

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: P776601

Luminaire Tested: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776601  
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-HCD4TRH-5000lm-3000K  
Description: 4 INCH ROUND MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

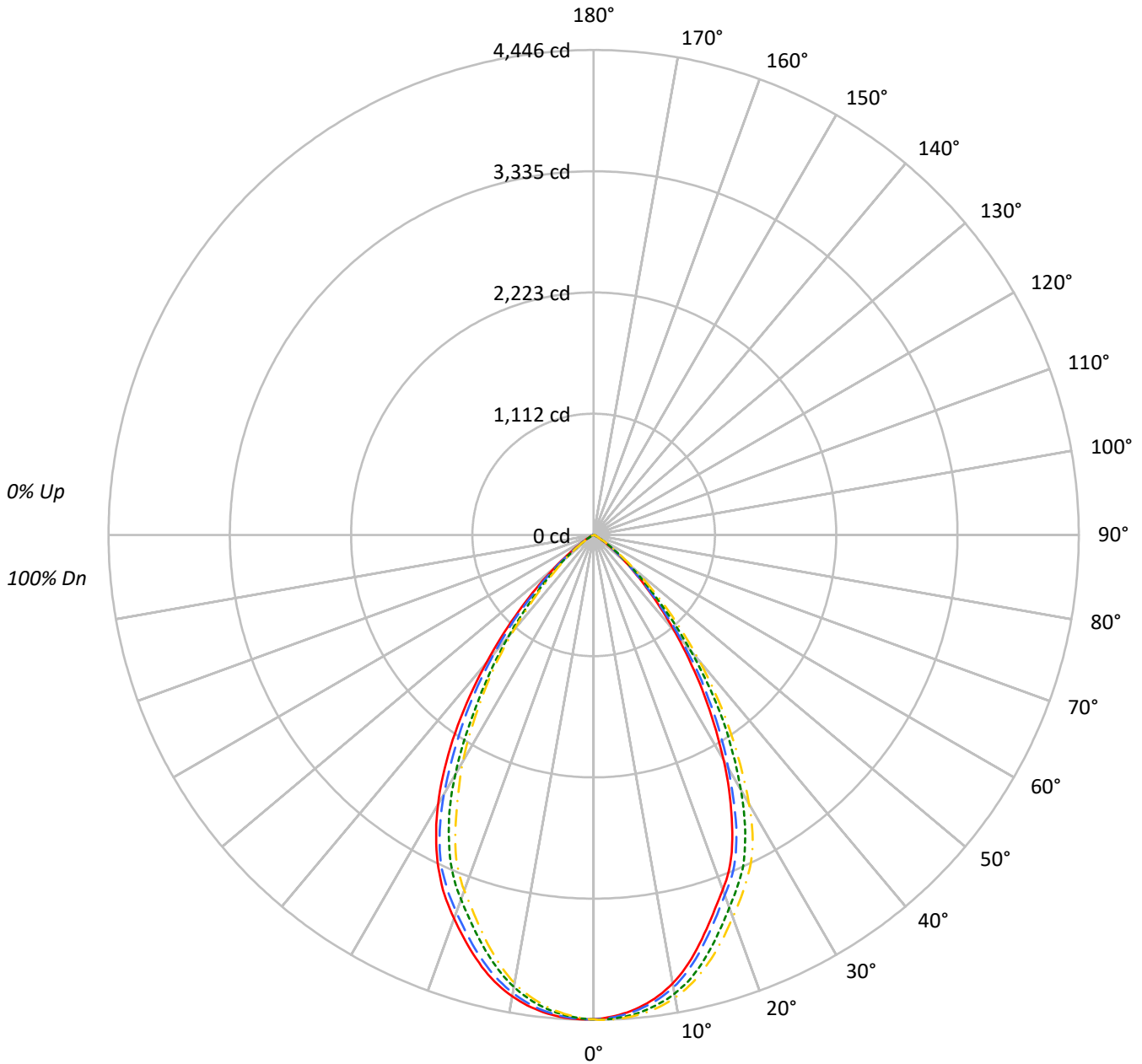
Lumens per Lamp: N/A  
Luminaire Lumens: 5005.2 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.98  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



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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	107	105	111	108	105	103	104	102	100	100	99	97	97	95	94	92					92			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85					85			
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78					78			
4	95	87	81	76	93	85	80	75	83	78	75	81	77	74	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60					60			
7	80	70	63	58	78	69	63	58	68	62	58	66	61	58	65	61	57	56					56			
8	75	65	58	54	74	64	58	54	63	58	54	62	57	53	61	57	53	52					52			
9	71	61	54	50	70	60	54	50	59	54	50	58	53	50	58	53	49	48					48			
10	68	57	51	47	67	57	51	47	56	50	46	55	50	46	54	50	46	45					45			

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

	0°	90°	180°	270°
0°	559000	559000	559000	559000
5°	551445	556789	557850	553391
10°	533477	545707	548978	537809
15°	499581	520467	529001	509079
20°	463413	487064	500952	476176
25°	417496	453378	467583	435312
30°	346338	392274	414624	368703
35°	266479	315688	339532	281335
40°	189125	226319	251439	199672
45°	122592	144999	164523	124656
50°	70895	84345	91824	67977
55°	34887	42522	43027	31310
60°	14624	16612	17090	12157
65°	7623	7891	8159	6373
70°	4452	4600	4967	3753
75°	2723	2917	2917	2237
80°	1377	2029	1667	1377
85°	722	1300	722	722

