

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: P776597

Luminaire Tested: HCDJBL54050CSD-HCD4TRC-5000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776597
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: HCDJBS4050CSD-HCD4TRC-5000lm-3500K
Description: 4 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

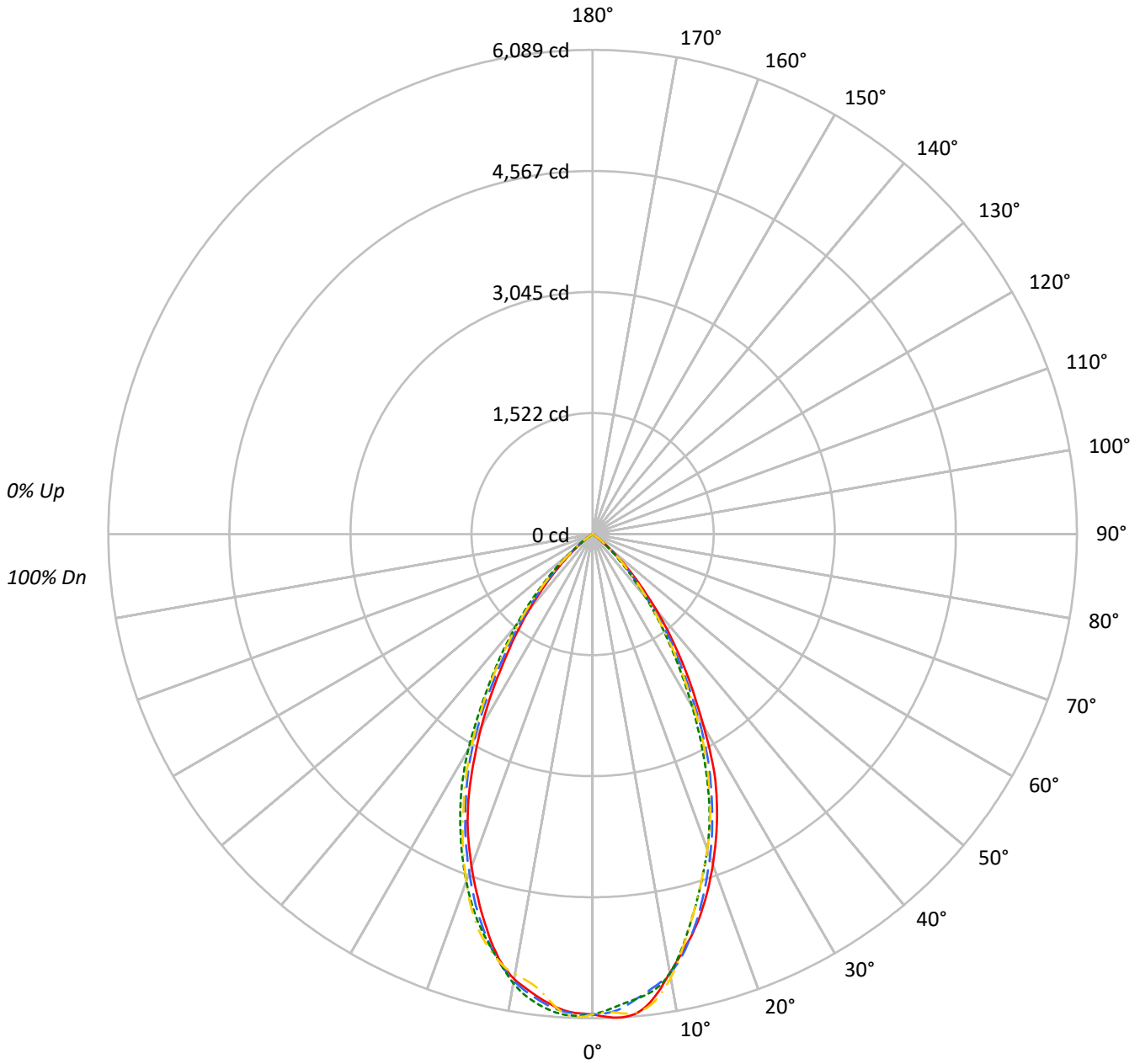
Lumens per Lamp: N/A
Luminaire Lumens: 5496.3 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.87 / 0.88
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	760347	760347	760347	760347
5°	765512	743051	750732	760093
10°	715886	716244	725956	733062
15°	660905	640554	669935	682234
20°	591902	564661	596067	621982
25°	512810	473359	513268	546802
30°	405905	363457	405832	454107
35°	299664	259580	296038	342574
40°	204634	171152	202859	244555
45°	120331	93457	118480	152919
50°	51179	41566	55153	74184
55°	10356	10137	17487	21853
60°	1661	2014	1888	2618
65°	983	1132	983	1548
70°	515	699	699	883
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: 152919 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.3	10.2
10°-20°	1421.9	25.9
20°-30°	1667.9	30.3
30°-40°	1221.0	22.2
40°-50°	538.7	9.8
50°-60°	82.3	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°	3649.1	66.4
0°-40°	4870.1	88.6
0°-60°	5491.1	99.9
0°-90°	5496.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5496.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	6042	6042	6042	6042	6042	
5°	6060	5882	5943	6017	6060	563
15°	5073	4916	5142	5236	5073	1413
25°	3693	3409	3696	3938	3693	1672
35°	1950	1690	1927	2230	1950	1220
45°	676	525	666	859	676	532
55°	47	46	80	100	47	68
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°	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7
0.5°	6053.0	6045.0	6037.0	6035.6	6026.6	6026.6	6031.3	6034.6	6037.9	6039.4	6040.3
1°	6062.9	6047.8	6033.2	6025.7	6013.9	6014.8	6022.8	6028.5	6033.2	6036.5	6039.8
1.5°	6071.9	6051.1	6028.0	6012.9	5997.8	6005.4	6017.2	6025.7	6029.9	6032.7	6037.9
2°	6079.9	6053.0	6020.5	5996.9	5979.9	5995.9	6017.2	6027.6	6026.6	6028.0	6034.2
2.5°	6086.1	6052.1	6008.7	5975.2	5961.5	5987.9	6021.4	6031.8	6020.5	6019.5	6029.4
3°	6089.4	6046.9	5993.6	5951.6	5942.6	5983.2	6028.5	6036.1	6012.0	6006.8	6022.4
3.5°	6088.9	6037.5	5973.3	5926.1	5925.6	5979.9	6037.5	6039.8	5998.3	5989.8	6014.3
4°	6084.2	6022.8	5949.2	5898.7	5909.6	5977.5	6044.1	6040.3	5982.3	5969.1	6003.0
