

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: P776512

Luminaire Tested: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776512
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-HCD8TSQC-4000lm-3500K
Description: 8 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

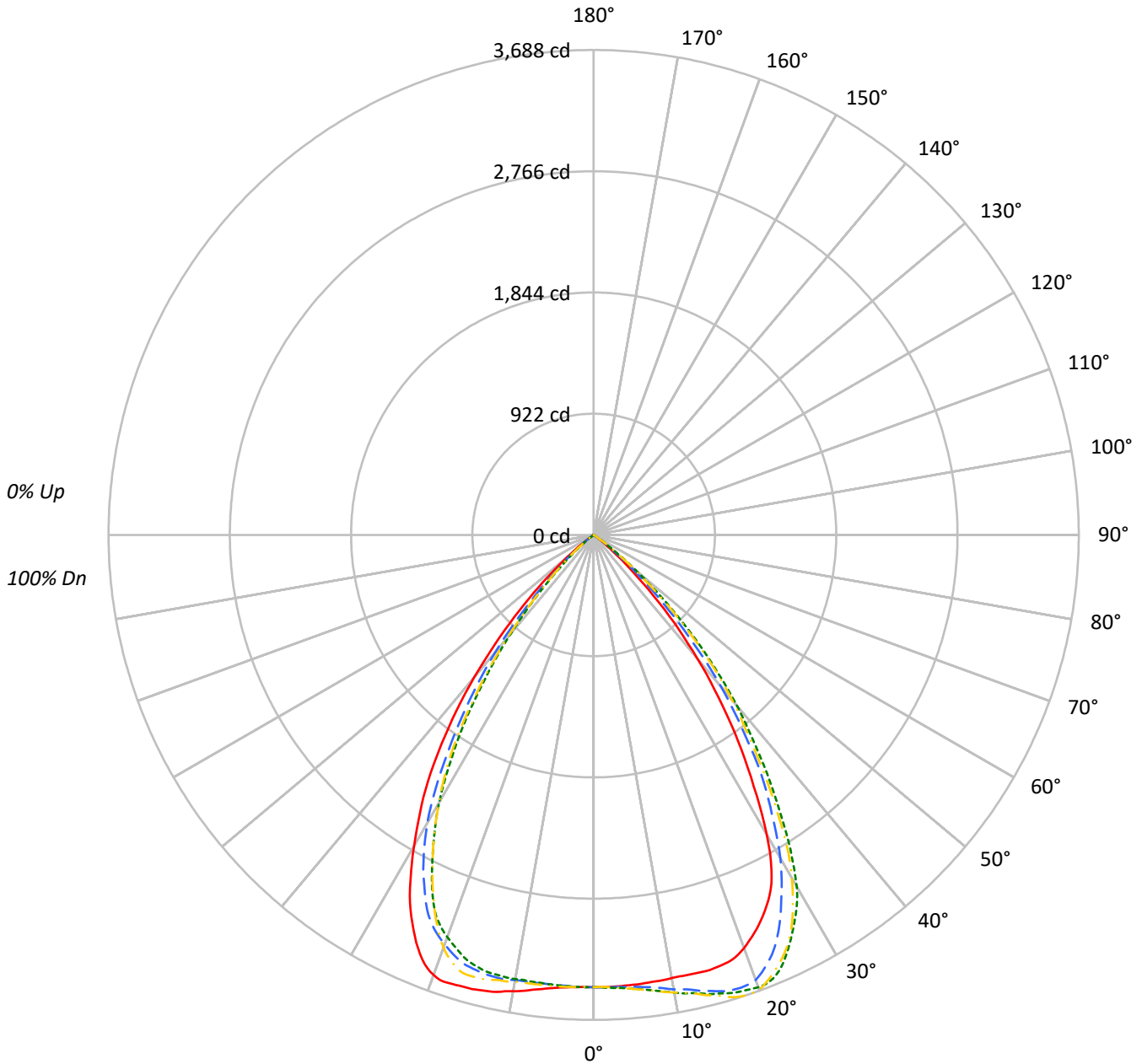
Lumens per Lamp: N/A
Luminaire Lumens: 4622.8 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.07
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 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



