

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P776777

Luminaire Tested: HCDJBS4050CSD-HCD82TRH-5000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776777
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-3500K
Description: 8 INCH ROUND NARROW HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5255.9 lumens
Efficiency: N/A
Efficacy: 109.5 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

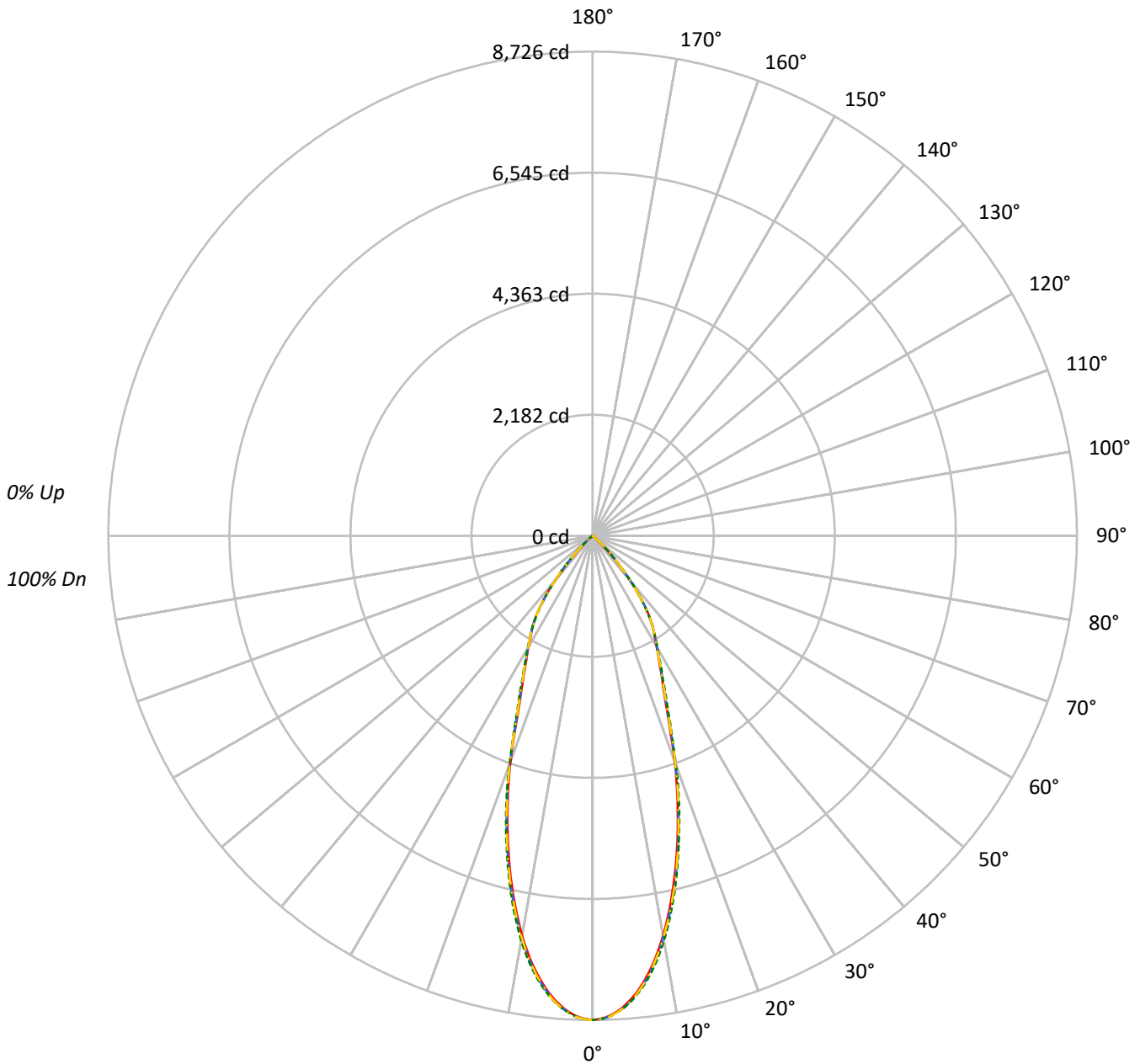
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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			100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94			94
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88			88
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82			82
4	98	91	86	82	97	90	85	82	88	84	81	86	82	80	84	81	79	77			77
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72			72
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68			68
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64			64
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61			61
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57			57
10	74	65	60	56	73	65	60	56	64	59	56	63	59	56	63	58	56	54			54

