

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: P776786

Luminaire Tested: HCDJBS4050CSD-HCD82TRMB-5000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776786
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: HCDJBS4050CSD-HCD82TRMB-5000lm-3000K
Description: 8 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

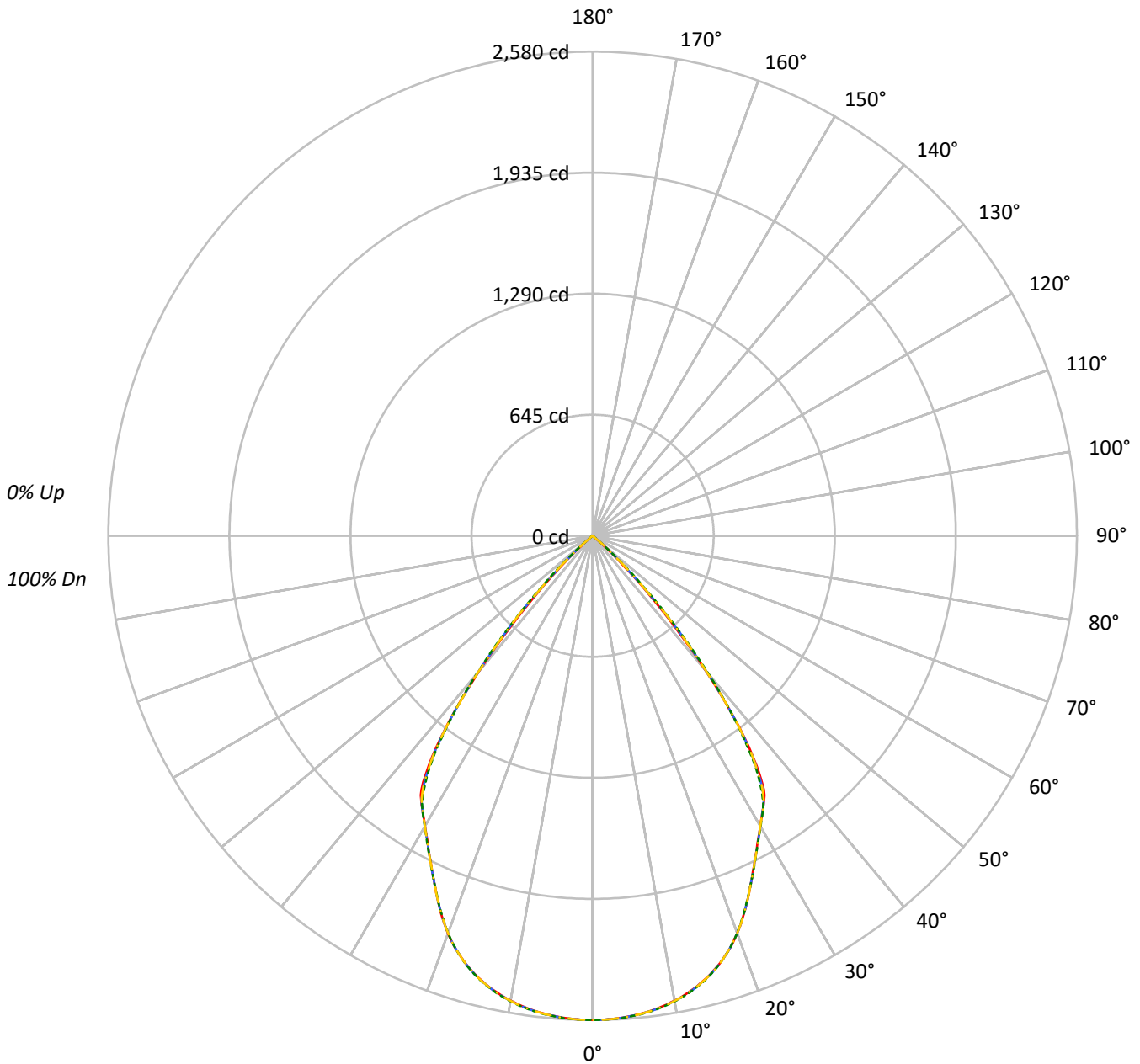
Lumens per Lamp: N/A
Luminaire Lumens: 3069.1 lumens
Efficiency: N/A
Efficacy: 63.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.08
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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



