

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: P776824

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

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776824  
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-HCD8TSQC-5000lm-5000K  
Description: 8 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

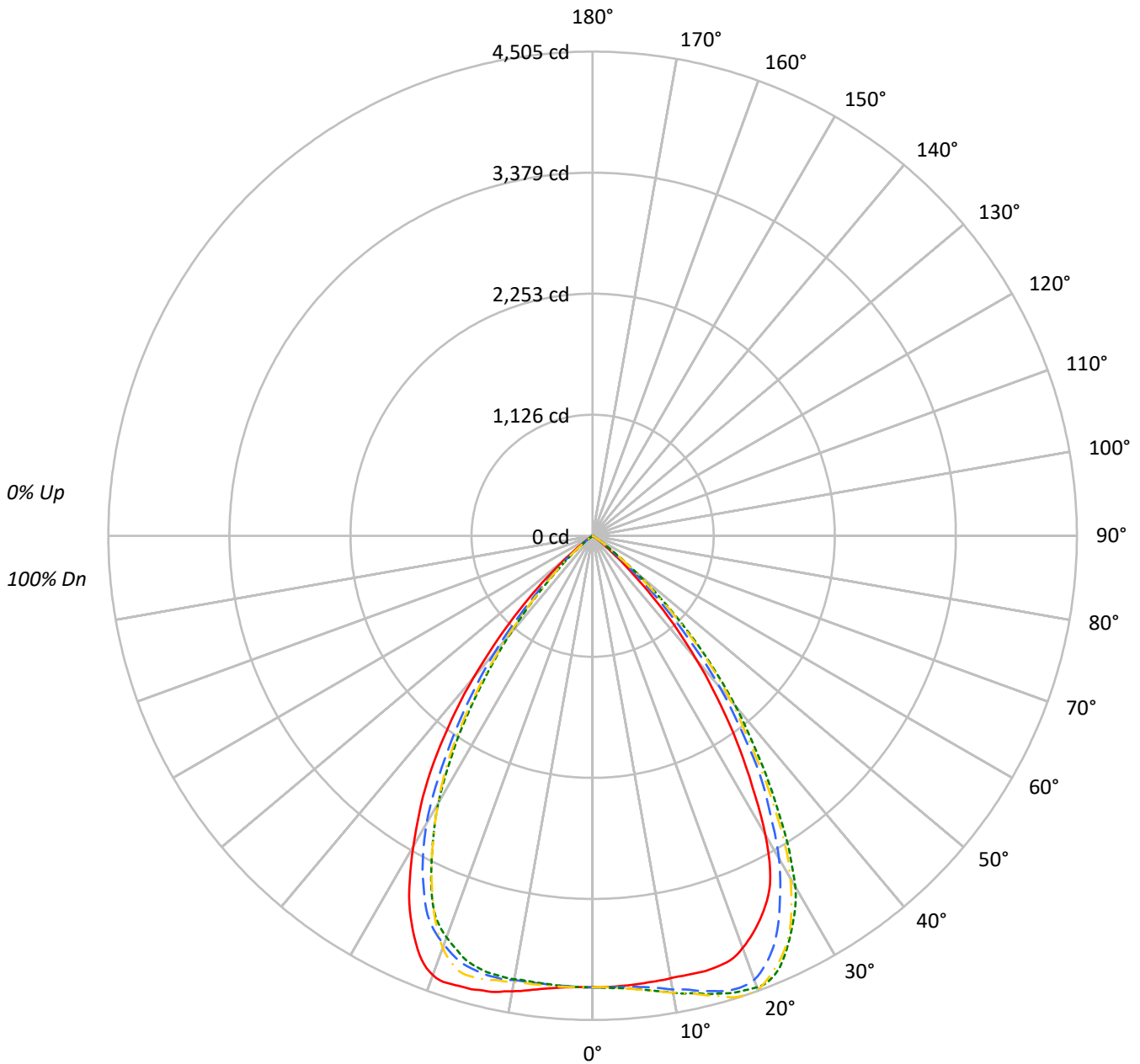
Lumens per Lamp: N/A  
Luminaire Lumens: 5646.2 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.07  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P776824  
CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQC-5000lm-5000K