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 168243 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	414.5	8.3
10°-20°	1106.4	22.1
20°-30°	1450.1	29.0
30°-40°	1214.5	24.3
40°-50°	615.8	12.3
50°-60°	168.3	3.4
60°-70°	28.3	0.6
70°-80°	6.6	0.1
80°-90°	0.8	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°	2971.0	59.4
0°-40°	4185.5	83.6
0°-60°	4969.5	99.3
0°-90°	5005.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5005.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	4442	4442	4442	4442	4442	
5°	4365	4407	4416	4380	4365	411
15°	3834	3995	4060	3907	3834	1074
25°	3007	3265	3367	3135	3007	1363
35°	1734	2055	2210	1831	1734	1080
45°	689	815	924	700	689	542
55°	159	194	196	143	159	154
65°	26	26	27	21	26	28
75°	6	6	6	5	6	6
85°	0	1	0	0	0	1
90°	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°	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8
0.5°	4436.7	4437.2	4439.0	4442.3	4443.7	4445.1	4445.5	4445.1	4441.4	4440.4	4440.9
1°	4433.0	4433.5	4436.7	4440.4	4443.7	4445.5	4446.5	4446.0	4442.8	4440.9	4440.9
1.5°	4427.9	4429.7	4433.5	4438.1	4442.8	4445.5	4446.5	4446.5	4442.3	4440.4	4438.6
2°	4422.3	4425.1	4428.8	4434.9	4440.4	4444.1	4446.5	4446.0	4441.4	4438.6	4437.2
2.5°	4415.3	4418.6	4424.2	4430.2	4437.6	4442.8	4445.1	4444.1	4439.5	4435.8	4433.9
3°	4407.4	4411.6	4417.2	4425.1	4433.0	4439.0	4442.3	4442.3	4436.2	4432.5	4429.7
3.5°	4398.1	4403.2	4410.2	4417.7	4428.3	4435.3	4438.6	4438.1	4433.0	4428.3	4424.6
4°	4388.4	4394.0	4400.9	4409.8	4422.8	4430.2	4434.9	4433.9	4428.3	4423.2	4419.0
4.5°	4377.7	4383.3	4391.6	4401.4	4415.8	4424.6	4430.2	4429.3	4421.8	4416.7	4411.6
5°	4365.1	4372.6	4380.5	4390.7	4407.4	4418.1	4423.7	4422.8	4415.8	4409.8	4404.2
5.5°	4352.1	4359.1	4368.9	4380.0	4398.6	4410.2	4416.7	4415.3	4407.9	4401.4	4394.9
6°	4336.8	4345.1	4356.8	4368.4	4387.9	4401.4	4408.8	4407.9	4399.5	4392.6	4385.6
6.5°	4321.9	4331.7	4342.8	4356.3	4377.2	4392.1	4400.5	4398.6	4390.2	4381.9	4374.0
7°	4304.7	4314.9	4328.0	4342.8	4365.1	4381.4	4390.2	4389.3	4379.5	4371.2	4361.9
7.5°	4286.6	4296.8	4311.7	4328.0	4352.1	4369.8	4378.6	4377.7	4368.4	4358.6	4348.4
8°	4267.1	4278.7	4294.5	4312.2	4338.2	4356.8	4366.1	4364.2	4356.3	4345.6	4334.0
8.5°	4246.2	4258.2	4275.4	4294.5	4322.8	4342.4	4353.1	4352.1	4342.4	4331.2	4318.2
9°	4223.4	4236.4	4254.5	4275.9	4307.0	4327.5	4338.2	4337.2	4328.0	4315.9	4301.5
9.5°	4200.1	4213.6	4233.1	4255.9	4288.9	4310.8	4322.8	4321.9	4313.1	4299.6	4283.3
10°	4174.6	4189.5	4210.4	4234.5	4270.3	4293.1	4304.7	4305.2	4295.9	4282.4	4264.3
10.5°	4146.7	4162.5	4186.7	4211.3	4249.4	4273.1	4286.6	4288.0	4278.2	4262.9	4244.8
11°	4118.8	4135.1	4159.2	4187.1	4227.6	4252.7	4267.5	4268.0	4258.7	4243.4	4222.9
11.5°	4087.2	4105.8	4130.9	4160.6	4204.8	4231.3	4246.6	4248.0	4238.7	4222.0	4199.7
12°	4054.2	4073.3	4100.2	4132.7	4180.2	4207.1	4223.8	4226.2	4217.3	4199.7	4176.4
12.5°	4020.3	4039.8	4068.1	4102.1	4152.3	4182.0	4201.5	4204.3	4194.6	4176.0	4151.3
13°	3985.4	4005.9	4034.7	4071.9	4123.9	4156.5	4175.5	4179.2	4169.9	4150.4	4124.8
13.5°	3948.7	3969.1	4000.8	4037.5	4094.2	4127.2	4149.9	4154.1	4144.4	4124.4	4097.9
14°	3910.6	3932.9	3964.0	4003.1	4062.6	4098.4	4121.6	4126.2	4116.9	4097.4	4068.1
14.5°	3872.9	3893.9	3926.4	3966.8	4029.1	4067.7	4092.3	4099.3	4090.0	4069.1	4039.3
15°	3834.4	3856.7	3888.7	3931.5	3994.7	4036.1	4062.6	4068.6	4060.2	4038.9	4009.1
15.5°	3795.3	3818.1	3850.6	3894.3	3960.8	4003.1	4032.4	4039.8	4030.5	4009.6	3978.4
16°	3757.2	3779.5	3813.5	3856.7	3925.5	3970.5	4001.2	4009.1	4000.8	3978.4	3946.8
16.5°	3717.7	3740.9	3774.9	3820.4	3890.6	3937.1	3967.8	3979.4	3970.1	3947.8	3914.3
17°	3680.1	3701.9	3736.8	3781.8	3853.4	3903.2	3934.8	3946.8	3938.0	3916.2	3880.8
17.5°	3641.0	3663.8	3697.7	3744.7	3816.7	3867.4	3901.8	3913.4	3905.9	3882.7	3848.3
18°	3602.9	3626.1	3660.5	3707.5	3780.9	3833.0	3867.4	3879.9	3872.9	3850.2	3813.5
18.5°	3564.3	3587.6	3622.0	3669.4	3744.2	3797.6	3833.4	3848.3	3839.0	3817.2	3779.1
19°	3529.0	3551.3	3585.2	3632.7	3707.9	3761.4	3799.0	3812.1	3806.0	3783.7	3745.6
19.5°	3493.2	3515.5	3549.9	3596.4	3673.1	3726.5	3764.6	3778.6	3773.0	3750.7	3713.1
20°	3460.2	3481.1	3514.6	3561.5	3636.8	3691.2	3729.3	3746.1	3740.5	3718.2	3679.6
20.5°	3424.9	3446.7	3480.2	3526.2	3602.4	3655.9	3695.9	3712.6	3707.5	3685.6	3646.1
21°	3390.5	3411.9	3446.3	3491.4	3568.1	3622.0	3661.5	3677.7	3674.5	3652.6	3613.1



