

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: P775830

Luminaire Tested: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775830  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B045-HCD81TRMB)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD81TRMB-1000lm-2700K  
Description: 8 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1058.0 lumens  
Efficiency: N/A  
Efficacy: 105.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.37  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

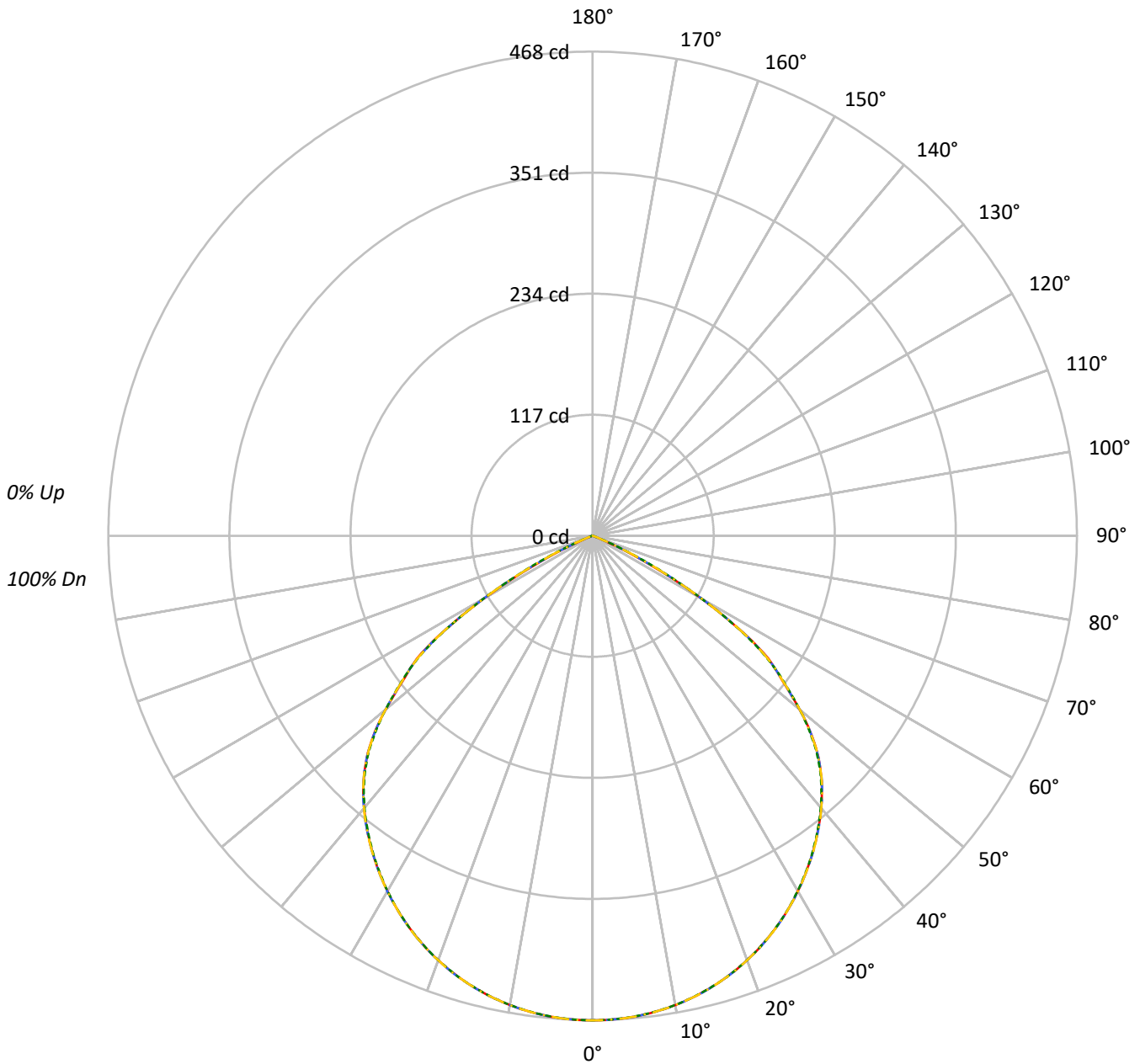
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78								
3	95	86	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68								
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52								
6	75	63	55	50	74	62	55	49	61	54	49	59	53	49	58	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30								

