

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: P775657

Luminaire Tested: HCDJBS510CSD-HCD42TRMB-1000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775657  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B051)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD42TRMB-1000lm-3500K  
Description: 4 INCH ROUND NARROW MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 488.6 lumens  
Efficiency: N/A  
Efficacy: 48.9 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 0.94 / 0.88  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

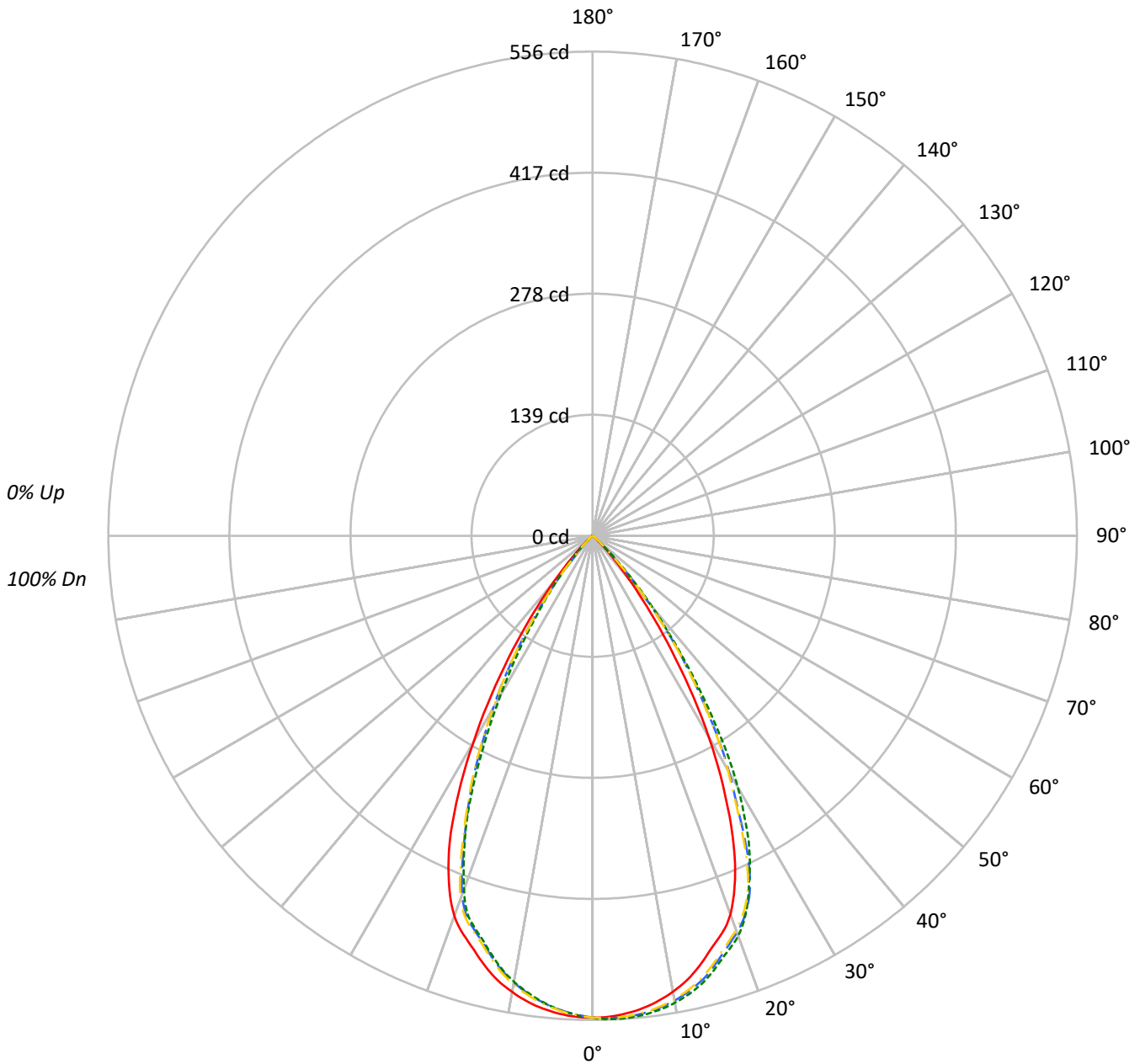
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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				100															
1	114	111	109	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94				94															
2	108	103	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88				88															
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	85	83	82				82															
4	98	91	85	81	96	89	84	81	87	83	80	85	82	79	83	80	78	76				76															
5	93	85	79	75	91	84	79	75	82	78	74	81	77	73	79	76	73	71				71															
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67				67															
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63				63															
8	80	71	65	61	79	70	65	61	69	64	61	68	64	60	67	63	60	59				59															
9	76	67	61	57	75	67	61	57	66	61	57	65	60	57	64	60	57	55				55															
10	73	63	58	54	72	63	58	54	62	57	54	61	57	54	61	56	53	52				52															

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

	0°	90°	180°	270°
0°	69633	69633	69633	69633
5°	69229	70050	69267	68547
10°	67947	69582	67985	66451
15°	65275	67985	65444	62878
20°	61954	65463	62182	57870
25°	52864	59252	53905	45865
30°	38757	48449	39817	30662
35°	22891	32386	24520	17468
40°	10514	17283	11714	7935
45°	3239	5873	3702	2314
50°	1038	1175	1057	901
55°	636	724	636	549
60°	403	453	428	352
65°	268	268	268	238
70°	184	184	184	147
75°	97	146	97	97
80°	72	72	72	72
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 6140 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.8	10.6
10°-20°	140.9	28.8
20°-30°	171.0	35.0
30°-40°	100.7	20.6
40°-50°	20.3	4.1
50°-60°	2.8	0.6
60°-70°	0.9	0.2
70°-80°	0.3	0.1
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°	363.6	74.4
0°-40°	464.4	95.0
0°-60°	487.4	99.8
