

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: P775913

Luminaire Tested: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775913  
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-HCD8TSQMW-1000lm-4000K  
Description: 8 INCH SQUARE MEDIUM MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

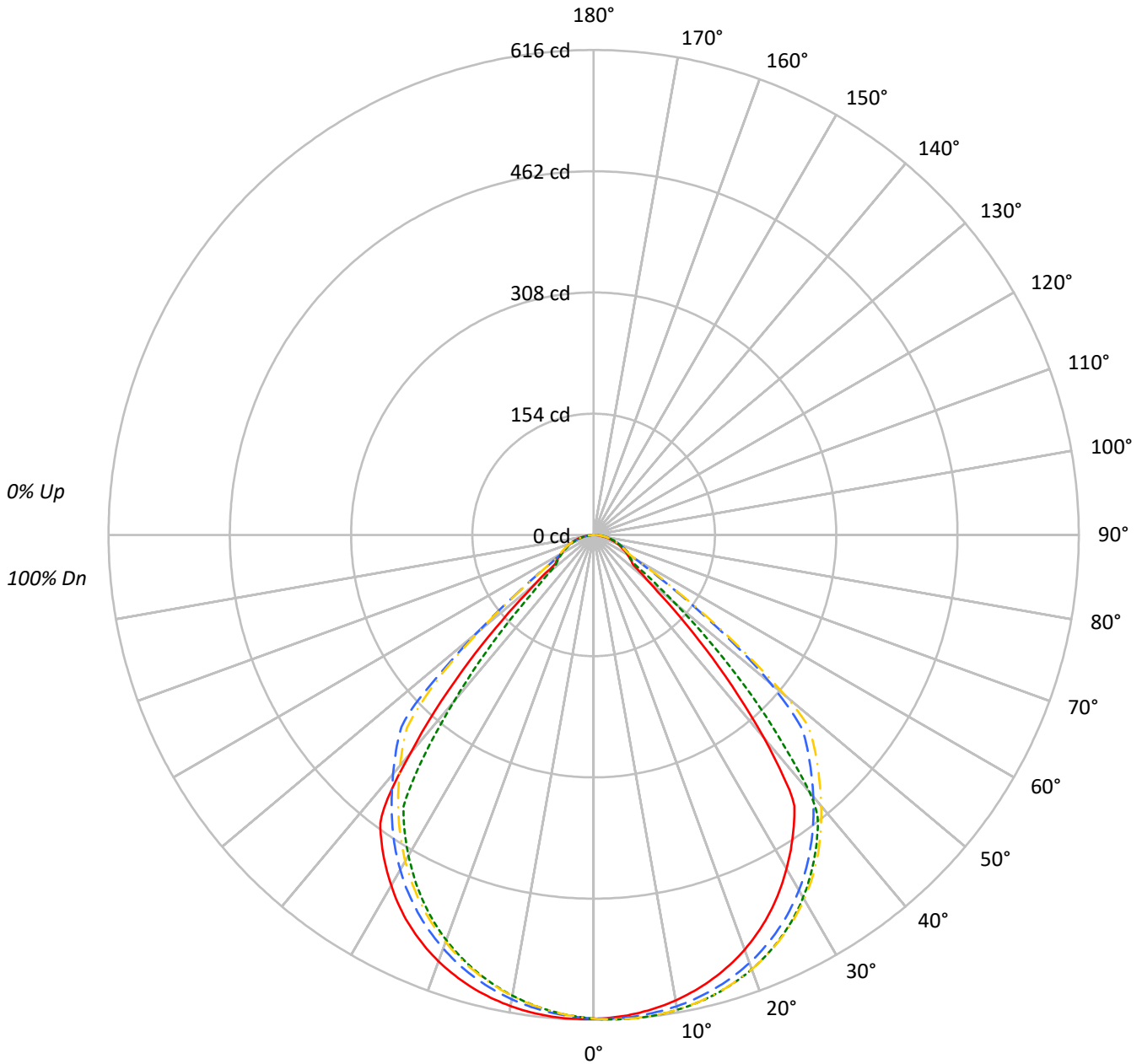
Lumens per Lamp: N/A  
Luminaire Lumens: 1112.7 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.29  
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P775913  
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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	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	102	99	97	98	96	94	94	93	91	89								
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70								
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63								
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56								
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51								
7	73	62	54	49	72	61	54	49	60	53	48	58	52	48	57	52	48	46								
8	69	57	50	44	67	56	49	44	55	49	44	54	48	44	53	48	44	42								
9	65	53	45	41	63	52	45	40	51	45	40	50	44	40	49	44	40	38								
10	61	49	42	37	60	49	42	37	48	41	37	47	41	37	46	41	37	35								

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

	0°	90°	180°	270°
0°	14732	14732	14732	14732
5°	14692	14832	14781	14618
10°	14616	14911	14799	14468
15°	14492	14967	14778	14259
20°	14305	14979	14703	13973
25°	14001	14911	14541	13565
30°	13562	14727	14232	13022
35°	12988	14379	13773	12318
40°	10524	13338	11347	8642
45°	6409	9176	7199	4751
50°	3286	5006	3674	2682
55°	2454	2563	2391	2295
60°	2374	2441	2307	2211
65°	2292	2400	2235	2133
70°	2222	2370	2159	2040
75°	2112	2372	2066	1899
80°	1906	2403	1906	1643
85°	1348	2559	1513	963

