

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: P776779

Luminaire Tested: HCDJBS4050CSD-HCD82TRH-5000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776779
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B063-HCD82TRH)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD82TRH-5000lm-5000K
Description: 8 INCH ROUND NARROW HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

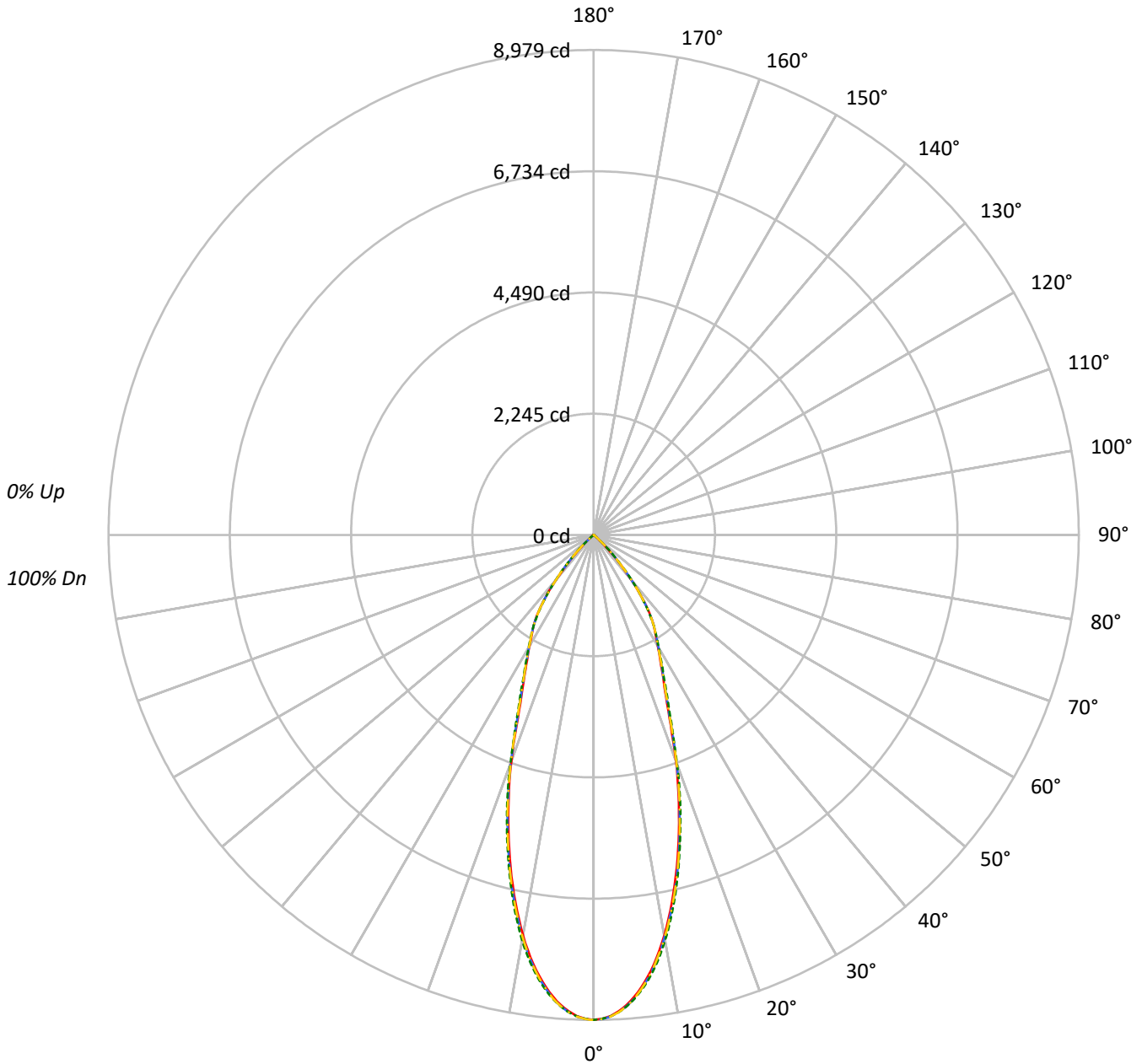
Lumens per Lamp: N/A
Luminaire Lumens: 5408.5 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.65 / 0.67
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82		
4	98	91	86	82	97	90	85	82	88	84	81	86	82	80	84	81	79	77		
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	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	74	65	60	56	73	65	60	56	64	59	56	63	59	56	63	58	56	54		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	274144	274144	274144	274144
5°	263153	264360	263153	264360
10°	233343	236264	233343	236264
15°	190709	193790	190709	193790
20°	144676	146493	144676	146493
25°	104317	107146	104317	107146
30°	83684	84971	83684	84971
35°	68500	67922	68500	67922
40°	42971	43880	42971	43880
45°	16368	18989	16368	18989
50°	2446	3434	2446	3434
55°	516	543	516	543
60°	324	324	324	324
65°	209	209	209	209
70°	134	170	134	170
75°	118	118	118	118
80°	88	88	88	88
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 18989 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	788.6	14.6
10°-20°	1673.2	30.9
20°-30°	1469.5	27.2
30°-40°	1109.7	20.5
40°-50°	349.7	6.5
50°-60°	13.4	0.2
60°-70°	3.2	0.1
70°-80°	1.1	0.0
80°-90°	0.1	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°	3931.3	72.7
0°-40°	5041.0	93.2
0°-60°	5404.1	99.9
0°-90°	5408.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5408.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	8979	8979	8979	8979	8979	
5°	8587	8626	8587	8626	8587	786
15°	6034	6131	6034	6131	6034	1659
25°	3097	3181	3097	3181	3097	1456
35°	1838	1822	1838	1822	1838	1108
45°	379	440	379	440	379	331
55°	10	10	10	10	10	11
65°	3	3	3	3	3	3
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4
0.5°	8971.1	8973.1	8977.9	8979.9	8971.1	8979.9	8977.9	8973.1	8971.1	8973.1	8977.9
1°	8959.0	8961.4	8966.3	8969.7	8960.9	8969.7	8966.3	8961.4	8959.0	8961.4	8966.3
1.5°	8938.6	8941.5	8947.8	8951.7	8943.0	8951.7	8947.8	8941.5	8938.6	8941.5	8947.8
2°	8911.4	8913.8	8922.1	8926.9	8918.7	8926.9	8922.1	8913.8	8911.4	8913.8	8922.1
2.5°	8874.0	8878.9	8888.6	8894.4	8886.6	8894.4	8888.6	8878.9	8874.0	8878.9	8888.6
3°	8831.8	8836.6	8848.3	8855.6	8848.3	8855.6	8848.3	8836.6	8831.8	8836.6	8848.3
3.5°	8781.3	8787.1	8800.2	8809.5	8804.1	8809.5	8800.2	8787.1	8781.3	8787.1	8800.2
4°	8722.6	8729.8	8745.4	8756.5	8751.7	8756.5	8745.4	8729.8	8722.6	8729.8	8745.4