0°-90°	488.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	488.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	553	553	553	553	553	
5°	548	554	548	543	548	52
15°	501	522	502	483	501	141
25°	381	427	388	330	381	171
35°	149	211	160	114	149	95
45°	18	33	21	13	18	18
55°	3	3	3	2	3	3
65°	1	1	1	1	1	1
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°	553.3	553.3	553.3	553.3	553.3	553.3	553.3	553.3	553.3	553.3	553.3
0.5°	553.4	553.7	553.4	553.2	554.4	553.9	553.6	553.5	553.4	553.3	552.5
1°	553.2	553.7	553.7	553.6	554.8	554.4	553.9	553.6	553.3	552.9	551.8
1.5°	553.0	553.7	554.0	554.0	555.1	554.7	554.0	553.5	553.0	552.4	551.0
2°	552.6	553.5	554.2	554.3	555.3	554.9	554.2	553.4	552.7	551.9	550.1
2.5°	552.1	553.3	554.2	554.4	555.5	555.0	554.0	553.2	552.2	551.2	549.1
3°	551.5	552.9	554.0	554.5	555.5	555.0	553.9	552.8	551.7	550.3	548.0
3.5°	550.8	552.5	553.9	554.4	555.4	554.8	553.6	552.4	550.9	549.4	546.9
4°	550.0	551.9	553.6	554.2	555.2	554.6	553.3	551.8	550.1	548.4	545.6
4.5°	549.1	551.3	553.3	553.9	554.9	554.3	552.8	551.2	549.3	547.3	544.1
5°	548.0	550.4	552.8	553.5	554.5	553.7	552.3	550.4	548.3	546.1	542.6
5.5°	546.9	549.6	552.2	553.1	553.9	553.2	551.6	549.6	547.1	544.7	541.0
6°	545.7	548.6	551.5	552.5	553.3	552.5	550.7	548.6	545.9	543.3	539.2
6.5°	544.3	547.5	550.6	551.8	552.7	551.8	549.8	547.4	544.5	541.6	537.4
7°	543.0	546.3	549.7	550.9	551.8	550.8	548.9	546.2	543.2	540.0	535.3
7.5°	541.3	544.9	548.7	550.1	550.8	549.8	547.8	544.9	541.6	538.1	533.2
8°	539.7	543.5	547.6	549.1	549.8	548.8	546.5	543.5	539.9	536.2	531.1
8.5°	537.8	541.9	546.3	547.9	548.7	547.5	545.1	541.9	538.1	534.3	528.7
9°	535.9	540.3	544.9	546.7	547.4	546.3	543.7	540.3	536.2	532.1	526.3
9.5°	533.9	538.4	543.5	545.4	546.1	544.8	542.1	538.5	534.2	529.9	523.6
10°	531.7	536.6	541.9	543.9	544.5	543.4	540.5	536.7	532.0	527.4	520.9
10.5°	529.3	534.5	540.3	542.4	543.0	541.6	538.7	534.6	529.7	525.0	518.1
11°	527.0	532.4	538.4	540.6	541.2	539.9	536.8	532.4	527.4	522.3	515.1
11.5°	524.4	530.1	536.5	538.8	539.4	537.9	534.7	530.1	524.9	519.5	511.8
12°	521.7	527.7	534.4	537.0	537.4	535.9	532.5	527.8	522.2	516.5	508.4
12.5°	518.7	525.0	532.2	534.8	535.3	533.7	530.1	525.2	519.3	513.3	504.8
13°	515.4	522.3	529.7	532.6	532.9	531.4	527.7	522.5	516.3	510.0	501.0
13.5°	512.0	519.2	527.3	530.2	530.5	528.8	525.0	519.5	513.0	506.4	497.0
14°	508.5	516.1	524.7	527.7	527.9	526.1	522.1	516.4	509.5	502.6	492.8
14.5°	504.8	512.6	521.8	524.9	524.9	523.0	519.1	513.1	506.0	498.7	488.7
