

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: P776623

Luminaire Tested: HCDJBS4050CSD-HCD4TSQC-5000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776623
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-HCD4TSQC-5000lm-4000K
Description: 4 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

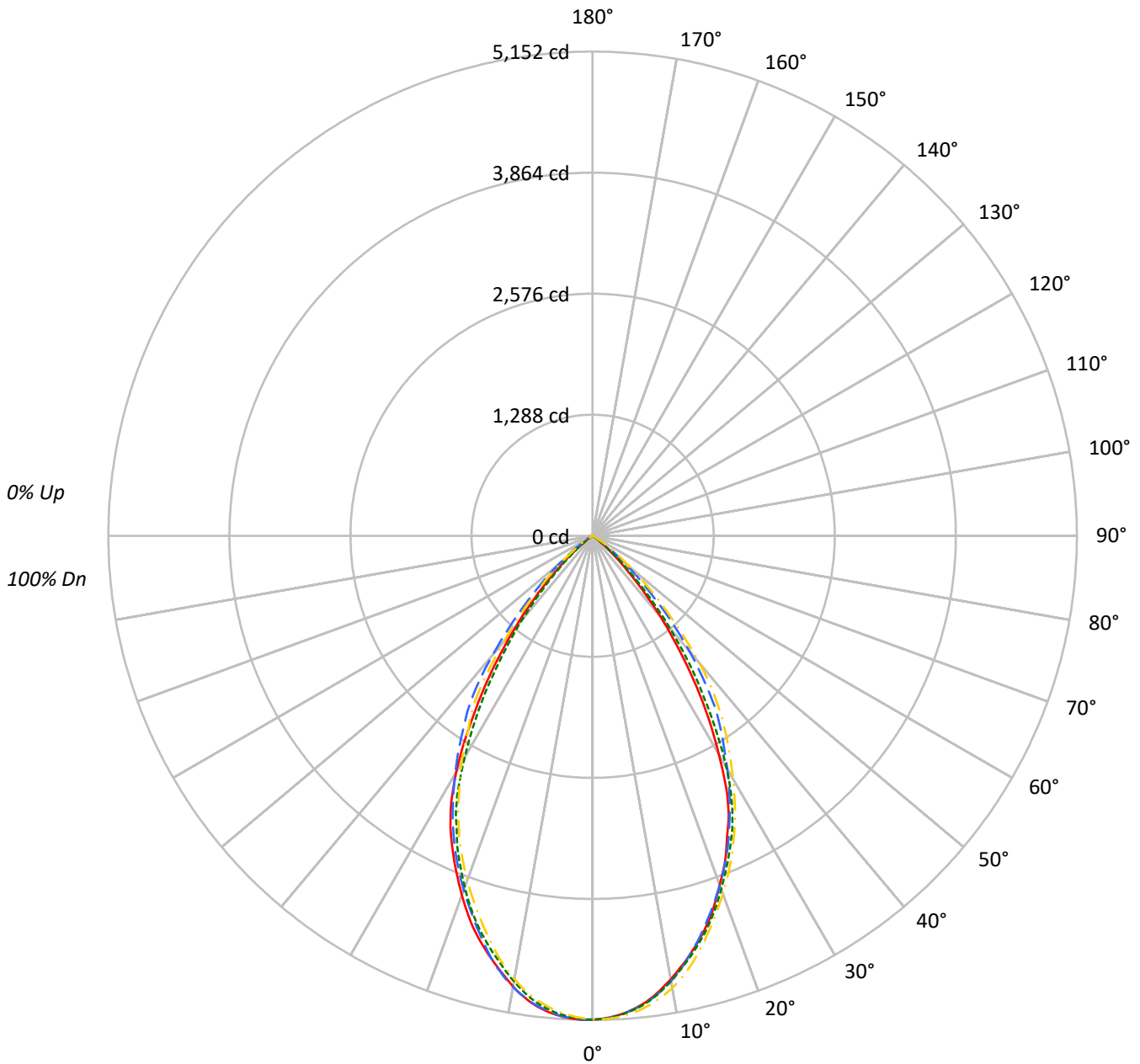
Lumens per Lamp: N/A
Luminaire Lumens: 5324.8 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.93 / 0.98
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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					100			
1	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93					93			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86					86			
3	101	95	89	85	99	93	88	84	90	86	83	88	85	82	86	83	80	79					79			
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	80	77	74	73					73			
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67					67			
6	85	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62					62			
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	67	62	59	57					57			
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53					53			
9	73	62	56	52	71	62	56	52	61	55	52	60	55	51	59	55	51	50					50			
10	69	59	53	48	68	58	52	48	57	52	48	57	52	48	56	51	48	47					47			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	508810	508810	508810	508810
5°	501457	502310	505673	503163
10°	480848	482866	488868	483388
15°	453092	455487	461995	454310
20°	416072	420858	427948	418387
25°	371874	381842	387840	373335
30°	306893	325131	331249	310385
35°	225811	244224	248894	231120
40°	144500	163441	166654	150242
45°	73093	89406	92146	78503
50°	25680	34199	36413	29124
55°	4773	6187	7014	6928
60°	1799	1700	1522	2076
65°	1450	1333	1240	1567
70°	1098	1098	954	1243
75°	917	917	726	1108
80°	569	569	569	797
85°	567	567	0	567