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 135°  
 Vertical Angle: 45°  
 Luminance: 13561 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.1	5.2
10°-20°	166.2	14.9
20°-30°	248.4	22.3
30°-40°	285.0	25.6
40°-50°	207.0	18.6
50°-60°	75.9	6.8
60°-70°	40.7	3.7
70°-80°	24.6	2.2
80°-90°	6.9	0.6
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°	472.7	42.5
0°-40°	757.7	68.1
0°-60°	1040.6	93.5
0°-90°	1112.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1112.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	614	614	614	614	614	
5°	610	616	614	607	610	58
15°	584	603	595	574	584	165
25°	529	564	550	513	529	243
35°	444	491	470	421	444	271
45°	189	271	212	140	189	149
55°	59	61	57	55	59	55
65°	40	42	39	38	40	40
75°	23	26	22	20	23	24
85°	5	9	6	4	5	6
90°	0	2	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°	614.4	614.4	614.4	614.4	614.4	614.4	614.4	614.4	614.4	614.4	614.4
0.5°	614.6	614.7	614.4	614.3	614.8	614.8	614.8	615.0	615.0	614.7	613.9
1°	614.4	614.6	614.5	614.6	615.2	615.1	615.1	615.2	615.1	614.6	613.5
1.5°	614.1	614.5	614.6	614.8	615.5	615.4	615.4	615.4	615.1	614.5	613.2
2°	613.7	614.3	614.6	614.9	615.7	615.7	615.6	615.5	615.1	614.4	612.9
2.5°	613.2	614.1	614.6	615.1	616.0	616.0	615.8	615.5	615.1	614.2	612.4
3°	612.8	613.7	614.5	615.2	616.2	616.2	616.0	615.5	615.0	614.0	612.0
3.5°	612.4	613.4	614.4	615.2	616.2	616.3	616.1	615.6	614.9	613.6	611.3
4°	611.8	613.0	614.3	615.2	616.2	616.3	616.2	615.5	614.7	613.2	610.7
4.5°	611.1	612.6	614.0	615.0	616.2	616.3	616.1	615.4	614.4	612.8	610.1
5°	610.4	612.1	613.7	614.9	616.2	616.3	616.1	615.2	614.1	612.3	609.3
5.5°	609.7	611.5	613.3	614.7	616.1	616.1	615.8	615.0	613.6	611.6	608.6
6°	608.8	610.9	613.0	614.5	615.8	616.0	615.6	614.7	613.2	611.1	607.8
6.5°	608.1	610.2	612.5	614.2	615.6	615.7	615.4	614.4	612.7	610.5	606.9
7°	607.1	609.4	612.1	613.9	615.3	615.5	615.1	614.0	612.2	609.8	605.9
7.5°	606.1	608.7	611.4	613.4	615.0	615.3	614.8	613.5	611.5	609.0	604.9
8°	605.0	607.9	610.9	613.0	614.6	614.9	614.4	613.0	610.9	608.2	603.8
8.5°	604.0	606.9	610.2	612.4	614.2	614.5	614.0	612.5	610.2	607.2	602.6
9°	602.8	606.0	609.4	611.9	613.6	614.1	613.4	611.9	609.4	606.3	601.5
9.5°	601.6	604.9	608.7	611.2	613.1	613.4	612.9	611.2	608.6	605.2	600.2
10°	600.3	603.8	608.0	610.6	612.4	612.9	612.2	610.4	607.8	604.2	598.9
10.5°	598.9	602.6	607.0	609.9	611.8	612.3	611.5	609.5	606.7	603.1	597.5
11°	597.6	601.5	606.1	609.0	611.0	611.6	610.8	608.7	605.7	601.9	596.0
11.5°	596.1	600.2	604.9	608.2	610.3	610.8	610.0	607.8	604.6	600.7	594.5
12°	594.5	598.8	604.0	607.2	609.4	610.0	609.1	606.8	603.6	599.4	593.1
12.5°	592.9	597.5	602.8	606.3	608.5	609.1	608.3	605.9	602.3	597.9	591.4
13°	591.3	595.9	601.7	605.2	607.6	608.2	607.2	604.7	601.0	596.4	589.7
13.5°	589.5	594.4	600.4	604.2	606.5	607.2	606.2	603.6	599.7	595.0	587.9
14°	587.7	592.7	599.2	603.0	605.3	606.1	605.1	602.3	598.3	593.4	586.0
14.5°	585.8	591.2	597.8	601.9	604.2	605.0	604.0	601.0	596.8	591.8	584.1
15°	583.8	589.4	596.3	600.5	602.9	603.9	602.7	599.7	595.3	590.0	582.2
15.5°	581.8	587.6	594.8	599.2	601.7	602.5	601.6	598.3	593.7	588.3	580.3
16°	579.7	585.6	593.3	597.8	600.3	601.3	600.2	596.8	592.0	586.4	578.2
16.5°	577.6	583.8	591.6	596.3	598.9	599.9	598.7	595.3	590.3	584.6	575.9
17°	575.4	581.8	589.9	594.7	597.4	598.4	597.3	593.7	588.5	582.7	573.7
17.5°	573.1	579.7	588.2	593.2	595.8	596.9	595.7	592.0	586.7	580.7	571.4
18°	570.8	577.6	586.3	591.5	594.2	595.4	594.2	590.1	584.7	578.6	569.1
18.5°	568.3	575.4	584.5	589.8	592.5	593.7	592.5	588.4	582.7	576.4	566.6
19°	565.8	573.1	582.6	587.9	590.8	592.0	590.8	586.4	580.6	574.2	564.1
19.5°	563.2	570.7	580.5	586.0	588.9	590.2	589.0	584.7	578.5	571.9	561.6
20°	560.6	568.3	578.4	584.1	587.0	588.4	587.1	582.5	576.2	569.5	558.9
20.5°	557.8	565.8	576.3	582.1	585.0	586.4	585.2	580.5	573.8	567.1	556.2
21°	554.9	563.2	574.1	580.0	583.0	584.6	583.1	578.3	571.5	564.5	553.4