4.5°	6074.7	6002.6	5921.4	5873.3	5895.4	5974.7	6046.9	6037.5	5963.9	5944.0	5987.9
5°	6059.6	5978.0	5893.1	5849.2	5881.8	5969.5	6044.1	6028.5	5942.6	5916.2	5970.0
5.5°	6037.5	5949.7	5865.3	5826.6	5868.1	5960.6	6035.1	6015.8	5919.5	5885.5	5949.2
6°	6009.6	5917.2	5837.9	5807.2	5853.9	5946.4	6019.1	5996.9	5895.9	5856.3	5927.1
6.5°	5973.8	5882.7	5811.5	5788.8	5837.9	5928.9	5996.9	5974.2	5870.9	5826.6	5903.9
7°	5931.3	5845.0	5786.9	5770.9	5818.5	5904.4	5968.1	5945.5	5846.4	5801.1	5879.9
7.5°	5884.1	5804.4	5760.0	5753.0	5796.4	5872.3	5933.7	5913.4	5820.4	5775.1	5854.9
8°	5832.7	5761.4	5733.6	5733.6	5769.9	5834.6	5889.3	5875.6	5793.5	5752.0	5828.4
8.5°	5778.4	5713.3	5705.8	5711.4	5738.3	5791.6	5840.2	5834.6	5767.1	5732.2	5801.6
9°	5719.0	5665.7	5676.0	5685.5	5699.6	5739.7	5785.5	5789.3	5739.3	5714.3	5770.9
9.5°	5659.5	5617.1	5643.5	5655.3	5655.8	5683.1	5727.5	5738.8	5711.9	5695.9	5738.8
10°	5602.0	5568.0	5607.6	5620.4	5604.8	5621.8	5661.9	5685.0	5680.8	5676.0	5702.9
10.5°	5546.3	5518.0	5567.5	5578.4	5549.1	5553.8	5594.9	5626.5	5646.3	5654.8	5666.6
11°	5492.5	5468.0	5523.2	5526.5	5489.7	5483.1	5522.2	5565.2	5606.7	5631.2	5626.0
11.5°	5440.1	5415.6	5472.2	5475.1	5420.8	5412.8	5449.1	5499.1	5563.8	5601.5	5583.6
12°	5387.8	5362.3	5417.0	5414.2	5350.5	5329.7	5368.4	5429.8	5515.6	5567.5	5538.3
12.5°	5336.3	5307.6	5360.4	5346.2	5279.2	5253.3	5293.9	5358.0	5462.8	5526.0	5488.3
13°	5286.3	5253.3	5299.1	5277.4	5207.5	5184.4	5216.5	5286.3	5401.9	5477.9	5436.8
13.5°	5236.3	5194.3	5237.7	5212.2	5134.4	5102.3	5140.5	5213.7	5340.6	5426.9	5383.5
14°	5183.5	5133.9	5174.0	5139.6	5060.3	5030.1	5064.6	5140.1	5277.8	5368.4	5328.3
14.5°	5128.3	5072.1	5109.4	5067.9	4987.2	4959.8	4992.8	5069.3	5211.3	5307.6	5270.8
15°	5072.6	5009.4	5041.4	4995.7	4916.4	4885.7	4916.4	4998.5	5141.9	5244.8	5209.9
15.5°	5014.1	4943.3	4973.0	4922.5	4845.2	4813.1	4846.1	4927.7	5074.5	5181.1	5148.5
16°	4954.2	4878.2	4902.3	4849.4	4774.4	4743.7	4771.6	4858.8	5005.1	5113.2	5086.3
16.5°	4889.0	4809.3	4831.5	4777.7	4702.7	4674.8	4700.8	4792.8	4937.6	5045.2	5022.6
17°	4826.8	4741.4	4758.3	4704.6	4634.7	4604.1	4630.0	4722.0	4869.7	4976.8	4957.0
17.5°	4760.2	4670.6	4686.2	4631.9	4564.4	4536.1	4562.5	4654.5	4797.5	4906.5	4888.6
18°	4693.7	4600.8	4612.1	4559.7	4493.7	4465.8	4488.5	4588.0	4729.1	4835.7	4820.2