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 148520 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	476.5	8.9
10°-20°	1246.5	23.4
20°-30°	1582.9	29.7
30°-40°	1309.0	24.6
40°-50°	599.0	11.2
50°-60°	100.6	1.9
60°-70°	7.1	0.1
70°-80°	2.7	0.1
80°-90°	0.5	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°	3305.9	62.1
0°-40°	4614.8	86.7
0°-60°	5314.5	99.8
0°-90°	5324.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5324.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5148	5148	5148	5148	5148	
5°	5054	5063	5096	5071	5054	474
15°	4428	4451	4515	4440	4428	1237
25°	3410	3501	3556	3423	3410	1549
35°	1871	2024	2063	1915	1871	1162
45°	523	640	659	562	523	424
55°	28	36	41	40	28	45
65°	6	6	5	7	6	6
75°	2	2	2	3	2	3
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°	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7
0.5°	5146.8	5147.3	5147.3	5144.9	5146.8	5146.8	5146.8	5148.7	5151.6	5152.0	5151.1
1°	5141.5	5142.9	5143.4	5142.0	5144.4	5145.3	5146.8	5148.7	5151.6	5151.6	5150.1
1.5°	5136.2	5137.2	5138.2	5137.7	5139.6	5141.5	5144.9	5146.8	5150.1	5151.1	5147.7
2°	5128.1	5129.6	5131.0	5130.5	5133.4	5137.7	5141.5	5143.4	5147.3	5148.7	5144.9
2.5°	5119.0	5120.5	5122.4	5122.4	5125.2	5131.0	5137.7	5138.2	5142.0	5143.4	5141.0
3°	5109.9	5110.9	5111.9	5112.8	5116.2	5122.9	5131.0	5131.9	5136.2	5136.7	5133.4
3.5°	5098.5	5098.9	5100.4	5101.8	5105.2	5114.2	5123.8	5122.4	5128.6	5129.1	5124.8
4°	5086.0	5086.0	5087.0	5089.4	5092.7	5103.2	5113.8	5113.3	5119.5	5119.5	5114.7
4.5°	5070.7	5071.7	5073.6	5076.0	5079.3	5091.8	5102.8	5101.8	5109.5	5109.0	5103.2
5°	5054.0	5054.4	5057.8	5060.7	5062.6	5077.9	5090.8	5089.4	5096.5	5097.5	5089.8
5.5°	5035.3	5036.3	5040.6	5043.9	5046.3	5062.1	5077.4	5075.5	5082.7	5083.6	5076.0
6°	5014.7	5015.7	5021.9	5024.8	5027.2	5045.8	5061.1	5059.2	5067.4	5067.8	5059.7
6.5°	4993.2	4993.7	5000.9	5005.2	5006.6	5026.7	5044.9	5042.0	5051.1	5051.1	5043.9
7°	4968.8	4969.8	4978.4	4983.6	4984.6	5005.7	5027.2	5022.9	5032.0	5032.4	5024.8
7.5°	4943.9	4943.9	4954.9	4960.2	4959.3	4983.2	5007.1	5002.8	5010.0	5012.4	5004.7
8°	4916.7	4917.2	4927.7	4935.3	4932.9	4958.3	4985.6	4979.3	4986.0	4988.4	4982.2
8.5°	4887.5	4889.4	4901.4	4908.1	4903.8	4932.0	4962.6	4954.9	4960.2	4965.0	4957.8
9°	4854.5	4858.3	4871.7	4878.4	4874.1	4904.2	4937.7	4927.7	4931.5	4937.7	4933.4
9.5°	4822.0	4826.3	4841.6	4848.3	4843.0	4874.6	4911.9	4898.5	4902.3	4909.0	4906.2
10°	4790.9	4792.8	4809.0	4816.7	4811.0	4844.9	4884.1	4868.4	4870.8	4878.4	4875.5
10.5°	4756.4	4758.8	4776.0	4782.7	4777.5	4814.3	4854.0	4835.4	4837.7	4846.4	4844.4
11°	4722.5	4724.9	4741.1	4748.8	4744.0	4779.9	4821.0	4801.9	4802.3	4813.8	4812.4
11.5°	4687.1	4689.9	4703.3	4712.4	4708.1	4746.4	4789.4	4765.5	4765.5	4778.4	4778.0
12°	4653.1	4654.1	4665.1	4674.6	4672.7	4711.9	4754.5	4729.2	4730.1	4740.6	4739.7
12.5°	4617.7	4617.7	4623.0	4637.8	4637.8	4676.5	4716.7	4690.9	4696.6	4704.3	4703.8
13°	4580.4	4581.3	4583.3	4599.0	4602.9	4641.1	4678.4	4652.1	4662.2	4667.9	4662.2
13.5°	4543.1	4543.1	4542.1	4559.3	4565.6	4605.3	4641.1	4614.3	4625.8	4628.7	4619.6
14°	4505.3	4504.3	4499.1	4520.6	4527.8	4568.4	4597.1	4576.1	4589.0	4590.4	4575.1
14.5°	4466.5	4465.1	4456.0	4480.4	4490.0	4531.1	4555.0	4537.3	4552.2	4552.6	4531.1
15°	4427.8	4425.9	4413.9	4441.2	4451.2	4492.8	4512.5	4498.6	4514.8	4513.9	4482.8
15.5°	4388.6	4385.2	4368.0	4400.0	4412.0	4453.6	4467.5	4457.4	4475.1	4473.7	4435.4
16°	4346.0	4341.7	4324.0	4357.0	4371.3	4413.4	4420.6	4417.3	4436.9	4434.5	4387.1
16.5°	4303.9	4302.0	4278.5	4313.9	4329.7	4374.7	4375.2	4375.6	4395.7	4392.9	4341.2
17°	4259.9	4259.4	4233.6	4270.9	4286.7	4331.2	4328.3	4333.5	4353.2	4350.8	4292.4
17.5°	4213.5	4214.9	4187.6	4226.9	4241.2	4289.1	4281.9	4289.5	4308.2	4308.7	4245.5
18°	4163.2	4165.6	4141.7	4182.4	4194.3	4245.0	4236.4	4244.6	4261.8	4265.1	4197.2
18.5°	4111.1	4120.2	4095.8	4135.0	4147.5	4200.6	4191.0	4197.7	4214.4	4218.3	4150.8
19°	4058.0	4068.5	4048.9	4086.7	4099.6	4151.8	4144.6	4150.3	4167.6	4170.9	4104.4
19.5°	4007.8	4015.4	4001.1	4036.5	4050.8	4105.8	4098.7	4103.0	4118.8	4121.6	4057.5
20°	3955.6	3962.8	3954.7	3987.7	4001.1	4055.6	4051.8	4051.8	4068.5	4072.4	4009.7
20.5°	3904.9	3910.7	3907.8	3936.5	3950.8	4005.9	4004.4	4001.1	4017.8	4021.6	3961.4
21°	3855.2	3858.0	3859.5	3885.3	3899.7	3954.7	3956.6	3949.9	3967.1	3970.5	3911.6