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	266410	266410	266410	266410
5°	255730	256901	255730	256901
10°	226762	229598	226762	229598
15°	185326	188326	185326	188326
20°	140596	142360	140596	142360
25°	101373	104121	101373	104121
30°	81326	82574	81326	82574
35°	66569	66006	66569	66006
40°	41759	42640	41759	42640
45°	15906	18454	15906	18454
50°	2375	3339	2375	3339
55°	500	527	500	527
60°	318	318	318	318
65°	202	202	202	202
70°	125	170	125	170
75°	106	106	106	106
80°	88	88	88	88
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 18454 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	766.3	14.6
10°-20°	1626.0	30.9
20°-30°	1428.0	27.2
30°-40°	1078.4	20.5
40°-50°	339.8	6.5
50°-60°	13.0	0.2
60°-70°	3.1	0.1
70°-80°	1.0	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°	3820.4	72.7
0°-40°	4898.8	93.2
0°-60°	5251.6	99.9
0°-90°	5255.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5255.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	8726	8726	8726	8726	8726	
5°	8344	8383	8344	8383	8344	763
15°	5863	5958	5863	5958	5863	1613
25°	3009	3091	3009	3091	3009	1415
35°	1786	1771	1786	1771	1786	1077
45°	368	427	368	427	368	321
55°	9	10	9	10	9	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	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°	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1
0.5°	8718.0	8719.9	8724.6	8726.5	8718.0	8726.5	8724.6	8719.9	8718.0	8719.9	8724.6
1°	8706.2	8708.6	8713.3	8716.6	8708.1	8716.6	8713.3	8708.6	8706.2	8708.6	8713.3
1.5°	8686.4	8689.3	8695.4	8699.2	8690.7	8699.2	8695.4	8689.3	8686.4	8689.3	8695.4
2°	8660.0	8662.4	8670.4	8675.1	8667.1	8675.1	8670.4	8662.4	8660.0	8662.4	8670.4
2.5°	8623.7	8628.4	8637.8	8643.5	8636.0	8643.5	8637.8	8628.4	8623.7	8628.4	8637.8
3°	8582.6	8587.4	8598.7	8605.8	8598.7	8605.8	8598.7	8587.4	8582.6	8587.4	8598.7
3.5°	8533.6	8539.2	8552.0	8560.9	8555.8	8560.9	8552.0	8539.2	8533.6	8539.2	8552.0
4°	8476.5	8483.6	8498.7	8509.5	8504.8	8509.5	8498.7	8483.6	8476.5	8483.6	8498.7
4.5°	8413.8	8420.4	8438.3	8451.5	8446.8	8451.5	8438.3	8420.4	8413.8	8420.4	8438.3
5°	8344.4	8351.5	8371.3	8386.9	8382.6	8386.9	8371.3	8351.5	8344.4	8351.5	8371.3
5.5°	8268.0	8275.5	8296.3	8314.2	8312.3	8314.2	8296.3	8275.5	8268.0	8275.5	8296.3
6°	8184.5	8192.5	8215.1	8235.9	8236.4	8235.9	8215.1	8192.5	8184.5	8192.5	8215.1
6.5°	8097.2	8103.8	8128.8	8151.9	8153.3	8151.9	8128.8	8103.8	8097.2	8103.8	8128.8
