	239.2	239.9
61.5°	232.0	232.4	233.1	233.9	234.3	233.9	233.1	232.4	232.0	232.4	233.1
62°	225.6	225.6	226.3	227.1	227.1	227.1	226.3	225.6	225.6	225.6	226.3
62.5°	218.8	219.1	219.5	220.3	220.7	220.3	219.5	219.1	218.8	219.1	219.5
63°	212.3	212.7	213.1	213.9	213.9	213.9	213.1	212.7	212.3	212.7	213.1
63.5°	205.9	206.3	206.7	207.4	207.8	207.4	206.7	206.3	205.9	206.3	206.7
64°	199.9	200.3	200.6	201.0	201.4	201.0	200.6	200.3	199.9	200.3	200.6
64.5°	193.8	194.2	194.6	195.0	195.3	195.0	194.6	194.2	193.8	194.2	194.6
65°	187.8	188.2	188.5	188.9	189.3	188.9	188.5	188.2	187.8	188.2	188.5
65.5°	182.1	182.1	182.5	183.2	183.2	183.2	182.5	182.1	182.1	182.1	182.5
66°	176.1	176.4	176.8	177.2	177.6	177.2	176.8	176.4	176.1	176.4	176.8



TEST NUMBER: P776535

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	159.4	159.8	160.2	160.6	160.6	160.6	160.2	159.8	159.4	159.8	160.2
68°	154.2	154.5	154.9	155.3	155.3	155.3	154.9	154.5	154.2	154.5	154.9
68.5°	148.9	149.2	149.6	149.6	150.0	149.6	149.6	149.2	148.9	149.2	149.6
69°	144.0	144.0	144.0	144.7	144.7	144.7	144.0	144.0	144.0	144.0	144.0
69.5°	138.7	139.0	139.0	139.4	139.8	139.4	139.0	139.0	138.7	139.0	139.0
70°	134.1	134.5	134.1	134.5	134.9	134.5	134.1	134.5	134.1	134.5	134.1
70.5°	129.2	129.6	129.6	129.6	130.0	129.6	129.6	129.6	129.2	129.6	129.6
71°	124.7	124.7	124.7	124.7	125.1	124.7	124.7	124.7	124.7	124.7	124.7
71.5°	119.8	119.8	120.2	120.2	120.2	120.2	120.2	119.8	119.8	119.8	120.2
72°	115.2	115.2	115.2	115.6	115.6	115.6	115.2	115.2	115.2	115.2	115.2
72.5°	110.7	110.7	110.7	111.1	111.1	111.1	110.7	110.7	110.7	110.7	110.7
73°	106.2	106.2	106.2	106.5	106.5	106.5	106.2	106.2	106.2	106.2	106.2
73.5°	101.6	101.6	102.0	102.0	102.0	102.0	102.0	101.6	101.6	101.6	102.0
74°	97.5	97.5	97.5	97.9	97.9	97.9	97.5	97.5	97.5	97.5	97.5
74.5°	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3
75°	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2
75.5°	85.0	85.0	85.0	85.0	85.4	85.0	85.0	85.0	85.0	85.0	85.0
76°	81.2	80.9	80.9	81.2	81.2	81.2	80.9	80.9	81.2	80.9	80.9
76.5°	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1
77°	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
77.5°	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5
78°	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7
78.5°	62.3	62.3	62.0	62.0	62.3	62.0	62.0	62.3	62.3	62.3	62.0
79°	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6
79.5°	55.2	55.2	54.8	55.2	55.2	55.2	54.8	55.2	55.2	55.2	54.8
80°	51.8	51.8	51.4	51.4	51.4	51.4	51.4	51.8	51.8	51.8	51.4
80.5°	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
81°	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
81.5°	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6
82°	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
82.5°	35.5	35.5	35.5	35.5	35.1	35.5	35.5	35.5	35.5	35.5	35.5
83°	32.5	32.5	32.5	32.1	32.1	32.1	32.5	32.5	32.5	32.5	32.5
83.5°	29.5	29.5	29.5	29.1	29.1	29.1	29.5	29.5	29.5	29.5	29.5
84°	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4
84.5°	23.8	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.8	23.4	23.4
85°	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
85.5°	18.1	17.8	18.1	17.8	18.1	17.8	18.1	17.8	18.1	17.8	18.1
86°	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
86.5°	12.8	12.5	12.5	12.5	12.8	12.5	12.5	12.5	12.8	12.5	12.5
87°	10.2	10.2	10.2	9.8	10.2	9.8	10.2	10.2	10.2	10.2	10.2
87.5°	7.6	7.6	7.6	7.6	7.9	7.6	7.6	7.6	7.6	7.6	7.6
88°	4.9	5.3	5.3	5.7	5.7	5.7	5.3	5.3	4.9	5.3	5.3
88.5°	3.0	3.0	3.4	3.8	4.5	3.8	3.4	3.0	3.0	3.0	3.4



