

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: P775685

Luminaire Tested: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775685
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: HCDJBL510CSD-HCD4TRMW-1000lm-2700K
Description: 4 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1017.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.02
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

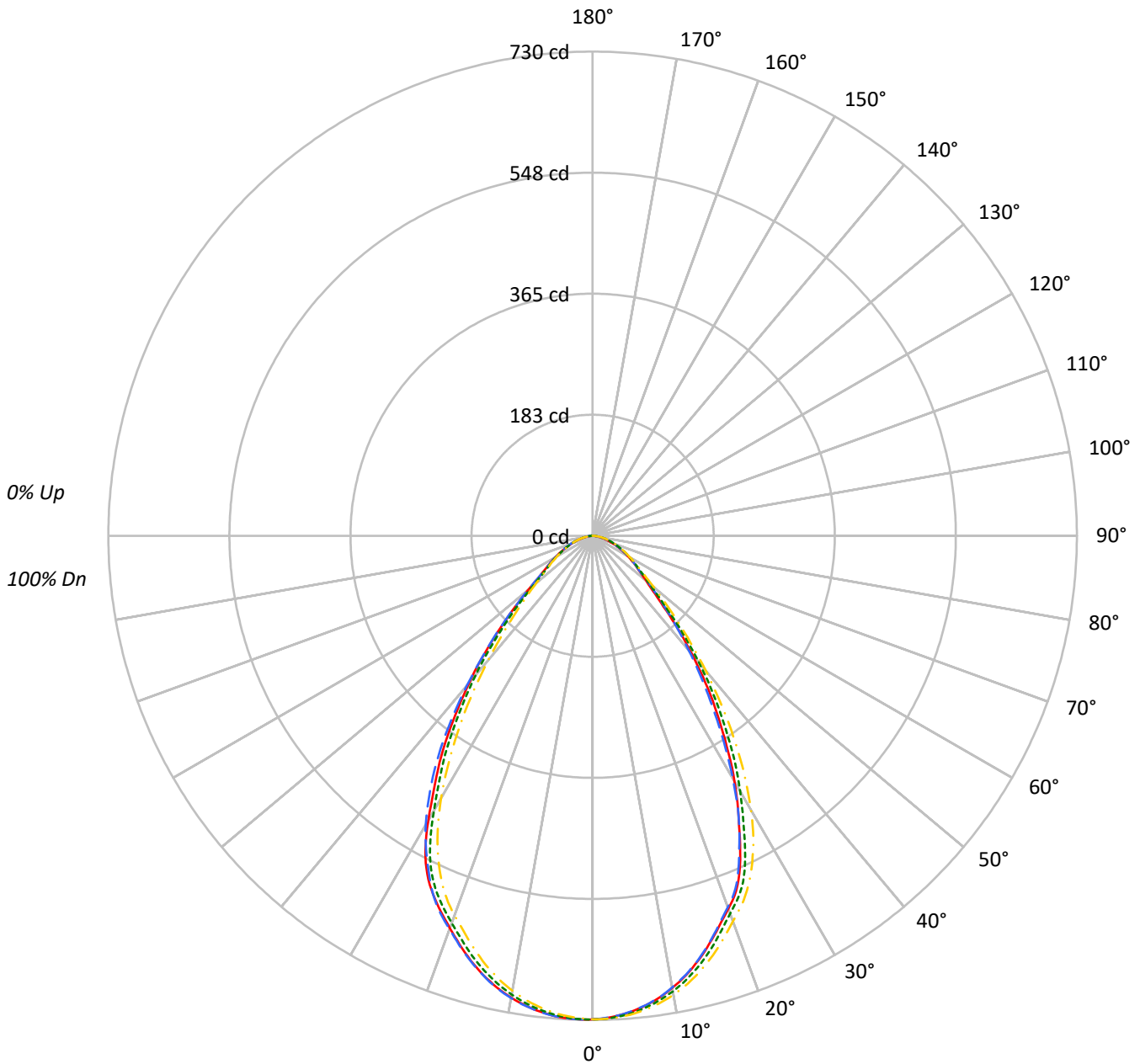
Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	73	72					72			
4	91	82	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	65					65			
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	60	55	64	59	55	53					53			
7	75	64	57	51	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45					45			
9	67	55	48	44	65	55	48	43	54	48	43	53	47	43	52	47	43	41					41			
10	63	52	45	40	62	51	45	40	50	44	40	49	44	40	49	44	40	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	91757	91757	91757	91757
5°	90768	91110	91615	91337
10°	88470	89109	90361	89761
15°	84675	85678	87867	86942
20°	80155	81186	84293	83182
25°	73096	75484	80636	79178
30°	62211	64594	71991	69477
35°	50238	52927	60348	57813
40°	38213	40973	47528	45129
45°	26999	29349	34991	32784
50°	20597	21811	24610	22927
55°	17531	18277	18891	18014
60°	15329	16159	16411	15706
65°	13103	14264	14026	13698
70°	11112	12695	11959	12143
75°	8947	11330	10017	10697
80°	6233	9856	7682	9132
85°	2166	7797	3466	6642