7°	8001.9	8009.5	8035.4	8061.4	8066.5	8061.4	8035.4	8009.5	8001.9	8009.5	8035.4
7.5°	7901.9	7908.0	7934.9	7962.3	7969.8	7962.3	7934.9	7908.0	7901.9	7908.0	7934.9
8°	7794.3	7801.4	7829.7	7859.4	7868.9	7859.4	7829.7	7801.4	7794.3	7801.4	7829.7
8.5°	7683.0	7689.1	7717.4	7750.9	7761.8	7750.9	7717.4	7689.1	7683.0	7689.1	7717.4
9°	7563.7	7571.7	7601.4	7637.2	7649.5	7637.2	7601.4	7571.7	7563.7	7571.7	7601.4
9.5°	7441.9	7450.4	7478.7	7516.5	7530.6	7516.5	7478.7	7450.4	7441.9	7450.4	7478.7
10°	7314.6	7324.0	7353.2	7394.3	7406.1	7394.3	7353.2	7324.0	7314.6	7324.0	7353.2
10.5°	7182.9	7192.4	7222.6	7266.0	7277.3	7266.0	7222.6	7192.4	7182.9	7192.4	7222.6
11°	7042.4	7057.5	7088.1	7133.4	7143.3	7133.4	7088.1	7057.5	7042.4	7057.5	7088.1
11.5°	6907.0	6919.2	6949.9	6993.8	7005.6	6993.8	6949.9	6919.2	6907.0	6919.2	6949.9
12°	6763.1	6777.7	6809.3	6853.7	6864.5	6853.7	6809.3	6777.7	6763.1	6777.7	6809.3
12.5°	6618.7	6633.8	6665.9	6707.9	6717.3	6707.9	6665.9	6633.8	6618.7	6633.8	6665.9
13°	6470.6	6487.6	6522.0	6564.0	6571.6	6564.0	6522.0	6487.6	6470.6	6487.6	6522.0
13.5°	6322.5	6339.4	6375.3	6412.1	6422.9	6412.1	6375.3	6339.4	6322.5	6339.4	6375.3
14°	6170.6	6189.0	6225.3	6258.8	6270.6	6258.8	6225.3	6189.0	6170.6	6189.0	6225.3
14.5°	6017.2	6036.1	6072.9	6104.5	6114.4	6104.5	6072.9	6036.1	6017.2	6036.1	6072.9
15°	5863.4	5882.8	5919.1	5951.2	5958.3	5951.2	5919.1	5882.8	5863.4	5882.8	5919.1
15.5°	5709.2	5728.1	5764.4	5795.0	5805.9	5795.0	5764.4	5728.1	5709.2	5728.1	5764.4
16°	5555.9	5572.4	5608.7	5639.4	5652.1	5639.4	5608.7	5572.4	5555.9	5572.4	5608.7
16.5°	5404.4	5418.6	5454.9	5484.6	5498.3	5484.6	5454.9	5418.6	5404.4	5418.6	5454.9
17°	5248.7	5264.3	5297.3	5332.2	5342.6	5332.2	5297.3	5264.3	5248.7	5264.3	5297.3
17.5°	5093.5	5109.1	5142.1	5177.5	5189.8	5177.5	5142.1	5109.1	5093.5	5109.1	5142.1
18°	4941.2	4953.0	4988.3	5022.8	5035.0	5022.8	4988.3	4953.0	4941.2	4953.0	4988.3
18.5°	4788.8	4800.6	4832.2	4865.7	4878.9	4865.7	4832.2	4800.6	4788.8	4800.6	4832.2
19°	4635.9	4647.3	4678.4	4706.7	4721.8	4706.7	4678.4	4647.3	4635.9	4647.3	4678.4
19.5°	4483.1	4495.4	4520.8	4544.9	4556.7	4544.9	4520.8	4495.4	4483.1	4495.4	4520.8
20°	4327.4	4337.8	4358.1	4381.2	4381.7	4381.2	4358.1	4337.8	4327.4	4337.8	4358.1
20.5°	4169.8	4176.4	4198.1	4219.9	4217.0	4219.9	4198.1	4176.4	4169.8	4176.4	4198.1
21°	4009.0	4019.8	4040.6	4061.8	4061.3	4061.8	4040.6	4019.8	4009.0	4019.8	4040.6