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CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	545.9	555.1	566.8	573.3	576.3	578.0	576.7	571.3	564.0	556.5	544.8
23°	542.8	552.1	564.3	571.0	574.0	575.7	574.5	568.9	561.2	553.7	541.7
23.5°	539.5	549.2	561.8	568.5	571.4	573.4	572.1	566.4	558.4	550.7	538.6
24°	536.1	546.0	559.0	566.0	569.0	571.0	569.5	563.7	555.7	547.8	535.4
24.5°	532.8	542.9	556.3	563.5	566.4	568.5	567.1	561.0	552.6	544.8	532.1
25°	529.2	539.6	553.5	560.6	563.6	565.9	564.5	558.3	549.6	541.6	528.8
25.5°	525.6	536.3	550.6	557.9	560.9	563.1	561.9	555.5	546.5	538.4	525.3
26°	522.1	532.9	547.6	555.1	558.0	560.5	559.1	552.5	543.3	535.1	521.9
26.5°	518.3	529.4	544.7	552.1	555.1	557.7	556.3	549.4	539.9	531.6	518.3
27°	514.5	525.9	541.6	549.2	552.0	554.5	553.5	546.2	536.5	528.2	514.6
27.5°	510.4	522.2	538.4	546.1	548.9	551.6	550.5	543.1	533.0	524.6	510.9
28°	506.5	518.5	535.0	542.9	545.6	548.5	547.5	539.8	529.4	520.9	507.3
28.5°	502.2	514.7	531.7	539.7	542.2	545.3	544.3	536.4	525.8	517.1	503.3
29°	498.3	510.8	528.3	536.3	539.1	541.9	541.2	533.0	521.9	513.4	499.4
29.5°	493.9	506.9	524.8	532.9	535.3	538.6	537.9	529.3	518.1	509.3	495.3
30°	489.8	502.8	521.2	529.4	531.9	535.1	534.5	525.8	514.0	505.4	491.3
30.5°	485.3	498.7	517.7	525.9	528.0	531.5	531.1	522.0	510.1	501.3	487.0
31°	481.1	494.6	513.9	522.1	524.5	528.0	527.5	518.2	506.0	497.1	482.8
31.5°	476.6	490.2	510.0	518.4	520.3	524.1	524.0	514.3	501.9	492.9	478.5
32°	472.2	485.9	506.1	514.5	516.3	520.4	520.2	510.3	497.7	488.7	474.1
32.5°	467.5	481.5	502.1	510.5	512.3	516.4	516.4	506.3	493.4	484.4	469.5
33°	463.1	477.2	497.9	506.5	508.3	512.5	512.5	502.2	489.0	480.1	465.0
33.5°	458.3	472.7	493.9	502.5	504.0	508.4	508.5	498.1	484.6	475.8	460.3
34°	453.6	468.3	489.6	498.3	499.7	504.2	504.4	493.8	480.1	471.4	455.6
34.5°	448.5	463.7	485.3	494.1	495.4	500.0	500.3	489.6	475.2	466.8	450.9
35°	443.7	459.1	480.9	489.8	491.2	495.9	496.1	485.3	470.5	462.2	446.1
35.5°	438.8	454.4	476.5	485.5	486.5	491.6	491.7	481.0	465.7	457.5	441.2
36°	433.7	449.6	471.9	481.1	482.0	487.2	487.3	476.5	460.8	452.8	436.3
36.5°	428.3	444.7	467.4	476.8	477.1	482.9	482.8	471.9	455.3	447.9	431.3
37°	419.3	439.8	462.8	472.3	472.3	478.3	478.3	467.2	447.3	442.9	426.3
37.5°	408.5	434.8	458.0	467.7	467.4	473.7	473.6	462.4	437.3	438.0	421.2
38°	394.0	429.7	453.3	463.1	462.3	468.8	468.9	457.5	425.0	432.6	416.1
38.5°	379.5	424.4	448.4	458.3	456.7	464.1	464.1	452.7	410.4	426.6	411.2
39°	365.4	416.6	443.5	453.6	448.6	459.2	459.4	447.6	394.9	416.9	406.2
39.5°	351.1	406.1	438.7	448.7	438.6	454.1	454.5	442.0	378.7	406.1	401.1
40°	336.2	392.3	433.8	443.6	426.1	449.0	449.4	432.7	362.5	393.1	396.2
40.5°	320.7	377.9	428.8	438.5	411.9	443.4	444.4	423.4	347.0	378.7	391.3
41°	304.8	364.2	423.8	433.4	395.9	434.7	439.5	411.1	332.2	364.5	386.4
41.5°	289.2	350.3	418.9	427.8	379.6	425.1	434.5	397.4	317.1	348.4	381.5
42°	274.3	335.8	413.8	420.3	363.2	413.3	429.6	382.6	301.9	333.7	376.4
42.5°	260.1	320.7	408.8	410.7	347.7	399.3	424.6	367.1	286.1	319.4	371.5