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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									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°	78780	78780	78780	78780
5°	78597	78668	78597	78668
10°	77977	78095	77977	78095
15°	76477	76550	76477	76550
20°	73232	73157	73232	73157
25°	67646	67706	67646	67706
30°	62973	63072	62973	63072
35°	57807	56629	57807	56629
40°	37300	38340	37300	38340
45°	13691	16463	13691	16463
50°	1567	2517	1567	2517
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: 16463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	7.9
10°-20°	678.8	22.1
20°-30°	925.2	30.1
30°-40°	913.6	29.8
40°-50°	299.2	9.7
50°-60°	7.0	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°	1847.4	60.2
0°-40°	2761.0	90.0
0°-60°	3067.2	99.9
0°-90°	3069.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3069.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2580	2580	2580	2580	2580	
5°	2565	2567	2565	2567	2565	243
15°	2420	2422	2420	2422	2420	679
25°	2008	2010	2008	2010	2008	925
35°	1551	1519	1551	1519	1551	917
45°	317	381	317	381	317	281
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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4
0.5°	2580.0	2580.0	2580.4	2580.0	2580.4	2580.0	2580.4	2580.0	2580.0	2580.0	2580.4
1°	2579.5	2579.5	2580.0	2579.5	2580.4	2579.5	2580.0	2579.5	2579.5	2579.5	2580.0
1.5°	2578.6	2579.0	2579.0	2579.0	2579.5	2579.0	2579.0	2579.0	2578.6	2579.0	2579.0
2°	2577.6	2577.6	2578.1	2578.1	2578.6	2578.1	2578.1	2577.6	2577.6	2577.6	2578.1
2.5°	2576.2	2576.7	2576.7	2576.7	2577.2	2576.7	2576.7	2576.7	2576.2	2576.7	2576.7
3°	2574.8	2574.8	2575.3	2575.3	2575.8	2575.3	2575.3	2574.8	2574.8	2574.8	2575.3
3.5°	2573.0	2573.0	2573.5	2573.5	2573.9	2573.5	2573.5	2573.0	2573.0	2573.0	2573.5
4°	2570.7	2570.7	2571.1	2571.1	2572.1	2571.1	2571.1	2570.7	2570.7	2570.7	2571.1
4.5°	2567.9	2567.9	2568.3	2568.8	2569.3	2568.8	2568.3	2567.9	2567.9	2567.9	2568.3
5°	2564.6	2565.1	2565.5	2566.0	2566.9	2566.0	2565.5	2565.1	2564.6	2565.1	2565.5
5.5°	2561.8	2561.8	2562.3	2562.8	2563.7	2562.8	2562.3	2561.8	2561.8	2561.8	2562.3
6°	2558.1	2558.1	2559.0	2559.5	2560.4	2559.5	2559.0	2558.1	2558.1	2558.1	2559.0
6.5°	2553.9	2554.4	2555.3	2555.8	2556.7	2555.8	2555.3	2554.4	2553.9	2554.4	2555.3
7°	2549.7	2549.7	2551.1	2551.6	2552.5	2551.6	2551.1	2549.7	2549.7	2549.7	2551.1
7.5°	2545.1	2545.1	2546.5	2546.9	2547.9	2546.9	2546.5	2545.1	2545.1	2545.1	2546.5
8°	2540.0	2540.4	2541.4	2542.3	2543.2	2542.3	2541.4	2540.4	2540.0	2540.4	2541.4
8.5°	2534.4	2534.9	2535.8	2536.7	2537.6	2536.7	2535.8	2534.9	2534.4	2534.9	2535.8
9°	2528.4	2528.8	2530.2	2531.1	2532.1	2531.1	2530.2	2528.8	2528.4	2528.8	2530.2
9.5°	2521.8	2522.3	2523.7	2525.1	2526.0	2525.1	2523.7	2522.3	2521.8	2522.3	2523.7
10°	2515.3	2515.8	2516.7	2518.1	2519.1	2518.1	2516.7	2515.8	2515.3	2515.8	2516.7
10.5°	2507.9	2508.4	2509.8	2511.1	2512.1	2511.1	2509.8	2508.4	2507.9	2508.4	2509.8
11°	2500.5	2500.9	2502.3	2503.2	2504.2	2503.2	2502.3	2500.9	2500.5	2500.9	2502.3
11.5°	2492.1	2492.6	2493.9	2494.9	2496.3	2494.9	2493.9	2492.6	2492.1	2492.6	2493.9
12°	2483.7	2483.7	2485.1	2486.5	2487.4	2486.5	2485.1	2483.7	2483.7	2483.7	2485.1
12.5°	2474.4	2474.4	2475.8	2477.2	2478.1	2477.2	2475.8	2474.4	2474.4	2474.4	2475.8
13°	2464.7	2465.1	2466.0	2467.4	2467.9	2467.4	2466.0	2465.1	2464.7	2465.1	2466.0
13.5°	2454.0	2454.4	2455.8	2456.7	2457.7	2456.7	2455.8	2454.4	2454.0	2454.4	2455.8
14°	2443.3	2443.7	2444.7	2445.6	2446.5	2445.6	2444.7	2443.7	2443.3	2443.7	2444.7
14.5°	2431.6	2432.1	2433.0	2434.0	2434.9	2434.0	2433.0	2432.1	2431.6	2432.1	2433.0
15°	2419.6	2419.6	2420.5	2421.4	2421.9	2421.4	2420.5	2419.6	2419.6	2419.6	2420.5
15.5°	2406.5	2406.5	2407.5	2408.4	2408.9	2408.4	2407.5	2406.5	2406.5	2406.5	2407.5
16°	2392.6	2393.1	2393.5	2394.0	2394.9	2394.0	2393.5	2393.1	2392.6	2393.1	2393.5
16.5°	2378.6	2378.6	2379.1	2379.6	2380.0	2379.6	2379.1	2378.6	2378.6	2378.6	2379.1
17°	2363.3	2363.3	2363.8	2364.2	2364.7	2364.2	2363.8	2363.3	2363.3	2363.3	2363.8
17.5°	2347.0	2347.0	2347.5	2347.5	2348.0	2347.5	2347.5	2347.0	2347.0	2347.0	2347.5
18°	2330.8	2330.3	2330.3	2330.3	2330.8	2330.3	2330.3	2330.3	2330.8	2330.3	2330.3
18.5°	2312.6	2312.6	2312.2	2312.2	2312.2	2312.2	2312.2	2312.6	2312.6	2312.6	2312.2
19°	2294.0	2294.0	2293.6	2293.1	2293.1	2293.1	2293.6	2294.0	2294.0	2294.0	2293.6
19.5°	2274.5	2274.0	2273.6	2273.1	2273.1	2273.1	2273.6	2274.0	2274.5	2274.0	2273.6
20°	2254.0	2253.6	2253.1	2252.2	2251.7	2252.2	2253.1	2253.6	2254.0	2253.6	2253.1
20.5°	2232.2	2231.7	2230.8	2229.9	2229.4	2229.9	2230.8	2231.7	2232.2	2231.7	2230.8
21°	2209.4	2209.4	2208.5	2206.6	2205.7	2206.6	2208.5	2209.4	2209.4	2209.4	2208.5



