

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: P776596

Luminaire Tested: HCDJBL54050CSD-HCD4TRC-5000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776596
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL54050CSD-HCD4TRC-5000lm-3000K
Description: 4 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

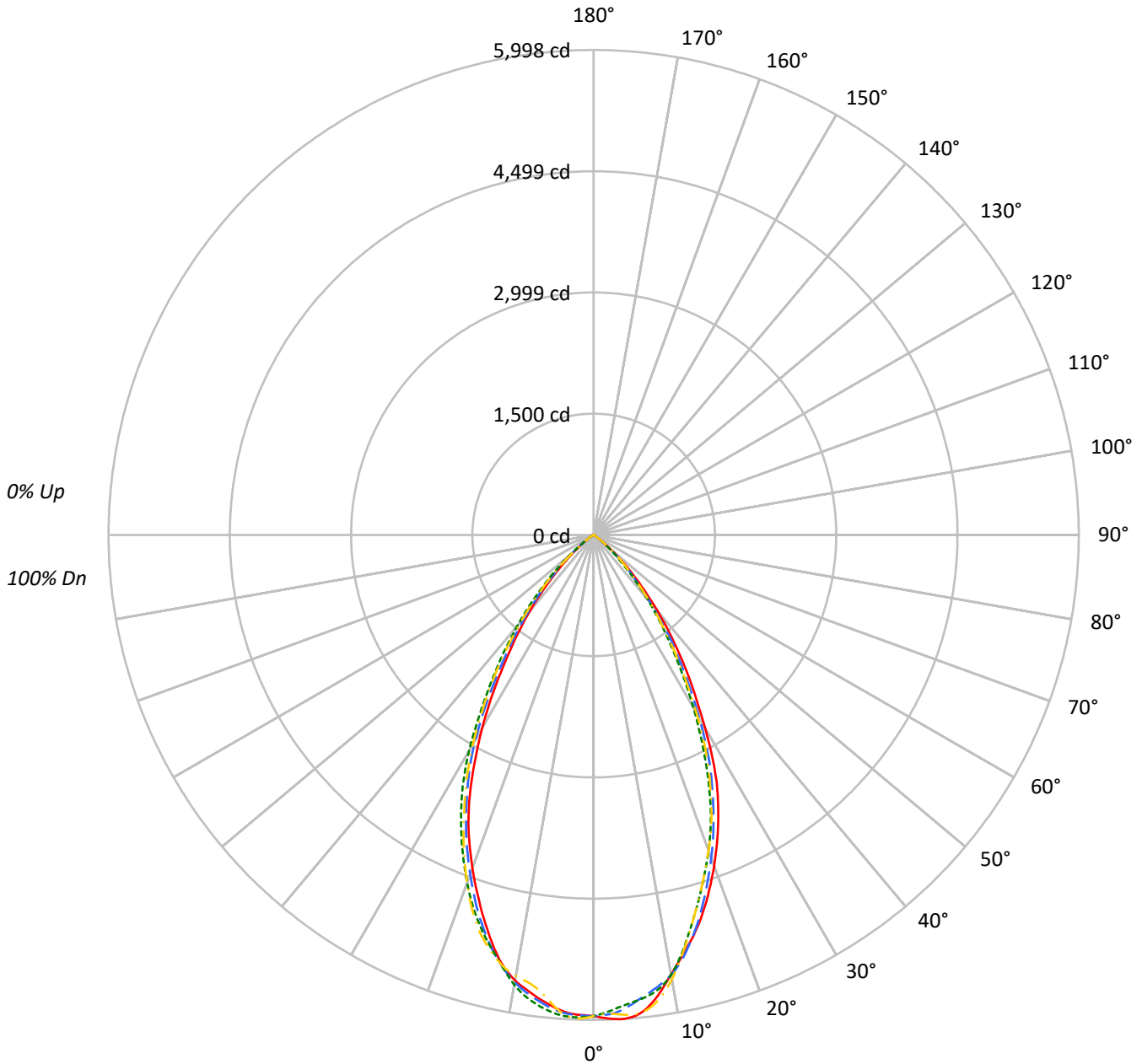
Lumens per Lamp: N/A
Luminaire Lumens: 5413.8 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.87 / 0.88
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					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					100			
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86					86			
3	102	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80					80			
4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74					74			
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69					69			
6	87	78	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64					64			
7	82	73	66	62	81	72	66	62	71	65	62	69	65	61	68	64	61	60					60			
8	78	68	62	58	77	68	62	58	67	61	57	66	61	57	65	60	57	56					56			
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57	53	52					52			
10	71	61	55	51	70	60	54	51	59	54	50	59	54	50	58	53	50	49					49			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	748932	748932	748932	748932
5°	754029	731883	739463	748685
10°	705139	705484	715056	722059
15°	650977	630939	659876	671993
20°	583009	556184	587121	612634
25°	505103	466250	505561	538596
30°	399816	358007	399743	447291
35°	295162	255678	291598	337442
40°	201562	168573	199804	240891
45°	118534	92068	116700	150623
50°	50415	40939	54311	73068
55°	10203	9983	17224	21524
60°	1636	1988	1863	2567
65°	983	1102	983	1519
70°	515	699	699	846
75°	243	438	438	681
80°	0	362	362	362
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°
 Vertical Angle: 45°
 Luminance: 150623 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	550.9	10.2
10°-20°	1400.5	25.9
20°-30°	1642.9	30.3
30°-40°	1202.7	22.2
40°-50°	530.6	9.8
50°-60°	81.0	1.5