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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°	3699.7	3702.1	3710.7	3727.9	3754.7	3798.3	3811.6	3791.1	3815.5	3812.6	3764.8
23°	3639.4	3650.4	3658.6	3674.8	3705.4	3745.6	3762.4	3737.0	3766.2	3759.5	3713.6
23.5°	3575.8	3595.4	3604.5	3617.9	3654.3	3695.9	3712.6	3683.0	3715.0	3705.9	3664.8
24°	3515.1	3536.1	3550.5	3567.2	3603.1	3640.4	3661.4	3628.9	3661.4	3651.9	3610.7
24.5°	3462.4	3473.9	3494.5	3516.5	3552.4	3585.4	3607.9	3575.3	3608.8	3597.8	3556.2
25°	3409.8	3408.9	3438.0	3464.8	3501.2	3530.4	3554.3	3521.3	3556.2	3543.3	3502.1
25.5°	3357.7	3349.5	3381.1	3406.0	3450.0	3474.9	3500.7	3467.2	3504.1	3489.2	3448.1
26°	3302.7	3295.5	3324.7	3347.1	3392.1	3419.9	3447.1	3413.6	3451.4	3435.2	3396.4
26.5°	3234.3	3243.3	3268.2	3287.4	3331.4	3369.6	3395.0	3351.5	3389.7	3373.0	3338.5
27°	3168.2	3189.8	3212.7	3234.7	3272.5	3318.4	3337.1	3296.0	3330.4	3320.4	3279.7
27.5°	3100.3	3134.3	3156.3	3184.5	3207.0	3263.4	3279.7	3244.3	3266.3	3263.4	3220.9
28°	3018.5	3064.0	3101.3	3133.8	3141.4	3199.3	3219.4	3188.3	3199.8	3199.8	3159.6
28.5°	2934.3	2997.0	3043.4	3072.6	3071.1	3138.1	3161.5	3127.1	3128.1	3140.5	3100.3
29°	2852.0	2930.0	2986.0	3012.8	3000.3	3074.5	3103.2	3069.2	3055.8	3075.4	3040.5
29.5°	2770.7	2852.5	2925.2	2953.5	2926.2	3007.5	3045.3	3005.6	2978.8	3007.5	2981.2
30°	2688.9	2771.2	2865.0	2890.8	2848.7	2938.1	2989.3	2939.6	2902.3	2938.6	2921.4
30.5°	2607.1	2689.4	2802.3	2824.3	2766.4	2865.4	2931.4	2872.6	2820.9	2866.9	2863.5
31°	2525.8	2609.0	2743.0	2755.9	2684.6	2793.7	2871.2	2803.2	2735.3	2794.6	2806.6
31.5°	2445.9	2529.1	2684.6	2686.5	2599.9	2718.6	2810.4	2732.4	2650.2	2718.1	2749.7
32°	2367.0	2451.6	2632.5	2615.2	2514.8	2642.0	2749.2	2657.8	2565.5	2641.6	2689.9
32.5°	2286.6	2372.7	2578.9	2540.6	2428.2	2563.1	2694.7	2581.3	2477.5	2562.1	2626.7
33°	2203.8	2295.2	2526.3	2465.5	2345.4	2480.3	2641.1	2503.8	2393.3	2482.3	2567.9
33.5°	2122.0	2219.6	2471.7	2387.5	2260.8	2398.5	2587.5	2424.4	2304.8	2398.5	2511.9
34°	2040.2	2142.6	2414.8	2308.6	2180.4	2316.7	2530.1	2342.6	2223.5	2313.4	2454.5
34.5°	1956.1	2065.1	2355.0	2228.7	2100.0	2235.4	2468.4	2260.8	2141.2	2231.1	2397.1
35°	1871.4	1987.1	2302.4	2149.3	2024.0	2155.5	2416.2	2182.3	2062.7	2153.6	2345.9
35.5°	1787.7	1907.7	2242.1	2069.4	1946.0	2077.6	2365.1	2102.4	1980.0	2071.3	2294.3
36°	1702.5	1829.3	2170.4	1991.5	1869.9	2001.0	2301.9	2024.5	1902.5	1993.4	2231.6
36.5°	1627.4	1749.4	2100.0	1916.3	1794.8	1925.9	2240.2	1947.9	1824.5	1914.4	2164.1
37°	1552.3	1675.2	2031.6	1841.7	1717.3	1851.8	2181.4	1871.9	1748.9	1843.2	2102.9
37.5°	1477.2	1601.1	1958.4	1768.1	1638.9	1779.1	2115.3	1798.7	1670.0	1767.6	2032.6
38°	1401.6	1527.0	1885.7	1691.0	1562.8	1707.3	2049.3	1726.4	1590.1	1696.3	1958.9
38.5°	1329.9	1452.3	1813.5	1623.1	1486.8	1635.1	1983.8	1655.6	1513.1	1624.5	1883.8
39°	1259.5	1378.7	1742.2	1554.7	1412.1	1567.1	1912.0	1584.8	1439.9	1553.7	1807.8
39.5°	1188.3	1309.8	1670.5	1486.8	1338.5	1494.4	1840.3	1512.6	1364.3	1482.0	1729.8
40°	1119.9	1242.8	1599.2	1418.8	1266.7	1423.1	1769.0	1442.8	1291.6	1412.6	1654.2
40.5°	1050.0	1174.9	1527.9	1350.9	1197.4	1352.3	1695.3	1373.4	1219.8	1342.8	1578.6
41°	982.6	1111.3	1456.6	1283.9	1129.9	1285.4	1620.7	1304.5	1153.3	1274.9	1504.9
41.5°	916.6	1046.2	1385.4	1218.4	1064.4	1217.4	1544.7	1236.6	1085.4	1206.0	1432.2
42°	852.5	984.0	1314.1	1152.4	998.4	1152.9	1469.5	1171.5	1021.3	1141.9	1361.0
42.5°	790.7	922.8	1244.2	1091.6	936.6	1087.8	1397.3	1108.4	957.2	1079.7	1291.1
43°	732.9	862.0	1173.9	1031.4	873.5	1029.5	1325.6	1047.1	893.1	1017.5	1224.6
43.5°	676.9	801.7	1104.1	973.0	812.3	967.3	1256.7	987.8	832.4	957.7	1158.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	522.9	640.1	912.2	807.5	639.6	797.4	1062.5	818.5	659.2	790.3	970.6
45.5°	475.0	589.4	854.4	755.3	587.0	742.4	1001.2	765.4	606.1	737.6	911.8
46°	430.5	543.4	797.0	703.2	536.7	689.8	942.9	714.2	555.4	686.0	853.4
46.5°	388.0	498.9	743.9	653.5	489.4	639.1	885.5	662.5	507.1	635.8	796.5
47°	347.3	454.5	691.7	604.2	447.3	590.3	831.4	613.7	465.9	588.4	742.4
47.5°	310.0	412.8	642.0	558.3	405.2	542.0	776.4	567.8	424.8	542.5	690.3
48°	275.5	373.1	593.2	514.2	363.6	498.0	725.2	521.9	383.7	498.5	640.5
48.5°	244.0	335.8	547.3	471.7	321.9	459.2	674.0	479.3	343.0	460.7	593.2
49°	215.7	299.9	502.8	432.4	286.1	420.0	626.2	441.5	301.9	422.9	548.2
49.5°	189.9	267.9	460.7	395.6	253.5	381.3	577.9	403.7	268.4	385.6	504.2
50°	167.0	238.2	419.1	359.7	222.4	342.5	532.9	366.0	236.8	347.8	466.9
50.5°	149.7	210.5	382.2	323.4	194.2	303.8	489.8	328.2	208.1	310.0	430.1
51°	132.5	185.1	345.9	290.8	168.9	271.7	452.1	294.2	182.3	279.4	392.7
51.5°	115.3	163.1	312.9	259.8	145.4	242.1	413.8	263.1	157.9	249.7	355.4
52°	98.1	146.4	281.3	231.1	124.4	214.8	375.5	233.4	134.9	222.0	318.6
52.5°	84.7	129.6	253.1	203.8	104.8	188.0	337.3	206.7	114.3	195.7	287.5
53°	72.2	112.4	224.4	178.0	87.5	163.6	304.7	180.3	96.2	171.3	258.3
53.5°	60.3	96.2	200.9	157.9	71.8	141.6	274.6	156.9	79.4	148.3	231.5
54°	49.3	83.2	177.0	137.8	59.8	121.0	244.9	134.4	66.5	127.2	205.7
54.5°	37.8	71.3	158.8	118.2	47.8	102.4	217.2	114.8	53.6	109.1	182.3
55°	27.7	60.3	141.6	98.1	35.9	86.1	192.3	96.2	40.7	91.4	160.7
55.5°	20.1	49.3	123.9	78.5	24.4	69.8	168.4	79.4	27.7	75.6	141.1
56°	18.2	38.3	106.2	63.6	12.4	58.4	146.4	66.5	14.8	63.1	123.4
56.5°	16.3	28.7	88.5	50.2	11.5	46.4	125.8	54.1	10.5	50.7	106.7
57°	14.4	20.1	74.6	38.3	11.0	34.9	107.6	41.6	10.0	38.7	91.8
57.5°	12.4	17.7	63.6	26.3	10.5	23.4	90.9	29.2	9.6	26.3	78.9
58°	10.5	15.8	53.6	17.2	10.0	11.5	76.1	16.7	9.1	13.9	67.5
58.5°	10.0	13.9	45.0	15.3	9.6	10.0	63.6	10.0	8.6	10.0	56.9
59°	9.6	12.0	37.3	13.4	9.1	9.6	55.5	9.1	8.1	9.1	50.2
59.5°	9.6	9.6	31.1	11.5	8.6	9.1	47.4	8.6	7.7	9.1	43.5
60°	9.1	9.1	26.3	9.1	8.6	8.6	39.7	8.1	7.7	8.6	36.4
60.5°	8.6	9.1	22.0	9.1	8.1	8.6	31.6	8.1	7.2	8.1	29.7
61°	8.1	8.6	18.2	8.6	7.7	8.1	23.4	7.7	7.2	7.7	23.0
61.5°	8.1	8.1	15.8	8.1	7.7	7.7	19.1	7.2	6.7	7.7	18.7
62°	7.7	8.1	13.4	7.7	7.2	7.7	15.8	7.2	6.2	7.2	15.8
62.5°	7.2	7.7	11.0	7.7	7.2	7.2	12.9	6.7	6.2	7.2	12.9
63°	7.2	7.2	8.6	7.2	6.7	6.7	10.5	6.7	5.7	6.7	10.5
63.5°	6.7	7.2	7.7	7.2	6.2	6.7	8.6	6.2	5.7	6.2	9.1
64°	6.7	6.7	7.2	6.7	6.2	6.2	7.2	6.2	5.7	6.2	7.7
64.5°	6.2	6.7	6.7	6.7	5.7	6.2	6.7	5.7	5.3	5.7	6.7
65°	6.2	6.2	6.7	6.2	5.7	5.7	6.2	5.7	5.3	5.7	6.7
65.5°	5.7	6.2	6.2	6.2	5.7	5.7	5.7	5.3	4.8	5.7	6.2
66°	5.7	5.7	5.7	5.7	5.3	5.3	5.7	5.3	4.8	5.3	5.7