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

	0°	90°	180°	270°
0°	14300	14300	14300	14300
5°	14297	14291	14297	14291
10°	14279	14276	14279	14276
15°	14242	14239	14242	14239
20°	14185	14182	14185	14182
25°	14098	14091	14098	14091
30°	13985	13974	13985	13974
35°	13853	13835	13853	13835
40°	13694	13666	13694	13666
45°	13385	13337	13385	13337
50°	12397	12397	12397	12397
55°	11034	10912	11034	10912
60°	7364	7474	7364	7474
65°	2608	3121	2608	3121
70°	27	295	27	295
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13385 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.3	4.2
10°-20°	127.2	12.0
20°-30°	192.8	18.2
30°-40°	232.5	22.0
40°-50°	237.0	22.4
50°-60°	178.1	16.8
60°-70°	46.0	4.3
70°-80°	0.1	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°	364.4	34.4
0°-40°	596.8	56.4
0°-60°	1011.9	95.6
0°-90°	1058.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1058.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	468	468	468	468	468	
5°	466	466	466	466	466	44
15°	451	450	451	450	451	127
25°	418	418	418	418	418	193
35°	372	371	372	371	372	232
45°	310	309	310	309	310	237
55°	207	205	207	205	207	178
65°	36	43	36	43	36	43
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
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°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
0.5°	468.4	468.4	468.4	468.4	468.3	468.4	468.4	468.4	468.4	468.4	468.4
1°	468.4	468.4	468.4	468.3	468.2	468.3	468.4	468.4	468.4	468.4	468.4
1.5°	468.3	468.3	468.3	468.3	468.2	468.3	468.3	468.3	468.3	468.3	468.3
2°	468.2	468.2	468.2	468.1	468.0	468.1	468.2	468.2	468.2	468.2	468.2
2.5°	467.9	468.0	468.0	468.0	467.8	468.0	468.0	468.0	467.9	468.0	468.0
3°	467.7	467.8	467.8	467.8	467.6	467.8	467.8	467.8	467.7	467.8	467.8
3.5°	467.5	467.5	467.5	467.5	467.4	467.5	467.5	467.5	467.5	467.5	467.5
4°	467.2	467.2	467.2	467.2	467.0	467.2	467.2	467.2	467.2	467.2	467.2
4.5°	466.9	466.9	466.9	466.9	466.7	466.9	466.9	466.9	466.9	466.9	466.9
5°	466.5	466.5	466.5	466.5	466.3	466.5	466.5	466.5	466.5	466.5	466.5
5.5°	466.1	466.1	466.1	466.1	465.9	466.1	466.1	466.1	466.1	466.1	466.1
6°	465.6	465.7	465.6	465.6	465.5	465.6	465.6	465.7	465.6	465.7	465.6