60°-70°	4.1	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°	3594.3	66.4
0°-40°	4797.0	88.6
0°-60°	5408.6	99.9
0°-90°	5413.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5413.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5951	5951	5951	5951	5951	
5°	5969	5793	5853	5926	5969	555
15°	4996	4843	5065	5158	4996	1391
25°	3638	3358	3641	3879	3638	1647
35°	1921	1664	1898	2196	1921	1201
45°	666	517	656	846	666	524
55°	46	46	78	98	46	67
65°	3	4	3	5	3	3
75°	0	1	1	1	0	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°	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0
0.5°	5962.1	5954.2	5946.3	5945.0	5936.1	5936.1	5940.8	5944.0	5947.3	5948.7	5949.6
1°	5971.9	5957.0	5942.6	5935.2	5923.6	5924.5	5932.4	5938.0	5942.6	5945.9	5949.1
1.5°	5980.7	5960.3	5937.5	5922.6	5907.8	5915.2	5926.8	5935.2	5939.4	5942.2	5947.3
2°	5988.6	5962.1	5930.1	5906.8	5890.1	5905.9	5926.8	5937.1	5936.1	5937.5	5943.6
2.5°	5994.7	5961.2	5918.5	5885.5	5872.0	5898.0	5931.0	5941.2	5930.1	5929.2	5938.9
3°	5997.9	5956.1	5903.6	5862.2	5853.4	5893.4	5938.0	5945.4	5921.7	5916.6	5931.9
3.5°	5997.5	5946.8	5883.6	5837.1	5836.7	5890.1	5946.8	5949.1	5908.2	5899.9	5924.0
4°	5992.8	5932.4	5859.9	5810.2	5820.9	5887.8	5953.3	5949.6	5892.4	5879.4	5912.9
4.5°	5983.5	5912.4	5832.5	5785.1	5806.9	5885.0	5956.1	5946.8	5874.3	5854.8	5898.0
5°	5968.7	5888.3	5804.6	5761.4	5793.4	5879.9	5953.3	5938.0	5853.4	5827.4	5880.4
5.5°	5946.8	5860.4	5777.2	5739.1	5780.0	5871.1	5944.5	5925.4	5830.6	5797.2	5859.9
6°	5919.4	5828.3	5750.2	5720.0	5766.0	5857.1	5928.7	5906.8	5807.4	5768.4	5838.1
6.5°	5884.1	5794.4	5724.2	5701.9	5750.2	5839.9	5906.8	5884.5	5782.8	5739.1	5815.3
7°	5842.2	5757.2	5700.0	5684.2	5731.2	5815.8	5878.5	5856.2	5758.6	5714.0	5791.6
7.5°	5795.8	5717.2	5673.5	5666.6	5709.3	5784.2	5844.6	5824.6	5733.0	5688.4	5767.0
8°	5745.1	5674.9	5647.5	5647.5	5683.3	5747.0	5800.9	5787.4	5706.5	5665.6	5740.9
8.5°	5691.7	5627.5	5620.1	5625.7	5652.2	5704.7	5752.6	5747.0	5680.5	5646.1	5714.4
9°	5633.1	5580.6	5590.8	5600.1	5614.1	5653.6	5698.6	5702.4	5653.1	5628.5	5684.2