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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°	2136.4	2136.4	2135.5	2134.1	2134.1	2134.1	2135.5	2136.4	2136.4	2136.4	2135.5
23°	2110.8	2110.8	2110.4	2109.0	2109.0	2109.0	2110.4	2110.8	2110.8	2110.8	2110.4
23.5°	2084.8	2085.3	2084.8	2083.9	2083.9	2083.9	2084.8	2085.3	2084.8	2085.3	2084.8
24°	2058.8	2059.2	2059.2	2058.8	2059.2	2058.8	2059.2	2059.2	2058.8	2059.2	2059.2
24.5°	2033.7	2033.7	2034.1	2033.7	2034.6	2033.7	2034.1	2033.7	2033.7	2033.7	2034.1
25°	2008.1	2008.5	2009.0	2009.0	2009.9	2009.0	2009.0	2008.5	2008.1	2008.5	2009.0
25.5°	1983.9	1983.9	1984.4	1984.8	1985.8	1984.8	1984.4	1983.9	1983.9	1983.9	1984.4
26°	1959.7	1960.2	1960.7	1961.1	1962.1	1961.1	1960.7	1960.2	1959.7	1960.2	1960.7
26.5°	1936.0	1936.5	1936.9	1937.4	1938.8	1937.4	1936.9	1936.5	1936.0	1936.5	1936.9
27°	1913.2	1913.2	1914.2	1914.2	1915.6	1914.2	1914.2	1913.2	1913.2	1913.2	1914.2
27.5°	1890.5	1890.9	1891.4	1892.3	1893.2	1892.3	1891.4	1890.9	1890.5	1890.9	1891.4
28°	1868.1	1868.6	1869.5	1870.0	1871.4	1870.0	1869.5	1868.6	1868.1	1868.6	1869.5
28.5°	1846.7	1847.7	1848.1	1848.6	1850.0	1848.6	1848.1	1847.7	1846.7	1847.7	1848.1
29°	1826.3	1826.8	1827.2	1827.7	1829.1	1827.7	1827.2	1826.8	1826.3	1826.8	1827.2
29.5°	1805.8	1806.3	1807.2	1807.7	1808.6	1807.7	1807.2	1806.3	1805.8	1806.3	1807.2
30°	1786.3	1786.3	1787.2	1787.7	1789.1	1787.7	1787.2	1786.3	1786.3	1786.3	1787.2
30.5°	1766.8	1767.2	1767.7	1768.6	1769.6	1768.6	1767.7	1767.2	1766.8	1767.2	1767.7
31°	1748.2	1748.6	1749.6	1750.0	1751.4	1750.0	1749.6	1748.6	1748.2	1748.6	1749.6
31.5°	1730.5	1731.0	1731.0	1731.4	1732.4	1731.4	1731.0	1731.0	1730.5	1731.0	1731.0
32°	1713.3	1713.3	1713.3	1712.8	1713.8	1712.8	1713.3	1713.3	1713.3	1713.3	1713.3
32.5°	1696.6	1696.1	1695.2	1693.3	1691.5	1693.3	1695.2	1696.1	1696.6	1696.1	1695.2
33°	1678.4	1677.5	1672.9	1668.2	1663.1	1668.2	1672.9	1677.5	1678.4	1677.5	1672.9
33.5°	1658.9	1654.3	1645.4	1637.5	1631.0	1637.5	1645.4	1654.3	1658.9	1654.3	1645.4
34°	1631.0	1625.0	1612.9	1602.7	1595.7	1602.7	1612.9	1625.0	1631.0	1625.0	1612.9
34.5°	1594.3	1589.2	1575.7	1565.9	1558.9	1565.9	1575.7	1589.2	1594.3	1589.2	1575.7
35°	1551.0	1545.9	1533.8	1525.9	1519.4	1525.9	1533.8	1545.9	1551.0	1545.9	1533.8
35.5°	1503.6	1500.8	1489.7	1481.3	1474.8	1481.3	1489.7	1500.8	1503.6	1500.8	1489.7
36°	1452.9	1450.6	1441.3	1432.9	1426.0	1432.9	1441.3	1450.6	1452.9	1450.6	1441.3
36.5°	1399.0	1397.1	1389.2	1380.4	1373.0	1380.4	1389.2	1397.1	1399.0	1397.1	1389.2
37°	1338.6	1337.2	1332.5	1326.0	1318.6	1326.0	1332.5	1337.2	1338.6	1337.2	1332.5
37.5°	1276.3	1274.4	1272.5	1268.4	1262.3	1268.4	1272.5	1274.4	1276.3	1274.4	1272.5
38°	1210.2	1207.5	1208.4	1207.9	1205.1	1207.9	1208.4	1207.5	1210.2	1207.5	1208.4
38.5°	1146.1	1141.9	1142.8	1145.2	1147.5	1145.2	1142.8	1141.9	1146.1	1141.9	1142.8