6.5°	465.1	465.2	465.2	465.1	465.0	465.1	465.2	465.2	465.1	465.2	465.2
7°	464.6	464.6	464.6	464.6	464.5	464.6	464.6	464.6	464.6	464.6	464.6
7.5°	464.0	464.0	464.0	464.1	463.9	464.1	464.0	464.0	464.0	464.0	464.0
8°	463.4	463.4	463.4	463.4	463.3	463.4	463.4	463.4	463.4	463.4	463.4
8.5°	462.8	462.8	462.8	462.8	462.6	462.8	462.8	462.8	462.8	462.8	462.8
9°	462.1	462.1	462.1	462.1	462.0	462.1	462.1	462.1	462.1	462.1	462.1
9.5°	461.3	461.4	461.4	461.4	461.2	461.4	461.4	461.4	461.3	461.4	461.4
10°	460.6	460.6	460.6	460.6	460.5	460.6	460.6	460.6	460.6	460.6	460.6
10.5°	459.8	459.8	459.8	459.8	459.7	459.8	459.8	459.8	459.8	459.8	459.8
11°	458.9	458.9	458.9	459.0	458.8	459.0	458.9	458.9	458.9	458.9	458.9
11.5°	458.0	458.0	458.0	458.1	457.9	458.1	458.0	458.0	458.0	458.0	458.0
12°	457.1	457.1	457.1	457.1	457.0	457.1	457.1	457.1	457.1	457.1	457.1
12.5°	456.1	456.1	456.1	456.2	456.0	456.2	456.1	456.1	456.1	456.1	456.1
13°	455.1	455.1	455.1	455.1	455.0	455.1	455.1	455.1	455.1	455.1	455.1
13.5°	454.0	454.1	454.1	454.1	453.9	454.1	454.1	454.1	454.0	454.1	454.1
14°	452.9	453.0	453.0	453.0	452.8	453.0	453.0	453.0	452.9	453.0	453.0
14.5°	451.8	451.8	451.8	451.8	451.7	451.8	451.8	451.8	451.8	451.8	451.8
15°	450.6	450.6	450.6	450.7	450.5	450.7	450.6	450.6	450.6	450.6	450.6
15.5°	449.4	449.4	449.4	449.4	449.3	449.4	449.4	449.4	449.4	449.4	449.4
16°	448.1	448.2	448.2	448.2	448.0	448.2	448.2	448.2	448.1	448.2	448.2
16.5°	446.8	446.8	446.9	446.9	446.8	446.9	446.9	446.8	446.8	446.8	446.9
17°	445.5	445.5	445.6	445.5	445.4	445.5	445.6	445.5	445.5	445.5	445.6
17.5°	444.1	444.1	444.2	444.2	444.1	444.2	444.2	444.1	444.1	444.1	444.2
18°	442.7	442.7	442.7	442.7	442.6	442.7	442.7	442.7	442.7	442.7	442.7
18.5°	441.2	441.2	441.3	441.3	441.1	441.3	441.3	441.2	441.2	441.2	441.3
19°	439.7	439.7	439.8	439.8	439.6	439.8	439.8	439.7	439.7	439.7	439.8
19.5°	438.2	438.2	438.2	438.2	438.1	438.2	438.2	438.2	438.2	438.2	438.2
20°	436.6	436.6	436.6	436.6	436.5	436.6	436.6	436.6	436.6	436.6	436.6
20.5°	434.9	435.0	435.0	435.0	434.8	435.0	435.0	435.0	434.9	435.0	435.0
21°	433.3	433.3	433.3	433.3	433.2	433.3	433.3	433.3	433.3	433.3	433.3