18.5°	4625.8	4528.6	4538.5	4487.1	4423.4	4397.4	4418.6	4520.6	4662.1	4761.7	4749.4
19°	4558.3	4458.3	4462.0	4413.0	4354.9	4329.0	4349.7	4451.2	4591.8	4690.9	4678.6
19.5°	4488.9	4386.1	4390.3	4340.3	4285.6	4263.4	4284.2	4385.6	4522.0	4616.3	4606.4
20°	4419.6	4316.7	4314.8	4268.6	4216.2	4195.5	4213.9	4318.6	4450.7	4542.7	4534.2
20.5°	4349.3	4245.0	4241.2	4195.9	4147.3	4128.5	4145.4	4249.7	4380.4	4468.2	4461.1
21°	4279.0	4171.4	4166.7	4122.3	4073.7	4058.6	4077.5	4182.7	4308.7	4395.0	4387.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	4064.8	3947.3	3930.8	3885.9	3842.1	3838.3	3864.7	3974.6	4093.5	4173.8	4167.2
23°	3992.6	3869.0	3850.1	3804.3	3759.0	3757.6	3785.9	3899.6	4021.8	4100.6	4095.0
23.5°	3918.5	3792.1	3768.9	3719.9	3671.7	3680.7	3708.1	3823.7	3943.0	4023.2	4018.1
24°	3843.5	3713.3	3688.7	3634.0	3584.0	3597.7	3626.0	3741.6	3862.4	3945.4	3938.3
24.5°	3769.9	3635.4	3607.1	3544.8	3496.2	3514.6	3543.4	3658.1	3777.9	3865.2	3860.5
25°	3693.0	3554.3	3525.9	3457.5	3408.9	3431.6	3461.3	3574.5	3696.3	3784.0	3785.9
25.5°	3617.0	3475.5	3444.8	3367.9	3321.2	3348.1	3378.7	3491.5	3607.6	3701.9	3703.8
26°	3538.7	3395.7	3363.2	3277.3	3229.2	3256.1	3296.2	3408.0	3518.4	3619.4	3626.4
26.5°	3456.1	3313.2	3280.1	3186.7	3136.2	3169.7	3212.7	3324.5	3429.7	3537.3	3549.1
27°	3366.5	3226.8	3196.1	3097.1	3044.7	3075.8	3124.4	3234.4	3340.5	3454.7	3471.7
27.5°	3275.4	3141.9	3106.0	3008.8	2953.1	2983.8	3041.9	3140.9	3246.2	3372.6	3394.3
28°	3182.0	3051.8	3015.4	2920.6	2860.2	2892.3	2949.4	3045.6	3151.8	3290.5	3316.5
28.5°	3085.3	2958.8	2925.8	2831.4	2769.1	2799.8	2858.8	2952.2	3061.7	3201.3	3232.0
29°	2986.6	2866.3	2834.2	2744.6	2679.0	2707.3	2767.7	2857.4	2972.0	3112.2	3145.2
29.5°	2887.6	2771.0	2741.8	2657.8	2589.8	2614.9	2673.8	2768.2	2882.8	3022.0	3055.5
30°	2793.2	2676.2	2652.1	2571.4	2501.1	2521.9	2578.0	2673.8	2792.7	2930.5	2964.5
30.5°	2700.7	2580.4	2563.0	2485.6	2412.0	2431.8	2487.5	2581.4	2703.1	2838.5	2872.5
31°	2610.1	2482.3	2473.8	2396.4	2326.1	2340.7	2395.0	2493.6	2612.5	2749.8	2779.5
31.5°	2522.4	2389.8	2387.4	2310.5	2240.2	2253.0	2304.9	2407.2	2522.4	2662.0	2688.5
32°	2434.6	2301.1	2302.0	2225.1	2155.8	2172.3	2215.7	2319.5	2435.6	2574.3	2596.9
32.5°	2353.0	2213.3	2218.0	2138.3	2073.7	2088.3	2132.6	2236.4	2346.4	2488.4	2505.9
33°	2273.7	2127.9	2135.9	2052.4	1992.0	2007.6	2047.2	2152.9	2258.6	2402.1	2416.7
33.5°	2193.0	2043.5	2054.8	1973.6	1912.3	1932.6	1966.1	2071.3	2172.3	2319.5	2323.7