39°	1076.8	1075.4	1076.3	1081.9	1088.0	1081.9	1076.3	1075.4	1076.8	1075.4	1076.3
39.5°	1008.0	1008.9	1010.8	1017.8	1026.1	1017.8	1010.8	1008.9	1008.0	1008.9	1010.8
40°	935.9	940.6	944.8	954.1	962.0	954.1	944.8	940.6	935.9	940.6	944.8
40.5°	866.7	873.2	881.1	891.3	898.3	891.3	881.1	873.2	866.7	873.2	881.1
41°	795.5	804.3	817.4	829.0	836.0	829.0	817.4	804.3	795.5	804.3	817.4
41.5°	728.1	737.4	753.2	767.2	773.7	767.2	753.2	737.4	728.1	737.4	753.2
42°	662.1	670.4	689.0	705.8	711.8	705.8	689.0	670.4	662.1	670.4	689.0
42.5°	597.9	608.1	629.1	645.8	651.4	645.8	629.1	608.1	597.9	608.1	629.1
43°	536.1	547.7	568.6	586.3	592.3	586.3	568.6	547.7	536.1	547.7	568.6
43.5°	478.4	489.6	510.0	528.2	536.5	528.2	510.0	489.6	478.4	489.6	510.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	317.1	326.9	348.2	369.6	381.3	369.6	348.2	326.9	317.1	326.9	348.2
45.5°	268.3	279.9	301.7	324.1	334.8	324.1	301.7	279.9	268.3	279.9	301.7
46°	225.5	235.3	259.9	281.8	294.8	281.8	259.9	235.3	225.5	235.3	259.9
46.5°	186.9	197.1	220.4	241.3	255.3	241.3	220.4	197.1	186.9	197.1	220.4
47°	156.7	162.7	182.3	203.2	215.3	203.2	182.3	162.7	156.7	162.7	182.3
47.5°	127.9	131.6	149.2	167.4	175.3	167.4	149.2	131.6	127.9	131.6	149.2
48°	101.8	105.5	119.0	135.3	143.7	135.3	119.0	105.5	101.8	105.5	119.0
48.5°	81.8	83.7	95.3	107.4	114.8	107.4	95.3	83.7	81.8	83.7	95.3
49°	61.4	63.7	73.5	85.1	89.3	85.1	73.5	63.7	61.4	63.7	73.5
49.5°	46.5	47.4	53.9	64.2	69.7	64.2	53.9	47.4	46.5	47.4	53.9
50°	33.0	32.1	40.9	50.2	53.0	50.2	40.9	32.1	33.0	32.1	40.9
50.5°	20.5	22.3	28.8	37.7	42.8	37.7	28.8	22.3	20.5	22.3	28.8
51°	11.2	14.9	20.0	25.1	32.5	25.1	20.0	14.9	11.2	14.9	20.0
51.5°	8.8	9.3	13.0	16.3	24.2	16.3	13.0	9.3	8.8	9.3	13.0
52°	7.4	7.9	8.4	10.2	15.8	10.2	8.4	7.9	7.4	7.9	8.4
52.5°	6.0	7.0	7.0	7.9	7.4	7.9	7.0	7.0	6.0	7.0	7.0
53°	6.0	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.0	6.0	6.5
53.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
54°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
54.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
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°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
56.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
57°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
57.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
58°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
58.5°	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.8	3.3	3.3
59°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
59.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
62°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
63°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
63.5°	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.9	1.9
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: P776786

