

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: P776823

Luminaire Tested: HCDJBS4050CSD-HCD8TSQC-5000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776823
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-HCD8TSQC-5000lm-4000K
Description: 8 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

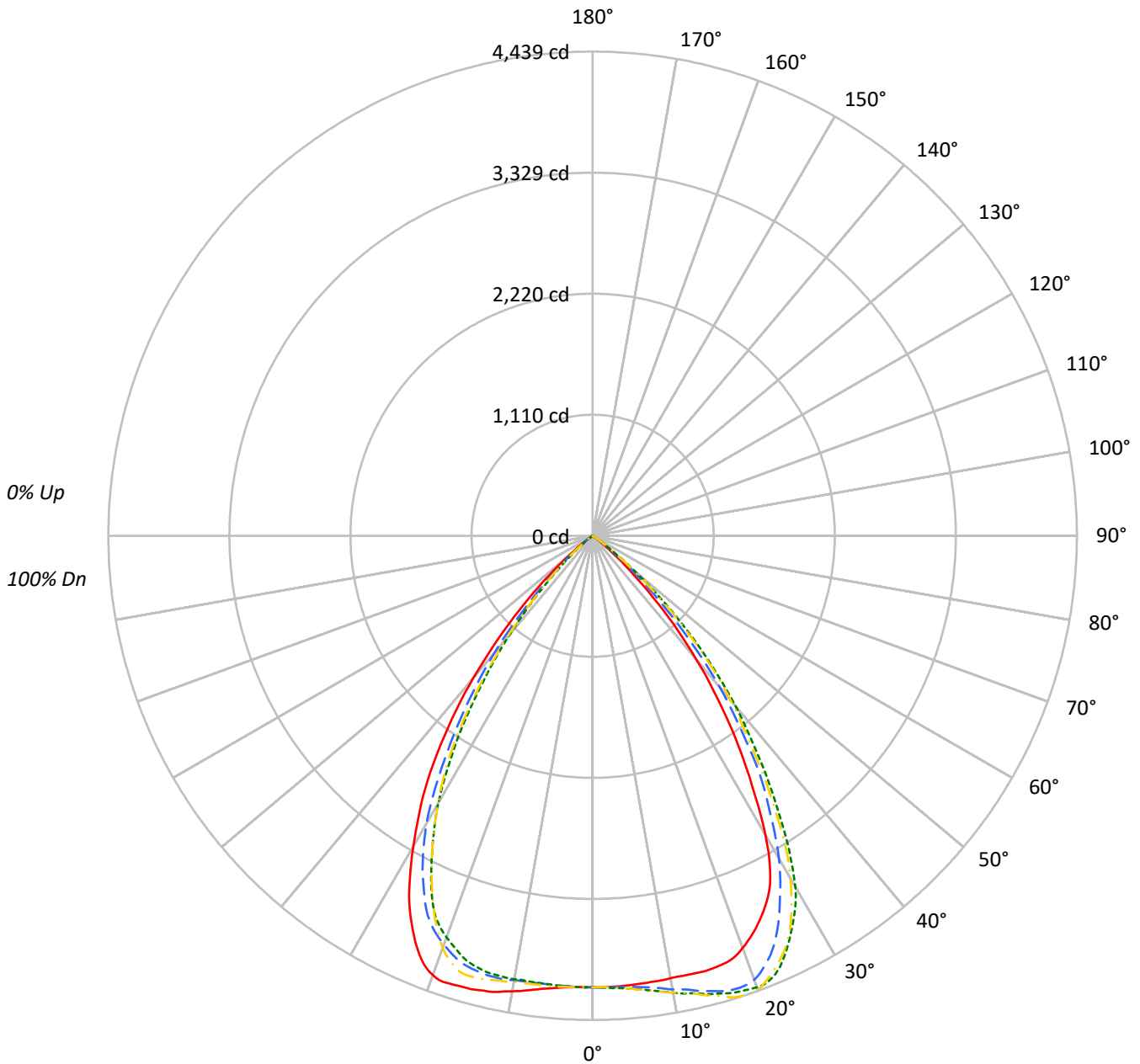
Lumens per Lamp: N/A
Luminaire Lumens: 5563.8 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.07
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

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



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CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P776823