4.5°	8658.0	8664.8	8683.2	8696.8	8692.0	8696.8	8683.2	8664.8	8658.0	8664.8	8683.2
5°	8586.6	8593.9	8614.3	8630.3	8626.0	8630.3	8614.3	8593.9	8586.6	8593.9	8614.3
5.5°	8508.0	8515.8	8537.1	8555.6	8553.6	8555.6	8537.1	8515.8	8508.0	8515.8	8537.1
6°	8422.1	8430.3	8453.6	8475.0	8475.5	8475.0	8453.6	8430.3	8422.1	8430.3	8453.6
6.5°	8332.3	8339.1	8364.8	8388.6	8390.0	8388.6	8364.8	8339.1	8332.3	8339.1	8364.8
7°	8234.2	8242.0	8268.7	8295.4	8300.7	8295.4	8268.7	8242.0	8234.2	8242.0	8268.7
7.5°	8131.3	8137.6	8165.3	8193.4	8201.2	8193.4	8165.3	8137.6	8131.3	8137.6	8165.3
8°	8020.6	8027.9	8057.0	8087.6	8097.3	8087.6	8057.0	8027.9	8020.6	8027.9	8057.0
8.5°	7906.0	7912.3	7941.5	7975.9	7987.1	7975.9	7941.5	7912.3	7906.0	7912.3	7941.5
9°	7783.2	7791.5	7822.1	7858.9	7871.6	7858.9	7822.1	7791.5	7783.2	7791.5	7822.1
9.5°	7658.0	7666.7	7695.8	7734.7	7749.2	7734.7	7695.8	7666.7	7658.0	7666.7	7695.8
10°	7526.9	7536.6	7566.7	7608.9	7621.1	7608.9	7566.7	7536.6	7526.9	7536.6	7566.7
10.5°	7391.5	7401.2	7432.2	7476.9	7488.5	7476.9	7432.2	7401.2	7391.5	7401.2	7432.2
11°	7246.8	7262.3	7293.9	7340.5	7350.7	7340.5	7293.9	7262.3	7246.8	7262.3	7293.9
11.5°	7107.5	7120.1	7151.6	7196.8	7208.9	7196.8	7151.6	7120.1	7107.5	7120.1	7151.6
12°	6959.4	6974.5	7007.0	7052.6	7063.8	7052.6	7007.0	6974.5	6959.4	6974.5	7007.0
12.5°	6810.9	6826.4	6859.4	6902.6	6912.3	6902.6	6859.4	6826.4	6810.9	6826.4	6859.4
13°	6658.4	6675.9	6711.3	6754.5	6762.3	6754.5	6711.3	6675.9	6658.4	6675.9	6711.3
13.5°	6506.0	6523.5	6560.4	6598.2	6609.4	6598.2	6560.4	6523.5	6506.0	6523.5	6560.4
14°	6349.7	6368.6	6406.0	6440.5	6452.6	6440.5	6406.0	6368.6	6349.7	6368.6	6406.0
14.5°	6191.9	6211.3	6249.2	6281.7	6291.9	6281.7	6249.2	6211.3	6191.9	6211.3	6249.2
15°	6033.7	6053.6	6090.9	6123.9	6131.2	6123.9	6090.9	6053.6	6033.7	6053.6	6090.9
15.5°	5874.9	5894.3	5931.7	5963.3	5974.4	5963.3	5931.7	5894.3	5874.9	5894.3	5931.7
16°	5717.1	5734.1	5771.5	5803.1	5816.2	5803.1	5771.5	5734.1	5717.1	5734.1	5771.5
16.5°	5561.3	5575.9	5613.3	5643.8	5657.9	5643.8	5613.3	5575.9	5561.3	5575.9	5613.3
17°	5401.1	5417.1	5451.1	5487.0	5497.7	5487.0	5451.1	5417.1	5401.1	5417.1	5451.1
17.5°	5241.4	5257.4	5291.4	5327.8	5340.4	5327.8	5291.4	5257.4	5241.4	5257.4	5291.4
18°	5084.6	5096.7	5133.1	5168.6	5181.2	5168.6	5133.1	5096.7	5084.6	5096.7	5133.1
18.5°	4927.8	4939.9	4972.5	5006.9	5020.5	5006.9	4972.5	4939.9	4927.8	4939.9	4972.5
19°	4770.5	4782.2	4814.2	4843.3	4858.9	4843.3	4814.2	4782.2	4770.5	4782.2	4814.2
19.5°	4613.2	4625.9	4652.1	4676.8	4689.0	4676.8	4652.1	4625.9	4613.2	4625.9	4652.1
20°	4453.0	4463.7	4484.6	4508.4	4508.9	4508.4	4484.6	4463.7	4453.0	4463.7	4484.6
20.5°	4290.9	4297.7	4320.0	4342.3	4339.4	4342.3	4320.0	4297.7	4290.9	4297.7	4320.0
21°	4125.4	4136.5	4157.9	4179.7	4179.2	4179.7	4157.9	4136.5	4125.4	4136.5	4157.9