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

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: P776786

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

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: P776786

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2580.4	2580.4	2580.4	2580.4	2580.4	2580.4
0.5°	2580.0	2580.4	2580.0	2580.4	2580.0	2580.0
1°	2579.5	2580.4	2579.5	2580.0	2579.5	2579.5
1.5°	2579.0	2579.5	2579.0	2579.0	2579.0	2578.6
2°	2578.1	2578.6	2578.1	2578.1	2577.6	2577.6
2.5°	2576.7	2577.2	2576.7	2576.7	2576.7	2576.2
3°	2575.3	2575.8	2575.3	2575.3	2574.8	2574.8
3.5°	2573.5	2573.9	2573.5	2573.5	2573.0	2573.0
4°	2571.1	2572.1	2571.1	2571.1	2570.7	2570.7
4.5°	2568.8	2569.3	2568.8	2568.3	2567.9	2567.9
5°	2566.0	2566.9	2566.0	2565.5	2565.1	2564.6
5.5°	2562.8	2563.7	2562.8	2562.3	2561.8	2561.8
6°	2559.5	2560.4	2559.5	2559.0	2558.1	2558.1
6.5°	2555.8	2556.7	2555.8	2555.3	2554.4	2553.9
7°	2551.6	2552.5	2551.6	2551.1	2549.7	2549.7
7.5°	2546.9	2547.9	2546.9	2546.5	2545.1	2545.1
8°	2542.3	2543.2	2542.3	2541.4	2540.4	2540.0
8.5°	2536.7	2537.6	2536.7	2535.8	2534.9	2534.4
9°	2531.1	2532.1	2531.1	2530.2	2528.8	2528.4
9.5°	2525.1	2526.0	2525.1	2523.7	2522.3	2521.8
10°	2518.1	2519.1	2518.1	2516.7	2515.8	2515.3
10.5°	2511.1	2512.1	2511.1	2509.8	2508.4	2507.9
11°	2503.2	2504.2	2503.2	2502.3	2500.9	2500.5
11.5°	2494.9	2496.3	2494.9	2493.9	2492.6	2492.1
12°	2486.5	2487.4	2486.5	2485.1	2483.7	2483.7
12.5°	2477.2	2478.1	2477.2	2475.8	2474.4	2474.4
13°	2467.4	2467.9	2467.4	2466.0	2465.1	2464.7
13.5°	2456.7	2457.7	2456.7	2455.8	2454.4	2454.0
14°	2445.6	2446.5	2445.6	2444.7	2443.7	2443.3
14.5°	2434.0	2434.9	2434.0	2433.0	2432.1	2431.6
15°	2421.4	2421.9	2421.4	2420.5	2419.6	2419.6
15.5°	2408.4	2408.9	2408.4	2407.5	2406.5	2406.5
16°	2394.0	2394.9	2394.0	2393.5	2393.1	2392.6
16.5°	2379.6	2380.0	2379.6	2379.1	2378.6	2378.6
17°	2364.2	2364.7	2364.2	2363.8	2363.3	2363.3
17.5°	2347.5	2348.0	2347.5	2347.5	2347.0	2347.0
18°	2330.3	2330.8	2330.3	2330.3	2330.3	2330.8
18.5°	2312.2	2312.2	2312.2	2312.2	2312.6	2312.6
19°	2293.1	2293.1	2293.1	2293.6	2294.0	2294.0
19.5°	2273.1	2273.1	2273.1	2273.6	2274.0	2274.5