TEST NUMBER: P776535
CATALOG NUMBER: HCDJBL4050CSD-HCD42TRMW-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	0.4	0.8	1.1	0.8	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776535

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2821.3	2821.3	2821.3	2821.3	2821.3	2821.3
0.5°	2820.1	2819.0	2820.1	2820.5	2821.3	2821.7
1°	2819.4	2817.9	2819.4	2819.8	2820.1	2820.5
1.5°	2817.5	2816.4	2817.5	2818.3	2818.3	2819.0
2°	2815.2	2813.7	2815.2	2815.6	2816.4	2816.7
2.5°	2812.2	2810.3	2812.2	2812.6	2813.3	2814.1
3°	2808.1	2806.2	2808.1	2808.8	2809.6	2810.3
3.5°	2803.5	2802.4	2803.5	2804.3	2805.4	2806.2
4°	2798.6	2796.7	2798.6	2799.4	2800.9	2801.3
4.5°	2792.9	2790.7	2792.9	2793.7	2795.2	2796.0
5°	2787.3	2784.6	2787.3	2788.0	2789.5	2790.7
5.5°	2779.7	2777.4	2779.7	2780.5	2782.4	2785.0
6°	2771.8	2768.8	2771.8	2772.9	2774.8	2776.3
6.5°	2763.1	2760.1	2763.1	2764.2	2766.5	2767.6
7°	2754.0	2751.4	2754.0	2755.9	2757.0	2758.6
7.5°	2744.6	2741.9	2744.6	2745.3	2746.8	2748.4
8°	2733.6	2732.1	2733.6	2734.8	2736.3	2737.4
8.5°	2721.9	2720.4	2721.9	2723.0	2724.6	2726.1
9°	2709.8	2708.3	2709.8	2710.9	2712.8	2714.0
9.5°	2697.0	2695.5	2697.0	2698.1	2700.0	2700.7
10°	2683.4	2681.5	2683.4	2684.9	2686.4	2687.5
10.5°	2669.0	2667.5	2669.0	2670.1	2672.0	2672.8
11°	2654.3	2652.4	2654.3	2655.8	2657.3	2658.1
11.5°	2638.8	2637.3	2638.8	2640.3	2641.8	2642.6
12°	2622.9	2621.4	2622.9	2624.8	2625.9	2626.7
12.5°	2606.3	2604.4	2606.3	2608.2	2609.3	2610.1
13°	2589.7	2587.8	2589.7	2591.2	2592.3	2593.1
13.5°	2572.3	2570.8	2572.3	2573.8	2574.6	2575.3
14°	2554.5	2553.0	2554.5	2556.0	2556.8	2557.2
14.5°	2536.0	2534.5	2536.0	2537.5	2537.9	2538.3
15°	2517.9	2516.4	2517.9	2518.6	2519.4	2519.4
15.5°	2499.7	2499.0	2499.7	2500.5	2499.7	2499.7
16°	2482.0	2481.2	2482.0	2482.4	2481.2	2480.8
16.5°	2464.2	2463.8	2464.2	2464.2	2462.7	2462.0
17°	2446.1	2446.5	2446.1	2446.5	2445.0	2444.2
17.5°	2428.3	2428.0	2428.3	2428.7	2427.6	2426.8
18°	2410.2	2409.4	2410.2	2410.9	2410.2	2409.8
18.5°	2390.9	2389.8	2390.9	2391.7	2391.7	2391.7
19°	2370.1	2369.0	2370.1	2371.3	2372.0	2373.2
19.5°	2348.2	2347.1	2348.2	2349.0	2351.3	2352.8
20°	2324.8	2322.2	2324.8	2324.4	2328.6	2330.5
20.5°	2299.5	2296.5	2299.5	2298.0	2302.9	2305.9
21°	2271.9	2268.1	2271.9	2270.0	2275.7	2280.2