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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°	3561.8	3575.0	3593.8	3628.3	3643.4	3628.3	3593.8	3575.0	3561.8	3575.0	3593.8
23°	3433.0	3442.9	3465.5	3494.8	3511.7	3494.8	3465.5	3442.9	3433.0	3442.9	3465.5
23.5°	3305.6	3330.1	3348.0	3372.1	3388.6	3372.1	3348.0	3330.1	3305.6	3330.1	3348.0
24°	3205.6	3215.0	3240.0	3266.0	3287.7	3266.0	3240.0	3215.0	3205.6	3215.0	3240.0
24.5°	3102.3	3113.6	3138.1	3164.1	3190.0	3164.1	3138.1	3113.6	3102.3	3113.6	3138.1
25°	3009.3	3021.1	3044.2	3066.4	3090.9	3066.4	3044.2	3021.1	3009.3	3021.1	3044.2
25.5°	2929.6	2934.8	2953.7	2972.5	2993.8	2972.5	2953.7	2934.8	2929.6	2934.8	2953.7
26°	2850.8	2855.5	2867.8	2885.7	2898.5	2885.7	2867.8	2855.5	2850.8	2855.5	2867.8
26.5°	2769.2	2776.3	2790.9	2806.5	2814.5	2806.5	2790.9	2776.3	2769.2	2776.3	2790.9
27°	2690.4	2698.9	2717.8	2734.8	2742.8	2734.8	2717.8	2698.9	2690.4	2698.9	2717.8
27.5°	2618.2	2626.3	2644.7	2662.6	2673.9	2662.6	2644.7	2626.3	2618.2	2626.3	2644.7
28°	2551.7	2558.3	2573.4	2589.9	2599.4	2589.9	2573.4	2558.3	2551.7	2558.3	2573.4
28.5°	2488.5	2494.2	2506.9	2520.6	2531.0	2520.6	2506.9	2494.2	2488.5	2494.2	2506.9
29°	2427.2	2431.9	2444.2	2457.4	2464.0	2457.4	2444.2	2431.9	2427.2	2431.9	2444.2
29.5°	2365.9	2371.0	2383.3	2395.6	2401.7	2395.6	2383.3	2371.0	2365.9	2371.0	2383.3
30°	2306.9	2311.6	2323.4	2335.2	2342.3	2335.2	2323.4	2311.6	2306.9	2311.6	2323.4
30.5°	2249.8	2253.6	2265.8	2277.6	2284.7	2277.6	2265.8	2253.6	2249.8	2253.6	2265.8
31°	2193.7	2199.8	2210.6	2222.9	2229.0	2222.9	2210.6	2199.8	2193.7	2199.8	2210.6
31.5°	2142.2	2146.0	2157.8	2169.1	2176.7	2169.1	2157.8	2146.0	2142.2	2146.0	2157.8
32°	2091.3	2096.0	2106.9	2117.7	2124.3	2117.7	2106.9	2096.0	2091.3	2096.0	2106.9
32.5°	2044.1	2048.8	2058.7	2066.3	2070.1	2066.3	2058.7	2048.8	2044.1	2048.8	2058.7
33°	2000.2	2002.6	2008.7	2012.5	2012.0	2012.5	2008.7	2002.6	2000.2	2002.6	2008.7
33.5°	1955.0	1954.5	1955.0	1955.0	1954.0	1955.0	1955.0	1954.5	1955.0	1954.5	1955.0
34°	1904.5	1901.2	1897.4	1902.6	1892.2	1902.6	1897.4	1901.2	1904.5	1901.2	1897.4
34.5°	1846.4	1845.5	1844.6	1840.8	1831.4	1840.8	1844.6	1845.5	1846.4	1845.5	1844.6
35°	1786.1	1781.8	1781.8	1778.0	1771.0	1778.0	1781.8	1781.8	1786.1	1781.8	1781.8
35.5°	1723.8	1718.6	1718.6	1712.0	1707.8	1712.0	1718.6	1718.6	1723.8	1718.6	1718.6
36°	1655.4	1652.6	1654.0	1643.1	1642.2	1643.1	1654.0	1652.6	1655.4	1652.6	1654.0
36.5°	1584.6	1584.2	1584.2	1573.8	1571.9	1573.8	1584.2	1584.2	1584.6	1584.2	1584.2
37°	1511.5	1511.5	1512.0	1504.0	1500.7	1504.0	1512.0	1511.5	1511.5	1511.5	1512.0
37.5°	1438.4	1437.0	1443.1	1433.2	1430.8	1433.2	1443.1	1437.0	1438.4	1437.0	1443.1
38°	1363.8	1360.5	1362.4	1359.6	1360.1	1359.6	1362.4	1360.5	1363.8	1360.5	1362.4
38.5°	1286.0	1283.2	1282.2	1286.5	1287.9	1286.5	1282.2	1283.2	1286.0	1283.2	1282.2
39°	1207.2	1205.8	1203.4	1212.9	1213.4	1212.9	1203.4	1205.8	1207.2	1205.8	1203.4
39.5°	1127.0	1127.0	1127.0	1138.8	1141.6	1138.8	1127.0	1127.0	1127.0	1127.0	1127.0
40°	1047.8	1050.1	1054.8	1065.2	1069.9	1065.2	1054.8	1050.1	1047.8	1050.1	1054.8