TEST NUMBER: P776512
CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

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°	82462	82462	82462	82462
5°	82671	83388	83246	82681
10°	83318	86066	85794	83522
15°	84996	89680	88754	84455
20°	85292	93401	90837	83021
25°	82346	92312	86267	76975
30°	72944	85539	75649	65078
35°	55986	69791	61870	48683
40°	38476	53041	44060	30654
45°	20234	34450	25219	14361
50°	6789	15563	9692	4656
55°	481	3374	1062	117
60°	77	96	77	58
65°	45	45	45	23
70°	28	28	28	28
75°	37	37	37	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 34813 cd/sqm



TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	330.2	7.1
10°-20°	992.9	21.5
20°-30°	1447.9	31.3
30°-40°	1247.6	27.0
40°-50°	548.6	11.9
50°-60°	54.6	1.2
60°-70°	0.8	0.0
70°-80°	0.2	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°	2770.9	59.9
0°-40°	4018.5	86.9
0°-60°	4621.7	100.0
0°-90°	4622.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4622.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3439	3439	3439	3439	3439	
5°	3435	3464	3458	3435	3435	327
15°	3424	3613	3575	3402	3424	966
25°	3112	3489	3261	2909	3112	1413
35°	1913	2384	2114	1663	1913	1186
45°	597	1016	744	424	597	477
55°	12	81	25	3	12	39
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: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0
0.5°	3439.8	3441.4	3442.2	3439.4	3440.6	3438.6	3437.0	3437.8	3439.0	3440.2	3440.2
1°	3439.8	3441.8	3442.6	3441.4	3441.8	3439.8	3437.4	3438.2	3439.4	3440.2	3440.2
1.5°	3439.8	3441.4	3442.2	3442.6	3444.2	3441.8	3438.6	3439.4	3439.4	3439.8	3439.4
2°	3439.0	3440.2	3441.8	3443.8	3446.6	3444.6	3441.8	3441.4	3440.6	3439.8	3439.0
2.5°	3439.0	3440.2	3442.2	3443.8	3448.5	3448.5	3444.6	3443.8	3443.0	3440.2	3437.8
3°	3437.8	3439.8	3442.6	3445.0	3450.1	3449.7	3448.5	3448.2	3444.6	3440.6	3437.0
3.5°	3437.0	3439.0	3443.8	3447.4	3452.1	3452.5	3451.7	3451.3	3447.0	3441.8	3436.2
4°	3435.8	3437.8	3445.0	3450.1	3455.7	3456.5	3455.7	3456.1	3450.5	3442.6	3435.4
4.5°	3435.4	3437.8	3447.0	3453.7	3459.7	3461.3	3460.5	3460.1	3454.5	3444.2	3433.8
5°	3434.6	3437.8	3449.3	3458.5	3464.4	3465.6	3466.0	3466.0	3458.5	3445.8	3433.8
5.5°	3433.8	3439.4	3452.5	3464.0	3469.2	3470.8	3471.2	3472.8	3463.6	3447.8	3433.5
6°	3432.7	3440.2	3456.1	3469.2	3474.8	3476.4	3477.6	3479.1	3468.8	3450.5	3433.5
6.5°	3431.1	3441.4	3460.9	3475.6	3481.1	3481.9	3484.3	3485.9	3475.2	3454.5	3433.8