TEST NUMBER: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.8	5.3	5.3	5.3	4.8	4.8	5.3	4.8	4.3	4.8	5.3
68°	4.8	4.8	5.3	4.8	4.3	4.8	4.8	4.3	3.8	4.8	4.8
68.5°	4.3	4.8	4.8	4.8	4.3	4.3	4.8	4.3	3.8	4.3	4.8
69°	4.3	4.3	4.8	4.3	4.3	4.3	4.3	3.8	3.8	4.3	4.8
69.5°	4.3	4.3	4.3	4.3	3.8	4.3	4.3	3.8	3.3	3.8	4.3
70°	3.8	4.3	4.3	4.3	3.8	3.8	4.3	3.8	3.3	3.8	4.3
70.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.3	3.3	3.8	3.8
71°	3.3	3.8	3.8	3.8	3.3	3.8	3.8	3.3	3.3	3.3	3.8
71.5°	3.3	3.8	3.8	3.8	3.3	3.3	3.3	3.3	2.9	3.3	3.8
72°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.9	2.9	3.3	3.3
72.5°	2.9	3.3	3.3	3.3	2.9	3.3	3.3	2.9	2.9	2.9	3.3
73°	2.9	2.9	3.3	3.3	2.9	2.9	2.9	2.9	2.4	2.9	3.3
73.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.4	2.9	2.9
74°	2.4	2.9	2.9	2.9	2.4	2.9	2.9	2.4	2.4	2.9	2.9
74.5°	2.4	2.4	2.9	2.9	2.4	2.4	2.9	2.4	2.4	2.4	2.9
75°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.9	2.4	2.4
75.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.9	1.9	2.4	2.4
76°	1.9	2.4	2.4	2.4	1.9	2.4	2.4	1.9	1.9	1.9	2.4
76.5°	1.9	1.9	2.4	2.4	1.9	1.9	2.4	1.9	1.9	1.9	2.4
77°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.9	1.9
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.9	1.9
78°	1.4	1.4	1.9	1.9	1.4	1.9	1.9	1.4	1.4	1.4	1.9
78.5°	1.4	1.4	1.9	1.4	1.4	1.4	1.9	1.4	1.4	1.4	1.9
79°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.4	1.4
79.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.4	1.4
80°	1.0	1.0	1.4	1.4	1.0	1.4	1.4	1.0	1.0	1.0	1.4
80.5°	1.0	1.0	1.4	1.4	1.0	1.4	1.4	1.0	1.0	1.0	1.4
81°	1.0	1.0	1.4	1.0	1.0	1.0	1.4	1.0	1.0	1.0	1.0
81.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	1.0
82°	1.0	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
82.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
83°	0.5	0.5	1.0	1.0	0.5	1.0	1.0	0.5	0.5	0.5	1.0
83.5°	0.5	0.5	1.0	0.5	0.5	0.5	1.0	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5
85°	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
85.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
86°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
86.5°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.5
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: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