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85	85	85	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	82	80	78	78	78	78
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	74	72	72	72	72
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66	66	66	66
6	85	75	69	64	83	74	68	64	73	67	63	71	67	63	70	66	62	61	61	61	61
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	66	61	58	56	56	56	56
8	76	65	59	54	74	65	59	54	64	58	54	62	57	54	61	57	53	52	52	52	52
9	71	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48	48	48	48
10	68	57	51	47	67	57	51	47	56	50	47	55	50	46	54	50	46	45	45	45	45

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	100717	100717	100717	100717
5°	100974	101850	101674	100986
10°	101764	105119	104788	102012
15°	103813	109535	108403	103150
20°	104172	114078	110947	101398
25°	100577	112748	105366	94016
30°	89091	104475	92397	79486
35°	68380	85241	75566	59461
40°	46996	64782	53814	37440
45°	24714	42076	30804	17542
50°	8289	19006	11840	5685
55°	589	4118	1300	142
60°	91	115	91	72
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: 42521 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	403.3	7.1
10°-20°	1212.7	21.5
20°-30°	1768.4	31.3
30°-40°	1523.7	27.0
40°-50°	670.0	11.9
50°-60°	66.7	1.2
60°-70°	1.1	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°	3384.4	59.9
0°-40°	4908.1	86.9
0°-60°	5644.9	100.0
0°-90°	5646.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5646.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	4200	4200	4200	4200	4200	
5°	4195	4231	4224	4196	4195	400
15°	4182	4412	4367	4155	4182	1180
25°	3802	4262	3982	3554	3802	1725
35°	2336	2912	2582	2031	2336	1449
45°	729	1241	908	517	729	582
55°	14	98	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	