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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°	428.0	428.1	428.1	428.1	427.9	428.1	428.1	428.1	428.0	428.1	428.1
23°	426.2	426.2	426.2	426.2	426.1	426.2	426.2	426.2	426.2	426.2	426.2
23.5°	424.3	424.4	424.4	424.4	424.2	424.4	424.4	424.4	424.3	424.4	424.4
24°	422.4	422.4	422.5	422.4	422.3	422.4	422.5	422.4	422.4	422.4	422.5
24.5°	420.4	420.5	420.6	420.5	420.3	420.5	420.6	420.5	420.4	420.5	420.6
25°	418.5	418.5	418.6	418.5	418.3	418.5	418.6	418.5	418.5	418.5	418.6
25.5°	416.4	416.5	416.6	416.5	416.3	416.5	416.6	416.5	416.4	416.5	416.6
26°	414.4	414.4	414.5	414.4	414.2	414.4	414.5	414.4	414.4	414.4	414.5
26.5°	412.3	412.4	412.4	412.3	412.1	412.3	412.4	412.4	412.3	412.4	412.4
27°	410.2	410.2	410.3	410.2	410.0	410.2	410.3	410.2	410.2	410.2	410.3
27.5°	408.0	408.1	408.1	408.0	407.8	408.0	408.1	408.1	408.0	408.1	408.1
28°	405.8	405.9	405.9	405.8	405.6	405.8	405.9	405.9	405.8	405.9	405.9
28.5°	403.6	403.6	403.7	403.6	403.4	403.6	403.7	403.6	403.6	403.6	403.7
29°	401.3	401.4	401.4	401.3	401.0	401.3	401.4	401.4	401.3	401.4	401.4
29.5°	399.0	399.1	399.1	399.0	398.7	399.0	399.1	399.1	399.0	399.1	399.1
30°	396.7	396.8	396.8	396.6	396.4	396.6	396.8	396.8	396.7	396.8	396.8
30.5°	394.4	394.4	394.4	394.3	394.0	394.3	394.4	394.4	394.4	394.4	394.4
31°	391.9	392.0	392.1	391.8	391.6	391.8	392.1	392.0	391.9	392.0	392.1
31.5°	389.5	389.6	389.6	389.4	389.1	389.4	389.6	389.6	389.5	389.6	389.6
32°	387.1	387.2	387.2	387.0	386.6	387.0	387.2	387.2	387.1	387.2	387.2
32.5°	384.6	384.7	384.7	384.4	384.1	384.4	384.7	384.7	384.6	384.7	384.7
33°	382.0	382.2	382.2	382.0	381.6	382.0	382.2	382.2	382.0	382.2	382.2
33.5°	379.5	379.6	379.7	379.4	379.0	379.4	379.7	379.6	379.5	379.6	379.7
34°	376.9	377.0	377.1	376.8	376.5	376.8	377.1	377.0	376.9	377.0	377.1
34.5°	374.3	374.4	374.5	374.2	373.9	374.2	374.5	374.4	374.3	374.4	374.5
35°	371.7	371.8	371.9	371.6	371.2	371.6	371.9	371.8	371.7	371.8	371.9
35.5°	369.0	369.2	369.2	368.9	368.5	368.9	369.2	369.2	369.0	369.2	369.2
36°	366.4	366.5	366.6	366.2	365.8	366.2	366.6	366.5	366.4	366.5	366.6
36.5°	363.6	363.7	363.8	363.4	363.0	363.4	363.8	363.7	363.6	363.7	363.8
37°	360.8	360.9	361.0	360.6	360.3	360.6	361.0	360.9	360.8	360.9	361.0
37.5°	358.0	358.2	358.3	357.8	357.4	357.8	358.3	358.2	358.0	358.2	358.3
38°	355.2	355.3	355.5	355.0	354.7	355.0	355.5	355.3	355.2	355.3	355.5
38.5°	352.3	352.5	352.6	352.2	351.8	352.2	352.6	352.5	352.3	352.5	352.6
39°	349.5	349.7	349.8	349.3	348.9	349.3	349.8	349.7	349.5	349.7	349.8
39.5°	346.6	346.7	346.8	346.4	345.9	346.4	346.8	346.7	346.6	346.7	346.8
40°	343.6	343.8	343.8	343.4	342.9	343.4	343.8	343.8	343.6	343.8	343.8
40.5°	340.6	340.7	340.8	340.3	339.9	340.3	340.8	340.7	340.6	340.7	340.8
41°	337.5	337.7	337.8	337.3	336.8	337.3	337.8	337.7	337.5	337.7	337.8
41.5°	334.4	334.5	334.6	334.1	333.7	334.1	334.6	334.5	334.4	334.5	334.6
42°	331.2	331.3	331.4	330.9	330.4	330.9	331.4	331.3	331.2	331.3	331.4
42.5°	327.9	328.1	328.1	327.6	327.1	327.6	328.1	328.1	327.9	328.1	328.1
43°	324.6	324.7	324.7	324.2	323.7	324.2	324.7	324.7	324.6	324.7	324.7