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 202.5°
 Vertical Angle: 45°
 Luminance: 35471 cd/sqm



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	6.7
10°-20°	185.8	18.3
20°-30°	251.8	24.8
30°-40°	223.7	22.0
40°-50°	137.0	13.5
50°-60°	75.9	7.5
60°-70°	46.6	4.6
70°-80°	23.0	2.3
80°-90°	5.0	0.5
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°	505.8	49.7
0°-40°	729.5	71.7
0°-60°	942.3	92.7
0°-90°	1017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1017.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	729	729	729	729	729	
5°	718	721	725	723	718	68
15°	650	658	674	667	650	182
25°	526	544	581	570	526	239
35°	327	344	393	376	327	204
45°	152	165	197	184	152	121
55°	80	83	86	82	80	72
65°	44	48	47	46	44	44
75°	18	23	21	22	18	20
85°	2	5	2	5	2	3
90°	0	0	0	0	0	



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1
0.5°	728.8	728.9	728.7	728.3	729.3	729.0	729.0	729.2	729.4	729.6	729.4
1°	728.3	728.4	728.2	727.8	729.0	728.9	728.9	729.3	729.5	729.7	729.5
1.5°	727.6	727.6	727.4	727.1	728.5	728.6	728.6	729.2	729.5	729.7	729.5
2°	726.8	726.7	726.5	726.3	727.9	728.1	728.3	728.8	729.3	729.6	729.3
2.5°	725.8	725.7	725.5	725.3	727.1	727.5	727.8	728.5	729.0	729.3	729.0
3°	724.6	724.6	724.4	724.2	726.2	726.7	727.2	728.0	728.5	728.8	728.5
3.5°	723.3	723.3	723.0	723.0	725.2	725.8	726.4	727.3	727.9	728.2	727.9
4°	721.9	721.8	721.5	721.6	724.0	724.8	725.4	726.5	727.2	727.5	727.2
4.5°	720.4	720.2	719.9	720.1	722.7	723.5	724.3	725.5	726.3	726.7	726.3
5°	718.5	718.4	718.2	718.4	721.2	722.2	723.1	724.4	725.2	725.7	725.3
5.5°	716.6	716.4	716.2	716.5	719.4	720.6	721.6	723.2	724.0	724.5	724.2
6°	714.6	714.3	714.1	714.4	717.6	719.0	720.2	721.8	722.7	723.2	723.0
6.5°	712.3	712.0	712.0	712.3	715.6	717.1	718.5	720.2	721.3	721.8	721.6
7°	710.0	709.7	709.6	710.0	713.5	715.1	716.7	718.5	719.8	720.3	720.0
7.5°	707.4	707.0	706.9	707.5	711.2	713.0	714.7	716.7	718.0	718.6	718.3
8°	704.8	704.4	704.2	704.8	708.6	710.7	712.6	714.7	716.0	716.7	716.4
8.5°	701.9	701.5	701.3	701.9	706.1	708.3	710.3	712.6	714.0	714.6	714.5
9°	698.9	698.4	698.2	699.0	703.3	705.7	707.9	710.2	711.9	712.6	712.4
9.5°	695.6	695.0	694.9	695.8	700.3	703.0	705.3	707.9	709.6	710.3	710.1
10°	692.3	691.6	691.5	692.4	697.3	700.1	702.6	705.3	707.1	708.0	707.7
10.5°	688.8	688.1	688.0	688.9	694.1	697.1	699.7	702.6	704.4	705.4	705.2
11°	685.1	684.4	684.2	685.3	690.5	693.8	696.6	699.8	701.7	702.7	702.5
11.5°	681.2	680.3	680.3	681.5	687.1	690.4	693.5	696.6	698.9	699.8	699.7
12°	677.2	676.4	676.3	677.5	683.4	686.9	690.1	693.5	695.9	696.9	696.6
12.5°	673.0	672.1	672.1	673.2	679.3	683.1	686.5	690.2	692.6	693.7	693.4
13°	668.7	667.8	667.6	669.0	675.3	679.3	682.9	686.8	689.3	690.5	690.2
13.5°	664.0	663.0	663.2	664.5	671.2	675.2	679.1	683.2	685.8	687.0	686.8
14°	659.6	658.5	658.4	659.8	666.8	671.0	675.0	679.3	682.2	683.4	683.0
14.5°	654.8	653.7	653.6	655.2	662.2	666.7	671.0	675.4	678.5	679.6	679.2
15°	649.9	648.6	648.5	650.2	657.6	662.2	666.8	671.3	674.4	675.7	675.3
15.5°	644.7	643.5	643.5	645.1	652.7	657.6	662.3	667.2	670.3	671.7	671.4
16°	639.5	638.3	638.2	639.9	647.8	652.9	657.8	663.0	666.2	667.6	667.2
16.5°	634.3	632.9	632.9	634.8	642.7	648.0	653.2	658.5	661.9	663.3	662.9
17°	629.1	627.5	627.6	629.5	637.5	642.9	648.5	654.0	657.4	658.9	658.6
17.5°	623.8	622.1	622.1	624.1	632.2	637.9	643.5	649.3	652.9	654.5	654.0
18°	618.2	616.6	616.5	618.6	627.0	632.7	638.6	644.4	648.3	649.9	649.5
18.5°	613.0	611.2	611.0	613.2	621.6	627.4	633.5	639.6	643.5	645.1	644.7
19°	608.0	606.1	605.8	607.9	616.2	622.3	628.4	634.7	638.8	640.5	640.0
19.5°	603.2	601.2	600.9	603.0	611.1	617.2	623.3	629.9	633.9	635.8	635.4
20°	598.5	596.4	596.2	598.2	606.2	612.4	618.7	625.1	629.4	631.2	631.0
20.5°	593.5	591.4	591.2	593.3	601.4	607.6	613.9	620.4	624.7	626.8	626.6
21°	588.5	586.4	586.3	588.5	596.6	603.1	609.3	615.7	620.2	622.5	622.3