9.5°	5574.6	5532.7	5558.8	5570.4	5570.8	5597.8	5641.5	5652.6	5626.1	5610.3	5652.6
10°	5517.9	5484.4	5523.4	5536.0	5520.6	5537.4	5576.9	5599.7	5595.5	5590.8	5617.3
10.5°	5463.0	5435.1	5483.9	5494.6	5465.8	5470.5	5510.9	5542.0	5561.5	5569.9	5581.5
11°	5410.0	5385.9	5440.2	5443.5	5407.3	5400.7	5439.3	5481.6	5522.5	5546.7	5541.6
11.5°	5358.5	5334.3	5390.1	5392.8	5339.4	5331.5	5367.3	5416.5	5480.2	5517.4	5499.7
12°	5306.9	5281.8	5335.7	5332.9	5270.2	5249.7	5287.8	5348.2	5432.8	5483.9	5455.1
12.5°	5256.2	5227.9	5279.9	5266.0	5200.0	5174.4	5214.4	5277.6	5380.8	5443.0	5405.9
13°	5206.9	5174.4	5219.5	5198.1	5129.3	5106.6	5138.2	5206.9	5320.8	5395.6	5355.2
13.5°	5157.7	5116.3	5159.1	5134.0	5057.3	5025.7	5063.3	5135.4	5260.4	5345.4	5302.7
14°	5105.6	5056.8	5096.3	5062.4	4984.3	4954.6	4988.5	5062.9	5198.6	5287.8	5248.3
14.5°	5051.3	4996.0	5032.7	4991.8	4912.3	4885.3	4917.9	4993.2	5133.1	5227.9	5191.6
15°	4996.4	4934.1	4965.7	4920.7	4842.6	4812.4	4842.6	4923.5	5064.7	5166.1	5131.7
15.5°	4938.8	4869.1	4898.4	4848.6	4772.4	4740.8	4773.3	4853.7	4998.3	5103.3	5071.2
16°	4879.8	4804.9	4828.6	4776.6	4702.7	4672.5	4699.9	4785.9	4930.0	5036.4	5009.9
16.5°	4815.6	4737.1	4758.9	4706.0	4632.1	4604.6	4630.2	4720.8	4863.5	4969.5	4947.2
17°	4754.3	4670.2	4686.9	4633.9	4565.1	4534.9	4560.5	4651.1	4796.6	4902.1	4882.6
17.5°	4688.8	4600.5	4615.8	4562.4	4495.9	4468.0	4494.0	4584.7	4725.5	4832.8	4815.2
18°	4623.2	4531.7	4542.8	4491.2	4426.2	4398.8	4421.1	4519.1	4658.1	4763.1	4747.8
18.5°	4556.3	4460.6	4470.3	4419.7	4356.9	4331.4	4352.3	4452.7	4592.1	4690.2	4678.1
19°	4489.9	4391.3	4395.0	4346.7	4289.6	4264.0	4284.4	4384.4	4522.9	4620.4	4608.4
19.5°	4421.5	4320.2	4324.4	4275.1	4221.2	4199.4	4219.8	4319.8	4454.1	4547.0	4537.3
20°	4353.2	4251.9	4250.0	4204.5	4152.9	4132.5	4150.6	4253.8	4383.9	4474.5	4466.2
20.5°	4284.0	4181.3	4177.5	4132.9	4085.1	4066.5	4083.2	4185.9	4314.6	4401.1	4394.1
21°	4214.7	4108.8	4104.1	4060.4	4012.6	3997.7	4016.3	4119.9	4244.0	4329.1	4321.2

