

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: P776785

Luminaire Tested: HCDJBS4050CSD-HCD82TRMB-5000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776785
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B065-HCD82TRMB)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K
Description: 8 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

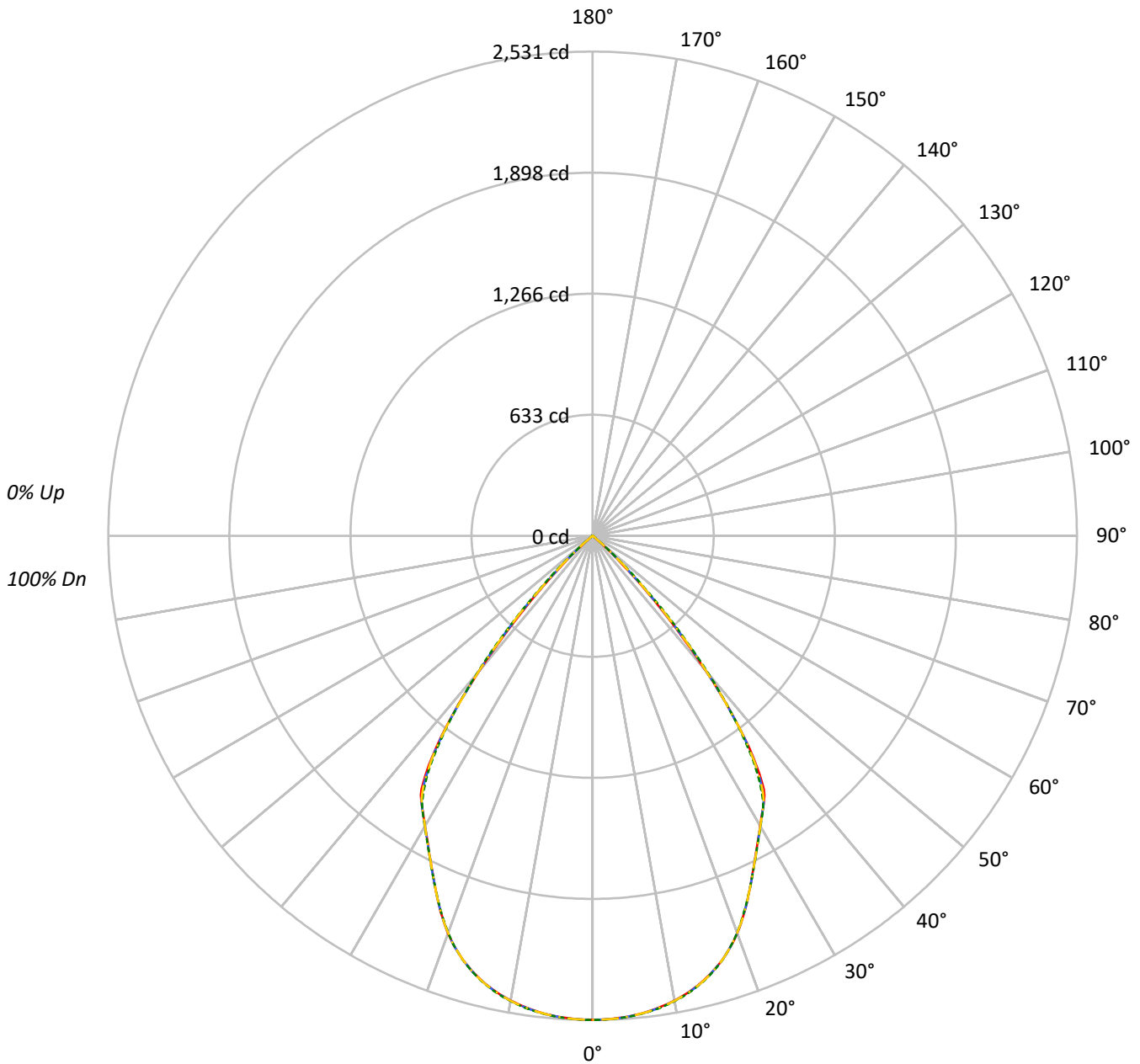
Lumens per Lamp: N/A
Luminaire Lumens: 3009.8 lumens
Efficiency: N/A
Efficacy: 62.7 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.08
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): 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