43°	245.5	305.7	403.8	399.2	332.5	384.2	419.6	352.0	270.6	305.9	366.5
43.5°	231.0	290.5	398.7	386.3	317.3	368.2	414.8	337.3	255.2	291.0	361.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	189.0	246.8	383.6	341.9	270.6	322.5	399.9	293.5	212.3	247.8	345.1
45.5°	175.7	232.9	378.4	327.1	254.8	307.9	394.7	278.5	198.1	232.8	336.6
46°	163.2	218.9	373.2	313.1	240.2	293.0	389.6	263.6	184.7	219.5	326.6
46.5°	150.9	204.8	367.9	299.2	226.0	277.5	384.4	248.4	171.4	205.7	312.5
47°	138.9	191.0	362.5	284.8	211.7	262.1	379.2	234.2	158.7	193.3	295.2
47.5°	128.1	177.9	352.8	270.3	197.6	247.0	373.7	220.3	146.4	179.8	277.8
48°	117.7	165.2	342.7	255.8	183.7	232.8	368.0	206.9	135.5	167.6	260.1
48.5°	108.5	153.0	330.1	241.2	170.4	218.8	359.3	193.1	124.6	155.2	243.0
49°	100.6	141.0	317.7	227.8	157.6	204.8	347.2	179.8	114.8	143.2	226.5
49.5°	93.9	129.9	305.1	213.8	145.5	191.1	333.9	166.9	105.4	132.4	210.2
50°	88.1	119.2	293.0	201.2	134.2	177.5	317.6	154.4	98.5	122.3	194.2
50.5°	83.3	109.4	279.7	188.2	123.7	164.3	300.3	142.6	91.7	112.4	178.9
51°	78.8	100.8	264.4	175.3	113.6	151.8	282.0	131.0	84.8	103.2	164.8
51.5°	74.2	93.9	248.9	162.2	104.5	139.9	263.7	120.6	78.0	96.0	151.5
52°	69.8	87.8	232.6	150.5	97.2	128.6	245.8	110.9	71.2	88.7	138.7
52.5°	65.9	82.6	215.9	138.8	89.9	118.1	228.3	103.3	65.8	81.6	127.1
53°	63.1	77.9	199.7	128.1	82.6	108.3	212.1	95.8	62.1	74.3	116.4
53.5°	61.7	73.6	184.1	117.6	75.4	100.8	196.7	88.2	60.4	68.6	106.7
54°	60.6	69.2	169.3	108.4	69.9	93.3	181.6	80.6	59.2	63.4	99.3
54.5°	59.6	65.0	155.0	99.1	64.8	85.9	166.7	73.1	58.2	59.6	92.1
55°	58.7	61.6	142.4	91.1	61.3	78.4	152.6	67.7	57.2	58.0	84.9
55.5°	57.6	59.6	130.4	83.8	59.7	71.0	139.2	62.6	56.2	56.8	77.7
56°	56.7	58.5	118.8	77.2	58.7	65.4	126.8	58.6	55.2	55.9	70.6
56.5°	55.8	57.5	108.3	71.1	57.6	60.6	116.1	56.9	54.3	54.8	65.8
57°	54.8	56.5	98.9	65.5	56.6	57.6	107.3	55.8	53.3	53.9	61.8
57.5°	53.9	55.5	90.4	60.6	55.7	56.4	98.5	54.8	52.5	52.9	58.5
58°	53.0	54.6	82.8	57.4	54.7	55.4	89.6	53.8	51.6	52.0	55.8
58.5°	52.1	53.7	76.3	56.2	53.8	54.4	80.7	52.9	50.7	51.1	53.4
59°	51.2	52.7	70.6	55.1	52.8	53.4	72.0	52.0	49.8	50.2	51.5
59.5°	50.3	51.9	65.9	54.1	51.9	52.5	66.2	51.0	48.9	49.4	49.8
60°	49.5	50.9	62.1	53.1	50.9	51.6	61.5	50.2	48.1	48.5	48.3
60.5°	48.5	50.1	58.9	52.2	50.0	50.6	58.0	49.2	47.3	47.7	47.1
61°	47.7	49.2	56.3	51.2	49.1	49.7	54.8	48.4	46.4	46.8	46.2
61.5°	46.7	48.4	53.9	50.4	48.3	48.8	52.5	47.6	45.5	46.0	45.3
62°	45.9	47.5	51.9	49.5	47.5	48.0	50.4	46.7	44.6	45.2	44.2
62.5°	44.9	46.6	50.1	48.6	46.6	47.1	48.7	45.9	43.7	44.3	43.3
63°	44.0	45.8	48.7	47.7	45.7	46.3	47.1	45.0	42.8	43.4	42.3
63.5°	43.2	44.9	47.7	46.8	44.8	45.5	46.0	44.2	42.0	42.5	41.5
64°	42.2	44.1	46.6	46.0	44.0	44.6	44.9	43.4	41.1	41.6	40.5
64.5°	41.4	43.2	45.7	45.0	43.2	43.8	44.0	42.5	40.2	40.7	39.6
65°	40.4	42.3	44.7	44.2	42.3	42.9	43.1	41.7	39.4	39.9	38.6
65.5°	39.5	41.5	43.7	43.4	41.4	42.1	42.1	40.8	38.4	39.0	37.8
66°	38.6	40.5	42.7	42.5	40.5	41.3	41.2	39.9	37.6	38.1	36.9