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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°	4003.7	3888.0	3871.7	3827.6	3784.4	3780.7	3806.7	3915.0	4032.1	4111.1	4104.6
23°	3932.6	3810.9	3792.3	3747.2	3702.6	3701.2	3729.1	3841.1	3961.4	4039.1	4033.5
23.5°	3859.7	3735.1	3712.3	3664.0	3616.6	3625.4	3652.4	3766.3	3883.8	3962.8	3957.7
24°	3785.8	3657.5	3633.3	3579.4	3530.2	3543.6	3571.5	3685.4	3804.4	3886.2	3879.2
24.5°	3713.3	3580.8	3552.9	3491.6	3443.7	3461.8	3490.2	3603.1	3721.2	3807.2	3802.5
25°	3637.5	3500.9	3473.0	3405.6	3357.7	3380.1	3409.3	3520.9	3640.8	3727.2	3729.1
25.5°	3562.7	3423.3	3393.1	3317.3	3271.3	3297.8	3328.0	3439.1	3553.4	3646.4	3648.2
26°	3485.6	3344.7	3312.7	3228.1	3180.7	3207.2	3246.7	3356.8	3465.6	3565.0	3572.0
26.5°	3404.2	3263.4	3230.9	3138.9	3089.1	3122.1	3164.4	3274.6	3378.2	3484.2	3495.8
27°	3315.9	3178.4	3148.1	3050.6	2999.0	3029.6	3077.5	3185.8	3290.4	3402.8	3419.6
27.5°	3226.2	3094.7	3059.4	2963.6	2908.8	2939.0	2996.2	3093.8	3197.4	3322.0	3343.3
28°	3134.2	3005.9	2970.2	2876.7	2817.3	2848.9	2905.1	2999.9	3104.5	3241.1	3266.7
28.5°	3038.9	2914.4	2881.9	2788.9	2727.6	2757.8	2815.9	2907.9	3015.7	3153.3	3183.5
29°	2941.8	2823.3	2791.7	2703.4	2638.8	2666.7	2726.2	2814.5	2927.4	3065.4	3098.0
29.5°	2844.2	2729.4	2700.6	2617.9	2551.0	2575.6	2633.7	2726.6	2839.6	2976.7	3009.7
30°	2751.3	2636.0	2612.3	2532.8	2463.6	2484.0	2539.3	2633.7	2750.8	2886.5	2920.0
30.5°	2660.2	2541.7	2524.5	2448.3	2375.8	2395.3	2450.1	2542.6	2662.5	2795.9	2829.3
31°	2570.9	2445.0	2436.6	2360.4	2291.2	2305.6	2359.0	2456.2	2573.3	2708.5	2737.8
31.5°	2484.5	2353.9	2351.6	2275.8	2206.6	2219.1	2270.3	2371.1	2484.5	2622.1	2648.1
32°	2398.1	2266.5	2267.5	2191.7	2123.4	2139.7	2182.4	2284.7	2399.0	2535.6	2557.9
32.5°	2317.7	2180.1	2184.7	2106.2	2042.5	2056.9	2100.6	2202.9	2311.2	2451.0	2468.2
33°	2239.6	2096.0	2103.9	2021.6	1962.1	1977.5	2016.5	2120.6	2224.7	2366.0	2380.4
33.5°	2160.1	2012.8	2023.9	1944.0	1883.6	1903.6	1936.6	2040.2	2139.7	2284.7	2288.8
34°	2079.7	1933.3	1944.5	1866.4	1808.8	1822.2	1858.0	1962.1	2056.9	2203.8	2201.0
34.5°	1998.8	1856.6	1867.8	1789.2	1735.3	1748.4	1780.4	1884.5	1975.6	2123.4	2116.4
35°	1921.2	1780.9	1789.7	1716.3	1664.2	1681.4	1705.6	1808.8	1898.0	2043.9	2034.6
35.5°	1845.5	1707.9	1712.1	1657.7	1594.1	1608.0	1633.1	1736.3	1823.2	1963.5	1951.4
36°	1767.9	1665.2	1661.0	1586.6	1527.1	1532.7	1563.4	1662.4	1753.0	1884.5	1872.0
36.5°	1695.4	1589.4	1583.4	1516.0	1461.1	1468.1	1495.5	1593.6	1682.4	1806.0	1794.4
37°	1627.1	1513.2	1505.3	1444.9	1395.6	1399.8	1428.1	1523.0	1613.1	1728.8	1721.4
37.5°	1559.2	1437.0	1426.8	1374.2	1331.9	1333.3	1364.9	1452.8	1547.1	1654.5	1647.0
38°	1491.4	1361.2	1348.7	1308.7	1268.3	1270.1	1302.7	1389.6	1478.3	1579.7	1576.9
38.5°	1423.0	1296.6	1277.6	1244.1	1205.1	1207.9	1241.3	1326.4	1413.7	1509.9	1507.2
39°	1355.2	1234.8	1214.8	1178.6	1144.2	1149.8	1181.8	1258.5	1346.8	1439.8	1438.8
39.5°	1290.1	1173.5	1151.2	1115.4	1083.8	1091.7	1121.9	1197.6	1281.8	1371.9	1370.1
40°	1226.9	1111.7	1090.3	1053.1	1026.1	1035.0	1064.7	1138.1	1216.2	1303.6	1305.0
40.5°	1164.2	1052.6	1027.1	990.8	966.2	980.6	1009.9	1077.7	1156.3	1238.5	1240.9