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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°	3266.9	3297.1	3337.5	3387.3	3462.5	3519.3	3560.6	3579.2	3573.2	3549.0	3507.6
23°	3221.8	3251.5	3295.2	3349.1	3427.2	3481.6	3526.7	3543.9	3536.4	3507.6	3470.4
23.5°	3171.6	3201.8	3250.1	3305.9	3391.4	3444.4	3490.4	3505.8	3494.2	3466.7	3433.3
24°	3118.2	3150.7	3200.9	3259.9	3355.7	3406.8	3453.7	3467.7	3451.9	3425.4	3395.6
24.5°	3061.9	3094.9	3149.3	3211.1	3311.5	3369.6	3417.5	3430.0	3409.6	3384.0	3358.4
25°	3006.6	3039.1	3095.8	3157.7	3265.0	3332.4	3381.2	3391.9	3367.3	3342.6	3312.4
25.5°	2946.7	2980.6	3039.1	3101.9	3216.2	3287.3	3344.5	3353.8	3325.0	3296.6	3265.5
26°	2888.6	2925.3	2980.6	3041.0	3164.2	3239.9	3301.3	3306.8	3276.6	3245.0	3216.2
26.5°	2827.7	2867.2	2918.3	2977.8	3111.6	3190.7	3255.3	3260.8	3227.8	3194.4	3164.2
27°	2768.2	2808.1	2854.6	2913.7	3057.3	3138.6	3206.9	3208.3	3176.7	3143.7	3110.3
27.5°	2705.9	2747.7	2786.8	2850.9	3002.4	3087.5	3156.3	3157.7	3125.1	3092.6	3053.5
28°	2644.6	2686.8	2721.7	2789.6	2944.8	3034.0	3100.5	3101.9	3073.1	3040.1	2995.5
28.5°	2579.9	2625.0	2656.2	2728.7	2883.4	2979.7	3041.9	3046.6	3021.9	2987.1	2935.5
29°	2515.8	2561.8	2590.6	2669.2	2822.6	2922.9	2982.0	2988.0	2967.1	2931.8	2873.7
29.5°	2450.3	2495.8	2528.4	2611.6	2759.8	2864.9	2917.4	2928.5	2911.3	2875.5	2809.5
30°	2383.3	2428.0	2467.0	2552.5	2699.4	2804.4	2850.0	2864.9	2853.2	2816.1	2741.2
30.5°	2314.6	2360.6	2405.7	2494.9	2630.6	2740.3	2779.3	2800.7	2794.7	2756.1	2672.9
31°	2247.6	2293.2	2344.8	2432.6	2566.0	2674.3	2711.5	2734.3	2732.9	2695.7	2604.6
31.5°	2181.2	2224.9	2283.9	2371.7	2501.9	2604.6	2639.4	2666.4	2670.6	2631.1	2534.4
32°	2115.2	2157.9	2222.1	2306.2	2441.9	2536.3	2569.7	2597.1	2606.4	2566.0	2466.5
32.5°	2052.4	2091.0	2159.3	2241.6	2375.9	2467.9	2500.9	2529.8	2544.2	2500.9	2398.7
33°	1989.7	2027.3	2097.0	2174.2	2312.2	2396.8	2434.0	2461.9	2478.2	2437.3	2331.3
33.5°	1925.5	1963.7	2032.9	2105.9	2249.5	2325.3	2367.1	2394.0	2413.6	2369.9	2265.8
34°	1862.8	1899.1	1966.9	2036.6	2188.1	2250.9	2301.1	2327.1	2345.7	2300.6	2200.7
34.5°	1799.1	1833.5	1900.9	1971.1	2120.3	2177.0	2235.6	2261.6	2279.2	2234.2	2136.6
35°	1734.5	1767.1	1836.3	1906.5	2054.8	2103.1	2168.6	2197.0	2210.0	2165.4	2071.5
35.5°	1675.0	1704.8	1772.6	1844.2	1986.9	2032.0	2102.6	2132.8	2143.1	2094.3	2007.3
36°	1614.6	1643.9	1709.9	1783.3	1922.8	1961.3	2036.2	2067.3	2072.0	2024.5	1943.2
36.5°	1553.3	1583.5	1666.7	1722.0	1849.3	1892.5	1969.7	2003.6	2002.2	1953.9	1877.7
37°	1492.4	1522.6	1602.5	1651.8	1781.0	1824.2	1901.4	1937.2	1931.6	1885.1	1811.2
37.5°	1431.5	1462.2	1538.9	1593.2	1710.4	1758.7	1832.6	1871.6	1864.7	1816.3	1744.8
38°	1370.6	1401.8	1475.2	1534.2	1643.4	1695.0	1764.7	1805.2	1795.9	1748.5	1677.4
38.5°	1313.4	1346.0	1411.0	1475.6	1572.8	1630.0	1698.3	1738.7	1728.5	1681.5	1611.8
39°	1258.6	1291.1	1352.0	1417.1	1507.3	1567.2	1632.3	1672.2	1663.0	1616.5	1547.7
39.5°	1204.2	1234.9	1293.0	1354.3	1439.9	1503.1	1567.7	1607.6	1597.4	1550.9	1484.9
40°	1151.2	1179.1	1234.4	1291.6	1377.6	1442.2	1503.1	1542.1	1530.5	1486.8	1421.3
40.5°	1098.3	1127.1	1177.7	1231.2	1312.1	1379.0	1440.8	1478.0	1465.9	1422.7	1362.7
41°	1047.6	1074.6	1120.6	1171.7	1252.1	1319.0	1380.4	1417.1	1401.3	1356.7	1300.9
41.5°	998.3	1026.2	1065.3	1114.5	1191.7	1258.6	1319.5	1355.3	1337.6	1293.9	1241.9
42°	950.9	977.4	1011.8	1058.7	1134.0	1201.0	1260.5	1294.9	1273.5	1232.6	1182.4
42.5°	903.1	930.0	960.2	1004.4	1077.3	1142.4	1202.4	1233.5	1212.1	1172.2	1124.3
43°	857.5	883.5	908.6	950.5	1022.0	1086.2	1144.7	1174.9	1151.7	1114.5	1066.7
43.5°	813.4	839.4	860.3	896.5	966.7	1030.9	1088.5	1117.8	1092.2	1055.0	1009.9



