

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: P776571

Luminaire Tested: HCDJBS4050CSD-HCD42TRC-5000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776571
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B049)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD42TRC-5000lm-3000K
Description: 4 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

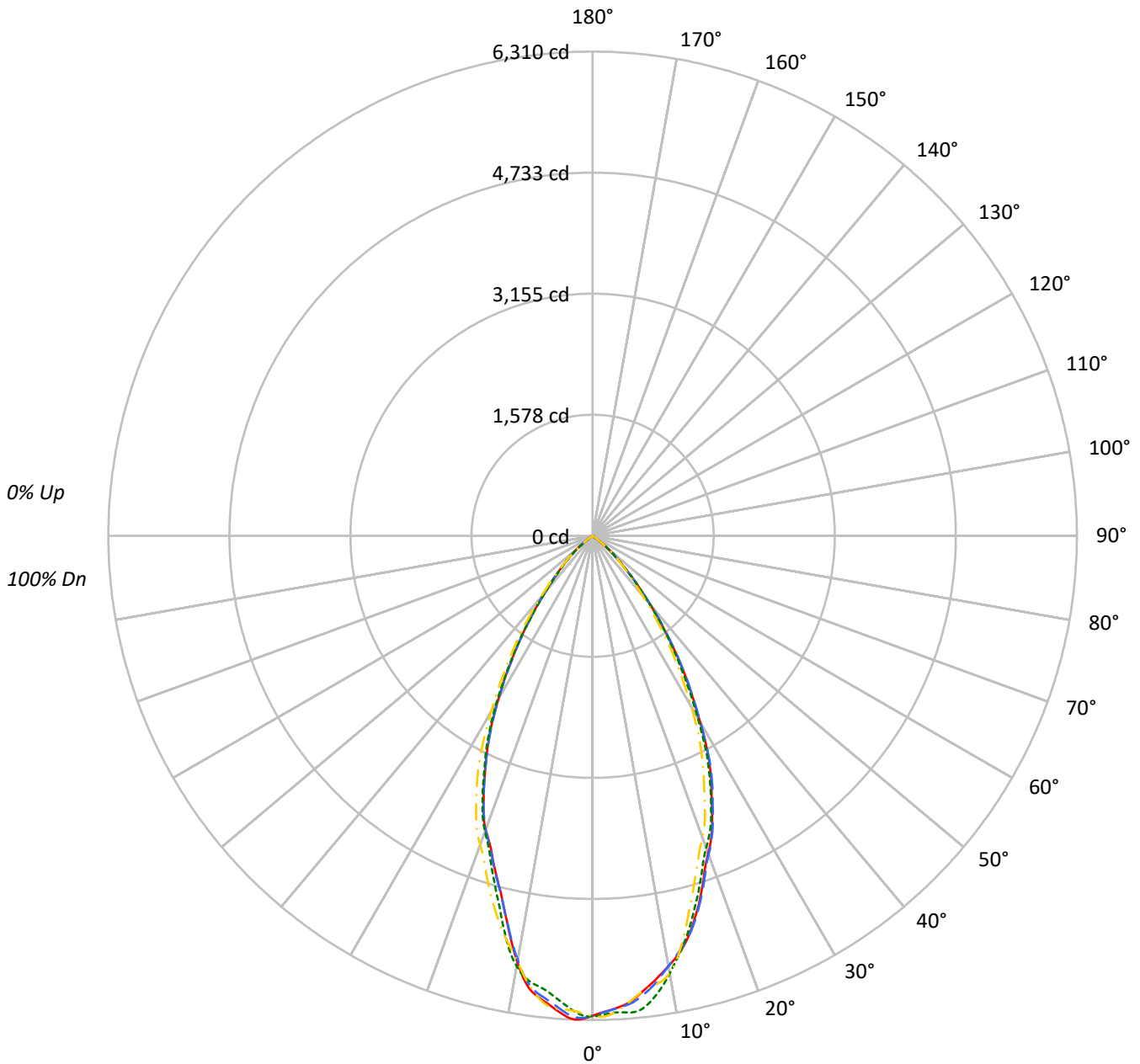
Lumens per Lamp: N/A
Luminaire Lumens: 5149.1 lumens
Efficiency: N/A
Efficacy: 107.3 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.84
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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					10					0
RW	70	50	30	10	70	50	30	10	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	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	95	90	86	92	88	85	89	86	84	87	85	82	81								
4	97	90	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	74	90	83	77	73	81	76	73	79	75	72	78	74	71	70								
6	87	78	72	68	86	78	72	68	76	71	67	75	70	67	73	70	66	65								
7	83	74	68	63	82	73	67	63	72	67	63	71	66	63	69	65	62	61								
8	79	69	63	59	78	69	63	59	68	62	59	67	62	59	66	61	58	57								
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53								
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	52	50								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	787492	787492	787492	787492
5°	766599	787330	777754	759196
10°	727694	739873	721279	728231
15°	671602	662339	614913	629219
20°	589384	579353	545925	549474
25°	509171	504770	458432	463209
30°	406864	397883	356874	362149
35°	296668	288233	251392	253097
40°	189618	188024	161213	157632
45°	105897	108798	96393	93652
50°	48144	51414	47772	45971
55°	2852	2765	2238	2545
60°	831	1057	931	931
65°	417	566	566	566
70°	331	331	331	331
75°	243	243	243	243
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 108798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	571.0	11.1
10°-20°	1381.5	26.8
20°-30°	1584.9	30.8
30°-40°	1107.8	21.5
40°-50°	451.9	8.8
50°-60°	49.7	1.0