TEST NUMBER: P776785
CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

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	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93								
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86								
3	101	95	89	85	99	93	88	85	91	86	83	88	85	82	86	83	81	79								
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	81	77	74	73								
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67								
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62								
7	81	71	64	60	79	70	64	60	69	63	59	68	63	59	66	62	59	57								
8	76	66	60	55	75	66	60	55	64	59	55	63	58	55	62	58	55	53								
9	72	62	56	51	71	61	55	51	60	55	51	60	55	51	59	54	51	49								
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	77260	77260	77260	77260
5°	77080	77151	77080	77151
10°	76474	76586	76474	76586
15°	74998	75070	74998	75070
20°	71818	71744	71818	71744
25°	66339	66399	66339	66399
30°	61757	61852	61757	61852
35°	56692	55537	56692	55537
40°	36582	37599	36582	37599
45°	13428	16144	13428	16144
50°	1539	2470	1539	2470
55°	245	245	245	245
60°	140	140	140	140
65°	101	101	101	101
70°	80	80	80	80
75°	59	59	59	59
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 16144 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.7	7.9
10°-20°	665.7	22.1
20°-30°	907.3	30.1
30°-40°	895.9	29.8
40°-50°	293.4	9.7
50°-60°	6.9	0.2
60°-70°	1.4	0.0
70°-80°	0.4	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°	1811.7	60.2
0°-40°	2707.7	90.0
0°-60°	3007.9	99.9
0°-90°	3009.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3009.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2531	2531	2531	2531	2531	
5°	2515	2517	2515	2517	2515	239
15°	2373	2375	2373	2375	2373	665
25°	1969	1971	1969	1971	1969	907
35°	1521	1490	1521	1490	1521	899
45°	311	374	311	374	311	275
55°	5	5	5	5	5	6
65°	1	1	1	1	1	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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CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6
0.5°	2530.1	2530.1	2530.6	2530.1	2530.6	2530.1	2530.6	2530.1	2530.1	2530.1	2530.6
1°	2529.7	2529.7	2530.1	2529.7	2530.6	2529.7	2530.1	2529.7	2529.7	2529.7	2530.1
1.5°	2528.8	2529.2	2529.2	2529.2	2529.7	2529.2	2529.2	2529.2	2528.8	2529.2	2529.2
2°	2527.9	2527.9	2528.3	2528.3	2528.8	2528.3	2528.3	2527.9	2527.9	2527.9	2528.3
2.5°	2526.5	2527.0	2527.0	2527.0	2527.4	2527.0	2527.0	2527.0	2526.5	2527.0	2527.0
3°	2525.1	2525.1	2525.6	2525.6	2526.0	2525.6	2525.6	2525.1	2525.1	2525.1	2525.6
3.5°	2523.3	2523.3	2523.8	2523.8	2524.2	2523.8	2523.8	2523.3	2523.3	2523.3	2523.8
4°	2521.0	2521.0	2521.5	2521.5	2522.4	2521.5	2521.5	2521.0	2521.0	2521.0	2521.5
4.5°	2518.3	2518.3	2518.7	2519.2	2519.7	2519.2	2518.7	2518.3	2518.3	2518.3	2518.7
