

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: P776774

Luminaire Tested: HCDJBS4050CSD-HCD82TRC-5000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776774
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B062-HCD82TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD82TRC-5000lm-5000K
Description: 8 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

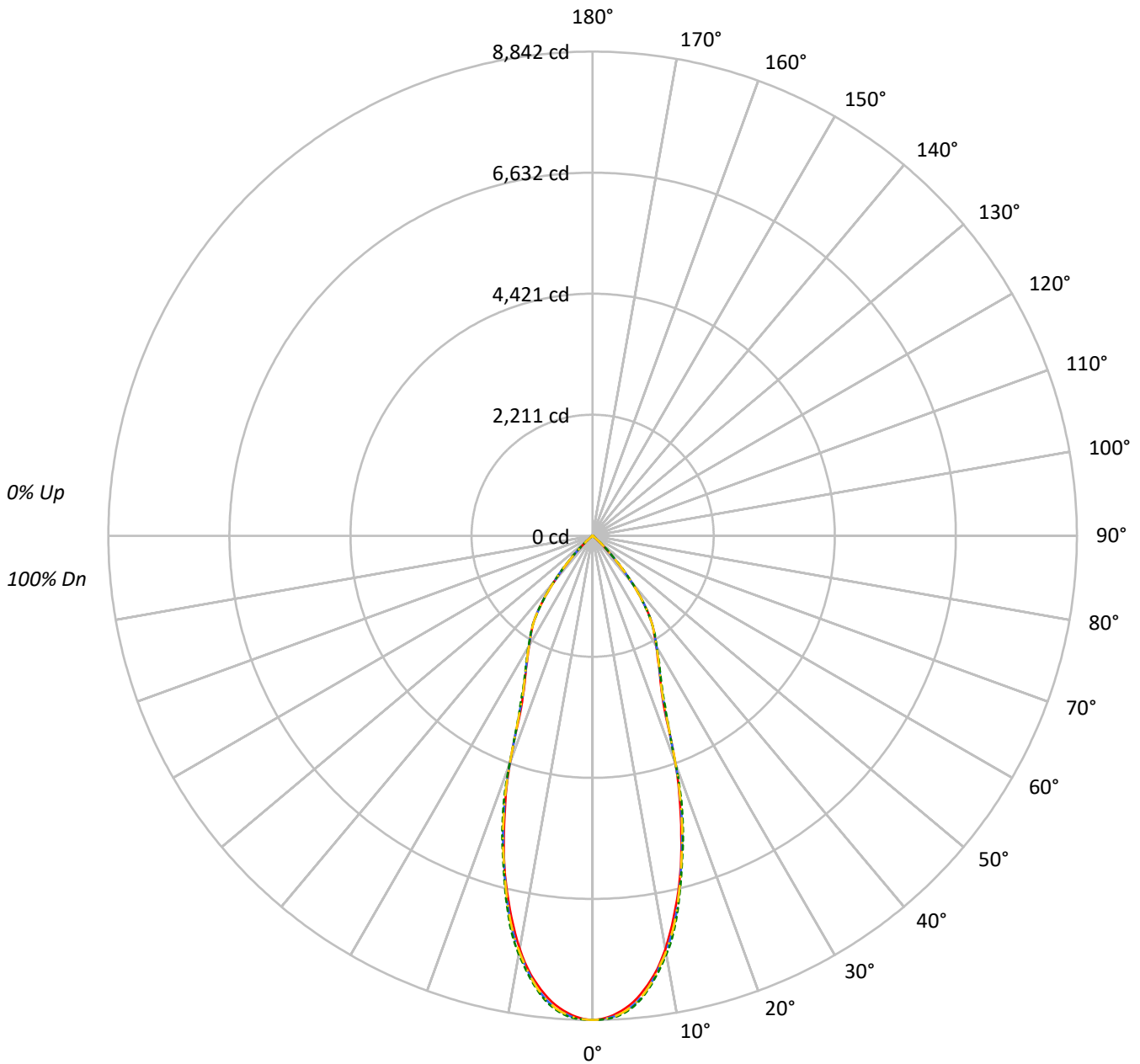
Lumens per Lamp: N/A
Luminaire Lumens: 5398.8 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 0.66 / 0.66
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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									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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88																			
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82																			
4	98	91	86	82	97	90	85	81	88	84	80	86	82	80	84	81	79	77																			
5	94	86	80	76	92	85	80	76	83	79	75	81	78	74	80	77	74	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68																			
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64																			
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61																			
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57																			
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	54																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	269866	269866	269866	269866
5°	261807	264455	261807	264455
10°	237383	240573	237383	240573
15°	196831	198535	196831	198535
20°	143335	143932	143335	143932
25°	98748	100123	98748	100123
30°	81809	82666	81809	82666
35°	68287	67963	68287	67963
40°	43708	44310	43708	44310
45°	17694	19434	17694	19434
50°	3320	3690	3320	3690
55°	1006	979	1006	979
60°	653	653	653	653
65°	455	455	455	455
70°	303	348	303	348
75°	224	224	224	224
80°	176	176	176	176
85°	0	175	0	175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 19434 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	792.2	14.7
10°-20°	1708.6	31.6
20°-30°	1401.5	26.0
30°-40°	1103.2	20.4
40°-50°	362.9	6.7
50°-60°	21.2	0.4
60°-70°	6.5	0.1
70°-80°	2.3	0.0
80°-90°	0.4	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°	3902.3	72.3
0°-40°	5005.5	92.7
0°-60°	5389.6	99.8
0°-90°	5398.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5398.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	8839	8839	8839	8839	8839	
5°	8543	8629	8543	8629	8543	788
15°	6227	6281	6227	6281	6227	1695
25°	2931	2972	2931	2972	2931	1392
35°	1832	1824	1832	1824	1832	1102
45°	410	450	410	450	410	350
55°	19	18	19	18	19	20
65°	6	6	6	6	6	6
75°	2	2	2	2	2	2
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°	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3
0.5°	8835.5	8836.4	8840.8	8832.1	8841.8	8832.1	8840.8	8836.4	8835.5	8836.4	8840.8
1°	8826.2	8828.2	8835.0	8826.7	8836.9	8826.7	8835.0	8828.2	8826.2	8828.2	8835.0
1.5°	8809.7	8814.1	8824.3	8818.0	8828.7	8818.0	8824.3	8814.1	8809.7	8814.1	8824.3
2°	8787.9	8793.7	8809.2	8804.9	8819.9	8804.9	8809.2	8793.7	8787.9	8793.7	8809.2