60°-70°	1.9	0.0
70°-80°	0.5	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°	3537.4	68.7
0°-40°	4645.2	90.2
0°-60°	5146.7	100.0
0°-90°	5149.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5149.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	6257	6257	6257	6257	6257	
5°	6068	6232	6156	6010	6068	566
15°	5155	5084	4720	4829	5155	1429
25°	3667	3635	3301	3336	3667	1670
35°	1931	1876	1636	1647	1931	1199
45°	595	611	542	526	595	477
55°	13	13	10	12	13	48
65°	1	2	2	2	1	2
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°	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4
0.5°	6237.4	6236.9	6236.9	6238.3	6260.2	6262.0	6267.6	6273.2	6275.5	6275.0	6269.0
1°	6220.7	6219.3	6221.6	6225.3	6249.0	6256.9	6269.9	6283.9	6293.2	6292.7	6281.1
1.5°	6204.4	6202.5	6206.7	6214.1	6238.8	6247.2	6264.4	6286.7	6305.7	6306.7	6286.7
2°	6189.0	6184.9	6192.8	6206.2	6228.6	6233.7	6249.9	6279.2	6310.4	6314.1	6282.0
2.5°	6174.2	6166.3	6178.8	6201.6	6222.0	6218.3	6227.6	6259.7	6301.5	6310.4	6266.2
3°	6158.8	6144.4	6166.3	6201.6	6219.7	6201.6	6200.2	6232.3	6282.5	6293.2	6240.6
3.5°	6142.1	6119.3	6152.8	6207.2	6221.6	6184.4	6168.1	6199.7	6255.5	6269.0	6210.0
4°	6123.0	6092.4	6138.4	6214.6	6227.6	6165.3	6132.3	6163.5	6224.4	6237.9	6177.4
4.5°	6098.4	6058.9	6120.7	6223.0	6232.3	6143.0	6094.7	6126.3	6190.9	6205.3	6143.5
5°	6068.2	6022.6	6099.8	6226.2	6232.3	6115.1	6057.0	6089.6	6156.5	6173.2	6110.5
5.5°	6032.9	5984.5	6071.9	6219.7	6221.6	6082.6	6020.3	6056.6	6124.9	6140.2	6079.8
6°	5995.7	5946.4	6039.4	6201.6	6198.3	6044.5	5987.3	6027.3	6095.6	6107.7	6051.9
6.5°	5957.1	5912.5	6004.5	6170.0	6166.3	6009.1	5959.4	6003.1	6066.8	6075.6	6024.5
7°	5921.3	5884.1	5968.2	6126.3	6126.3	5974.7	5938.5	5982.2	6034.7	6040.3	5994.7
7.5°	5884.6	5859.0	5929.7	6071.4	6079.3	5941.7	5922.2	5963.1	5998.9	5996.1	5958.5
8°	5849.2	5836.7	5887.8	6005.9	6030.1	5911.5	5906.9	5940.3	5952.9	5940.8	5912.0
8.5°	5809.7	5817.2	5840.9	5930.1	5976.1	5879.9	5890.6	5910.1	5891.5	5872.5	5852.5
