

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: P776234

Luminaire Tested: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776234
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-5000K
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3508.0 lumens
Efficiency: N/A
Efficacy: 104.7 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

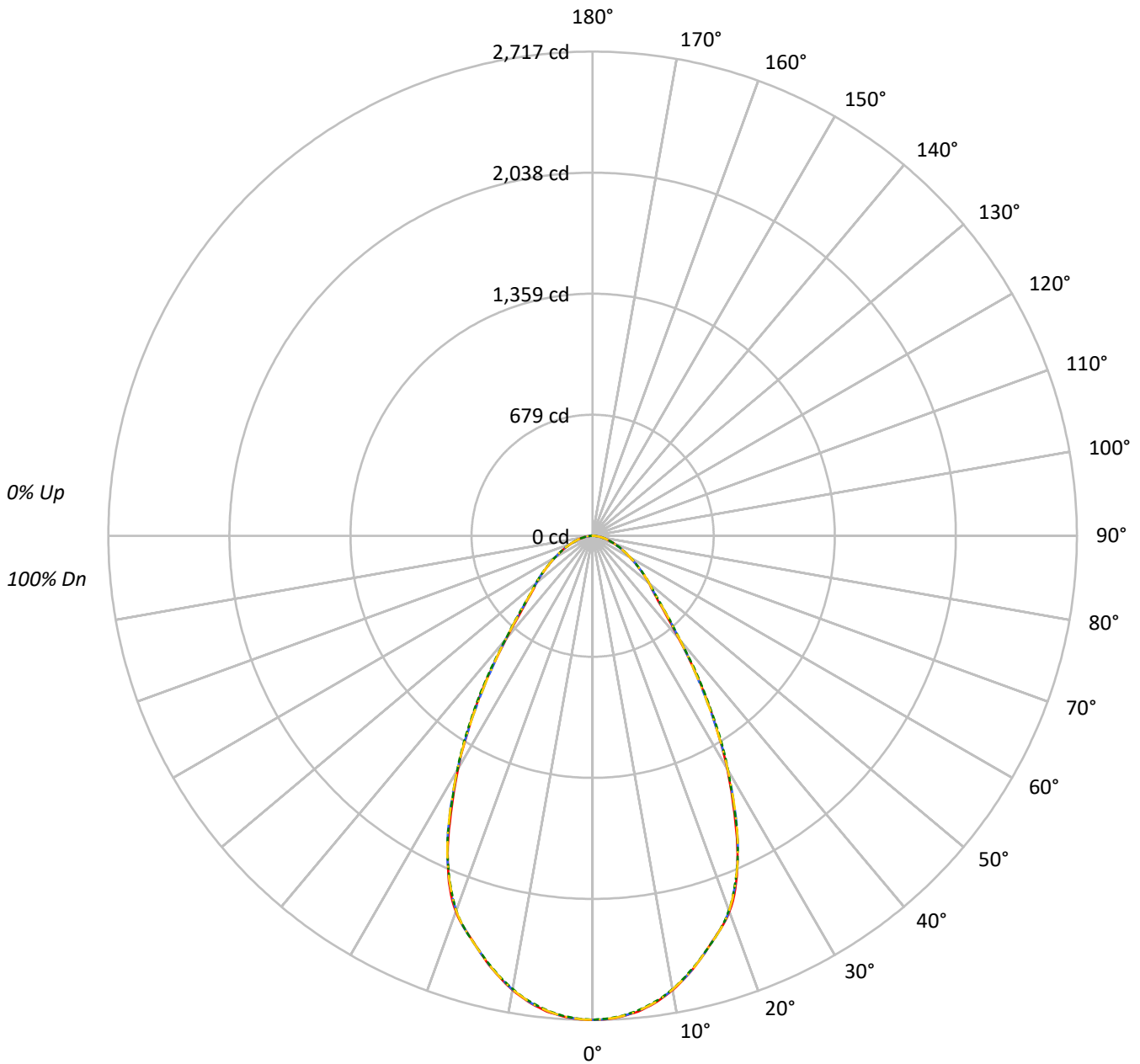
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	341896	341896	341896	341896
5°	339475	338743	339475	338743
10°	330711	329970	330711	329970
15°	316082	315704	316082	315704
20°	300545	299473	300545	299473
25°	266750	267611	266750	267611
30°	219475	220638	219475	220638
35°	170257	172101	170257	172101
40°	123674	125826	123674	125826
45°	93634	95966	93634	95966
50°	80645	81271	80645	81271
55°	70080	70892	70080	70892
60°	61264	61817	61264	61817
65°	53840	54286	53840	54286
70°	47540	47798	47540	47798
75°	41769	41769	41769	41769
80°	36092	35875	36092	35875
85°	28879	28879	28879	28879