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: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	5147.7	5147.7	5147.7	5147.7	5147.7	5147.7
0.5°	5146.8	5146.8	5143.9	5141.0	5144.4	5146.8
1°	5144.9	5144.4	5140.1	5136.2	5140.6	5141.5
1.5°	5141.5	5141.0	5135.8	5130.5	5134.3	5136.2
2°	5137.2	5135.8	5129.6	5122.4	5127.6	5128.1
2.5°	5130.5	5128.6	5120.9	5113.8	5119.0	5119.0
3°	5122.9	5120.5	5110.9	5102.3	5109.9	5109.9
3.5°	5114.2	5110.4	5099.9	5091.3	5099.4	5098.5
4°	5103.7	5099.9	5087.5	5077.4	5087.0	5086.0
4.5°	5091.3	5086.0	5073.1	5063.5	5072.6	5070.7
5°	5077.9	5071.2	5057.8	5046.8	5057.3	5054.0
5.5°	5062.1	5054.9	5040.1	5029.1	5039.1	5035.3
6°	5044.9	5036.7	5021.0	5010.9	5020.0	5014.7
6.5°	5025.3	5016.2	5000.4	4988.9	4998.5	4993.2
7°	5004.2	4993.7	4977.0	4965.5	4975.5	4968.8
7.5°	4980.3	4969.8	4953.0	4941.1	4951.6	4943.9
8°	4955.9	4943.0	4925.3	4914.3	4925.3	4916.7
8.5°	4928.6	4914.3	4896.6	4886.1	4898.5	4887.5
9°	4899.5	4882.2	4866.0	4856.4	4867.9	4854.5
9.5°	4868.4	4849.7	4833.4	4825.3	4836.3	4822.0
10°	4835.8	4816.2	4798.5	4789.4	4803.3	4790.9
10.5°	4802.3	4780.3	4762.2	4757.9	4770.3	4756.4
11°	4766.9	4744.9	4726.3	4720.5	4736.3	4722.5
11.5°	4731.5	4706.7	4688.5	4680.8	4700.9	4687.1
12°	4693.3	4668.9	4649.3	4638.7	4664.1	4653.1
12.5°	4656.0	4632.0	4609.6	4598.1	4627.3	4617.7
13°	4617.7	4594.3	4569.4	4554.6	4590.4	4580.4
13.5°	4578.9	4556.9	4530.2	4510.5	4552.2	4543.1
14°	4539.7	4518.7	4489.0	4464.1	4512.5	4505.3
14.5°	4500.0	4480.9	4449.8	4419.2	4473.2	4466.5
15°	4460.8	4439.7	4408.2	4372.3	4432.6	4427.8
15.5°	4420.6	4399.1	4365.6	4325.9	4390.5	4388.6
16°	4379.0	4358.4	4322.1	4279.0	4348.9	4346.0
16.5°	4336.4	4316.3	4279.5	4232.6	4306.3	4303.9
17°	4291.9	4271.8	4235.0	4185.3	4261.8	4259.9
17.5°	4248.9	4227.8	4189.6	4138.8	4217.3	4213.5
18°	4203.0	4179.5	4142.2	4092.0	4171.4	4163.2
18.5°	4157.0	4129.8	4094.8	4044.1	4123.5	4111.1
19°	4108.7	4081.0	4045.1	3996.8	4072.8	4058.0
19.5°	4058.5	4030.3	3994.4	3948.9	4020.2	4007.8
20°	4008.3	3977.6	3943.7	3898.2	3966.6	3955.6
20.5°	3955.6	3926.5	3890.1	3849.4	3913.1	3904.9
21°	3903.5	3873.4	3837.5	3799.7	3857.6	3855.2