43.5°	321.1	321.2	321.2	320.7	320.2	320.7	321.2	321.2	321.1	321.2	321.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	310.0	310.0	309.9	309.4	308.9	309.4	309.9	310.0	310.0	310.0	309.9
45.5°	306.0	306.0	305.9	305.3	304.8	305.3	305.9	306.0	306.0	306.0	305.9
46°	301.9	301.9	301.7	301.1	300.5	301.1	301.7	301.9	301.9	301.9	301.7
46.5°	297.5	297.5	297.3	296.6	296.2	296.6	297.3	297.5	297.5	297.5	297.3
47°	292.9	292.9	292.6	292.0	291.5	292.0	292.6	292.9	292.9	292.9	292.6
47.5°	288.1	288.1	287.8	287.2	286.7	287.2	287.8	288.1	288.1	288.1	287.8
48°	283.1	283.1	282.9	282.3	281.9	282.3	282.9	283.1	283.1	283.1	282.9
48.5°	277.9	277.9	277.7	277.3	276.9	277.3	277.7	277.9	277.9	277.9	277.7
49°	272.4	272.4	272.3	272.0	271.8	272.0	272.3	272.4	272.4	272.4	272.3
49.5°	266.9	266.8	266.9	266.6	266.5	266.6	266.9	266.8	266.9	266.8	266.9
50°	261.0	261.1	261.3	261.1	261.0	261.1	261.3	261.1	261.0	261.1	261.3
50.5°	254.9	255.3	255.6	255.5	255.5	255.5	255.6	255.3	254.9	255.3	255.6
51°	249.1	249.3	249.6	249.9	250.1	249.9	249.6	249.3	249.1	249.3	249.6
51.5°	243.4	243.5	243.9	244.2	244.5	244.2	243.9	243.5	243.4	243.5	243.9
52°	237.7	237.9	238.3	238.7	239.2	238.7	238.3	237.9	237.7	237.9	238.3
52.5°	232.3	232.5	233.0	233.5	233.9	233.5	233.0	232.5	232.3	232.5	233.0
53°	227.2	227.4	227.9	228.3	228.7	228.3	227.9	227.4	227.2	227.4	227.9
53.5°	222.4	222.6	222.8	223.0	223.3	223.0	222.8	222.6	222.4	222.6	222.8
54°	217.9	217.7	217.7	217.6	217.6	217.6	217.7	217.7	217.9	217.7	217.7
54.5°	212.9	212.7	212.3	211.8	211.4	211.8	212.3	212.7	212.9	212.7	212.3
55°	207.3	206.9	206.3	205.6	205.0	205.6	206.3	206.9	207.3	206.9	206.3
55.5°	200.7	200.2	199.6	199.0	198.4	199.0	199.6	200.2	200.7	200.2	199.6
56°	193.3	193.0	192.4	191.8	191.1	191.8	192.4	193.0	193.3	193.0	192.4
56.5°	185.2	184.9	184.7	184.1	183.6	184.1	184.7	184.9	185.2	184.9	184.7
57°	176.7	176.5	176.4	175.9	175.3	175.9	176.4	176.5	176.7	176.5	176.4
57.5°	167.7	167.7	167.7	167.2	166.8	167.2	167.7	167.7	167.7	167.7	167.7
58°	158.6	158.7	158.8	158.5	158.1	158.5	158.8	158.7	158.6	158.7	158.8
58.5°	149.3	149.3	149.6	149.5	149.1	149.5	149.6	149.3	149.3	149.3	149.6
59°	139.8	140.0	140.3	140.4	140.3	140.4	140.3	140.0	139.8	140.0	140.3
59.5°	130.3	130.5	131.0	131.4	131.4	131.4	131.0	130.5	130.3	130.5	131.0
60°	120.6	121.0	121.6	122.5	122.4	122.5	121.6	121.0	120.6	121.0	121.6
60.5°	111.1	111.6	112.4	113.3	113.4	113.3	112.4	111.6	111.1	111.6	112.4
61°	101.9	102.5	103.3	104.3	104.6	104.3	103.3	102.5	101.9	102.5	103.3
61.5°	92.9	93.4	94.5	95.4	96.0	95.4	94.5	93.4	92.9	93.4	94.5
62°	83.9	84.6	85.8	86.9	87.7	86.9	85.8	84.6	83.9	84.6	85.8
62.5°	75.0	75.8	77.4	78.6	79.4	78.6	77.4	75.8	75.0	75.8	77.4
63°	66.5	67.4	69.2	70.5	71.4	70.5	69.2	67.4	66.5	67.4	69.2
63.5°	58.4	59.3	61.2	62.8	64.3	62.8	61.2	59.3	58.4	59.3	61.2
64°	50.6	51.6	53.5	55.6	57.3	55.6	53.5	51.6	50.6	51.6	53.5
64.5°	43.1	44.4	46.4	48.6	50.2	48.6	46.4	44.4	43.1	44.4	46.4
65°	36.1	37.8	39.7	41.8	43.2	41.8	39.7	37.8	36.1	37.8	39.7
65.5°	29.7	31.6	33.3	35.3	36.6	35.3	33.3	31.6	29.7	31.6	33.3
66°	23.8	26.1	27.4	29.4	30.6	29.4	27.4	26.1	23.8	26.1	27.4