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 95966 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.1	7.2
10°-20°	681.5	19.4
20°-30°	872.7	24.9
30°-40°	691.6	19.7
40°-50°	423.4	12.1
50°-60°	289.5	8.3
60°-70°	181.2	5.2
70°-80°	91.8	2.6
80°-90°	23.2	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°	1807.3	51.5
0°-40°	2498.9	71.2
0°-60°	3211.8	91.6
0°-90°	3508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3508.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2717	2717	2717	2717	2717	
5°	2687	2681	2687	2681	2687	253
15°	2426	2423	2426	2423	2426	682
25°	1921	1927	1921	1927	1921	871
35°	1108	1120	1108	1120	1108	691
45°	526	539	526	539	526	418
55°	319	323	319	323	319	288
65°	181	182	181	182	181	180
75°	86	86	86	86	86	92
85°	20	20	20	20	20	23
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°	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7
0.5°	2717.1	2716.7	2716.0	2715.6	2714.5	2715.6	2716.0	2716.7	2717.1	2716.7	2716.0
1°	2716.0	2715.6	2715.3	2714.9	2713.4	2714.9	2715.3	2715.6	2716.0	2715.6	2715.3
1.5°	2714.5	2713.8	2713.8	2713.1	2712.0	2713.1	2713.8	2713.8	2714.5	2713.8	2713.8
2°	2712.3	2712.0	2711.3	2710.9	2709.4	2710.9	2711.3	2712.0	2712.3	2712.0	2711.3
2.5°	2709.8	2709.1	2708.3	2708.0	2706.2	2708.0	2708.3	2709.1	2709.8	2709.1	2708.3
3°	2706.2	2705.4	2704.7	2704.0	2702.2	2704.0	2704.7	2705.4	2706.2	2705.4	2704.7
3.5°	2702.2	2701.4	2700.3	2699.6	2698.5	2699.6	2700.3	2701.4	2702.2	2701.4	2700.3
4°	2697.4	2697.1	2695.6	2694.9	2693.1	2694.9	2695.6	2697.1	2697.4	2697.1	2695.6
4.5°	2692.3	2691.6	2690.2	2689.4	2687.2	2689.4	2690.2	2691.6	2692.3	2691.6	2690.2
5°	2687.2	2686.2	2684.7	2684.0	2681.4	2684.0	2684.7	2686.2	2687.2	2686.2	2684.7
5.5°	2681.8	2679.2	2677.4	2676.7	2674.5	2676.7	2677.4	2679.2	2681.8	2679.2	2677.4
6°	2673.4	2672.0	2670.1	2669.1	2666.1	2669.1	2670.1	2672.0	2673.4	2672.0	2670.1
6.5°	2665.1	2664.0	2661.8	2660.7	2657.8	2660.7	2661.8	2664.0	2665.1	2664.0	2661.8
7°	2656.3	2654.9	2653.8	2652.0	2649.4	2652.0	2653.8	2654.9	2656.3	2654.9	2653.8
7.5°	2646.5	2645.0	2643.6	2642.9	2640.3	2642.9	2643.6	2645.0	2646.5	2645.0	2643.6
8°	2635.9	2634.9	2633.4	2632.3	2630.9	2632.3	2633.4	2634.9	2635.9	2634.9	2633.4
8.5°	2625.0	2623.6	2622.1	2621.0	2619.6	2621.0	2622.1	2623.6	2625.0	2623.6	2622.1
9°	2613.4	2612.3	2610.5	2609.4	2607.9	2609.4	2610.5	2612.3	2613.4	2612.3	2610.5
9.5°	2600.7	2599.9	2598.1	2597.0	2595.6	2597.0	2598.1	2599.9	2600.7	2599.9	2598.1
10°	2587.9	2586.8	2585.4	2583.9	2582.1	2583.9	2585.4	2586.8	2587.9	2586.8	2585.4
10.5°	2573.7	2573.0	2571.2	2570.1	2568.6	2570.1	2571.2	2573.0	2573.7	2573.0	2571.2
11°	2559.5	2558.8	2557.4	2555.9	2554.1	2555.9	2557.4	2558.8	2559.5	2558.8	2557.4
11.5°	2544.6	2543.9	2542.4	2541.0	2539.5	2541.0	2542.4	2543.9	2544.6	2543.9	2542.4
12°	2529.3	2528.6	2527.5	2525.7	2524.2	2525.7	2527.5	2528.6	2529.3	2528.6	2527.5
12.5°	2513.3	2512.6	2511.5	2509.7	2507.9	2509.7	2511.5	2512.6	2513.3	2512.6	2511.5
13°	2497.0	2496.2	2495.1	2493.7	2491.9	2493.7	2495.1	2496.2	2497.0	2496.2	2495.1
13.5°	2479.9	2479.1	2478.4	2477.0	2475.5	2477.0	2478.4	2479.1	2479.9	2479.1	2478.4
14°	2462.4	2462.0	2461.3	2459.9	2458.4	2459.9	2461.3	2462.0	2462.4	2462.0	2461.3
14.5°	2444.2	2443.8	2443.5	2442.0	2440.6	2442.0	2443.5	2443.8	2444.2	2443.8	2443.5
15°	2426.0	2426.0	2425.3	2424.6	2423.1	2424.6	2425.3	2426.0	2426.0	2426.0	2425.3
15.5°	2407.1	2407.1	2407.8	2407.1	2406.4	2407.1	2407.8	2407.1	2407.1	2407.1	2407.8
16°	2388.9	2389.3	2390.4	2390.0	2389.3	2390.0	2390.4	2389.3	2388.9	2389.3	2390.4
16.5°	2370.7	2371.4	2372.9	2372.9	2372.5	2372.9	2372.9	2371.4	2370.7	2371.4	2372.9
17°	2353.6	2354.3	2355.8	2355.4	2355.8	2355.4	2355.8	2354.3	2353.6	2354.3	2355.8
17.5°	2336.9	2337.6	2338.7	2338.3	2338.0	2338.3	2338.7	2337.6	2336.9	2337.6	2338.7
18°	2320.5	2320.9	2321.6	2320.9	2320.1	2320.9	2321.6	2320.9	2320.5	2320.9	2321.6
18.5°	2303.0	2303.0	2303.0	2302.3	2301.2	2302.3	2303.0	2303.0	2303.0	2303.0	2303.0
19°	2285.2	2284.1	2283.4	2282.3	2281.2	2282.3	2283.4	2284.1	2285.2	2284.1	2283.4
19.5°	2265.6	2264.1	2261.9	2261.2	2260.1	2261.2	2261.9	2264.1	2265.6	2264.1	2261.9
20°	2244.1	2242.3	2238.3	2238.6	2236.1	2238.6	2238.3	2242.3	2244.1	2242.3	2238.3
20.5°	2220.5	2217.5	2212.8	2214.3	2211.4	2214.3	2212.8	2217.5	2220.5	2217.5	2212.8
21°	2195.7	2191.3	2185.9	2187.7	2184.1	2187.7	2185.9	2191.3	2195.7	2191.3	2185.9



