

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: P775684

Luminaire Tested: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775684  
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-5000K  
Description: 4 INCH ROUND MEDIUM MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

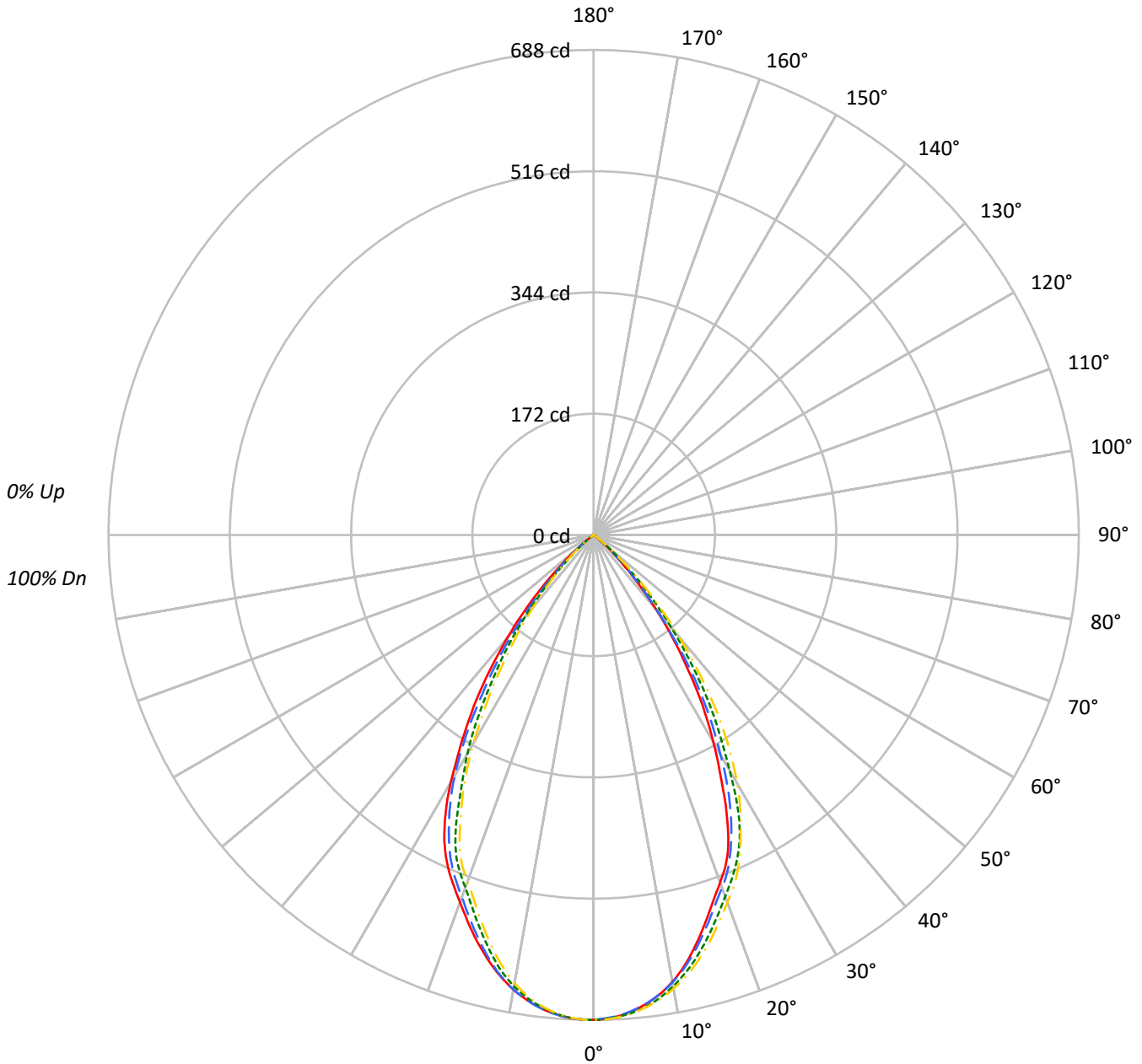
Lumens per Lamp: N/A  
Luminaire Lumens: 675.4 lumens  
Efficiency: N/A  
Efficacy: 67.5 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.94  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	100	100	100	100	100		
	1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86	86	86	86	86	86		
	3	102	95	90	86	100	94	89	85	91	87	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74	74	74	74	74	74		
	5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69	69	69	69	69	69		
	6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64	64	64	64	64	64		
	7	82	72	66	62	81	72	66	62	70	65	61	69	65	61	68	64	61	59	59	59	59	59	59		
	8	78	68	62	58	77	67	62	57	66	61	57	65	60	57	64	60	57	55	55	55	55	55	55		
	9	74	64	58	54	73	63	58	54	62	57	53	62	57	53	61	56	53	52	52	52	52	52	52		
	10	70	60	54	50	69	60	54	50	59	54	50	58	53	50	57	53	50	48	48	48	48	48	48		