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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°	3665.1	3678.7	3698.2	3733.6	3749.1	3733.6	3698.2	3678.7	3665.1	3678.7	3698.2
23°	3532.6	3542.8	3566.1	3596.2	3613.7	3596.2	3566.1	3542.8	3532.6	3542.8	3566.1
23.5°	3401.5	3426.8	3445.2	3470.0	3487.0	3470.0	3445.2	3426.8	3401.5	3426.8	3445.2
24°	3298.6	3308.3	3334.1	3360.8	3383.1	3360.8	3334.1	3308.3	3298.6	3308.3	3334.1
24.5°	3192.3	3204.0	3229.2	3255.9	3282.6	3255.9	3229.2	3204.0	3192.3	3204.0	3229.2
25°	3096.7	3108.8	3132.6	3155.4	3180.7	3155.4	3132.6	3108.8	3096.7	3108.8	3132.6
25.5°	3014.6	3020.0	3039.4	3058.8	3080.7	3058.8	3039.4	3020.0	3014.6	3020.0	3039.4
26°	2933.6	2938.4	2951.0	2969.5	2982.6	2969.5	2951.0	2938.4	2933.6	2938.4	2951.0
26.5°	2849.6	2856.9	2871.9	2887.9	2896.2	2887.9	2871.9	2856.9	2849.6	2856.9	2871.9
27°	2768.5	2777.3	2796.7	2814.2	2822.4	2814.2	2796.7	2777.3	2768.5	2777.3	2796.7
27.5°	2694.2	2702.5	2721.4	2739.9	2751.5	2739.9	2721.4	2702.5	2694.2	2702.5	2721.4
28°	2625.8	2632.6	2648.1	2665.1	2674.8	2665.1	2648.1	2632.6	2625.8	2632.6	2648.1
28.5°	2560.7	2566.6	2579.7	2593.8	2604.4	2593.8	2579.7	2566.6	2560.7	2566.6	2579.7
29°	2497.6	2502.5	2515.1	2528.7	2535.5	2528.7	2515.1	2502.5	2497.6	2502.5	2515.1
29.5°	2434.5	2439.9	2452.5	2465.1	2471.4	2465.1	2452.5	2439.9	2434.5	2439.9	2452.5
30°	2373.8	2378.7	2390.8	2403.0	2410.3	2403.0	2390.8	2378.7	2373.8	2378.7	2390.8
30.5°	2315.1	2319.0	2331.6	2343.8	2351.0	2343.8	2331.6	2319.0	2315.1	2319.0	2331.6
31°	2257.3	2263.7	2274.8	2287.4	2293.8	2287.4	2274.8	2263.7	2257.3	2263.7	2274.8
31.5°	2204.4	2208.3	2220.4	2232.1	2239.9	2232.1	2220.4	2208.3	2204.4	2208.3	2220.4
32°	2152.0	2156.9	2168.0	2179.2	2186.0	2179.2	2168.0	2156.9	2152.0	2156.9	2168.0
32.5°	2103.5	2108.3	2118.5	2126.3	2130.2	2126.3	2118.5	2108.3	2103.5	2108.3	2118.5
33°	2058.3	2060.7	2067.0	2070.9	2070.4	2070.9	2067.0	2060.7	2058.3	2060.7	2067.0
33.5°	2011.7	2011.2	2011.7	2011.7	2010.7	2011.7	2011.7	2011.2	2011.7	2011.2	2011.7
34°	1959.8	1956.4	1952.5	1957.8	1947.1	1957.8	1952.5	1956.4	1959.8	1956.4	1952.5
34.5°	1900.1	1899.1	1898.1	1894.2	1884.5	1894.2	1898.1	1899.1	1900.1	1899.1	1898.1
35°	1837.9	1833.5	1833.5	1829.7	1822.4	1829.7	1833.5	1833.5	1837.9	1833.5	1833.5
35.5°	1773.8	1768.5	1768.5	1761.7	1757.3	1761.7	1768.5	1768.5	1773.8	1768.5	1768.5
36°	1703.4	1700.5	1702.0	1690.8	1689.9	1690.8	1702.0	1700.5	1703.4	1700.5	1702.0
36.5°	1630.6	1630.1	1630.1	1619.5	1617.5	1619.5	1630.1	1630.1	1630.6	1630.1	1630.1
37°	1555.4	1555.4	1555.9	1547.6	1544.2	1547.6	1555.9	1555.4	1555.4	1555.4	1555.9
37.5°	1480.1	1478.7	1485.0	1474.8	1472.4	1474.8	1485.0	1478.7	1480.1	1478.7	1485.0
38°	1403.4	1400.0	1402.0	1399.1	1399.6	1399.1	1402.0	1400.0	1403.4	1400.0	1402.0
38.5°	1323.3	1320.4	1319.5	1323.8	1325.3	1323.8	1319.5	1320.4	1323.3	1320.4	1319.5
39°	1242.3	1240.8	1238.4	1248.1	1248.6	1248.1	1238.4	1240.8	1242.3	1240.8	1238.4
39.5°	1159.7	1159.7	1159.7	1171.9	1174.8	1171.9	1159.7	1159.7	1159.7	1159.7	1159.7
40°	1078.2	1080.6	1085.5	1096.1	1101.0	1096.1	1085.5	1080.6	1078.2	1080.6	1085.5
40.5°	998.1	1001.0	1011.7	1019.9	1028.7	1019.9	1011.7	1001.0	998.1	1001.0	1011.7
41°	919.0	923.3	937.4	946.1	955.4	946.1	937.4	923.3	919.0	923.3	937.4
41.5°	839.8	847.1	863.6	873.3	884.0	873.3	863.6	847.1	839.8	847.1	863.6
42°	764.1	772.4	791.8	802.9	813.1	802.9	791.8	772.4	764.1	772.4	791.8
42.5°	690.8	700.0	721.9	736.4	745.7	736.4	721.9	700.0	690.8	700.0	721.9
43°	619.4	632.5	654.9	671.4	679.1	671.4	654.9	632.5	619.4	632.5	654.9
43.5°	552.4	568.0	589.8	607.8	614.6	607.8	589.8	568.0	552.4	568.0	589.8