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TSQC-5000lm-4000K

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	100	100	99	97	97	96	95	93					93			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85					85			
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	82	80	78					78			
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	74	72					72			
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66					66			
6	85	75	69	64	83	74	68	64	73	67	63	71	67	63	70	66	62	61					61			
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	66	61	58	56					56			
8	76	65	59	54	74	65	59	54	64	58	54	62	57	54	61	57	53	52					52			
9	71	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48					48			
10	68	57	51	47	67	57	51	47	56	50	47	55	50	46	54	50	46	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	99249	99249	99249	99249
5°	99501	100365	100191	99513
10°	100279	103585	103259	100522
15°	102298	107936	106821	101646
20°	102654	112414	109326	99918
25°	99109	111102	103829	92645
30°	87793	102952	91049	78326
35°	67382	83997	74466	58591
40°	46311	63837	53031	36895
45°	24355	41463	30353	17284
50°	8170	18730	11665	5599
55°	581	4059	1279	138
60°	91	115	91	67
65°	57	57	57	28
70°	35	35	35	35
75°	46	46	46	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°

Vertical Angle: 45°

Luminance: 41900 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.4	7.1
10°-20°	1195.0	21.5
20°-30°	1742.6	31.3
30°-40°	1501.5	27.0
40°-50°	660.2	11.9
50°-60°	65.8	1.2
60°-70°	1.0	0.0
70°-80°	0.3	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°	3335.0	59.9
0°-40°	4836.5	86.9
0°-60°	5562.5	100.0
0°-90°	5563.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5563.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4139	4139	4139	4139	4139	
5°	4134	4170	4162	4134	4134	394
15°	4121	4348	4303	4095	4121	1162
25°	3746	4199	3924	3502	3746	1700
35°	2302	2870	2544	2002	2302	1428
45°	718	1223	895	510	718	574
55°	14	97	31	3	14	47
65°	1	1	1	0	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1
0.5°	4140.0	4141.9	4142.9	4139.5	4141.0	4138.6	4136.7	4137.6	4139.1	4140.5	4140.5
1°	4140.0	4142.4	4143.4	4141.9	4142.4	4140.0	4137.1	4138.1	4139.5	4140.5	4140.5
1.5°	4140.0	4141.9	4142.9	4143.4	4145.3	4142.4	4138.6	4139.5	4139.5	4140.0	4139.5
2°	4139.1	4140.5	4142.4	4144.8	4148.1	4145.8	4142.4	4141.9	4141.0	4140.0	4139.1
2.5°	4139.1	4140.5	4142.9	4144.8	4150.5	4150.5	4145.8	4144.8	4143.8	4140.5	4137.6
3°	4137.6	4140.0	4143.4	4146.2	4152.4	4152.0	4150.5	4150.1	4145.8	4141.0	4136.7
3.5°	4136.7	4139.1	4144.8	4149.1	4154.8	4155.3	4154.4	4153.9	4148.6	4142.4	4135.7
4°	4135.2	4137.6	4146.2	4152.4	4159.1	4160.1	4159.1	4159.6	4152.9	4143.4	4134.8
4.5°	4134.8	4137.6	4148.6	4156.7	4163.9	4165.8	4164.9	4164.4	4157.7	4145.3	4132.8
5°	4133.8	4137.6	4151.5	4162.5	4169.7	4171.1	4171.6	4171.6	4162.5	4147.2	4132.8
5.5°	4132.8	4139.5	4155.3	4169.2	4175.4	4177.3	4177.8	4179.7	4168.7	4149.6	4132.4
6°	4131.4	4140.5	4159.6	4175.4	4182.1	4184.0	4185.4	4187.4	4174.9	4152.9	4132.4
6.5°	4129.5	4141.9	4165.4	4183.0	4189.7	4190.7	4193.6	4195.5	4182.6	4157.7	4132.8
7°	4127.6	4143.4	4171.6	4191.7	4197.9	4197.9	4201.2	4204.6	4190.7	4162.0	4132.8
7.5°	4126.1	4145.3	4178.7	4201.7	4206.0	4206.0	4208.4	4212.7	4198.8	4167.3	4132.8
8°	4125.7	4148.1	4185.9	4211.7	4214.6	4214.6	4218.0	4223.2	4207.9	4172.1	4133.3
8.5°	4124.7	4152.9	4194.0	4222.3	4223.7	4224.6	4227.0	4232.8	4217.0	4176.8	4134.3
9°	4123.8	4158.2	4203.6	4234.2	4234.2	4234.2	4235.6	4243.3	4225.6	4182.1	4134.8
9.5°	4121.4	4162.5	4214.1	4245.2	4243.3	4244.3	4244.3	4252.9	4233.7	4186.9	4134.8
10°	4118.5	4166.8	4222.7	4257.2	4254.3	4255.3	4253.8	4261.0	4240.9	4191.7	4137.1
10.5°	4116.6	4170.1	4230.4	4267.7	4264.8	4265.8	4262.9	4268.6	4248.1	4198.3	4142.9
11°	4116.6	4174.4	4237.6	4275.8	4274.9	4275.3	4271.0	4275.8	4255.7	4207.9	4147.7
11.5°	4118.5	4180.7	4245.2	4283.5	4282.5	4283.5	4278.7	4283.9	4267.2	4216.5	4149.1
12°	4119.5	4188.8	4255.7	4292.1	4288.2	4292.1	4288.2	4295.9	4276.3	4224.6	4147.7
12.5°	4119.5	4196.9	4268.6	4301.6	4295.9	4301.2	4299.7	4307.4	4283.5	4226.1	4145.3
13°	4119.0	4201.7	4281.6	4313.6	4305.9	4312.2	4314.1	4316.5	4286.8	4228.5	4144.8
13.5°	4119.9	4204.6	4293.5	4324.6	4318.8	4324.6	4329.8	4321.7	4289.2	4233.3	4143.4
14°	4121.8	4207.0	4302.1	4332.2	4331.3	4338.5	4342.8	4325.1	4293.5	4238.0	4140.0
14.5°	4122.3	4210.3	4311.7	4336.5	4340.8	4349.0	4353.3	4330.3	4298.8	4241.4	4134.3
15°	4120.9	4212.7	4322.7	4340.4	4348.0	4356.1	4364.8	4338.5	4303.1	4243.8	4128.1
15.5°	4117.1	4212.7	4333.7	4348.0	4355.7	4361.4	4380.1	4345.1	4304.0	4244.3	4120.9
16°	4113.2	4208.9	4343.7	4354.7	4365.2	4369.1	4397.3	4349.5	4304.5	4246.2	4114.7
16.5°	4108.9	4203.1	4350.4	4357.6	4375.3	4378.1	4412.6	4350.9	4305.5	4247.6	4107.5
17°	4104.1	4196.4	4354.7	4357.6	4382.9	4384.4	4424.0	4349.0	4307.4	4249.0	4097.5
17.5°	4098.9	4190.7	4357.1	4356.1	4387.7	4387.2	4431.2	4347.1	4309.3	4247.1	4084.5
18°	4091.2	4184.5	4357.1	4354.2	4391.1	4386.7	4435.0	4345.6	4312.2	4238.5	4066.9
18.5°	4078.3	4178.3	4355.2	4351.8	4394.4	4386.7	4437.4	4343.2	4313.1	4224.6	4047.2
19°	4061.6	4170.1	4351.8	4349.9	4398.2	4388.7	4439.3	4340.4	4309.3	4203.1	4028.6
19.5°	4042.9	4159.6	4345.6	4347.5	4401.6	4392.0	4436.5	4332.7	4299.2	4180.2	4009.0
20°	4022.9	4145.8	4333.2	4343.7	4405.4	4395.4	4428.8	4320.3	4284.4	4154.8	3988.0
20.5°	4000.9	4130.4	4314.5	4336.5	4406.8	4396.3	4413.5	4305.9	4268.2	4127.1	3966.0
21°	3977.0	4114.2	4290.6	4324.6	4403.5	4392.5	4392.5	4289.2	4246.2	4094.6	3943.0



