

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: P776293

Luminaire Tested: HCDJBL3040CSD-HCD4TRH-4000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776293
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: HCDJBL3040CSD-HCD4TRH-4000lm-4000K
Description: 4 INCH ROUND MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

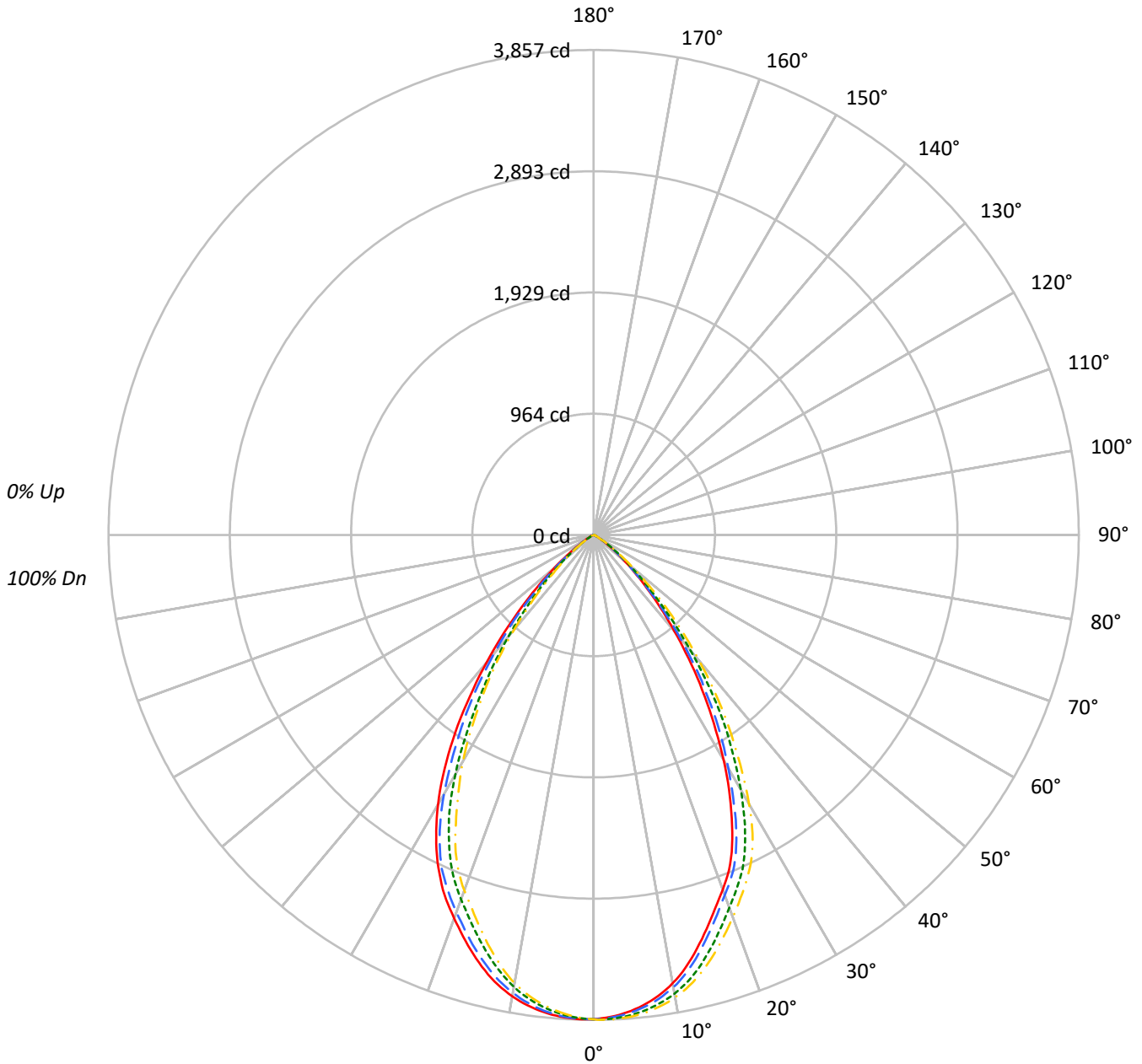
Lumens per Lamp: N/A
Luminaire Lumens: 4341.2 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.98
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					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°	484849	484849	484849	484849
5°	478300	482936	483846	479980
10°	462706	473313	476150	466464
15°	433303	451426	458827	441550
20°	401940	422458	434498	413003
25°	362119	393237	405554	377560
30°	300403	340235	359620	319789
35°	231127	273807	294486	244017
40°	164039	196288	218089	173173
45°	106324	125777	142703	108122
50°	61477	73166	79627	58952
55°	30257	36883	37322	27163
60°	12686	14397	14825	10546
65°	6611	6849	7087	5509
70°	3864	4011	4305	3275
75°	2334	2528	2528	1945
80°	1160	1739	1449	1160
85°	578	1155	578	578