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	570.5	567.5	567.3	570.7	581.5	588.3	594.9	601.7	606.3	608.7	608.4
23°	563.1	560.0	559.3	563.4	575.5	582.5	589.3	596.8	601.6	603.8	603.0
23.5°	555.2	552.0	550.7	555.7	568.6	576.1	583.5	591.7	596.7	598.4	597.4
24°	546.3	543.2	541.5	547.3	560.9	569.3	577.2	586.2	591.6	592.8	591.3
24.5°	536.7	534.2	532.3	538.4	552.7	562.0	570.5	580.5	586.2	586.8	585.0
25°	526.4	524.7	522.9	529.1	543.6	554.2	563.5	574.3	580.7	580.5	578.3
25.5°	516.3	514.7	513.8	519.4	534.1	545.5	556.1	567.9	574.8	573.8	571.2
26°	506.1	504.5	504.8	509.4	524.2	536.5	548.6	561.0	568.3	566.9	564.1
26.5°	495.9	493.7	495.7	499.2	513.6	527.1	540.6	553.5	561.3	559.4	556.8
27°	485.8	483.2	486.3	489.0	503.2	517.4	532.8	545.8	553.9	551.9	549.7
27.5°	476.2	472.6	476.7	478.4	493.2	507.6	524.7	537.8	545.8	544.1	542.5
28°	466.7	461.8	466.4	468.0	483.2	497.5	516.2	529.3	537.0	536.5	534.9
28.5°	457.2	451.5	455.7	457.7	473.5	488.0	507.3	520.7	527.3	528.4	527.4
29°	447.4	441.3	444.8	447.4	463.9	478.7	497.7	511.5	517.1	520.1	519.7
29.5°	437.9	431.2	433.9	437.1	454.2	469.5	487.9	501.9	506.5	511.5	511.5
30°	428.1	421.0	422.8	426.8	444.5	460.2	477.7	491.9	495.4	502.7	503.1
30.5°	418.2	411.1	411.5	416.4	435.0	451.1	467.4	481.0	484.1	493.1	494.0
31°	407.9	400.8	400.5	406.0	425.4	441.7	456.6	469.9	472.9	483.6	484.9
31.5°	397.7	390.6	389.6	395.8	415.4	432.2	445.8	458.2	462.1	473.7	475.2
32°	386.9	380.6	378.6	385.6	405.6	422.6	435.4	446.5	451.8	463.5	465.7
32.5°	376.5	370.3	367.6	375.3	395.7	412.8	425.0	434.9	441.8	452.6	456.1
33°	366.3	360.1	357.0	365.3	385.2	402.5	414.0	423.2	431.9	441.6	446.6
33.5°	356.2	350.4	346.4	355.4	374.8	392.2	403.0	412.0	422.1	430.7	436.5
34°	346.4	340.2	335.9	345.4	364.5	381.6	392.0	401.6	412.6	420.0	426.8
34.5°	336.6	330.2	325.6	335.4	354.5	370.7	381.2	390.7	402.7	409.2	416.1
35°	327.0	320.0	315.2	325.5	344.5	359.8	370.3	379.7	392.8	398.9	405.5
35.5°	317.6	310.5	305.4	315.6	335.0	349.4	359.6	369.2	382.4	388.8	394.4
36°	308.3	300.4	296.0	305.6	325.1	338.7	348.5	358.6	371.6	378.7	383.5
36.5°	298.8	290.6	286.8	295.4	315.8	328.4	338.0	348.0	360.9	368.5	372.2
37°	289.2	281.2	277.8	285.6	306.3	318.0	326.9	337.2	350.0	358.2	360.9
37.5°	279.6	271.7	268.7	275.7	296.9	308.0	316.2	326.5	339.2	348.3	349.8
38°	269.9	262.5	259.8	266.1	287.6	298.0	305.3	316.0	328.9	337.8	338.6
38.5°	260.3	253.2	250.9	257.2	278.2	288.2	294.9	305.7	319.2	327.5	327.2
39°	251.1	244.6	242.4	248.4	267.9	278.4	284.5	295.4	308.9	317.0	316.2
39.5°	241.7	236.0	234.0	239.8	258.6	268.5	274.7	285.7	299.2	306.6	305.2
40°	232.6	227.5	225.5	231.2	249.4	258.7	264.4	275.9	289.3	296.1	294.4
40.5°	223.8	219.2	217.6	223.0	239.8	248.5	254.6	266.6	280.4	285.8	283.6
41°	215.3	211.1	210.0	214.9	230.7	238.8	244.9	257.3	270.5	275.6	273.3
41.5°	206.7	203.1	202.5	207.1	221.9	229.3	235.8	248.4	260.5	265.6	263.3
42°	198.2	195.5	195.6	199.4	213.5	220.0	226.7	239.8	250.7	255.7	253.5
42.5°	190.1	188.2	188.7	191.9	204.9	210.8	218.1	231.2	241.6	246.1	244.0
43°	182.0	181.1	182.0	184.7	196.6	202.1	209.7	222.6	231.9	236.3	234.4
43.5°	174.0	174.1	175.3	177.7	188.3	193.7	201.8	214.4	222.6	226.8	225.1