TEST NUMBER: P776824

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3
0.5°	4201.3	4203.3	4204.2	4200.8	4202.3	4199.9	4197.9	4198.9	4200.3	4201.8	4201.8
1°	4201.3	4203.7	4204.7	4203.3	4203.7	4201.3	4198.4	4199.4	4200.8	4201.8	4201.8
1.5°	4201.3	4203.3	4204.2	4204.7	4206.7	4203.7	4199.9	4200.8	4200.8	4201.3	4200.8
2°	4200.3	4201.8	4203.7	4206.2	4209.6	4207.1	4203.7	4203.3	4202.3	4201.3	4200.3
2.5°	4200.3	4201.8	4204.2	4206.2	4212.0	4212.0	4207.1	4206.2	4205.2	4201.8	4198.9
3°	4198.9	4201.3	4204.7	4207.6	4213.9	4213.4	4212.0	4211.5	4207.1	4202.3	4197.9
3.5°	4197.9	4200.3	4206.2	4210.5	4216.4	4216.8	4215.9	4215.4	4210.1	4203.7	4196.9
4°	4196.5	4198.9	4207.6	4213.9	4220.7	4221.7	4220.7	4221.2	4214.4	4204.7	4196.0
4.5°	4196.0	4198.9	4210.1	4218.3	4225.6	4227.5	4226.5	4226.1	4219.3	4206.7	4194.0
5°	4195.0	4198.9	4213.0	4224.1	4231.4	4232.9	4233.3	4233.3	4224.1	4208.6	4194.0
5.5°	4194.0	4200.8	4216.8	4230.9	4237.2	4239.2	4239.7	4241.6	4230.4	4211.0	4193.6
6°	4192.6	4201.8	4221.2	4237.2	4244.0	4246.0	4247.4	4249.4	4236.7	4214.4	4193.6
6.5°	4190.6	4203.3	4227.0	4245.0	4251.8	4252.8	4255.7	4257.6	4244.5	4219.3	4194.0
7°	4188.7	4204.7	4233.3	4253.7	4260.0	4260.0	4263.4	4266.8	4252.8	4223.6	4194.0
7.5°	4187.2	4206.7	4240.6	4263.9	4268.3	4268.3	4270.7	4275.1	4261.0	4229.0	4194.0
8°	4186.8	4209.6	4247.9	4274.1	4277.0	4277.0	4280.4	4285.7	4270.2	4233.8	4194.5
8.5°	4185.8	4214.4	4256.1	4284.8	4286.2	4287.2	4289.6	4295.5	4279.4	4238.7	4195.5
9°	4184.8	4219.8	4265.9	4296.9	4296.9	4296.9	4298.4	4306.1	4288.2	4244.0	4196.0
9.5°	4182.4	4224.1	4276.5	4308.1	4306.1	4307.1	4307.1	4315.8	4296.4	4248.9	4196.0
10°	4179.5	4228.5	4285.3	4320.2	4317.3	4318.3	4316.8	4324.1	4303.7	4253.7	4198.4
10.5°	4177.5	4231.9	4293.0	4330.9	4328.0	4328.9	4326.0	4331.8	4311.0	4260.5	4204.2
11°	4177.5	4236.3	4300.3	4339.1	4338.2	4338.6	4334.3	4339.1	4318.7	4270.2	4209.1
11.5°	4179.5	4242.6	4308.1	4346.9	4345.9	4346.9	4342.0	4347.4	4330.4	4279.0	4210.5
12°	4180.4	4250.8	4318.7	4355.6	4351.7	4355.6	4351.7	4359.5	4339.6	4287.2	4209.1
12.5°	4180.4	4259.1	4331.8	4365.3	4359.5	4364.8	4363.4	4371.2	4346.9	4288.7	4206.7
13°	4180.0	4263.9	4345.0	4377.5	4369.7	4376.0	4377.9	4380.4	4350.3	4291.1	4206.2
13.5°	4180.9	4266.8	4357.1	4388.6	4382.8	4388.6	4394.0	4385.7	4352.7	4295.9	4204.7
14°	4182.9	4269.3	4365.8	4396.4	4395.4	4402.7	4407.1	4389.1	4357.1	4300.8	4201.3
14.5°	4183.4	4272.6	4375.5	4400.8	4405.1	4413.4	4417.7	4394.4	4362.4	4304.2	4195.5
15°	4181.9	4275.1	4386.7	4404.6	4412.4	4420.6	4429.4	4402.7	4366.8	4306.6	4189.2
15.5°	4178.0	4275.1	4397.8	4412.4	4420.2	4426.0	4444.9	4409.5	4367.8	4307.1	4181.9
16°	4174.1	4271.2	4408.0	4419.2	4429.9	4433.8	4462.4	4413.9	4368.2	4309.0	4175.6
16.5°	4169.8	4265.4	4414.8	4422.1	4440.1	4443.0	4477.9	4415.3	4369.2	4310.5	4168.3
17°	4164.9	4258.6	4419.2	4422.1	4447.8	4449.3	4489.6	4413.4	4371.2	4312.0	4158.1
17.5°	4159.6	4252.8	4421.6	4420.6	4452.7	4452.2	4496.8	4411.4	4373.1	4310.0	4145.0
18°	4151.8	4246.4	4421.6	4418.7	4456.1	4451.7	4500.7	4410.0	4376.0	4301.3	4127.1
18.5°	4138.7	4240.1	4419.7	4416.3	4459.5	4451.7	4503.1	4407.5	4377.0	4287.2	4107.2
19°	4121.7	4231.9	4416.3	4414.3	4463.4	4453.6	4505.1	4404.6	4373.1	4265.4	4088.3
19.5°	4102.8	4221.2	4410.0	4411.9	4466.7	4457.0	4502.2	4396.9	4362.9	4242.1	4068.4
20°	4082.4	4207.1	4397.4	4408.0	4470.6	4460.4	4494.4	4384.3	4347.9	4216.4	4047.0
20.5°	4060.1	4191.6	4378.4	4400.8	4472.1	4461.4	4478.9	4369.7	4331.4	4188.2	4024.7
21°	4035.8	4175.1	4354.2	4388.6	4468.7	4457.5	4457.5	4352.7	4309.0	4155.2	4001.4