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 145925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.5	8.3
10°-20°	959.6	22.1
20°-30°	1257.8	29.0
30°-40°	1053.3	24.3
40°-50°	534.1	12.3
50°-60°	146.0	3.4
60°-70°	24.5	0.6
70°-80°	5.7	0.1
80°-90°	0.7	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°	2576.9	59.4
0°-40°	3630.2	83.6
0°-60°	4310.3	99.3
0°-90°	4341.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4341.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3853	3853	3853	3853	3853	
5°	3786	3823	3830	3799	3786	356
15°	3326	3465	3522	3389	3326	932
25°	2608	2832	2921	2719	2608	1182
35°	1504	1782	1917	1588	1504	937
45°	597	707	802	608	597	470
55°	138	168	170	124	138	134
65°	22	23	24	18	22	24
75°	5	5	5	4	5	5
85°	0	1	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°	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6
0.5°	3848.1	3848.6	3850.2	3853.0	3854.2	3855.4	3855.8	3855.4	3852.2	3851.4	3851.8
1°	3844.9	3845.3	3848.1	3851.4	3854.2	3855.8	3856.6	3856.2	3853.4	3851.8	3851.8
1.5°	3840.5	3842.1	3845.3	3849.4	3853.4	3855.8	3856.6	3856.6	3853.0	3851.4	3849.8
2°	3835.7	3838.1	3841.3	3846.5	3851.4	3854.6	3856.6	3856.2	3852.2	3849.8	3848.6
2.5°	3829.6	3832.4	3837.3	3842.5	3849.0	3853.4	3855.4	3854.6	3850.6	3847.3	3845.7
3°	3822.8	3826.4	3831.2	3838.1	3844.9	3850.2	3853.0	3853.0	3847.7	3844.5	3842.1
3.5°	3814.7	3819.1	3825.2	3831.6	3840.9	3846.9	3849.8	3849.4	3844.9	3840.9	3837.7
4°	3806.2	3811.1	3817.1	3824.8	3836.1	3842.5	3846.5	3845.7	3840.9	3836.5	3832.8
4.5°	3797.0	3801.8	3809.0	3817.5	3830.0	3837.7	3842.5	3841.7	3835.2	3830.8	3826.4
5°	3786.1	3792.5	3799.4	3808.2	3822.8	3832.0	3836.9	3836.1	3830.0	3824.8	3819.9
5.5°	3774.8	3780.8	3789.3	3799.0	3815.1	3825.2	3830.8	3829.6	3823.2	3817.5	3811.9
6°	3761.5	3768.7	3778.8	3788.9	3805.8	3817.5	3824.0	3823.2	3815.9	3809.9	3803.8
6.5°	3748.6	3757.0	3766.7	3778.4	3796.5	3809.4	3816.7	3815.1	3807.8	3800.6	3793.7
7°	3733.7	3742.5	3753.8	3766.7	3786.1	3800.2	3807.8	3807.0	3798.6	3791.3	3783.2
7.5°	3717.9	3726.8	3739.7	3753.8	3774.8	3790.1	3797.8	3797.0	3788.9	3780.4	3771.6
8°	3701.0	3711.1	3724.8	3740.1	3762.7	3778.8	3786.9	3785.3	3778.4	3769.1	3759.1
8.5°	3682.9	3693.4	3708.3	3724.8	3749.4	3766.3	3775.6	3774.8	3766.3	3756.6	3745.4
9°	3663.1	3674.4	3690.1	3708.7	3735.7	3753.4	3762.7	3761.9	3753.8	3743.3	3730.8
9.5°	3643.0	3654.7	3671.6	3691.3	3720.0	3738.9	3749.4	3748.6	3740.9	3729.2	3715.1
10°	3620.8	3633.7	3651.8	3672.8	3703.8	3723.6	3733.7	3734.1	3726.0	3714.3	3698.6
10.5°	3596.6	3610.3	3631.3	3652.6	3685.7	3706.3	3717.9	3719.2	3710.7	3697.4	3681.7
11°	3572.4	3586.5	3607.5	3631.7	3666.7	3688.5	3701.4	3701.8	3693.8	3680.5	3662.7
11.5°	3545.0	3561.1	3582.9	3608.7	3647.0	3670.0	3683.3	3684.5	3676.4	3661.9	3642.6
12°	3516.4	3532.9	3556.3	3584.5	3625.6	3649.0	3663.5	3665.5	3657.9	3642.6	3622.4
12.5°	3487.0	3503.9	3528.5	3557.9	3601.4	3627.2	3644.2	3646.6	3638.1	3622.0	3600.6
13°	3456.7	3474.5	3499.5	3531.7	3576.9	3605.1	3621.6	3624.8	3616.8	3599.8	3577.7
13.5°	3424.9	3442.6	3470.0	3501.9	3551.1	3579.7	3599.4	3603.1	3594.6	3577.3	3554.3
14°	3391.8	3411.2	3438.2	3472.0	3523.6	3554.7	3574.8	3578.9	3570.8	3553.9	3528.5
14.5°	3359.2	3377.3	3405.5	3440.6	3494.6	3528.1	3549.4	3555.5	3547.4	3529.3	3503.5
15°	3325.7	3345.1	3372.9	3410.0	3464.8	3500.7	3523.6	3528.9	3521.6	3503.1	3477.3
15.5°	3291.8	3311.6	3339.8	3377.7	3435.4	3472.0	3497.4	3503.9	3495.8	3477.7	3450.7
16°	3258.8	3278.1	3307.6	3345.1	3404.7	3443.8	3470.4	3477.3	3470.0	3450.7	3423.3
16.5°	3224.5	3244.7	3274.1	3313.6	3374.5	3414.8	3441.4	3451.5	3443.4	3424.1	3395.0
17°	3191.9	3210.8	3241.1	3280.2	3342.2	3385.4	3412.8	3423.3	3415.6	3396.7	3366.0
17.5°	3158.0	3177.8	3207.2	3247.9	3310.4	3354.3	3384.2	3394.2	3387.8	3367.6	3337.8
18°	3125.0	3145.1	3174.9	3215.7	3279.4	3324.5	3354.3	3365.2	3359.2	3339.4	3307.6
18.5°	3091.5	3111.7	3141.5	3182.6	3247.5	3293.9	3324.9	3337.8	3329.7	3310.8	3277.7
19°	3060.9	3080.2	3109.6	3150.8	3216.1	3262.4	3295.1	3306.4	3301.1	3281.8	3248.7
19.5°	3029.8	3049.2	3079.0	3119.3	3185.8	3232.2	3265.2	3277.3	3272.5	3253.1	3220.5
20°	3001.2	3019.3	3048.4	3089.1	3154.4	3201.5	3234.6	3249.1	3244.3	3224.9	3191.5
20.5°	2970.6	2989.5	3018.5	3058.4	3124.6	3170.9	3205.6	3220.1	3215.7	3196.7	3162.4
21°	2940.7	2959.3	2989.1	3028.2	3094.7	3141.5	3175.7	3189.9	3187.0	3168.1	3133.8