TEST NUMBER: P776535

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2177.4	2175.6	2177.4	2177.8	2181.6	2186.1
23°	2143.1	2142.3	2143.1	2145.7	2146.5	2150.2
23.5°	2107.6	2109.4	2107.6	2112.1	2110.2	2113.6
24°	2071.3	2074.7	2071.3	2077.3	2072.8	2075.4
24.5°	2034.6	2039.2	2034.6	2040.7	2035.0	2036.1
25°	1998.0	2001.4	1998.0	2002.5	1995.7	1995.0
25.5°	1961.3	1962.1	1961.3	1963.2	1957.2	1952.3
26°	1923.2	1920.1	1923.2	1922.8	1917.1	1908.4
26.5°	1883.5	1876.7	1883.5	1880.9	1876.3	1863.5
27°	1842.7	1832.5	1842.7	1838.5	1834.0	1819.6
27.5°	1800.8	1787.5	1800.8	1795.5	1790.2	1776.6
28°	1756.9	1742.6	1756.9	1751.6	1746.3	1733.5
28.5°	1712.3	1699.1	1712.3	1707.8	1701.8	1691.6
29°	1667.0	1657.9	1667.0	1664.0	1656.8	1650.0
29.5°	1621.7	1617.5	1621.7	1620.5	1612.6	1609.2
30°	1576.3	1576.7	1576.3	1575.9	1567.2	1568.4
30.5°	1532.5	1538.2	1532.5	1531.7	1523.4	1526.1
31°	1488.7	1497.4	1488.7	1487.1	1478.5	1484.1
31.5°	1445.2	1456.2	1445.2	1442.6	1435.4	1441.1
32°	1402.5	1413.8	1402.5	1398.4	1391.9	1397.2
32.5°	1360.2	1371.5	1360.2	1354.9	1350.4	1354.9
33°	1317.9	1328.5	1317.9	1310.3	1308.8	1312.2
33.5°	1275.6	1285.0	1275.6	1266.1	1267.3	1274.1
34°	1234.0	1243.8	1234.0	1222.3	1225.7	1232.9
34.5°	1192.1	1203.0	1192.1	1179.6	1184.5	1192.1
35°	1151.6	1163.3	1151.6	1139.2	1144.5	1150.9
35.5°	1111.6	1124.4	1111.6	1099.1	1104.8	1110.8
36°	1073.0	1086.3	1073.0	1060.2	1065.1	1071.5
36.5°	1034.9	1047.4	1034.9	1022.4	1026.9	1032.6
37°	997.9	1008.8	997.9	985.4	989.2	993.3
37.5°	962.3	970.3	962.3	949.9	952.5	955.2
38°	927.6	932.1	927.6	915.9	917.0	917.4
38.5°	893.6	895.5	893.6	883.4	882.6	881.9
39°	860.7	860.3	860.7	850.9	849.4	847.5
39.5°	828.2	827.1	828.2	819.9	817.3	813.9
40°	796.8	795.3	796.8	790.0	785.5	781.7
40.5°	766.2	765.9	766.2	761.3	755.3	751.5
41°	737.5	738.7	737.5	734.1	726.2	722.4
41.5°	709.9	713.3	709.9	708.1	699.0	694.8
42°	684.3	688.8	684.3	683.1	673.3	669.1
42.5°	660.1	665.0	660.1	659.7	649.1	645.0
43°	637.4	641.9	637.4	636.6	626.4	621.9
43.5°	615.5	619.6	615.5	615.1	605.3	600.8