TEST NUMBER: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	379.1	387.4	407.3	431.1	439.8	431.1	407.3	387.4	379.1	387.4	407.3
45.5°	326.7	335.0	354.9	378.7	388.4	378.7	354.9	335.0	326.7	335.0	354.9
46°	276.2	286.4	306.8	331.1	346.6	331.1	306.8	286.4	276.2	286.4	306.8
46.5°	233.5	241.3	264.6	287.4	304.9	287.4	264.6	241.3	233.5	241.3	264.6
47°	195.6	204.4	224.8	245.6	263.1	245.6	224.8	204.4	195.6	204.4	224.8
47.5°	162.1	169.4	186.9	204.9	221.4	204.9	186.9	169.4	162.1	169.4	186.9
48°	134.5	138.8	153.4	168.0	179.6	168.0	153.4	138.8	134.5	138.8	153.4
48.5°	108.7	114.1	123.8	136.9	147.1	136.9	123.8	114.1	108.7	114.1	123.8
49°	85.0	90.8	101.0	109.2	118.0	109.2	101.0	90.8	85.0	90.8	101.0
49.5°	66.5	70.9	79.6	87.4	93.7	87.4	79.6	70.9	66.5	70.9	79.6
50°	51.5	54.4	60.7	67.5	72.3	67.5	60.7	54.4	51.5	54.4	60.7
50.5°	38.4	38.8	46.1	52.9	56.3	52.9	46.1	38.8	38.4	38.8	46.1
51°	26.7	28.6	34.5	41.7	47.6	41.7	34.5	28.6	26.7	28.6	34.5
51.5°	17.5	21.4	26.7	31.6	39.3	31.6	26.7	21.4	17.5	21.4	26.7
52°	15.0	16.0	19.9	24.3	30.6	24.3	19.9	16.0	15.0	16.0	19.9
52.5°	13.6	14.1	14.6	18.4	22.3	18.4	14.6	14.1	13.6	14.1	14.6
53°	12.6	13.1	13.1	14.1	14.1	14.1	13.1	13.1	12.6	13.1	13.1
53.5°	11.7	12.1	12.6	12.6	12.1	12.6	12.6	12.1	11.7	12.1	12.6
54°	11.2	11.2	11.7	11.7	11.2	11.7	11.7	11.2	11.2	11.2	11.7
54.5°	10.2	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.2	10.7	10.7
55°	9.7	10.2	10.2	10.2	10.2	10.2	10.2	10.2	9.7	10.2	10.2
55.5°	9.2	9.2	9.7	9.7	9.7	9.7	9.7	9.2	9.2	9.2	9.7
56°	8.7	8.7	9.2	9.2	9.2	9.2	9.2	8.7	8.7	8.7	9.2
56.5°	8.3	8.3	8.7	8.7	8.3	8.7	8.7	8.3	8.3	8.3	8.7
57°	7.8	7.8	8.3	8.3	7.8	8.3	8.3	7.8	7.8	7.8	8.3
57.5°	7.3	7.3	7.8	7.8	7.8	7.8	7.8	7.3	7.3	7.3	7.8
58°	6.8	6.8	7.3	7.3	7.3	7.3	7.3	6.8	6.8	6.8	7.3
58.5°	6.3	6.3	6.8	6.8	6.8	6.8	6.8	6.3	6.3	6.3	6.8
59°	5.8	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.8	6.3	6.3
59.5°	5.3	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.3	5.8	5.8
60°	5.3	5.3	5.8	5.8	5.3	5.8	5.8	5.3	5.3	5.3	5.8
60.5°	4.9	4.9	5.3	5.3	5.3	5.3	5.3	4.9	4.9	4.9	5.3
61°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
61.5°	4.4	4.4	4.9	4.9	4.9	4.9	4.9	4.4	4.4	4.4	4.9
62°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
62.5°	3.9	3.9	4.4	4.4	4.4	4.4	4.4	3.9	3.9	3.9	4.4
63°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
63.5°	3.4	3.4	3.9	3.9	3.9	3.9	3.9	3.4	3.4	3.4	3.9
64°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
64.5°	2.9	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.9	3.4	3.4
65°	2.9	2.9	3.4	3.4	2.9	3.4	3.4	2.9	2.9	2.9	3.4
65.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
66°	2.4	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.4	2.9	2.9