TEST NUMBER: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	9.1	12.3	13.7	15.4	16.3	15.4	13.7	12.3	9.1	12.3	13.7
68°	5.3	8.5	10.4	11.6	12.7	11.6	10.4	8.5	5.3	8.5	10.4
68.5°	2.0	5.7	7.5	8.8	10.1	8.8	7.5	5.7	2.0	5.7	7.5
69°	1.0	3.4	4.8	6.1	7.5	6.1	4.8	3.4	1.0	3.4	4.8
69.5°	0.6	1.5	2.7	4.0	5.4	4.0	2.7	1.5	0.6	1.5	2.7
70°	0.3	0.7	1.5	2.3	3.3	2.3	1.5	0.7	0.3	0.7	1.5
70.5°	0.1	0.4	0.9	1.1	1.3	1.1	0.9	0.4	0.1	0.4	0.9
71°	0.1	0.2	0.5	0.6	0.5	0.6	0.5	0.2	0.1	0.2	0.5
71.5°	0.1	0.1	0.3	0.3	0.1	0.3	0.3	0.1	0.1	0.1	0.3
72°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
72.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
73°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	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	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: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

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



TEST NUMBER: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	468.4	468.4	468.4	468.4	468.4	468.4
0.5°	468.4	468.3	468.4	468.4	468.4	468.4
1°	468.3	468.2	468.3	468.4	468.4	468.4
1.5°	468.3	468.2	468.3	468.3	468.3	468.3
2°	468.1	468.0	468.1	468.2	468.2	468.2
2.5°	468.0	467.8	468.0	468.0	468.0	467.9
3°	467.8	467.6	467.8	467.8	467.8	467.7
3.5°	467.5	467.4	467.5	467.5	467.5	467.5
4°	467.2	467.0	467.2	467.2	467.2	467.2
4.5°	466.9	466.7	466.9	466.9	466.9	466.9
5°	466.5	466.3	466.5	466.5	466.5	466.5
5.5°	466.1	465.9	466.1	466.1	466.1	466.1
6°	465.6	465.5	465.6	465.6	465.7	465.6
6.5°	465.1	465.0	465.1	465.2	465.2	465.1
7°	464.6	464.5	464.6	464.6	464.6	464.6
7.5°	464.1	463.9	464.1	464.0	464.0	464.0
8°	463.4	463.3	463.4	463.4	463.4	463.4
8.5°	462.8	462.6	462.8	462.8	462.8	462.8
9°	462.1	462.0	462.1	462.1	462.1	462.1
9.5°	461.4	461.2	461.4	461.4	461.4	461.3
10°	460.6	460.5	460.6	460.6	460.6	460.6
10.5°	459.8	459.7	459.8	459.8	459.8	459.8
11°	459.0	458.8	459.0	458.9	458.9	458.9
11.5°	458.1	457.9	458.1	458.0	458.0	458.0
12°	457.1	457.0	457.1	457.1	457.1	457.1
12.5°	456.2	456.0	456.2	456.1	456.1	456.1
13°	455.1	455.0	455.1	455.1	455.1	455.1
13.5°	454.1	453.9	454.1	454.1	454.1	454.0
14°	453.0	452.8	453.0	453.0	453.0	452.9
14.5°	451.8	451.7	451.8	451.8	451.8	451.8
15°	450.7	450.5	450.7	450.6	450.6	450.6
15.5°	449.4	449.3	449.4	449.4	449.4	449.4
16°	448.2	448.0	448.2	448.2	448.2	448.1
16.5°	446.9	446.8	446.9	446.9	446.8	446.8
17°	445.5	445.4	445.5	445.6	445.5	445.5
17.5°	444.2	444.1	444.2	444.2	444.1	444.1
18°	442.7	442.6	442.7	442.7	442.7	442.7
18.5°	441.3	441.1	441.3	441.3	441.2	441.2
19°	439.8	439.6	439.8	439.8	439.7	439.7
19.5°	438.2	438.1	438.2	438.2	438.2	438.2
20°	436.6	436.5	436.6	436.6	436.6	436.6
20.5°	435.0	434.8	435.0	435.0	435.0	434.9
21°	433.3	433.2	433.3	433.3	433.3	433.3