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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°	2105.1	2100.8	2097.1	2096.7	2094.9	2096.7	2097.1	2100.8	2105.1	2100.8	2097.1
23°	2070.6	2066.9	2066.2	2063.6	2062.9	2063.6	2066.2	2066.9	2070.6	2066.9	2066.2
23.5°	2035.3	2032.0	2033.8	2029.4	2031.3	2029.4	2033.8	2032.0	2035.3	2032.0	2033.8
24°	1998.5	1996.0	2000.3	1994.5	1997.8	1994.5	2000.3	1996.0	1998.5	1996.0	2000.3
24.5°	1960.7	1959.6	1965.0	1959.2	1963.6	1959.2	1965.0	1959.6	1960.7	1959.6	1965.0
25°	1921.0	1921.7	1928.3	1923.9	1927.2	1923.9	1928.3	1921.7	1921.0	1921.7	1928.3
25.5°	1879.9	1884.6	1890.5	1888.6	1889.4	1888.6	1890.5	1884.6	1879.9	1884.6	1890.5
26°	1837.7	1846.1	1851.5	1851.9	1849.0	1851.9	1851.5	1846.1	1837.7	1846.1	1851.5
26.5°	1794.4	1806.8	1811.1	1813.7	1807.1	1813.7	1811.1	1806.8	1794.4	1806.8	1811.1
27°	1752.2	1766.0	1770.4	1774.4	1764.6	1774.4	1770.4	1766.0	1752.2	1766.0	1770.4
27.5°	1710.7	1723.8	1728.9	1734.0	1721.3	1734.0	1728.9	1723.8	1710.7	1723.8	1728.9
28°	1669.2	1681.6	1686.7	1691.8	1678.0	1691.8	1686.7	1681.6	1669.2	1681.6	1686.7
28.5°	1628.9	1638.7	1644.5	1648.9	1636.1	1648.9	1644.5	1638.7	1628.9	1638.7	1644.5
29°	1588.8	1595.4	1602.3	1605.2	1596.5	1605.2	1602.3	1595.4	1588.8	1595.4	1602.3
29.5°	1549.5	1552.8	1560.5	1561.6	1557.6	1561.6	1560.5	1552.8	1549.5	1552.8	1560.5
30°	1510.3	1509.2	1517.5	1517.9	1518.3	1517.9	1517.5	1509.2	1510.3	1509.2	1517.5
30.5°	1469.5	1467.0	1475.0	1475.7	1481.1	1475.7	1475.0	1467.0	1469.5	1467.0	1475.0
31°	1429.1	1423.7	1432.0	1433.5	1441.9	1433.5	1432.0	1423.7	1429.1	1423.7	1432.0
31.5°	1387.6	1382.2	1389.1	1391.6	1402.2	1391.6	1389.1	1382.2	1387.6	1382.2	1389.1
32°	1345.4	1340.3	1346.5	1350.5	1361.4	1350.5	1346.5	1340.3	1345.4	1340.3	1346.5
32.5°	1304.7	1300.3	1304.7	1309.8	1320.7	1309.8	1304.7	1300.3	1304.7	1300.3	1304.7
33°	1263.6	1260.3	1261.8	1269.0	1279.2	1269.0	1261.8	1260.3	1263.6	1260.3	1261.8
33.5°	1226.8	1220.3	1219.2	1228.3	1237.4	1228.3	1219.2	1220.3	1226.8	1220.3	1219.2
34°	1187.2	1180.3	1177.0	1188.3	1197.7	1188.3	1177.0	1180.3	1187.2	1180.3	1177.0
34.5°	1147.9	1140.6	1135.9	1147.9	1158.4	1147.9	1135.9	1140.6	1147.9	1140.6	1135.9
35°	1108.2	1102.0	1096.9	1109.0	1120.2	1109.0	1096.9	1102.0	1108.2	1102.0	1096.9
35.5°	1069.7	1063.8	1058.4	1070.4	1082.8	1070.4	1058.4	1063.8	1069.7	1063.8	1058.4
36°	1031.8	1025.6	1020.9	1033.3	1046.0	1033.3	1020.9	1025.6	1031.8	1025.6	1020.9
36.5°	994.3	988.9	984.5	996.5	1008.5	996.5	984.5	988.9	994.3	988.9	984.5
37°	956.5	952.5	948.9	960.9	971.4	960.9	948.9	952.5	956.5	952.5	948.9
37.5°	919.8	917.2	914.7	926.7	934.3	926.7	914.7	917.2	919.8	917.2	914.7
38°	883.4	883.0	881.9	893.2	897.6	893.2	881.9	883.0	883.4	883.0	881.9
38.5°	849.2	849.9	850.6	860.5	862.3	860.5	850.6	849.9	849.2	849.9	850.6
39°	816.1	817.9	819.3	828.8	828.4	828.8	819.3	817.9	816.1	817.9	819.3
39.5°	783.7	787.0	789.5	797.5	796.4	797.5	789.5	787.0	783.7	787.0	789.5
40°	752.8	756.4	760.8	767.3	765.9	767.3	760.8	756.4	752.8	756.4	760.8
40.5°	723.7	727.3	733.1	737.8	737.5	737.8	733.1	727.3	723.7	727.3	733.1
41°	695.6	699.3	706.9	710.2	711.3	710.2	706.9	699.3	695.6	699.3	706.9
41.5°	669.1	673.1	681.8	683.6	686.9	683.6	681.8	673.1	669.1	673.1	681.8
42°	644.3	648.3	657.8	658.9	663.3	658.9	657.8	648.3	644.3	648.3	657.8