TEST NUMBER: P775913

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	36.0	38.3	40.0	39.9	38.0	38.7	38.4	37.3	35.1	35.5	34.1
68°	35.2	37.4	39.1	39.0	37.2	37.9	37.5	36.4	34.2	34.5	33.2
68.5°	34.3	36.4	37.9	38.0	36.3	37.0	36.6	35.6	33.4	33.7	32.2
69°	33.5	35.4	37.1	37.2	35.5	36.1	35.7	34.7	32.6	32.8	31.4
69.5°	32.6	34.4	36.2	36.3	34.7	35.3	34.9	33.8	31.7	31.9	30.5
70°	31.7	33.6	35.3	35.6	33.8	34.4	33.9	33.0	30.8	31.1	29.5
70.5°	30.8	32.7	34.4	34.8	33.1	33.6	33.1	32.1	29.9	30.1	28.7
71°	29.9	31.8	33.5	33.8	32.2	32.8	32.1	31.2	29.1	29.3	27.7
71.5°	29.0	31.0	32.7	33.0	31.4	31.9	31.3	30.3	28.2	28.5	26.8
72°	28.1	30.0	31.7	32.1	30.6	31.1	30.3	29.5	27.4	27.5	25.9
72.5°	27.2	29.1	30.8	31.3	29.8	30.2	29.5	28.7	26.6	26.7	25.0
73°	26.4	28.2	29.8	30.3	29.0	29.4	28.6	27.7	25.7	25.8	24.2
73.5°	25.4	27.3	29.0	29.5	28.1	28.6	27.7	26.9	24.9	24.9	23.2
74°	24.6	26.5	28.0	28.7	27.3	27.7	26.9	26.0	24.0	24.0	22.3
74.5°	23.6	25.5	27.1	27.8	26.5	26.9	25.9	25.2	23.1	23.1	21.4
75°	22.8	24.7	26.3	27.0	25.6	26.0	25.1	24.3	22.3	22.3	20.5
75.5°	21.8	23.7	25.3	26.1	24.9	25.2	24.3	23.4	21.4	21.3	19.5
76°	20.9	22.8	24.4	25.2	24.0	24.4	23.3	22.5	20.6	20.4	18.7
76.5°	20.1	21.8	23.5	24.4	23.2	23.5	22.5	21.6	19.7	19.5	17.7
77°	19.1	21.0	22.6	23.5	22.4	22.7	21.6	20.8	18.8	18.7	16.9
77.5°	18.3	20.1	21.6	22.6	21.5	21.8	20.7	19.8	18.0	17.7	16.0
78°	17.3	19.1	20.8	21.7	20.7	21.0	19.8	19.0	17.1	16.9	15.1
78.5°	16.5	18.3	19.8	20.9	19.8	20.2	19.0	18.1	16.3	16.0	14.2
79°	15.5	17.3	19.0	20.0	19.1	19.3	18.1	17.2	15.4	15.1	13.3
79.5°	14.7	16.4	18.1	19.1	18.3	18.5	17.2	16.4	14.6	14.2	12.4
80°	13.8	15.5	17.1	18.3	17.4	17.5	16.4	15.4	13.8	13.3	11.6
80.5°	12.9	14.6	16.3	17.3	16.6	16.8	15.5	14.6	12.9	12.4	10.7
81°	12.1	13.7	15.4	16.5	15.9	16.0	14.7	13.8	12.1	11.6	9.8
81.5°	11.1	12.7	14.5	15.6	15.0	15.0	13.8	12.9	11.2	10.6	8.9
82°	10.3	11.9	13.5	14.7	14.2	14.3	12.9	12.0	10.4	9.8	8.1
82.5°	9.3	10.9	12.7	13.9	13.3	13.3	12.1	11.1	9.6	8.8	7.1
83°	8.5	10.1	11.9	13.0	12.6	12.5	11.2	10.3	8.7	8.0	6.3
83.5°	7.6	9.1	10.9	12.2	11.8	11.7	10.4	9.3	7.9	7.0	5.6
84°	6.7	8.2	10.1	11.3	10.9	10.8	9.6	8.5	7.0	6.2	4.8
84.5°	5.9	7.4	9.1	10.4	10.2	10.0	8.7	7.7	6.2	5.4	4.1
85°	4.9	6.4	8.3	9.6	9.3	9.2	7.9	6.7	5.5	4.4	3.4
85.5°	4.1	5.6	7.5	8.7	8.5	8.4	7.0	5.9	4.6	3.6	2.6
86°	3.5	4.6	6.5	7.9	7.8	7.6	6.2	5.0	3.9	2.8	2.0
86.5°	2.7	3.7	5.8	7.1	6.9	6.7	5.5	4.1	3.0	2.2	1.3
87°	2.1	3.0	5.0	6.3	6.1	5.9	4.7	3.4	2.3	1.7	0.6
87.5°	1.5	2.4	4.3	5.5	5.4	5.1	4.0	2.7	1.8	1.2	0.1
88°	0.8	1.8	3.7	4.7	4.5	4.3	3.4	2.1	1.3	0.6	0.0
88.5°	0.3	1.2	2.9	3.9	3.8	3.6	2.6	1.6	0.7	0.1	0.0



