

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: P775680

Luminaire Tested: HCDJBL510CSD-HCD4TRMB-1000lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775680  
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-HCD4TRMB-1000lm-2700K  
Description: 4 INCH ROUND MEDIUM MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

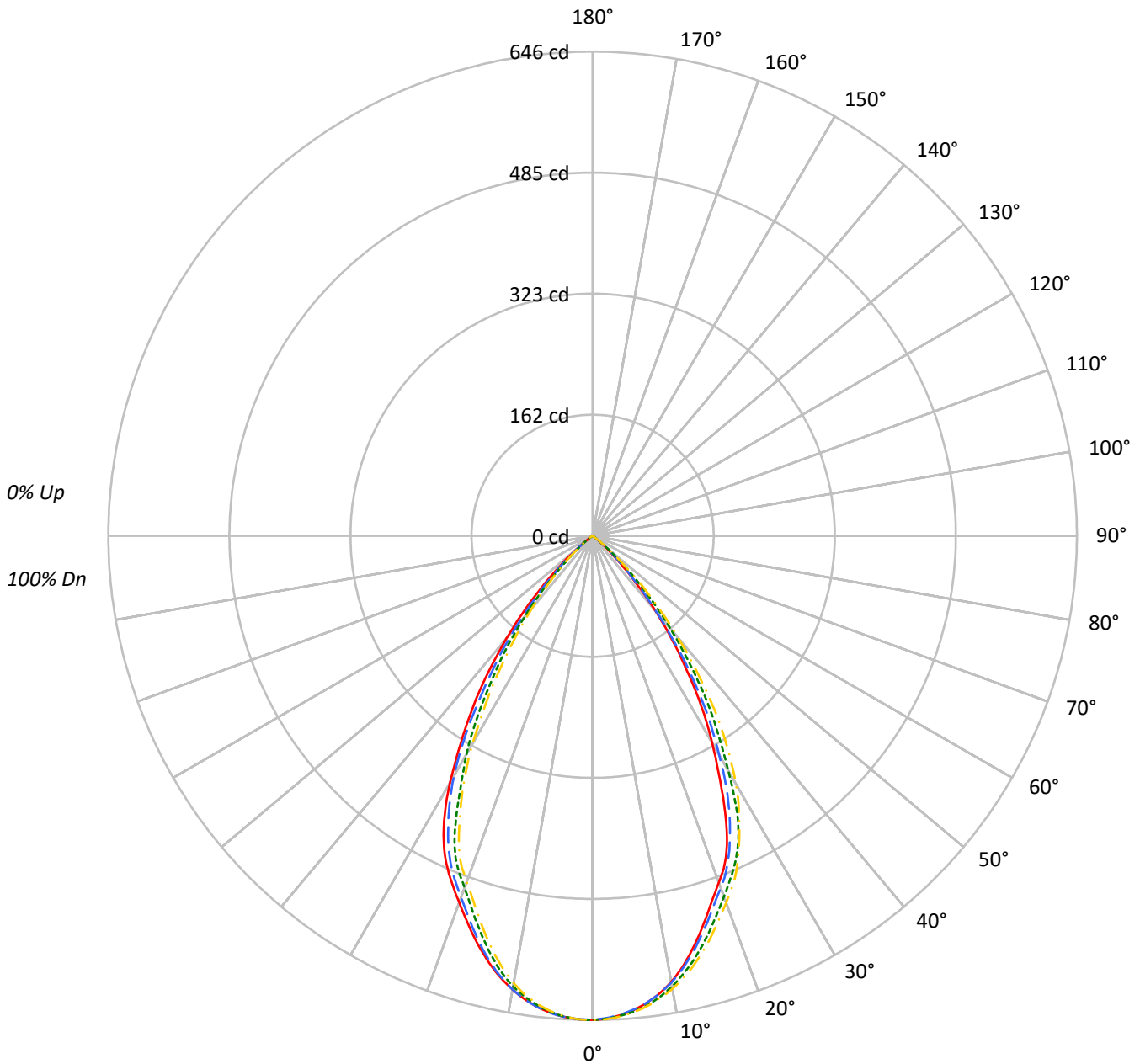
Lumens per Lamp: N/A  
Luminaire Lumens: 634.0 lumens  
Efficiency: N/A  
Efficacy: 63.4 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.94  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