34°	2111.4	1962.8	1974.1	1894.8	1836.3	1850.0	1886.4	1992.0	2088.3	2237.4	2234.6
34.5°	2029.3	1884.9	1896.3	1816.5	1761.8	1775.0	1807.6	1913.2	2005.7	2155.8	2148.7
35°	1950.5	1808.0	1817.0	1742.4	1689.6	1707.1	1731.6	1836.3	1926.9	2075.1	2065.6
35.5°	1873.6	1734.0	1738.2	1683.0	1618.4	1632.5	1658.0	1762.7	1851.0	1993.5	1981.2
36°	1794.8	1690.5	1686.3	1610.8	1550.4	1556.1	1587.2	1687.7	1779.7	1913.2	1900.5
36.5°	1721.2	1613.6	1607.5	1539.1	1483.4	1490.5	1518.3	1617.9	1708.0	1833.5	1821.7
37°	1651.9	1536.3	1528.2	1466.9	1416.9	1421.1	1449.9	1546.2	1637.7	1755.2	1747.6
37.5°	1583.0	1458.9	1448.5	1395.2	1352.2	1353.7	1385.7	1474.9	1570.7	1679.7	1672.1
38°	1514.1	1382.0	1369.2	1328.7	1287.6	1289.5	1322.5	1410.8	1500.9	1603.7	1600.9
38.5°	1444.7	1316.4	1297.0	1263.1	1223.4	1226.3	1260.2	1346.6	1435.3	1533.0	1530.1
39°	1375.8	1253.6	1233.3	1196.5	1161.6	1167.3	1199.8	1277.7	1367.3	1461.7	1460.8
39.5°	1309.8	1191.4	1168.7	1132.4	1100.3	1108.3	1139.0	1215.9	1301.3	1392.8	1390.9
40°	1245.6	1128.6	1106.9	1069.2	1041.8	1050.8	1080.9	1155.5	1234.8	1323.5	1324.9
40.5°	1181.9	1068.7	1042.7	1005.9	980.9	995.5	1025.3	1094.2	1173.9	1257.4	1259.8
41°	1118.2	1011.6	986.1	946.0	925.7	940.8	971.0	1035.7	1109.7	1191.8	1196.1
41.5°	1057.8	954.5	929.0	888.4	869.1	888.4	919.1	978.6	1048.4	1128.1	1132.4
42°	997.4	899.3	873.8	832.3	815.3	838.0	868.2	923.8	989.9	1064.9	1072.5
42.5°	939.9	845.5	818.1	778.0	762.5	788.4	819.6	870.5	933.3	1005.0	1012.5
43°	883.7	791.2	768.6	727.1	711.5	740.8	773.8	817.7	878.5	945.1	955.0
43.5°	829.9	739.8	719.1	677.1	662.9	694.1	727.6	768.1	823.3	887.5	898.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	676.1	596.4	580.8	537.9	525.1	566.2	599.2	628.9	665.7	728.0	744.1
45.5°	628.0	551.1	538.4	496.4	484.6	527.5	559.1	585.1	616.7	679.4	695.5
46°	580.8	509.1	498.2	456.3	450.1	489.3	520.4	543.5	570.0	632.2	647.3
46.5°	534.1	468.5	460.0	419.0	415.7	455.3	483.1	504.4	523.3	587.4	602.0
47°	488.8	429.4	423.2	384.1	380.8	421.3	450.1	466.2	480.8	543.5	560.1
47.5°	445.4	392.1	387.8	351.0	346.3	387.4	417.6	432.2	446.3	502.0	518.1
48°	405.8	356.2	354.3	320.8	312.3	353.4	384.5	398.2	411.9	466.6	477.0
48.5°	366.1	322.3	322.7	292.5	285.0	319.9	351.5	364.2	377.5	431.2	440.7
49°	328.9	290.6	292.5	265.2	259.5	291.1	318.5	330.3	342.5	395.4	404.4
49.5°	294.4	260.4	264.2	240.6	235.4	263.3	288.3	300.6	308.6	360.0	368.0