TEST NUMBER: P775913  
CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-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	0.8	1.6	1.5	1.3	0.6	0.1	0.0	0.0	0.0



TEST NUMBER: P775913

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	614.4	614.4	614.4	614.4	614.4	614.4
0.5°	613.5	614.0	613.9	614.0	614.3	614.6
1°	613.1	613.4	613.2	613.4	613.9	614.4
1.5°	612.6	612.9	612.6	612.8	613.4	614.1
2°	612.1	612.3	612.0	612.3	612.9	613.7
2.5°	611.4	611.5	611.3	611.5	612.3	613.2
3°	610.8	610.9	610.5	610.9	611.6	612.8
3.5°	610.1	610.1	609.8	610.1	611.0	612.4
4°	609.3	609.2	608.8	609.2	610.3	611.8
4.5°	608.5	608.3	608.0	608.4	609.5	611.1
5°	607.7	607.3	606.9	607.3	608.6	610.4
5.5°	606.7	606.3	605.9	606.4	607.8	609.7
6°	605.7	605.2	604.7	605.3	606.8	608.8
6.5°	604.6	604.1	603.6	604.2	605.9	608.1
7°	603.5	602.8	602.3	603.0	604.7	607.1
7.5°	602.3	601.6	600.9	601.8	603.7	606.1
8°	601.0	600.2	599.6	600.5	602.4	605.0
8.5°	599.7	598.8	598.2	599.2	601.1	604.0
9°	598.3	597.3	596.7	597.7	599.9	602.8
9.5°	596.8	595.8	595.2	596.2	598.5	601.6
10°	595.4	594.2	593.5	594.6	597.1	600.3
10.5°	593.7	592.5	591.8	593.1	595.6	598.9
11°	592.1	590.8	590.1	591.4	594.0	597.6
11.5°	590.3	589.0	588.3	589.7	592.4	596.1
12°	588.7	587.1	586.3	587.8	590.6	594.5
12.5°	586.8	585.1	584.5	586.0	588.9	592.9
13°	584.9	583.1	582.4	584.0	587.2	591.3
13.5°	582.9	581.0	580.4	582.1	585.3	589.5
14°	580.9	578.9	578.2	580.0	583.3	587.7
14.5°	578.8	576.7	575.9	577.9	581.3	585.8
15°	576.6	574.4	573.5	575.7	579.2	583.8
15.5°	574.4	572.1	571.3	573.5	577.0	581.8
16°	572.1	569.5	568.9	571.1	574.9	579.7
16.5°	569.8	567.1	566.4	568.8	572.6	577.6
17°	567.2	564.6	563.8	566.3	570.3	575.4
17.5°	564.7	561.9	561.1	563.9	567.9	573.1
18°	562.2	559.1	558.5	561.2	565.3	570.8
18.5°	559.5	556.3	555.8	558.5	562.8	568.3
19°	556.7	553.5	552.7	555.9	560.2	565.8
19.5°	554.0	550.6	549.9	553.1	557.6	563.2
20°	551.2	547.6	547.0	550.2	554.7	560.6
20.5°	548.1	544.4	543.9	547.4	551.9	557.8
21°	545.2	541.3	540.8	544.2	549.0	554.9