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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°	3899.5	4054.4	4205.0	4274.9	4359.5	4373.8	4323.6	4237.1	4151.0	3986.0	3861.7
23°	3870.8	4027.2	4172.5	4257.2	4336.5	4361.9	4297.3	4215.1	4111.3	3944.9	3828.7
23.5°	3841.2	3995.6	4135.7	4234.7	4308.8	4346.6	4269.1	4190.7	4068.8	3901.9	3791.9
24°	3811.0	3959.7	4095.5	4210.8	4275.3	4325.5	4239.5	4162.0	4021.4	3856.0	3749.3
24.5°	3779.5	3918.6	4050.1	4183.5	4237.6	4300.2	4208.4	4129.0	3974.1	3807.2	3702.5
25°	3746.0	3874.6	4002.3	4150.5	4199.3	4268.2	4173.5	4089.8	3924.4	3754.1	3648.9
25.5°	3710.1	3827.8	3949.7	4112.8	4158.7	4231.3	4135.7	4046.3	3875.1	3701.5	3595.9
26°	3672.4	3778.0	3895.2	4068.8	4116.6	4189.3	4092.7	3997.5	3820.1	3642.2	3542.3
26.5°	3629.3	3725.9	3837.8	4020.0	4071.6	4141.4	4047.2	3943.5	3763.7	3582.5	3488.7
27°	3582.0	3668.1	3779.0	3964.0	4027.6	4088.8	3995.6	3883.7	3705.8	3523.2	3435.2
27.5°	3526.0	3607.3	3721.1	3901.4	3983.2	4034.8	3942.0	3822.0	3637.5	3463.9	3371.6
28°	3465.3	3543.7	3662.8	3832.1	3936.8	3971.7	3882.3	3757.5	3569.1	3404.6	3308.9
28.5°	3398.8	3478.2	3605.9	3758.9	3889.0	3906.7	3819.2	3696.3	3500.7	3341.5	3245.4
29°	3327.1	3413.7	3545.2	3685.7	3838.3	3839.2	3756.5	3626.5	3432.3	3276.4	3178.9
29.5°	3250.1	3346.7	3483.0	3612.6	3781.9	3769.0	3694.4	3556.2	3363.5	3210.9	3111.9
30°	3170.8	3280.7	3417.5	3538.0	3718.3	3693.4	3623.6	3485.9	3288.4	3140.6	3042.6
30.5°	3083.3	3215.7	3345.8	3465.3	3638.4	3617.8	3552.8	3416.1	3214.7	3070.3	2970.4
31°	2994.3	3152.1	3269.3	3392.2	3558.6	3542.3	3482.5	3335.7	3144.0	2996.7	2889.6
31.5°	2903.0	3084.7	3191.3	3319.9	3478.7	3466.7	3411.8	3254.4	3070.8	2922.6	2804.5
32°	2815.5	3009.6	3113.9	3249.7	3398.8	3390.7	3323.3	3170.8	2999.1	2848.0	2717.9
32.5°	2726.1	2930.2	3038.3	3176.5	3312.3	3318.5	3232.4	3089.0	2928.8	2774.4	2633.3
33°	2640.5	2846.6	2966.1	3100.5	3221.0	3240.6	3138.7	3008.2	2858.0	2698.8	2544.8
33.5°	2554.9	2757.6	2894.9	3023.5	3131.1	3162.6	3046.4	2923.1	2782.5	2620.4	2460.2
34°	2471.2	2664.9	2825.0	2945.5	3041.7	3074.6	2959.4	2837.5	2706.5	2538.6	2373.6
34.5°	2387.0	2576.9	2750.4	2863.8	2954.6	2981.4	2871.9	2753.3	2627.6	2451.1	2290.9
35°	2301.9	2489.4	2671.1	2781.0	2869.5	2883.4	2784.9	2673.0	2543.9	2363.1	2205.3
35.5°	2221.1	2404.2	2587.4	2698.8	2784.4	2786.8	2693.5	2589.8	2456.4	2275.1	2124.0
36°	2132.6	2321.0	2498.0	2615.1	2698.3	2687.8	2604.1	2509.0	2369.8	2188.6	2039.4
36.5°	2044.2	2236.4	2403.8	2530.0	2609.9	2591.7	2511.4	2425.3	2285.2	2107.8	1956.2
37°	1959.1	2149.9	2314.4	2443.0	2523.3	2497.0	2423.4	2344.0	2202.9	2027.9	1872.0
37.5°	1875.9	2067.1	2229.2	2361.7	2438.2	2410.9	2339.7	2264.6	2123.6	1947.1	1789.3
38°	1796.0	1985.4	2146.5	2278.5	2354.5	2331.1	2262.2	2188.6	2039.9	1865.3	1709.0
38.5°	1721.9	1902.2	2067.1	2198.2	2273.2	2255.1	2188.1	2106.8	1954.3	1783.6	1630.6
39°	1641.6	1817.5	1985.4	2115.9	2195.8	2182.4	2116.4	2024.6	1867.7	1702.3	1554.1
39.5°	1560.8	1734.3	1901.7	2027.0	2118.8	2109.7	2043.2	1936.6	1779.8	1617.2	1476.1
40°	1479.5	1652.6	1815.1	1930.9	2039.4	2038.9	1969.1	1851.5	1694.2	1531.6	1396.7
40.5°	1398.7	1571.3	1730.0	1838.1	1958.6	1963.4	1892.1	1765.9	1605.7	1444.1	1315.9
41°	1317.8	1489.5	1641.1	1751.1	1874.4	1886.9	1814.2	1684.6	1523.0	1358.0	1234.6