9°	5771.1	5799.0	5792.1	5849.7	5919.4	5845.5	5865.0	5868.8	5819.0	5791.1	5783.7
9.5°	5731.6	5781.8	5743.3	5769.3	5855.3	5810.2	5830.6	5814.8	5733.0	5697.7	5700.9
10°	5694.4	5767.0	5694.4	5689.8	5789.7	5770.7	5786.9	5749.8	5644.2	5597.3	5615.4
10.5°	5655.4	5752.1	5647.5	5618.7	5722.8	5726.1	5730.7	5676.8	5550.8	5487.6	5527.1
11°	5617.3	5734.9	5602.9	5553.1	5656.3	5674.5	5665.2	5597.3	5454.1	5376.9	5437.4
11.5°	5575.0	5709.3	5558.2	5495.0	5593.1	5615.0	5587.1	5514.5	5353.7	5265.8	5343.0
12°	5529.9	5671.2	5514.1	5442.0	5527.1	5546.6	5504.3	5429.5	5255.6	5153.4	5247.3
12.5°	5478.3	5619.1	5467.6	5393.2	5459.7	5468.5	5411.8	5341.2	5156.1	5045.0	5149.6
13°	5424.4	5555.5	5420.6	5344.4	5392.3	5386.2	5318.4	5250.5	5057.6	4944.2	5059.0
13.5°	5362.1	5483.4	5366.3	5290.9	5319.3	5295.6	5221.2	5153.8	4963.7	4848.9	4966.5
14°	5297.5	5404.8	5307.7	5231.4	5241.2	5203.6	5125.5	5064.6	4874.9	4762.9	4879.6
14.5°	5227.7	5323.0	5243.1	5169.6	5162.7	5108.3	5030.6	4972.5	4792.2	4681.5	4799.6
15°	5154.7	5236.6	5174.7	5104.5	5083.6	5016.2	4941.8	4887.0	4719.6	4606.2	4727.5
15.5°	5082.7	5154.7	5103.1	5039.9	5004.6	4929.8	4856.3	4802.9	4646.7	4537.4	4656.9
16°	5007.9	5071.1	5029.7	4971.6	4926.5	4845.6	4771.7	4721.5	4576.5	4469.6	4587.2
16.5°	4930.7	4984.6	4953.9	4900.0	4848.4	4761.0	4685.7	4636.9	4503.0	4401.2	4514.2
17°	4848.9	4897.7	4874.9	4823.3	4767.1	4676.4	4604.8	4552.3	4431.0	4332.9	4442.6
17.5°	4768.0	4808.0	4794.5	4746.1	4684.3	4591.3	4523.5	4468.6	4357.5	4265.5	4369.6
18°	4684.3	4719.6	4710.8	4667.6	4604.8	4507.2	4444.0	4390.1	4288.3	4202.3	4301.7
18.5°	4603.0	4634.6	4628.1	4589.5	4524.4	4428.2	4368.2	4312.9	4226.9	4146.0	4237.6
19°	4527.2	4555.6	4550.4	4516.5	4451.4	4356.6	4301.3	4248.3	4173.4	4097.2	4184.6
19.5°	4460.7	4485.8	4481.2	4453.3	4383.6	4295.7	4242.7	4189.7	4125.1	4050.7	4130.2
20°	4400.8	4422.6	4419.8	4396.6	4325.9	4239.0	4187.4	4133.0	4076.3	4001.4	4076.3
20.5°	4346.8	4363.1	4363.1	4345.0	4272.0	4182.7	4129.3	4070.7	4020.0	3943.8	4014.5
21°	4285.5	4299.9	4299.9	4291.1	4217.6	4121.4	4061.0	4000.1	3955.0	3878.7	3945.7