42.5°	621.1	625.1	635.2	635.6	640.3	635.6	635.2	625.1	621.1	625.1	635.2
43°	598.9	603.2	613.1	613.8	618.1	613.8	613.1	603.2	598.9	603.2	613.1
43.5°	578.5	582.9	592.3	592.7	596.7	592.7	592.3	582.9	578.5	582.9	592.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	526.1	529.7	535.6	537.4	539.2	537.4	535.6	529.7	526.1	529.7	535.6
45.5°	510.8	513.7	519.2	521.0	522.5	521.0	519.2	513.7	510.8	513.7	519.2
46°	496.3	498.8	503.5	506.1	506.8	506.1	503.5	498.8	496.3	498.8	503.5
46.5°	482.8	485.0	488.6	491.5	492.3	491.5	488.6	485.0	482.8	485.0	488.6
47°	470.1	471.5	475.2	478.1	479.2	478.1	475.2	471.5	470.1	471.5	475.2
47.5°	458.1	459.2	462.4	465.7	467.2	465.7	462.4	459.2	458.1	459.2	462.4
48°	446.8	448.2	451.5	454.4	455.9	454.4	451.5	448.2	446.8	448.2	451.5
48.5°	437.7	438.4	441.0	443.9	445.0	443.9	441.0	438.4	437.7	438.4	441.0
49°	429.0	429.3	431.5	433.7	434.8	433.7	431.5	429.3	429.0	429.3	431.5
49.5°	420.6	421.0	422.4	424.2	424.6	424.2	422.4	421.0	420.6	421.0	422.4
50°	411.9	412.2	413.3	414.8	415.1	414.8	413.3	412.2	411.9	412.2	413.3
50.5°	403.1	403.5	404.2	405.7	405.7	405.7	404.2	403.5	403.1	403.5	404.2
51°	393.3	394.0	395.1	396.6	396.6	396.6	395.1	394.0	393.3	394.0	395.1
51.5°	383.8	384.2	385.7	387.5	387.8	387.5	385.7	384.2	383.8	384.2	385.7
52°	374.0	374.7	376.2	378.0	378.4	378.0	376.2	374.7	374.0	374.7	376.2
52.5°	364.2	364.9	366.7	368.2	368.9	368.2	366.7	364.9	364.2	364.9	366.7
53°	355.1	355.8	357.3	358.7	359.5	358.7	357.3	355.8	355.1	355.8	357.3
53.5°	345.6	346.4	347.8	349.6	350.4	349.6	347.8	346.4	345.6	346.4	347.8
54°	336.9	337.3	338.7	340.2	340.9	340.2	338.7	337.3	336.9	337.3	338.7
54.5°	328.2	328.5	330.0	331.4	332.2	331.4	330.0	328.5	328.2	328.5	330.0
55°	319.4	320.2	321.6	322.7	323.1	322.7	321.6	320.2	319.4	320.2	321.6
55.5°	311.1	311.8	313.3	314.3	314.7	314.3	313.3	311.8	311.1	311.8	313.3
56°	303.1	303.8	304.9	306.0	306.3	306.0	304.9	303.8	303.1	303.8	304.9
56.5°	295.1	295.8	296.9	298.0	298.3	298.0	296.9	295.8	295.1	295.8	296.9
57°	287.1	287.8	288.9	290.0	290.3	290.0	288.9	287.8	287.1	287.8	288.9
57.5°	279.1	280.1	281.2	282.0	282.7	282.0	281.2	280.1	279.1	280.1	281.2
58°	272.1	272.5	273.6	274.7	275.1	274.7	273.6	272.5	272.1	272.5	273.6
58.5°	264.9	265.2	266.3	267.1	267.4	267.1	266.3	265.2	264.9	265.2	266.3
59°	257.6	258.0	258.7	259.4	260.1	259.4	258.7	258.0	257.6	258.0	258.7
59.5°	250.3	250.7	251.4	252.5	252.9	252.5	251.4	250.7	250.3	250.7	251.4
60°	243.4	243.8	244.5	245.2	245.6	245.2	244.5	243.8	243.4	243.8	244.5
60.5°	236.5	236.9	237.6	238.3	238.7	238.3	237.6	236.9	236.5	236.9	237.6
61°	229.9	230.3	231.0	231.8	232.1	231.8	231.0	230.3	229.9	230.3	231.0
61.5°	223.4	223.8	224.5	225.2	225.6	225.2	224.5	223.8	223.4	223.8	224.5
62°	217.2	217.2	217.9	218.7	218.7	218.7	217.9	217.2	217.2	217.2	217.9
62.5°	210.7	211.0	211.4	212.1	212.5	212.1	211.4	211.0	210.7	211.0	211.4
63°	204.5	204.8	205.2	205.9	205.9	205.9	205.2	204.8	204.5	204.8	205.2
63.5°	198.3	198.7	199.0	199.7	200.1	199.7	199.0	198.7	198.3	198.7	199.0
64°	192.5	192.8	193.2	193.6	193.9	193.6	193.2	192.8	192.5	192.8	193.2
64.5°	186.6	187.0	187.4	187.7	188.1	187.7	187.4	187.0	186.6	187.0	187.4
65°	180.8	181.2	181.6	181.9	182.3	181.9	181.6	181.2	180.8	181.2	181.6
65.5°	175.4	175.4	175.7	176.5	176.5	176.5	175.7	175.4	175.4	175.4	175.7
66°	169.5	169.9	170.3	170.6	171.0	170.6	170.3	169.9	169.5	169.9	170.3