7°	3429.5	3442.6	3466.0	3482.7	3487.9	3487.9	3490.7	3493.4	3481.9	3458.1	3433.8
7.5°	3428.3	3444.2	3472.0	3491.1	3494.6	3494.6	3496.6	3500.2	3488.7	3462.5	3433.8
8°	3427.9	3446.6	3477.9	3499.4	3501.8	3501.8	3504.6	3508.9	3496.2	3466.4	3434.2
8.5°	3427.1	3450.5	3484.7	3508.1	3509.3	3510.1	3512.1	3516.9	3503.8	3470.4	3435.0
9°	3426.3	3454.9	3492.6	3518.1	3518.1	3518.1	3519.3	3525.6	3510.9	3474.8	3435.4
9.5°	3424.3	3458.5	3501.4	3527.2	3525.6	3526.4	3526.4	3533.6	3517.7	3478.7	3435.4
10°	3421.9	3462.1	3508.5	3537.1	3534.8	3535.6	3534.4	3540.3	3523.6	3482.7	3437.4
10.5°	3420.3	3464.8	3514.9	3545.9	3543.5	3544.3	3541.9	3546.7	3529.6	3488.3	3442.2
11°	3420.3	3468.4	3520.9	3552.6	3551.8	3552.2	3548.7	3552.6	3536.0	3496.2	3446.2
11.5°	3421.9	3473.6	3527.2	3559.0	3558.2	3559.0	3555.0	3559.4	3545.5	3503.4	3447.4
12°	3422.7	3480.3	3536.0	3566.1	3563.0	3566.1	3563.0	3569.3	3553.0	3510.1	3446.2
12.5°	3422.7	3487.1	3546.7	3574.1	3569.3	3573.7	3572.5	3578.9	3559.0	3511.3	3444.2
13°	3422.3	3491.1	3557.4	3584.0	3577.7	3582.8	3584.4	3586.4	3561.8	3513.3	3443.8
13.5°	3423.1	3493.4	3567.3	3593.2	3588.4	3593.2	3597.5	3590.8	3563.8	3517.3	3442.6
14°	3424.7	3495.4	3574.5	3599.5	3598.7	3604.7	3608.3	3593.6	3567.3	3521.3	3439.8
14.5°	3425.1	3498.2	3582.4	3603.1	3606.7	3613.4	3617.0	3597.9	3571.7	3524.0	3435.0
15°	3423.9	3500.2	3591.6	3606.3	3612.6	3619.4	3626.5	3604.7	3575.3	3526.0	3429.9
15.5°	3420.7	3500.2	3600.7	3612.6	3619.0	3623.8	3639.3	3610.2	3576.1	3526.4	3423.9
16°	3417.6	3497.0	3609.1	3618.2	3626.9	3630.1	3653.6	3613.8	3576.5	3528.0	3418.8
16.5°	3414.0	3492.3	3614.6	3620.6	3635.3	3637.7	3666.3	3615.0	3577.3	3529.2	3412.8
17°	3410.0	3486.7	3618.2	3620.6	3641.6	3642.8	3675.8	3613.4	3578.9	3530.4	3404.4
17.5°	3405.6	3481.9	3620.2	3619.4	3645.6	3645.2	3681.8	3611.8	3580.5	3528.8	3393.7
18°	3399.3	3476.8	3620.2	3617.8	3648.4	3644.8	3684.9	3610.6	3582.8	3521.7	3379.0
18.5°	3388.6	3471.6	3618.6	3615.8	3651.2	3644.8	3686.9	3608.7	3583.6	3510.1	3362.7
19°	3374.6	3464.8	3615.8	3614.2	3654.3	3646.4	3688.5	3606.3	3580.5	3492.3	3347.2
19.5°	3359.2	3456.1	3610.6	3612.2	3657.1	3649.2	3686.1	3599.9	3572.1	3473.2	3330.9
20°	3342.5	3444.6	3600.3	3609.1	3660.3	3652.0	3679.8	3589.6	3559.8	3452.1	3313.5
20.5°	3324.2	3431.9	3584.8	3603.1	3661.5	3652.8	3667.1	3577.7	3546.3	3429.1	3295.2
21°	3304.3	3418.4	3565.0	3593.2	3658.7	3649.6	3649.6	3563.8	3528.0	3402.1	3276.1



TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3240.0	3368.7	3493.8	3551.8	3622.2	3634.1	3592.4	3520.5	3448.9	3311.9	3208.6
23°	3216.1	3346.0	3466.8	3537.1	3603.1	3624.2	3570.5	3502.2	3416.0	3277.7	3181.2
23.5°	3191.5	3319.8	3436.2	3518.5	3580.1	3611.4	3547.1	3481.9	3380.6	3242.0	3150.6
24°	3166.5	3290.0	3402.9	3498.6	3552.2	3594.0	3522.4	3458.1	3341.3	3203.8	3115.2
24.5°	3140.2	3255.9	3365.1	3476.0	3520.9	3572.9	3496.6	3430.7	3301.9	3163.3	3076.3
25°	3112.4	3219.3	3325.4	3448.5	3489.1	3546.3	3467.6	3398.1	3260.6	3119.2	3031.8
25.5°	3082.6	3180.4	3281.7	3417.2	3455.3	3515.7	3436.2	3361.9	3219.7	3075.5	2987.7
26°	3051.2	3139.1	3236.4	3380.6	3420.3	3480.7	3400.5	3321.4	3174.0	3026.2	2943.2
26.5°	3015.5	3095.7	3188.7	3340.1	3383.0	3441.0	3362.7	3276.5	3127.1	2976.6	2898.7
27°	2976.2	3047.7	3139.8	3293.6	3346.4	3397.3	3319.8	3226.9	3079.1	2927.3	2854.2
27.5°	2929.7	2997.2	3091.8	3241.6	3309.5	3352.4	3275.3	3175.6	3022.2	2878.0	2801.3
28°	2879.2	2944.4	3043.3	3183.9	3271.0	3300.0	3225.7	3122.0	2965.4	2828.8	2749.3
28.5°	2824.0	2889.9	2996.0	3123.2	3231.2	3245.9	3173.2	3071.1	2908.6	2776.3	2696.5
29°	2764.4	2836.3	2945.6	3062.4	3189.1	3189.9	3121.2	3013.1	2851.8	2722.3	2641.2
29.5°	2700.4	2780.7	2893.9	3001.6	3142.2	3131.5	3069.5	2954.7	2794.6	2667.9	2585.6
30°	2634.5	2725.9	2839.5	2939.6	3089.4	3068.7	3010.7	2896.3	2732.2	2609.5	2528.0
30.5°	2561.8	2671.8	2779.9	2879.2	3023.0	3006.0	2951.9	2838.3	2671.0	2551.1	2468.0
31°	2487.9	2619.0	2716.3	2818.4	2956.7	2943.2	2893.5	2771.6	2612.2	2489.9	2400.9
31.5°	2412.0	2563.0	2651.6	2758.4	2890.3	2880.4	2834.7	2704.0	2551.4	2428.3	2330.2
32°	2339.3	2500.6	2587.2	2700.0	2824.0	2817.2	2761.2	2634.5	2491.9	2366.3	2258.2
32.5°	2265.0	2434.6	2524.4	2639.3	2752.1	2757.2	2685.7	2566.5	2433.5	2305.1	2187.9
33°	2193.9	2365.1	2464.4	2576.1	2676.2	2692.5	2607.9	2499.4	2374.7	2242.4	2114.4
33.5°	2122.8	2291.2	2405.2	2512.1	2601.5	2627.7	2531.2	2428.7	2311.9	2177.2	2044.1
34°	2053.2	2214.1	2347.2	2447.4	2527.2	2554.6	2458.9	2357.6	2248.7	2109.3	1972.2
34.5°	1983.3	2141.0	2285.3	2379.4	2454.9	2477.2	2386.2	2287.6	2183.2	2036.6	1903.5
35°	1912.6	2068.3	2219.3	2310.7	2384.2	2395.7	2313.9	2220.9	2113.6	1963.4	1832.3
35.5°	1845.4	1997.6	2149.8	2242.4	2313.5	2315.5	2238.0	2151.8	2040.9	1890.3	1764.8
36°	1771.9	1928.5	2075.5	2172.8	2242.0	2233.2	2163.7	2084.6	1969.0	1818.4	1694.5
36.5°	1698.4	1858.2	1997.2	2102.1	2168.5	2153.4	2086.6	2015.1	1898.7	1751.3	1625.3
37°	1627.7	1786.3	1922.9	2029.8	2096.5	2074.7	2013.5	1947.6	1830.4	1684.9	1555.4
37.5°	1558.6	1717.5	1852.2	1962.3	2025.8	2003.2	1944.0	1881.6	1764.4	1617.8	1486.7
38°	1492.3	1649.6	1783.5	1893.1	1956.3	1936.8	1879.6	1818.4	1694.9	1549.9	1419.9
38.5°	1430.7	1580.5	1717.5	1826.4	1888.8	1873.7	1818.0	1750.5	1623.8	1481.9	1354.8
39°	1363.9	1510.1	1649.6	1758.0	1824.4	1813.3	1758.4	1682.2	1551.8	1414.4	1291.2
39.5°	1296.8	1441.0	1580.1	1684.1	1760.4	1752.9	1697.7	1609.1	1478.7	1343.7	1226.5
40°	1229.2	1373.1	1508.1	1604.3	1694.5	1694.1	1636.1	1538.3	1407.6	1272.5	1160.5
40.5°	1162.1	1305.5	1437.4	1527.2	1627.3	1631.3	1572.1	1467.2	1334.1	1199.8	1093.4
41°	1095.0	1237.6	1363.5	1454.9	1557.4	1567.7	1507.3	1399.7	1265.4	1128.3	1025.8
41.5°	1030.6	1169.6	1289.6	1386.6	1487.9	1505.0	1442.2	1332.5	1197.9	1058.8	958.3
42°	967.8	1102.1	1215.3	1318.6	1416.8	1440.2	1375.0	1267.4	1130.3	989.3	890.3
42.5°	906.2	1033.4	1141.4	1250.7	1347.2	1375.0	1307.9	1200.6	1063.6	922.9	824.0
43°	841.9	964.2	1067.5	1183.2	1280.1	1306.7	1238.8	1134.3	996.0	859.0	759.6
43.5°	778.7	893.5	999.2	1114.8	1211.8	1237.2	1169.2	1067.1	929.3	796.2	696.1



TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	596.7	694.5	803.7	917.8	1015.9	1026.6	967.4	874.9	743.7	616.6	521.7
45.5°	539.5	634.5	745.3	854.6	949.5	957.1	900.3	813.3	685.3	561.8	470.4
46°	484.7	578.5	686.5	792.6	882.8	888.4	834.7	752.1	631.3	510.1	422.7
46.5°	432.3	524.0	629.7	730.2	819.2	821.2	770.8	690.9	576.5	460.5	384.2
47°	383.0	472.8	574.9	670.6	756.5	754.5	707.6	631.7	525.2	416.4	345.6
47.5°	337.3	425.1	522.0	611.8	695.7	691.3	644.8	574.1	474.8	378.6	306.7
48°	296.4	381.4	470.4	557.0	635.7	631.3	586.8	519.7	427.5	340.5	268.2
48.5°	261.4	340.5	422.3	505.4	575.3	572.9	530.0	467.2	385.4	302.7	238.4
49°	231.2	302.7	378.2	455.7	517.7	516.5	476.0	422.7	343.7	265.0	211.4
49.5°	205.0	268.2	336.5	406.8	462.5	463.6	430.7	378.2	301.5	233.2	187.1
50°	182.0	236.8	297.6	358.8	417.2	418.8	385.0	333.7	259.8	205.0	164.5
50.5°	160.1	207.4	261.8	313.9	371.9	374.3	339.7	289.2	225.7	178.0	141.8
51°	139.5	180.0	228.0	272.1	327.0	329.4	294.4	244.7	195.1	153.0	120.8
51.5°	121.2	156.5	197.9	234.8	281.7	284.9	248.7	211.4	167.7	129.1	102.1
52°	102.9	133.5	169.6	201.8	237.2	240.0	213.7	180.4	141.8	107.3	83.4
52.5°	84.6	114.4	143.8	171.2	203.4	203.8	181.6	153.0	117.6	87.8	67.5
53°	66.3	95.4	123.2	144.2	172.4	172.4	153.0	127.5	96.1	71.1	52.0
53.5°	48.1	75.9	102.9	123.2	145.0	144.2	126.7	104.5	78.3	54.8	36.2
54°	28.2	56.8	82.6	102.5	119.2	118.0	103.7	85.0	60.8	38.5	20.7
54.5°	14.3	36.6	62.4	81.4	96.1	96.1	83.8	69.1	42.9	22.2	5.6
55°	11.5	19.5	42.1	60.8	80.7	78.3	67.9	52.8	25.4	6.4	4.0
55.5°	8.7	16.3	23.0	39.7	65.6	60.8	52.0	36.9	8.3	4.4	3.2
56°	6.0	12.7	10.3	20.7	50.1	43.3	36.6	21.1	4.8	3.6	2.8
56.5°	3.6	9.5	7.9	8.7	35.0	25.4	20.7	5.2	4.0	3.2	2.4
57°	3.2	6.4	6.4	6.8	19.5	7.9	5.2	4.0	3.2	2.8	2.0
57.5°	2.8	3.2	4.8	5.6	4.4	4.4	4.0	3.6	2.8	2.4	2.0
58°	2.4	2.8	2.8	4.0	3.6	3.6	3.2	3.2	2.4	2.0	1.6
58.5°	2.4	2.4	2.4	2.8	2.8	2.8	2.8	2.8	2.4	2.0	1.6
59°	2.0	2.0	2.4	2.4	2.4	2.4	2.4	2.4	2.0	1.6	1.6
59.5°	2.0	2.0	2.0	2.0	2.4	2.4	2.4	2.0	2.0	1.6	1.2
60°	1.6	1.6	1.6	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.2
60.5°	1.6	1.6	1.6	1.6	1.6	2.0	2.0	2.0	1.6	1.2	1.2
61°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.2
61.5°	1.2	1.6	1.2	1.2	1.6	1.6	1.6	1.6	1.2	1.2	1.2
62°	1.2	1.2	1.2	1.2	1.2	1.6	1.6	1.6	1.2	1.2	0.8
62.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8
63°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
63.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
64°	0.8	1.2	0.8	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	1.2	1.2	1.2	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4



TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4
68°	0.8	0.8	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	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: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

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: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3439.0	3439.0	3439.0	3439.0	3439.0	3439.0
0.5°	3438.2	3440.6	3438.2	3437.0	3437.8	3439.8
1°	3438.2	3440.2	3439.0	3437.4	3439.0	3439.8
1.5°	3437.8	3440.2	3439.4	3438.2	3439.0	3439.8
2°	3437.0	3439.8	3439.8	3439.4	3439.4	3439.0
2.5°	3435.4	3439.0	3440.6	3440.6	3439.8	3439.0
3°	3434.2	3438.2	3441.4	3442.6	3440.6	3437.8
3.5°	3432.7	3437.8	3442.6	3443.0	3440.6	3437.0
4°	3431.1	3437.4	3443.0	3444.6	3440.6	3435.8
4.5°	3429.1	3435.8	3443.8	3445.0	3440.2	3435.4
5°	3427.5	3435.0	3443.8	3445.0	3439.8	3434.6
5.5°	3426.3	3433.8	3443.0	3445.0	3438.2	3433.8
6°	3424.7	3432.7	3442.6	3444.2	3437.8	3432.7
6.5°	3421.9	3431.5	3442.6	3444.2	3437.0	3431.1
7°	3419.9	3430.7	3443.0	3444.6	3436.2	3429.5
7.5°	3417.2	3429.5	3444.6	3446.2	3435.8	3428.3
8°	3414.4	3429.1	3444.6	3447.0	3436.2	3427.9
8.5°	3411.2	3427.9	3444.2	3447.0	3435.8	3427.1
9°	3407.2	3426.7	3444.6	3447.0	3434.2	3426.3
9.5°	3404.1	3427.9	3447.8	3447.8	3433.1	3424.3
10°	3402.9	3430.3	3452.1	3451.7	3433.1	3421.9
10.5°	3403.7	3431.9	3456.1	3456.5	3435.0	3420.3
11°	3402.9	3431.1	3458.9	3459.7	3437.8	3420.3
11.5°	3400.5	3428.7	3460.1	3461.7	3438.2	3421.9
12°	3397.3	3425.9	3462.1	3462.5	3436.6	3422.7
12.5°	3396.9	3424.7	3466.8	3467.2	3435.0	3422.7
13°	3396.9	3423.9	3473.2	3473.2	3434.2	3422.3
13.5°	3396.1	3421.9	3478.7	3477.6	3434.2	3423.1
14°	3393.7	3417.2	3480.7	3480.3	3431.9	3424.7
14.5°	3389.3	3409.6	3481.9	3481.1	3427.1	3425.1
15°	3385.4	3402.1	3482.3	3481.9	3420.7	3423.9
15.5°	3380.6	3394.5	3482.3	3482.3	3415.2	3420.7
16°	3375.8	3386.2	3480.3	3481.9	3408.8	3417.6
16.5°	3371.1	3375.8	3474.0	3478.3	3402.5	3414.0
17°	3361.9	3361.5	3462.1	3469.6	3393.7	3410.0
17.5°	3348.8	3344.5	3444.6	3456.1	3381.8	3405.6
18°	3332.5	3326.2	3422.7	3438.2	3367.9	3399.3
18.5°	3313.5	3309.1	3398.5	3418.0	3352.0	3388.6
19°	3294.4	3291.2	3371.1	3394.5	3336.1	3374.6
19.5°	3274.1	3272.9	3340.5	3368.3	3320.6	3359.2
20°	3251.9	3253.5	3306.7	3337.7	3304.7	3342.5
20.5°	3229.2	3234.0	3269.8	3304.7	3288.0	3324.2
21°	3204.2	3212.2	3229.2	3267.0	3271.0	3304.3

TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3128.3	3131.1	3099.7	3142.6	3210.6	3240.0
23°	3100.9	3095.0	3052.0	3096.5	3185.1	3216.1
23.5°	3072.7	3054.4	3004.8	3048.9	3156.5	3191.5
24°	3043.3	3009.1	2955.5	3000.4	3122.0	3166.5
24.5°	3014.7	2961.5	2905.0	2950.3	3082.2	3140.2
25°	2977.7	2909.4	2852.6	2899.9	3036.9	3112.4
25.5°	2940.8	2856.2	2803.3	2849.0	2988.9	3082.6
26°	2904.2	2802.5	2753.7	2796.2	2937.6	3051.2
26.5°	2866.9	2748.1	2698.8	2743.7	2884.8	3015.5
27°	2814.9	2692.1	2645.2	2690.1	2830.0	2976.2
27.5°	2758.4	2636.9	2592.0	2634.9	2774.7	2929.7
28°	2693.7	2582.4	2536.7	2578.5	2719.1	2879.2
28.5°	2629.3	2528.0	2479.5	2524.0	2663.5	2824.0
29°	2563.8	2471.2	2420.7	2468.8	2606.7	2764.4
29.5°	2498.6	2414.4	2362.3	2411.6	2545.9	2700.4
30°	2429.9	2350.4	2305.9	2354.8	2484.3	2634.5
30.5°	2359.6	2284.5	2249.1	2295.6	2419.5	2561.8
31°	2288.8	2216.9	2191.9	2239.2	2352.8	2487.9
31.5°	2217.7	2149.4	2134.7	2182.4	2282.5	2412.0
32°	2147.0	2077.1	2075.5	2123.6	2212.2	2339.3
32.5°	2075.9	2008.3	2016.3	2060.8	2140.6	2265.0
33°	2004.8	1940.8	1952.3	1995.2	2069.1	2193.9
33.5°	1937.2	1874.5	1881.6	1927.7	1997.2	2122.8
34°	1868.9	1806.9	1807.3	1857.0	1932.9	2053.2
34.5°	1799.8	1737.8	1730.6	1783.9	1864.9	1983.3
35°	1727.8	1663.1	1659.5	1710.0	1796.2	1912.6
35.5°	1655.5	1589.6	1587.6	1636.9	1724.3	1845.4
36°	1585.6	1516.9	1519.3	1565.8	1653.2	1771.9
36.5°	1516.9	1443.0	1448.2	1496.2	1576.1	1698.4
37°	1452.1	1377.0	1378.2	1428.7	1505.8	1627.7
37.5°	1389.4	1311.1	1308.7	1359.2	1437.0	1558.6
38°	1324.2	1244.7	1238.8	1289.6	1371.5	1492.3
38.5°	1256.3	1178.8	1169.2	1220.1	1305.5	1430.7
39°	1185.5	1112.8	1099.3	1150.6	1239.6	1363.9
39.5°	1118.8	1046.1	1033.0	1081.0	1173.6	1296.8
40°	1052.8	979.3	966.6	1016.3	1107.7	1229.2
40.5°	991.7	917.8	900.3	951.5	1040.9	1162.1
41°	930.1	857.4	839.9	887.6	978.9	1095.0
41.5°	870.1	797.0	776.7	824.8	915.0	1030.6
42°	807.3	739.0	720.7	764.4	854.2	967.8
42.5°	746.1	682.2	665.1	706.0	793.8	906.2
43°	685.7	625.7	613.0	650.8	736.2	841.9
43.5°	627.7	570.1	563.4	598.3	677.8	778.7



TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	466.4	423.5	429.5	456.1	510.1	596.7
45.5°	422.7	380.2	390.1	414.8	460.1	539.5
46°	379.4	339.7	353.2	375.4	412.4	484.7
46.5°	336.1	302.7	317.4	338.5	366.7	432.3
47°	292.8	269.4	285.3	304.3	325.4	383.0
47.5°	249.5	238.8	254.3	271.0	288.0	337.3
48°	222.5	211.4	225.7	240.8	254.7	296.4
48.5°	199.0	187.1	198.6	212.6	225.3	261.4
49°	178.0	165.3	172.8	186.3	199.4	231.2
49.5°	157.7	144.2	149.0	162.1	175.6	205.0
50°	138.7	124.8	129.1	138.3	154.2	182.0
50.5°	119.2	105.7	109.3	118.8	133.9	160.1
51°	100.5	86.2	89.0	99.3	116.0	139.5
51.5°	83.4	67.1	69.1	79.9	97.7	121.2
52°	67.5	47.7	49.3	60.8	79.9	102.9
52.5°	52.0	27.4	29.4	41.3	61.6	84.6
53°	36.6	13.1	14.3	22.6	40.9	66.3
53.5°	20.7	10.3	11.5	9.9	23.0	48.1
54°	5.6	7.5	8.3	8.3	10.7	28.2
54.5°	4.0	5.2	5.6	6.4	8.7	14.3
55°	3.2	2.8	2.8	4.8	6.8	11.5
55.5°	2.8	2.4	2.4	2.8	5.2	8.7
56°	2.4	2.0	2.4	2.8	3.2	6.0
56.5°	2.0	2.0	2.0	2.4	2.8	3.6
57°	2.0	1.6	2.0	2.0	2.4	3.2
57.5°	1.6	1.6	1.6	2.0	2.4	2.8
58°	1.6	1.6	1.6	2.0	2.0	2.4
58.5°	1.6	1.2	1.6	1.6	2.0	2.4
59°	1.2	1.2	1.2	1.6	2.0	2.0
59.5°	1.2	1.2	1.2	1.6	1.6	2.0
60°	1.2	1.2	1.2	1.2	1.6	1.6
60.5°	1.2	1.2	1.2	1.2	1.6	1.6
61°	1.2	0.8	1.2	1.2	1.2	1.6
61.5°	0.8	0.8	0.8	1.2	1.2	1.2
62°	0.8	0.8	0.8	1.2	1.2	1.2
62.5°	0.8	0.8	0.8	0.8	1.2	1.2
63°	0.8	0.8	0.8	0.8	1.2	1.2
63.5°	0.8	0.8	0.8	0.8	0.8	1.2
64°	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.4	0.8	0.8	0.8	0.8
65.5°	0.4	0.4	0.4	0.8	0.8	0.8
66°	0.4	0.4	0.4	0.8	0.8	0.8



TEST NUMBER: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.4	0.4	0.4	0.4	0.4	0.8
68°	0.4	0.4	0.4	0.4	0.4	0.8
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.0	0.0	0.4	0.4	0.4	0.4
74°	0.0	0.0	0.0	0.4	0.4	0.4
74.5°	0.0	0.0	0.0	0.4	0.4	0.4
75°	0.0	0.0	0.0	0.0	0.4	0.4
75.5°	0.0	0.0	0.0	0.0	0.0	0.4
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: P776512

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-3500K

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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

Scaled Data Report





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

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

Scaled Data Report



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

Scaled Data Report





21.5°	3283.7	3404.4	3542.7	3579.3	3650.4	3645.2	3631.7	3551.1	3506.2	3373.5	3255.5
22°	3262.6	3388.2	3519.3	3565.8	3637.7	3640.0	3612.6	3536.7	3479.1	3343.7	3233.6



44°	716.3	824.8	931.7	1046.5	1146.6	1167.7	1100.9	1001.6	865.7	734.2	635.3
44.5°	655.9	757.6	866.9	980.5	1081.8	1097.3	1033.0	936.0	803.7	673.4	576.9



66.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4
67°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4



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

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

Scaled Data Report





21.5°	3180.0	3187.9	3188.7	3226.9	3252.3	3283.7
22°	3153.8	3161.3	3144.2	3185.5	3232.4	3262.6



44°	572.9	518.1	516.1	548.7	619.0	716.3
44.5°	519.3	470.0	471.6	501.0	563.8	655.9



66.5°	0.4	0.4	0.4	0.8	0.8	0.8
67°	0.4	0.4	0.4	0.4	0.8	0.8

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
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

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

Scaled Data Report



(END OF REPORT)