41.5°	1240.4	1407.7	1552.1	1668.8	1790.8	1811.3	1735.8	1603.8	1441.7	1274.3	1153.4
42°	1164.8	1326.4	1462.7	1587.1	1705.2	1733.4	1655.0	1525.4	1360.4	1190.6	1071.6
42.5°	1090.7	1243.7	1373.8	1505.3	1621.5	1655.0	1574.1	1445.0	1280.1	1110.8	991.7
43°	1013.2	1160.5	1284.8	1424.0	1540.7	1572.7	1490.9	1365.2	1198.8	1033.8	914.3
43.5°	937.2	1075.4	1202.6	1341.8	1458.4	1489.0	1407.3	1284.4	1118.4	958.3	837.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	718.2	835.8	967.3	1104.6	1222.7	1235.6	1164.3	1052.9	895.1	742.1	627.8
45.5°	649.4	763.6	897.1	1028.5	1142.8	1151.9	1083.5	978.8	824.8	676.1	566.2
46°	583.4	696.2	826.3	954.0	1062.5	1069.2	1004.6	905.2	759.8	614.0	508.8
46.5°	520.3	630.7	757.9	878.9	986.0	988.4	927.7	831.5	693.8	554.2	462.4
47°	461.0	569.0	691.9	807.2	910.4	908.0	851.6	760.3	632.1	501.1	416.0
47.5°	406.0	511.6	628.3	736.4	837.3	832.0	776.1	691.0	571.4	455.7	369.1
48°	356.7	459.0	566.2	670.4	765.1	759.8	706.3	625.4	514.5	409.8	322.8
48.5°	314.6	409.8	508.3	608.2	692.4	689.5	637.9	562.3	463.8	364.4	286.9
49°	278.3	364.4	455.2	548.5	623.1	621.6	572.8	508.8	413.6	318.9	254.4
49.5°	246.7	322.8	405.0	489.6	556.6	558.0	518.3	455.2	362.9	280.7	225.2
50°	219.0	285.0	358.2	431.8	502.1	504.0	463.3	401.7	312.7	246.7	198.0
50.5°	192.7	249.6	315.1	377.8	447.6	450.4	408.8	348.1	271.6	214.2	170.7
51°	167.8	216.6	274.5	327.5	393.5	396.4	354.3	294.6	234.8	184.1	145.4
51.5°	145.8	188.4	238.1	282.6	339.0	342.8	299.3	254.4	201.8	155.4	122.9
52°	123.8	160.7	204.2	242.9	285.5	288.8	257.3	217.1	170.7	129.1	100.4
52.5°	101.9	137.7	173.1	206.1	244.8	245.3	218.5	184.1	141.5	105.7	81.3
53°	79.9	114.8	148.2	173.6	207.5	207.5	184.1	153.5	115.7	85.6	62.6
53.5°	57.9	91.3	123.8	148.2	174.5	173.6	152.5	125.8	94.2	66.0	43.5
54°	34.0	68.4	99.5	123.4	143.5	142.0	124.8	102.3	73.2	46.4	24.9
54.5°	17.2	44.0	75.1	98.0	115.7	115.7	100.9	83.2	51.6	26.8	6.7
55°	13.9	23.4	50.7	73.2	97.1	94.2	81.8	63.6	30.6	7.7	4.8
55.5°	10.5	19.6	27.7	47.8	78.9	73.2	62.6	44.5	10.0	5.3	3.8
56°	7.2	15.3	12.4	24.9	60.2	52.1	44.0	25.3	5.7	4.3	3.3
56.5°	4.3	11.5	9.6	10.5	42.1	30.6	24.9	6.2	4.8	3.8	2.9
57°	3.8	7.7	7.7	8.1	23.4	9.6	6.2	4.8	3.8	3.3	2.4
57.5°	3.3	3.8	5.7	6.7	5.3	5.3	4.8	4.3	3.3	2.9	2.4
58°	2.9	3.3	3.3	4.8	4.3	4.3	3.8	3.8	2.9	2.4	1.9
58.5°	2.9	2.9	2.9	3.3	3.3	3.3	3.3	3.3	2.9	2.4	1.9
59°	2.4	2.4	2.9	2.9	2.9	2.9	2.9	2.9	2.4	1.9	1.9
59.5°	2.4	2.4	2.4	2.4	2.9	2.9	2.9	2.4	2.4	1.9	1.4
60°	1.9	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.4
60.5°	1.9	1.9	1.9	1.9	1.9	2.4	2.4	2.4	1.9	1.4	1.4
61°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.4
61.5°	1.4	1.9	1.4	1.4	1.9	1.9	1.9	1.9	1.4	1.4	1.4
62°	1.4	1.4	1.4	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.0
62.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0
63°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0
63.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0
64°	1.0	1.4	1.0	1.0	1.4	1.4	1.4	1.4	1.0	1.0	1.0
64.5°	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4	1.0	1.0	1.0
65°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
65.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
66°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5