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

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3957.2	4114.5	4267.3	4338.2	4424.0	4438.6	4387.7	4299.8	4212.5	4045.1	3918.9
23°	3928.1	4086.8	4234.3	4320.2	4400.8	4426.5	4361.0	4277.5	4172.2	4003.3	3885.4
23.5°	3898.0	4054.8	4196.9	4297.4	4372.6	4410.9	4332.3	4252.8	4129.0	3959.7	3848.1
24°	3867.5	4018.4	4156.2	4273.1	4338.6	4389.6	4302.2	4223.6	4081.0	3913.1	3804.9
24.5°	3835.4	3976.6	4110.1	4245.5	4300.3	4363.9	4270.7	4190.2	4032.9	3863.6	3757.3
25°	3801.5	3932.0	4061.6	4212.0	4261.5	4331.4	4235.3	4150.4	3982.5	3809.7	3703.0
25.5°	3765.1	3884.4	4008.2	4173.7	4220.2	4294.0	4196.9	4106.2	3932.5	3756.3	3649.1
26°	3726.7	3834.0	3952.9	4129.0	4177.5	4251.3	4153.3	4056.7	3876.7	3696.2	3594.8
26.5°	3683.1	3781.1	3894.6	4079.5	4131.9	4202.8	4107.2	4001.9	3819.4	3635.5	3540.4
27°	3635.0	3722.4	3835.0	4022.7	4087.3	4149.4	4054.8	3941.2	3760.7	3575.3	3486.1
27.5°	3578.3	3660.7	3776.2	3959.2	4042.2	4094.6	4000.4	3878.6	3691.3	3515.2	3421.5
28°	3516.6	3596.2	3717.0	3888.8	3995.1	4030.5	3939.8	3813.1	3621.9	3455.0	3357.9
28.5°	3449.2	3529.7	3659.3	3814.6	3946.6	3964.5	3875.7	3751.0	3552.5	3390.9	3293.4
29°	3376.4	3464.2	3597.7	3740.3	3895.1	3896.1	3812.1	3680.2	3483.1	3324.9	3226.0
29.5°	3298.3	3396.3	3534.6	3666.1	3837.9	3824.8	3749.1	3608.8	3413.3	3258.5	3158.0
30°	3217.7	3329.3	3468.1	3590.4	3773.3	3748.1	3677.2	3537.5	3337.1	3187.1	3087.7
30.5°	3128.9	3263.3	3395.3	3516.6	3692.3	3671.4	3605.4	3466.6	3262.4	3115.8	3014.4
31°	3038.7	3198.8	3317.7	3442.4	3611.2	3594.8	3534.1	3385.1	3190.5	3041.1	2932.4
31.5°	2946.0	3130.4	3238.6	3369.1	3530.2	3518.1	3462.3	3302.6	3116.3	2965.9	2846.0
32°	2857.2	3054.2	3160.0	3297.8	3449.2	3440.9	3372.5	3217.7	3043.5	2890.2	2758.2
32.5°	2766.4	2973.6	3083.3	3223.5	3361.3	3367.7	3280.3	3134.7	2972.2	2815.4	2672.3
33°	2679.6	2888.7	3010.0	3146.4	3268.7	3288.6	3185.2	3052.7	2900.4	2738.8	2582.5
33.5°	2592.7	2798.5	2937.7	3068.3	3177.4	3209.5	3091.5	2966.3	2823.7	2659.2	2496.6
34°	2507.8	2704.3	2866.9	2989.2	3086.7	3120.2	3003.2	2879.5	2746.5	2576.2	2408.8
34.5°	2422.4	2615.0	2791.2	2906.2	2998.4	3025.5	2914.4	2794.1	2666.5	2487.4	2324.8
35°	2336.0	2526.2	2710.6	2822.2	2912.0	2926.1	2826.1	2712.6	2581.5	2398.1	2238.0
35.5°	2254.0	2439.8	2625.7	2738.8	2825.6	2828.1	2733.4	2628.1	2492.7	2308.8	2155.5
36°	2164.2	2355.4	2535.0	2653.8	2738.3	2727.6	2642.7	2546.1	2404.9	2221.0	2069.6
36.5°	2074.5	2269.5	2439.4	2567.5	2648.5	2630.1	2548.5	2461.2	2319.0	2139.0	1985.2
37°	1988.1	2181.7	2348.6	2479.2	2560.7	2534.0	2459.3	2378.7	2235.6	2058.0	1899.8
37.5°	1903.6	2097.7	2262.2	2396.7	2474.3	2446.6	2374.3	2298.2	2155.0	1975.9	1815.8
38°	1822.6	2014.8	2178.3	2312.2	2389.4	2365.6	2295.7	2221.0	2070.1	1893.0	1734.3
38.5°	1747.4	1930.3	2097.7	2230.7	2306.9	2288.5	2220.5	2138.0	1983.2	1810.0	1654.7
39°	1665.9	1844.4	2014.8	2147.2	2228.3	2214.7	2147.7	2054.6	1895.4	1727.5	1577.1
39.5°	1583.9	1760.0	1929.8	2057.0	2150.2	2140.9	2073.5	1965.3	1806.1	1641.1	1498.0
40°	1501.4	1677.0	1842.0	1959.4	2069.6	2069.1	1998.3	1878.9	1719.2	1554.3	1417.4
40.5°	1419.4	1594.5	1755.6	1865.3	1987.6	1992.4	1920.1	1792.0	1629.5	1465.5	1335.4
41°	1337.4	1511.6	1665.4	1777.0	1902.2	1914.8	1841.0	1709.5	1545.5	1378.1	1252.9
41.5°	1258.7	1428.6	1575.1	1693.5	1817.3	1838.1	1761.5	1627.5	1463.0	1293.2	1170.4
42°	1182.1	1346.1	1484.4	1610.6	1730.4	1759.0	1679.5	1548.0	1380.5	1208.3	1087.5
42.5°	1106.9	1262.1	1394.1	1527.6	1645.5	1679.5	1597.5	1466.4	1299.0	1127.2	1006.4
43°	1028.2	1177.7	1303.9	1445.1	1563.5	1596.0	1513.0	1385.4	1216.5	1049.1	927.8
43.5°	951.1	1091.3	1220.4	1361.6	1480.0	1511.1	1428.1	1303.4	1135.0	972.4	850.2