TEST NUMBER: P776234

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	153.5	153.9	154.3	154.6	154.6	154.6	154.3	153.9	153.5	153.9	154.3
68°	148.4	148.8	149.2	149.5	149.5	149.5	149.2	148.8	148.4	148.8	149.2
68.5°	143.3	143.7	144.1	144.1	144.4	144.1	144.1	143.7	143.3	143.7	144.1
69°	138.6	138.6	138.6	139.3	139.3	139.3	138.6	138.6	138.6	138.6	138.6
69.5°	133.5	133.9	133.9	134.3	134.6	134.3	133.9	133.9	133.5	133.9	133.9
70°	129.2	129.5	129.2	129.5	129.9	129.5	129.2	129.5	129.2	129.5	129.2
70.5°	124.4	124.8	124.8	124.8	125.2	124.8	124.8	124.8	124.4	124.8	124.8
71°	120.1	120.1	120.1	120.1	120.4	120.1	120.1	120.1	120.1	120.1	120.1
71.5°	115.3	115.3	115.7	115.7	115.7	115.7	115.7	115.3	115.3	115.3	115.7
72°	111.0	111.0	111.0	111.3	111.3	111.3	111.0	111.0	111.0	111.0	111.0
72.5°	106.6	106.6	106.6	107.0	107.0	107.0	106.6	106.6	106.6	106.6	106.6
73°	102.2	102.2	102.2	102.6	102.6	102.6	102.2	102.2	102.2	102.2	102.2
73.5°	97.9	97.9	98.2	98.2	98.2	98.2	98.2	97.9	97.9	97.9	98.2
74°	93.9	93.9	93.9	94.2	94.2	94.2	93.9	93.9	93.9	93.9	93.9
74.5°	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
75°	85.9	85.9	85.9	85.9	85.9	85.9	85.9	85.9	85.9	85.9	85.9
75.5°	81.9	81.9	81.9	81.9	82.2	81.9	81.9	81.9	81.9	81.9	81.9
76°	78.2	77.9	77.9	78.2	78.2	78.2	77.9	77.9	78.2	77.9	77.9
76.5°	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2
77°	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6	70.6
77.5°	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9
78°	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
78.5°	60.0	60.0	59.7	59.7	60.0	59.7	59.7	60.0	60.0	60.0	59.7
79°	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4
79.5°	53.1	53.1	52.8	53.1	53.1	53.1	52.8	53.1	53.1	53.1	52.8
80°	49.8	49.8	49.5	49.5	49.5	49.5	49.5	49.8	49.8	49.8	49.5
80.5°	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6
81°	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
81.5°	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
82°	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1
82.5°	34.2	34.2	34.2	34.2	33.8	34.2	34.2	34.2	34.2	34.2	34.2
83°	31.3	31.3	31.3	30.9	30.9	30.9	31.3	31.3	31.3	31.3	31.3
83.5°	28.4	28.4	28.4	28.0	28.0	28.0	28.4	28.4	28.4	28.4	28.4
84°	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
84.5°	22.9	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.9	22.6	22.6
85°	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
85.5°	17.5	17.1	17.5	17.1	17.5	17.1	17.5	17.1	17.5	17.1	17.5
86°	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
86.5°	12.4	12.0	12.0	12.0	12.4	12.0	12.0	12.0	12.4	12.0	12.0
87°	9.8	9.8	9.8	9.5	9.8	9.5	9.8	9.8	9.8	9.8	9.8
87.5°	7.3	7.3	7.3	7.3	7.6	7.3	7.3	7.3	7.3	7.3	7.3
88°	4.7	5.1	5.1	5.5	5.5	5.5	5.1	5.1	4.7	5.1	5.1
88.5°	2.9	2.9	3.3	3.6	4.4	3.6	3.3	2.9	2.9	2.9	3.3