TEST NUMBER: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3743.2	3715.0	3672.4	3649.0	3694.0	3699.7
23°	3686.8	3662.4	3616.5	3597.3	3639.4	3639.4
23.5°	3631.8	3608.3	3560.5	3544.7	3586.3	3575.8
24°	3576.3	3547.6	3505.5	3489.7	3529.9	3515.1
24.5°	3520.8	3483.5	3449.0	3431.8	3470.1	3462.4
25°	3465.8	3423.2	3390.2	3374.4	3406.9	3409.8
25.5°	3410.3	3371.1	3329.0	3317.0	3343.3	3357.7
26°	3346.2	3319.9	3264.4	3258.6	3278.7	3302.7
26.5°	3281.6	3256.3	3203.6	3197.9	3222.8	3234.3
27°	3221.3	3187.4	3149.6	3139.5	3168.2	3168.2
27.5°	3165.4	3124.7	3095.0	3078.3	3115.1	3100.3
28°	3111.3	3045.3	3030.9	3018.5	3059.2	3018.5
28.5°	3049.6	2964.5	2961.1	2959.7	2996.0	2934.3
29°	2977.8	2881.7	2898.4	2902.7	2927.6	2852.0
29.5°	2914.7	2800.4	2822.4	2845.3	2864.5	2770.7
30°	2837.2	2719.5	2742.5	2787.9	2790.3	2688.9
30.5°	2761.1	2640.1	2660.7	2728.6	2713.8	2607.1
31°	2678.9	2560.2	2581.3	2667.9	2634.9	2525.8
31.5°	2599.9	2480.3	2502.8	2601.4	2555.0	2445.9
32°	2522.9	2402.4	2425.8	2536.3	2476.5	2367.0
32.5°	2447.3	2324.9	2347.4	2474.6	2399.0	2286.6
33°	2367.9	2245.9	2274.2	2418.6	2324.9	2203.8
33.5°	2294.7	2164.6	2199.5	2370.8	2249.3	2122.0
34°	2218.7	2081.9	2125.9	2324.4	2174.7	2040.2
34.5°	2146.9	1998.6	2048.9	2263.2	2098.6	1956.1
35°	2069.4	1915.4	1975.2	2206.7	2025.4	1871.4
35.5°	1995.8	1833.6	1897.7	2148.8	1950.3	1787.7
36°	1918.3	1752.3	1821.6	2074.2	1876.6	1702.5
36.5°	1845.1	1676.2	1744.1	2003.9	1800.6	1627.4
37°	1765.7	1600.1	1670.9	1929.7	1727.4	1552.3
37.5°	1688.6	1524.6	1597.8	1849.9	1654.7	1477.2
38°	1612.1	1448.5	1525.0	1769.5	1581.5	1401.6
38.5°	1538.0	1372.9	1452.3	1688.2	1508.8	1329.9
39°	1465.2	1303.6	1379.6	1616.4	1436.1	1259.5
39.5°	1395.4	1234.7	1311.2	1545.1	1363.4	1188.3
40°	1326.0	1164.4	1247.1	1473.4	1297.3	1119.9
40.5°	1260.0	1094.0	1181.6	1402.1	1231.3	1050.0
41°	1195.9	1028.5	1118.9	1334.6	1168.2	982.6
41.5°	1132.8	958.2	1056.2	1269.1	1104.1	916.6
42°	1070.6	896.9	994.5	1205.0	1043.3	852.5
42.5°	1008.4	834.8	933.8	1143.3	983.0	790.7
43°	947.6	776.9	873.5	1081.1	925.6	732.9
43.5°	888.8	717.1	815.6	1020.8	867.3	676.9