TEST NUMBER: P776824

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

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	728.8	848.2	981.7	1120.9	1240.8	1253.9	1181.6	1068.5	908.4	753.1	637.1
45.5°	659.0	774.9	910.3	1043.8	1159.8	1169.0	1099.6	993.3	837.1	686.1	574.5
46°	592.0	706.5	838.5	968.1	1078.2	1085.0	1019.5	918.6	771.1	623.1	516.3
46.5°	528.0	640.0	769.1	891.9	1000.6	1003.0	941.4	843.9	704.1	562.4	469.2
47°	467.8	577.5	702.2	819.1	923.9	921.5	864.2	771.6	641.5	508.5	422.2
47.5°	412.0	519.2	637.6	747.3	849.7	844.3	787.6	701.2	579.9	462.4	374.6
48°	362.0	465.8	574.5	680.3	776.4	771.1	716.7	634.7	522.1	415.9	327.5
48.5°	319.3	415.9	515.8	617.2	702.6	699.7	647.3	570.7	470.7	369.8	291.2
49°	282.4	369.8	462.0	556.6	632.3	630.8	581.3	516.3	419.7	323.7	258.2
49.5°	250.4	327.5	411.0	496.9	564.8	566.3	526.0	462.0	368.3	284.8	228.6
50°	222.2	289.2	363.5	438.2	509.5	511.5	470.2	407.6	317.4	250.4	200.9
50.5°	195.6	253.3	319.8	383.3	454.2	457.1	414.9	353.3	275.6	217.4	173.2
51°	170.3	219.8	278.5	332.4	399.4	402.3	359.6	298.9	238.3	186.8	147.5
51.5°	148.0	191.2	241.7	286.8	344.0	347.9	303.8	258.2	204.8	157.7	124.7
52°	125.7	163.0	207.2	246.5	289.7	293.1	261.1	220.3	173.2	131.0	101.9
52.5°	103.4	139.8	175.7	209.1	248.4	248.9	221.8	186.8	143.6	107.2	82.5
53°	81.0	116.5	150.4	176.1	210.6	210.6	186.8	155.8	117.4	86.9	63.6
53.5°	58.7	92.7	125.7	150.4	177.1	176.1	154.8	127.6	95.6	67.0	44.2
54°	34.5	69.4	100.9	125.2	145.6	144.1	126.7	103.8	74.2	47.1	25.2
54.5°	17.5	44.6	76.2	99.5	117.4	117.4	102.4	84.4	52.4	27.2	6.8
55°	14.1	23.8	51.4	74.2	98.5	95.6	83.0	64.5	31.1	7.8	4.9
55.5°	10.7	19.9	28.1	48.5	80.1	74.2	63.6	45.1	10.2	5.3	3.9
56°	7.3	15.5	12.6	25.2	61.1	52.9	44.6	25.7	5.8	4.4	3.4
56.5°	4.4	11.6	9.7	10.7	42.7	31.1	25.2	6.3	4.9	3.9	2.9
57°	3.9	7.8	7.8	8.2	23.8	9.7	6.3	4.9	3.9	3.4	2.4
57.5°	3.4	3.9	5.8	6.8	5.3	5.3	4.9	4.4	3.4	2.9	2.4
58°	2.9	3.4	3.4	4.9	4.4	4.4	3.9	3.9	2.9	2.4	1.9
58.5°	2.9	2.9	2.9	3.4	3.4	3.4	3.4	3.4	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	1.5
60°	1.9	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.5
60.5°	1.9	1.9	1.9	1.9	1.9	2.4	2.4	2.4	1.9	1.5	1.5
61°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.5	1.5
61.5°	1.5	1.9	1.5	1.5	1.9	1.9	1.9	1.9	1.5	1.5	1.5
62°	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.5	1.5	1.0
62.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0
63°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0
63.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0
64°	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.0	1.0	1.0
64.5°	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	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: P776824