41°	1101.4	996.4	971.3	931.8	911.8	926.7	956.4	1020.1	1093.1	1173.9	1178.1
41.5°	1041.9	940.2	915.1	875.1	856.1	875.1	905.3	963.9	1032.7	1111.2	1115.4
42°	982.5	885.8	860.7	819.8	803.1	825.4	855.1	910.0	975.0	1048.9	1056.4
42.5°	925.8	832.8	805.9	766.4	751.0	776.6	807.3	857.4	919.3	989.9	997.3
43°	870.5	779.4	757.1	716.2	700.8	729.6	762.2	805.4	865.3	930.9	940.6
43.5°	817.5	728.7	708.3	666.9	653.0	683.6	716.6	756.6	811.0	874.2	885.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	666.0	587.4	572.1	529.8	517.3	557.7	590.2	619.5	655.7	717.1	732.9
45.5°	618.6	542.8	530.3	488.9	477.3	519.6	550.7	576.3	607.4	669.2	685.0
46°	572.1	501.5	490.8	449.4	443.4	481.9	512.6	535.4	561.4	622.8	637.6
46.5°	526.1	461.5	453.1	412.7	409.4	448.5	475.9	496.8	515.4	578.6	593.0
47°	481.5	422.9	416.9	378.3	375.0	415.0	443.4	459.2	473.6	535.4	551.6
47.5°	438.7	386.2	382.0	345.8	341.1	381.6	411.3	425.7	439.6	494.5	510.3
48°	399.7	350.9	349.0	316.0	307.7	348.1	378.8	392.2	405.7	459.6	469.9
48.5°	360.6	317.4	317.9	288.1	280.7	315.1	346.2	358.8	371.8	424.8	434.1
49°	323.9	286.3	288.1	261.2	255.6	286.7	313.7	325.3	337.4	389.5	398.3
49.5°	290.0	256.5	260.3	237.0	231.9	259.3	284.0	296.0	303.9	354.6	362.5
50°	257.5	228.2	232.8	214.2	209.1	233.3	257.0	267.7	277.4	319.7	327.2
50.5°	228.2	201.2	207.7	192.4	187.8	208.7	230.5	242.1	252.8	290.0	296.5
51°	200.3	176.1	184.0	171.0	167.8	185.0	205.9	218.4	229.1	262.1	267.7
51.5°	173.8	156.2	160.8	153.4	148.7	163.1	181.7	195.2	206.8	236.6	238.9
52°	153.4	136.2	141.7	135.7	130.1	142.7	160.3	173.3	185.9	212.4	212.4
52.5°	133.4	116.2	123.2	118.0	112.0	123.2	138.5	152.4	165.9	189.1	186.8
53°	113.4	96.2	104.6	99.9	95.3	104.6	119.0	132.9	147.3	167.3	163.6
53.5°	93.4	76.2	86.0	82.7	79.5	87.8	100.8	113.9	127.8	146.9	141.3
54°	73.4	61.8	70.6	67.9	66.0	72.5	83.7	96.7	109.7	127.3	120.8
54.5°	59.0	49.3	57.2	54.8	55.8	61.3	68.8	80.4	92.9	108.3	102.2
55°	46.5	36.7	44.6	42.3	45.5	50.2	57.6	66.5	78.5	91.6	84.6
55.5°	33.9	25.6	32.5	30.7	35.3	39.0	46.9	55.8	67.4	76.2	69.2
56°	23.2	17.2	22.3	21.4	25.1	27.9	36.2	45.1	56.7	64.1	58.6
56.5°	15.3	14.9	15.3	15.3	15.3	17.2	25.6	34.4	45.5	52.5	47.4
57°	13.5	13.0	13.9	13.9	13.0	13.0	14.9	24.2	34.4	40.9	36.7
57.5°	11.6	10.7	12.1	12.5	11.6	11.6	11.6	13.5	23.7	29.3	26.0
58°	9.8	8.8	10.7	11.2	10.7	10.2	10.2	10.7	12.5	17.7	15.3
58.5°	8.4	7.9	9.3	9.8	9.8	9.8	9.3	9.3	10.2	12.5	11.6
59°	7.4	7.4	8.4	8.8	8.8	8.8	8.4	8.4	8.8	10.2	10.2
59.5°	7.0	7.0	7.9	8.4	8.4	8.4	7.9	7.9	7.9	8.8	9.3
60°	6.5	6.0	7.0	7.4	7.9	7.4	7.4	7.0	7.4	7.9	8.4
60.5°	6.0	5.6	6.5	7.0	7.4	7.0	6.5	6.5	7.0	7.4	7.9
61°	5.6	5.6	6.0	6.5	6.5	6.5	6.0	6.0	6.0	7.0	7.0
61.5°	5.1	5.1	5.6	6.0	6.5	6.0	5.6	5.6	5.6	6.0	6.5
62°	4.6	4.6	5.1	5.6	6.0	5.6	5.6	5.1	5.1	5.6	6.0
62.5°	4.2	4.2	5.1	5.6	5.6	5.1	5.1	5.1	5.1	5.6	5.6
63°	4.2	4.2	4.6	5.1	5.1	5.1	4.6	4.6	4.6	5.1	5.1
63.5°	3.7	3.7	4.2	4.6	4.6	4.6	4.2	4.2	4.2	4.6	5.1
64°	3.7	3.7	4.2	4.2	4.6	4.2	4.2	4.2	4.2	4.2	4.6
64.5°	3.3	3.3	3.7	4.2	4.2	4.2	3.7	3.7	3.7	4.2	4.2
65°	3.3	3.3	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.7	4.2
65.5°	2.8	2.8	3.3	3.7	3.7	3.7	3.3	3.3	3.3	3.7	3.7
66°	2.8	2.8	3.3	3.3	3.3	3.3	3.3	2.8	2.8	3.3	3.3