40.5°	969.9	972.8	983.1	991.2	999.6	991.2	983.1	972.8	969.9	972.8	983.1
41°	893.0	897.3	911.0	919.5	928.4	919.5	911.0	897.3	893.0	897.3	911.0
41.5°	816.1	823.2	839.3	848.7	859.1	848.7	839.3	823.2	816.1	823.2	839.3
42°	742.5	750.6	769.4	780.3	790.2	780.3	769.4	750.6	742.5	750.6	769.4
42.5°	671.3	680.3	701.5	715.7	724.6	715.7	701.5	680.3	671.3	680.3	701.5
43°	602.0	614.7	636.4	652.4	660.0	652.4	636.4	614.7	602.0	614.7	636.4
43.5°	536.9	552.0	573.2	590.6	597.2	590.6	573.2	552.0	536.9	552.0	573.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	368.4	376.5	395.8	418.9	427.4	418.9	395.8	376.5	368.4	376.5	395.8
45.5°	317.5	325.5	344.9	368.0	377.4	368.0	344.9	325.5	317.5	325.5	344.9
46°	268.4	278.3	298.1	321.7	336.8	321.7	298.1	278.3	268.4	278.3	298.1
46.5°	226.9	234.5	257.1	279.3	296.3	279.3	257.1	234.5	226.9	234.5	257.1
47°	190.1	198.6	218.4	238.7	255.7	238.7	218.4	198.6	190.1	198.6	218.4
47.5°	157.6	164.6	181.6	199.1	215.1	199.1	181.6	164.6	157.6	164.6	181.6
48°	130.7	134.9	149.1	163.2	174.5	163.2	149.1	134.9	130.7	134.9	149.1
48.5°	105.7	110.9	120.3	133.0	142.9	133.0	120.3	110.9	105.7	110.9	120.3
49°	82.6	88.2	98.1	106.1	114.6	106.1	98.1	88.2	82.6	88.2	98.1
49.5°	64.6	68.9	77.4	84.9	91.0	84.9	77.4	68.9	64.6	68.9	77.4
50°	50.0	52.8	59.0	65.6	70.3	65.6	59.0	52.8	50.0	52.8	59.0
50.5°	37.3	37.7	44.8	51.4	54.7	51.4	44.8	37.7	37.3	37.7	44.8
51°	25.9	27.8	33.5	40.6	46.2	40.6	33.5	27.8	25.9	27.8	33.5
51.5°	17.0	20.8	25.9	30.7	38.2	30.7	25.9	20.8	17.0	20.8	25.9
52°	14.6	15.6	19.3	23.6	29.7	23.6	19.3	15.6	14.6	15.6	19.3
52.5°	13.2	13.7	14.2	17.9	21.7	17.9	14.2	13.7	13.2	13.7	14.2
53°	12.3	12.7	12.7	13.7	13.7	13.7	12.7	12.7	12.3	12.7	12.7
53.5°	11.3	11.8	12.3	12.3	11.8	12.3	12.3	11.8	11.3	11.8	12.3
54°	10.9	10.9	11.3	11.3	10.9	11.3	11.3	10.9	10.9	10.9	11.3
54.5°	9.9	10.4	10.4	10.4	10.4	10.4	10.4	10.4	9.9	10.4	10.4
55°	9.4	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.4	9.9	9.9
55.5°	9.0	9.0	9.4	9.4	9.4	9.4	9.4	9.0	9.0	9.0	9.4
56°	8.5	8.5	9.0	9.0	9.0	9.0	9.0	8.5	8.5	8.5	9.0
56.5°	8.0	8.0	8.5	8.5	8.0	8.5	8.5	8.0	8.0	8.0	8.5
57°	7.5	7.5	8.0	8.0	7.5	8.0	8.0	7.5	7.5	7.5	8.0
57.5°	7.1	7.1	7.5	7.5	7.5	7.5	7.5	7.1	7.1	7.1	7.5
58°	6.6	6.6	7.1	7.1	7.1	7.1	7.1	6.6	6.6	6.6	7.1
58.5°	6.1	6.1	6.6	6.6	6.6	6.6	6.6	6.1	6.1	6.1	6.6
59°	5.7	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.7	6.1	6.1
59.5°	5.2	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.2	5.7	5.7
60°	5.2	5.2	5.7	5.7	5.2	5.7	5.7	5.2	5.2	5.2	5.7
60.5°	4.7	4.7	5.2	5.2	5.2	5.2	5.2	4.7	4.7	4.7	5.2
61°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
61.5°	4.2	4.2	4.7	4.7	4.7	4.7	4.7	4.2	4.2	4.2	4.7
62°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
62.5°	3.8	3.8	4.2	4.2	4.2	4.2	4.2	3.8	3.8	3.8	4.2
63°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
63.5°	3.3	3.3	3.8	3.8	3.8	3.8	3.8	3.3	3.3	3.3	3.8
64°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
64.5°	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.8	3.3	3.3
65°	2.8	2.8	3.3	3.3	2.8	3.3	3.3	2.8	2.8	2.8	3.3
65.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
66°	2.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.4	2.8	2.8