TEST NUMBER: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
68°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	2.4
68.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
69°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
69.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
70°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.5	1.5	1.5	1.9
70.5°	1.5	1.5	1.5	1.9	1.5	1.9	1.5	1.5	1.5	1.5	1.5
71°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
71.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
72°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
72.5°	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.5	1.5
73°	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.5
73.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
74°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
74.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
76°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
76.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
77°	0.5	0.5	0.5	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
82.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
83°	0.0	0.0	0.0	0.5	0.5	0.5	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: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-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: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8979.4	8979.4	8979.4	8979.4	8979.4	8979.4
0.5°	8979.9	8971.1	8979.9	8977.9	8973.1	8971.1
1°	8969.7	8960.9	8969.7	8966.3	8961.4	8959.0
1.5°	8951.7	8943.0	8951.7	8947.8	8941.5	8938.6
2°	8926.9	8918.7	8926.9	8922.1	8913.8	8911.4
2.5°	8894.4	8886.6	8894.4	8888.6	8878.9	8874.0
3°	8855.6	8848.3	8855.6	8848.3	8836.6	8831.8
3.5°	8809.5	8804.1	8809.5	8800.2	8787.1	8781.3
4°	8756.5	8751.7	8756.5	8745.4	8729.8	8722.6
4.5°	8696.8	8692.0	8696.8	8683.2	8664.8	8658.0
5°	8630.3	8626.0	8630.3	8614.3	8593.9	8586.6
5.5°	8555.6	8553.6	8555.6	8537.1	8515.8	8508.0
6°	8475.0	8475.5	8475.0	8453.6	8430.3	8422.1
6.5°	8388.6	8390.0	8388.6	8364.8	8339.1	8332.3
7°	8295.4	8300.7	8295.4	8268.7	8242.0	8234.2
7.5°	8193.4	8201.2	8193.4	8165.3	8137.6	8131.3
8°	8087.6	8097.3	8087.6	8057.0	8027.9	8020.6
8.5°	7975.9	7987.1	7975.9	7941.5	7912.3	7906.0
9°	7858.9	7871.6	7858.9	7822.1	7791.5	7783.2
9.5°	7734.7	7749.2	7734.7	7695.8	7666.7	7658.0
10°	7608.9	7621.1	7608.9	7566.7	7536.6	7526.9
10.5°	7476.9	7488.5	7476.9	7432.2	7401.2	7391.5
11°	7340.5	7350.7	7340.5	7293.9	7262.3	7246.8
11.5°	7196.8	7208.9	7196.8	7151.6	7120.1	7107.5
12°	7052.6	7063.8	7052.6	7007.0	6974.5	6959.4
12.5°	6902.6	6912.3	6902.6	6859.4	6826.4	6810.9
13°	6754.5	6762.3	6754.5	6711.3	6675.9	6658.4
13.5°	6598.2	6609.4	6598.2	6560.4	6523.5	6506.0
14°	6440.5	6452.6	6440.5	6406.0	6368.6	6349.7
14.5°	6281.7	6291.9	6281.7	6249.2	6211.3	6191.9
15°	6123.9	6131.2	6123.9	6090.9	6053.6	6033.7
15.5°	5963.3	5974.4	5963.3	5931.7	5894.3	5874.9
16°	5803.1	5816.2	5803.1	5771.5	5734.1	5717.1
16.5°	5643.8	5657.9	5643.8	5613.3	5575.9	5561.3
17°	5487.0	5497.7	5487.0	5451.1	5417.1	5401.1
17.5°	5327.8	5340.4	5327.8	5291.4	5257.4	5241.4
18°	5168.6	5181.2	5168.6	5133.1	5096.7	5084.6
18.5°	5006.9	5020.5	5006.9	4972.5	4939.9	4927.8
19°	4843.3	4858.9	4843.3	4814.2	4782.2	4770.5
19.5°	4676.8	4689.0	4676.8	4652.1	4625.9	4613.2
20°	4508.4	4508.9	4508.4	4484.6	4463.7	4453.0
20.5°	4342.3	4339.4	4342.3	4320.0	4297.7	4290.9
21°	4179.7	4179.2	4179.7	4157.9	4136.5	4125.4