TEST NUMBER: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	688.8	713.0	724.1	744.1	814.7	875.6	928.1	945.3	924.4	891.4	845.4
45.5°	650.7	673.9	681.8	697.6	768.7	825.4	877.5	890.0	871.9	840.3	793.8
46°	613.0	636.3	640.9	651.1	723.2	778.5	829.6	838.0	821.3	789.2	744.6
46.5°	577.2	600.0	600.9	607.9	680.0	732.9	780.4	784.5	771.5	739.5	696.7
47°	541.5	563.8	563.8	568.0	638.6	688.3	732.9	735.3	722.7	693.9	649.8
47.5°	509.4	529.8	528.0	529.8	598.6	645.6	686.5	686.9	675.8	649.3	606.1
48°	477.3	497.8	494.1	494.5	560.5	605.1	642.8	641.4	630.7	602.8	564.2
48.5°	446.6	466.6	462.4	462.9	524.7	566.6	599.1	596.8	587.5	561.0	524.3
49°	416.9	436.4	431.3	433.2	490.8	528.9	557.3	554.9	546.1	521.5	485.7
49.5°	389.0	407.6	403.0	404.8	458.3	493.6	517.8	515.9	505.7	482.9	453.2
50°	362.1	379.7	376.5	379.3	430.8	460.1	479.6	478.7	469.0	450.8	421.1
50.5°	336.5	353.2	351.4	354.6	403.0	430.8	447.6	446.6	437.4	418.8	389.0
51°	311.9	327.7	327.7	331.8	375.5	401.6	415.5	414.6	405.3	386.2	356.9
51.5°	288.2	303.5	304.4	309.5	347.6	372.7	383.4	383.0	373.2	354.2	324.9
52°	266.3	280.7	282.6	288.6	320.2	343.5	351.4	350.9	341.1	322.1	297.5
52.5°	244.9	258.9	261.7	267.7	296.5	314.2	319.3	319.3	309.5	293.3	271.9
53°	224.9	237.5	241.2	247.7	273.3	289.6	293.3	292.8	283.5	268.2	248.7
53.5°	205.9	217.5	222.2	228.7	252.4	265.8	269.1	267.2	259.3	244.9	226.3
54°	188.2	198.9	204.0	210.1	231.9	242.6	246.3	244.0	236.6	223.6	206.4
54.5°	172.9	182.2	186.8	192.9	211.9	221.2	224.5	222.2	214.7	202.6	187.3
55°	159.0	166.4	171.0	176.6	193.8	201.7	204.0	202.6	196.1	184.5	171.5
55.5°	145.5	152.9	157.1	162.7	176.6	183.1	185.4	184.5	178.5	168.7	156.2
56°	131.5	139.4	143.1	148.3	160.8	166.4	168.7	167.8	162.7	153.8	140.4
56.5°	117.6	126.0	129.2	133.9	145.9	151.1	153.4	152.0	147.3	137.6	125.5
57°	103.6	112.0	115.3	119.4	130.6	135.7	138.0	136.2	132.5	123.6	112.0
57.5°	93.4	98.5	101.3	105.0	116.2	120.8	122.7	122.2	118.1	110.2	99.9
58°	84.6	88.8	91.1	93.9	103.6	107.4	109.2	108.8	105.5	98.5	89.2
58.5°	76.7	80.4	81.8	83.7	92.5	95.7	97.1	97.1	94.3	88.3	79.9
59°	69.7	73.0	73.9	75.3	82.3	84.6	86.4	86.4	84.1	79.5	72.0
59.5°	63.7	66.5	66.5	67.9	73.4	75.8	77.2	77.2	75.3	71.1	64.6
60°	58.1	60.4	60.9	61.3	66.0	67.9	68.8	69.3	67.9	64.1	58.6
60.5°	53.0	55.3	55.3	55.3	59.5	60.9	61.8	62.7	61.3	58.6	53.4
61°	48.3	50.7	50.7	50.2	53.9	55.3	55.8	56.7	55.3	53.0	48.3
61.5°	44.6	46.5	46.5	46.0	48.8	50.2	50.7	51.6	50.2	48.3	44.6
62°	40.9	42.8	42.3	42.3	44.6	45.5	46.0	46.9	46.0	44.2	41.4
62.5°	38.1	39.5	39.0	38.6	41.4	42.3	42.3	42.8	41.8	40.9	38.6
63°	34.9	36.7	36.3	35.3	38.1	39.0	39.5	40.0	39.0	38.1	35.3
63.5°	32.1	33.9	33.0	32.5	34.9	35.8	36.3	36.7	36.3	34.9	32.5
64°	29.7	31.1	30.7	30.2	32.1	32.5	33.5	33.9	33.5	32.1	29.3
64.5°	27.4	28.8	28.4	27.9	28.8	29.3	30.7	31.1	30.7	28.8	27.0
65°	25.6	27.0	26.5	25.6	26.5	27.0	27.4	27.9	27.4	27.0	25.1
65.5°	23.7	24.6	24.6	23.7	24.6	25.1	25.6	26.0	25.6	25.1	23.2
66°	21.8	23.2	22.8	22.3	22.8	23.2	23.7	24.2	23.7	23.2	21.8