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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°	2833.5	2859.7	2894.8	2937.9	3003.2	3052.4	3088.3	3104.4	3099.2	3078.2	3042.3
23°	2794.4	2820.2	2858.1	2904.9	2972.6	3019.7	3058.8	3073.8	3067.3	3042.3	3010.1
23.5°	2750.9	2777.1	2819.0	2867.4	2941.5	2987.5	3027.4	3040.7	3030.6	3006.8	2977.8
24°	2704.5	2732.7	2776.3	2827.5	2910.5	2954.8	2995.6	3007.6	2993.9	2971.0	2945.2
24.5°	2655.7	2684.4	2731.5	2785.1	2872.2	2922.6	2964.1	2975.0	2957.3	2935.1	2912.9
25°	2607.8	2636.0	2685.2	2738.8	2831.9	2890.3	2932.7	2941.9	2920.6	2899.2	2873.0
25.5°	2555.8	2585.2	2636.0	2690.4	2789.6	2851.2	2900.8	2908.9	2883.9	2859.3	2832.3
26°	2505.4	2537.2	2585.2	2637.6	2744.4	2810.1	2863.3	2868.2	2842.0	2814.6	2789.6
26.5°	2452.6	2486.8	2531.2	2582.8	2698.9	2767.4	2823.4	2828.3	2799.6	2770.6	2744.4
27°	2401.0	2435.6	2475.9	2527.1	2651.7	2722.2	2781.5	2782.7	2755.3	2726.7	2697.7
27.5°	2346.9	2383.2	2417.1	2472.7	2604.1	2677.9	2737.6	2738.8	2710.6	2682.3	2648.5
28°	2293.7	2330.4	2360.6	2419.5	2554.1	2631.5	2689.2	2690.4	2665.4	2636.8	2598.1
28.5°	2237.7	2276.8	2303.8	2366.7	2500.9	2584.4	2638.4	2642.4	2621.1	2590.8	2546.1
29°	2182.1	2222.0	2247.0	2315.1	2448.1	2535.2	2586.4	2591.6	2573.5	2542.9	2492.5
29.5°	2125.2	2164.7	2193.0	2265.1	2393.7	2484.8	2530.4	2540.0	2525.1	2494.1	2436.8
30°	2067.2	2105.9	2139.7	2213.9	2341.3	2432.4	2471.9	2484.8	2474.7	2442.5	2377.6
30.5°	2007.5	2047.4	2086.5	2163.9	2281.6	2376.8	2410.6	2429.2	2423.9	2390.5	2318.3
31°	1949.5	1989.0	2033.7	2109.9	2225.6	2319.5	2351.8	2371.5	2370.3	2338.1	2259.1
31.5°	1891.8	1929.7	1980.9	2057.1	2170.0	2259.1	2289.3	2312.7	2316.3	2282.0	2198.2
32°	1834.6	1871.7	1927.3	2000.3	2118.0	2199.8	2228.8	2252.6	2260.7	2225.6	2139.3
32.5°	1780.2	1813.6	1872.9	1944.2	2060.7	2140.5	2169.2	2194.2	2206.7	2169.2	2080.5
33°	1725.7	1758.4	1818.9	1885.8	2005.5	2078.9	2111.1	2135.3	2149.4	2113.9	2022.0
33.5°	1670.1	1703.2	1763.2	1826.5	1951.1	2016.8	2053.1	2076.5	2093.4	2055.5	1965.2
34°	1615.7	1647.1	1706.0	1766.5	1897.9	1952.3	1995.8	2018.4	2034.5	1995.4	1908.8
34.5°	1560.5	1590.3	1648.7	1709.6	1839.0	1888.2	1939.0	1961.6	1976.9	1937.8	1853.1
35°	1504.4	1532.6	1592.7	1653.6	1782.2	1824.1	1880.9	1905.5	1916.8	1878.1	1796.7
35.5°	1452.8	1478.6	1537.5	1599.6	1723.3	1762.4	1823.7	1849.9	1858.8	1816.4	1741.1
36°	1400.4	1425.8	1483.1	1546.8	1667.7	1701.2	1766.1	1793.1	1797.1	1756.0	1685.4
36.5°	1347.2	1373.4	1445.6	1493.5	1604.0	1641.5	1708.4	1737.8	1736.6	1694.7	1628.6
37°	1294.4	1320.6	1389.9	1432.7	1544.7	1582.2	1649.1	1680.2	1675.4	1635.0	1570.9
37.5°	1241.6	1268.2	1334.7	1381.9	1483.5	1525.4	1589.5	1623.3	1617.3	1575.4	1513.3
38°	1188.8	1215.8	1279.5	1330.7	1425.4	1470.2	1530.6	1565.7	1557.6	1516.5	1454.8
38.5°	1139.2	1167.4	1223.9	1279.9	1364.1	1413.7	1473.0	1508.1	1499.2	1458.5	1398.0
39°	1091.6	1119.9	1172.7	1229.1	1307.3	1359.3	1415.7	1450.4	1442.3	1402.0	1342.4
39.5°	1044.5	1071.1	1121.5	1174.7	1248.9	1303.7	1359.7	1394.4	1385.5	1345.2	1288.0
40°	998.5	1022.7	1070.7	1120.3	1194.8	1250.9	1303.7	1337.5	1327.5	1289.6	1232.7
40.5°	952.6	977.6	1021.5	1067.9	1138.0	1196.0	1249.7	1281.9	1271.4	1233.9	1181.9
41°	908.6	932.0	971.9	1016.3	1086.0	1144.0	1197.3	1229.1	1215.4	1176.7	1128.3