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

	0°	90°	180°	270°
0°	86585	86585	86585	86585
5°	85437	85741	85993	85829
10°	82246	83064	83690	83090
15°	76376	78486	79542	77600
20°	70258	73084	74235	71276
25°	62390	67750	69083	64306
30°	49365	56020	58883	52024
35°	35889	42633	45414	38224
40°	22458	28158	31247	24692
45°	10163	15093	17388	11604
50°	2937	4621	6011	3465
55°	461	461	636	592
60°	176	176	227	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: 17388 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.9	9.5
10°-20°	167.5	24.8
20°-30°	213.8	31.7
30°-40°	163.5	24.2
40°-50°	61.1	9.0
50°-60°	5.0	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°	445.2	65.9
0°-40°	608.7	90.1
0°-60°	674.7	99.9
0°-90°	675.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	675.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	688	688	688	688	688	
5°	676	679	681	679	676	64
15°	586	602	610	596	586	164
25°	449	488	498	463	449	202
35°	234	278	296	249	234	146
45°	57	85	98	65	57	48
55°	2	2	3	3	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°	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0
0.5°	687.8	687.2	687.2	687.2	687.8	687.9	688.2	688.4	688.1	687.8	687.8
1°	687.3	686.8	686.7	686.8	687.3	687.5	687.9	688.1	688.0	687.8	687.7
1.5°	686.7	686.1	685.9	686.1	686.8	687.1	687.4	687.8	687.5	687.4	687.5
2°	685.8	685.2	685.0	685.2	686.2	686.5	686.8	687.1	687.1	687.0	687.1
2.5°	684.8	684.0	683.9	684.2	685.3	685.6	685.9	686.4	686.5	686.4	686.5
3°	683.5	682.7	682.6	683.1	684.2	684.7	685.0	685.4	685.6	685.6	685.7
3.5°	682.0	681.1	681.3	681.8	683.1	683.5	683.9	684.3	684.7	684.8	684.8
4°	680.3	679.5	679.5	680.2	681.8	682.2	682.5	683.1	683.5	683.7	683.7
4.5°	678.4	677.6	677.7	678.6	680.4	680.8	681.1	681.7	682.2	682.4	682.4
5°	676.3	675.5	675.6	676.7	678.7	679.1	679.4	680.1	680.7	681.0	680.9
5.5°	674.0	673.0	673.5	674.5	676.8	677.2	677.6	678.3	679.0	679.3	679.1
6°	671.5	670.6	671.0	672.3	674.7	675.2	675.6	676.3	677.2	677.5	677.2
6.5°	668.9	668.0	668.6	669.8	672.4	673.0	673.5	674.2	675.2	675.5	675.2
7°	666.0	665.1	665.8	667.1	669.8	670.6	671.1	672.0	672.8	673.3	672.9
7.5°	662.9	662.2	662.7	664.1	667.1	667.9	668.7	669.4	670.3	670.8	670.5
8°	659.6	659.0	659.5	661.0	664.1	665.0	666.0	666.9	667.7	668.0	667.7
8.5°	656.0	655.5	656.2	657.6	660.9	661.9	663.2	664.0	664.7	665.3	664.8
9°	652.1	651.8	652.6	653.9	657.5	658.9	660.2	661.0	661.7	662.1	661.7
9.5°	647.9	647.9	648.7	650.2	653.8	655.4	657.0	658.0	658.4	658.7	658.4
10°	643.6	643.6	644.6	646.2	650.0	651.9	653.6	654.6	654.9	655.1	654.8
10.5°	639.1	639.1	640.2	642.0	646.3	648.1	650.0	651.1	651.3	651.4	651.0
11°	634.0	634.2	635.6	637.4	642.0	644.1	646.3	647.3	647.5	647.4	646.9
11.5°	628.8	629.2	630.8	632.7	637.6	640.1	642.4	643.4	643.4	643.3	642.5
12°	623.2	623.9	625.7	627.8	633.3	635.8	638.3	639.3	639.3	638.9	638.2
12.5°	617.5	618.2	620.2	622.8	628.5	631.2	633.9	635.1	635.0	634.3	633.5
13°	611.5	612.5	614.8	617.6	623.5	626.5	629.5	630.7	630.4	629.5	628.2
13.5°	605.3	606.6	609.0	612.0	618.6	621.7	624.7	625.9	625.7	624.7	623.2
14°	599.0	600.5	603.4	606.6	613.2	616.8	619.8	621.2	620.8	619.5	617.8
14.5°	592.6	594.3	597.4	600.9	607.9	611.7	614.7	616.1	615.7	614.3	612.1
15°	586.2	588.0	591.3	595.1	602.4	606.4	609.6	611.0	610.5	608.8	606.5
15.5°	579.6	581.7	585.1	589.3	597.0	600.9	604.3	605.6	605.2	603.4	600.6
16°	573.0	575.3	579.2	583.3	591.2	595.6	599.0	600.3	599.8	597.7	594.7
16.5°	566.6	569.1	573.1	577.5	585.6	590.1	593.4	595.1	594.3	592.1	588.8
17°	560.2	562.8	566.9	571.6	579.8	584.4	587.9	589.4	588.7	586.2	582.8
17.5°	553.8	556.5	560.8	565.7	573.9	578.6	582.2	583.5	582.9	580.3	576.6
18°	547.4	550.3	554.8	559.8	568.2	573.0	576.5	578.1	577.1	574.5	570.6
18.5°	541.2	544.4	548.8	553.9	562.3	567.3	571.0	572.3	571.3	568.5	564.5
19°	535.4	538.8	543.3	548.2	556.7	561.8	565.3	566.7	565.5	562.6	558.4
19.5°	530.0	533.4	537.8	542.8	551.2	556.2	560.0	561.3	560.1	556.8	552.4
20°	524.6	528.1	532.5	537.5	545.7	550.8	554.9	555.9	554.3	551.2	546.8
20.5°	519.2	522.6	527.1	532.0	540.4	545.6	549.5	550.7	549.1	545.7	541.2
21°	513.8	517.3	521.6	526.6	535.0	540.4	544.1	545.5	543.8	540.4	535.8