TEST NUMBER: P776596

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	2.3	2.3	2.3	2.8	2.8	2.8	2.8	2.3	2.3	2.8	2.8
68°	1.9	1.9	2.3	2.8	2.8	2.3	2.3	2.3	2.3	2.3	2.8
68.5°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
69°	1.9	1.9	1.9	2.3	2.3	2.3	1.9	1.9	1.9	2.3	2.3
69.5°	1.4	1.4	1.9	2.3	2.3	1.9	1.9	1.9	1.9	1.9	2.3
70°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
70.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.9	1.9
71°	1.4	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.9	1.9
71.5°	0.9	0.9	1.4	1.4	1.9	1.4	1.4	1.4	1.4	1.4	1.9
72°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
73°	0.9	0.9	0.9	1.4	1.4	1.4	0.9	0.9	0.9	1.4	1.4
73.5°	0.9	0.9	0.9	1.4	1.4	1.4	0.9	0.9	0.9	0.9	1.4
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°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
75°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
75.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
76°	0.5	0.5	0.5	0.9	0.9	0.9	0.9	0.5	0.5	0.9	0.9
76.5°	0.5	0.5	0.5	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.9
77°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	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	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5
81°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5
81.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.5
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: P776596
CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-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: P776596

CATALOG NUMBER: HCDJBL4050CSD-HCD4TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	5951.0	5951.0	5951.0	5951.0	5951.0	5951.0
0.5°	5956.6	5956.1	5960.3	5964.9	5965.4	5962.1
1°	5959.8	5963.1	5970.1	5976.6	5977.5	5971.9
1.5°	5961.7	5968.2	5976.1	5983.5	5987.2	5980.7
2°	5963.1	5971.0	5976.6	5985.9	5994.2	5988.6
2.5°	5964.0	5970.5	5971.4	5981.2	5996.5	5994.7
3°	5963.5	5967.3	5958.0	5966.8	5993.8	5997.9
3.5°	5963.1	5961.7	5937.1	5945.0	5984.5	5997.5
4°	5962.6	5952.9	5910.1	5912.0	5969.1	5992.8
4.5°	5960.3	5941.2	5876.2	5872.9	5947.3	5983.5
5°	5956.6	5926.4	5835.7	5829.2	5918.5	5968.7
5.5°	5952.4	5908.7	5794.8	5782.3	5885.0	5946.8
6°	5945.9	5888.7	5753.5	5738.1	5852.5	5919.4
6.5°	5934.7	5867.8	5713.5	5697.2	5818.5	5884.1
7°	5918.5	5845.0	5679.1	5661.9	5778.1	5842.2
7.5°	5897.1	5820.9	5651.2	5632.2	5740.5	5795.8
8°	5866.9	5793.4	5627.5	5607.6	5700.5	5745.1
8.5°	5830.6	5764.2	5607.6	5589.0	5659.1	5691.7
9°	5789.7	5730.2	5589.4	5570.8	5616.4	5633.1
9.5°	5742.3	5692.1	5575.5	5554.1	5575.0	5574.6
10°	5688.0	5650.3	5557.4	5536.9	5531.8	5517.9
10.5°	5635.0	5603.8	5537.8	5518.8	5489.0	5463.0
11°	5578.3	5555.5	5516.0	5497.4	5444.9	5410.0
11.5°	5519.3	5504.8	5490.4	5472.8	5402.1	5358.5
12°	5463.9	5454.7	5458.8	5443.0	5358.9	5306.9
12.5°	5410.5	5404.0	5425.4	5408.6	5315.7	5256.2
13°	5355.7	5353.3	5389.6	5373.8	5274.3	5206.9
13.5°	5301.3	5304.5	5350.1	5334.8	5229.3	5157.7
14°	5248.8	5255.3	5308.7	5293.9	5182.8	5105.6
14.5°	5195.8	5207.9	5266.4	5251.6	5134.4	5051.3
15°	5141.9	5157.7	5219.0	5206.0	5084.3	4996.4
15.5°	5088.4	5108.9	5170.2	5159.5	5029.9	4938.8
16°	5030.8	5056.8	5118.6	5108.0	4974.6	4879.8
16.5°	4974.1	5003.9	5066.1	5052.2	4917.9	4815.6
17°	4911.4	4947.6	5010.4	4994.6	4857.9	4754.3
17.5°	4850.5	4890.9	4949.9	4932.3	4796.1	4688.8
18°	4785.4	4831.0	4885.3	4866.8	4732.4	4623.2
18.5°	4720.8	4769.2	4820.7	4797.5	4664.1	4556.3
19°	4652.5	4704.1	4752.0	4725.0	4598.1	4489.9
19.5°	4585.1	4641.8	4682.7	4651.1	4530.3	4421.5
20°	4514.9	4574.4	4613.5	4578.6	4461.0	4353.2
20.5°	4447.1	4509.8	4538.2	4503.3	4390.9	4284.0
21°	4376.9	4440.6	4467.1	4427.1	4320.7	4214.7