5°	2515.1	2515.6	2516.0	2516.5	2517.4	2516.5	2516.0	2515.6	2515.1	2515.6	2516.0
5.5°	2512.4	2512.4	2512.8	2513.3	2514.2	2513.3	2512.8	2512.4	2512.4	2512.4	2512.8
6°	2508.7	2508.7	2509.6	2510.1	2511.0	2510.1	2509.6	2508.7	2508.7	2508.7	2509.6
6.5°	2504.6	2505.1	2506.0	2506.4	2507.3	2506.4	2506.0	2505.1	2504.6	2505.1	2506.0
7°	2500.5	2500.5	2501.9	2502.3	2503.2	2502.3	2501.9	2500.5	2500.5	2500.5	2501.9
7.5°	2495.9	2495.9	2497.3	2497.8	2498.7	2497.8	2497.3	2495.9	2495.9	2495.9	2497.3
8°	2490.9	2491.4	2492.3	2493.2	2494.1	2493.2	2492.3	2491.4	2490.9	2491.4	2492.3
8.5°	2485.5	2485.9	2486.8	2487.7	2488.7	2487.7	2486.8	2485.9	2485.5	2485.9	2486.8
9°	2479.5	2480.0	2481.4	2482.3	2483.2	2482.3	2481.4	2480.0	2479.5	2480.0	2481.4
9.5°	2473.1	2473.6	2475.0	2476.3	2477.3	2476.3	2475.0	2473.6	2473.1	2473.6	2475.0
10°	2466.8	2467.2	2468.1	2469.5	2470.4	2469.5	2468.1	2467.2	2466.8	2467.2	2468.1
10.5°	2459.5	2459.9	2461.3	2462.7	2463.6	2462.7	2461.3	2459.9	2459.5	2459.9	2461.3
11°	2452.2	2452.6	2454.0	2454.9	2455.8	2454.9	2454.0	2452.6	2452.2	2452.6	2454.0
11.5°	2444.0	2444.4	2445.8	2446.7	2448.1	2446.7	2445.8	2444.4	2444.0	2444.4	2445.8
12°	2435.8	2435.8	2437.1	2438.5	2439.4	2438.5	2437.1	2435.8	2435.8	2435.8	2437.1
12.5°	2426.6	2426.6	2428.0	2429.4	2430.3	2429.4	2428.0	2426.6	2426.6	2426.6	2428.0
13°	2417.1	2417.5	2418.4	2419.8	2420.3	2419.8	2418.4	2417.5	2417.1	2417.5	2418.4
13.5°	2406.6	2407.0	2408.4	2409.3	2410.2	2409.3	2408.4	2407.0	2406.6	2407.0	2408.4
14°	2396.1	2396.5	2397.5	2398.4	2399.3	2398.4	2397.5	2396.5	2396.1	2396.5	2397.5
14.5°	2384.7	2385.1	2386.1	2387.0	2387.9	2387.0	2386.1	2385.1	2384.7	2385.1	2386.1
15°	2372.8	2372.8	2373.7	2374.7	2375.1	2374.7	2373.7	2372.8	2372.8	2372.8	2373.7
15.5°	2360.1	2360.1	2361.0	2361.9	2362.3	2361.9	2361.0	2360.1	2360.1	2360.1	2361.0
16°	2346.4	2346.8	2347.3	2347.8	2348.7	2347.8	2347.3	2346.8	2346.4	2346.8	2347.3
16.5°	2332.7	2332.7	2333.2	2333.6	2334.1	2333.6	2333.2	2332.7	2332.7	2332.7	2333.2
17°	2317.7	2317.7	2318.1	2318.6	2319.0	2318.6	2318.1	2317.7	2317.7	2317.7	2318.1
17.5°	2301.7	2301.7	2302.2	2302.2	2302.6	2302.2	2302.2	2301.7	2301.7	2301.7	2302.2
18°	2285.7	2285.3	2285.3	2285.3	2285.7	2285.3	2285.3	2285.3	2285.7	2285.3	2285.3
18.5°	2268.0	2268.0	2267.5	2267.5	2267.5	2267.5	2267.5	2268.0	2268.0	2268.0	2267.5
19°	2249.7	2249.7	2249.3	2248.8	2248.8	2248.8	2249.3	2249.7	2249.7	2249.7	2249.3
19.5°	2230.6	2230.1	2229.7	2229.2	2229.2	2229.2	2229.7	2230.1	2230.6	2230.1	2229.7
20°	2210.5	2210.1	2209.6	2208.7	2208.2	2208.7	2209.6	2210.1	2210.5	2210.1	2209.6
20.5°	2189.1	2188.6	2187.7	2186.8	2186.3	2186.8	2187.7	2188.6	2189.1	2188.6	2187.7
21°	2166.7	2166.7	2165.8	2164.0	2163.1	2164.0	2165.8	2166.7	2166.7	2166.7	2165.8