2.5°	8759.7	8768.9	8788.4	8787.4	8803.9	8787.4	8788.4	8768.9	8759.7	8768.9	8788.4
3°	8727.2	8739.3	8763.1	8763.6	8782.5	8763.6	8763.1	8739.3	8727.2	8739.3	8763.1
3.5°	8689.3	8705.3	8732.0	8733.5	8754.9	8733.5	8732.0	8705.3	8689.3	8705.3	8732.0
4°	8647.1	8668.4	8695.1	8697.1	8720.4	8697.1	8695.1	8668.4	8647.1	8668.4	8695.1
4.5°	8598.0	8624.7	8651.0	8655.3	8678.6	8655.3	8651.0	8624.7	8598.0	8624.7	8651.0
5°	8542.7	8576.2	8600.5	8606.8	8629.1	8606.8	8600.5	8576.2	8542.7	8576.2	8600.5
5.5°	8481.0	8520.9	8540.3	8552.4	8571.8	8552.4	8540.3	8520.9	8481.0	8520.9	8540.3
6°	8413.6	8458.2	8473.8	8492.2	8504.3	8492.2	8473.8	8458.2	8413.6	8458.2	8473.8
6.5°	8339.8	8387.8	8398.0	8424.7	8429.1	8424.7	8398.0	8387.8	8339.8	8387.8	8398.0
7°	8262.1	8309.2	8316.0	8352.4	8345.6	8352.4	8316.0	8309.2	8262.1	8309.2	8316.0
7.5°	8179.6	8222.8	8225.7	8273.3	8258.2	8273.3	8225.7	8222.8	8179.6	8222.8	8225.7
8°	8091.2	8129.5	8131.5	8187.3	8164.0	8187.3	8131.5	8129.5	8091.2	8129.5	8131.5
8.5°	7994.6	8026.1	8031.0	8093.1	8067.9	8093.1	8031.0	8026.1	7994.6	8026.1	8031.0
9°	7891.7	7915.9	7927.1	7990.2	7965.9	7990.2	7927.1	7915.9	7891.7	7915.9	7927.1
9.5°	7778.1	7795.5	7821.3	7878.6	7865.4	7878.6	7821.3	7795.5	7778.1	7795.5	7821.3
10°	7657.2	7670.3	7710.6	7756.2	7760.1	7756.2	7710.6	7670.3	7657.2	7670.3	7710.6
10.5°	7529.0	7537.2	7596.5	7626.6	7651.8	7626.6	7596.5	7537.2	7529.0	7537.2	7596.5
11°	7398.4	7401.8	7478.0	7491.1	7533.4	7491.1	7478.0	7401.8	7398.4	7401.8	7478.0
11.5°	7262.0	7264.4	7350.3	7351.3	7403.3	7351.3	7350.3	7264.4	7262.0	7264.4	7350.3
12°	7124.6	7126.5	7210.0	7212.5	7263.4	7212.5	7210.0	7126.5	7124.6	7126.5	7210.0
12.5°	6979.9	6991.6	7058.1	7071.2	7107.6	7071.2	7058.1	6991.6	6979.9	6991.6	7058.1
13°	6837.7	6854.6	6901.3	6927.5	6951.3	6927.5	6901.3	6854.6	6837.7	6854.6	6901.3
13.5°	6690.1	6713.4	6737.6	6775.0	6783.8	6775.0	6737.6	6713.4	6690.1	6713.4	6737.6
14°	6541.5	6564.8	6574.5	6615.8	6615.3	6615.8	6574.5	6564.8	6541.5	6564.8	6574.5
14.5°	6387.1	6405.6	6412.9	6454.6	6448.8	6454.6	6412.9	6405.6	6387.1	6405.6	6412.9
15°	6227.4	6239.0	6250.7	6288.6	6281.3	6288.6	6250.7	6239.0	6227.4	6239.0	6250.7
15.5°	6056.5	6063.3	6089.0	6123.0	6124.5	6123.0	6089.0	6063.3	6056.5	6063.3	6089.0
16°	5882.7	5887.1	5925.9	5956.0	5963.3	5956.0	5925.9	5887.1	5882.7	5887.1	5925.9
16.5°	5699.7	5712.8	5758.9	5790.5	5807.9	5790.5	5758.9	5712.8	5699.7	5712.8	5758.9
17°	5522.5	5538.0	5589.0	5626.4	5648.7	5626.4	5589.0	5538.0	5522.5	5538.0	5589.0
17.5°	5343.3	5364.7	5410.8	5456.4	5478.3	5456.4	5410.8	5364.7	5343.3	5364.7	5410.8
18°	5171.0	5186.5	5228.7	5278.3	5297.2	5278.3	5228.7	5186.5	5171.0	5186.5	5228.7
18.5°	4991.3	5005.9	5038.4	5087.9	5102.5	5087.9	5038.4	5005.9	4991.3	5005.9	5038.4
19°	4807.3	4817.0	4842.3	4879.2	4894.2	4879.2	4842.3	4817.0	4807.3	4817.0	4842.3
19.5°	4615.1	4616.0	4635.0	4663.1	4677.2	4663.1	4635.0	4616.0	4615.1	4616.0	4635.0
20°	4411.7	4411.7	4421.9	4437.4	4430.1	4437.4	4421.9	4411.7	4411.7	4421.9	4430.1
20.5°	4211.6	4204.4	4208.7	4208.2	4186.9	4208.2	4208.7	4204.4	4211.6	4204.4	4208.7
21°	4005.8	4000.9	3983.0	4000.9	3994.1	4000.9	3983.0	4000.9	4005.8	4000.9	3983.0