15°	501.0	509.0	518.7	521.9	521.8	520.0	515.8	509.6	502.3	494.7	484.7
15.5°	497.1	505.3	515.3	518.7	518.7	516.7	512.3	506.0	498.5	490.8	481.1
16°	493.5	501.7	511.8	515.3	515.2	513.3	508.8	502.3	494.6	487.0	477.6
16.5°	490.2	498.1	508.2	511.8	511.6	509.8	505.2	498.7	491.1	483.5	474.0
17°	486.8	494.7	504.6	508.4	508.2	506.2	501.6	495.2	487.7	480.1	470.5
17.5°	483.6	491.4	501.2	504.9	504.9	502.9	498.2	491.8	484.4	476.7	467.0
18°	480.3	488.2	497.7	501.7	501.9	499.7	495.1	488.5	481.0	473.2	462.9
18.5°	476.7	484.8	494.5	498.6	498.7	496.6	491.6	485.0	477.5	469.5	458.1
19°	472.6	481.5	491.2	495.4	495.6	493.4	488.3	481.8	473.6	465.1	452.3
19.5°	467.8	477.8	488.0	492.1	492.5	490.2	485.0	478.1	469.3	460.0	445.7
20°	462.6	473.5	484.6	488.9	488.8	486.7	481.5	474.1	464.3	454.1	437.9
20.5°	456.4	468.8	481.1	485.3	484.7	482.7	477.7	469.8	458.6	447.5	429.2
21°	449.8	463.7	477.1	481.3	479.9	478.2	473.5	464.9	452.6	440.2	419.2



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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°	426.9	444.5	463.3	466.2	462.7	461.9	458.7	447.4	431.0	413.8	386.8
23°	418.7	437.0	457.6	460.2	455.8	455.3	452.9	440.5	423.4	403.9	376.1
23.5°	410.2	429.0	451.3	453.4	448.5	448.2	446.1	432.7	415.3	393.5	365.6
24°	400.8	420.5	444.2	446.0	441.2	440.9	438.6	424.6	406.8	383.1	355.6
24.5°	390.9	411.5	436.3	438.3	434.1	433.0	430.1	416.1	397.8	372.6	345.6
25°	380.7	402.2	426.8	430.1	426.7	425.1	420.9	407.0	388.2	362.7	335.6
25.5°	369.8	392.3	416.8	422.0	419.4	417.2	410.5	397.2	377.9	352.8	325.4
26°	358.7	381.5	405.3	413.3	411.6	409.1	399.1	386.9	367.2	343.2	315.1
26.5°	347.3	369.9	393.1	404.4	403.4	400.1	387.0	375.9	356.0	333.3	304.4
27°	335.8	357.9	380.4	394.8	394.6	390.8	375.3	364.3	345.0	323.2	293.4
27.5°	324.4	345.3	367.8	385.0	384.7	381.0	363.4	352.2	333.3	313.1	281.9
28°	313.1	332.3	355.6	374.2	374.7	370.9	352.0	339.3	321.5	302.6	270.7
28.5°	301.7	319.5	344.3	363.1	364.2	359.7	340.8	326.9	310.2	291.9	259.6
29°	290.0	306.9	333.4	351.3	354.2	348.2	330.8	314.6	298.0	280.6	249.0
29.5°	278.4	294.1	323.1	339.3	343.8	336.3	320.3	302.7	285.9	268.6	238.6
30°	266.7	282.1	312.8	327.0	333.4	324.5	310.1	291.3	274.0	256.9	228.2
30.5°	255.0	269.8	302.4	315.3	322.2	312.6	299.7	279.7	262.4	245.0	218.2
31°	242.8	258.0	291.4	303.7	310.9	301.2	289.1	268.3	250.4	233.4	208.0
31.5°	230.8	246.0	280.1	292.2	298.6	289.8	277.6	256.9	238.6	221.9	197.9
32°	218.7	234.4	268.3	281.1	286.2	278.7	266.0	245.4	226.9	210.9	187.7