TEST NUMBER: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

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°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.9
70.5°	1.4	1.4	1.4	1.9	1.4	1.9	1.4	1.4	1.4	1.4	1.4
71°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
71.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
72°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.9	1.4	1.4
73°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
73.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
74°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
74.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
75.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
76°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
76.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.9
77°	0.5	0.5	0.5	0.9	0.9	0.9	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: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

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: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8726.1	8726.1	8726.1	8726.1	8726.1	8726.1
0.5°	8726.5	8718.0	8726.5	8724.6	8719.9	8718.0
1°	8716.6	8708.1	8716.6	8713.3	8708.6	8706.2
1.5°	8699.2	8690.7	8699.2	8695.4	8689.3	8686.4
2°	8675.1	8667.1	8675.1	8670.4	8662.4	8660.0
2.5°	8643.5	8636.0	8643.5	8637.8	8628.4	8623.7
3°	8605.8	8598.7	8605.8	8598.7	8587.4	8582.6
3.5°	8560.9	8555.8	8560.9	8552.0	8539.2	8533.6
4°	8509.5	8504.8	8509.5	8498.7	8483.6	8476.5
4.5°	8451.5	8446.8	8451.5	8438.3	8420.4	8413.8
5°	8386.9	8382.6	8386.9	8371.3	8351.5	8344.4
5.5°	8314.2	8312.3	8314.2	8296.3	8275.5	8268.0
6°	8235.9	8236.4	8235.9	8215.1	8192.5	8184.5
6.5°	8151.9	8153.3	8151.9	8128.8	8103.8	8097.2
7°	8061.4	8066.5	8061.4	8035.4	8009.5	8001.9
7.5°	7962.3	7969.8	7962.3	7934.9	7908.0	7901.9
8°	7859.4	7868.9	7859.4	7829.7	7801.4	7794.3
8.5°	7750.9	7761.8	7750.9	7717.4	7689.1	7683.0
9°	7637.2	7649.5	7637.2	7601.4	7571.7	7563.7
9.5°	7516.5	7530.6	7516.5	7478.7	7450.4	7441.9
10°	7394.3	7406.1	7394.3	7353.2	7324.0	7314.6
10.5°	7266.0	7277.3	7266.0	7222.6	7192.4	7182.9
11°	7133.4	7143.3	7133.4	7088.1	7057.5	7042.4
11.5°	6993.8	7005.6	6993.8	6949.9	6919.2	6907.0
12°	6853.7	6864.5	6853.7	6809.3	6777.7	6763.1
12.5°	6707.9	6717.3	6707.9	6665.9	6633.8	6618.7
13°	6564.0	6571.6	6564.0	6522.0	6487.6	6470.6
13.5°	6412.1	6422.9	6412.1	6375.3	6339.4	6322.5
14°	6258.8	6270.6	6258.8	6225.3	6189.0	6170.6
14.5°	6104.5	6114.4	6104.5	6072.9	6036.1	6017.2
15°	5951.2	5958.3	5951.2	5919.1	5882.8	5863.4
15.5°	5795.0	5805.9	5795.0	5764.4	5728.1	5709.2
16°	5639.4	5652.1	5639.4	5608.7	5572.4	5555.9
16.5°	5484.6	5498.3	5484.6	5454.9	5418.6	5404.4
17°	5332.2	5342.6	5332.2	5297.3	5264.3	5248.7
17.5°	5177.5	5189.8	5177.5	5142.1	5109.1	5093.5
18°	5022.8	5035.0	5022.8	4988.3	4953.0	4941.2
18.5°	4865.7	4878.9	4865.7	4832.2	4800.6	4788.8
19°	4706.7	4721.8	4706.7	4678.4	4647.3	4635.9
19.5°	4544.9	4556.7	4544.9	4520.8	4495.4	4483.1
20°	4381.2	4381.7	4381.2	4358.1	4337.8	4327.4
20.5°	4219.9	4217.0	4219.9	4198.1	4176.4	4169.8
21°	4061.8	4061.3	4061.8	4040.6	4019.8	4009.0