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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°	494.7	498.0	502.2	508.8	518.8	524.0	527.4	529.0	527.8	524.2	519.1
23°	487.0	490.4	494.8	502.6	513.2	518.2	521.2	523.1	522.3	518.6	513.0
23.5°	478.7	482.3	487.1	495.6	507.3	511.9	514.2	516.4	516.5	512.8	506.5
24°	469.4	473.3	479.0	488.2	501.3	505.2	506.9	509.5	510.4	506.9	499.7
24.5°	459.6	463.4	470.4	480.4	494.8	498.3	499.5	502.2	504.1	500.5	492.2
25°	449.3	453.0	462.0	472.5	487.9	491.0	491.7	494.6	497.5	494.0	484.6
25.5°	438.4	442.3	453.1	463.9	480.6	483.2	483.4	486.6	490.4	486.9	476.6
26°	427.1	431.4	444.2	455.6	472.7	475.0	475.3	478.5	482.9	479.6	468.5
26.5°	415.6	420.6	434.6	446.8	464.1	466.4	467.3	470.3	474.8	471.6	459.8
27°	403.9	409.9	424.9	437.7	454.8	457.8	459.3	462.1	466.1	462.8	451.2
27.5°	392.8	399.3	414.8	428.5	444.6	448.9	451.2	453.7	457.3	453.7	442.6
28°	381.6	389.3	404.1	418.5	433.8	439.9	442.9	445.4	447.4	444.0	433.5
28.5°	370.8	379.6	393.3	408.1	422.1	430.3	434.5	436.9	437.5	434.1	424.2
29°	360.3	370.0	382.3	397.4	410.1	420.6	426.0	428.2	427.4	423.2	414.5
29.5°	350.0	360.3	371.0	386.1	397.9	410.4	416.7	419.0	416.3	412.1	404.3
30°	339.7	350.4	359.8	374.3	385.5	399.8	407.1	409.7	405.2	400.6	393.4
30.5°	329.6	340.1	349.0	361.9	373.7	388.8	397.0	399.7	393.4	388.6	382.5
31°	319.2	329.6	338.0	349.9	362.3	377.5	387.1	389.9	381.9	376.5	371.2
31.5°	308.9	318.7	327.5	337.2	351.3	366.1	376.7	379.2	370.3	364.4	359.9
32°	298.4	307.7	316.6	324.8	341.0	354.4	366.6	368.5	359.3	352.6	347.9
32.5°	288.0	296.1	305.8	312.7	330.4	343.0	356.4	357.3	348.3	341.2	336.5
33°	277.1	284.7	294.8	300.4	320.4	331.7	345.9	346.3	337.7	329.9	324.4
33.5°	266.0	273.3	283.7	288.2	309.7	320.5	335.0	335.2	326.8	318.8	312.1
34°	255.0	262.4	272.3	276.4	299.1	309.9	324.3	324.1	316.7	307.8	299.6
34.5°	244.4	251.1	261.0	264.8	288.1	299.4	313.1	312.6	306.0	297.2	287.8
35°	233.6	240.5	249.7	253.4	277.5	289.4	301.9	301.5	295.6	286.6	275.5
35.5°	223.5	230.4	238.1	242.3	265.8	278.9	290.0	290.3	284.9	275.9	264.0
36°	213.4	220.2	226.4	231.6	254.5	268.4	278.4	279.1	274.7	265.2	252.8
36.5°	203.6	210.1	215.1	221.0	243.4	258.0	266.5	267.8	263.7	254.2	241.9
37°	193.9	199.9	203.3	210.6	232.5	247.7	254.9	256.3	252.8	243.0	230.9
37.5°	184.3	190.0	191.9	200.3	221.6	236.9	243.2	245.4	241.8	231.9	220.7
38°	174.7	179.7	180.7	190.0	211.4	226.0	232.3	234.7	231.0	220.8	210.2
38.5°	165.1	169.6	170.2	179.9	201.2	215.0	221.1	224.1	220.6	209.9	199.9
39°	155.7	159.7	160.2	170.1	191.5	204.4	210.1	213.5	210.3	200.0	189.6