41.5°	865.9	890.1	923.9	966.7	1033.6	1091.6	1144.4	1175.5	1160.2	1122.3	1077.1
42°	824.8	847.8	877.6	918.3	983.6	1041.7	1093.3	1123.1	1104.5	1069.1	1025.5
42.5°	783.3	806.6	832.8	871.1	934.4	990.9	1042.9	1069.9	1051.3	1016.7	975.1
43°	743.7	766.3	788.1	824.4	886.5	942.1	992.9	1019.1	998.9	966.7	925.2
43.5°	705.5	728.0	746.2	777.6	838.5	894.1	944.1	969.5	947.3	915.1	876.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	597.4	618.4	628.1	645.4	706.7	759.5	805.0	819.9	801.8	773.2	733.3
45.5°	564.4	584.5	591.4	605.1	666.8	715.9	761.1	772.0	756.2	728.8	688.5
46°	531.7	551.9	555.9	564.8	627.2	675.2	719.6	726.8	712.3	684.5	645.8
46.5°	500.7	520.4	521.2	527.3	589.8	635.7	676.8	680.5	669.2	641.4	604.3
47°	469.6	489.0	489.0	492.6	553.9	597.0	635.7	637.7	626.8	601.9	563.6
47.5°	441.8	459.6	457.9	459.6	519.2	559.9	595.4	595.8	586.1	563.2	525.7
48°	414.0	431.7	428.5	428.9	486.2	524.9	557.5	556.3	547.0	522.8	489.4
48.5°	387.4	404.7	401.1	401.5	455.1	491.4	519.6	517.6	509.5	486.6	454.7
49°	361.6	378.5	374.1	375.7	425.7	458.7	483.3	481.3	473.7	452.3	421.3
49.5°	337.4	353.5	349.5	351.1	397.5	428.1	449.1	447.5	438.6	418.8	393.0
50°	314.0	329.3	326.5	328.9	373.7	399.1	416.0	415.2	406.7	391.0	365.2
50.5°	291.9	306.4	304.8	307.6	349.5	373.7	388.2	387.4	379.3	363.2	337.4
51°	270.5	284.2	284.2	287.8	325.7	348.3	360.4	359.6	351.5	335.0	309.6
51.5°	249.9	263.2	264.0	268.5	301.5	323.3	332.6	332.2	323.7	307.2	281.8
52°	231.0	243.5	245.1	250.3	277.7	297.9	304.8	304.4	295.9	279.4	258.0
52.5°	212.4	224.5	227.0	232.2	257.2	272.5	276.9	276.9	268.5	254.4	235.8
53°	195.1	206.0	209.2	214.9	237.0	251.1	254.4	254.0	245.9	232.6	215.7
53.5°	178.6	188.7	192.7	198.3	218.9	230.6	233.4	231.8	224.9	212.4	196.3
54°	163.3	172.5	177.0	182.2	201.2	210.4	213.7	211.6	205.2	193.9	179.0
54.5°	150.0	158.0	162.1	167.3	183.8	191.9	194.7	192.7	186.2	175.8	162.5
55°	137.9	144.3	148.3	153.2	168.1	175.0	177.0	175.8	170.1	160.0	148.7
55.5°	126.2	132.6	136.3	141.1	153.2	158.8	160.8	160.0	154.8	146.3	135.4
56°	114.1	120.9	124.2	128.6	139.5	144.3	146.3	145.5	141.1	133.4	121.7
56.5°	102.0	109.2	112.1	116.1	126.6	131.0	133.0	131.8	127.8	119.3	108.8
57°	89.9	97.2	100.0	103.6	113.3	117.7	119.7	118.1	114.9	107.2	97.2
57.5°	81.0	85.5	87.9	91.1	100.8	104.8	106.4	106.0	102.4	95.5	86.7
58°	73.4	77.0	79.0	81.4	89.9	93.1	94.7	94.3	91.5	85.5	77.4
58.5°	66.5	69.7	70.9	72.6	80.2	83.0	84.3	84.3	81.8	76.6	69.3
59°	60.5	63.3	64.1	65.3	71.4	73.4	75.0	75.0	73.0	68.9	62.5
59.5°	55.2	57.6	57.6	58.9	63.7	65.7	66.9	66.9	65.3	61.7	56.0
60°	50.4	52.4	52.8	53.2	57.2	58.9	59.7	60.1	58.9	55.6	50.8
60.5°	46.0	48.0	48.0	48.0	51.6	52.8	53.6	54.4	53.2	50.8	46.4
61°	41.9	43.9	43.9	43.5	46.8	48.0	48.4	49.2	48.0	46.0	41.9
61.5°	38.7	40.3	40.3	39.9	42.3	43.5	43.9	44.7	43.5	41.9	38.7
62°	35.5	37.1	36.7	36.7	38.7	39.5	39.9	40.7	39.9	38.3	35.9
62.5°	33.1	34.3	33.9	33.5	35.9	36.7	36.7	37.1	36.3	35.5	33.5
63°	30.2	31.8	31.4	30.6	33.1	33.9	34.3	34.7	33.9	33.1	30.6
63.5°	27.8	29.4	28.6	28.2	30.2	31.0	31.4	31.8	31.4	30.2	28.2
64°	25.8	27.0	26.6	26.2	27.8	28.2	29.0	29.4	29.0	27.8	25.4
64.5°	23.8	25.0	24.6	24.2	25.0	25.4	26.6	27.0	26.6	25.0	23.4
65°	22.2	23.4	23.0	22.2	23.0	23.4	23.8	24.2	23.8	23.4	21.8
65.5°	20.6	21.4	21.4	20.6	21.4	21.8	22.2	22.6	22.2	21.8	20.2
66°	18.9	20.2	19.8	19.3	19.8	20.2	20.6	21.0	20.6	20.2	18.9