TEST NUMBER: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3733.6	3749.1	3733.6	3698.2	3678.7	3665.1
23°	3596.2	3613.7	3596.2	3566.1	3542.8	3532.6
23.5°	3470.0	3487.0	3470.0	3445.2	3426.8	3401.5
24°	3360.8	3383.1	3360.8	3334.1	3308.3	3298.6
24.5°	3255.9	3282.6	3255.9	3229.2	3204.0	3192.3
25°	3155.4	3180.7	3155.4	3132.6	3108.8	3096.7
25.5°	3058.8	3080.7	3058.8	3039.4	3020.0	3014.6
26°	2969.5	2982.6	2969.5	2951.0	2938.4	2933.6
26.5°	2887.9	2896.2	2887.9	2871.9	2856.9	2849.6
27°	2814.2	2822.4	2814.2	2796.7	2777.3	2768.5
27.5°	2739.9	2751.5	2739.9	2721.4	2702.5	2694.2
28°	2665.1	2674.8	2665.1	2648.1	2632.6	2625.8
28.5°	2593.8	2604.4	2593.8	2579.7	2566.6	2560.7
29°	2528.7	2535.5	2528.7	2515.1	2502.5	2497.6
29.5°	2465.1	2471.4	2465.1	2452.5	2439.9	2434.5
30°	2403.0	2410.3	2403.0	2390.8	2378.7	2373.8
30.5°	2343.8	2351.0	2343.8	2331.6	2319.0	2315.1
31°	2287.4	2293.8	2287.4	2274.8	2263.7	2257.3
31.5°	2232.1	2239.9	2232.1	2220.4	2208.3	2204.4
32°	2179.2	2186.0	2179.2	2168.0	2156.9	2152.0
32.5°	2126.3	2130.2	2126.3	2118.5	2108.3	2103.5
33°	2070.9	2070.4	2070.9	2067.0	2060.7	2058.3
33.5°	2011.7	2010.7	2011.7	2011.7	2011.2	2011.7
34°	1957.8	1947.1	1957.8	1952.5	1956.4	1959.8
34.5°	1894.2	1884.5	1894.2	1898.1	1899.1	1900.1
35°	1829.7	1822.4	1829.7	1833.5	1833.5	1837.9
35.5°	1761.7	1757.3	1761.7	1768.5	1768.5	1773.8
36°	1690.8	1689.9	1690.8	1702.0	1700.5	1703.4
36.5°	1619.5	1617.5	1619.5	1630.1	1630.1	1630.6
37°	1547.6	1544.2	1547.6	1555.9	1555.4	1555.4
37.5°	1474.8	1472.4	1474.8	1485.0	1478.7	1480.1
38°	1399.1	1399.6	1399.1	1402.0	1400.0	1403.4
38.5°	1323.8	1325.3	1323.8	1319.5	1320.4	1323.3
39°	1248.1	1248.6	1248.1	1238.4	1240.8	1242.3
39.5°	1171.9	1174.8	1171.9	1159.7	1159.7	1159.7
40°	1096.1	1101.0	1096.1	1085.5	1080.6	1078.2
40.5°	1019.9	1028.7	1019.9	1011.7	1001.0	998.1
41°	946.1	955.4	946.1	937.4	923.3	919.0
41.5°	873.3	884.0	873.3	863.6	847.1	839.8
42°	802.9	813.1	802.9	791.8	772.4	764.1
42.5°	736.4	745.7	736.4	721.9	700.0	690.8
43°	671.4	679.1	671.4	654.9	632.5	619.4
43.5°	607.8	614.6	607.8	589.8	568.0	552.4