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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°	4068.9	4083.7	4091.2	4105.6	4029.3	3913.6	3824.3	3742.1	3712.3	3648.2	3713.2
23°	3982.9	4003.3	4009.8	4031.2	3952.2	3835.0	3736.5	3650.0	3630.0	3572.9	3629.6
23.5°	3899.2	3924.7	3930.3	3955.9	3872.7	3759.3	3647.2	3565.4	3547.8	3497.1	3546.4
24°	3818.3	3846.7	3849.4	3875.5	3794.1	3685.3	3570.5	3480.8	3465.9	3421.8	3463.2
24.5°	3741.1	3773.7	3774.1	3792.3	3713.7	3607.3	3493.8	3396.2	3383.7	3346.0	3379.9
25°	3666.8	3701.6	3696.0	3703.9	3635.1	3531.9	3417.1	3311.6	3301.4	3270.2	3296.3
25.5°	3595.6	3631.4	3623.1	3618.9	3553.8	3457.1	3340.4	3232.6	3222.8	3196.3	3213.1
26°	3520.8	3560.8	3545.0	3528.2	3472.4	3381.8	3263.7	3156.3	3145.7	3117.3	3135.4
26.5°	3444.1	3486.4	3466.4	3439.4	3390.6	3306.5	3187.0	3078.3	3064.3	3036.0	3053.6
27°	3363.7	3406.4	3381.3	3345.1	3308.8	3219.6	3108.5	3001.1	2983.0	2952.3	2970.9
27.5°	3279.5	3323.7	3293.9	3255.8	3227.0	3133.6	3026.7	2920.7	2898.8	2866.3	2887.2
28°	3189.4	3236.8	3201.0	3162.4	3129.9	3043.9	2943.0	2833.3	2812.8	2778.4	2799.8
28.5°	3094.5	3147.1	3103.8	3073.1	3030.4	2952.3	2850.9	2745.0	2722.2	2685.5	2709.6
29°	2994.6	3058.7	3004.8	2980.6	2931.8	2861.6	2758.4	2655.7	2633.4	2593.4	2621.8
29.5°	2897.9	2965.3	2906.7	2890.9	2834.2	2767.7	2664.5	2562.7	2544.6	2501.4	2531.6
30°	2799.8	2870.9	2811.0	2800.7	2738.0	2673.8	2571.6	2471.6	2455.8	2414.0	2442.8
30.5°	2703.6	2776.6	2717.1	2711.0	2643.2	2580.9	2478.1	2384.7	2367.5	2322.9	2353.5
31°	2610.6	2680.3	2626.4	2618.5	2556.2	2493.0	2388.4	2301.0	2282.0	2235.9	2270.3
31.5°	2520.4	2587.4	2540.4	2528.8	2460.0	2403.3	2303.3	2217.8	2197.4	2151.3	2184.8
32°	2433.5	2494.9	2455.4	2438.6	2373.1	2315.0	2219.2	2138.3	2112.8	2074.6	2102.1
32.5°	2348.0	2402.4	2371.7	2350.3	2285.7	2223.4	2136.5	2057.0	2026.8	1993.3	2020.2
33°	2265.7	2312.6	2290.3	2263.8	2205.7	2137.4	2053.7	1978.4	1945.4	1916.1	1938.4
33.5°	2182.5	2223.9	2205.3	2179.7	2116.9	2049.5	1973.8	1901.2	1863.1	1839.0	1859.4
34°	2099.3	2135.5	2121.1	2097.9	2033.3	1966.8	1892.9	1823.2	1787.8	1767.8	1780.4
34.5°	2014.7	2045.8	2036.5	2017.9	1953.3	1881.3	1812.5	1742.3	1710.2	1692.5	1705.1
35°	1931.0	1958.0	1952.8	1936.6	1876.1	1799.9	1729.7	1664.6	1636.3	1620.5	1630.7
35.5°	1848.3	1872.0	1869.6	1857.1	1796.2	1719.0	1649.3	1588.9	1563.8	1548.9	1557.7
36°	1766.0	1787.8	1786.0	1776.7	1718.6	1643.7	1568.9	1514.5	1494.5	1481.0	1484.7
36.5°	1681.8	1705.1	1705.1	1693.5	1642.8	1562.8	1488.9	1437.3	1422.4	1410.4	1414.1
37°	1604.2	1628.4	1627.4	1616.3	1571.2	1487.1	1410.8	1362.5	1352.7	1346.2	1344.4
37.5°	1526.6	1551.7	1549.8	1539.1	1494.0	1412.7	1336.9	1293.2	1284.4	1282.1	1276.9
38°	1448.9	1474.5	1472.7	1461.5	1422.4	1343.4	1264.9	1224.0	1219.8	1219.8	1210.5
38.5°	1371.3	1397.8	1395.0	1384.3	1350.9	1273.7	1196.5	1155.6	1157.0	1159.3	1147.7
39°	1293.7	1321.1	1317.4	1307.2	1283.5	1206.8	1130.1	1089.1	1096.1	1101.7	1086.8
39.5°	1221.6	1248.1	1244.4	1237.4	1210.5	1142.6	1065.4	1025.5	1036.6	1044.1	1028.7
40°	1154.2	1178.4	1171.9	1170.0	1144.5	1081.2	1003.2	963.2	981.3	989.7	971.5
40.5°	1086.8	1111.5	1100.3	1105.4	1079.9	1021.7	943.2	905.1	928.8	937.1	919.0