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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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86								
3	102	95	90	86	100	94	89	85	91	87	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74								
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69								
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64								
7	82	72	66	62	81	72	66	62	70	65	61	69	65	61	68	64	61	59								
8	78	68	62	58	77	67	62	57	66	61	57	65	60	57	64	60	57	55								
9	74	64	58	54	73	63	58	54	62	57	53	62	57	53	61	56	53	52								
10	70	60	54	50	69	60	54	50	59	54	50	58	53	50	57	53	50	48								

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

	0°	90°	180°	270°
0°	81274	81274	81274	81274
5°	80207	80485	80725	80574
10°	77211	77978	78566	78004
15°	71698	73679	74669	72845
20°	65945	68597	69695	66910
25°	58557	63598	64848	60362
30°	46342	52591	55279	48827
35°	33692	40022	42618	35889
40°	21094	26433	29325	23181
45°	9540	14167	16321	10892
50°	2761	4327	5639	3250
55°	439	439	592	549
60°	176	176	201	176
65°	119	119	119	119
70°	74	110	110	110
75°	49	97	49	97
80°	0	72	72	72
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 16321 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.0	9.5
10°-20°	157.3	24.8
20°-30°	200.7	31.7
30°-40°	153.4	24.2
40°-50°	57.3	9.0
50°-60°	4.7	0.7
60°-70°	0.4	0.1
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°	417.9	65.9
0°-40°	571.4	90.1
0°-60°	633.4	99.9
0°-90°	634.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	634.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	646	646	646	646	646	
5°	635	637	639	638	635	60
15°	550	566	573	559	550	154
25°	422	458	467	435	422	190
35°	219	260	277	234	219	137
45°	54	80	92	61	54	45
55°	2	2	3	2	2	3
65°	0	0	0	0	0	0
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°	645.8	645.8	645.8	645.8	645.8	645.8	645.8	645.8	645.8	645.8	645.8
0.5°	645.6	645.1	645.1	645.1	645.6	645.7	646.0	646.2	645.9	645.6	645.6
1°	645.2	644.7	644.6	644.7	645.2	645.4	645.7	645.9	645.8	645.6	645.5
1.5°	644.6	644.0	643.9	644.0	644.7	645.0	645.3	645.6	645.4	645.3	645.4
2°	643.8	643.2	643.0	643.2	644.1	644.4	644.7	645.0	645.0	644.9	645.0
2.5°	642.8	642.1	642.0	642.3	643.3	643.6	643.9	644.3	644.4	644.3	644.4
3°	641.6	640.9	640.8	641.2	642.3	642.7	643.0	643.4	643.6	643.6	643.7
3.5°	640.2	639.4	639.5	640.0	641.2	641.6	642.0	642.4	642.7	642.8	642.8
4°	638.6	637.9	637.9	638.5	640.0	640.4	640.7	641.2	641.6	641.8	641.8