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	151.7	155.0	157.0	158.4	164.9	170.6	178.5	189.9	196.6	199.3	198.5
45.5°	145.3	149.1	151.3	152.5	157.7	163.5	171.6	182.1	188.6	190.6	190.0
46°	139.3	143.5	146.0	146.9	150.8	156.5	164.7	174.5	180.6	182.1	181.8
46.5°	133.6	138.1	140.6	141.4	144.3	150.2	158.0	167.2	173.0	173.8	173.9
47°	128.4	132.9	135.7	136.1	138.4	143.9	151.7	160.2	165.5	165.6	166.2
47.5°	123.7	127.9	130.8	131.1	132.9	138.0	145.7	153.3	158.2	158.1	159.0
48°	119.5	123.4	126.1	126.4	127.7	132.6	140.1	146.9	151.3	150.9	151.8
48.5°	115.5	119.0	121.6	121.9	123.0	127.5	134.7	140.8	144.5	144.1	145.0
49°	111.9	114.9	117.6	117.6	118.8	122.9	129.4	134.9	137.9	137.5	138.4
49.5°	108.4	111.0	113.5	113.5	114.9	118.4	124.6	129.4	131.7	131.4	132.3
50°	105.2	107.3	109.6	109.6	111.4	114.3	119.9	124.1	125.7	125.6	126.3
50.5°	102.2	103.8	105.7	106.0	107.9	110.5	115.5	119.1	120.3	120.3	120.7
51°	99.3	100.6	102.3	102.5	104.6	107.0	111.3	114.4	115.2	115.3	115.5
51.5°	96.4	97.4	98.9	99.3	101.6	103.7	107.3	110.0	110.5	110.7	110.5
52°	93.7	94.4	95.7	96.1	98.8	100.5	103.6	105.9	106.1	106.3	105.9
52.5°	90.9	91.4	92.6	93.2	95.9	97.5	100.0	101.9	102.1	102.2	101.6
53°	88.3	88.8	89.6	90.2	93.1	94.6	96.7	98.2	98.5	98.4	97.6
53.5°	85.9	86.3	86.9	87.5	90.3	91.7	93.5	94.9	95.0	94.9	94.1
54°	83.7	84.0	84.4	85.0	87.8	89.2	90.4	91.6	91.7	91.5	90.8
54.5°	81.8	82.0	82.3	82.9	85.3	86.5	87.6	88.6	88.8	88.4	87.8
55°	79.9	80.1	80.4	80.9	83.3	84.5	85.4	85.9	86.1	85.8	85.6
55.5°	78.0	78.2	78.5	79.0	81.3	82.4	83.3	83.8	84.0	83.7	83.4
56°	76.1	76.3	76.6	77.0	79.3	80.4	81.2	81.7	81.8	81.5	81.2
56.5°	74.1	74.4	74.7	75.2	77.3	78.3	79.0	79.6	79.6	79.4	79.1
57°	72.2	72.5	72.8	73.2	75.5	76.3	76.9	77.4	77.4	77.2	76.9
57.5°	70.3	70.6	70.8	71.3	73.5	74.3	74.9	75.4	75.6	75.2	74.8
58°	68.4	68.7	68.9	69.4	71.6	72.4	72.9	73.4	73.5	73.2	72.7
58.5°	66.5	66.8	67.1	67.6	69.7	70.4	70.9	71.5	71.4	71.2	70.7
59°	64.7	65.0	65.3	65.8	67.8	68.5	69.0	69.5	69.3	69.1	68.7
59.5°	62.8	63.2	63.5	63.9	66.0	66.6	67.0	67.5	67.3	67.1	66.7
60°	60.9	61.5	61.7	62.2	64.2	64.9	65.2	65.6	65.2	65.2	64.8
60.5°	59.1	59.7	60.0	60.4	62.5	63.0	63.4	63.7	63.2	63.2	62.9
61°	57.3	57.9	58.3	58.7	60.7	61.3	61.6	61.9	61.3	61.3	61.1
61.5°	55.6	56.2	56.7	57.1	59.0	59.6	59.8	60.1	59.4	59.4	59.3
62°	53.8	54.5	55.1	55.4	57.3	57.9	58.1	58.4	57.5	57.6	57.6
62.5°	52.1	52.9	53.4	53.8	55.6	56.2	56.5	56.6	55.7	55.8	55.9
63°	50.4	51.2	51.9	52.3	54.0	54.6	54.8	54.9	53.9	54.0	54.2
63.5°	48.8	49.6	50.3	50.7	52.4	53.0	53.2	53.1	52.1	52.3	52.6
64°	47.2	48.0	48.9	49.2	50.9	51.4	51.6	51.4	50.4	50.6	51.0
64.5°	45.6	46.5	47.4	47.8	49.4	49.9	50.1	49.8	48.7	49.0	49.5
65°	44.0	44.9	46.0	46.3	47.9	48.4	48.6	48.2	47.1	47.4	47.9
65.5°	42.5	43.4	44.5	44.9	46.5	46.9	47.2	46.6	45.4	45.8	46.4
66°	41.0	42.0	43.1	43.5	45.0	45.5	45.7	45.1	43.9	44.3	45.0