TEST NUMBER: P775913

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	535.6	531.2	530.9	534.9	539.7	545.9
23°	532.4	527.6	527.4	531.6	536.6	542.8
23.5°	528.9	524.2	524.0	528.4	533.3	539.5
24°	525.4	520.4	520.4	524.9	530.0	536.1
24.5°	521.9	516.6	516.6	521.4	526.5	532.8
25°	518.2	512.7	512.8	517.9	523.0	529.2
25.5°	514.5	508.8	509.1	514.3	519.3	525.6
26°	510.6	504.9	505.2	510.5	515.8	522.1
26.5°	506.7	500.9	501.2	506.7	512.0	518.3
27°	502.9	496.7	497.1	503.0	508.2	514.5
27.5°	498.8	492.4	493.0	499.1	504.2	510.4
28°	494.7	488.1	488.7	495.0	500.2	506.5
28.5°	490.5	483.6	484.5	491.0	496.2	502.2
29°	486.3	479.2	480.2	486.8	492.3	498.3
29.5°	482.0	474.8	475.8	482.6	488.0	493.9
30°	477.6	470.3	471.3	478.4	483.8	489.8
30.5°	473.1	465.7	466.8	474.0	479.4	485.3
31°	468.7	461.1	462.3	469.7	475.0	481.1
31.5°	464.2	456.3	457.6	465.2	470.6	476.6
32°	459.7	451.5	453.0	460.7	466.1	472.2
32.5°	455.2	446.7	448.5	455.9	461.6	467.5
33°	450.5	441.8	443.7	451.4	457.1	463.1
33.5°	445.7	436.7	438.8	446.7	452.4	458.3
34°	440.9	431.7	434.1	442.0	447.9	453.6
34.5°	436.2	426.3	429.0	436.9	443.2	448.5
35°	431.3	420.8	424.1	432.2	438.5	443.7
35.5°	426.3	409.6	419.0	427.4	433.8	438.8
36°	421.3	396.9	413.9	422.3	428.9	433.7
36.5°	416.1	382.6	408.4	417.4	423.9	428.3
37°	410.7	368.4	400.6	412.5	419.0	419.3
37.5°	404.3	353.7	389.6	407.4	413.9	408.5
38°	393.4	338.5	376.0	402.4	408.8	394.0
38.5°	380.4	323.0	362.1	397.3	403.7	379.5
39°	366.7	307.0	348.9	392.4	398.3	365.4
39.5°	352.8	291.0	334.8	387.4	389.7	351.1
40°	339.0	276.1	320.3	382.4	379.3	336.2
40.5°	324.4	261.2	305.0	377.3	365.8	320.7
41°	309.3	247.0	290.2	372.2	352.4	304.8
41.5°	294.0	232.3	275.4	367.2	339.4	289.2
42°	279.1	218.2	261.0	362.3	325.9	274.3
42.5°	264.4	203.7	247.3	357.2	312.5	260.1
43°	250.1	190.0	234.1	352.2	298.3	245.5
43.5°	236.4	176.7	220.3	346.9	283.9	231.0



TEST NUMBER: P775913

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	195.2	140.1	180.0	322.0	242.2	189.0
45.5°	182.0	128.6	167.5	310.3	229.2	175.7
46°	169.2	118.2	155.6	298.2	216.0	163.2
46.5°	156.9	109.0	143.9	286.8	202.8	150.9
47°	145.0	101.3	132.4	274.9	189.5	138.9
47.5°	133.7	94.8	121.9	262.7	176.9	128.1
48°	122.5	89.5	112.1	248.0	164.8	117.7
48.5°	112.8	84.7	103.7	232.8	153.0	108.5
49°	103.7	80.4	96.6	216.7	141.4	100.6
49.5°	98.0	76.1	90.4	201.6	130.7	93.9
50°	92.4	71.9	85.3	187.2	120.0	88.1
50.5°	86.8	67.6	80.7	173.7	110.4	83.3
51°	81.2	64.3	76.5	160.3	101.5	78.8
51.5°	75.6	62.1	72.3	148.4	94.1	74.2
52°	71.3	60.8	68.1	136.8	87.6	69.8
52.5°	67.2	59.7	64.2	125.5	82.0	65.9
53°	63.1	58.8	61.1	115.3	77.2	63.1
53.5°	59.9	57.9	59.6	106.1	72.8	61.7
54°	58.1	56.8	58.5	97.2	68.4	60.6
54.5°	57.0	55.9	57.5	90.0	64.3	59.6
55°	56.0	54.9	56.5	83.0	60.8	58.7
55.5°	55.0	54.0	55.5	76.9	58.7	57.6
56°	54.1	53.1	54.6	71.3	57.6	56.7
56.5°	53.1	52.2	53.7	67.0	56.6	55.8
57°	52.3	51.3	52.7	63.1	55.7	54.8
57.5°	51.3	50.4	51.9	60.0	54.7	53.9
58°	50.5	49.6	51.0	57.2	53.8	53.0
58.5°	49.7	48.7	50.1	55.0	52.8	52.1
59°	48.7	47.9	49.2	52.9	52.0	51.2
59.5°	47.9	47.0	48.4	51.1	51.0	50.3
60°	47.0	46.1	47.5	49.8	50.1	49.5
60.5°	46.2	45.3	46.7	48.7	49.2	48.5
61°	45.4	44.4	45.9	47.8	48.3	47.7
61.5°	44.4	43.6	45.0	46.8	47.5	46.7
62°	43.6	42.6	44.1	45.8	46.5	45.9
62.5°	42.7	41.8	43.3	44.8	45.7	44.9
63°	41.8	41.0	42.4	43.9	44.7	44.0
63.5°	41.0	40.0	41.5	42.9	43.8	43.2
64°	40.1	39.2	40.6	42.0	42.8	42.2
64.5°	39.2	38.4	39.7	41.1	41.9	41.4
65°	38.3	37.6	38.9	40.1	41.1	40.4
65.5°	37.4	36.8	37.8	39.3	40.1	39.5
66°	36.5	35.9	37.1	38.3	39.2	38.6