4.5°	636.8	636.1	636.2	637.0	638.7	639.1	639.4	639.9	640.4	640.6	640.6
5°	634.9	634.1	634.2	635.2	637.1	637.5	637.8	638.4	639.0	639.3	639.2
5.5°	632.7	631.8	632.2	633.2	635.3	635.7	636.1	636.7	637.4	637.7	637.5
6°	630.4	629.5	629.9	631.1	633.4	633.8	634.2	634.9	635.7	636.0	635.7
6.5°	627.9	627.1	627.6	628.8	631.2	631.8	632.2	632.9	633.8	634.1	633.8
7°	625.2	624.4	625.0	626.2	628.8	629.5	630.0	630.8	631.6	632.0	631.7
7.5°	622.3	621.6	622.1	623.4	626.2	627.0	627.7	628.4	629.2	629.7	629.4
8°	619.2	618.6	619.1	620.5	623.4	624.3	625.2	626.0	626.8	627.1	626.8
8.5°	615.8	615.4	616.0	617.3	620.4	621.4	622.6	623.3	624.0	624.5	624.1
9°	612.2	611.9	612.6	613.9	617.2	618.5	619.8	620.5	621.2	621.5	621.2
9.5°	608.2	608.2	609.0	610.4	613.8	615.3	616.8	617.7	618.1	618.4	618.1
10°	604.2	604.2	605.1	606.6	610.2	612.0	613.6	614.5	614.8	615.0	614.7
10.5°	600.0	600.0	601.0	602.7	606.7	608.4	610.2	611.2	611.4	611.5	611.1
11°	595.1	595.3	596.6	598.4	602.7	604.7	606.7	607.7	607.9	607.8	607.3
11.5°	590.2	590.6	592.1	593.9	598.6	600.9	603.1	604.0	604.0	603.9	603.2
12°	585.0	585.6	587.3	589.3	594.4	596.8	599.2	600.2	600.2	599.8	599.1
12.5°	579.6	580.3	582.2	584.6	589.9	592.5	595.0	596.1	596.0	595.4	594.6
13°	574.0	574.9	577.1	579.7	585.3	588.1	590.9	592.0	591.7	590.9	589.7
13.5°	568.2	569.4	571.7	574.5	580.7	583.6	586.4	587.5	587.3	586.4	585.0
14°	562.3	563.7	566.4	569.4	575.6	579.0	581.8	583.1	582.7	581.5	579.9
14.5°	556.3	557.9	560.8	564.1	570.6	574.2	577.0	578.3	577.9	576.6	574.6
15°	550.3	552.0	555.1	558.6	565.5	569.2	572.2	573.5	573.1	571.5	569.3
15.5°	544.1	546.1	549.3	553.2	560.4	564.1	567.3	568.5	568.1	566.4	563.8
16°	537.9	540.1	543.7	547.6	555.0	559.1	562.3	563.5	563.0	561.1	558.3
16.5°	531.9	534.3	538.0	542.1	549.7	553.9	557.0	558.6	557.9	555.8	552.7
17°	525.9	528.3	532.2	536.6	544.3	548.6	551.9	553.3	552.6	550.3	547.1
17.5°	519.9	522.4	526.5	531.1	538.8	543.2	546.5	547.8	547.2	544.8	541.3
18°	513.8	516.5	520.8	525.5	533.4	537.9	541.2	542.7	541.8	539.3	535.7
18.5°	508.0	511.0	515.1	520.0	527.9	532.6	536.0	537.3	536.3	533.7	529.9
19°	502.6	505.7	510.0	514.6	522.6	527.4	530.7	532.0	530.9	528.2	524.2
19.5°	497.5	500.7	504.8	509.5	517.4	522.2	525.7	526.9	525.8	522.7	518.6
20°	492.4	495.7	499.8	504.5	512.2	517.0	520.9	521.9	520.4	517.4	513.2
20.5°	487.4	490.6	494.8	499.4	507.2	512.1	515.8	516.9	515.4	512.2	508.0
21°	482.3	485.6	489.6	494.3	502.2	507.2	510.7	512.0	510.4	507.2	502.9