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	36.7	37.7	39.0	39.5	40.9	41.3	41.5	40.6	39.4	39.8	40.7
68°	35.4	36.3	37.7	38.2	39.6	40.0	40.2	39.2	38.0	38.4	39.3
68.5°	34.1	35.1	36.5	36.9	38.3	38.7	38.8	37.8	36.5	37.0	38.0
69°	32.8	33.8	35.2	35.7	37.0	37.4	37.5	36.4	35.2	35.7	36.7
69.5°	31.5	32.5	34.0	34.5	35.8	36.2	36.2	35.1	33.8	34.4	35.4
70°	30.2	31.2	32.8	33.4	34.5	34.9	35.0	33.8	32.5	33.1	34.1
70.5°	28.9	29.9	31.6	32.2	33.4	33.7	33.8	32.5	31.2	31.8	32.9
71°	27.7	28.7	30.4	31.0	32.2	32.5	32.5	31.2	30.0	30.5	31.7
71.5°	26.5	27.5	29.2	29.9	31.0	31.4	31.3	29.9	28.7	29.3	30.5
72°	25.2	26.3	28.0	28.7	29.8	30.2	30.1	28.7	27.5	28.1	29.3
72.5°	24.0	25.1	26.9	27.6	28.7	29.1	29.0	27.5	26.3	26.9	28.2
73°	22.8	23.9	25.7	26.5	27.6	27.9	27.8	26.3	25.1	25.7	27.0
73.5°	21.7	22.7	24.6	25.4	26.5	26.8	26.6	25.1	23.9	24.5	25.9
74°	20.6	21.6	23.5	24.4	25.4	25.8	25.6	24.0	22.8	23.4	24.8
74.5°	19.5	20.5	22.4	23.3	24.3	24.7	24.4	22.9	21.7	22.3	23.7
75°	18.4	19.4	21.3	22.3	23.3	23.6	23.4	21.7	20.6	21.2	22.6
75.5°	17.3	18.3	20.3	21.2	22.3	22.6	22.3	20.7	19.5	20.1	21.6
76°	16.3	17.3	19.2	20.3	21.2	21.6	21.2	19.5	18.4	19.0	20.6
76.5°	15.3	16.2	18.2	19.2	20.2	20.6	20.2	18.5	17.4	18.0	19.5
77°	14.3	15.2	17.2	18.3	19.2	19.6	19.2	17.4	16.3	16.9	18.5
77.5°	13.3	14.2	16.2	17.3	18.3	18.7	18.2	16.4	15.3	15.9	17.5
78°	12.3	13.2	15.3	16.4	17.3	17.7	17.2	15.4	14.3	15.0	16.5
78.5°	11.3	12.2	14.3	15.4	16.4	16.7	16.2	14.4	13.4	14.0	15.6
79°	10.4	11.2	13.4	14.5	15.4	15.8	15.3	13.4	12.4	13.0	14.7
79.5°	9.5	10.3	12.4	13.6	14.5	14.9	14.4	12.5	11.5	12.0	13.7
80°	8.6	9.4	11.5	12.7	13.6	14.0	13.4	11.5	10.6	11.1	12.8
80.5°	7.7	8.5	10.7	11.9	12.8	13.1	12.6	10.6	9.7	10.2	11.9
81°	6.8	7.6	9.8	11.0	11.9	12.2	11.7	9.7	8.8	9.4	11.1
81.5°	6.0	6.7	9.0	10.1	11.0	11.4	10.8	8.9	8.0	8.5	10.2
82°	5.1	5.9	8.2	9.3	10.2	10.5	10.0	8.1	7.1	7.6	9.4
82.5°	4.3	5.1	7.4	8.5	9.3	9.7	9.2	7.3	6.3	6.8	8.7
83°	3.5	4.4	6.7	7.7	8.6	8.9	8.5	6.5	5.4	5.9	8.0
83.5°	3.0	3.7	5.9	6.9	7.8	8.1	7.7	5.6	4.6	5.2	7.2
84°	2.5	3.3	5.3	6.2	7.0	7.3	6.9	4.9	3.8	4.5	6.5
84.5°	2.0	2.9	4.6	5.4	6.2	6.5	6.2	4.3	3.1	3.8	5.8
85°	1.5	2.4	3.9	4.6	5.4	5.7	5.4	3.7	2.4	3.3	5.1
85.5°	1.2	2.0	3.3	3.9	4.6	5.0	4.8	3.2	2.0	2.9	4.4
86°	0.9	1.6	2.7	3.2	3.9	4.3	4.1	2.8	1.7	2.5	3.8
86.5°	0.7	1.2	2.1	2.5	3.2	3.5	3.5	2.3	1.4	2.1	3.2
87°	0.4	0.8	1.4	1.8	2.5	2.8	2.8	1.9	1.1	1.7	2.6
87.5°	0.2	0.5	0.8	1.1	1.8	2.2	2.2	1.5	0.9	1.3	2.0
88°	0.1	0.2	0.3	0.5	1.2	1.5	1.6	1.1	0.6	1.0	1.4
88.5°	0.0	0.1	0.1	0.2	0.6	0.8	1.0	0.7	0.4	0.6	0.8