39.5°	146.0	149.3	150.2	161.0	181.2	193.7	199.2	203.1	200.1	189.2	179.6
40°	136.7	139.4	140.4	151.4	171.4	183.5	188.4	192.4	190.2	179.3	169.6
40.5°	127.5	129.7	131.4	142.4	161.8	173.3	177.6	182.1	180.2	169.8	159.7
41°	118.4	120.3	122.4	133.5	152.4	163.6	167.2	171.6	170.9	160.8	149.6
41.5°	109.4	111.2	113.8	124.8	142.7	153.8	157.2	161.1	161.3	151.4	140.2
42°	101.2	102.3	105.4	115.9	133.2	144.4	147.3	150.9	151.4	142.6	130.7
42.5°	93.0	94.0	97.5	107.9	124.3	135.0	137.6	141.2	141.9	133.8	121.7
43°	85.3	85.9	89.6	99.9	115.6	125.6	128.1	131.7	132.7	125.5	113.1
43.5°	77.7	78.1	82.3	92.0	107.3	116.2	119.2	122.4	123.4	116.6	104.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	57.1	56.5	62.0	70.2	84.8	90.1	94.4	97.1	97.7	93.4	82.3
45.5°	50.9	50.2	56.1	63.6	77.3	81.6	86.4	89.1	89.7	85.9	74.9
46°	45.1	44.5	50.5	57.3	69.9	73.1	78.4	81.1	81.7	78.3	68.2
46.5°	39.6	39.0	45.2	51.5	62.9	65.6	70.5	73.2	73.7	70.8	61.9
47°	35.6	35.2	40.1	46.0	56.2	58.6	63.4	65.7	66.2	63.9	55.8
47.5°	31.8	31.3	36.2	40.6	49.8	51.9	56.5	58.8	59.5	57.5	50.1
48°	27.9	27.3	32.2	35.6	43.7	45.9	50.3	52.2	53.0	51.4	44.9
48.5°	24.1	23.5	28.3	31.3	38.1	40.1	44.4	46.1	46.9	45.2	40.0
49°	20.3	19.5	24.3	27.5	32.7	35.0	38.7	40.2	41.1	39.7	35.3
49.5°	17.6	17.0	20.4	24.1	27.8	30.2	33.5	34.9	35.7	34.6	31.0
50°	15.0	14.5	17.3	20.7	23.6	25.8	28.6	30.1	30.7	29.8	27.1
50.5°	12.8	12.4	14.5	17.3	19.7	21.9	24.2	25.7	26.2	25.5	23.4
51°	10.8	10.3	11.9	13.9	16.3	18.2	20.2	21.7	22.1	21.4	20.1
51.5°	8.9	8.5	9.7	11.3	14.2	15.0	16.6	17.9	18.3	18.0	17.0
52°	7.3	6.9	7.7	9.0	12.1	12.8	14.2	14.7	15.0	14.9	14.2
52.5°	5.8	5.4	6.0	6.8	9.9	10.7	11.7	12.6	12.8	12.8	12.2
53°	4.4	4.2	4.5	5.1	7.8	8.4	9.4	10.3	10.7	10.6	10.1
53.5°	3.8	3.6	3.9	3.7	5.7	6.2	6.9	8.2	8.4	8.4	8.1
54°	3.3	3.0	3.3	3.1	3.5	4.1	4.6	6.0	6.2	6.3	6.0
54.5°	2.8	2.3	2.8	2.7	2.6	2.9	3.2	3.8	4.1	4.1	4.1
55°	2.1	1.8	2.1	2.1	2.1	2.2	2.5	2.8	2.9	3.0	3.0
55.5°	1.6	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.2
56°	1.5	1.4	1.4	1.5	1.6	1.7	1.7	1.8	1.9	1.9	1.9
56.5°	1.3	1.3	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.7
57°	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.5
57.5°	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4
58°	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2
58.5°	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1
59°	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0
59.5°	0.7	0.7	0.7	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9
60°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	0.9	0.9
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: P775684