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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°	464.4	467.5	471.4	477.6	487.0	491.9	495.1	496.6	495.4	492.1	487.3
23°	457.2	460.4	464.5	471.8	481.7	486.4	489.2	491.0	490.3	486.8	481.6
23.5°	449.4	452.8	457.3	465.2	476.2	480.5	482.7	484.7	484.8	481.4	475.5
24°	440.7	444.3	449.7	458.3	470.6	474.2	475.8	478.3	479.1	475.8	469.1
24.5°	431.4	435.0	441.6	451.0	464.5	467.8	468.9	471.4	473.2	469.8	462.1
25°	421.7	425.2	433.6	443.6	458.0	460.9	461.6	464.3	467.0	463.7	454.9
25.5°	411.5	415.2	425.3	435.4	451.2	453.6	453.8	456.8	460.4	457.1	447.4
26°	400.9	405.0	417.0	427.6	443.8	445.9	446.2	449.2	453.3	450.2	439.8
26.5°	390.1	394.8	408.0	419.4	435.6	437.8	438.7	441.5	445.7	442.7	431.6
27°	379.2	384.8	398.9	410.9	426.9	429.7	431.1	433.7	437.5	434.4	423.5
27.5°	368.8	374.9	389.4	402.2	417.3	421.4	423.5	425.9	429.2	425.9	415.5
28°	358.2	365.5	379.4	392.9	407.2	412.9	415.7	418.1	420.0	416.8	406.9
28.5°	348.0	356.3	369.2	383.1	396.2	403.9	407.9	410.1	410.7	407.5	398.2
29°	338.2	347.3	358.9	373.1	385.0	394.8	399.9	402.0	401.2	397.3	389.1
29.5°	328.5	338.2	348.2	362.5	373.5	385.3	391.2	393.3	390.8	386.9	379.5
30°	318.9	328.9	337.7	351.3	361.9	375.3	382.2	384.6	380.4	376.1	369.3
30.5°	309.4	319.3	327.6	339.7	350.8	365.0	372.7	375.2	369.3	364.8	359.1
31°	299.7	309.4	317.3	328.4	340.1	354.3	363.4	366.0	358.4	353.4	348.4
31.5°	290.0	299.2	307.4	316.5	329.8	343.6	353.6	355.9	347.6	342.0	337.8
32°	280.2	288.9	297.2	304.9	320.1	332.7	344.1	345.9	337.3	331.0	326.6
32.5°	270.3	277.9	287.1	293.6	310.2	322.0	334.5	335.4	326.9	320.3	315.9
33°	260.1	267.2	276.7	282.0	300.8	311.4	324.7	325.1	317.0	309.7	304.5
33.5°	249.7	256.5	266.3	270.5	290.8	300.9	314.5	314.7	306.8	299.3	293.0
34°	239.4	246.3	255.6	259.4	280.8	290.9	304.4	304.3	297.3	289.0	281.3
34.5°	229.4	235.7	245.0	248.6	270.4	281.1	293.9	293.5	287.3	278.9	270.1
35°	219.3	225.8	234.4	237.9	260.5	271.6	283.4	283.1	277.4	269.0	258.6
35.5°	209.8	216.3	223.5	227.5	249.5	261.8	272.2	272.5	267.4	259.0	247.8
36°	200.4	206.7	212.6	217.4	238.9	251.9	261.3	262.0	257.8	248.9	237.3
36.5°	191.1	197.2	202.0	207.5	228.5	242.2	250.2	251.4	247.5	238.6	227.1
37°	182.0	187.6	190.8	197.6	218.3	232.5	239.3	240.6	237.3	228.1	216.8
37.5°	173.0	178.3	180.1	188.0	208.1	222.4	228.3	230.4	227.0	217.7	207.2
38°	164.0	168.7	169.6	178.3	198.4	212.2	218.1	220.3	216.9	207.3	197.3
38.5°	155.0	159.2	159.8	168.9	188.8	201.9	207.6	210.4	207.1	197.0	187.6
39°	146.2	149.9	150.4	159.7	179.7	191.8	197.2	200.5	197.4	187.7	178.0
39.5°	137.1	140.2	141.0	151.1	170.1	181.8	187.0	190.6	187.8	177.6	168.6
40°	128.4	130.9	131.8	142.1	160.9	172.2	176.8	180.6	178.5	168.3	159.2
40.5°	119.7	121.8	123.4	133.7	151.9	162.7	166.7	170.9	169.1	159.4	149.9
41°	111.1	112.9	114.9	125.4	143.1	153.6	157.0	161.1	160.4	151.0	140.5