41°	1019.9	1047.3	1033.8	1041.3	1019.0	965.5	886.9	848.8	878.1	887.9	867.9
41.5°	956.7	984.1	969.7	979.4	958.5	910.6	833.9	798.6	829.8	840.0	819.1
42°	900.0	925.5	909.7	919.0	904.6	859.0	784.2	750.7	782.3	794.4	772.6
42.5°	844.2	867.9	851.1	859.0	849.8	809.8	738.2	708.0	739.1	750.7	727.5
43°	790.2	811.6	795.8	803.3	798.6	761.9	695.4	668.0	696.3	708.4	685.2
43.5°	736.3	755.8	743.3	747.9	748.9	715.9	655.0	631.3	655.0	667.1	644.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	595.0	604.8	600.1	602.4	611.3	592.2	546.7	527.6	541.6	551.3	534.6
45.5°	549.0	559.2	556.0	560.6	570.4	551.8	513.7	496.5	507.2	515.1	501.1
46°	509.5	517.8	514.6	520.2	529.0	514.1	481.1	465.8	473.7	479.7	468.6
46.5°	468.6	476.5	474.1	480.2	491.3	478.8	450.9	437.0	443.0	448.1	438.4
47°	431.8	437.4	436.5	443.5	454.6	446.7	421.2	408.1	412.8	417.0	408.6
47.5°	393.7	399.3	399.3	407.7	420.7	414.2	391.4	379.3	382.1	385.4	378.4
48°	360.3	364.9	364.4	372.8	386.8	382.1	361.7	350.5	351.4	353.8	348.6
48.5°	328.2	332.4	332.4	340.7	352.8	349.6	331.9	322.1	321.2	322.1	318.9
49°	300.3	302.6	302.6	310.1	319.4	317.5	304.9	295.6	294.7	296.1	292.9
49.5°	272.9	273.8	274.3	279.8	290.1	289.1	279.4	270.5	268.7	270.5	267.8
50°	245.9	245.9	246.4	251.9	262.6	261.7	251.9	245.0	244.0	245.4	242.2
50.5°	217.6	217.6	217.1	222.2	233.8	232.9	225.0	218.0	218.0	218.9	215.7
51°	186.9	186.4	185.5	189.7	202.2	201.7	194.3	188.3	188.7	188.7	185.5
51.5°	152.9	152.5	152.0	152.5	168.7	168.3	163.2	158.0	158.5	157.6	154.8
52°	125.0	124.6	124.6	125.0	134.3	132.5	128.8	126.0	126.4	124.6	121.8
52.5°	97.2	96.7	97.6	97.6	102.7	99.9	97.2	95.8	94.8	93.9	91.6
53°	69.3	69.3	70.2	69.7	84.6	82.3	79.5	78.6	77.6	77.2	75.3
53.5°	41.4	41.8	43.2	42.8	66.5	64.6	62.3	61.4	60.9	60.4	58.6
54°	25.1	25.6	26.5	26.5	47.9	46.5	45.1	44.2	44.2	43.7	42.3
54.5°	14.9	15.3	16.3	15.8	29.8	28.8	27.9	27.4	27.4	27.0	25.6
55°	13.0	13.0	13.5	13.5	12.6	11.6	10.7	10.2	10.2	10.2	10.2
55.5°	10.7	10.7	11.2	11.2	9.8	9.3	8.4	8.4	7.9	7.9	8.4
56°	8.4	8.4	8.8	9.3	8.4	7.9	7.4	7.0	7.0	7.0	7.4
56.5°	6.0	6.0	6.5	7.0	7.4	7.0	6.5	6.5	6.0	6.5	6.5
57°	5.6	5.6	6.0	6.5	7.0	6.5	6.0	5.6	5.6	5.6	6.0
57.5°	5.1	5.1	5.6	6.0	6.0	6.0	5.6	5.1	5.1	5.1	5.6
58°	4.6	4.6	5.1	5.6	5.6	5.6	5.1	5.1	4.6	4.6	5.1
58.5°	4.2	4.2	4.6	5.1	5.1	5.1	4.6	4.6	4.2	4.6	4.6
59°	3.7	4.2	4.2	4.6	5.1	4.6	4.2	4.2	4.2	4.2	4.2
59.5°	3.7	3.7	4.2	4.2	4.6	4.2	4.2	3.7	3.7	3.7	4.2
60°	3.3	3.3	3.7	4.2	4.2	4.2	3.7	3.7	3.7	3.7	3.7
60.5°	3.3	3.3	3.3	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3
61°	2.8	2.8	3.3	3.3	3.7	3.3	3.3	3.3	2.8	3.3	3.3
61.5°	2.8	2.8	2.8	3.3	3.3	3.3	2.8	2.8	2.8	2.8	2.8
62°	2.3	2.3	2.8	2.8	3.3	2.8	2.8	2.8	2.8	2.8	2.8
62.5°	2.3	2.3	2.3	2.8	2.8	2.8	2.8	2.3	2.3	2.3	2.8
63°	2.3	2.3	2.3	2.3	2.8	2.8	2.3	2.3	2.3	2.3	2.3
63.5°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
64°	1.9	1.9	1.9	2.3	2.3	2.3	1.9	1.9	1.9	1.9	2.3
64.5°	1.9	1.9	1.9	1.9	2.3	1.9	1.9	1.9	1.9	1.9	1.9
65°	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
65.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.9	1.9
66°	1.4	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4