50°	261.4	231.7	236.4	217.5	212.3	236.9	260.9	271.8	281.7	324.6	332.2
50.5°	231.7	204.3	210.9	195.3	190.6	211.8	234.0	245.8	256.7	294.4	301.0
51°	203.4	178.8	186.8	173.6	170.3	187.8	209.0	221.8	232.6	266.1	271.8
51.5°	176.5	158.5	163.3	155.7	151.0	165.6	184.5	198.2	210.0	240.2	242.5
52°	155.7	138.2	143.9	137.8	132.1	144.9	162.8	176.0	188.7	215.6	215.6
52.5°	135.4	118.0	125.0	119.8	113.7	125.0	140.6	154.8	168.4	192.0	189.7
53°	115.1	97.7	106.2	101.4	96.7	106.2	120.8	134.9	149.6	169.9	166.1
53.5°	94.8	77.4	87.3	84.0	80.7	89.2	102.4	115.6	129.8	149.1	143.4
54°	74.5	62.8	71.7	68.9	67.0	73.6	84.9	98.1	111.4	129.3	122.7
54.5°	59.9	50.0	58.0	55.7	56.6	62.3	69.8	81.6	94.4	109.9	103.8
55°	47.2	37.3	45.3	42.9	46.2	51.0	58.5	67.5	79.7	92.9	85.9
55.5°	34.4	26.0	33.0	31.1	35.9	39.6	47.7	56.6	68.4	77.4	70.3
56°	23.6	17.5	22.6	21.7	25.5	28.3	36.8	45.8	57.6	65.1	59.4
56.5°	15.6	15.1	15.6	15.6	15.6	17.5	26.0	34.9	46.2	53.3	48.1
57°	13.7	13.2	14.2	14.2	13.2	13.2	15.1	24.5	34.9	41.5	37.3
57.5°	11.8	10.9	12.3	12.7	11.8	11.8	11.8	13.7	24.1	29.7	26.4
58°	9.9	9.0	10.9	11.3	10.9	10.4	10.4	10.9	12.7	17.9	15.6
58.5°	8.5	8.0	9.4	9.9	9.9	9.9	9.4	9.4	10.4	12.7	11.8
59°	7.5	7.5	8.5	9.0	9.0	9.0	8.5	8.5	9.0	10.4	10.4
59.5°	7.1	7.1	8.0	8.5	8.5	8.5	8.0	8.0	8.0	9.0	9.4
60°	6.6	6.1	7.1	7.5	8.0	7.5	7.5	7.1	7.5	8.0	8.5
60.5°	6.1	5.7	6.6	7.1	7.5	7.1	6.6	6.6	7.1	7.5	8.0
61°	5.7	5.7	6.1	6.6	6.6	6.6	6.1	6.1	6.1	7.1	7.1
61.5°	5.2	5.2	5.7	6.1	6.6	6.1	5.7	5.7	5.7	6.1	6.6
62°	4.7	4.7	5.2	5.7	6.1	5.7	5.7	5.2	5.2	5.7	6.1
62.5°	4.2	4.2	5.2	5.7	5.7	5.2	5.2	5.2	5.2	5.7	5.7
63°	4.2	4.2	4.7	5.2	5.2	5.2	4.7	4.7	4.7	5.2	5.2
63.5°	3.8	3.8	4.2	4.7	4.7	4.7	4.2	4.2	4.2	4.7	5.2
64°	3.8	3.8	4.2	4.2	4.7	4.2	4.2	4.2	4.2	4.2	4.7
64.5°	3.3	3.3	3.8	4.2	4.2	4.2	3.8	3.8	3.8	4.2	4.2
65°	3.3	3.3	3.8	3.8	3.8	3.8	3.8	3.3	3.3	3.8	4.2
65.5°	2.8	2.8	3.3	3.8	3.8	3.8	3.3	3.3	3.3	3.8	3.8
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: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-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	2.8	2.8	2.8	2.8	2.4	2.4	2.8	2.8
68°	1.9	1.9	2.4	2.8	2.8	2.4	2.4	2.4	2.4	2.4	2.8
68.5°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
69°	1.9	1.9	1.9	2.4	2.4	2.4	1.9	1.9	1.9	2.4	2.4
69.5°	1.4	1.4	1.9	2.4	2.4	1.9	1.9	1.9	1.9	1.9	2.4