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CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2095.2	2095.2	2094.2	2092.9	2092.9	2092.9	2094.2	2095.2	2095.2	2095.2	2094.2
23°	2070.1	2070.1	2069.6	2068.3	2068.3	2068.3	2069.6	2070.1	2070.1	2070.1	2069.6
23.5°	2044.5	2045.0	2044.5	2043.6	2043.6	2043.6	2044.5	2045.0	2044.5	2045.0	2044.5
24°	2019.0	2019.5	2019.5	2019.0	2019.5	2019.0	2019.5	2019.5	2019.0	2019.5	2019.5
24.5°	1994.4	1994.4	1994.8	1994.4	1995.3	1994.4	1994.8	1994.4	1994.4	1994.4	1994.8
25°	1969.3	1969.8	1970.2	1970.2	1971.1	1970.2	1970.2	1969.8	1969.3	1969.8	1970.2
25.5°	1945.6	1945.6	1946.1	1946.5	1947.4	1946.5	1946.1	1945.6	1945.6	1945.6	1946.1
26°	1921.9	1922.3	1922.8	1923.3	1924.2	1923.3	1922.8	1922.3	1921.9	1922.3	1922.8
26.5°	1898.6	1899.1	1899.5	1900.0	1901.4	1900.0	1899.5	1899.1	1898.6	1899.1	1899.5
27°	1876.3	1876.3	1877.2	1877.2	1878.6	1877.2	1877.2	1876.3	1876.3	1876.3	1877.2
27.5°	1853.9	1854.4	1854.9	1855.8	1856.7	1855.8	1854.9	1854.4	1853.9	1854.4	1854.9
28°	1832.1	1832.5	1833.4	1833.9	1835.3	1833.9	1833.4	1832.5	1832.1	1832.5	1833.4
28.5°	1811.1	1812.0	1812.5	1812.9	1814.3	1812.9	1812.5	1812.0	1811.1	1812.0	1812.5
29°	1791.0	1791.5	1791.9	1792.4	1793.8	1792.4	1791.9	1791.5	1791.0	1791.5	1791.9
29.5°	1771.0	1771.4	1772.3	1772.8	1773.7	1772.8	1772.3	1771.4	1771.0	1771.4	1772.3
30°	1751.8	1751.8	1752.7	1753.2	1754.5	1753.2	1752.7	1751.8	1751.8	1751.8	1752.7
30.5°	1732.7	1733.1	1733.6	1734.5	1735.4	1734.5	1733.6	1733.1	1732.7	1733.1	1733.6
31°	1714.4	1714.9	1715.8	1716.2	1717.6	1716.2	1715.8	1714.9	1714.4	1714.9	1715.8
31.5°	1697.1	1697.6	1697.6	1698.0	1698.9	1698.0	1697.6	1697.6	1697.1	1697.6	1697.6
32°	1680.2	1680.2	1680.2	1679.8	1680.7	1679.8	1680.2	1680.2	1680.2	1680.2	1680.2
32.5°	1663.8	1663.4	1662.4	1660.6	1658.8	1660.6	1662.4	1663.4	1663.8	1663.4	1662.4
33°	1646.0	1645.1	1640.6	1636.0	1631.0	1636.0	1640.6	1645.1	1646.0	1645.1	1640.6
33.5°	1626.9	1622.3	1613.7	1605.9	1599.5	1605.9	1613.7	1622.3	1626.9	1622.3	1613.7
34°	1599.5	1593.6	1581.7	1571.7	1564.9	1571.7	1581.7	1593.6	1599.5	1593.6	1581.7
34.5°	1563.5	1558.5	1545.3	1535.7	1528.8	1535.7	1545.3	1558.5	1563.5	1558.5	1545.3
35°	1521.1	1516.1	1504.2	1496.5	1490.1	1496.5	1504.2	1516.1	1521.1	1516.1	1504.2
35.5°	1474.6	1471.9	1460.9	1452.7	1446.3	1452.7	1460.9	1471.9	1474.6	1471.9	1460.9
36°	1424.9	1422.6	1413.5	1405.3	1398.4	1405.3	1413.5	1422.6	1424.9	1422.6	1413.5
36.5°	1372.0	1370.2	1362.4	1353.8	1346.5	1353.8	1362.4	1370.2	1372.0	1370.2	1362.4
37°	1312.7	1311.4	1306.8	1300.4	1293.1	1300.4	1306.8	1311.4	1312.7	1311.4	1306.8
37.5°	1251.6	1249.8	1248.0	1243.9	1237.9	1243.9	1248.0	1249.8	1251.6	1249.8	1248.0
38°	1186.9	1184.1	1185.0	1184.6	1181.9	1184.6	1185.0	1184.1	1186.9	1184.1	1185.0
38.5°	1124.0	1119.8	1120.8	1123.0	1125.3	1123.0	1120.8	1119.8	1124.0	1119.8	1120.8
39°	1056.0	1054.6	1055.6	1061.0	1067.0	1061.0	1055.6	1054.6	1056.0	1054.6	1055.6
39.5°	988.5	989.4	991.3	998.1	1006.3	998.1	991.3	989.4	988.5	989.4	991.3
40°	917.9	922.4	926.5	935.6	943.4	935.6	926.5	922.4	917.9	922.4	926.5