TEST NUMBER: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	721.4	561.6	655.4	845.8	701.8	522.9
45.5°	669.7	511.9	606.6	791.7	651.5	475.0
46°	620.4	466.9	560.2	738.1	602.3	430.5
46.5°	573.1	422.9	515.2	688.9	556.3	388.0
47°	527.6	380.8	472.2	640.5	511.4	347.3
47.5°	484.6	340.6	429.6	595.1	467.4	310.0
48°	445.4	306.2	389.9	550.6	427.2	275.5
48.5°	406.1	272.2	352.6	510.4	387.5	244.0
49°	366.9	242.1	317.2	471.2	350.2	215.7
49.5°	328.2	214.8	284.6	434.8	313.8	189.9
50°	294.2	189.4	253.5	398.0	283.2	167.0
50.5°	262.6	166.5	225.3	364.5	253.1	149.7
51°	234.9	149.7	200.0	331.5	224.4	132.5
51.5°	208.1	133.0	177.5	301.9	197.6	115.3
52°	183.2	116.7	160.7	273.6	175.1	98.1
52.5°	161.2	100.0	144.0	246.4	157.9	84.7
53°	141.6	86.6	127.2	220.5	140.6	72.2
53.5°	124.4	74.1	110.5	197.6	123.4	60.3
54°	108.6	62.2	93.8	176.0	106.2	49.3
54.5°	94.7	51.2	81.8	158.8	89.0	37.8
55°	82.3	40.2	69.8	142.1	76.5	27.7
55.5°	70.3	29.7	58.8	124.9	65.5	20.1
56°	61.2	22.0	47.4	108.1	54.5	18.2
56.5°	52.1	15.8	37.3	90.9	44.5	16.3
57°	43.1	14.8	27.3	78.0	34.9	14.4
57.5°	34.0	13.9	19.6	67.0	25.8	12.4
58°	24.9	13.4	17.7	56.9	18.2	10.5
58.5°	15.8	12.4	15.8	47.8	16.3	10.0
59°	12.4	12.0	14.4	40.2	14.4	9.6
59.5°	11.5	11.5	12.4	33.5	12.0	9.6
60°	11.0	10.5	11.0	27.7	10.0	9.1
60.5°	10.5	10.0	10.5	23.0	9.6	8.6
61°	10.0	9.6	10.0	19.1	9.1	8.1
61.5°	9.6	9.1	9.6	16.7	8.6	8.1
62°	9.1	9.1	9.1	14.4	8.1	7.7
62.5°	8.6	8.6	8.6	12.0	8.1	7.2
63°	8.1	8.1	8.1	9.6	7.7	7.2
63.5°	7.7	7.7	7.7	8.1	7.2	6.7
64°	7.7	7.2	7.7	7.2	7.2	6.7
64.5°	7.2	7.2	7.2	7.2	6.7	6.2
65°	6.7	6.7	6.7	6.7	6.7	6.2
65.5°	6.7	6.7	6.7	6.7	6.2	5.7
66°	6.2	6.2	6.2	6.2	6.2	5.7