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: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-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: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	6041.7	6041.7	6041.7	6041.7	6041.7	6041.7
0.5°	6047.4	6046.9	6051.1	6055.9	6056.3	6053.0
1°	6050.7	6054.0	6061.1	6067.7	6068.6	6062.9
1.5°	6052.6	6059.2	6067.2	6074.7	6078.5	6071.9
2°	6054.0	6062.0	6067.7	6077.1	6085.6	6079.9
2.5°	6054.9	6061.5	6062.5	6072.4	6088.0	6086.1
3°	6054.5	6058.2	6048.8	6057.8	6085.1	6089.4
3.5°	6054.0	6052.6	6027.6	6035.6	6075.7	6088.9
4°	6053.5	6043.6	6000.2	6002.1	6060.1	6084.2
4.5°	6051.1	6031.8	5965.7	5962.4	6037.9	6074.7
5°	6047.4	6016.7	5924.7	5918.1	6008.7	6059.6
5.5°	6043.1	5998.8	5883.2	5870.4	5974.7	6037.5
6°	6036.5	5978.5	5841.2	5825.6	5941.7	6009.6
6.5°	6025.2	5957.3	5800.6	5784.1	5907.2	5973.8
7°	6008.7	5934.1	5765.7	5748.2	5866.2	5931.3
7.5°	5987.0	5909.6	5737.4	5718.0	5828.0	5884.1
8°	5956.3	5881.8	5713.3	5693.0	5787.4	5832.7
8.5°	5919.5	5852.0	5693.0	5674.2	5745.4	5778.4
9°	5878.0	5817.6	5674.6	5655.8	5702.0	5719.0
9.5°	5829.9	5778.9	5660.5	5638.8	5660.0	5659.5
10°	5774.7	5736.4	5642.1	5621.3	5616.1	5602.0
10.5°	5720.9	5689.3	5622.3	5602.9	5572.7	5546.3
11°	5663.3	5640.2	5600.1	5581.2	5527.9	5492.5
11.5°	5603.4	5588.8	5574.1	5556.2	5484.5	5440.1
12°	5547.2	5537.8	5542.1	5526.0	5440.6	5387.8
12.5°	5493.0	5486.4	5508.1	5491.1	5396.7	5336.3
13°	5437.3	5434.9	5471.7	5455.7	5354.7	5286.3
13.5°	5382.1	5385.4	5431.6	5416.1	5309.0	5236.3
14°	5328.8	5335.4	5389.7	5374.6	5261.8	5183.5
14.5°	5275.0	5287.3	5346.7	5331.6	5212.7	5128.3
15°	5220.3	5236.3	5298.6	5285.4	5161.8	5072.6
15.5°	5166.0	5186.8	5249.0	5238.2	5106.6	5014.1
16°	5107.5	5133.9	5196.7	5185.8	5050.4	4954.2
16.5°	5049.9	5080.1	5143.4	5129.2	4992.8	4889.0
17°	4986.2	5023.0	5086.7	5070.7	4932.0	4826.8
17.5°	4924.4	4965.5	5025.4	5007.5	4869.2	4760.2
18°	4858.4	4904.6	4959.8	4940.9	4804.6	4693.7
18.5°	4792.8	4841.9	4894.2	4870.6	4735.2	4625.8
19°	4723.4	4775.8	4824.4	4797.0	4668.2	4558.3
19.5°	4655.0	4712.6	4754.1	4722.0	4599.3	4488.9
20°	4583.8	4644.2	4683.8	4648.4	4529.0	4419.6
20.5°	4514.9	4578.6	4607.4	4572.0	4457.8	4349.3
21°	4443.6	4508.3	4535.2	4494.6	4386.6	4279.0

TEST NUMBER: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	4233.7	4301.6	4312.5	4257.7	4166.2	4064.8
23°	4160.5	4231.3	4234.6	4178.5	4091.7	3992.6
23.5°	4087.4	4158.2	4155.4	4096.9	4012.4	3918.5
24°	4016.6	4086.0	4077.5	4011.9	3936.0	3843.5