TEST NUMBER: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	17.7	18.6	18.1	17.7	18.1	18.6	19.1	19.1	19.1	18.6	17.2
68°	16.3	17.2	17.2	16.7	16.7	17.2	17.7	17.7	17.7	17.2	16.3
68.5°	15.3	16.3	16.3	15.8	15.8	15.8	16.3	16.7	16.3	16.3	14.9
69°	14.4	14.9	14.9	14.4	14.9	14.9	15.3	15.3	15.3	14.9	13.9
69.5°	13.0	13.9	13.9	13.5	13.9	13.9	14.4	14.4	14.4	13.9	13.0
70°	12.1	13.0	13.0	12.5	12.5	13.0	13.5	13.5	13.5	13.0	12.1
70.5°	11.2	12.1	12.1	11.6	12.1	12.1	12.5	12.5	12.5	12.1	11.2
71°	10.7	11.2	11.2	10.7	11.2	11.2	11.6	11.6	11.6	11.2	10.7
71.5°	9.8	10.2	10.2	10.2	10.2	10.2	10.7	10.7	10.7	10.2	9.8
72°	8.8	9.8	9.8	9.3	9.8	9.8	9.8	10.2	9.8	9.8	9.3
72.5°	8.4	8.8	8.8	8.8	8.8	9.3	9.3	9.3	9.3	8.8	8.4
73°	7.4	8.4	8.4	7.9	8.4	8.4	8.8	8.8	8.4	8.4	7.9
73.5°	7.0	7.4	7.4	7.4	7.9	7.9	7.9	7.9	7.9	7.4	7.4
74°	6.5	7.0	7.0	7.0	7.4	7.4	7.4	7.4	7.4	7.0	7.0
74.5°	6.0	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	6.5	6.0
75°	5.6	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.0	6.0	5.6
75.5°	5.1	5.6	5.6	5.6	5.6	6.0	6.0	6.0	5.6	5.6	5.1
76°	4.6	5.1	5.1	5.1	5.1	5.6	5.6	5.1	5.1	5.1	4.6
76.5°	4.2	4.6	4.6	4.6	5.1	5.1	5.1	5.1	4.6	4.6	4.6
77°	3.7	4.2	4.2	4.2	4.6	4.6	4.6	4.6	4.6	4.2	4.2
77.5°	3.3	3.7	4.2	4.2	4.2	4.2	4.2	4.2	4.2	3.7	3.7
78°	3.3	3.3	3.7	3.7	3.7	4.2	3.7	3.7	3.7	3.7	3.3
78.5°	2.8	3.3	3.3	3.3	3.7	3.7	3.7	3.3	3.3	3.3	3.3
79°	2.3	2.8	2.8	3.3	3.3	3.3	3.3	3.3	3.3	2.8	2.8
79.5°	2.3	2.3	2.8	2.8	2.8	3.3	2.8	2.8	2.8	2.3	2.8
80°	1.9	2.3	2.3	2.3	2.8	2.8	2.8	2.3	2.3	2.3	2.3
80.5°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.9	1.9
81°	1.4	1.9	1.9	2.3	2.3	2.3	2.3	1.9	1.9	1.9	1.9
81.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.9
82°	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.4
82.5°	0.9	0.9	1.4	1.4	1.4	1.9	1.4	1.4	1.4	0.9	1.4
83°	0.5	0.9	1.4	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9
83.5°	0.5	0.9	0.9	1.4	1.4	1.4	1.4	0.9	0.9	0.9	0.9
84°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.9
84.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.9
85°	0.5	0.5	0.5	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.5
85.5°	0.0	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5
86°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5
87°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	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: P776601  
CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4441.8	4441.8	4441.8	4441.8	4441.8	4441.8
0.5°	4440.9	4440.4	4440.9	4440.0	4439.0	4436.7
1°	4440.0	4437.6	4436.7	4435.3	4434.4	4433.0
1.5°	4437.6	4433.9	4431.6	4430.2	4429.7	4427.9
2°	4434.4	4429.3	4426.5	4424.6	4423.7	4422.3
2.5°	4429.7	4423.7	4419.0	4416.3	4415.8	4415.3
3°	4425.1	4416.7	4411.6	4407.9	4407.0	4407.4
3.5°	4419.5	4409.3	4402.3	4398.6	4397.7	4398.1
4°	4412.5	4400.5	4392.6	4387.4	4387.0	4388.4
4.5°	4404.6	4391.2	4381.9	4376.8	4375.4	4377.7
5°	4395.8	4380.5	4370.2	4364.2	4362.3	4365.1
5.5°	4385.6	4368.9	4356.3	4350.7	4349.3	4352.1
6°	4374.9	4356.3	4342.8	4335.4	4334.5	4336.8
6.5°	4362.8	4341.9	4328.0	4320.5	4318.7	4321.9
7°	4349.3	4327.0	4311.2	4303.3	4300.5	4304.7
7.5°	4334.5	4310.8	4294.0	4285.2	4282.4	4286.6
8°	4319.1	4293.1	4275.9	4265.7	4262.9	4267.1
8.5°	4301.9	4273.6	4255.4	4245.2	4242.0	4246.2
9°	4283.8	4253.1	4234.1	4222.4	4218.7	4223.4
9.5°	4263.8	4231.7	4211.8	4197.8	4195.0	4200.1
10°	4243.4	4208.5	4186.7	4173.2	4168.5	4174.6
10.5°	4221.1	4183.4	4160.6	4146.2	4142.0	4146.7
11°	4197.4	4157.8	4133.2	4116.5	4110.9	4118.8
11.5°	4172.7	4130.9	4103.0	4084.9	4080.7	4087.2
12°	4147.6	4101.6	4071.9	4052.3	4047.2	4054.2
12.5°	4119.7	4071.4	4039.3	4018.4	4011.9	4020.3
13°	4091.8	4040.3	4005.9	3983.1	3976.1	3985.4
13.5°	4062.1	4008.7	3972.4	3946.8	3940.3	3948.7
14°	4031.9	3975.7	3936.2	3910.6	3902.7	3910.6
14.5°	3999.4	3941.7	3901.3	3874.3	3865.0	3872.9
15°	3968.7	3907.3	3863.2	3835.8	3825.5	3834.4
15.5°	3935.2	3872.0	3827.9	3798.1	3787.0	3795.3
16°	3902.2	3837.2	3790.2	3759.1	3748.4	3757.2
16.5°	3867.8	3802.3	3755.8	3721.4	3710.7	3717.7
17°	3834.4	3765.1	3718.2	3681.9	3672.2	3680.1
17.5°	3799.5	3730.7	3681.5	3645.2	3633.1	3641.0
18°	3764.2	3694.5	3643.8	3607.1	3595.5	3602.9
18.5°	3729.3	3658.7	3609.0	3570.4	3558.8	3564.3
19°	3695.4	3623.4	3573.6	3536.4	3523.4	3529.0
19.5°	3661.5	3590.4	3539.2	3502.1	3488.1	3493.2
20°	3628.5	3555.5	3504.4	3467.2	3453.3	3460.2
20.5°	3593.6	3520.6	3469.5	3432.8	3417.9	3424.9
21°	3561.5	3485.3	3431.9	3394.7	3382.6	3390.5