TEST NUMBER: P776823
 CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5
68°	1.0	1.0	0.5	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5
68.5°	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	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	0.0
74°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0
74.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	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: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-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: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4139.1	4139.1	4139.1	4139.1	4139.1	4139.1
0.5°	4138.1	4141.0	4138.1	4136.7	4137.6	4140.0
1°	4138.1	4140.5	4139.1	4137.1	4139.1	4140.0
1.5°	4137.6	4140.5	4139.5	4138.1	4139.1	4140.0
2°	4136.7	4140.0	4140.0	4139.5	4139.5	4139.1
2.5°	4134.8	4139.1	4141.0	4141.0	4140.0	4139.1
3°	4133.3	4138.1	4141.9	4143.4	4141.0	4137.6
3.5°	4131.4	4137.6	4143.4	4143.8	4141.0	4136.7
4°	4129.5	4137.1	4143.8	4145.8	4141.0	4135.2
4.5°	4127.1	4135.2	4144.8	4146.2	4140.5	4134.8
5°	4125.2	4134.3	4144.8	4146.2	4140.0	4133.8
5.5°	4123.8	4132.8	4143.8	4146.2	4138.1	4132.8
6°	4121.8	4131.4	4143.4	4145.3	4137.6	4131.4
6.5°	4118.5	4130.0	4143.4	4145.3	4136.7	4129.5
7°	4116.1	4129.0	4143.8	4145.8	4135.7	4127.6
7.5°	4112.8	4127.6	4145.8	4147.7	4135.2	4126.1
8°	4109.4	4127.1	4145.8	4148.6	4135.7	4125.7
8.5°	4105.6	4125.7	4145.3	4148.6	4135.2	4124.7
9°	4100.8	4124.2	4145.8	4148.6	4133.3	4123.8
9.5°	4097.0	4125.7	4149.6	4149.6	4131.9	4121.4
10°	4095.5	4128.5	4154.8	4154.4	4131.9	4118.5
10.5°	4096.5	4130.4	4159.6	4160.1	4134.3	4116.6
11°	4095.5	4129.5	4163.0	4163.9	4137.6	4116.6
11.5°	4092.7	4126.6	4164.4	4166.3	4138.1	4118.5
12°	4088.8	4123.3	4166.8	4167.3	4136.2	4119.5
12.5°	4088.4	4121.8	4172.5	4173.0	4134.3	4119.5
13°	4088.4	4120.9	4180.2	4180.2	4133.3	4119.0
13.5°	4087.4	4118.5	4186.9	4185.4	4133.3	4119.9
14°	4084.5	4112.8	4189.3	4188.8	4130.4	4121.8
14.5°	4079.3	4103.7	4190.7	4189.7	4124.7	4122.3
15°	4074.5	4094.6	4191.2	4190.7	4117.1	4120.9
15.5°	4068.8	4085.5	4191.2	4191.2	4110.4	4117.1
16°	4063.0	4075.5	4188.8	4190.7	4102.7	4113.2
16.5°	4057.3	4063.0	4181.1	4186.4	4095.1	4108.9
17°	4046.3	4045.8	4166.8	4175.9	4084.5	4104.1
17.5°	4030.5	4025.3	4145.8	4159.6	4070.2	4098.9
18°	4010.9	4003.3	4119.5	4138.1	4053.5	4091.2
18.5°	3988.0	3982.7	4090.3	4113.7	4034.3	4078.3
19°	3965.0	3961.2	4057.3	4085.5	4015.2	4061.6
19.5°	3940.6	3939.2	4020.5	4053.9	3996.6	4042.9
20°	3913.8	3915.7	3979.8	4017.1	3977.4	4022.9
20.5°	3886.6	3892.3	3935.4	3977.4	3957.4	4000.9
21°	3856.5	3866.0	3886.6	3932.0	3936.8	3977.0