40.5°	849.9	856.3	864.1	874.1	880.9	874.1	864.1	856.3	849.9	856.3	864.1
41°	780.2	788.8	801.6	813.0	819.8	813.0	801.6	788.8	780.2	788.8	801.6
41.5°	714.0	723.2	738.7	752.3	758.7	752.3	738.7	723.2	714.0	723.2	738.7
42°	649.3	657.5	675.7	692.2	698.1	692.2	675.7	657.5	649.3	657.5	675.7
42.5°	586.4	596.4	616.9	633.3	638.8	633.3	616.9	596.4	586.4	596.4	616.9
43°	525.7	537.1	557.6	575.0	580.9	575.0	557.6	537.1	525.7	537.1	557.6
43.5°	469.2	480.1	500.2	518.0	526.2	518.0	500.2	480.1	469.2	480.1	500.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	311.0	320.5	341.5	362.5	373.9	362.5	341.5	320.5	311.0	320.5	341.5
45.5°	263.1	274.5	295.9	317.8	328.3	317.8	295.9	274.5	263.1	274.5	295.9
46°	221.1	230.7	254.9	276.3	289.1	276.3	254.9	230.7	221.1	230.7	254.9
46.5°	183.3	193.3	216.1	236.6	250.3	236.6	216.1	193.3	183.3	193.3	216.1
47°	153.7	159.6	178.7	199.3	211.1	199.3	178.7	159.6	153.7	159.6	178.7
47.5°	125.4	129.0	146.4	164.1	171.9	164.1	146.4	129.0	125.4	129.0	146.4
48°	99.9	103.5	116.7	132.7	140.9	132.7	116.7	103.5	99.9	103.5	116.7
48.5°	80.2	82.1	93.5	105.3	112.6	105.3	93.5	82.1	80.2	82.1	93.5
49°	60.2	62.5	72.0	83.4	87.5	83.4	72.0	62.5	60.2	62.5	72.0
49.5°	45.6	46.5	52.9	62.9	68.4	62.9	52.9	46.5	45.6	46.5	52.9
50°	32.4	31.5	40.1	49.2	52.0	49.2	40.1	31.5	32.4	31.5	40.1
50.5°	20.1	21.9	28.3	36.9	41.9	36.9	28.3	21.9	20.1	21.9	28.3
51°	10.9	14.6	19.6	24.6	31.9	24.6	19.6	14.6	10.9	14.6	19.6
51.5°	8.7	9.1	12.8	16.0	23.7	16.0	12.8	9.1	8.7	9.1	12.8
52°	7.3	7.8	8.2	10.0	15.5	10.0	8.2	7.8	7.3	7.8	8.2
52.5°	5.9	6.8	6.8	7.8	7.3	7.8	6.8	6.8	5.9	6.8	6.8
53°	5.9	5.9	6.4	6.4	5.9	6.4	6.4	5.9	5.9	5.9	6.4
53.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
54°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
54.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
55°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
55.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
56°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
56.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
57°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
57.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
58°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
58.5°	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.7	3.2	3.2
59°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
59.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
60°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
60.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
61°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
61.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
62°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
62.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
63°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
63.5°	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.4	1.8	1.8
64°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
64.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
65.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
66°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