TEST NUMBER: P776535

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	558.1	559.9	558.1	556.2	550.1	546.3
45.5°	541.1	542.6	541.1	539.2	533.5	530.5
46°	525.6	526.3	525.6	522.9	518.0	515.4
46.5°	510.5	511.2	510.5	507.4	503.7	501.4
47°	496.5	497.6	496.5	493.4	489.7	488.2
47.5°	483.6	485.1	483.6	480.2	476.8	475.7
48°	471.9	473.4	471.9	468.9	465.5	464.0
48.5°	461.0	462.1	461.0	457.9	455.3	454.5
49°	450.4	451.5	450.4	448.1	445.8	445.5
49.5°	440.6	440.9	440.6	438.7	437.2	436.8
50°	430.7	431.1	430.7	429.2	428.1	427.7
50.5°	421.3	421.3	421.3	419.8	419.0	418.6
51°	411.8	411.8	411.8	410.3	409.2	408.4
51.5°	402.4	402.8	402.4	400.5	399.0	398.6
52°	392.6	392.9	392.6	390.7	389.2	388.4
52.5°	382.4	383.1	382.4	380.9	379.0	378.2
53°	372.5	373.3	372.5	371.0	369.5	368.8
53.5°	363.1	363.9	363.1	361.2	359.7	358.9
54°	353.3	354.0	353.3	351.8	350.3	349.9
54.5°	344.2	345.0	344.2	342.7	341.2	340.8
55°	335.1	335.5	335.1	334.0	332.5	331.7
55.5°	326.4	326.8	326.4	325.3	323.8	323.0
56°	317.8	318.1	317.8	316.6	315.5	314.7
56.5°	309.4	309.8	309.4	308.3	307.2	306.4
57°	301.1	301.5	301.1	300.0	298.9	298.1
57.5°	292.8	293.6	292.8	292.1	290.9	289.8
58°	285.3	285.6	285.3	284.1	283.0	282.6
58.5°	277.3	277.7	277.3	276.6	275.4	275.1
59°	269.4	270.2	269.4	268.6	267.9	267.5
59.5°	262.2	262.6	262.2	261.1	260.3	259.9
60°	254.7	255.0	254.7	253.9	253.1	252.8
60.5°	247.5	247.9	247.5	246.7	246.0	245.6
61°	240.7	241.1	240.7	239.9	239.2	238.8
61.5°	233.9	234.3	233.9	233.1	232.4	232.0
62°	227.1	227.1	227.1	226.3	225.6	225.6
62.5°	220.3	220.7	220.3	219.5	219.1	218.8
63°	213.9	213.9	213.9	213.1	212.7	212.3
63.5°	207.4	207.8	207.4	206.7	206.3	205.9
64°	201.0	201.4	201.0	200.6	200.3	199.9
64.5°	195.0	195.3	195.0	194.6	194.2	193.8
65°	188.9	189.3	188.9	188.5	188.2	187.8
65.5°	183.2	183.2	183.2	182.5	182.1	182.1
66°	177.2	177.6	177.2	176.8	176.4	176.1