TEST NUMBER: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	431.1	439.8	431.1	407.3	387.4	379.1
45.5°	378.7	388.4	378.7	354.9	335.0	326.7
46°	331.1	346.6	331.1	306.8	286.4	276.2
46.5°	287.4	304.9	287.4	264.6	241.3	233.5
47°	245.6	263.1	245.6	224.8	204.4	195.6
47.5°	204.9	221.4	204.9	186.9	169.4	162.1
48°	168.0	179.6	168.0	153.4	138.8	134.5
48.5°	136.9	147.1	136.9	123.8	114.1	108.7
49°	109.2	118.0	109.2	101.0	90.8	85.0
49.5°	87.4	93.7	87.4	79.6	70.9	66.5
50°	67.5	72.3	67.5	60.7	54.4	51.5
50.5°	52.9	56.3	52.9	46.1	38.8	38.4
51°	41.7	47.6	41.7	34.5	28.6	26.7
51.5°	31.6	39.3	31.6	26.7	21.4	17.5
52°	24.3	30.6	24.3	19.9	16.0	15.0
52.5°	18.4	22.3	18.4	14.6	14.1	13.6
53°	14.1	14.1	14.1	13.1	13.1	12.6
53.5°	12.6	12.1	12.6	12.6	12.1	11.7
54°	11.7	11.2	11.7	11.7	11.2	11.2
54.5°	10.7	10.7	10.7	10.7	10.7	10.2
55°	10.2	10.2	10.2	10.2	10.2	9.7
55.5°	9.7	9.7	9.7	9.7	9.2	9.2
56°	9.2	9.2	9.2	9.2	8.7	8.7
56.5°	8.7	8.3	8.7	8.7	8.3	8.3
57°	8.3	7.8	8.3	8.3	7.8	7.8
57.5°	7.8	7.8	7.8	7.8	7.3	7.3
58°	7.3	7.3	7.3	7.3	6.8	6.8
58.5°	6.8	6.8	6.8	6.8	6.3	6.3
59°	6.3	6.3	6.3	6.3	6.3	5.8
59.5°	5.8	5.8	5.8	5.8	5.8	5.3
60°	5.8	5.3	5.8	5.8	5.3	5.3
60.5°	5.3	5.3	5.3	5.3	4.9	4.9
61°	4.9	4.9	4.9	4.9	4.9	4.9
61.5°	4.9	4.9	4.9	4.9	4.4	4.4
62°	4.4	4.4	4.4	4.4	4.4	4.4
62.5°	4.4	4.4	4.4	4.4	3.9	3.9
63°	3.9	3.9	3.9	3.9	3.9	3.9
63.5°	3.9	3.9	3.9	3.9	3.4	3.4
64°	3.4	3.4	3.4	3.4	3.4	3.4
64.5°	3.4	3.4	3.4	3.4	3.4	2.9
65°	3.4	2.9	3.4	3.4	2.9	2.9
65.5°	2.9	2.9	2.9	2.9	2.9	2.9
66°	2.9	2.9	2.9	2.9	2.9	2.4