TEST NUMBER: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3628.3	3643.4	3628.3	3593.8	3575.0	3561.8
23°	3494.8	3511.7	3494.8	3465.5	3442.9	3433.0
23.5°	3372.1	3388.6	3372.1	3348.0	3330.1	3305.6
24°	3266.0	3287.7	3266.0	3240.0	3215.0	3205.6
24.5°	3164.1	3190.0	3164.1	3138.1	3113.6	3102.3
25°	3066.4	3090.9	3066.4	3044.2	3021.1	3009.3
25.5°	2972.5	2993.8	2972.5	2953.7	2934.8	2929.6
26°	2885.7	2898.5	2885.7	2867.8	2855.5	2850.8
26.5°	2806.5	2814.5	2806.5	2790.9	2776.3	2769.2
27°	2734.8	2742.8	2734.8	2717.8	2698.9	2690.4
27.5°	2662.6	2673.9	2662.6	2644.7	2626.3	2618.2
28°	2589.9	2599.4	2589.9	2573.4	2558.3	2551.7
28.5°	2520.6	2531.0	2520.6	2506.9	2494.2	2488.5
29°	2457.4	2464.0	2457.4	2444.2	2431.9	2427.2
29.5°	2395.6	2401.7	2395.6	2383.3	2371.0	2365.9
30°	2335.2	2342.3	2335.2	2323.4	2311.6	2306.9
30.5°	2277.6	2284.7	2277.6	2265.8	2253.6	2249.8
31°	2222.9	2229.0	2222.9	2210.6	2199.8	2193.7
31.5°	2169.1	2176.7	2169.1	2157.8	2146.0	2142.2
32°	2117.7	2124.3	2117.7	2106.9	2096.0	2091.3
32.5°	2066.3	2070.1	2066.3	2058.7	2048.8	2044.1
33°	2012.5	2012.0	2012.5	2008.7	2002.6	2000.2
33.5°	1955.0	1954.0	1955.0	1955.0	1954.5	1955.0
34°	1902.6	1892.2	1902.6	1897.4	1901.2	1904.5
34.5°	1840.8	1831.4	1840.8	1844.6	1845.5	1846.4
35°	1778.0	1771.0	1778.0	1781.8	1781.8	1786.1
35.5°	1712.0	1707.8	1712.0	1718.6	1718.6	1723.8
36°	1643.1	1642.2	1643.1	1654.0	1652.6	1655.4
36.5°	1573.8	1571.9	1573.8	1584.2	1584.2	1584.6
37°	1504.0	1500.7	1504.0	1512.0	1511.5	1511.5
37.5°	1433.2	1430.8	1433.2	1443.1	1437.0	1438.4
38°	1359.6	1360.1	1359.6	1362.4	1360.5	1363.8
38.5°	1286.5	1287.9	1286.5	1282.2	1283.2	1286.0
39°	1212.9	1213.4	1212.9	1203.4	1205.8	1207.2
39.5°	1138.8	1141.6	1138.8	1127.0	1127.0	1127.0
40°	1065.2	1069.9	1065.2	1054.8	1050.1	1047.8
40.5°	991.2	999.6	991.2	983.1	972.8	969.9
41°	919.5	928.4	919.5	911.0	897.3	893.0
41.5°	848.7	859.1	848.7	839.3	823.2	816.1
42°	780.3	790.2	780.3	769.4	750.6	742.5
42.5°	715.7	724.6	715.7	701.5	680.3	671.3
43°	652.4	660.0	652.4	636.4	614.7	602.0
43.5°	590.6	597.2	590.6	573.2	552.0	536.9