TEST NUMBER: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3765.1	3768.5	3730.7	3782.3	3864.1	3899.5
23°	3732.1	3725.0	3673.3	3726.9	3833.5	3870.8
23.5°	3698.2	3676.2	3616.4	3669.5	3799.1	3841.2
24°	3662.8	3621.7	3557.1	3611.2	3757.5	3811.0
24.5°	3628.4	3564.3	3496.4	3550.9	3709.7	3779.5
25°	3583.9	3501.7	3433.3	3490.2	3655.1	3746.0
25.5°	3539.4	3437.6	3374.0	3429.0	3597.3	3710.1
26°	3495.4	3373.0	3314.2	3365.4	3535.6	3672.4
26.5°	3450.5	3307.5	3248.2	3302.3	3472.0	3629.3
27°	3387.8	3240.1	3183.7	3237.7	3406.0	3582.0
27.5°	3319.9	3173.6	3119.6	3171.2	3339.6	3526.0
28°	3242.0	3108.1	3053.1	3103.3	3272.6	3465.3
28.5°	3164.5	3042.6	2984.3	3037.8	3205.7	3398.8
29°	3085.6	2974.2	2913.5	2971.4	3137.3	3327.1
29.5°	3007.2	2905.9	2843.2	2902.5	3064.1	3250.1
30°	2924.5	2828.9	2775.3	2834.1	2990.0	3170.8
30.5°	2839.9	2749.5	2706.9	2762.9	2912.1	3083.3
31°	2754.7	2668.2	2638.1	2695.0	2831.7	2994.3
31.5°	2669.2	2586.9	2569.2	2626.6	2747.1	2903.0
32°	2584.0	2499.9	2498.0	2555.8	2662.5	2815.5
32.5°	2498.4	2417.2	2426.7	2480.3	2576.4	2726.1
33°	2412.9	2335.9	2349.7	2401.4	2490.3	2640.5
33.5°	2331.6	2256.0	2264.6	2320.1	2403.8	2554.9
34°	2249.3	2174.7	2175.2	2235.0	2326.3	2471.2
34.5°	2166.1	2091.5	2082.9	2147.0	2244.5	2387.0
35°	2079.6	2001.6	1997.3	2058.1	2161.8	2301.9
35.5°	1992.5	1913.2	1910.8	1970.1	2075.3	2221.1
36°	1908.4	1825.7	1828.5	1884.5	1989.7	2132.6
36.5°	1825.7	1736.7	1742.9	1800.8	1896.9	2044.2
37°	1747.7	1657.3	1658.8	1719.5	1812.3	1959.1
37.5°	1672.2	1578.0	1575.1	1635.8	1729.5	1875.9
38°	1593.7	1498.1	1490.9	1552.1	1650.6	1796.0
38.5°	1512.0	1418.7	1407.3	1468.5	1571.3	1721.9
39°	1426.9	1339.4	1323.1	1384.8	1491.9	1641.6
39.5°	1346.5	1259.0	1243.2	1301.1	1412.5	1560.8
40°	1267.2	1178.7	1163.4	1223.2	1333.1	1479.5
40.5°	1193.5	1104.6	1083.5	1145.2	1252.8	1398.7
41°	1119.4	1031.9	1010.9	1068.2	1178.2	1317.8
41.5°	1047.2	959.2	934.8	992.7	1101.2	1240.4
42°	971.6	889.4	867.4	920.0	1028.1	1164.8
42.5°	898.0	821.0	800.5	849.7	955.4	1090.7
43°	825.3	753.1	737.8	783.2	886.1	1013.2
43.5°	755.5	686.2	678.0	720.1	815.8	937.2