TEST NUMBER: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	5.7	5.3	5.7	5.3	5.3	4.8
68°	5.3	5.3	5.3	5.3	5.3	4.8
68.5°	5.3	4.8	5.3	4.8	4.8	4.3
69°	4.8	4.8	4.8	4.8	4.8	4.3
69.5°	4.8	4.8	4.8	4.8	4.3	4.3
70°	4.3	4.3	4.3	4.3	4.3	3.8
70.5°	4.3	4.3	4.3	4.3	4.3	3.8
71°	3.8	3.8	3.8	3.8	3.8	3.3
71.5°	3.8	3.8	3.8	3.8	3.8	3.3
72°	3.8	3.8	3.8	3.8	3.3	3.3
72.5°	3.3	3.3	3.3	3.3	3.3	2.9
73°	3.3	3.3	3.3	3.3	3.3	2.9
73.5°	3.3	3.3	3.3	3.3	2.9	2.9
74°	2.9	2.9	2.9	2.9	2.9	2.4
74.5°	2.9	2.9	2.9	2.9	2.9	2.4
75°	2.9	2.9	2.9	2.9	2.4	2.4
75.5°	2.4	2.4	2.4	2.4	2.4	2.4
76°	2.4	2.4	2.4	2.4	2.4	1.9
76.5°	2.4	2.4	2.4	2.4	2.4	1.9
77°	2.4	1.9	2.4	2.4	1.9	1.9
77.5°	1.9	1.9	1.9	1.9	1.9	1.9
78°	1.9	1.9	1.9	1.9	1.9	1.4
78.5°	1.9	1.9	1.9	1.9	1.4	1.4
79°	1.4	1.4	1.9	1.9	1.4	1.4
79.5°	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4	1.0
80.5°	1.4	1.4	1.4	1.4	1.0	1.0
81°	1.4	1.4	1.4	1.4	1.0	1.0
81.5°	1.0	1.0	1.0	1.0	1.0	1.0
82°	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	0.5	0.5
83°	1.0	1.0	1.0	1.0	0.5	0.5
83.5°	1.0	1.0	1.0	1.0	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.5
85.5°	0.5	0.5	0.5	0.5	0.0	0.0
86°	0.5	0.5	0.5	0.5	0.0	0.0
86.5°	0.5	0.5	0.5	0.5	0.0	0.0
87°	0.0	0.5	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: P776623

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQC-5000lm-4000K

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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Scaled Data Report



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Scaled Data Report





21.5°	3806.4	3805.9	3809.3	3832.7	3849.4	3904.0	3908.8	3897.8	3916.4	3918.3	3863.8
22°	3755.2	3751.8	3760.5	3781.0	3802.6	3850.9	3859.5	3847.0	3866.2	3865.2	3814.5



44°	622.8	745.8	1037.1	915.1	753.0	909.9	1188.3	928.5	773.5	899.3	1095.5
44.5°	570.7	691.7	972.5	861.5	694.6	852.5	1123.7	873.0	716.1	844.3	1031.8



66.5°	5.3	5.7	5.7	5.7	5.3	5.3	5.3	4.8	4.8	5.3	5.7
67°	5.3	5.3	5.3	5.3	4.8	5.3	5.3	4.8	4.3	4.8	5.3



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°	3850.9	3818.8	3782.9	3749.0	3803.5	3806.4
22°	3796.8	3767.2	3728.4	3699.7	3749.0	3755.2



44°	831.4	664.0	760.1	960.6	808.9	622.8
44.5°	774.5	612.3	707.5	903.2	753.4	570.7



66.5°	6.2	5.7	6.2	5.7	5.7	5.3
67°	5.7	5.7	5.7	5.7	5.7	5.3

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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)