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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°	3430.0	3452.8	3483.9	3521.3	3504.8	3521.3	3483.9	3452.8	3430.0	3452.8	3483.9
23°	3295.5	3311.0	3343.1	3394.1	3394.6	3394.1	3343.1	3311.0	3295.5	3311.0	3343.1
23.5°	3196.5	3194.0	3214.4	3263.5	3269.8	3263.5	3214.4	3194.0	3196.5	3194.0	3214.4
24°	3090.2	3100.8	3113.5	3153.3	3156.2	3153.3	3113.5	3100.8	3090.2	3100.8	3113.5
24.5°	3008.6	3013.9	3025.1	3050.3	3050.3	3050.3	3025.1	3013.9	3008.6	3013.9	3025.1
25°	2931.4	2938.2	2949.8	2973.1	2972.2	2973.1	2949.8	2938.2	2931.4	2938.2	2949.8
25.5°	2859.5	2862.9	2875.1	2896.9	2898.4	2896.9	2875.1	2862.9	2859.5	2862.9	2875.1
26°	2790.1	2793.0	2801.8	2818.3	2820.7	2818.3	2801.8	2793.0	2790.1	2793.0	2801.8
26.5°	2724.6	2725.5	2735.7	2750.8	2752.2	2750.8	2735.7	2725.5	2724.6	2725.5	2735.7
27°	2658.1	2661.0	2671.7	2690.6	2695.4	2690.6	2671.7	2661.0	2658.1	2661.0	2671.7
27.5°	2595.4	2599.3	2609.5	2628.0	2634.8	2628.0	2609.5	2599.3	2595.4	2599.3	2609.5
28°	2536.2	2540.1	2549.8	2563.4	2569.7	2563.4	2549.8	2540.1	2536.2	2540.1	2549.8
28.5°	2481.3	2483.3	2492.5	2503.2	2508.5	2503.2	2492.5	2483.3	2481.3	2483.3	2492.5
29°	2427.0	2428.4	2437.2	2446.4	2452.2	2446.4	2437.2	2428.4	2427.0	2428.4	2437.2
29.5°	2373.1	2376.0	2383.3	2393.5	2398.3	2393.5	2383.3	2376.0	2373.1	2376.0	2383.3
30°	2320.6	2323.6	2330.4	2340.1	2344.9	2340.1	2330.4	2323.6	2320.6	2323.6	2330.4
30.5°	2269.7	2272.1	2278.9	2288.1	2291.5	2288.1	2278.9	2272.1	2269.7	2272.1	2278.9
31°	2219.7	2222.1	2228.4	2238.1	2243.0	2238.1	2228.4	2222.1	2219.7	2222.1	2228.4
31.5°	2171.6	2174.0	2180.8	2189.6	2193.0	2189.6	2180.8	2174.0	2171.6	2174.0	2180.8
32°	2125.5	2127.4	2133.7	2142.5	2145.9	2142.5	2133.7	2127.4	2125.5	2127.4	2133.7
32.5°	2081.3	2083.2	2087.6	2095.9	2098.8	2095.9	2087.6	2083.2	2081.3	2083.2	2087.6
33°	2038.6	2039.5	2042.0	2045.9	2048.8	2045.9	2042.0	2039.5	2038.6	2039.5	2042.0
33.5°	1994.4	1994.4	1993.4	1991.5	1995.9	1991.5	1993.4	1994.4	1994.4	1994.4	1993.4
34°	1944.4	1942.5	1941.5	1935.2	1944.9	1935.2	1941.5	1942.5	1944.4	1942.5	1941.5
34.5°	1890.5	1886.1	1885.6	1877.4	1884.7	1877.4	1885.6	1886.1	1890.5	1886.1	1885.6
35°	1832.2	1826.4	1826.4	1818.6	1823.5	1818.6	1826.4	1826.4	1832.2	1826.4	1826.4
35.5°	1768.6	1766.2	1763.3	1756.5	1759.4	1756.5	1763.3	1766.2	1768.6	1766.2	1763.3
36°	1702.6	1701.6	1696.3	1692.4	1692.9	1692.4	1696.3	1701.6	1702.6	1701.6	1696.3
36.5°	1632.7	1634.6	1626.9	1624.5	1621.5	1624.5	1626.9	1634.6	1632.7	1634.6	1626.9
37°	1557.5	1563.3	1556.5	1555.0	1551.1	1555.0	1556.5	1563.3	1557.5	1563.3	1556.5
37.5°	1482.7	1487.1	1485.1	1482.7	1481.2	1482.7	1485.1	1487.1	1482.7	1487.1	1485.1
38°	1407.9	1411.3	1408.9	1410.8	1409.4	1410.8	1408.9	1411.3	1407.9	1411.3	1408.9
38.5°	1333.2	1331.2	1332.2	1332.7	1336.6	1332.7	1332.2	1331.2	1333.2	1331.2	1332.2
39°	1256.9	1252.6	1255.0	1255.0	1262.8	1255.0	1255.0	1252.6	1256.9	1252.6	1255.0
39.5°	1176.8	1174.4	1177.8	1180.7	1186.5	1180.7	1177.8	1174.4	1176.8	1174.4	1177.8
40°	1096.7	1098.7	1103.0	1107.4	1111.8	1107.4	1103.0	1098.7	1096.7	1098.7	1103.0
40.5°	1017.1	1022.0	1026.3	1037.0	1036.5	1037.0	1026.3	1022.0	1017.1	1022.0	1026.3