20°	2252.2	2251.7	2252.2	2253.1	2253.6	2254.0
20.5°	2229.9	2229.4	2229.9	2230.8	2231.7	2232.2
21°	2206.6	2205.7	2206.6	2208.5	2209.4	2209.4

TEST NUMBER: P776786

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2134.1	2134.1	2134.1	2135.5	2136.4	2136.4
23°	2109.0	2109.0	2109.0	2110.4	2110.8	2110.8
23.5°	2083.9	2083.9	2083.9	2084.8	2085.3	2084.8
24°	2058.8	2059.2	2058.8	2059.2	2059.2	2058.8
24.5°	2033.7	2034.6	2033.7	2034.1	2033.7	2033.7
25°	2009.0	2009.9	2009.0	2009.0	2008.5	2008.1
25.5°	1984.8	1985.8	1984.8	1984.4	1983.9	1983.9
26°	1961.1	1962.1	1961.1	1960.7	1960.2	1959.7
26.5°	1937.4	1938.8	1937.4	1936.9	1936.5	1936.0
27°	1914.2	1915.6	1914.2	1914.2	1913.2	1913.2
27.5°	1892.3	1893.2	1892.3	1891.4	1890.9	1890.5
28°	1870.0	1871.4	1870.0	1869.5	1868.6	1868.1
28.5°	1848.6	1850.0	1848.6	1848.1	1847.7	1846.7
29°	1827.7	1829.1	1827.7	1827.2	1826.8	1826.3
29.5°	1807.7	1808.6	1807.7	1807.2	1806.3	1805.8
30°	1787.7	1789.1	1787.7	1787.2	1786.3	1786.3
30.5°	1768.6	1769.6	1768.6	1767.7	1767.2	1766.8
31°	1750.0	1751.4	1750.0	1749.6	1748.6	1748.2
31.5°	1731.4	1732.4	1731.4	1731.0	1731.0	1730.5
32°	1712.8	1713.8	1712.8	1713.3	1713.3	1713.3
32.5°	1693.3	1691.5	1693.3	1695.2	1696.1	1696.6
33°	1668.2	1663.1	1668.2	1672.9	1677.5	1678.4
33.5°	1637.5	1631.0	1637.5	1645.4	1654.3	1658.9
34°	1602.7	1595.7	1602.7	1612.9	1625.0	1631.0
34.5°	1565.9	1558.9	1565.9	1575.7	1589.2	1594.3
35°	1525.9	1519.4	1525.9	1533.8	1545.9	1551.0
35.5°	1481.3	1474.8	1481.3	1489.7	1500.8	1503.6
36°	1432.9	1426.0	1432.9	1441.3	1450.6	1452.9
36.5°	1380.4	1373.0	1380.4	1389.2	1397.1	1399.0
37°	1326.0	1318.6	1326.0	1332.5	1337.2	1338.6
37.5°	1268.4	1262.3	1268.4	1272.5	1274.4	1276.3
38°	1207.9	1205.1	1207.9	1208.4	1207.5	1210.2
38.5°	1145.2	1147.5	1145.2	1142.8	1141.9	1146.1
39°	1081.9	1088.0	1081.9	1076.3	1075.4	1076.8
39.5°	1017.8	1026.1	1017.8	1010.8	1008.9	1008.0
40°	954.1	962.0	954.1	944.8	940.6	935.9
40.5°	891.3	898.3	891.3	881.1	873.2	866.7
41°	829.0	836.0	829.0	817.4	804.3	795.5
41.5°	767.2	773.7	767.2	753.2	737.4	728.1
42°	705.8	711.8	705.8	689.0	670.4	662.1
42.5°	645.8	651.4	645.8	629.1	608.1	597.9
43°	586.3	592.3	586.3	568.6	547.7	536.1
43.5°	528.2	536.5	528.2	510.0	489.6	478.4