TEST NUMBER: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	561.4	509.7	516.9	548.9	614.0	718.2
45.5°	508.8	457.6	469.6	499.2	553.7	649.4
46°	456.7	408.8	425.1	451.9	496.3	583.4
46.5°	404.5	364.4	382.1	407.4	441.4	520.3
47°	352.4	324.2	343.3	366.3	391.6	461.0
47.5°	300.3	287.4	306.0	326.1	346.7	406.0
48°	267.8	254.4	271.6	289.8	306.5	356.7
48.5°	239.6	225.2	239.1	255.8	271.1	314.6
49°	214.2	198.9	208.0	224.3	240.0	278.3
49.5°	189.8	173.6	179.3	195.1	211.4	246.7
50°	166.9	150.1	155.4	166.4	185.5	219.0
50.5°	143.5	127.2	131.5	143.0	161.1	192.7
51°	121.0	103.8	107.1	119.5	139.6	167.8
51.5°	100.4	80.8	83.2	96.1	117.6	145.8
52°	81.3	57.4	59.3	73.2	96.1	123.8
52.5°	62.6	33.0	35.4	49.7	74.1	101.9
53°	44.0	15.8	17.2	27.3	49.3	79.9
53.5°	24.9	12.4	13.9	12.0	27.7	57.9
54°	6.7	9.1	10.0	10.0	12.9	34.0
54.5°	4.8	6.2	6.7	7.7	10.5	17.2
55°	3.8	3.3	3.3	5.7	8.1	13.9
55.5°	3.3	2.9	2.9	3.3	6.2	10.5
56°	2.9	2.4	2.9	3.3	3.8	7.2
56.5°	2.4	2.4	2.4	2.9	3.3	4.3
57°	2.4	1.9	2.4	2.4	2.9	3.8
57.5°	1.9	1.9	1.9	2.4	2.9	3.3
58°	1.9	1.9	1.9	2.4	2.4	2.9
58.5°	1.9	1.4	1.9	1.9	2.4	2.9
59°	1.4	1.4	1.4	1.9	2.4	2.4
59.5°	1.4	1.4	1.4	1.9	1.9	2.4
60°	1.4	1.4	1.4	1.4	1.9	1.9
60.5°	1.4	1.4	1.4	1.4	1.9	1.9
61°	1.4	1.0	1.4	1.4	1.4	1.9
61.5°	1.0	1.0	1.0	1.4	1.4	1.4
62°	1.0	1.0	1.0	1.4	1.4	1.4
62.5°	1.0	1.0	1.0	1.0	1.4	1.4
63°	1.0	1.0	1.0	1.0	1.4	1.4
63.5°	1.0	1.0	1.0	1.0	1.0	1.4
64°	1.0	1.0	1.0	1.0	1.0	1.0
64.5°	1.0	1.0	1.0	1.0	1.0	1.0
65°	1.0	0.5	1.0	1.0	1.0	1.0
65.5°	0.5	0.5	0.5	1.0	1.0	1.0
66°	0.5	0.5	0.5	1.0	1.0	1.0