24.5°	3944.5	4012.4	3996.8	3928.9	3855.7	3769.9
25°	3869.4	3937.8	3913.3	3846.8	3779.8	3693.0
25.5°	3796.8	3863.3	3834.0	3765.6	3696.7	3617.0
26°	3724.1	3787.8	3755.7	3686.8	3619.8	3538.7
26.5°	3647.2	3712.8	3676.0	3606.2	3539.6	3456.1
27°	3569.8	3636.4	3597.7	3527.8	3458.5	3366.5
27.5°	3492.9	3558.0	3517.0	3448.1	3370.2	3275.4
28°	3415.5	3475.9	3435.4	3366.9	3290.5	3182.0
28.5°	3338.6	3390.5	3354.2	3283.9	3203.2	3085.3
29°	3252.3	3305.1	3271.6	3202.3	3113.1	2986.6
29.5°	3163.1	3216.4	3190.0	3116.9	3023.9	2887.6
30°	3069.2	3124.9	3104.1	3030.1	2931.9	2793.2
30.5°	2973.4	3031.5	3014.5	2940.9	2835.7	2700.7
31°	2884.7	2935.2	2926.3	2851.7	2743.2	2610.1
31.5°	2786.1	2838.0	2836.1	2763.0	2647.9	2522.4
32°	2683.7	2744.6	2747.4	2677.1	2557.3	2434.6
32.5°	2594.1	2652.6	2656.4	2590.3	2467.6	2353.0
33°	2501.1	2563.9	2571.0	2507.3	2378.9	2273.7
33.5°	2408.2	2473.3	2478.5	2423.8	2295.4	2193.0
34°	2320.4	2392.2	2393.6	2339.3	2214.7	2111.4
34.5°	2236.9	2310.5	2311.9	2256.7	2135.9	2029.3
35°	2156.2	2229.8	2227.0	2176.1	2057.6	1950.5
35.5°	2077.0	2150.6	2145.4	2094.4	1982.6	1873.6
36°	1998.6	2072.7	2067.1	2014.7	1907.1	1794.8
36.5°	1920.3	1996.3	1988.3	1933.1	1834.5	1721.2
37°	1843.4	1919.4	1908.5	1852.9	1761.8	1651.9
37.5°	1767.5	1843.4	1835.4	1777.4	1684.4	1583.0
38°	1692.4	1766.5	1758.0	1703.8	1614.6	1514.1
38.5°	1618.4	1692.9	1676.9	1632.0	1545.7	1444.7
39°	1545.2	1625.0	1608.9	1559.9	1476.3	1375.8
39.5°	1475.4	1556.5	1541.0	1488.1	1407.0	1309.8
40°	1407.5	1488.6	1473.5	1415.9	1338.1	1245.6
40.5°	1340.9	1420.7	1405.6	1344.2	1273.0	1181.9
41°	1280.5	1352.7	1337.6	1276.8	1208.8	1118.2
41.5°	1215.4	1288.1	1270.2	1210.7	1146.1	1057.8
42°	1154.6	1224.9	1203.6	1146.5	1084.3	997.4
42.5°	1094.6	1160.7	1139.5	1085.2	1024.3	939.9
43°	1039.4	1097.9	1075.3	1024.3	964.4	883.7
43.5°	980.0	1036.1	1013.0	963.0	905.0	829.9



TEST NUMBER: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	819.1	859.2	838.0	793.6	735.1	676.1
45.5°	764.8	803.5	781.8	740.3	682.3	628.0
46°	715.3	749.7	728.0	687.9	631.8	580.8
46.5°	665.3	697.4	677.1	637.9	582.2	534.1
47°	618.1	646.4	626.1	589.3	535.0	488.8
47.5°	570.4	596.9	577.5	542.1	488.8	445.4
48°	526.1	549.7	529.4	496.4	446.3	405.8
48.5°	482.7	503.9	485.0	454.4	406.2	366.1
49°	443.5	461.0	442.6	411.9	367.1	328.9
49.5°	404.8	419.5	402.0	372.3	330.3	294.4
50°	365.7	378.9	360.5	333.6	296.8	261.4