TEST NUMBER: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3455.6	3370.1	3307.3	3270.6	3258.5	3266.9
23°	3419.8	3325.9	3261.8	3221.8	3211.6	3221.8
23.5°	3383.5	3282.2	3213.4	3171.1	3161.8	3171.6
24°	3347.7	3234.8	3162.8	3117.7	3107.5	3118.2
24.5°	3304.5	3186.0	3111.2	3059.1	3050.3	3061.9
25°	3259.9	3134.9	3058.7	2998.7	2992.7	3006.6
25.5°	3211.1	3082.8	3004.3	2936.0	2929.5	2946.7
26°	3161.4	3030.3	2948.5	2872.8	2867.6	2888.6
26.5°	3105.6	2975.9	2889.9	2811.4	2802.1	2827.7
27°	3048.4	2920.6	2830.5	2751.0	2736.1	2768.2
27.5°	2986.2	2861.6	2769.1	2690.6	2670.6	2705.9
28°	2922.5	2801.2	2705.9	2632.0	2606.9	2644.6
28.5°	2854.6	2738.9	2641.3	2574.4	2542.3	2579.9
29°	2784.4	2673.4	2576.7	2516.3	2482.3	2515.8
29.5°	2713.3	2606.4	2511.2	2456.8	2418.7	2450.3
30°	2643.6	2537.2	2446.6	2396.8	2358.3	2383.3
30.5°	2571.6	2467.9	2381.0	2333.2	2298.3	2314.6
31°	2503.7	2397.3	2319.7	2269.0	2236.9	2247.6
31.5°	2437.3	2325.3	2255.5	2202.1	2174.7	2181.2
32°	2371.7	2254.1	2192.3	2133.3	2112.4	2115.2
32.5°	2307.6	2182.1	2128.7	2065.4	2048.7	2052.4
33°	2240.7	2109.6	2063.1	1999.4	1984.6	1989.7
33.5°	2175.6	2036.6	1995.3	1933.9	1920.4	1925.5
34°	2110.1	1967.8	1929.3	1868.8	1855.8	1862.8
34.5°	2044.1	1899.1	1860.9	1803.8	1789.4	1799.1
35°	1976.7	1831.2	1793.1	1742.9	1726.6	1734.5
35.5°	1909.3	1767.5	1723.8	1683.4	1664.3	1675.0
36°	1841.4	1703.9	1648.1	1622.1	1605.8	1614.6
36.5°	1774.0	1641.6	1583.9	1561.2	1547.2	1553.3
37°	1706.6	1579.3	1519.3	1499.8	1488.7	1492.4
37.5°	1640.6	1517.5	1455.2	1438.9	1430.6	1431.5
38°	1576.5	1455.2	1390.6	1377.6	1372.0	1370.6
38.5°	1513.8	1393.4	1326.9	1316.2	1314.8	1313.4
39°	1451.5	1333.0	1267.9	1256.3	1258.1	1258.6
39.5°	1391.1	1273.0	1207.9	1196.3	1199.1	1204.2
40°	1330.6	1215.4	1148.9	1137.3	1141.9	1151.2
40.5°	1271.6	1157.7	1092.2	1079.7	1086.6	1098.3
41°	1213.5	1100.6	1036.9	1023.0	1032.7	1047.6
41.5°	1156.4	1044.8	982.1	968.6	979.7	998.3
42°	1099.6	992.3	930.0	915.6	927.2	950.9
42.5°	1045.3	938.8	879.8	863.5	878.0	903.1
43°	991.8	888.2	831.0	812.9	829.2	857.5
43.5°	939.3	838.4	783.6	762.7	782.2	813.4