41.5°	102.7	104.4	106.8	117.1	134.0	144.4	147.6	151.2	151.4	142.1	131.6
42°	95.0	96.0	98.9	108.8	125.1	135.6	138.3	141.7	142.1	133.9	122.7
42.5°	87.3	88.2	91.5	101.3	116.6	126.8	129.2	132.6	133.2	125.6	114.2
43°	80.1	80.6	84.1	93.8	108.5	117.9	120.3	123.7	124.6	117.8	106.1
43.5°	72.9	73.3	77.3	86.4	100.7	109.0	111.9	114.9	115.8	109.4	98.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	53.6	53.1	58.2	65.9	79.6	84.6	88.6	91.1	91.7	87.7	77.3
45.5°	47.8	47.2	52.7	59.7	72.6	76.6	81.1	83.6	84.2	80.6	70.3
46°	42.4	41.8	47.4	53.8	65.6	68.6	73.6	76.1	76.7	73.5	64.0
46.5°	37.1	36.6	42.5	48.4	59.1	61.6	66.2	68.7	69.2	66.5	58.1
47°	33.4	33.0	37.6	43.2	52.8	55.0	59.5	61.7	62.2	60.0	52.4
47.5°	29.8	29.3	33.9	38.1	46.8	48.8	53.1	55.2	55.9	54.0	47.1
48°	26.2	25.6	30.2	33.4	41.1	43.1	47.3	49.0	49.8	48.3	42.2
48.5°	22.6	22.0	26.5	29.3	35.7	37.6	41.7	43.3	44.1	42.5	37.5
49°	19.0	18.3	22.8	25.8	30.7	32.8	36.3	37.7	38.5	37.2	33.1
49.5°	16.5	15.9	19.1	22.6	26.1	28.3	31.4	32.7	33.5	32.4	29.1
50°	14.1	13.6	16.2	19.4	22.1	24.2	26.8	28.2	28.8	27.9	25.4
50.5°	12.0	11.6	13.6	16.2	18.5	20.5	22.7	24.1	24.6	23.9	21.9
51°	10.1	9.7	11.2	13.0	15.3	17.1	18.9	20.3	20.7	20.1	18.8
51.5°	8.3	8.0	9.1	10.6	13.3	14.1	15.6	16.8	17.2	16.9	15.9
52°	6.8	6.5	7.2	8.4	11.3	12.0	13.3	13.8	14.1	14.0	13.3
52.5°	5.4	5.1	5.6	6.4	9.3	10.0	11.0	11.8	12.0	12.0	11.4
53°	4.1	3.9	4.2	4.8	7.3	7.9	8.8	9.7	10.0	9.9	9.5
53.5°	3.6	3.4	3.7	3.5	5.3	5.8	6.5	7.7	7.9	7.9	7.6
54°	3.1	2.8	3.1	2.9	3.3	3.8	4.3	5.6	5.8	5.9	5.6
54.5°	2.6	2.2	2.6	2.5	2.4	2.7	3.0	3.6	3.8	3.8	3.8
55°	2.0	1.7	2.0	2.0	2.0	2.1	2.3	2.6	2.7	2.8	2.8
55.5°	1.5	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.1
56°	1.4	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.8
56.5°	1.2	1.2	1.2	1.2	1.3	1.4	1.5	1.5	1.6	1.6	1.6
57°	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.4	1.4
57.5°	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.3
58°	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1
58.5°	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0
59°	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
59.5°	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
60°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
60.5°	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
61°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
61.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
62°	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
62.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
63°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
63.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
64°	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
64.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
65.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4