TEST NUMBER: P776596

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	4170.1	4237.0	4247.7	4193.8	4103.7	4003.7
23°	4098.1	4167.8	4171.0	4115.7	4030.2	3932.6
23.5°	4026.0	4095.8	4093.0	4035.3	3952.1	3859.7
24°	3956.3	4024.6	4016.3	3951.7	3876.9	3785.8
24.5°	3885.2	3952.1	3936.8	3869.9	3797.9	3713.3
25°	3811.3	3878.7	3854.6	3789.0	3723.0	3637.5
25.5°	3739.8	3805.3	3776.5	3709.1	3641.2	3562.7
26°	3668.2	3730.9	3699.3	3631.5	3565.5	3485.6
26.5°	3592.4	3657.0	3620.8	3552.0	3486.5	3404.2
27°	3516.2	3581.8	3543.6	3474.9	3406.5	3315.9
27.5°	3440.5	3504.6	3464.2	3396.3	3319.6	3226.2
28°	3364.3	3423.7	3383.8	3316.4	3241.1	3134.2
28.5°	3288.5	3339.6	3303.8	3234.6	3155.1	3038.9
29°	3203.5	3255.5	3222.5	3154.2	3066.4	2941.8
29.5°	3115.6	3168.1	3142.1	3070.1	2978.5	2844.2
30°	3023.1	3078.0	3057.5	2984.6	2887.9	2751.3
30.5°	2928.8	2986.0	2969.2	2896.7	2793.1	2660.2
31°	2841.4	2891.1	2882.3	2808.9	2702.0	2570.9
31.5°	2744.3	2795.4	2793.6	2721.5	2608.1	2484.5
32°	2643.4	2703.4	2706.2	2636.9	2518.9	2398.1
32.5°	2555.1	2612.8	2616.5	2551.4	2430.6	2317.7
33°	2463.6	2525.4	2532.4	2469.6	2343.2	2239.6
33.5°	2372.0	2436.2	2441.3	2387.4	2261.0	2160.1
34°	2285.6	2356.2	2357.6	2304.2	2181.5	2079.7
34.5°	2203.3	2275.8	2277.2	2222.9	2103.9	1998.8
35°	2123.9	2196.4	2193.6	2143.4	2026.7	1921.2
35.5°	2045.8	2118.3	2113.2	2063.0	1952.8	1845.5
36°	1968.6	2041.6	2036.0	1984.4	1878.5	1767.9
36.5°	1891.5	1966.3	1958.4	1904.0	1806.9	1695.4
37°	1815.7	1890.6	1879.9	1825.0	1735.3	1627.1
37.5°	1740.9	1815.7	1807.8	1750.7	1659.1	1559.2
38°	1667.0	1740.0	1731.6	1678.2	1590.3	1491.4
38.5°	1594.1	1667.5	1651.7	1607.5	1522.5	1423.0
39°	1522.0	1600.6	1584.8	1536.4	1454.2	1355.2
39.5°	1453.2	1533.2	1517.8	1465.8	1385.9	1290.1
40°	1386.3	1466.3	1451.4	1394.7	1318.0	1226.9
40.5°	1320.8	1399.3	1384.5	1324.0	1253.9	1164.2
41°	1261.3	1332.4	1317.5	1257.6	1190.7	1101.4
41.5°	1197.2	1268.7	1251.1	1192.5	1128.9	1041.9
42°	1137.2	1206.5	1185.6	1129.3	1068.0	982.5
42.5°	1078.2	1143.3	1122.3	1068.9	1009.0	925.8
43°	1023.8	1081.5	1059.1	1009.0	949.9	870.5
43.5°	965.3	1020.6	997.8	948.5	891.4	817.5