TEST NUMBER: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	790.6	700.4	652.5	627.4	650.2	688.8
45.5°	744.1	657.2	613.0	586.5	609.3	650.7
46°	698.1	616.3	574.9	547.5	570.3	613.0
46.5°	653.0	577.2	537.7	510.8	533.6	577.2
47°	609.8	539.6	503.3	477.8	499.2	541.5
47.5°	567.0	502.4	470.3	447.1	466.2	509.4
48°	526.6	468.5	439.2	417.4	436.0	477.3
48.5°	489.4	436.4	409.5	389.9	407.1	446.6
49°	452.7	405.3	380.6	363.9	379.7	416.9
49.5°	421.1	376.0	353.7	340.7	355.6	389.0
50°	389.5	347.2	328.1	317.9	330.9	362.1
50.5°	357.9	320.2	303.5	295.6	308.6	336.5
51°	326.3	295.1	280.3	274.7	286.8	311.9
51.5°	299.8	271.0	258.4	255.2	265.8	288.2
52°	275.1	248.7	237.5	236.1	245.9	266.3
52.5°	251.0	226.3	218.0	217.5	227.3	244.9
53°	229.6	205.9	199.4	199.4	209.1	224.9
53.5°	209.1	187.3	182.2	183.1	192.0	205.9
54°	190.1	170.6	165.9	167.8	175.7	188.2
54.5°	173.4	156.6	152.4	154.3	162.7	172.9
55°	158.0	142.7	139.0	140.8	148.7	159.0
55.5°	142.7	128.3	125.0	127.3	134.8	145.5
56°	127.3	114.3	111.5	113.9	120.8	131.5
56.5°	113.9	100.4	98.1	100.4	106.9	117.6
57°	101.3	89.2	87.4	89.7	95.7	103.6
57.5°	90.2	79.9	78.5	80.9	86.4	93.4
58°	80.4	72.0	70.6	73.0	78.5	84.6
58.5°	72.5	64.6	64.1	66.0	71.1	76.7
59°	65.1	58.6	58.1	60.4	65.1	69.7
59.5°	59.0	53.0	52.5	54.8	59.0	63.7
60°	53.4	48.3	47.9	50.2	54.4	58.1
60.5°	48.8	44.2	43.7	46.0	49.7	53.0
61°	44.6	40.4	40.0	42.3	45.5	48.3
61.5°	41.4	37.2	36.7	39.0	42.3	44.6
62°	38.1	33.9	33.9	35.8	39.0	40.9
62.5°	35.3	31.1	31.1	33.0	35.8	38.1
63°	32.1	28.8	28.8	30.7	33.0	34.9
63.5°	29.3	26.5	27.0	28.4	30.7	32.1
64°	27.0	24.6	24.6	26.0	28.4	29.7
64.5°	25.1	22.8	22.8	24.2	26.0	27.4
65°	23.2	21.4	21.4	22.3	24.2	25.6
65.5°	21.4	19.5	20.0	20.9	22.8	23.7
66°	20.0	18.1	18.6	19.5	20.9	21.8