TEST NUMBER: P776571

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-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	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
68°	0.9	0.9	0.9	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
68.5°	0.9	0.9	0.9	0.9	1.4	1.4	0.9	0.9	0.9	0.9	0.9
69°	0.9	0.9	0.9	0.9	1.4	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	0.9	0.9	0.9
71°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
71.5°	0.5	0.5	0.5	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.9
72°	0.5	0.5	0.5	0.5	0.9	0.9	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°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
77.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
78°	0.0	0.0	0.0	0.0	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: P776571
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-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: P776571

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	6257.4	6257.4	6257.4	6257.4	6257.4	6257.4
0.5°	6260.2	6265.7	6252.3	6245.3	6240.6	6237.4
1°	6263.9	6257.4	6239.7	6230.4	6224.8	6220.7
1.5°	6258.8	6240.2	6223.4	6215.5	6210.9	6204.4
2°	6243.0	6216.0	6203.0	6202.5	6199.3	6189.0
2.5°	6216.5	6184.9	6182.1	6193.2	6191.4	6174.2
3°	6183.9	6150.5	6161.6	6187.6	6186.7	6158.8
3.5°	6146.7	6114.7	6140.7	6185.3	6185.3	6142.1
4°	6110.0	6080.3	6118.9	6183.9	6185.3	6123.0
4.5°	6073.3	6044.9	6093.3	6181.1	6182.5	6098.4
5°	6039.4	6009.6	6064.5	6171.4	6172.8	6068.2
5.5°	6008.2	5977.1	6029.6	6150.0	6153.7	6032.9
6°	5980.8	5949.6	5993.3	6118.4	6124.4	5995.7
6.5°	5959.4	5926.9	5956.2	6077.9	6085.4	5957.1
7°	5941.7	5907.3	5919.9	6031.0	6038.9	5921.3
7.5°	5925.0	5889.7	5883.6	5976.6	5978.0	5884.6
8°	5905.9	5868.3	5845.1	5920.8	5917.6	5849.2
8.5°	5877.1	5839.5	5806.5	5855.3	5845.5	5809.7
9°	5837.6	5802.3	5763.2	5784.6	5773.5	5771.1
9.5°	5784.2	5754.9	5716.3	5710.2	5697.2	5731.6
10°	5719.1	5698.6	5665.6	5639.6	5628.0	5694.4
10.5°	5642.8	5637.7	5611.2	5570.8	5564.3	5655.4
11°	5561.0	5565.7	5551.7	5508.0	5504.8	5617.3
11.5°	5476.4	5480.6	5485.7	5446.7	5449.0	5575.0
12°	5384.8	5389.5	5414.1	5387.2	5399.3	5529.9
12.5°	5290.0	5294.7	5337.0	5325.3	5350.0	5478.3
13°	5196.6	5196.6	5256.6	5263.5	5301.2	5424.4
13.5°	5099.4	5098.5	5169.6	5195.2	5247.7	5362.1
14°	4999.5	5003.7	5079.4	5125.9	5191.9	5297.5
14.5°	4906.5	4914.4	4991.1	5054.8	5131.0	5227.7
15°	4817.7	4829.4	4903.7	4984.1	5069.2	5154.7
15.5°	4733.1	4747.1	4819.6	4913.5	5006.9	5082.7
16°	4649.9	4665.3	4735.5	4841.0	4940.5	5007.9
16.5°	4566.7	4585.8	4651.8	4765.2	4870.7	4930.7
17°	4482.1	4505.3	4570.4	4688.5	4796.3	4848.9
17.5°	4398.0	4424.5	4486.8	4611.8	4721.0	4768.0
18°	4316.6	4346.4	4405.9	4534.2	4644.3	4684.3
18.5°	4240.4	4278.0	4330.1	4457.9	4567.6	4603.0
19°	4174.4	4214.4	4265.0	4390.5	4497.9	4527.2
19.5°	4114.9	4159.0	4207.4	4334.7	4438.9	4460.7
20°	4057.2	4102.8	4150.2	4284.5	4387.3	4400.8
20.5°	3994.0	4045.6	4092.6	4232.9	4335.7	4346.8
21°	3923.8	3980.1	4029.8	4175.3	4279.9	4285.5