41°	939.9	945.3	951.6	964.2	962.2	964.2	951.6	945.3	939.9	945.3	951.6
41.5°	862.2	869.0	877.3	892.3	888.9	892.3	877.3	869.0	862.2	869.0	877.3
42°	788.4	795.2	806.4	821.5	819.0	821.5	806.4	795.2	788.4	795.2	806.4
42.5°	717.1	723.4	737.9	753.5	752.0	753.5	737.9	723.4	717.1	723.4	737.9
43°	648.1	656.4	671.4	688.9	687.5	688.9	671.4	656.4	648.1	656.4	671.4
43.5°	586.5	590.8	605.9	622.9	624.3	622.9	605.9	590.8	586.5	590.8	605.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	409.8	411.7	428.2	443.7	450.1	443.7	428.2	411.7	409.8	411.7	428.2
45.5°	353.4	357.8	376.3	389.8	398.1	389.8	376.3	357.8	353.4	357.8	376.3
46°	303.9	307.3	327.2	342.8	351.5	342.8	327.2	307.3	303.9	307.3	327.2
46.5°	259.3	265.1	280.6	300.0	310.2	300.0	280.6	265.1	259.3	265.1	280.6
47°	218.5	225.3	237.4	259.3	269.0	259.3	237.4	225.3	218.5	225.3	237.4
47.5°	183.5	190.3	201.5	220.4	227.7	220.4	201.5	190.3	183.5	190.3	201.5
48°	152.0	160.2	168.0	185.0	186.4	185.0	168.0	160.2	152.0	160.2	168.0
48.5°	125.3	132.5	138.9	153.4	151.0	153.4	138.9	132.5	125.3	132.5	138.9
49°	103.9	108.3	112.6	126.2	122.3	126.2	112.6	108.3	103.9	108.3	112.6
49.5°	86.9	88.4	93.2	101.5	97.1	101.5	93.2	88.4	86.9	88.4	93.2
50°	69.9	69.4	74.8	82.5	77.7	82.5	74.8	69.4	69.9	69.4	74.8
50.5°	52.9	54.9	57.8	65.5	61.2	65.5	57.8	54.9	52.9	54.9	57.8
51°	40.8	41.8	47.1	52.4	48.5	52.4	47.1	41.8	40.8	41.8	47.1
51.5°	30.6	34.5	37.4	43.7	43.2	43.7	37.4	34.5	30.6	34.5	37.4
52°	26.7	28.6	31.6	34.5	37.9	34.5	31.6	28.6	26.7	28.6	31.6
52.5°	24.3	24.8	27.2	29.1	32.0	29.1	27.2	24.8	24.3	24.8	27.2
53°	22.8	23.3	23.3	25.2	26.7	25.2	23.3	23.3	22.8	23.3	23.3
53.5°	21.8	21.8	22.3	21.8	21.4	21.8	22.3	21.8	21.8	21.8	22.3
54°	20.9	20.9	20.9	20.9	20.4	20.9	20.9	20.9	20.9	20.9	20.9
54.5°	19.9	19.9	19.9	19.9	19.4	19.9	19.9	19.9	19.9	19.9	19.9
55°	18.9	18.9	18.9	18.9	18.4	18.9	18.9	18.9	18.9	18.9	18.9
55.5°	18.0	18.0	18.0	18.0	17.5	18.0	18.0	18.0	18.0	18.0	18.0
56°	17.0	17.0	17.0	17.0	16.5	17.0	17.0	17.0	17.0	17.0	17.0
56.5°	16.0	16.0	16.5	16.0	15.5	16.0	16.5	16.0	16.0	16.0	16.5
57°	15.1	15.1	15.5	15.1	15.1	15.1	15.5	15.1	15.1	15.1	15.5
57.5°	14.1	14.6	14.6	14.1	14.1	14.1	14.6	14.6	14.1	14.6	14.6
58°	13.6	13.6	13.6	13.6	13.1	13.6	13.6	13.6	13.6	13.6	13.6
58.5°	12.6	13.1	13.1	12.6	12.6	12.6	13.1	13.1	12.6	13.1	13.1
59°	12.1	12.1	12.1	12.1	11.7	12.1	12.1	12.1	12.1	12.1	12.1
59.5°	11.2	11.7	11.7	11.7	11.2	11.7	11.7	11.7	11.2	11.7	11.7
60°	10.7	10.7	11.2	10.7	10.7	10.7	11.2	10.7	10.7	10.7	11.2
60.5°	10.2	10.2	10.7	10.2	10.2	10.2	10.7	10.2	10.2	10.2	10.7
61°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
61.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
62°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
62.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
63°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
63.5°	7.3	7.3	7.8	7.3	7.3	7.3	7.8	7.3	7.3	7.3	7.8
64°	6.8	6.8	7.3	7.3	6.8	7.3	7.3	6.8	6.8	6.8	7.3
64.5°	6.3	6.8	6.8	6.8	6.3	6.8	6.8	6.8	6.3	6.8	6.8
65°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
65.5°	5.8	5.8	6.3	5.8	5.8	5.8	6.3	5.8	5.8	5.8	6.3
66°	5.3	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.3	5.8	5.8