TEST NUMBER: P776785

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
68°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
68.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
69°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
69.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70.5°	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.9	0.9
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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
78°	0.0	0.0	0.0	0.5	0.5	0.5	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: P776785
CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776785

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2530.6	2530.6	2530.6	2530.6	2530.6	2530.6
0.5°	2530.1	2530.6	2530.1	2530.6	2530.1	2530.1
1°	2529.7	2530.6	2529.7	2530.1	2529.7	2529.7
1.5°	2529.2	2529.7	2529.2	2529.2	2529.2	2528.8
2°	2528.3	2528.8	2528.3	2528.3	2527.9	2527.9
2.5°	2527.0	2527.4	2527.0	2527.0	2527.0	2526.5
3°	2525.6	2526.0	2525.6	2525.6	2525.1	2525.1
3.5°	2523.8	2524.2	2523.8	2523.8	2523.3	2523.3
4°	2521.5	2522.4	2521.5	2521.5	2521.0	2521.0
4.5°	2519.2	2519.7	2519.2	2518.7	2518.3	2518.3
5°	2516.5	2517.4	2516.5	2516.0	2515.6	2515.1
5.5°	2513.3	2514.2	2513.3	2512.8	2512.4	2512.4
6°	2510.1	2511.0	2510.1	2509.6	2508.7	2508.7
6.5°	2506.4	2507.3	2506.4	2506.0	2505.1	2504.6
7°	2502.3	2503.2	2502.3	2501.9	2500.5	2500.5
7.5°	2497.8	2498.7	2497.8	2497.3	2495.9	2495.9
8°	2493.2	2494.1	2493.2	2492.3	2491.4	2490.9
8.5°	2487.7	2488.7	2487.7	2486.8	2485.9	2485.5
9°	2482.3	2483.2	2482.3	2481.4	2480.0	2479.5
9.5°	2476.3	2477.3	2476.3	2475.0	2473.6	2473.1
10°	2469.5	2470.4	2469.5	2468.1	2467.2	2466.8
10.5°	2462.7	2463.6	2462.7	2461.3	2459.9	2459.5
11°	2454.9	2455.8	2454.9	2454.0	2452.6	2452.2
11.5°	2446.7	2448.1	2446.7	2445.8	2444.4	2444.0
12°	2438.5	2439.4	2438.5	2437.1	2435.8	2435.8
12.5°	2429.4	2430.3	2429.4	2428.0	2426.6	2426.6
13°	2419.8	2420.3	2419.8	2418.4	2417.5	2417.1
13.5°	2409.3	2410.2	2409.3	2408.4	2407.0	2406.6
14°	2398.4	2399.3	2398.4	2397.5	2396.5	2396.1
14.5°	2387.0	2387.9	2387.0	2386.1	2385.1	2384.7
15°	2374.7	2375.1	2374.7	2373.7	2372.8	2372.8
15.5°	2361.9	2362.3	2361.9	2361.0	2360.1	2360.1
16°	2347.8	2348.7	2347.8	2347.3	2346.8	2346.4
16.5°	2333.6	2334.1	2333.6	2333.2	2332.7	2332.7
17°	2318.6	2319.0	2318.6	2318.1	2317.7	2317.7
17.5°	2302.2	2302.6	2302.2	2302.2	2301.7	2301.7
18°	2285.3	2285.7	2285.3	2285.3	2285.3	2285.7
18.5°	2267.5	2267.5	2267.5	2267.5	2268.0	2268.0
19°	2248.8	2248.8	2248.8	2249.3	2249.7	2249.7
19.5°	2229.2	2229.2	2229.2	2229.7	2230.1	2230.6
20°	2208.7	2208.2	2208.7	2209.6	2210.1	2210.5
20.5°	2186.8	2186.3	2186.8	2187.7	2188.6	2189.1
21°	2164.0	2163.1	2164.0	2165.8	2166.7	2166.7