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	729.1	729.1	729.1	729.1	729.1	729.1
0.5°	728.9	729.4	729.0	728.6	728.7	728.8
1°	729.0	729.3	728.7	728.2	728.2	728.3
1.5°	728.8	729.0	728.3	727.7	727.6	727.6
2°	728.6	728.6	727.8	727.0	726.8	726.8
2.5°	728.2	728.0	727.2	726.3	725.9	725.8
3°	727.7	727.3	726.3	725.4	724.8	724.6
3.5°	727.1	726.5	725.4	724.3	723.6	723.3
4°	726.3	725.6	724.2	723.2	722.3	721.9
4.5°	725.4	724.3	723.0	721.7	720.8	720.4
5°	724.4	723.0	721.5	720.2	719.1	718.5
5.5°	723.1	721.6	720.0	718.5	717.3	716.6
6°	721.7	720.1	718.2	716.7	715.4	714.6
6.5°	720.3	718.5	716.4	714.8	713.2	712.3
7°	718.7	716.6	714.4	712.6	710.9	710.0
7.5°	717.0	714.5	712.3	710.3	708.5	707.4
8°	715.0	712.5	710.0	707.8	705.9	704.8
8.5°	713.0	710.2	707.6	705.3	703.2	701.9
9°	710.8	707.7	705.0	702.4	700.1	698.9
9.5°	708.5	705.2	702.3	699.6	697.1	695.6
10°	706.0	702.4	699.4	696.6	693.9	692.3
10.5°	703.4	699.6	696.3	693.4	690.6	688.8
11°	700.5	696.6	693.1	690.0	687.0	685.1
11.5°	697.6	693.5	689.8	686.5	683.1	681.2
12°	694.5	690.1	686.3	682.6	679.3	677.2
12.5°	691.3	686.6	682.6	678.7	675.2	673.0
13°	687.9	683.0	678.9	674.8	671.1	668.7
13.5°	684.4	679.4	674.9	670.7	666.6	664.0
14°	680.7	675.5	670.9	666.4	662.0	659.6
14.5°	676.9	671.5	666.7	662.0	657.4	654.8
15°	672.9	667.3	662.3	657.3	652.6	649.9
15.5°	668.8	662.9	657.8	652.7	647.8	644.7
16°	664.6	658.6	653.2	647.9	642.8	639.5
16.5°	660.3	654.1	648.5	643.0	637.6	634.3
17°	655.8	649.3	643.6	638.1	632.5	629.1
17.5°	651.3	644.7	638.7	632.9	627.2	623.8
18°	646.7	639.9	633.9	627.9	622.0	618.2
18.5°	641.9	635.0	629.0	622.9	616.9	613.0
19°	637.0	630.5	624.2	618.1	612.1	608.0
19.5°	632.5	625.7	619.5	613.5	607.4	603.2
20°	628.1	621.1	615.1	608.8	602.7	598.5
20.5°	623.7	616.7	610.3	604.1	597.8	593.5
21°	619.2	612.0	605.7	599.3	592.9	588.5