TEST NUMBER: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
68°	4.4	4.4	4.9	4.9	4.4	4.9	4.9	4.4	4.4	4.4	4.9
68.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
69°	3.9	3.9	4.4	4.4	3.9	4.4	4.4	3.9	3.9	3.9	4.4
69.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
70°	3.4	3.4	3.9	3.9	3.9	3.9	3.9	3.4	3.4	3.4	3.9
70.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
71°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
71.5°	2.9	2.9	3.4	3.4	2.9	3.4	3.4	2.9	2.9	2.9	3.4
72°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
73°	2.4	2.4	2.4	2.9	2.4	2.9	2.4	2.4	2.4	2.4	2.4
73.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
74°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
74.5°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	2.4
75°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
75.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
76°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
76.5°	1.5	1.5	1.5	1.9	1.9	1.9	1.5	1.5	1.5	1.5	1.5
77°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
78°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
78.5°	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.5
79°	1.0	1.0	1.0	1.5	1.0	1.5	1.0	1.0	1.0	1.0	1.0
79.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
81°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
81.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
82°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
85.5°	0.0	0.0	0.0	0.5	0.5	0.5	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: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8839.3	8839.3	8839.3	8839.3	8839.3	8839.3
0.5°	8832.1	8841.8	8832.1	8840.8	8836.4	8835.5
1°	8826.7	8836.9	8826.7	8835.0	8828.2	8826.2
1.5°	8818.0	8828.7	8818.0	8824.3	8814.1	8809.7
2°	8804.9	8819.9	8804.9	8809.2	8793.7	8787.9
2.5°	8787.4	8803.9	8787.4	8788.4	8768.9	8759.7
3°	8763.6	8782.5	8763.6	8763.1	8739.3	8727.2
3.5°	8733.5	8754.9	8733.5	8732.0	8705.3	8689.3
4°	8697.1	8720.4	8697.1	8695.1	8668.4	8647.1
4.5°	8655.3	8678.6	8655.3	8651.0	8624.7	8598.0
5°	8606.8	8629.1	8606.8	8600.5	8576.2	8542.7
5.5°	8552.4	8571.8	8552.4	8540.3	8520.9	8481.0
6°	8492.2	8504.3	8492.2	8473.8	8458.2	8413.6
6.5°	8424.7	8429.1	8424.7	8398.0	8387.8	8339.8
7°	8352.4	8345.6	8352.4	8316.0	8309.2	8262.1
7.5°	8273.3	8258.2	8273.3	8225.7	8222.8	8179.6
8°	8187.3	8164.0	8187.3	8131.5	8129.5	8091.2
8.5°	8093.1	8067.9	8093.1	8031.0	8026.1	7994.6
9°	7990.2	7965.9	7990.2	7927.1	7915.9	7891.7
9.5°	7878.6	7865.4	7878.6	7821.3	7795.5	7778.1
10°	7756.2	7760.1	7756.2	7710.6	7670.3	7657.2
10.5°	7626.6	7651.8	7626.6	7596.5	7537.2	7529.0
11°	7491.1	7533.4	7491.1	7478.0	7401.8	7398.4
11.5°	7351.3	7403.3	7351.3	7350.3	7264.4	7262.0
12°	7212.5	7263.4	7212.5	7210.0	7126.5	7124.6
12.5°	7071.2	7107.6	7071.2	7058.1	6991.6	6979.9
13°	6927.5	6951.3	6927.5	6901.3	6854.6	6837.7
13.5°	6775.0	6783.8	6775.0	6737.6	6713.4	6690.1
14°	6615.8	6615.3	6615.8	6574.5	6564.8	6541.5
14.5°	6454.6	6448.8	6454.6	6412.9	6405.6	6387.1
15°	6288.6	6281.3	6288.6	6250.7	6239.0	6227.4
15.5°	6123.0	6124.5	6123.0	6089.0	6063.3	6056.5
16°	5956.0	5963.3	5956.0	5925.9	5887.1	5882.7
16.5°	5790.5	5807.9	5790.5	5758.9	5712.8	5699.7
17°	5626.4	5648.7	5626.4	5589.0	5538.0	5522.5
17.5°	5456.4	5478.3	5456.4	5410.8	5364.7	5343.3
18°	5278.3	5297.2	5278.3	5228.7	5186.5	5171.0
18.5°	5087.9	5102.5	5087.9	5038.4	5005.9	4991.3
19°	4879.2	4894.2	4879.2	4842.3	4817.0	4807.3
19.5°	4663.1	4677.2	4663.1	4635.0	4616.0	4615.1
20°	4437.4	4430.1	4437.4	4421.9	4411.7	4411.7
20.5°	4208.2	4186.9	4208.2	4208.7	4204.4	4211.6
21°	4000.9	3994.1	4000.9	3983.0	4000.9	4005.8