TEST NUMBER: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	15.8	14.9	14.9	15.8	16.7	17.7
68°	14.9	13.9	13.9	14.9	15.8	16.3
68.5°	13.9	13.0	13.0	13.5	14.4	15.3
69°	13.0	12.1	12.1	12.5	13.5	14.4
69.5°	12.1	11.2	11.2	11.6	12.5	13.0
70°	11.2	10.2	10.2	11.2	11.6	12.1
70.5°	10.7	9.8	9.8	10.2	10.7	11.2
71°	9.8	8.8	8.8	9.3	9.8	10.7
71.5°	9.3	8.4	8.4	8.8	9.3	9.8
72°	8.4	7.9	7.9	8.4	8.4	8.8
72.5°	7.9	7.0	7.0	7.4	7.9	8.4
73°	7.4	6.5	6.5	7.0	7.4	7.4
73.5°	7.0	6.0	6.0	6.5	6.5	7.0
74°	6.5	5.6	5.6	6.0	6.0	6.5
74.5°	6.0	5.1	5.1	5.6	5.6	6.0
75°	5.6	4.6	4.6	5.1	5.1	5.6
75.5°	5.1	4.6	4.6	4.6	4.6	5.1
76°	4.6	4.2	4.2	4.2	4.2	4.6
76.5°	4.2	3.7	3.7	3.7	3.7	4.2
77°	3.7	3.3	3.3	3.3	3.7	3.7
77.5°	3.7	3.3	3.3	3.3	3.3	3.3
78°	3.3	2.8	2.8	2.8	2.8	3.3
78.5°	2.8	2.8	2.8	2.8	2.8	2.8
79°	2.8	2.3	2.3	2.3	2.3	2.3
79.5°	2.3	2.3	2.3	2.3	1.9	2.3
80°	2.3	1.9	1.9	1.9	1.9	1.9
80.5°	1.9	1.9	1.9	1.9	1.4	1.9
81°	1.9	1.4	1.4	1.4	1.4	1.4
81.5°	1.4	1.4	1.4	1.4	1.4	1.4
82°	1.4	1.4	1.4	0.9	0.9	0.9
82.5°	1.4	0.9	0.9	0.9	0.9	0.9
83°	0.9	0.9	0.9	0.9	0.9	0.5
83.5°	0.9	0.9	0.9	0.9	0.5	0.5
84°	0.9	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	0.5	0.5
85.5°	0.5	0.5	0.5	0.5	0.0	0.0
86°	0.5	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: P776601

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9



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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





21.5°	3351.9	3376.1	3411.4	3457.0	3534.1	3587.6	3627.5	3644.7	3641.5	3619.2	3579.7
22°	3312.0	3339.8	3375.6	3423.0	3498.3	3554.1	3593.1	3611.7	3608.0	3584.8	3545.3



44°	770.1	795.2	813.4	845.0	914.7	977.4	1033.7	1058.7	1035.0	997.9	953.7
44.5°	729.2	753.4	767.8	793.8	864.5	924.4	980.2	1000.7	978.8	944.9	899.3



66.5°	20.4	21.4	21.4	20.4	20.9	21.4	21.8	22.3	21.8	21.4	20.0
67°	19.1	20.0	19.5	19.1	19.5	20.0	20.4	20.4	20.4	20.0	18.6



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°	3527.6	3448.6	3392.8	3354.3	3344.5	3351.9
22°	3491.4	3409.6	3351.0	3313.8	3302.7	3312.0



44°	888.6	791.0	738.5	716.7	737.1	770.1
44.5°	839.8	745.0	694.4	671.1	693.4	729.2

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66.5°	18.6	17.2	17.2	18.1	19.5	20.4
67°	17.2	15.8	16.3	17.2	18.1	19.1

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Peachtree City, GA 30269

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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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Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)