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	605.4	597.8	590.8	582.7	575.3	570.5
23°	600.3	592.9	585.6	576.6	568.6	563.1
23.5°	594.9	587.6	579.9	569.9	561.1	555.2
24°	589.0	582.4	573.8	562.9	553.1	546.3
24.5°	582.9	576.3	567.4	555.4	544.6	536.7
25°	576.4	570.2	560.5	547.8	535.8	526.4
25.5°	569.6	563.5	553.3	540.0	526.5	516.3
26°	562.5	556.6	545.7	532.2	516.9	506.1
26.5°	554.8	548.5	537.5	523.9	507.0	495.9
27°	547.3	540.3	529.0	515.3	497.3	485.8
27.5°	539.7	531.0	520.2	506.5	487.5	476.2
28°	531.8	521.2	511.0	497.2	478.0	466.7
28.5°	523.7	510.8	501.3	487.5	468.6	457.2
29°	515.3	500.3	491.2	477.4	459.2	447.4
29.5°	506.9	489.2	480.7	467.1	450.0	437.9
30°	497.8	478.1	469.8	456.5	440.8	428.1
30.5°	488.4	467.3	458.3	446.0	431.3	418.2
31°	478.6	456.6	446.4	435.4	421.4	407.9
31.5°	468.5	446.4	435.0	424.4	411.6	397.7
32°	458.1	436.4	423.7	413.6	401.7	386.9
32.5°	447.4	426.6	412.6	402.7	391.5	376.5
33°	436.5	416.9	402.0	391.9	380.5	366.3
33.5°	425.5	407.2	391.2	380.9	369.9	356.2
34°	414.8	397.4	380.9	370.1	358.8	346.4
34.5°	404.2	386.8	370.4	359.0	347.9	336.6
35°	393.8	376.3	359.9	348.1	336.8	327.0
35.5°	383.6	365.7	349.3	337.4	326.5	317.6
36°	373.4	355.0	338.6	326.9	316.0	308.3
36.5°	363.2	344.5	328.0	316.4	305.9	298.8
37°	353.1	333.7	317.4	305.6	295.9	289.2
37.5°	342.6	323.4	307.0	295.2	286.4	279.6
38°	332.2	313.4	296.7	284.8	276.3	269.9
38.5°	321.9	303.7	286.6	274.6	266.6	260.3
39°	311.7	294.1	277.1	264.4	256.7	251.1
39.5°	301.1	284.4	267.5	254.5	246.7	241.7
40°	290.8	274.7	258.3	244.7	236.9	232.6
40.5°	280.4	265.1	249.3	235.2	227.3	223.8
41°	270.7	255.3	240.3	225.9	217.8	215.3
41.5°	260.5	245.9	231.6	217.2	208.7	206.7
42°	250.8	236.3	222.8	208.5	200.1	198.2
42.5°	241.0	227.0	214.8	200.5	191.9	190.1
43°	231.8	217.8	206.2	192.5	183.9	182.0
43.5°	222.1	209.1	198.0	184.7	176.2	174.0



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	195.4	184.2	174.3	163.3	155.1	151.7
45.5°	186.6	176.4	167.0	156.8	148.8	145.3
46°	178.4	168.9	160.0	150.7	142.7	139.3
46.5°	170.2	161.4	153.1	144.7	137.0	133.6
47°	162.4	154.3	146.5	138.8	131.6	128.4
47.5°	155.0	147.3	140.4	133.4	126.6	123.7
48°	147.8	140.7	134.3	128.4	122.0	119.5
48.5°	141.3	134.2	128.7	123.6	117.6	115.5
49°	134.7	128.2	123.5	119.0	113.6	111.9
49.5°	128.8	122.5	118.5	114.6	109.9	108.4
50°	123.2	117.1	113.7	110.4	106.4	105.2
50.5°	117.9	112.0	109.2	106.5	103.1	102.2
51°	112.9	107.5	105.1	102.8	99.9	99.3
51.5°	108.4	103.3	101.2	99.4	96.9	96.4
52°	104.1	99.4	97.7	96.0	94.1	93.7
52.5°	100.1	95.9	94.3	92.9	91.2	90.9
53°	96.4	92.6	91.0	89.8	88.6	88.3
53.5°	92.9	89.5	88.0	87.1	86.1	85.9
54°	89.6	86.7	85.4	84.6	83.9	83.7
54.5°	86.8	84.3	83.2	82.5	81.9	81.8
55°	84.7	82.1	81.2	80.6	80.0	79.9
55.5°	82.5	80.2	79.2	78.6	78.0	78.0
56°	80.4	78.2	77.2	76.7	76.1	76.1
56.5°	78.3	76.2	75.3	74.7	74.1	74.1
57°	76.1	74.1	73.3	72.7	72.2	72.2
57.5°	74.1	72.0	71.2	70.7	70.3	70.3
58°	72.1	70.1	69.3	68.8	68.4	68.4
58.5°	70.1	68.1	67.3	66.9	66.5	66.5
59°	68.0	66.2	65.4	65.0	64.7	64.7
59.5°	66.1	64.2	63.5	63.2	62.9	62.8
60°	64.2	62.4	61.7	61.4	61.1	60.9
60.5°	62.3	60.5	59.9	59.7	59.4	59.1
61°	60.5	58.8	58.2	57.9	57.7	57.3
61.5°	58.7	57.1	56.5	56.2	55.9	55.6
62°	57.0	55.4	54.9	54.6	54.3	53.8
62.5°	55.3	53.7	53.1	53.0	52.6	52.1
63°	53.6	52.1	51.6	51.4	51.0	50.4
63.5°	52.1	50.5	50.0	49.9	49.4	48.8
64°	50.5	49.0	48.5	48.4	47.8	47.2
64.5°	48.9	47.5	47.0	46.9	46.3	45.6
65°	47.4	46.0	45.6	45.5	44.8	44.0
65.5°	45.9	44.6	44.2	44.0	43.3	42.5
66°	44.5	43.2	42.8	42.7	41.8	41.0