TEST NUMBER: P775680

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
68°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
68.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
69°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
69.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
70°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
70.5°	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3
71°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
71.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
72°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
72.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
73°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
75.5°	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2
76°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
76.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
77°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
81.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
82°	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
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: P775680  
CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-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: P775680

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	645.8	645.8	645.8	645.8	645.8	645.8
0.5°	645.6	645.8	645.9	646.0	646.0	645.6
1°	645.6	645.7	645.7	645.8	645.7	645.2
1.5°	645.4	645.4	645.4	645.4	645.2	644.6
2°	645.0	644.9	644.9	644.8	644.4	643.8
2.5°	644.4	644.2	644.1	644.0	643.5	642.8
3°	643.7	643.3	643.2	643.0	642.5	641.6
3.5°	642.7	642.2	642.1	641.8	641.1	640.2
4°	641.5	640.9	640.8	640.4	639.6	638.6
4.5°	640.2	639.4	639.2	638.8	638.0	636.8
5°	638.8	637.8	637.4	636.9	636.1	634.9
5.5°	637.1	635.9	635.4	634.9	633.8	632.7
6°	635.2	633.8	633.3	632.6	631.6	630.4
6.5°	633.2	631.6	631.0	630.2	629.1	627.9
7°	631.0	629.2	628.4	627.5	626.2	625.2
7.5°	628.6	626.6	625.6	624.5	623.2	622.3
8°	626.1	623.8	622.6	621.3	620.2	619.2
8.5°	623.3	620.8	619.4	617.9	616.7	615.8
9°	620.3	617.6	615.9	614.2	613.0	612.2
9.5°	617.1	614.1	612.2	610.2	608.8	608.2
10°	613.7	610.4	608.2	606.1	604.8	604.2
10.5°	610.0	606.5	603.9	601.6	600.4	600.0
11°	606.2	602.3	599.4	596.8	595.5	595.1
11.5°	602.1	597.6	594.5	591.8	590.4	590.2
12°	597.5	592.9	589.4	586.5	585.1	585.0
12.5°	592.9	587.7	584.0	581.0	579.6	579.6
13°	588.1	582.3	578.5	575.4	573.9	574.0
13.5°	582.9	576.8	572.7	569.4	568.2	568.2
14°	577.5	571.1	566.8	563.4	561.9	562.3
14.5°	572.0	565.1	560.7	557.4	555.8	556.3
15°	566.4	559.1	554.5	551.2	549.7	550.3
15.5°	560.6	553.1	548.3	545.0	543.5	544.1
16°	554.8	546.9	542.1	538.5	537.3	537.9
16.5°	548.9	540.9	535.9	532.3	531.1	531.9
17°	542.9	534.8	529.5	526.0	524.8	525.9
17.5°	536.9	528.6	523.3	519.9	518.7	519.9
18°	531.0	522.4	517.1	513.5	512.6	513.8
18.5°	525.1	516.4	510.9	507.4	506.6	508.0
19°	519.2	510.4	505.0	501.6	501.0	502.6
19.5°	513.5	504.9	499.7	496.3	495.6	497.5
20°	508.1	499.6	494.2	491.1	490.4	492.4
20.5°	502.9	494.5	489.1	485.9	485.4	487.4
21°	497.7	489.4	483.8	480.6	480.4	482.3