TEST NUMBER: P776571

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3680.2	3750.0	3822.0	3967.5	4074.9	4068.9
23°	3597.5	3666.8	3744.4	3887.6	3992.6	3982.9
23.5°	3515.2	3584.0	3668.2	3805.3	3910.8	3899.2
24°	3432.5	3498.9	3591.4	3724.9	3825.7	3818.3
24.5°	3350.2	3416.7	3515.2	3645.4	3743.5	3741.1
25°	3267.4	3335.8	3433.4	3566.3	3660.2	3666.8
25.5°	3193.5	3259.1	3357.2	3486.9	3576.6	3595.6
26°	3117.8	3181.4	3276.7	3403.2	3489.6	3520.8
26.5°	3039.2	3103.8	3195.4	3316.7	3403.6	3444.1
27°	2960.2	3024.8	3107.5	3226.1	3312.5	3363.7
27.5°	2876.0	2940.7	3021.5	3131.2	3220.5	3279.5
28°	2790.5	2855.1	2929.0	3029.9	3127.5	3189.4
28.5°	2698.5	2766.3	2835.1	2932.3	3040.1	3094.5
29°	2606.4	2677.1	2738.9	2834.7	2945.3	2994.6
29.5°	2515.8	2582.7	2645.0	2739.4	2854.2	2897.9
30°	2428.9	2492.1	2553.0	2645.0	2760.3	2799.8
30.5°	2343.3	2400.5	2459.1	2554.8	2668.7	2703.6
31°	2262.9	2310.3	2370.3	2463.7	2577.1	2610.6
31.5°	2181.6	2222.0	2283.4	2375.4	2487.0	2520.4
32°	2105.8	2134.6	2197.8	2288.5	2396.3	2433.5
32.5°	2025.4	2051.9	2112.8	2198.8	2307.5	2348.0
33°	1948.7	1970.0	2030.5	2113.2	2222.9	2265.7
33.5°	1869.2	1890.6	1947.3	2029.5	2140.2	2182.5
34°	1789.2	1809.7	1864.5	1947.3	2057.4	2099.3
34.5°	1711.1	1727.4	1785.0	1868.7	1977.0	2014.7
35°	1635.4	1647.4	1703.7	1788.8	1896.1	1931.0
35.5°	1560.0	1571.2	1629.3	1713.9	1818.5	1848.3
36°	1488.0	1494.5	1554.9	1661.8	1737.6	1766.0
36.5°	1415.0	1418.3	1481.0	1584.2	1649.8	1681.8
37°	1347.6	1342.0	1406.6	1505.7	1573.5	1604.2
37.5°	1276.0	1270.9	1332.7	1427.6	1497.8	1526.6
38°	1207.2	1204.4	1263.9	1349.5	1421.5	1448.9
38.5°	1139.8	1138.9	1198.9	1279.7	1345.7	1371.3
39°	1072.4	1078.5	1136.1	1212.3	1275.6	1293.7
39.5°	1007.3	1015.7	1074.7	1146.3	1205.4	1221.6
40°	945.5	959.5	1014.8	1080.8	1139.4	1154.2
40.5°	886.9	902.7	959.5	1019.4	1074.7	1086.8
41°	833.9	852.1	905.5	959.9	1012.4	1019.9
41.5°	784.7	802.3	854.4	904.1	952.5	956.7
42°	738.7	755.4	808.4	850.7	893.0	900.0
42.5°	697.3	713.1	761.0	800.5	837.7	844.2
43°	658.2	671.2	715.9	749.3	783.3	790.2
43.5°	622.0	632.2	672.6	701.0	731.2	736.3