TEST NUMBER: P776785

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2092.9	2092.9	2092.9	2094.2	2095.2	2095.2
23°	2068.3	2068.3	2068.3	2069.6	2070.1	2070.1
23.5°	2043.6	2043.6	2043.6	2044.5	2045.0	2044.5
24°	2019.0	2019.5	2019.0	2019.5	2019.5	2019.0
24.5°	1994.4	1995.3	1994.4	1994.8	1994.4	1994.4
25°	1970.2	1971.1	1970.2	1970.2	1969.8	1969.3
25.5°	1946.5	1947.4	1946.5	1946.1	1945.6	1945.6
26°	1923.3	1924.2	1923.3	1922.8	1922.3	1921.9
26.5°	1900.0	1901.4	1900.0	1899.5	1899.1	1898.6
27°	1877.2	1878.6	1877.2	1877.2	1876.3	1876.3
27.5°	1855.8	1856.7	1855.8	1854.9	1854.4	1853.9
28°	1833.9	1835.3	1833.9	1833.4	1832.5	1832.1
28.5°	1812.9	1814.3	1812.9	1812.5	1812.0	1811.1
29°	1792.4	1793.8	1792.4	1791.9	1791.5	1791.0
29.5°	1772.8	1773.7	1772.8	1772.3	1771.4	1771.0
30°	1753.2	1754.5	1753.2	1752.7	1751.8	1751.8
30.5°	1734.5	1735.4	1734.5	1733.6	1733.1	1732.7
31°	1716.2	1717.6	1716.2	1715.8	1714.9	1714.4
31.5°	1698.0	1698.9	1698.0	1697.6	1697.6	1697.1
32°	1679.8	1680.7	1679.8	1680.2	1680.2	1680.2
32.5°	1660.6	1658.8	1660.6	1662.4	1663.4	1663.8
33°	1636.0	1631.0	1636.0	1640.6	1645.1	1646.0
33.5°	1605.9	1599.5	1605.9	1613.7	1622.3	1626.9
34°	1571.7	1564.9	1571.7	1581.7	1593.6	1599.5
34.5°	1535.7	1528.8	1535.7	1545.3	1558.5	1563.5
35°	1496.5	1490.1	1496.5	1504.2	1516.1	1521.1
35.5°	1452.7	1446.3	1452.7	1460.9	1471.9	1474.6
36°	1405.3	1398.4	1405.3	1413.5	1422.6	1424.9
36.5°	1353.8	1346.5	1353.8	1362.4	1370.2	1372.0
37°	1300.4	1293.1	1300.4	1306.8	1311.4	1312.7
37.5°	1243.9	1237.9	1243.9	1248.0	1249.8	1251.6
38°	1184.6	1181.9	1184.6	1185.0	1184.1	1186.9
38.5°	1123.0	1125.3	1123.0	1120.8	1119.8	1124.0
39°	1061.0	1067.0	1061.0	1055.6	1054.6	1056.0
39.5°	998.1	1006.3	998.1	991.3	989.4	988.5
40°	935.6	943.4	935.6	926.5	922.4	917.9
40.5°	874.1	880.9	874.1	864.1	856.3	849.9
41°	813.0	819.8	813.0	801.6	788.8	780.2
41.5°	752.3	758.7	752.3	738.7	723.2	714.0
42°	692.2	698.1	692.2	675.7	657.5	649.3
42.5°	633.3	638.8	633.3	616.9	596.4	586.4
43°	575.0	580.9	575.0	557.6	537.1	525.7
43.5°	518.0	526.2	518.0	500.2	480.1	469.2