TEST NUMBER: P776234

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

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: P776234

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2716.7	2716.7	2716.7	2716.7	2716.7	2716.7
0.5°	2715.6	2714.5	2715.6	2716.0	2716.7	2717.1
1°	2714.9	2713.4	2714.9	2715.3	2715.6	2716.0
1.5°	2713.1	2712.0	2713.1	2713.8	2713.8	2714.5
2°	2710.9	2709.4	2710.9	2711.3	2712.0	2712.3
2.5°	2708.0	2706.2	2708.0	2708.3	2709.1	2709.8
3°	2704.0	2702.2	2704.0	2704.7	2705.4	2706.2
3.5°	2699.6	2698.5	2699.6	2700.3	2701.4	2702.2
4°	2694.9	2693.1	2694.9	2695.6	2697.1	2697.4
4.5°	2689.4	2687.2	2689.4	2690.2	2691.6	2692.3
5°	2684.0	2681.4	2684.0	2684.7	2686.2	2687.2
5.5°	2676.7	2674.5	2676.7	2677.4	2679.2	2681.8
6°	2669.1	2666.1	2669.1	2670.1	2672.0	2673.4
6.5°	2660.7	2657.8	2660.7	2661.8	2664.0	2665.1
7°	2652.0	2649.4	2652.0	2653.8	2654.9	2656.3
7.5°	2642.9	2640.3	2642.9	2643.6	2645.0	2646.5
8°	2632.3	2630.9	2632.3	2633.4	2634.9	2635.9
8.5°	2621.0	2619.6	2621.0	2622.1	2623.6	2625.0
9°	2609.4	2607.9	2609.4	2610.5	2612.3	2613.4
9.5°	2597.0	2595.6	2597.0	2598.1	2599.9	2600.7
10°	2583.9	2582.1	2583.9	2585.4	2586.8	2587.9
10.5°	2570.1	2568.6	2570.1	2571.2	2573.0	2573.7
11°	2555.9	2554.1	2555.9	2557.4	2558.8	2559.5
11.5°	2541.0	2539.5	2541.0	2542.4	2543.9	2544.6
12°	2525.7	2524.2	2525.7	2527.5	2528.6	2529.3
12.5°	2509.7	2507.9	2509.7	2511.5	2512.6	2513.3
13°	2493.7	2491.9	2493.7	2495.1	2496.2	2497.0
13.5°	2477.0	2475.5	2477.0	2478.4	2479.1	2479.9
14°	2459.9	2458.4	2459.9	2461.3	2462.0	2462.4
14.5°	2442.0	2440.6	2442.0	2443.5	2443.8	2444.2
15°	2424.6	2423.1	2424.6	2425.3	2426.0	2426.0
15.5°	2407.1	2406.4	2407.1	2407.8	2407.1	2407.1
16°	2390.0	2389.3	2390.0	2390.4	2389.3	2388.9
16.5°	2372.9	2372.5	2372.9	2372.9	2371.4	2370.7
17°	2355.4	2355.8	2355.4	2355.8	2354.3	2353.6
17.5°	2338.3	2338.0	2338.3	2338.7	2337.6	2336.9
18°	2320.9	2320.1	2320.9	2321.6	2320.9	2320.5
18.5°	2302.3	2301.2	2302.3	2303.0	2303.0	2303.0
19°	2282.3	2281.2	2282.3	2283.4	2284.1	2285.2
19.5°	2261.2	2260.1	2261.2	2261.9	2264.1	2265.6
20°	2238.6	2236.1	2238.6	2238.3	2242.3	2244.1
20.5°	2214.3	2211.4	2214.3	2212.8	2217.5	2220.5
21°	2187.7	2184.1	2187.7	2185.9	2191.3	2195.7