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

**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: P776824

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

**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: P776824

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

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4200.3	4200.3	4200.3	4200.3	4200.3	4200.3
0.5°	4199.4	4202.3	4199.4	4197.9	4198.9	4201.3
1°	4199.4	4201.8	4200.3	4198.4	4200.3	4201.3
1.5°	4198.9	4201.8	4200.8	4199.4	4200.3	4201.3
2°	4197.9	4201.3	4201.3	4200.8	4200.8	4200.3
2.5°	4196.0	4200.3	4202.3	4202.3	4201.3	4200.3
3°	4194.5	4199.4	4203.3	4204.7	4202.3	4198.9
3.5°	4192.6	4198.9	4204.7	4205.2	4202.3	4197.9
4°	4190.6	4198.4	4205.2	4207.1	4202.3	4196.5
4.5°	4188.2	4196.5	4206.2	4207.6	4201.8	4196.0
5°	4186.3	4195.5	4206.2	4207.6	4201.3	4195.0
5.5°	4184.8	4194.0	4205.2	4207.6	4199.4	4194.0
6°	4182.9	4192.6	4204.7	4206.7	4198.9	4192.6
6.5°	4179.5	4191.1	4204.7	4206.7	4197.9	4190.6
7°	4177.1	4190.2	4205.2	4207.1	4196.9	4188.7
7.5°	4173.7	4188.7	4207.1	4209.1	4196.5	4187.2
8°	4170.3	4188.2	4207.1	4210.1	4196.9	4186.8
8.5°	4166.4	4186.8	4206.7	4210.1	4196.5	4185.8
9°	4161.5	4185.3	4207.1	4210.1	4194.5	4184.8
9.5°	4157.6	4186.8	4211.0	4211.0	4193.1	4182.4
10°	4156.2	4189.7	4216.4	4215.9	4193.1	4179.5
10.5°	4157.2	4191.6	4221.2	4221.7	4195.5	4177.5
11°	4156.2	4190.6	4224.6	4225.6	4198.9	4177.5
11.5°	4153.3	4187.7	4226.1	4228.0	4199.4	4179.5
12°	4149.4	4184.3	4228.5	4229.0	4197.4	4180.4
12.5°	4148.9	4182.9	4234.3	4234.8	4195.5	4180.4
13°	4148.9	4181.9	4242.1	4242.1	4194.5	4180.0
13.5°	4147.9	4179.5	4248.9	4247.4	4194.5	4180.9
14°	4145.0	4173.7	4251.3	4250.8	4191.6	4182.9
14.5°	4139.7	4164.4	4252.8	4251.8	4185.8	4183.4
15°	4134.8	4155.2	4253.2	4252.8	4178.0	4181.9
15.5°	4129.0	4146.0	4253.2	4253.2	4171.2	4178.0
16°	4123.2	4135.8	4250.8	4252.8	4163.5	4174.1
16.5°	4117.4	4123.2	4243.0	4248.4	4155.7	4169.8
17°	4106.2	4105.7	4228.5	4237.7	4145.0	4164.9
17.5°	4090.2	4084.9	4207.1	4221.2	4130.5	4159.6
18°	4070.3	4062.5	4180.4	4199.4	4113.5	4151.8
18.5°	4047.0	4041.7	4150.8	4174.6	4094.1	4138.7
19°	4023.7	4019.8	4117.4	4146.0	4074.7	4121.7
19.5°	3999.0	3997.5	4080.0	4114.0	4055.7	4102.8
20°	3971.8	3973.7	4038.8	4076.6	4036.3	4082.4
20.5°	3944.1	3950.0	3993.6	4036.3	4015.9	4060.1
21°	3913.6	3923.3	3944.1	3990.2	3995.1	4035.8