TEST NUMBER: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.5	0.5	0.5	0.5	0.5	1.0
68°	0.5	0.5	0.5	0.5	0.5	1.0
68.5°	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	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°	0.0	0.0	0.5	0.5	0.5	0.5
74°	0.0	0.0	0.0	0.5	0.5	0.5
74.5°	0.0	0.0	0.0	0.5	0.5	0.5
75°	0.0	0.0	0.0	0.0	0.5	0.5
75.5°	0.0	0.0	0.0	0.0	0.0	0.5
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	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
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: P776823

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-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
1121 Highway 74 South
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°	3952.1	4097.5	4263.9	4307.9	4393.4	4387.2	4371.0	4273.9	4219.9	4060.2	3918.1
22°	3926.7	4077.9	4235.6	4291.6	4378.1	4381.0	4348.0	4256.7	4187.4	4024.3	3891.8



44°	862.1	992.7	1121.3	1259.5	1380.0	1405.3	1325.0	1205.5	1041.9	883.7	764.6
44.5°	789.5	911.9	1043.4	1180.1	1302.1	1320.7	1243.2	1126.6	967.3	810.5	694.3



66.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5
67°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5



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°	3827.3	3836.9	3837.8	3883.7	3914.3	3952.1
22°	3795.7	3804.8	3784.3	3834.0	3890.4	3926.7



44°	689.5	623.5	621.1	660.4	745.0	862.1
44.5°	625.0	565.7	567.6	603.0	678.5	789.5

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Scaled Data Report



66.5°	0.5	0.5	0.5	1.0	1.0	1.0
67°	0.5	0.5	0.5	0.5	1.0	1.0

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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)