50.5°	327.0	341.1	324.6	297.7	263.3	231.7
51°	293.5	305.7	289.7	264.7	232.6	203.4
51.5°	261.9	272.2	258.1	233.1	204.8	176.5
52°	231.2	241.1	226.5	202.9	177.4	155.7
52.5°	203.4	212.3	198.6	176.5	156.6	135.4
53°	177.9	184.5	171.7	155.7	135.4	115.1
53.5°	153.3	160.4	151.5	134.5	114.7	94.8
54°	130.2	140.1	131.2	113.7	93.4	74.5
54.5°	110.4	119.8	110.9	92.9	72.7	59.9
55°	91.5	99.6	90.6	72.2	59.0	47.2
55.5°	74.5	78.8	70.3	58.0	45.8	34.4
56°	63.2	64.2	56.6	45.8	33.5	23.6
56.5°	51.9	51.4	44.8	33.0	22.2	15.6
57°	40.6	38.7	32.1	22.6	15.1	13.7
57.5°	29.3	27.8	22.2	15.6	13.7	11.8
58°	17.9	19.3	16.0	13.7	11.8	9.9
58.5°	13.7	17.0	14.6	12.3	9.9	8.5
59°	11.8	15.1	12.7	10.4	8.5	7.5
59.5°	10.9	12.7	11.3	9.0	7.5	7.1
60°	9.9	10.4	9.4	8.0	7.1	6.6
60.5°	9.0	9.4	9.0	7.5	6.6	6.1
61°	8.5	9.0	8.0	7.1	6.1	5.7
61.5°	7.5	8.0	7.5	6.6	5.7	5.2
62°	7.1	7.5	7.1	6.1	5.2	4.7
62.5°	6.6	7.1	6.6	5.7	4.7	4.2
63°	6.1	6.6	6.1	5.2	4.7	4.2
63.5°	5.7	6.1	5.7	4.7	4.2	3.8
64°	5.2	5.7	5.2	4.2	3.8	3.8
64.5°	5.2	5.2	4.7	4.2	3.8	3.3
65°	4.7	5.2	4.7	3.8	3.3	3.3
65.5°	4.2	4.7	4.2	3.8	3.3	2.8
66°	4.2	4.2	3.8	3.3	2.8	2.8



TEST NUMBER: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.3	3.8	3.3	2.8	2.4	2.4
68°	3.3	3.3	2.8	2.4	2.4	1.9
68.5°	2.8	3.3	2.8	2.4	1.9	1.9
69°	2.8	2.8	2.8	2.4	1.9	1.9
69.5°	2.4	2.8	2.4	1.9	1.9	1.4
70°	2.4	2.4	2.4	1.9	1.4	1.4
70.5°	2.4	2.4	2.4	1.9	1.4	1.4
71°	1.9	2.4	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: P776597

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRC-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

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°	4208.7	4098.3	4089.8	4044.5	3999.2	3988.8	4012.4	4115.3	4236.5	4319.6	4314.4
22°	4137.9	4022.8	4012.4	3965.2	3921.8	3914.7	3940.2	4046.8	4165.3	4247.4	4240.8



44°	777.1	690.3	670.9	628.0	616.2	650.2	683.2	720.0	768.6	832.3	846.0
44.5°	725.2	642.6	625.2	581.8	569.5	607.2	640.3	673.3	716.7	779.5	793.6



66.5°	2.4	2.4	2.8	3.3	3.3	3.3	2.8	2.8	2.8	3.3	3.3
67°	2.4	2.4	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°	4373.3	4440.3	4461.6	4416.7	4313.9	4208.7
22°	4302.1	4370.0	4386.1	4338.9	4242.2	4137.9



44°	924.8	976.2	952.6	905.0	846.0	777.1
44.5°	870.5	917.2	895.5	848.8	791.2	725.2

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66.5°	3.8	4.2	3.8	3.3	2.8	2.4
67°	3.8	3.8	3.3	2.8	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)