TEST NUMBER: P775913

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	33.9	33.3	34.7	35.5	36.4	36.0
68°	33.1	32.4	33.7	34.7	35.5	35.2
68.5°	32.1	31.6	32.9	33.7	34.5	34.3
69°	31.3	30.8	32.0	32.8	33.7	33.5
69.5°	30.3	29.9	31.1	31.8	32.8	32.6
70°	29.5	29.1	30.2	30.9	31.8	31.7
70.5°	28.7	28.2	29.3	29.9	30.9	30.8
71°	27.8	27.4	28.5	29.0	30.0	29.9
71.5°	26.9	26.6	27.6	28.0	29.1	29.0
72°	26.0	25.6	26.7	27.1	28.1	28.1
72.5°	25.1	24.8	25.7	26.1	27.2	27.2
73°	24.3	23.9	24.9	25.3	26.3	26.4
73.5°	23.3	23.0	23.9	24.4	25.3	25.4
74°	22.5	22.2	23.1	23.4	24.5	24.6
74.5°	21.5	21.3	22.2	22.5	23.5	23.6
75°	20.7	20.5	21.2	21.5	22.6	22.8
75.5°	19.7	19.5	20.4	20.6	21.5	21.8
76°	18.9	18.7	19.4	19.6	20.7	20.9
76.5°	18.0	17.9	18.6	18.7	19.7	20.1
77°	17.1	17.0	17.6	17.9	18.8	19.1
77.5°	16.2	16.2	16.8	16.9	17.9	18.3
78°	15.3	15.3	15.9	16.0	16.9	17.3
78.5°	14.4	14.4	15.0	15.0	16.0	16.5
79°	13.5	13.5	14.1	14.1	15.0	15.5
79.5°	12.6	12.7	13.1	13.1	14.1	14.7
80°	11.8	11.9	12.3	12.3	13.1	13.8
80.5°	10.8	11.0	11.3	11.3	12.2	12.9
81°	10.0	10.2	10.5	10.4	11.2	12.1
81.5°	9.1	9.3	9.7	9.6	10.3	11.1
82°	8.3	8.5	8.7	8.7	9.3	10.3
82.5°	7.5	7.6	7.9	7.9	8.5	9.3
83°	6.5	6.7	7.0	7.0	7.6	8.5
83.5°	5.7	5.9	6.1	6.2	6.5	7.6
84°	4.8	5.0	5.3	5.5	5.7	6.7
84.5°	4.1	4.3	4.4	4.6	4.7	5.9
85°	3.3	3.5	3.6	3.9	4.0	4.9
85.5°	2.4	2.6	2.8	3.2	3.4	4.1
86°	1.6	1.9	2.0	2.4	2.7	3.5
86.5°	0.8	1.1	1.2	1.7	2.0	2.7
87°	0.2	0.3	0.4	0.8	1.4	2.1
87.5°	0.0	0.0	0.1	0.3	0.8	1.5
88°	0.0	0.0	0.0	0.0	0.3	0.8
88.5°	0.0	0.0	0.0	0.0	0.0	0.3



TEST NUMBER: P775913  
CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMW-1000lm-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

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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°	552.0	560.6	571.6	577.9	580.8	582.5	581.1	576.1	569.1	561.9	550.6
22°	549.0	557.9	569.3	575.6	578.6	580.4	579.0	573.7	566.6	559.1	547.7



44°	216.7	275.5	393.6	371.7	301.8	352.5	409.8	323.0	240.4	276.5	356.2
44.5°	202.7	260.9	388.4	356.8	286.2	337.1	404.9	308.1	226.0	261.2	351.0



66.5°	37.8	39.7	41.8	41.6	39.7	40.4	40.2	39.1	36.8	37.2	35.9
67°	37.0	38.7	40.8	40.7	38.9	39.6	39.4	38.2	35.9	36.3	35.1



89°	0.0	0.6	2.2	3.2	2.9	2.7	2.0	0.9	0.3	0.0	0.0
89.5°	0.0	0.1	1.6	2.3	2.2	2.0	1.3	0.4	0.0	0.0	0.0



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21.5°	542.0	537.9	537.6	541.2	546.0	552.0
22°	538.9	534.6	534.2	538.1	543.0	549.0



44°	222.8	164.2	206.5	341.4	269.8	216.7
44.5°	209.1	151.6	192.9	332.0	255.8	202.7



66.5°	35.7	35.1	36.2	37.4	38.2	37.8
67°	34.9	34.2	35.4	36.4	37.3	37.0

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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)