TEST NUMBER: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	428.1	427.9	428.1	428.1	428.1	428.0
23°	426.2	426.1	426.2	426.2	426.2	426.2
23.5°	424.4	424.2	424.4	424.4	424.4	424.3
24°	422.4	422.3	422.4	422.5	422.4	422.4
24.5°	420.5	420.3	420.5	420.6	420.5	420.4
25°	418.5	418.3	418.5	418.6	418.5	418.5
25.5°	416.5	416.3	416.5	416.6	416.5	416.4
26°	414.4	414.2	414.4	414.5	414.4	414.4
26.5°	412.3	412.1	412.3	412.4	412.4	412.3
27°	410.2	410.0	410.2	410.3	410.2	410.2
27.5°	408.0	407.8	408.0	408.1	408.1	408.0
28°	405.8	405.6	405.8	405.9	405.9	405.8
28.5°	403.6	403.4	403.6	403.7	403.6	403.6
29°	401.3	401.0	401.3	401.4	401.4	401.3
29.5°	399.0	398.7	399.0	399.1	399.1	399.0
30°	396.6	396.4	396.6	396.8	396.8	396.7
30.5°	394.3	394.0	394.3	394.4	394.4	394.4
31°	391.8	391.6	391.8	392.1	392.0	391.9
31.5°	389.4	389.1	389.4	389.6	389.6	389.5
32°	387.0	386.6	387.0	387.2	387.2	387.1
32.5°	384.4	384.1	384.4	384.7	384.7	384.6
33°	382.0	381.6	382.0	382.2	382.2	382.0
33.5°	379.4	379.0	379.4	379.7	379.6	379.5
34°	376.8	376.5	376.8	377.1	377.0	376.9
34.5°	374.2	373.9	374.2	374.5	374.4	374.3
35°	371.6	371.2	371.6	371.9	371.8	371.7
35.5°	368.9	368.5	368.9	369.2	369.2	369.0
36°	366.2	365.8	366.2	366.6	366.5	366.4
36.5°	363.4	363.0	363.4	363.8	363.7	363.6
37°	360.6	360.3	360.6	361.0	360.9	360.8
37.5°	357.8	357.4	357.8	358.3	358.2	358.0
38°	355.0	354.7	355.0	355.5	355.3	355.2
38.5°	352.2	351.8	352.2	352.6	352.5	352.3
39°	349.3	348.9	349.3	349.8	349.7	349.5
39.5°	346.4	345.9	346.4	346.8	346.7	346.6
40°	343.4	342.9	343.4	343.8	343.8	343.6
40.5°	340.3	339.9	340.3	340.8	340.7	340.6
41°	337.3	336.8	337.3	337.8	337.7	337.5
41.5°	334.1	333.7	334.1	334.6	334.5	334.4
42°	330.9	330.4	330.9	331.4	331.3	331.2
42.5°	327.6	327.1	327.6	328.1	328.1	327.9
43°	324.2	323.7	324.2	324.7	324.7	324.6
43.5°	320.7	320.2	320.7	321.2	321.2	321.1