TEST NUMBER: P776785

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	362.5	373.9	362.5	341.5	320.5	311.0
45.5°	317.8	328.3	317.8	295.9	274.5	263.1
46°	276.3	289.1	276.3	254.9	230.7	221.1
46.5°	236.6	250.3	236.6	216.1	193.3	183.3
47°	199.3	211.1	199.3	178.7	159.6	153.7
47.5°	164.1	171.9	164.1	146.4	129.0	125.4
48°	132.7	140.9	132.7	116.7	103.5	99.9
48.5°	105.3	112.6	105.3	93.5	82.1	80.2
49°	83.4	87.5	83.4	72.0	62.5	60.2
49.5°	62.9	68.4	62.9	52.9	46.5	45.6
50°	49.2	52.0	49.2	40.1	31.5	32.4
50.5°	36.9	41.9	36.9	28.3	21.9	20.1
51°	24.6	31.9	24.6	19.6	14.6	10.9
51.5°	16.0	23.7	16.0	12.8	9.1	8.7
52°	10.0	15.5	10.0	8.2	7.8	7.3
52.5°	7.8	7.3	7.8	6.8	6.8	5.9
53°	6.4	5.9	6.4	6.4	5.9	5.9
53.5°	5.5	5.5	5.5	5.5	5.5	5.5
54°	5.0	5.0	5.0	5.0	5.0	5.0
54.5°	5.0	5.0	5.0	5.0	5.0	5.0
55°	4.6	4.6	4.6	4.6	4.6	4.6
55.5°	4.6	4.6	4.6	4.6	4.6	4.6
56°	4.1	4.1	4.1	4.1	4.1	4.1
56.5°	3.6	3.6	3.6	3.6	3.6	3.6
57°	3.6	3.6	3.6	3.6	3.6	3.6
57.5°	3.2	3.2	3.2	3.2	3.2	3.2
58°	3.2	3.2	3.2	3.2	3.2	3.2
58.5°	3.2	3.2	3.2	3.2	3.2	2.7
59°	2.7	2.7	2.7	2.7	2.7	2.7
59.5°	2.7	2.7	2.7	2.7	2.7	2.7
60°	2.3	2.3	2.3	2.3	2.3	2.3
60.5°	2.3	2.3	2.3	2.3	2.3	2.3
61°	2.3	2.3	2.3	2.3	2.3	2.3
61.5°	1.8	1.8	1.8	1.8	1.8	1.8
62°	1.8	1.8	1.8	1.8	1.8	1.8
62.5°	1.8	1.8	1.8	1.8	1.8	1.8
63°	1.8	1.8	1.8	1.8	1.8	1.8
63.5°	1.8	1.8	1.8	1.8	1.8	1.4
64°	1.4	1.4	1.4	1.4	1.4	1.4
64.5°	1.4	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	1.4	1.4	1.4	1.4
65.5°	1.4	1.4	1.4	1.4	1.4	1.4
66°	1.4	1.4	1.4	1.4	1.4	1.4



TEST NUMBER: P776785
 CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.9	0.9	0.9	0.9	0.9	0.9
68°	0.9	0.9	0.9	0.9	0.9	0.9
68.5°	0.9	0.9	0.9	0.9	0.9	0.9
69°	0.9	0.9	0.9	0.9	0.9	0.9
69.5°	0.9	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9	0.9
70.5°	0.9	0.9	0.9	0.9	0.9	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	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.0
78°	0.5	0.5	0.5	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: P776785
CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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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Scaled Data Report





21.5°	2143.5	2143.0	2142.1	2140.8	2140.3	2140.8	2142.1	2143.0	2143.5	2143.0	2142.1
22°	2119.8	2119.3	2118.4	2117.0	2116.6	2117.0	2118.4	2119.3	2119.8	2119.3	2118.4



44°	414.5	423.1	444.1	462.8	473.7	462.8	444.1	423.1	414.5	423.1	444.1
44.5°	362.0	370.2	391.2	411.7	422.7	411.7	391.2	370.2	362.0	370.2	391.2



66.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
67°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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°	2140.8	2140.3	2140.8	2142.1	2143.0	2143.5
22°	2117.0	2116.6	2117.0	2118.4	2119.3	2119.8



44°	462.8	473.7	462.8	444.1	423.1	414.5
44.5°	411.7	422.7	411.7	391.2	370.2	362.0

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66.5°	1.4	1.4	1.4	1.4	0.9	0.9
67°	0.9	0.9	0.9	0.9	0.9	0.9

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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)