TEST NUMBER: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	2.4	2.4	2.4	2.4	2.4	2.4
68°	2.4	2.4	2.4	2.4	1.9	1.9
68.5°	1.9	1.9	1.9	1.9	1.9	1.9
69°	1.9	1.9	1.9	1.9	1.9	1.9
69.5°	1.9	1.9	1.9	1.9	1.9	1.9
70°	1.9	1.9	1.9	1.9	1.5	1.5
70.5°	1.9	1.5	1.9	1.5	1.5	1.5
71°	1.5	1.5	1.5	1.5	1.5	1.5
71.5°	1.5	1.5	1.5	1.5	1.5	1.5
72°	1.5	1.5	1.5	1.5	1.5	1.5
72.5°	1.5	1.5	1.5	1.5	1.5	1.0
73°	1.5	1.5	1.5	1.5	1.0	1.0
73.5°	1.0	1.0	1.0	1.0	1.0	1.0
74°	1.0	1.0	1.0	1.0	1.0	1.0
74.5°	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0	1.0
75.5°	1.0	1.0	1.0	1.0	1.0	1.0
76°	1.0	1.0	1.0	1.0	1.0	1.0
76.5°	1.0	1.0	1.0	1.0	0.5	0.5
77°	1.0	1.0	1.0	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.0
82.5°	0.5	0.5	0.5	0.5	0.0	0.0
83°	0.5	0.5	0.5	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: P776779

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-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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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°	3954.0	3977.8	4001.6	4023.9	4029.7	4023.9	4001.6	3977.8	3954.0	3977.8	4001.6
22°	3805.0	3820.5	3848.2	3871.0	3882.6	3871.0	3848.2	3820.5	3805.0	3820.5	3848.2



44°	491.8	505.4	527.2	545.6	552.9	545.6	527.2	505.4	491.8	505.4	527.2
44.5°	434.5	445.2	465.5	485.4	494.2	485.4	465.5	445.2	434.5	445.2	465.5



66.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
67°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



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°	4023.9	4029.7	4023.9	4001.6	3977.8	3954.0
22°	3871.0	3882.6	3871.0	3848.2	3820.5	3805.0



44°	545.6	552.9	545.6	527.2	505.4	491.8
44.5°	485.4	494.2	485.4	465.5	445.2	434.5

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66.5°	2.4	2.4	2.4	2.4	2.4	2.4
67°	2.4	2.4	2.4	2.4	2.4	2.4

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Scaled Data Report



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)