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	40.4	39.1	38.8	38.6	37.5	36.7
68°	39.0	37.8	37.5	37.4	36.0	35.4
68.5°	37.8	36.6	36.1	36.0	34.8	34.1
69°	36.5	35.4	35.0	34.8	33.6	32.8
69.5°	35.2	34.2	33.8	33.6	32.3	31.5
70°	34.0	33.0	32.7	32.5	31.1	30.2
70.5°	32.8	31.9	31.5	31.3	29.8	28.9
71°	31.7	30.7	30.3	30.1	28.6	27.7
71.5°	30.5	29.5	29.2	28.9	27.4	26.5
72°	29.4	28.4	28.1	27.8	26.2	25.2
72.5°	28.2	27.3	27.0	26.6	25.0	24.0
73°	27.1	26.2	25.9	25.5	23.9	22.8
73.5°	26.0	25.1	24.8	24.4	22.7	21.7
74°	25.0	24.1	23.8	23.3	21.6	20.6
74.5°	23.9	23.0	22.7	22.3	20.5	19.5
75°	22.9	22.0	21.7	21.2	19.4	18.4
75.5°	21.9	21.0	20.7	20.2	18.4	17.3
76°	20.9	20.0	19.7	19.1	17.3	16.3
76.5°	19.9	19.0	18.7	18.1	16.2	15.3
77°	18.9	18.1	17.8	17.1	15.2	14.3
77.5°	18.0	17.1	16.8	16.2	14.2	13.3
78°	17.0	16.2	15.9	15.2	13.2	12.3
78.5°	16.1	15.3	15.0	14.3	12.3	11.3
79°	15.2	14.4	14.1	13.3	11.3	10.4
79.5°	14.3	13.5	13.2	12.4	10.4	9.5
80°	13.4	12.6	12.3	11.6	9.5	8.6
80.5°	12.5	11.8	11.5	10.7	8.6	7.7
81°	11.7	10.9	10.6	9.8	7.7	6.8
81.5°	10.8	10.1	9.8	9.0	6.9	6.0
82°	10.0	9.3	9.0	8.2	6.1	5.1
82.5°	9.2	8.5	8.2	7.5	5.3	4.3
83°	8.5	7.7	7.4	6.7	4.6	3.5
83.5°	7.7	6.9	6.6	6.0	4.0	3.0
84°	6.9	6.1	5.8	5.3	3.5	2.5
84.5°	6.1	5.4	5.1	4.6	3.1	2.0
85°	5.4	4.6	4.4	3.9	2.6	1.5
85.5°	4.6	3.9	3.6	3.3	2.1	1.2
86°	3.9	3.3	3.0	2.6	1.7	0.9
86.5°	3.2	2.6	2.3	2.0	1.3	0.7
87°	2.6	1.9	1.6	1.3	0.9	0.4
87.5°	1.9	1.2	0.9	0.7	0.5	0.2
88°	1.2	0.6	0.4	0.3	0.2	0.1
88.5°	0.6	0.2	0.1	0.1	0.1	0.0



TEST NUMBER: P775685

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.1	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

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°	583.3	580.6	580.8	583.2	591.9	598.3	604.7	611.1	615.5	617.9	617.8
22°	577.3	574.3	574.5	577.2	587.0	593.6	600.2	606.4	611.0	613.5	613.3



44°	166.2	167.5	169.1	171.1	180.2	185.8	193.7	206.0	213.6	217.5	216.0
44.5°	158.9	161.1	162.7	164.7	172.5	178.1	185.8	198.0	205.2	208.2	207.1



66.5°	39.6	40.5	41.8	42.1	43.6	44.1	44.2	43.5	42.3	42.7	43.5
67°	38.1	39.1	40.4	40.8	42.3	42.7	42.9	42.1	40.9	41.3	42.1



89°	0.0	0.1	0.0	0.0	0.2	0.3	0.4	0.4	0.2	0.3	0.3
89.5°	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1

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°	614.6	607.2	600.9	594.2	587.5	583.3
22°	610.2	602.7	596.0	588.6	581.7	577.3



44°	213.1	200.4	190.0	177.3	168.8	166.2
44.5°	204.0	192.2	182.2	170.1	161.8	158.9

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

Scaled Data Report



66.5°	43.1	41.8	41.4	41.3	40.3	39.6
67°	41.7	40.4	40.1	40.0	38.9	38.1

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

Scaled Data Report



89°	0.2	0.0	0.0	0.0	0.1	0.0
89.5°	0.0	0.0	0.0	0.0	0.1	0.0

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

Scaled Data Report



(END OF REPORT)