TEST NUMBER: P776293

CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	15.3	16.1	15.7	15.3	15.7	16.1	16.5	16.5	16.5	16.1	14.9
68°	14.1	14.9	14.9	14.5	14.5	14.9	15.3	15.3	15.3	14.9	14.1
68.5°	13.3	14.1	14.1	13.7	13.7	13.7	14.1	14.5	14.1	14.1	12.9
69°	12.5	12.9	12.9	12.5	12.9	12.9	13.3	13.3	13.3	12.9	12.1
69.5°	11.3	12.1	12.1	11.7	12.1	12.1	12.5	12.5	12.5	12.1	11.3
70°	10.5	11.3	11.3	10.9	10.9	11.3	11.7	11.7	11.7	11.3	10.5
70.5°	9.7	10.5	10.5	10.1	10.5	10.5	10.9	10.9	10.9	10.5	9.7
71°	9.3	9.7	9.7	9.3	9.7	9.7	10.1	10.1	10.1	9.7	9.3
71.5°	8.5	8.9	8.9	8.9	8.9	8.9	9.3	9.3	9.3	8.9	8.5
72°	7.7	8.5	8.5	8.1	8.5	8.5	8.5	8.9	8.5	8.5	8.1
72.5°	7.3	7.7	7.7	7.7	7.7	8.1	8.1	8.1	8.1	7.7	7.3
73°	6.4	7.3	7.3	6.9	7.3	7.3	7.7	7.7	7.3	7.3	6.9
73.5°	6.0	6.4	6.4	6.4	6.9	6.9	6.9	6.9	6.9	6.4	6.4
74°	5.6	6.0	6.0	6.0	6.4	6.4	6.4	6.4	6.4	6.0	6.0
74.5°	5.2	5.6	5.6	5.6	5.6	6.0	6.0	6.0	6.0	5.6	5.2
75°	4.8	5.2	5.2	5.2	5.2	5.6	5.6	5.6	5.2	5.2	4.8
75.5°	4.4	4.8	4.8	4.8	4.8	5.2	5.2	5.2	4.8	4.8	4.4
76°	4.0	4.4	4.4	4.4	4.4	4.8	4.8	4.4	4.4	4.4	4.0
76.5°	3.6	4.0	4.0	4.0	4.4	4.4	4.4	4.4	4.0	4.0	4.0
77°	3.2	3.6	3.6	3.6	4.0	4.0	4.0	4.0	4.0	3.6	3.6
77.5°	2.8	3.2	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.2	3.2
78°	2.8	2.8	3.2	3.2	3.2	3.6	3.2	3.2	3.2	3.2	2.8
78.5°	2.4	2.8	2.8	2.8	3.2	3.2	3.2	2.8	2.8	2.8	2.8
79°	2.0	2.4	2.4	2.8	2.8	2.8	2.8	2.8	2.8	2.4	2.4
79.5°	2.0	2.0	2.4	2.4	2.4	2.8	2.4	2.4	2.4	2.0	2.4
80°	1.6	2.0	2.0	2.0	2.4	2.4	2.4	2.0	2.0	2.0	2.0
80.5°	1.6	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.6
81°	1.2	1.6	1.6	2.0	2.0	2.0	2.0	1.6	1.6	1.6	1.6
81.5°	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.6
82°	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.2
82.5°	0.8	0.8	1.2	1.2	1.2	1.6	1.2	1.2	1.2	0.8	1.2
83°	0.4	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8
83.5°	0.4	0.8	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8
84°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8
84.5°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.8
85°	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
85.5°	0.0	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4
86°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
86.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.4
87°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	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: P776293
CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-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: P776293

CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3852.6	3852.6	3852.6	3852.6	3852.6	3852.6
0.5°	3851.8	3851.4	3851.8	3851.0	3850.2	3848.1
1°	3851.0	3849.0	3848.1	3846.9	3846.1	3844.9
1.5°	3849.0	3845.7	3843.7	3842.5	3842.1	3840.5
2°	3846.1	3841.7	3839.3	3837.7	3836.9	3835.7
2.5°	3842.1	3836.9	3832.8	3830.4	3830.0	3829.6
3°	3838.1	3830.8	3826.4	3823.2	3822.3	3822.8
3.5°	3833.2	3824.4	3818.3	3815.1	3814.3	3814.7
4°	3827.2	3816.7	3809.9	3805.4	3805.0	3806.2
4.5°	3820.3	3808.6	3800.6	3796.1	3794.9	3797.0
5°	3812.7	3799.4	3790.5	3785.3	3783.6	3786.1
5.5°	3803.8	3789.3	3778.4	3773.6	3772.4	3774.8
6°	3794.5	3778.4	3766.7	3760.3	3759.5	3761.5
6.5°	3784.1	3765.9	3753.8	3747.4	3745.8	3748.6
7°	3772.4	3753.0	3739.3	3732.5	3730.0	3733.7
7.5°	3759.5	3738.9	3724.4	3716.7	3714.3	3717.9
8°	3746.2	3723.6	3708.7	3699.8	3697.4	3701.0
8.5°	3731.2	3706.7	3690.9	3682.1	3679.2	3682.9
9°	3715.5	3688.9	3672.4	3662.3	3659.1	3663.1
9.5°	3698.2	3670.4	3653.0	3640.9	3638.5	3643.0
10°	3680.5	3650.2	3631.3	3619.6	3615.5	3620.8
10.5°	3661.1	3628.4	3608.7	3596.2	3592.6	3596.6
11°	3640.5	3606.3	3584.9	3570.4	3565.6	3572.4
11.5°	3619.2	3582.9	3558.7	3543.0	3539.4	3545.0
12°	3597.4	3557.5	3531.7	3514.8	3510.3	3516.4
12.5°	3573.2	3531.3	3503.5	3485.3	3479.7	3487.0
13°	3549.0	3504.3	3474.5	3454.7	3448.7	3456.7
13.5°	3523.2	3476.9	3445.4	3423.3	3417.6	3424.9
14°	3497.0	3448.3	3414.0	3391.8	3385.0	3391.8
14.5°	3468.8	3418.8	3383.8	3360.4	3352.3	3359.2
15°	3442.2	3389.0	3350.7	3326.9	3318.0	3325.7
15.5°	3413.2	3358.4	3320.1	3294.3	3284.6	3291.8
16°	3384.6	3328.1	3287.4	3260.4	3251.1	3258.8
16.5°	3354.7	3297.9	3257.6	3227.8	3218.5	3224.5
17°	3325.7	3265.6	3224.9	3193.5	3185.0	3191.9
17.5°	3295.5	3235.8	3193.1	3161.6	3151.2	3158.0
18°	3264.8	3204.4	3160.4	3128.6	3118.5	3125.0
18.5°	3234.6	3173.3	3130.2	3096.7	3086.7	3091.5
19°	3205.2	3142.7	3099.6	3067.3	3056.0	3060.9
19.5°	3175.7	3114.1	3069.7	3037.5	3025.4	3029.8
20°	3147.1	3083.8	3039.5	3007.2	2995.2	3001.2
20.5°	3116.9	3053.6	3009.3	2977.4	2964.5	2970.6
21°	3089.1	3023.0	2976.6	2944.4	2933.9	2940.7