TEST NUMBER: P776571

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	522.0	526.2	555.0	569.4	587.6	595.0
45.5°	490.9	493.7	517.8	529.5	545.3	549.0
46°	460.7	462.1	481.6	491.8	506.2	509.5
46.5°	431.8	430.0	446.3	454.6	467.6	468.6
47°	403.5	399.8	412.3	418.8	430.9	431.8
47.5°	375.1	370.0	378.9	384.9	396.1	393.7
48°	346.8	341.2	348.6	352.8	362.6	360.3
48.5°	318.0	314.2	319.4	322.1	330.5	328.2
49°	292.9	288.2	292.9	294.3	302.2	300.3
49.5°	267.8	262.2	266.4	266.4	274.3	272.9
50°	241.7	234.8	238.9	239.4	246.8	245.9
50.5°	214.8	205.9	210.6	210.6	218.0	217.6
51°	184.5	173.9	178.0	179.9	187.3	186.9
51.5°	154.3	146.4	150.1	151.5	153.4	152.9
52°	120.9	119.0	121.8	123.2	125.0	125.0
52.5°	92.5	91.6	93.9	94.8	96.7	97.2
53°	75.8	64.1	65.5	66.5	68.8	69.3
53.5°	59.5	36.7	37.7	38.6	40.4	41.4
54°	42.8	21.8	22.8	23.2	24.6	25.1
54.5°	26.5	13.0	13.9	13.9	14.4	14.9
55°	10.7	11.6	12.1	11.6	12.1	13.0
55.5°	8.8	10.2	10.2	10.2	10.2	10.7
56°	7.9	8.4	8.4	8.4	8.4	8.4
56.5°	7.0	7.0	6.5	6.5	6.0	6.0
57°	6.5	6.0	6.0	5.6	5.6	5.6
57.5°	6.0	5.6	5.6	5.1	5.1	5.1
58°	5.6	5.1	5.1	4.6	4.6	4.6
58.5°	5.1	5.1	4.6	4.6	4.2	4.2
59°	4.6	4.6	4.2	4.2	4.2	3.7
59.5°	4.2	4.2	4.2	3.7	3.7	3.7
60°	4.2	3.7	3.7	3.7	3.3	3.3
60.5°	3.7	3.7	3.7	3.3	3.3	3.3
61°	3.3	3.3	3.3	3.3	2.8	2.8
61.5°	3.3	3.3	3.3	2.8	2.8	2.8
62°	2.8	2.8	2.8	2.8	2.3	2.3
62.5°	2.8	2.8	2.8	2.3	2.3	2.3
63°	2.8	2.8	2.3	2.3	2.3	2.3
63.5°	2.3	2.3	2.3	2.3	1.9	1.9
64°	2.3	2.3	2.3	1.9	1.9	1.9
64.5°	2.3	2.3	1.9	1.9	1.9	1.9
65°	1.9	1.9	1.9	1.9	1.4	1.4
65.5°	1.9	1.9	1.9	1.4	1.4	1.4
66°	1.9	1.9	1.4	1.4	1.4	1.4



TEST NUMBER: P776571

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.4	1.4	1.4	1.4	0.9	0.9
68°	1.4	1.4	1.4	0.9	0.9	0.9
68.5°	1.4	1.4	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°	0.9	0.9	0.9	0.9	0.5	0.5
71.5°	0.9	0.9	0.9	0.5	0.5	0.5
72°	0.9	0.9	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	0.0
76.5°	0.5	0.5	0.5	0.5	0.0	0.0
77°	0.5	0.5	0.5	0.5	0.0	0.0
77.5°	0.5	0.5	0.5	0.0	0.0	0.0
78°	0.5	0.5	0.0	0.0	0.0	0.0
78.5°	0.5	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: P776571

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-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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Scaled Data Report





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

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Scaled Data Report



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21.5°	4218.1	4232.9	4234.3	4236.7	4159.0	4057.2	3988.4	3920.6	3880.6	3804.8	3872.7
22°	4143.7	4158.6	4163.2	4174.8	4097.2	3988.9	3909.4	3834.6	3798.8	3728.6	3795.1



44°	688.0	703.8	692.6	695.4	701.0	671.7	617.3	593.6	615.5	627.1	606.6
44.5°	641.0	652.7	644.8	647.1	654.5	631.7	582.5	560.6	577.3	588.5	569.9



66.5°	1.4	1.4	1.4	1.4	1.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4
67°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



89°	0.0	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	0.0

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21.5°	3849.4	3909.4	3965.2	4112.1	4218.5	4218.1
22°	3766.7	3831.3	3892.7	4044.2	4148.8	4143.7



44°	586.6	594.5	632.7	655.0	680.5	688.0
44.5°	553.6	560.1	592.2	611.3	632.2	641.0

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

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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)