32.5°	206.6	223.2	256.3	270.5	273.5	267.3	254.3	233.7	215.6	200.2	176.8
33°	194.5	212.0	244.1	259.5	260.7	256.4	242.6	221.7	203.9	189.6	166.1
33.5°	182.5	200.8	232.3	248.4	248.2	244.9	231.0	210.2	192.5	179.0	155.7
34°	170.8	190.2	221.1	237.1	235.7	233.7	220.0	199.1	181.3	168.1	145.5
34.5°	159.6	179.6	210.4	225.8	223.3	222.0	209.8	188.3	170.5	157.2	135.4
35°	149.0	169.1	199.7	214.1	210.8	210.6	199.1	177.8	159.6	146.4	125.8
35.5°	138.9	159.2	189.5	202.6	198.8	199.6	189.0	167.7	149.3	135.8	116.4
36°	129.1	149.9	179.4	191.1	187.1	188.4	178.5	158.2	139.2	125.3	107.4
36.5°	119.4	140.6	169.2	180.2	175.5	177.1	168.0	148.7	129.6	115.4	98.5
37°	110.3	131.1	158.8	169.4	164.5	166.0	157.2	139.5	119.8	105.8	89.6
37.5°	101.7	122.1	148.5	159.1	153.9	155.2	146.6	130.3	111.0	97.4	80.7
38°	93.4	113.0	138.1	148.8	143.7	144.6	136.1	121.4	102.4	89.1	71.9
38.5°	85.3	104.1	128.0	138.4	133.7	134.0	126.0	112.5	94.6	80.7	63.8
39°	77.8	95.4	118.6	128.6	124.0	124.0	116.0	103.7	86.8	72.5	56.2
39.5°	70.7	87.0	109.5	118.7	114.5	114.1	106.8	95.4	79.1	65.6	49.3
40°	64.0	79.1	101.1	109.0	105.2	104.6	98.6	87.3	71.3	58.6	43.2
40.5°	57.7	71.4	92.7	99.5	96.8	95.7	90.5	79.1	64.4	52.2	37.8
41°	51.6	64.2	84.9	90.0	88.4	86.9	82.3	70.9	58.1	46.2	33.1
41.5°	46.3	57.5	77.1	81.2	80.0	78.1	74.1	63.7	52.0	40.6	29.1
42°	41.2	51.3	69.5	72.9	71.6	69.2	65.9	56.9	46.4	35.5	25.8
42.5°	36.5	45.5	62.0	65.1	64.5	61.6	58.5	50.4	41.2	31.2	22.9
43°	32.8	40.1	54.5	57.8	57.3	54.3	51.2	44.4	36.4	27.2	20.1
43.5°	29.2	35.5	47.6	50.9	50.9	47.7	44.5	39.0	32.0	23.8	17.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	18.2	23.4	30.9	34.5	33.0	31.1	28.0	25.0	20.8	15.7	11.8
45.5°	15.6	19.5	26.7	30.2	27.9	26.6	23.7	21.4	17.8	13.6	10.6
46°	13.2	16.5	22.6	26.0	23.6	22.6	20.1	18.0	15.0	11.6	9.4
46.5°	11.1	13.8	18.3	21.7	19.7	19.0	16.9	15.2	12.6	10.5	8.2
47°	9.3	11.4	15.4	17.6	16.2	15.8	14.1	12.6	11.3	9.2	7.0
47.5°	7.8	9.4	12.7	14.6	13.4	13.1	12.7	11.3	9.9	8.1	5.8
48°	6.7	7.8	10.6	12.0	11.9	11.7	11.4	9.9	8.6	6.9	5.4
48.5°	6.1	6.7	8.7	9.7	10.4	10.4	10.0	8.7	7.2	5.8	5.2
49°	5.8	6.1	7.3	8.0	8.9	8.9	8.7	7.3	5.9	5.5	5.0
49.5°	5.5	5.8	6.5	6.8	7.5	7.5	7.2	6.1	5.6	5.2	4.8
50°	5.3	5.5	6.0	6.2	6.0	6.1	5.9	5.7	5.4	5.0	4.5
50.5°	5.0	5.3	5.7	5.8	5.7	5.8	5.7	5.5	5.1	4.8	4.2
51°	4.8	5.0	5.5	5.6	5.5	5.5	5.4	5.2	4.9	4.5	3.9
51.5°	4.5	4.8	5.2	5.3	5.2	5.2	5.1	4.9	4.6	4.2	3.7
52°	4.2	4.5	5.0	5.1	5.0	5.0	4.9	4.6	4.2	3.9	3.5
52.5°	3.9	4.1	4.7	4.8	4.7	4.7	4.6	4.3	4.0	3.7	3.3