TEST NUMBER: P776596

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	806.8	846.3	825.4	781.7	724.1	666.0
45.5°	753.3	791.5	770.1	729.2	672.0	618.6
46°	704.5	738.5	717.1	677.6	622.3	572.1
46.5°	655.3	686.9	666.9	628.3	573.5	526.1
47°	608.8	636.7	616.7	580.5	527.0	481.5
47.5°	561.9	587.9	568.8	534.0	481.5	438.7
48°	518.2	541.4	521.4	488.9	439.6	399.7
48.5°	475.4	496.3	477.8	447.5	400.1	360.6
49°	436.9	454.1	435.9	405.7	361.6	323.9
49.5°	398.7	413.2	396.0	366.7	325.3	290.0
50°	360.2	373.2	355.1	328.6	292.3	257.5
50.5°	322.1	336.0	319.7	293.3	259.3	228.2
51°	289.1	301.2	285.4	260.7	229.1	200.3
51.5°	257.9	268.2	254.2	229.6	201.7	173.8
52°	227.7	237.5	223.1	199.8	174.7	153.4
52.5°	200.3	209.1	195.7	173.8	154.3	133.4
53°	175.2	181.7	169.2	153.4	133.4	113.4
53.5°	151.0	158.0	149.2	132.5	112.9	93.4
54°	128.3	138.0	129.2	112.0	92.0	73.4
54.5°	108.7	118.0	109.2	91.6	71.6	59.0
55°	90.2	98.1	89.2	71.1	58.1	46.5
55.5°	73.4	77.6	69.2	57.2	45.1	33.9
56°	62.3	63.2	55.8	45.1	33.0	23.2
56.5°	51.1	50.7	44.2	32.5	21.8	15.3
57°	40.0	38.1	31.6	22.3	14.9	13.5
57.5°	28.8	27.4	21.8	15.3	13.5	11.6
58°	17.7	19.1	15.8	13.5	11.6	9.8
58.5°	13.5	16.7	14.4	12.1	9.8	8.4
59°	11.6	14.9	12.5	10.2	8.4	7.4
59.5°	10.7	12.5	11.2	8.8	7.4	7.0
60°	9.8	10.2	9.3	7.9	7.0	6.5
60.5°	8.8	9.3	8.8	7.4	6.5	6.0
61°	8.4	8.8	7.9	7.0	6.0	5.6
61.5°	7.4	7.9	7.4	6.5	5.6	5.1
62°	7.0	7.4	7.0	6.0	5.1	4.6
62.5°	6.5	7.0	6.5	5.6	4.6	4.2
63°	6.0	6.5	6.0	5.1	4.6	4.2
63.5°	5.6	6.0	5.6	4.6	4.2	3.7
64°	5.1	5.6	5.1	4.2	3.7	3.7
64.5°	5.1	5.1	4.6	4.2	3.7	3.3
65°	4.6	5.1	4.6	3.7	3.3	3.3
65.5°	4.2	4.6	4.2	3.7	3.3	2.8
66°	4.2	4.2	3.7	3.3	2.8	2.8



TEST NUMBER: P776596

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.3	3.7	3.3	2.8	2.3	2.3
68°	3.3	3.3	2.8	2.3	2.3	1.9
68.5°	2.8	3.3	2.8	2.3	1.9	1.9
69°	2.8	2.8	2.8	2.3	1.9	1.9
69.5°	2.3	2.8	2.3	1.9	1.9	1.4
70°	2.3	2.3	2.3	1.9	1.4	1.4
70.5°	2.3	2.3	2.3	1.9	1.4	1.4
71°	1.9	2.3	1.9	1.9	1.4	1.4
71.5°	1.9	1.9	1.9	1.4	1.4	0.9
72°	1.9	1.9	1.9	1.4	1.4	0.9
72.5°	1.9	1.9	1.4	1.4	0.9	0.9
73°	1.4	1.4	1.4	1.4	0.9	0.9
73.5°	1.4	1.4	1.4	0.9	0.9	0.9
74°	1.4	1.4	1.4	0.9	0.9	0.9
74.5°	1.4	1.4	1.4	0.9	0.9	0.5
75°	0.9	1.4	0.9	0.9	0.9	0.5
75.5°	0.9	0.9	0.9	0.9	0.5	0.5
76°	0.9	0.9	0.9	0.9	0.5	0.5
76.5°	0.9	0.9	0.9	0.5	0.5	0.5
77°	0.9	0.9	0.9	0.5	0.5	0.5
77.5°	0.9	0.9	0.9	0.5	0.5	0.5
78°	0.9	0.9	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	0.0
80°	0.5	0.5	0.5	0.5	0.0	0.0
80.5°	0.5	0.5	0.5	0.5	0.0	0.0
81°	0.5	0.5	0.5	0.5	0.0	0.0
81.5°	0.5	0.5	0.5	0.0	0.0	0.0
82°	0.5	0.5	0.5	0.0	0.0	0.0
82.5°	0.5	0.5	0.5	0.0	0.0	0.0
83°	0.5	0.5	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: P776596

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-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

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

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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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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Scaled Data Report





21.5°	4145.5	4036.7	4028.4	3983.8	3939.1	3928.9	3952.1	4053.5	4172.9	4254.7	4249.6
22°	4075.8	3962.4	3952.1	3905.7	3862.9	3855.9	3881.0	3986.1	4102.7	4183.6	4177.1



44°	765.4	679.9	660.9	618.6	607.0	640.4	672.9	709.2	757.1	819.8	833.3
44.5°	714.3	633.0	615.8	573.0	560.9	598.1	630.7	663.2	705.9	767.8	781.7



66.5°	2.3	2.3	2.8	3.3	3.3	3.3	2.8	2.8	2.8	3.3	3.3
67°	2.3	2.3	2.8	2.8	3.3	2.8	2.8	2.8	2.8	2.8	3.3



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°	4307.7	4373.7	4394.6	4350.4	4249.1	4145.5
22°	4237.5	4304.4	4320.2	4273.7	4178.5	4075.8



44°	910.9	961.5	938.3	891.4	833.3	765.4
44.5°	857.4	903.5	882.1	836.1	779.4	714.3

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66.5°	3.7	4.2	3.7	3.3	2.8	2.3
67°	3.7	3.7	3.3	2.8	2.3	2.3

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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)