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**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: P775684  
CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**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: P775684

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	688.0	688.0	688.0	688.0	688.0	688.0
0.5°	687.8	688.0	688.1	688.2	688.2	687.8
1°	687.8	687.9	687.9	688.0	687.9	687.3
1.5°	687.5	687.5	687.5	687.5	687.3	686.7
2°	687.1	687.0	687.0	686.9	686.5	685.8
2.5°	686.5	686.3	686.2	686.1	685.5	684.8
3°	685.7	685.3	685.2	685.0	684.5	683.5
3.5°	684.7	684.1	684.0	683.7	683.0	682.0
4°	683.4	682.7	682.6	682.2	681.4	680.3
4.5°	682.0	681.1	680.9	680.5	679.7	678.4
5°	680.5	679.4	679.0	678.5	677.6	676.3
5.5°	678.7	677.4	676.9	676.3	675.2	674.0
6°	676.7	675.2	674.6	673.9	672.8	671.5
6.5°	674.5	672.8	672.2	671.3	670.2	668.9
7°	672.2	670.3	669.4	668.5	667.1	666.0
7.5°	669.6	667.5	666.4	665.3	663.9	662.9
8°	667.0	664.5	663.2	661.8	660.7	659.6
8.5°	664.0	661.3	659.8	658.2	656.9	656.0
9°	660.8	657.9	656.1	654.3	653.0	652.1
9.5°	657.4	654.2	652.1	650.0	648.5	647.9
10°	653.7	650.2	647.9	645.6	644.2	643.6
10.5°	649.8	646.1	643.3	640.8	639.5	639.1
11°	645.7	641.6	638.5	635.8	634.4	634.0
11.5°	641.4	636.7	633.4	630.5	629.0	628.8
12°	636.6	631.7	627.9	624.8	623.3	623.2
12.5°	631.7	626.1	622.2	619.0	617.5	617.5
13°	626.5	620.3	616.3	613.0	611.4	611.5
13.5°	621.0	614.5	610.1	606.6	605.3	605.3
14°	615.2	608.4	603.8	600.2	598.6	599.0
14.5°	609.4	602.0	597.3	593.8	592.1	592.6
15°	603.4	595.6	590.7	587.2	585.6	586.2
15.5°	597.2	589.2	584.1	580.6	579.0	579.6
16°	591.0	582.6	577.5	573.6	572.3	573.0
16.5°	584.7	576.2	570.9	567.0	565.7	566.6
17°	578.3	569.7	564.0	560.3	559.0	560.2
17.5°	571.9	563.1	557.4	553.8	552.5	553.8
18°	565.6	556.5	550.9	547.1	546.1	547.4
18.5°	559.3	550.2	544.3	540.6	539.7	541.2
19°	553.0	543.8	538.0	534.4	533.7	535.4
19.5°	547.1	537.9	532.4	528.7	528.0	530.0
20°	541.3	532.2	526.5	523.2	522.4	524.6
20.5°	535.8	526.8	521.0	517.6	517.1	519.2
21°	530.2	521.4	515.4	512.0	511.8	513.8