53°	3.7	3.9	4.3	4.5	4.3	4.3	4.2	4.0	3.7	3.5	3.1
53.5°	3.5	3.6	4.0	4.1	4.0	4.0	3.9	3.8	3.5	3.3	2.9
54°	3.3	3.4	3.8	3.9	3.8	3.8	3.7	3.5	3.3	3.1	2.8
54.5°	3.1	3.2	3.6	3.7	3.5	3.5	3.5	3.3	3.1	2.9	2.6
55°	2.9	3.1	3.3	3.4	3.3	3.3	3.3	3.1	2.9	2.8	2.5
55.5°	2.7	2.9	3.1	3.2	3.1	3.1	3.1	2.9	2.8	2.6	2.3
56°	2.6	2.7	2.9	3.0	2.9	2.9	2.9	2.8	2.6	2.5	2.2
56.5°	2.4	2.5	2.8	2.8	2.8	2.8	2.7	2.6	2.5	2.3	2.1
57°	2.3	2.4	2.6	2.7	2.6	2.6	2.6	2.5	2.3	2.2	2.0
57.5°	2.1	2.2	2.4	2.5	2.4	2.4	2.4	2.3	2.2	2.1	1.9
58°	2.0	2.1	2.3	2.4	2.3	2.3	2.3	2.2	2.1	2.0	1.8
58.5°	1.9	2.0	2.2	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.7
59°	1.8	1.9	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.8	1.6
59.5°	1.7	1.8	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.4
60°	1.6	1.7	1.8	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.3
60.5°	1.4	1.6	1.7	1.8	1.7	1.7	1.7	1.6	1.6	1.4	1.3
61°	1.4	1.4	1.6	1.7	1.6	1.6	1.6	1.6	1.4	1.3	1.2
61.5°	1.3	1.3	1.4	1.6	1.4	1.4	1.4	1.4	1.3	1.2	1.1
62°	1.2	1.2	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.2	1.1
62.5°	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.0
63°	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0
63.5°	1.0	1.0	1.1	1.2	1.1	1.1	1.1	1.1	1.0	1.0	0.9
64°	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.9
64.5°	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8
65°	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8
65.5°	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7
66°	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7





TEST NUMBER: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6
68°	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5
68.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5
69°	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
69.5°	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
70.5°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
71°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
72.5°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
73°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
73.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
74°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
74.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
75°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
75.5°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
77°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
77.5°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