TEST NUMBER: P776293

CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2997.2	2923.0	2868.6	2836.7	2826.2	2833.5
23°	2966.1	2884.7	2829.1	2794.4	2785.5	2794.4
23.5°	2934.7	2846.8	2787.1	2750.5	2742.4	2750.9
24°	2903.6	2805.7	2743.2	2704.1	2695.2	2704.5
24.5°	2866.2	2763.4	2698.5	2653.3	2645.7	2655.7
25°	2827.5	2719.0	2652.9	2600.9	2595.7	2607.8
25.5°	2785.1	2673.9	2605.7	2546.5	2540.8	2555.8
26°	2742.0	2628.3	2557.4	2491.7	2487.2	2505.4
26.5°	2693.6	2581.2	2506.6	2438.4	2430.4	2452.6
27°	2644.0	2533.2	2455.0	2386.0	2373.1	2401.0
27.5°	2590.0	2482.0	2401.8	2333.6	2316.3	2346.9
28°	2534.8	2429.6	2346.9	2282.8	2261.1	2293.7
28.5°	2475.9	2375.6	2290.9	2232.9	2205.0	2237.7
29°	2415.1	2318.7	2234.9	2182.5	2153.0	2182.1
29.5°	2353.4	2260.7	2178.0	2130.9	2097.8	2125.2
30°	2292.9	2200.6	2122.0	2078.9	2045.4	2067.2
30.5°	2230.4	2140.5	2065.2	2023.6	1993.4	2007.5
31°	2171.6	2079.3	2012.0	1968.0	1940.2	1949.5
31.5°	2113.9	2016.8	1956.3	1910.0	1886.2	1891.8
32°	2057.1	1955.1	1901.5	1850.3	1832.2	1834.6
32.5°	2001.5	1892.6	1846.3	1791.4	1776.9	1780.2
33°	1943.4	1829.7	1789.4	1734.2	1721.3	1725.7
33.5°	1887.0	1766.5	1730.6	1677.4	1665.7	1670.1
34°	1830.1	1706.8	1673.3	1620.9	1609.6	1615.7
34.5°	1772.9	1647.1	1614.1	1564.5	1552.0	1560.5
35°	1714.5	1588.3	1555.2	1511.7	1497.6	1504.4
35.5°	1656.0	1533.1	1495.2	1460.1	1443.6	1452.8
36°	1597.1	1477.8	1429.5	1406.9	1392.8	1400.4
36.5°	1538.7	1423.8	1373.8	1354.1	1342.0	1347.2
37°	1480.2	1369.8	1317.8	1300.9	1291.2	1294.4
37.5°	1423.0	1316.2	1262.2	1248.0	1240.8	1241.6
38°	1367.4	1262.2	1206.1	1194.8	1190.0	1188.8
38.5°	1312.9	1208.5	1150.9	1141.6	1140.4	1139.2
39°	1258.9	1156.1	1099.7	1089.6	1091.2	1091.6
39.5°	1206.5	1104.1	1047.7	1037.6	1040.0	1044.5
40°	1154.1	1054.1	996.5	986.4	990.5	998.5
40.5°	1102.9	1004.2	947.3	936.4	942.5	952.6
41°	1052.5	954.6	899.4	887.3	895.7	908.6
41.5°	1003.0	906.2	851.8	840.1	849.8	865.9
42°	953.8	860.7	806.6	794.1	804.2	824.8
42.5°	906.6	814.3	763.1	749.0	761.5	783.3
43°	860.2	770.4	720.8	705.1	719.2	743.7
43.5°	814.7	727.2	679.7	661.5	678.4	705.5



TEST NUMBER: P776293

CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	685.7	607.5	566.0	544.2	564.0	597.4
45.5°	645.4	570.0	531.7	508.7	528.5	564.4
46°	605.5	534.5	498.7	474.9	494.6	531.7
46.5°	566.4	500.7	466.4	443.0	462.8	500.7
47°	528.9	468.0	436.6	414.4	432.9	469.6
47.5°	491.8	435.8	408.0	387.8	404.3	441.8
48°	456.7	406.3	380.9	362.0	378.1	414.0
48.5°	424.5	378.5	355.1	338.2	353.1	387.4
49°	392.6	351.5	330.2	315.6	329.3	361.6
49.5°	365.2	326.1	306.8	295.5	308.4	337.4
50°	337.8	301.1	284.6	275.7	287.0	314.0
50.5°	310.4	277.7	263.2	256.4	267.7	291.9
51°	283.0	256.0	243.1	238.2	248.7	270.5
51.5°	260.0	235.0	224.1	221.3	230.6	249.9
52°	238.6	215.7	206.0	204.8	213.2	231.0
52.5°	217.7	196.3	189.1	188.7	197.1	212.4
53°	199.1	178.6	172.9	172.9	181.4	195.1
53.5°	181.4	162.5	158.0	158.8	166.5	178.6
54°	164.9	147.9	143.9	145.5	152.4	163.3
54.5°	150.4	135.9	132.2	133.8	141.1	150.0
55°	137.1	123.8	120.5	122.1	129.0	137.9
55.5°	123.8	111.3	108.4	110.5	116.9	126.2
56°	110.5	99.2	96.7	98.8	104.8	114.1
56.5°	98.8	87.1	85.1	87.1	92.7	102.0
57°	87.9	77.4	75.8	77.8	83.0	89.9
57.5°	78.2	69.3	68.1	70.1	75.0	81.0
58°	69.7	62.5	61.3	63.3	68.1	73.4
58.5°	62.9	56.0	55.6	57.2	61.7	66.5
59°	56.4	50.8	50.4	52.4	56.4	60.5
59.5°	51.2	46.0	45.6	47.6	51.2	55.2
60°	46.4	41.9	41.5	43.5	47.2	50.4
60.5°	42.3	38.3	37.9	39.9	43.1	46.0
61°	38.7	35.1	34.7	36.7	39.5	41.9
61.5°	35.9	32.2	31.8	33.9	36.7	38.7
62°	33.1	29.4	29.4	31.0	33.9	35.5
62.5°	30.6	27.0	27.0	28.6	31.0	33.1
63°	27.8	25.0	25.0	26.6	28.6	30.2
63.5°	25.4	23.0	23.4	24.6	26.6	27.8
64°	23.4	21.4	21.4	22.6	24.6	25.8
64.5°	21.8	19.8	19.8	21.0	22.6	23.8
65°	20.2	18.5	18.5	19.3	21.0	22.2
65.5°	18.5	16.9	17.3	18.1	19.8	20.6
66°	17.3	15.7	16.1	16.9	18.1	18.9