TEST NUMBER: P775680

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	482.0	473.5	467.2	463.2	462.2	464.4
23°	475.8	467.2	460.4	455.7	454.7	457.2
23.5°	469.4	460.3	453.1	447.6	447.0	449.4
24°	462.4	452.5	444.7	438.7	438.2	440.7
24.5°	455.0	444.0	436.3	429.4	429.0	431.4
25°	447.1	434.7	427.1	419.7	419.5	421.7
25.5°	439.0	424.8	417.6	410.2	409.9	411.5
26°	430.3	414.4	407.4	400.9	399.7	400.9
26.5°	421.4	403.5	397.2	391.5	389.8	390.1
27°	412.3	393.0	386.3	382.3	379.7	379.2
27.5°	402.7	382.6	374.8	372.5	369.4	368.8
28°	392.9	372.9	363.7	362.7	359.2	358.2
28.5°	383.1	363.4	352.8	352.4	348.9	348.0
29°	373.0	354.1	342.4	341.8	338.3	338.2
29.5°	362.9	345.2	332.3	330.8	327.8	328.5
30°	353.0	336.0	322.3	319.8	317.0	318.9
30.5°	343.0	326.5	312.6	308.4	306.0	309.4
31°	333.3	316.8	302.9	296.9	295.2	299.7
31.5°	323.9	306.5	293.2	286.0	284.2	290.0
32°	314.3	296.0	283.3	275.0	273.7	280.2
32.5°	304.8	285.4	273.5	264.3	263.7	270.3
33°	295.3	274.5	263.5	254.0	253.8	260.1
33.5°	285.8	263.7	253.4	243.5	244.0	249.7
34°	275.6	253.3	243.3	233.3	234.2	239.4
34.5°	265.4	243.4	232.9	223.1	224.3	229.4
35°	254.7	233.6	222.8	212.9	214.4	219.3
35.5°	244.4	224.4	213.1	202.8	204.5	209.8
36°	233.0	215.5	203.4	193.1	194.4	200.4
36.5°	222.3	206.3	194.2	183.9	184.3	191.1
37°	211.3	197.2	184.9	174.8	174.6	182.0
37.5°	200.9	188.1	175.8	165.9	165.2	173.0
38°	190.3	178.6	166.8	157.1	156.1	164.0
38.5°	180.5	169.1	157.9	148.5	147.4	155.0
39°	170.5	159.8	149.4	140.3	139.2	146.2
39.5°	160.8	150.4	140.5	131.9	131.1	137.1
40°	151.1	141.1	132.0	124.1	123.2	128.4
40.5°	142.0	132.1	123.7	116.1	115.3	119.7
41°	132.7	123.6	115.4	108.7	108.0	111.1
41.5°	123.8	115.0	107.5	101.6	100.6	102.7
42°	115.0	107.0	99.8	95.0	93.6	95.0
42.5°	106.5	99.0	92.4	88.3	86.8	87.3
43°	98.3	91.3	85.3	82.1	80.4	80.1
43.5°	91.0	83.3	78.6	75.9	74.0	72.9



TEST NUMBER: P775680

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	69.3	61.2	59.9	59.0	57.0	53.6
45.5°	62.9	54.5	54.2	53.8	51.8	47.8
46°	56.9	48.3	48.9	49.0	47.1	42.4
46.5°	51.2	42.5	43.8	44.4	42.4	37.1
47°	45.9	37.3	38.8	39.8	37.9	33.4
47.5°	41.0	33.6	34.3	35.7	34.3	29.8
48°	36.2	29.9	30.8	32.3	30.8	26.2
48.5°	32.0	26.3	27.2	28.9	27.2	22.6
49°	28.1	22.7	23.7	25.5	23.6	19.0
49.5°	24.5	19.1	20.2	22.1	20.0	16.5
50°	21.2	16.6	17.3	18.7	17.2	14.1
50.5°	18.3	14.4	14.8	15.9	14.4	12.0
51°	15.6	12.3	12.6	13.4	12.1	10.1
51.5°	13.3	10.5	10.5	11.1	10.0	8.3
52°	11.5	8.8	8.6	9.0	8.0	6.8
52.5°	9.8	7.2	7.0	7.1	6.3	5.4
53°	8.0	5.8	5.5	5.4	4.8	4.1
53.5°	6.3	4.5	4.2	4.0	3.5	3.6
54°	4.5	3.4	3.6	3.4	3.0	3.1
54.5°	3.4	2.9	3.1	2.8	2.5	2.6
55°	2.6	2.5	2.6	2.2	2.0	2.0
55.5°	2.0	2.0	2.0	1.6	1.6	1.5
56°	1.8	1.6	1.5	1.5	1.4	1.4
56.5°	1.5	1.4	1.3	1.3	1.3	1.2
57°	1.4	1.2	1.2	1.2	1.1	1.1
57.5°	1.2	1.1	1.1	1.1	1.0	1.0
58°	1.1	1.0	1.0	1.0	0.9	0.9
58.5°	1.0	0.9	0.9	0.9	0.9	0.8
59°	0.9	0.8	0.8	0.8	0.8	0.8
59.5°	0.8	0.8	0.8	0.8	0.7	0.7
60°	0.8	0.7	0.7	0.7	0.7	0.7
60.5°	0.7	0.7	0.7	0.7	0.7	0.6
61°	0.7	0.6	0.6	0.6	0.6	0.6
61.5°	0.6	0.6	0.6	0.6	0.6	0.6
62°	0.6	0.6	0.6	0.6	0.5	0.5
62.5°	0.6	0.5	0.5	0.5	0.5	0.5
63°	0.5	0.5	0.5	0.5	0.5	0.5
63.5°	0.5	0.5	0.5	0.5	0.5	0.5
64°	0.5	0.5	0.5	0.5	0.4	0.4
64.5°	0.5	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4	0.4
65.5°	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.4	0.4	0.4	0.4	0.4	0.3