TEST NUMBER: P776824

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

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3820.9	3824.3	3785.9	3838.3	3921.3	3957.2
23°	3787.4	3780.1	3727.7	3782.1	3890.3	3928.1
23.5°	3752.9	3730.6	3670.0	3723.8	3855.3	3898.0
24°	3717.0	3675.3	3609.8	3664.6	3813.1	3867.5
24.5°	3682.1	3617.1	3548.2	3603.5	3764.6	3835.4
25°	3637.0	3553.5	3484.1	3541.9	3709.3	3801.5
25.5°	3591.8	3488.5	3423.9	3479.7	3650.6	3765.1
26°	3547.2	3423.0	3363.3	3415.2	3588.0	3726.7
26.5°	3501.6	3356.5	3296.3	3351.2	3523.4	3683.1
27°	3438.0	3288.1	3230.8	3285.6	3456.5	3635.0
27.5°	3369.1	3220.6	3165.8	3218.2	3389.0	3578.3
28°	3290.0	3154.1	3098.3	3149.3	3321.1	3516.6
28.5°	3211.4	3087.7	3028.5	3082.8	3253.1	3449.2
29°	3131.3	3018.3	2956.6	3015.4	3183.7	3376.4
29.5°	3051.8	2948.9	2885.3	2945.5	3109.5	3298.3
30°	2967.8	2870.8	2816.4	2876.1	3034.3	3217.7
30.5°	2881.9	2790.2	2747.0	2803.8	2955.2	3128.9
31°	2795.5	2707.7	2677.1	2734.9	2873.7	3038.7
31.5°	2708.7	2625.2	2607.3	2665.5	2787.8	2946.0
32°	2622.3	2536.9	2535.0	2593.7	2701.9	2857.2
32.5°	2535.4	2453.0	2462.7	2517.0	2614.5	2766.4
33°	2448.6	2370.5	2384.5	2436.9	2527.2	2679.6
33.5°	2366.1	2289.4	2298.2	2354.4	2439.4	2592.7
34°	2282.6	2206.9	2207.4	2268.1	2360.8	2507.8
34.5°	2198.2	2122.5	2113.8	2178.8	2277.8	2422.4
35°	2110.4	2031.3	2026.9	2088.5	2193.8	2336.0
35.5°	2022.0	1941.5	1939.1	1999.2	2106.0	2254.0
36°	1936.6	1852.7	1855.6	1912.4	2019.1	2164.2
36.5°	1852.7	1762.4	1768.7	1827.5	1925.0	2074.5
37°	1773.6	1681.9	1683.3	1745.0	1839.1	1988.1
37.5°	1696.9	1601.3	1598.4	1660.0	1755.2	1903.6
38°	1617.3	1520.3	1513.0	1575.1	1675.1	1822.6
38.5°	1534.4	1439.7	1428.1	1490.2	1594.5	1747.4
39°	1448.0	1359.2	1342.7	1405.3	1514.0	1665.9
39.5°	1366.5	1277.7	1261.7	1320.4	1433.4	1583.9
40°	1285.9	1196.1	1180.6	1241.3	1352.9	1501.4
40.5°	1211.2	1120.9	1099.6	1162.2	1271.4	1419.4
41°	1136.0	1047.2	1025.8	1084.1	1195.7	1337.4
41.5°	1062.7	973.4	948.7	1007.4	1117.5	1258.7
42°	986.0	902.6	880.2	933.6	1043.3	1182.1
42.5°	911.3	833.2	812.3	862.3	969.5	1106.9
43°	837.5	764.3	748.7	794.8	899.2	1028.2
43.5°	766.7	696.3	688.1	730.8	827.8	951.1