TEST NUMBER: P776293

CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	13.7	12.9	12.9	13.7	14.5	15.3
68°	12.9	12.1	12.1	12.9	13.7	14.1
68.5°	12.1	11.3	11.3	11.7	12.5	13.3
69°	11.3	10.5	10.5	10.9	11.7	12.5
69.5°	10.5	9.7	9.7	10.1	10.9	11.3
70°	9.7	8.9	8.9	9.7	10.1	10.5
70.5°	9.3	8.5	8.5	8.9	9.3	9.7
71°	8.5	7.7	7.7	8.1	8.5	9.3
71.5°	8.1	7.3	7.3	7.7	8.1	8.5
72°	7.3	6.9	6.9	7.3	7.3	7.7
72.5°	6.9	6.0	6.0	6.4	6.9	7.3
73°	6.4	5.6	5.6	6.0	6.4	6.4
73.5°	6.0	5.2	5.2	5.6	5.6	6.0
74°	5.6	4.8	4.8	5.2	5.2	5.6
74.5°	5.2	4.4	4.4	4.8	4.8	5.2
75°	4.8	4.0	4.0	4.4	4.4	4.8
75.5°	4.4	4.0	4.0	4.0	4.0	4.4
76°	4.0	3.6	3.6	3.6	3.6	4.0
76.5°	3.6	3.2	3.2	3.2	3.2	3.6
77°	3.2	2.8	2.8	2.8	3.2	3.2
77.5°	3.2	2.8	2.8	2.8	2.8	2.8
78°	2.8	2.4	2.4	2.4	2.4	2.8
78.5°	2.4	2.4	2.4	2.4	2.4	2.4
79°	2.4	2.0	2.0	2.0	2.0	2.0
79.5°	2.0	2.0	2.0	2.0	1.6	2.0
80°	2.0	1.6	1.6	1.6	1.6	1.6
80.5°	1.6	1.6	1.6	1.6	1.2	1.6
81°	1.6	1.2	1.2	1.2	1.2	1.2
81.5°	1.2	1.2	1.2	1.2	1.2	1.2
82°	1.2	1.2	1.2	0.8	0.8	0.8
82.5°	1.2	0.8	0.8	0.8	0.8	0.8
83°	0.8	0.8	0.8	0.8	0.8	0.4
83.5°	0.8	0.8	0.8	0.8	0.4	0.4
84°	0.8	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.4	0.4
85.5°	0.4	0.4	0.4	0.4	0.0	0.0
86°	0.4	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: P776293

CATALOG NUMBER: HCDJBL3040CSD-HCD4TRH-4000lm-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

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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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2907.3	2928.2	2958.9	2998.4	3065.3	3111.7	3146.3	3161.2	3158.4	3139.1	3104.8
22°	2872.6	2896.8	2927.8	2969.0	3034.3	3082.6	3116.5	3132.6	3129.4	3109.2	3075.0



44°	668.0	689.7	705.5	732.9	793.3	847.8	896.5	918.3	897.7	865.5	827.2
44.5°	632.5	653.5	665.9	688.5	749.8	801.8	850.2	867.9	849.0	819.5	780.0



66.5°	17.7	18.5	18.5	17.7	18.1	18.5	18.9	19.3	18.9	18.5	17.3
67°	16.5	17.3	16.9	16.5	16.9	17.3	17.7	17.7	17.7	17.3	16.1



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°	3059.7	2991.1	2942.7	2909.3	2900.8	2907.3
22°	3028.2	2957.3	2906.5	2874.2	2864.5	2872.6



44°	770.8	686.1	640.6	621.6	639.3	668.0
44.5°	728.4	646.2	602.3	582.1	601.4	632.5



66.5°	16.1	14.9	14.9	15.7	16.9	17.7
67°	14.9	13.7	14.1	14.9	15.7	16.5

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1121 Highway 74 South
Peachtree City, GA 30269

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

Scaled Data Report



(END OF REPORT)