TEST NUMBER: P775684

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	513.5	504.4	497.7	493.4	492.4	494.7
23°	506.9	497.7	490.4	485.4	484.4	487.0
23.5°	500.0	490.3	482.6	476.8	476.1	478.7
24°	492.6	482.0	473.7	467.3	466.9	469.4
24.5°	484.7	472.9	464.8	457.5	457.0	459.6
25°	476.2	463.1	455.0	447.1	446.9	449.3
25.5°	467.6	452.6	444.9	437.0	436.7	438.4
26°	458.4	441.5	434.0	427.1	425.8	427.1
26.5°	448.9	429.8	423.1	417.0	415.2	415.6
27°	439.2	418.6	411.5	407.2	404.5	403.9
27.5°	429.0	407.6	399.2	396.8	393.5	392.8
28°	418.5	397.2	387.4	386.3	382.6	381.6
28.5°	408.1	387.1	375.9	375.5	371.7	370.8
29°	397.3	377.3	364.8	364.1	360.4	360.3
29.5°	386.5	367.8	354.0	352.4	349.2	350.0
30°	376.1	358.0	343.3	340.7	337.7	339.7
30.5°	365.4	347.8	333.0	328.5	326.0	329.6
31°	355.1	337.5	322.7	316.3	314.4	319.2
31.5°	345.1	326.5	312.3	304.6	302.7	308.9
32°	334.8	315.3	301.7	293.0	291.6	298.4
32.5°	324.7	304.0	291.4	281.6	280.9	288.0
33°	314.5	292.5	280.7	270.6	270.4	277.1
33.5°	304.4	280.9	270.0	259.4	259.9	266.0
34°	293.6	269.9	259.2	248.5	249.5	255.0
34.5°	282.8	259.3	248.1	237.6	238.9	244.4
35°	271.3	248.8	237.3	226.8	228.4	233.6
35.5°	260.4	239.0	227.0	216.0	217.8	223.5
36°	248.2	229.5	216.6	205.8	207.1	213.4
36.5°	236.8	219.7	206.9	195.9	196.4	203.6
37°	225.1	210.1	197.0	186.2	186.0	193.9
37.5°	214.0	200.4	187.3	176.7	176.0	184.3
38°	202.8	190.3	177.7	167.4	166.3	174.7
38.5°	192.3	180.2	168.2	158.2	157.0	165.1
39°	181.6	170.2	159.1	149.4	148.3	155.7
39.5°	171.3	160.2	149.6	140.5	139.6	146.0
40°	161.0	150.3	140.6	132.2	131.2	136.7
40.5°	151.2	140.7	131.7	123.7	122.9	127.5
41°	141.3	131.6	123.0	115.8	115.1	118.4
41.5°	131.8	122.6	114.6	108.3	107.2	109.4
42°	122.6	114.0	106.3	101.2	99.7	101.2
42.5°	113.5	105.5	98.4	94.1	92.5	93.0
43°	104.7	97.3	90.9	87.5	85.6	85.3
43.5°	97.0	88.7	83.7	80.9	78.8	77.7