TEST NUMBER: P776824

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

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	569.7	517.3	524.6	557.1	623.1	728.8
45.5°	516.3	464.4	476.5	506.6	561.9	659.0
46°	463.4	414.9	431.4	458.6	503.7	592.0
46.5°	410.5	369.8	387.7	413.4	447.9	528.0
47°	357.6	329.0	348.4	371.7	397.4	467.8
47.5°	304.7	291.6	310.6	330.9	351.8	412.0
48°	271.7	258.2	275.6	294.1	311.0	362.0
48.5°	243.1	228.6	242.6	259.6	275.1	319.3
49°	217.4	201.9	211.1	227.6	243.6	282.4
49.5°	192.6	176.1	182.0	198.0	214.5	250.4
50°	169.4	152.4	157.7	168.9	188.3	222.2
50.5°	145.6	129.1	133.4	145.1	163.5	195.6
51°	122.8	105.3	108.7	121.3	141.7	170.3
51.5°	101.9	82.0	84.4	97.5	119.4	148.0
52°	82.5	58.2	60.2	74.2	97.5	125.7
52.5°	63.6	33.5	35.9	50.5	75.2	103.4
53°	44.6	16.0	17.5	27.7	50.0	81.0
53.5°	25.2	12.6	14.1	12.1	28.1	58.7
54°	6.8	9.2	10.2	10.2	13.1	34.5
54.5°	4.9	6.3	6.8	7.8	10.7	17.5
55°	3.9	3.4	3.4	5.8	8.2	14.1
55.5°	3.4	2.9	2.9	3.4	6.3	10.7
56°	2.9	2.4	2.9	3.4	3.9	7.3
56.5°	2.4	2.4	2.4	2.9	3.4	4.4
57°	2.4	1.9	2.4	2.4	2.9	3.9
57.5°	1.9	1.9	1.9	2.4	2.9	3.4
58°	1.9	1.9	1.9	2.4	2.4	2.9
58.5°	1.9	1.5	1.9	1.9	2.4	2.9
59°	1.5	1.5	1.5	1.9	2.4	2.4
59.5°	1.5	1.5	1.5	1.9	1.9	2.4
60°	1.5	1.5	1.5	1.5	1.9	1.9
60.5°	1.5	1.5	1.5	1.5	1.9	1.9
61°	1.5	1.0	1.5	1.5	1.5	1.9
61.5°	1.0	1.0	1.0	1.5	1.5	1.5
62°	1.0	1.0	1.0	1.5	1.5	1.5
62.5°	1.0	1.0	1.0	1.0	1.5	1.5
63°	1.0	1.0	1.0	1.0	1.5	1.5
63.5°	1.0	1.0	1.0	1.0	1.0	1.5
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: P776824

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

**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: P776824

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

**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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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°	4010.6	4158.1	4327.0	4371.6	4458.5	4452.2	4435.7	4337.2	4282.4	4120.3	3976.2
22°	3984.9	4138.2	4298.4	4355.1	4443.0	4445.9	4412.4	4319.7	4249.4	4083.9	3949.5



44°	874.9	1007.4	1137.9	1278.2	1400.4	1426.2	1344.6	1223.3	1057.4	896.7	775.9
44.5°	801.2	925.4	1058.8	1197.6	1321.3	1340.3	1261.7	1143.3	981.7	822.5	704.6



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°	3884.0	3893.7	3894.6	3941.2	3972.3	4010.6
22°	3851.9	3861.2	3840.3	3890.8	3948.0	3984.9



44°	699.7	632.8	630.3	670.1	756.0	874.9
44.5°	634.2	574.1	576.0	611.9	688.6	801.2

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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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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)