TEST NUMBER: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	418.9	427.4	418.9	395.8	376.5	368.4
45.5°	368.0	377.4	368.0	344.9	325.5	317.5
46°	321.7	336.8	321.7	298.1	278.3	268.4
46.5°	279.3	296.3	279.3	257.1	234.5	226.9
47°	238.7	255.7	238.7	218.4	198.6	190.1
47.5°	199.1	215.1	199.1	181.6	164.6	157.6
48°	163.2	174.5	163.2	149.1	134.9	130.7
48.5°	133.0	142.9	133.0	120.3	110.9	105.7
49°	106.1	114.6	106.1	98.1	88.2	82.6
49.5°	84.9	91.0	84.9	77.4	68.9	64.6
50°	65.6	70.3	65.6	59.0	52.8	50.0
50.5°	51.4	54.7	51.4	44.8	37.7	37.3
51°	40.6	46.2	40.6	33.5	27.8	25.9
51.5°	30.7	38.2	30.7	25.9	20.8	17.0
52°	23.6	29.7	23.6	19.3	15.6	14.6
52.5°	17.9	21.7	17.9	14.2	13.7	13.2
53°	13.7	13.7	13.7	12.7	12.7	12.3
53.5°	12.3	11.8	12.3	12.3	11.8	11.3
54°	11.3	10.9	11.3	11.3	10.9	10.9
54.5°	10.4	10.4	10.4	10.4	10.4	9.9
55°	9.9	9.9	9.9	9.9	9.9	9.4
55.5°	9.4	9.4	9.4	9.4	9.0	9.0
56°	9.0	9.0	9.0	9.0	8.5	8.5
56.5°	8.5	8.0	8.5	8.5	8.0	8.0
57°	8.0	7.5	8.0	8.0	7.5	7.5
57.5°	7.5	7.5	7.5	7.5	7.1	7.1
58°	7.1	7.1	7.1	7.1	6.6	6.6
58.5°	6.6	6.6	6.6	6.6	6.1	6.1
59°	6.1	6.1	6.1	6.1	6.1	5.7
59.5°	5.7	5.7	5.7	5.7	5.7	5.2
60°	5.7	5.2	5.7	5.7	5.2	5.2
60.5°	5.2	5.2	5.2	5.2	4.7	4.7
61°	4.7	4.7	4.7	4.7	4.7	4.7
61.5°	4.7	4.7	4.7	4.7	4.2	4.2
62°	4.2	4.2	4.2	4.2	4.2	4.2
62.5°	4.2	4.2	4.2	4.2	3.8	3.8
63°	3.8	3.8	3.8	3.8	3.8	3.8
63.5°	3.8	3.8	3.8	3.8	3.3	3.3
64°	3.3	3.3	3.3	3.3	3.3	3.3
64.5°	3.3	3.3	3.3	3.3	3.3	2.8
65°	3.3	2.8	3.3	3.3	2.8	2.8
65.5°	2.8	2.8	2.8	2.8	2.8	2.8
66°	2.8	2.8	2.8	2.8	2.8	2.4



TEST NUMBER: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

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	1.4	1.4
70.5°	1.9	1.4	1.9	1.4	1.4	1.4
71°	1.4	1.4	1.4	1.4	1.4	1.4
71.5°	1.4	1.4	1.4	1.4	1.4	1.4
72°	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	1.4	1.4	1.4	1.4	1.4	0.9
73°	1.4	1.4	1.4	1.4	0.9	0.9
73.5°	0.9	0.9	0.9	0.9	0.9	0.9
74°	0.9	0.9	0.9	0.9	0.9	0.9
74.5°	0.9	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9	0.9
75.5°	0.9	0.9	0.9	0.9	0.9	0.9
76°	0.9	0.9	0.9	0.9	0.9	0.9
76.5°	0.9	0.9	0.9	0.9	0.5	0.5
77°	0.9	0.9	0.9	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: P776777

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRH-5000lm-3500K

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°	3842.4	3865.6	3888.7	3910.4	3916.0	3910.4	3888.7	3865.6	3842.4	3865.6	3888.7
22°	3697.6	3712.7	3739.6	3761.8	3773.1	3761.8	3739.6	3712.7	3697.6	3712.7	3739.6



44°	477.9	491.1	512.3	530.3	537.3	530.3	512.3	491.1	477.9	491.1	512.3
44.5°	422.2	432.6	452.4	471.8	480.2	471.8	452.4	432.6	422.2	432.6	452.4



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°	3910.4	3916.0	3910.4	3888.7	3865.6	3842.4
22°	3761.8	3773.1	3761.8	3739.6	3712.7	3697.6



44°	530.3	537.3	530.3	512.3	491.1	477.9
44.5°	471.8	480.2	471.8	452.4	432.6	422.2

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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)