TEST NUMBER: P775684

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	73.8	65.2	63.8	62.8	60.7	57.1
45.5°	67.0	58.0	57.7	57.3	55.1	50.9
46°	60.6	51.4	52.1	52.2	50.1	45.1
46.5°	54.5	45.2	46.6	47.3	45.1	39.6
47°	48.9	39.8	41.4	42.5	40.4	35.6
47.5°	43.6	35.8	36.6	38.1	36.6	31.8
48°	38.6	31.9	32.9	34.5	32.9	27.9
48.5°	34.1	28.1	29.0	30.8	29.0	24.1
49°	30.0	24.2	25.3	27.2	25.2	20.3
49.5°	26.1	20.4	21.5	23.6	21.3	17.6
50°	22.6	17.7	18.5	19.9	18.3	15.0
50.5°	19.5	15.4	15.8	17.0	15.4	12.8
51°	16.6	13.1	13.4	14.3	12.9	10.8
51.5°	14.2	11.2	11.2	11.8	10.7	8.9
52°	12.3	9.4	9.2	9.6	8.5	7.3
52.5°	10.5	7.7	7.5	7.6	6.7	5.8
53°	8.5	6.2	5.9	5.8	5.1	4.4
53.5°	6.7	4.8	4.5	4.3	3.7	3.8
54°	4.8	3.6	3.8	3.6	3.2	3.3
54.5°	3.6	3.1	3.3	3.0	2.7	2.8
55°	2.8	2.7	2.8	2.3	2.1	2.1
55.5°	2.1	2.1	2.1	1.7	1.7	1.6
56°	1.9	1.7	1.6	1.6	1.5	1.5
56.5°	1.6	1.5	1.4	1.4	1.4	1.3
57°	1.5	1.3	1.3	1.3	1.2	1.2
57.5°	1.3	1.2	1.2	1.2	1.1	1.1
58°	1.2	1.1	1.1	1.1	1.0	1.0
58.5°	1.1	1.0	1.0	1.0	1.0	0.9
59°	1.0	0.9	0.9	0.9	0.9	0.9
59.5°	0.9	0.9	0.9	0.9	0.7	0.7
60°	0.9	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: P775684

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**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: P775684  
CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-5000K

**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°	508.1	511.6	515.6	521.0	529.7	535.2	539.2	540.2	538.4	534.8	530.3
22°	501.7	505.0	509.1	515.3	524.4	529.7	533.5	534.9	533.2	529.5	525.0



44°	70.6	70.5	75.1	84.3	99.8	107.1	110.4	113.4	114.3	108.6	97.3
44.5°	63.4	63.4	68.4	77.2	92.4	98.6	102.4	105.1	105.7	101.0	89.8



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°	524.8	516.0	510.2	506.8	505.9	508.1
22°	519.4	510.4	504.1	500.5	499.5	501.7



44°	89.3	80.6	76.8	74.6	72.4	70.6
44.5°	81.5	72.7	70.2	68.5	66.5	63.4

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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)