TEST NUMBER: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3521.3	3504.8	3521.3	3483.9	3452.8	3430.0
23°	3394.1	3394.6	3394.1	3343.1	3311.0	3295.5
23.5°	3263.5	3269.8	3263.5	3214.4	3194.0	3196.5
24°	3153.3	3156.2	3153.3	3113.5	3100.8	3090.2
24.5°	3050.3	3050.3	3050.3	3025.1	3013.9	3008.6
25°	2973.1	2972.2	2973.1	2949.8	2938.2	2931.4
25.5°	2896.9	2898.4	2896.9	2875.1	2862.9	2859.5
26°	2818.3	2820.7	2818.3	2801.8	2793.0	2790.1
26.5°	2750.8	2752.2	2750.8	2735.7	2725.5	2724.6
27°	2690.6	2695.4	2690.6	2671.7	2661.0	2658.1
27.5°	2628.0	2634.8	2628.0	2609.5	2599.3	2595.4
28°	2563.4	2569.7	2563.4	2549.8	2540.1	2536.2
28.5°	2503.2	2508.5	2503.2	2492.5	2483.3	2481.3
29°	2446.4	2452.2	2446.4	2437.2	2428.4	2427.0
29.5°	2393.5	2398.3	2393.5	2383.3	2376.0	2373.1
30°	2340.1	2344.9	2340.1	2330.4	2323.6	2320.6
30.5°	2288.1	2291.5	2288.1	2278.9	2272.1	2269.7
31°	2238.1	2243.0	2238.1	2228.4	2222.1	2219.7
31.5°	2189.6	2193.0	2189.6	2180.8	2174.0	2171.6
32°	2142.5	2145.9	2142.5	2133.7	2127.4	2125.5
32.5°	2095.9	2098.8	2095.9	2087.6	2083.2	2081.3
33°	2045.9	2048.8	2045.9	2042.0	2039.5	2038.6
33.5°	1991.5	1995.9	1991.5	1993.4	1994.4	1994.4
34°	1935.2	1944.9	1935.2	1941.5	1942.5	1944.4
34.5°	1877.4	1884.7	1877.4	1885.6	1886.1	1890.5
35°	1818.6	1823.5	1818.6	1826.4	1826.4	1832.2
35.5°	1756.5	1759.4	1756.5	1763.3	1766.2	1768.6
36°	1692.4	1692.9	1692.4	1696.3	1701.6	1702.6
36.5°	1624.5	1621.5	1624.5	1626.9	1634.6	1632.7
37°	1555.0	1551.1	1555.0	1556.5	1563.3	1557.5
37.5°	1482.7	1481.2	1482.7	1485.1	1487.1	1482.7
38°	1410.8	1409.4	1410.8	1408.9	1411.3	1407.9
38.5°	1332.7	1336.6	1332.7	1332.2	1331.2	1333.2
39°	1255.0	1262.8	1255.0	1255.0	1252.6	1256.9
39.5°	1180.7	1186.5	1180.7	1177.8	1174.4	1176.8
40°	1107.4	1111.8	1107.4	1103.0	1098.7	1096.7
40.5°	1037.0	1036.5	1037.0	1026.3	1022.0	1017.1
41°	964.2	962.2	964.2	951.6	945.3	939.9
41.5°	892.3	888.9	892.3	877.3	869.0	862.2
42°	821.5	819.0	821.5	806.4	795.2	788.4
42.5°	753.5	752.0	753.5	737.9	723.4	717.1
43°	688.9	687.5	688.9	671.4	656.4	648.1
43.5°	622.9	624.3	622.9	605.9	590.8	586.5