TEST NUMBER: P775680  
 CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.3	0.3	0.3	0.3	0.3	0.3
68°	0.3	0.3	0.3	0.3	0.3	0.3
68.5°	0.3	0.3	0.3	0.3	0.3	0.3
69°	0.3	0.3	0.3	0.3	0.3	0.3
69.5°	0.3	0.3	0.3	0.3	0.3	0.2
70°	0.3	0.3	0.3	0.3	0.2	0.2
70.5°	0.3	0.3	0.3	0.2	0.2	0.2
71°	0.3	0.2	0.2	0.2	0.2	0.2
71.5°	0.2	0.2	0.2	0.2	0.2	0.2
72°	0.2	0.2	0.2	0.2	0.2	0.2
72.5°	0.2	0.2	0.2	0.2	0.2	0.2
73°	0.2	0.2	0.2	0.2	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.1
74.5°	0.2	0.2	0.2	0.2	0.1	0.1
75°	0.2	0.2	0.2	0.2	0.1	0.1
75.5°	0.2	0.2	0.2	0.1	0.1	0.1
76°	0.2	0.1	0.1	0.1	0.1	0.1
76.5°	0.1	0.1	0.1	0.1	0.1	0.1
77°	0.1	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.0
80.5°	0.1	0.1	0.1	0.1	0.0	0.0
81°	0.1	0.1	0.1	0.1	0.0	0.0
81.5°	0.1	0.1	0.1	0.1	0.0	0.0
82°	0.1	0.1	0.1	0.0	0.0	0.0
82.5°	0.1	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: P775680  
CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-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

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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°	477.0	480.2	484.0	489.1	497.2	502.4	506.1	507.1	505.4	502.0	497.8
22°	471.0	474.1	477.9	483.7	492.2	497.2	500.8	502.1	500.5	497.0	492.8



44°	66.3	66.2	70.5	79.1	93.7	100.5	103.6	106.4	107.3	101.9	91.3
44.5°	59.5	59.5	64.2	72.5	86.7	92.5	96.1	98.6	99.2	94.8	84.3



66.5°	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	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



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21.5°	492.6	484.4	478.9	475.7	474.9	477.0
22°	487.6	479.1	473.2	469.8	468.9	471.0



44°	83.8	75.7	72.1	70.0	68.0	66.3
44.5°	76.5	68.3	65.9	64.3	62.4	59.5

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66.5°	0.4	0.4	0.4	0.4	0.3	0.3
67°	0.4	0.4	0.3	0.3	0.3	0.3

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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)