TEST NUMBER: P776535

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	160.6	160.6	160.6	160.2	159.8	159.4
68°	155.3	155.3	155.3	154.9	154.5	154.2
68.5°	149.6	150.0	149.6	149.6	149.2	148.9
69°	144.7	144.7	144.7	144.0	144.0	144.0
69.5°	139.4	139.8	139.4	139.0	139.0	138.7
70°	134.5	134.9	134.5	134.1	134.5	134.1
70.5°	129.6	130.0	129.6	129.6	129.6	129.2
71°	124.7	125.1	124.7	124.7	124.7	124.7
71.5°	120.2	120.2	120.2	120.2	119.8	119.8
72°	115.6	115.6	115.6	115.2	115.2	115.2
72.5°	111.1	111.1	111.1	110.7	110.7	110.7
73°	106.5	106.5	106.5	106.2	106.2	106.2
73.5°	102.0	102.0	102.0	102.0	101.6	101.6
74°	97.9	97.9	97.9	97.5	97.5	97.5
74.5°	93.3	93.3	93.3	93.3	93.3	93.3
75°	89.2	89.2	89.2	89.2	89.2	89.2
75.5°	85.0	85.4	85.0	85.0	85.0	85.0
76°	81.2	81.2	81.2	80.9	80.9	81.2
76.5°	77.1	77.1	77.1	77.1	77.1	77.1
77°	73.3	73.3	73.3	73.3	73.3	73.3
77.5°	69.5	69.5	69.5	69.5	69.5	69.5
78°	65.7	65.7	65.7	65.7	65.7	65.7
78.5°	62.0	62.3	62.0	62.0	62.3	62.3
79°	58.6	58.6	58.6	58.6	58.6	58.6
79.5°	55.2	55.2	55.2	54.8	55.2	55.2
80°	51.4	51.4	51.4	51.4	51.8	51.8
80.5°	48.4	48.4	48.4	48.4	48.4	48.4
81°	45.0	45.0	45.0	45.0	45.0	45.0
81.5°	41.6	41.6	41.6	41.6	41.6	41.6
82°	38.5	38.5	38.5	38.5	38.5	38.5
82.5°	35.5	35.1	35.5	35.5	35.5	35.5
83°	32.1	32.1	32.1	32.5	32.5	32.5
83.5°	29.1	29.1	29.1	29.5	29.5	29.5
84°	26.4	26.4	26.4	26.4	26.4	26.4
84.5°	23.4	23.4	23.4	23.4	23.4	23.8
85°	20.8	20.8	20.8	20.8	20.8	20.8
85.5°	17.8	18.1	17.8	18.1	17.8	18.1
86°	15.1	15.1	15.1	15.1	15.1	15.1
86.5°	12.5	12.8	12.5	12.5	12.5	12.8
87°	9.8	10.2	9.8	10.2	10.2	10.2
87.5°	7.6	7.9	7.6	7.6	7.6	7.6
88°	5.7	5.7	5.7	5.3	5.3	4.9
88.5°	3.8	4.5	3.8	3.4	3.0	3.0



TEST NUMBER: P776535
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.8	1.1	0.8	0.4	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
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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°	2250.4	2246.6	2240.2	2242.1	2238.3	2242.1	2240.2	2246.6	2250.4	2246.6	2240.2
22°	2219.0	2215.2	2209.6	2210.3	2206.5	2210.3	2209.6	2215.2	2219.0	2215.2	2209.6



44°	581.1	585.6	594.3	595.1	598.9	595.1	594.3	585.6	581.1	585.6	594.3
44.5°	563.0	567.5	575.1	576.2	578.8	576.2	575.1	567.5	563.0	567.5	575.1



66.5°	170.4	170.8	171.2	171.5	171.9	171.5	171.2	170.8	170.4	170.8	171.2
67°	165.1	165.1	165.5	165.9	166.2	165.9	165.5	165.1	165.1	165.1	165.5



89°	1.1	1.5	2.3	2.6	3.0	2.6	2.3	1.5	1.1	1.5	2.3
89.5°	0.0	0.4	1.1	1.5	1.9	1.5	1.1	0.4	0.0	0.4	1.1

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21.5°	2242.1	2238.3	2242.1	2240.2	2246.6	2250.4
22°	2210.3	2206.5	2210.3	2209.6	2215.2	2219.0

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44°	595.1	598.9	595.1	594.3	585.6	581.1
44.5°	576.2	578.8	576.2	575.1	567.5	563.0

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66.5°	171.5	171.9	171.5	171.2	170.8	170.4
67°	165.9	166.2	165.9	165.5	165.1	165.1

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89°	2.6	3.0	2.6	2.3	1.5	1.1
89.5°	1.5	1.9	1.5	1.1	0.4	0.0

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Scaled Data Report



(END OF REPORT)