TEST NUMBER: P776786

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	369.6	381.3	369.6	348.2	326.9	317.1
45.5°	324.1	334.8	324.1	301.7	279.9	268.3
46°	281.8	294.8	281.8	259.9	235.3	225.5
46.5°	241.3	255.3	241.3	220.4	197.1	186.9
47°	203.2	215.3	203.2	182.3	162.7	156.7
47.5°	167.4	175.3	167.4	149.2	131.6	127.9
48°	135.3	143.7	135.3	119.0	105.5	101.8
48.5°	107.4	114.8	107.4	95.3	83.7	81.8
49°	85.1	89.3	85.1	73.5	63.7	61.4
49.5°	64.2	69.7	64.2	53.9	47.4	46.5
50°	50.2	53.0	50.2	40.9	32.1	33.0
50.5°	37.7	42.8	37.7	28.8	22.3	20.5
51°	25.1	32.5	25.1	20.0	14.9	11.2
51.5°	16.3	24.2	16.3	13.0	9.3	8.8
52°	10.2	15.8	10.2	8.4	7.9	7.4
52.5°	7.9	7.4	7.9	7.0	7.0	6.0
53°	6.5	6.0	6.5	6.5	6.0	6.0
53.5°	5.6	5.6	5.6	5.6	5.6	5.6
54°	5.1	5.1	5.1	5.1	5.1	5.1
54.5°	5.1	5.1	5.1	5.1	5.1	5.1
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°	4.2	4.2	4.2	4.2	4.2	4.2
56.5°	3.7	3.7	3.7	3.7	3.7	3.7
57°	3.7	3.7	3.7	3.7	3.7	3.7
57.5°	3.3	3.3	3.3	3.3	3.3	3.3
58°	3.3	3.3	3.3	3.3	3.3	3.3
58.5°	3.3	3.3	3.3	3.3	3.3	2.8
59°	2.8	2.8	2.8	2.8	2.8	2.8
59.5°	2.8	2.8	2.8	2.8	2.8	2.8
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°	1.9	1.9	1.9	1.9	1.9	1.9
62°	1.9	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9	1.9
63°	1.9	1.9	1.9	1.9	1.9	1.9
63.5°	1.9	1.9	1.9	1.9	1.9	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: P776786
 CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

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: P776786

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3000K

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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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2185.7	2185.2	2184.3	2182.9	2182.4	2182.9	2184.3	2185.2	2185.7	2185.2	2184.3
22°	2161.5	2161.0	2160.1	2158.7	2158.3	2158.7	2160.1	2161.0	2161.5	2161.0	2160.1



44°	422.6	431.5	452.9	471.9	483.1	471.9	452.9	431.5	422.6	431.5	452.9
44.5°	369.2	377.5	398.9	419.8	431.0	419.8	398.9	377.5	369.2	377.5	398.9



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°	2182.9	2182.4	2182.9	2184.3	2185.2	2185.7
22°	2158.7	2158.3	2158.7	2160.1	2161.0	2161.5



44°	471.9	483.1	471.9	452.9	431.5	422.6
44.5°	419.8	431.0	419.8	398.9	377.5	369.2

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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)