TEST NUMBER: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	443.7	450.1	443.7	428.2	411.7	409.8
45.5°	389.8	398.1	389.8	376.3	357.8	353.4
46°	342.8	351.5	342.8	327.2	307.3	303.9
46.5°	300.0	310.2	300.0	280.6	265.1	259.3
47°	259.3	269.0	259.3	237.4	225.3	218.5
47.5°	220.4	227.7	220.4	201.5	190.3	183.5
48°	185.0	186.4	185.0	168.0	160.2	152.0
48.5°	153.4	151.0	153.4	138.9	132.5	125.3
49°	126.2	122.3	126.2	112.6	108.3	103.9
49.5°	101.5	97.1	101.5	93.2	88.4	86.9
50°	82.5	77.7	82.5	74.8	69.4	69.9
50.5°	65.5	61.2	65.5	57.8	54.9	52.9
51°	52.4	48.5	52.4	47.1	41.8	40.8
51.5°	43.7	43.2	43.7	37.4	34.5	30.6
52°	34.5	37.9	34.5	31.6	28.6	26.7
52.5°	29.1	32.0	29.1	27.2	24.8	24.3
53°	25.2	26.7	25.2	23.3	23.3	22.8
53.5°	21.8	21.4	21.8	22.3	21.8	21.8
54°	20.9	20.4	20.9	20.9	20.9	20.9
54.5°	19.9	19.4	19.9	19.9	19.9	19.9
55°	18.9	18.4	18.9	18.9	18.9	18.9
55.5°	18.0	17.5	18.0	18.0	18.0	18.0
56°	17.0	16.5	17.0	17.0	17.0	17.0
56.5°	16.0	15.5	16.0	16.5	16.0	16.0
57°	15.1	15.1	15.1	15.5	15.1	15.1
57.5°	14.1	14.1	14.1	14.6	14.6	14.1
58°	13.6	13.1	13.6	13.6	13.6	13.6
58.5°	12.6	12.6	12.6	13.1	13.1	12.6
59°	12.1	11.7	12.1	12.1	12.1	12.1
59.5°	11.7	11.2	11.7	11.7	11.7	11.2
60°	10.7	10.7	10.7	11.2	10.7	10.7
60.5°	10.2	10.2	10.2	10.7	10.2	10.2
61°	9.7	9.7	9.7	9.7	9.7	9.7
61.5°	9.2	9.2	9.2	9.2	9.2	9.2
62°	8.7	8.7	8.7	8.7	8.7	8.7
62.5°	8.3	8.3	8.3	8.3	8.3	8.3
63°	7.8	7.8	7.8	7.8	7.8	7.8
63.5°	7.3	7.3	7.3	7.8	7.3	7.3
64°	7.3	6.8	7.3	7.3	6.8	6.8
64.5°	6.8	6.3	6.8	6.8	6.8	6.3
65°	6.3	6.3	6.3	6.3	6.3	6.3
65.5°	5.8	5.8	5.8	6.3	5.8	5.8
66°	5.8	5.8	5.8	5.8	5.8	5.3