TEST NUMBER: P776234

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2096.7	2094.9	2096.7	2097.1	2100.8	2105.1
23°	2063.6	2062.9	2063.6	2066.2	2066.9	2070.6
23.5°	2029.4	2031.3	2029.4	2033.8	2032.0	2035.3
24°	1994.5	1997.8	1994.5	2000.3	1996.0	1998.5
24.5°	1959.2	1963.6	1959.2	1965.0	1959.6	1960.7
25°	1923.9	1927.2	1923.9	1928.3	1921.7	1921.0
25.5°	1888.6	1889.4	1888.6	1890.5	1884.6	1879.9
26°	1851.9	1849.0	1851.9	1851.5	1846.1	1837.7
26.5°	1813.7	1807.1	1813.7	1811.1	1806.8	1794.4
27°	1774.4	1764.6	1774.4	1770.4	1766.0	1752.2
27.5°	1734.0	1721.3	1734.0	1728.9	1723.8	1710.7
28°	1691.8	1678.0	1691.8	1686.7	1681.6	1669.2
28.5°	1648.9	1636.1	1648.9	1644.5	1638.7	1628.9
29°	1605.2	1596.5	1605.2	1602.3	1595.4	1588.8
29.5°	1561.6	1557.6	1561.6	1560.5	1552.8	1549.5
30°	1517.9	1518.3	1517.9	1517.5	1509.2	1510.3
30.5°	1475.7	1481.1	1475.7	1475.0	1467.0	1469.5
31°	1433.5	1441.9	1433.5	1432.0	1423.7	1429.1
31.5°	1391.6	1402.2	1391.6	1389.1	1382.2	1387.6
32°	1350.5	1361.4	1350.5	1346.5	1340.3	1345.4
32.5°	1309.8	1320.7	1309.8	1304.7	1300.3	1304.7
33°	1269.0	1279.2	1269.0	1261.8	1260.3	1263.6
33.5°	1228.3	1237.4	1228.3	1219.2	1220.3	1226.8
34°	1188.3	1197.7	1188.3	1177.0	1180.3	1187.2
34.5°	1147.9	1158.4	1147.9	1135.9	1140.6	1147.9
35°	1109.0	1120.2	1109.0	1096.9	1102.0	1108.2
35.5°	1070.4	1082.8	1070.4	1058.4	1063.8	1069.7
36°	1033.3	1046.0	1033.3	1020.9	1025.6	1031.8
36.5°	996.5	1008.5	996.5	984.5	988.9	994.3
37°	960.9	971.4	960.9	948.9	952.5	956.5
37.5°	926.7	934.3	926.7	914.7	917.2	919.8
38°	893.2	897.6	893.2	881.9	883.0	883.4
38.5°	860.5	862.3	860.5	850.6	849.9	849.2
39°	828.8	828.4	828.8	819.3	817.9	816.1
39.5°	797.5	796.4	797.5	789.5	787.0	783.7
40°	767.3	765.9	767.3	760.8	756.4	752.8
40.5°	737.8	737.5	737.8	733.1	727.3	723.7
41°	710.2	711.3	710.2	706.9	699.3	695.6
41.5°	683.6	686.9	683.6	681.8	673.1	669.1
42°	658.9	663.3	658.9	657.8	648.3	644.3
42.5°	635.6	640.3	635.6	635.2	625.1	621.1
43°	613.8	618.1	613.8	613.1	603.2	598.9
43.5°	592.7	596.7	592.7	592.3	582.9	578.5

TEST NUMBER: P776234

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	537.4	539.2	537.4	535.6	529.7	526.1
45.5°	521.0	522.5	521.0	519.2	513.7	510.8
46°	506.1	506.8	506.1	503.5	498.8	496.3
46.5°	491.5	492.3	491.5	488.6	485.0	482.8
47°	478.1	479.2	478.1	475.2	471.5	470.1
47.5°	465.7	467.2	465.7	462.4	459.2	458.1
48°	454.4	455.9	454.4	451.5	448.2	446.8
48.5°	443.9	445.0	443.9	441.0	438.4	437.7
49°	433.7	434.8	433.7	431.5	429.3	429.0
49.5°	424.2	424.6	424.2	422.4	421.0	420.6
50°	414.8	415.1	414.8	413.3	412.2	411.9
50.5°	405.7	405.7	405.7	404.2	403.5	403.1
51°	396.6	396.6	396.6	395.1	394.0	393.3
51.5°	387.5	387.8	387.5	385.7	384.2	383.8
52°	378.0	378.4	378.0	376.2	374.7	374.0
52.5°	368.2	368.9	368.2	366.7	364.9	364.2
53°	358.7	359.5	358.7	357.3	355.8	355.1
53.5°	349.6	350.4	349.6	347.8	346.4	345.6
54°	340.2	340.9	340.2	338.7	337.3	336.9
54.5°	331.4	332.2	331.4	330.0	328.5	328.2
55°	322.7	323.1	322.7	321.6	320.2	319.4
55.5°	314.3	314.7	314.3	313.3	311.8	311.1
56°	306.0	306.3	306.0	304.9	303.8	303.1
56.5°	298.0	298.3	298.0	296.9	295.8	295.1
57°	290.0	290.3	290.0	288.9	287.8	287.1
57.5°	282.0	282.7	282.0	281.2	280.1	279.1
58°	274.7	275.1	274.7	273.6	272.5	272.1
58.5°	267.1	267.4	267.1	266.3	265.2	264.9
59°	259.4	260.1	259.4	258.7	258.0	257.6
59.5°	252.5	252.9	252.5	251.4	250.7	250.3
60°	245.2	245.6	245.2	244.5	243.8	243.4
60.5°	238.3	238.7	238.3	237.6	236.9	236.5
61°	231.8	232.1	231.8	231.0	230.3	229.9
61.5°	225.2	225.6	225.2	224.5	223.8	223.4
62°	218.7	218.7	218.7	217.9	217.2	217.2
62.5°	212.1	212.5	212.1	211.4	211.0	210.7
63°	205.9	205.9	205.9	205.2	204.8	204.5
63.5°	199.7	200.1	199.7	199.0	198.7	198.3
64°	193.6	193.9	193.6	193.2	192.8	192.5
64.5°	187.7	188.1	187.7	187.4	187.0	186.6
65°	181.9	182.3	181.9	181.6	181.2	180.8
65.5°	176.5	176.5	176.5	175.7	175.4	175.4
66°	170.6	171.0	170.6	170.3	169.9	169.5