TEST NUMBER: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	309.4	308.9	309.4	309.9	310.0	310.0
45.5°	305.3	304.8	305.3	305.9	306.0	306.0
46°	301.1	300.5	301.1	301.7	301.9	301.9
46.5°	296.6	296.2	296.6	297.3	297.5	297.5
47°	292.0	291.5	292.0	292.6	292.9	292.9
47.5°	287.2	286.7	287.2	287.8	288.1	288.1
48°	282.3	281.9	282.3	282.9	283.1	283.1
48.5°	277.3	276.9	277.3	277.7	277.9	277.9
49°	272.0	271.8	272.0	272.3	272.4	272.4
49.5°	266.6	266.5	266.6	266.9	266.8	266.9
50°	261.1	261.0	261.1	261.3	261.1	261.0
50.5°	255.5	255.5	255.5	255.6	255.3	254.9
51°	249.9	250.1	249.9	249.6	249.3	249.1
51.5°	244.2	244.5	244.2	243.9	243.5	243.4
52°	238.7	239.2	238.7	238.3	237.9	237.7
52.5°	233.5	233.9	233.5	233.0	232.5	232.3
53°	228.3	228.7	228.3	227.9	227.4	227.2
53.5°	223.0	223.3	223.0	222.8	222.6	222.4
54°	217.6	217.6	217.6	217.7	217.7	217.9
54.5°	211.8	211.4	211.8	212.3	212.7	212.9
55°	205.6	205.0	205.6	206.3	206.9	207.3
55.5°	199.0	198.4	199.0	199.6	200.2	200.7
56°	191.8	191.1	191.8	192.4	193.0	193.3
56.5°	184.1	183.6	184.1	184.7	184.9	185.2
57°	175.9	175.3	175.9	176.4	176.5	176.7
57.5°	167.2	166.8	167.2	167.7	167.7	167.7
58°	158.5	158.1	158.5	158.8	158.7	158.6
58.5°	149.5	149.1	149.5	149.6	149.3	149.3
59°	140.4	140.3	140.4	140.3	140.0	139.8
59.5°	131.4	131.4	131.4	131.0	130.5	130.3
60°	122.5	122.4	122.5	121.6	121.0	120.6
60.5°	113.3	113.4	113.3	112.4	111.6	111.1
61°	104.3	104.6	104.3	103.3	102.5	101.9
61.5°	95.4	96.0	95.4	94.5	93.4	92.9
62°	86.9	87.7	86.9	85.8	84.6	83.9
62.5°	78.6	79.4	78.6	77.4	75.8	75.0
63°	70.5	71.4	70.5	69.2	67.4	66.5
63.5°	62.8	64.3	62.8	61.2	59.3	58.4
64°	55.6	57.3	55.6	53.5	51.6	50.6
64.5°	48.6	50.2	48.6	46.4	44.4	43.1
65°	41.8	43.2	41.8	39.7	37.8	36.1
65.5°	35.3	36.6	35.3	33.3	31.6	29.7
66°	29.4	30.6	29.4	27.4	26.1	23.8



TEST NUMBER: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	15.4	16.3	15.4	13.7	12.3	9.1
68°	11.6	12.7	11.6	10.4	8.5	5.3
68.5°	8.8	10.1	8.8	7.5	5.7	2.0
69°	6.1	7.5	6.1	4.8	3.4	1.0
69.5°	4.0	5.4	4.0	2.7	1.5	0.6
70°	2.3	3.3	2.3	1.5	0.7	0.3
70.5°	1.1	1.3	1.1	0.9	0.4	0.1
71°	0.6	0.5	0.6	0.5	0.2	0.1
71.5°	0.3	0.1	0.3	0.3	0.1	0.1
72°	0.1	0.1	0.1	0.1	0.1	0.1
72.5°	0.1	0.1	0.1	0.1	0.1	0.1
73°	0.1	0.1	0.1	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
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: P775830

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-2700K

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

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21.5°	431.6	431.6	431.6	431.6	431.4	431.6	431.6	431.6	431.6	431.6	431.6	431.6
22°	429.8	429.8	429.9	429.9	429.7	429.9	429.9	429.8	429.8	429.8	429.8	429.9



44°	317.5	317.6	317.5	317.0	316.6	317.0	317.5	317.6	317.5	317.6	317.5
44.5°	313.8	313.9	313.9	313.3	312.7	313.3	313.9	313.9	313.8	313.9	313.9



66.5°	18.8	21.1	22.2	24.1	25.2	24.1	22.2	21.1	18.8	21.1	22.2
67°	13.9	16.2	17.8	19.4	20.3	19.4	17.8	16.2	13.9	16.2	17.8



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°	431.6	431.4	431.6	431.6	431.6	431.6
22°	429.9	429.7	429.9	429.9	429.8	429.8



44°	317.0	316.6	317.0	317.5	317.6	317.5
44.5°	313.3	312.7	313.3	313.9	313.9	313.8



66.5°	24.1	25.2	24.1	22.2	21.1	18.8
67°	19.4	20.3	19.4	17.8	16.2	13.9

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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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(END OF REPORT)