TEST NUMBER: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.9	4.9	4.9	4.9	4.9	4.9
68°	4.9	4.4	4.9	4.9	4.4	4.4
68.5°	4.4	4.4	4.4	4.4	4.4	4.4
69°	4.4	3.9	4.4	4.4	3.9	3.9
69.5°	3.9	3.9	3.9	3.9	3.9	3.9
70°	3.9	3.9	3.9	3.9	3.4	3.4
70.5°	3.4	3.4	3.4	3.4	3.4	3.4
71°	3.4	3.4	3.4	3.4	3.4	3.4
71.5°	3.4	2.9	3.4	3.4	2.9	2.9
72°	2.9	2.9	2.9	2.9	2.9	2.9
72.5°	2.9	2.9	2.9	2.9	2.9	2.9
73°	2.9	2.4	2.9	2.4	2.4	2.4
73.5°	2.4	2.4	2.4	2.4	2.4	2.4
74°	2.4	2.4	2.4	2.4	2.4	2.4
74.5°	2.4	2.4	2.4	2.4	1.9	1.9
75°	1.9	1.9	1.9	1.9	1.9	1.9
75.5°	1.9	1.9	1.9	1.9	1.9	1.9
76°	1.9	1.9	1.9	1.9	1.9	1.9
76.5°	1.9	1.9	1.9	1.5	1.5	1.5
77°	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5
78°	1.5	1.5	1.5	1.5	1.5	1.5
78.5°	1.5	1.5	1.5	1.5	1.0	1.0
79°	1.5	1.0	1.5	1.0	1.0	1.0
79.5°	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0
80.5°	1.0	1.0	1.0	1.0	1.0	1.0
81°	1.0	1.0	1.0	1.0	1.0	1.0
81.5°	1.0	1.0	1.0	1.0	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0
85.5°	0.5	0.5	0.5	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: P776774

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-5000K

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
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Scaled Data Report





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

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Scaled Data Report





21.5°	3796.1	3793.6	3800.4	3821.8	3818.9	3821.8	3800.4	3793.6	3796.1	3793.6	3800.4
22°	3582.9	3616.9	3632.9	3661.1	3657.7	3661.1	3632.9	3616.9	3582.9	3616.9	3632.9



44°	525.8	529.7	543.3	560.3	562.2	560.3	543.3	529.7	525.8	529.7	543.3
44.5°	467.0	469.5	482.6	500.1	504.9	500.1	482.6	469.5	467.0	469.5	482.6



66.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
67°	4.9	4.9	5.3	5.3	4.9	5.3	5.3	4.9	4.9	4.9	5.3



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°	3821.8	3818.9	3821.8	3800.4	3793.6	3796.1
22°	3661.1	3657.7	3661.1	3632.9	3616.9	3582.9



44°	560.3	562.2	560.3	543.3	529.7	525.8
44.5°	500.1	504.9	500.1	482.6	469.5	467.0

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66.5°	5.3	5.3	5.3	5.3	5.3	5.3
67°	5.3	4.9	5.3	5.3	4.9	4.9

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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)