TEST NUMBER: P776234

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	154.6	154.6	154.6	154.3	153.9	153.5
68°	149.5	149.5	149.5	149.2	148.8	148.4
68.5°	144.1	144.4	144.1	144.1	143.7	143.3
69°	139.3	139.3	139.3	138.6	138.6	138.6
69.5°	134.3	134.6	134.3	133.9	133.9	133.5
70°	129.5	129.9	129.5	129.2	129.5	129.2
70.5°	124.8	125.2	124.8	124.8	124.8	124.4
71°	120.1	120.4	120.1	120.1	120.1	120.1
71.5°	115.7	115.7	115.7	115.7	115.3	115.3
72°	111.3	111.3	111.3	111.0	111.0	111.0
72.5°	107.0	107.0	107.0	106.6	106.6	106.6
73°	102.6	102.6	102.6	102.2	102.2	102.2
73.5°	98.2	98.2	98.2	98.2	97.9	97.9
74°	94.2	94.2	94.2	93.9	93.9	93.9
74.5°	89.9	89.9	89.9	89.9	89.9	89.9
75°	85.9	85.9	85.9	85.9	85.9	85.9
75.5°	81.9	82.2	81.9	81.9	81.9	81.9
76°	78.2	78.2	78.2	77.9	77.9	78.2
76.5°	74.2	74.2	74.2	74.2	74.2	74.2
77°	70.6	70.6	70.6	70.6	70.6	70.6
77.5°	66.9	66.9	66.9	66.9	66.9	66.9
78°	63.3	63.3	63.3	63.3	63.3	63.3
78.5°	59.7	60.0	59.7	59.7	60.0	60.0
79°	56.4	56.4	56.4	56.4	56.4	56.4
79.5°	53.1	53.1	53.1	52.8	53.1	53.1
80°	49.5	49.5	49.5	49.5	49.8	49.8
80.5°	46.6	46.6	46.6	46.6	46.6	46.6
81°	43.3	43.3	43.3	43.3	43.3	43.3
81.5°	40.0	40.0	40.0	40.0	40.0	40.0
82°	37.1	37.1	37.1	37.1	37.1	37.1
82.5°	34.2	33.8	34.2	34.2	34.2	34.2
83°	30.9	30.9	30.9	31.3	31.3	31.3
83.5°	28.0	28.0	28.0	28.4	28.4	28.4
84°	25.5	25.5	25.5	25.5	25.5	25.5
84.5°	22.6	22.6	22.6	22.6	22.6	22.9
85°	20.0	20.0	20.0	20.0	20.0	20.0
85.5°	17.1	17.5	17.1	17.5	17.1	17.5
86°	14.6	14.6	14.6	14.6	14.6	14.6
86.5°	12.0	12.4	12.0	12.0	12.0	12.4
87°	9.5	9.8	9.5	9.8	9.8	9.8
87.5°	7.3	7.6	7.3	7.3	7.3	7.3
88°	5.5	5.5	5.5	5.1	5.1	4.7
88.5°	3.6	4.4	3.6	3.3	2.9	2.9



TEST NUMBER: P776234
CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-5000K

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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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2167.0	2163.3	2157.1	2159.0	2155.3	2159.0	2157.1	2163.3	2167.0	2163.3	2157.1
22°	2136.8	2133.1	2127.7	2128.4	2124.8	2128.4	2127.7	2133.1	2136.8	2133.1	2127.7



44°	559.6	563.9	572.3	573.0	576.7	573.0	572.3	563.9	559.6	563.9	572.3
44.5°	542.1	546.5	553.7	554.8	557.4	554.8	553.7	546.5	542.1	546.5	553.7



66.5°	164.1	164.5	164.8	165.2	165.5	165.2	164.8	164.5	164.1	164.5	164.8
67°	159.0	159.0	159.4	159.7	160.1	159.7	159.4	159.0	159.0	159.0	159.4



89°	1.1	1.5	2.2	2.5	2.9	2.5	2.2	1.5	1.1	1.5	2.2
89.5°	0.0	0.4	1.1	1.5	1.8	1.5	1.1	0.4	0.0	0.4	1.1

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21.5°	2159.0	2155.3	2159.0	2157.1	2163.3	2167.0
22°	2128.4	2124.8	2128.4	2127.7	2133.1	2136.8



44°	573.0	576.7	573.0	572.3	563.9	559.6
44.5°	554.8	557.4	554.8	553.7	546.5	542.1



66.5°	165.2	165.5	165.2	164.8	164.5	164.1
67°	159.7	160.1	159.7	159.4	159.0	159.0

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89°	2.5	2.9	2.5	2.2	1.5	1.1
89.5°	1.5	1.8	1.5	1.1	0.4	0.0

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Scaled Data Report



(END OF REPORT)