78°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
78.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.2	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°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
82.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
83°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	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: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**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: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	553.3	553.3	553.3	553.3	553.3	553.3
0.5°	552.0	553.1	552.8	552.8	553.0	553.4
1°	551.2	552.4	552.2	552.2	552.7	553.2
1.5°	550.3	551.6	551.4	551.6	552.2	553.0
2°	549.3	550.5	550.4	550.7	551.6	552.6
2.5°	548.2	549.5	549.4	549.8	550.8	552.1
3°	547.0	548.4	548.3	548.9	550.0	551.5
3.5°	545.7	547.0	547.0	547.7	549.2	550.8
4°	544.2	545.7	545.7	546.5	548.0	550.0
4.5°	542.8	544.1	544.2	545.1	546.9	549.1
5°	541.0	542.6	542.7	543.8	545.7	548.0
5.5°	539.4	540.8	540.9	542.3	544.4	546.9
6°	537.4	538.9	539.1	540.6	542.9	545.7
6.5°	535.5	537.0	537.3	538.7	541.3	544.3
7°	533.3	534.9	535.2	537.0	539.7	543.0
7.5°	531.1	532.7	533.1	534.9	537.8	541.3
8°	528.8	530.3	530.9	532.7	535.9	539.7
8.5°	526.3	528.0	528.5	530.5	533.9	537.8
9°	523.7	525.4	526.0	528.2	531.7	535.9
9.5°	521.1	522.8	523.4	525.6	529.4	533.9
10°	518.2	520.0	520.6	523.1	527.0	531.7
10.5°	515.3	517.0	517.7	520.3	524.4	529.3
11°	512.0	513.9	514.7	517.3	521.7	527.0
11.5°	508.7	510.5	511.3	514.1	518.8	524.4
12°	505.2	507.1	507.8	510.8	515.7	521.7
12.5°	501.4	503.2	504.0	507.0	512.2	518.7
13°	497.4	499.2	499.9	503.2	508.8	515.4
13.5°	493.3	495.2	496.0	499.3	505.0	512.0
14°	488.9	490.9	491.7	495.2	501.2	508.5
14.5°	484.8	486.7	487.5	491.1	497.1	504.8
15°	481.0	482.6	483.5	486.9	493.2	501.0
15.5°	477.4	478.9	479.8	483.2	489.3	497.1
16°	473.7	475.4	476.3	479.6	485.7	493.5
16.5°	470.1	471.9	472.7	476.2	482.4	490.2
17°	466.6	468.3	469.2	472.8	479.1	486.8
17.5°	462.8	464.6	465.6	469.4	475.7	483.6
18°	457.8	460.4	461.4	465.7	472.3	480.3
18.5°	452.2	454.7	456.0	461.3	468.3	476.7
19°	445.8	448.4	450.2	456.0	463.7	472.6
19.5°	438.4	440.8	443.2	449.9	458.3	467.8
20°	430.2	432.1	435.3	442.6	452.1	462.6
20.5°	421.2	422.9	426.5	434.5	444.9	456.4
21°	411.6	413.3	417.1	425.3	436.8	449.8



TEST NUMBER: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	379.3	384.6	385.9	393.2	407.9	426.9
23°	368.1	375.1	375.1	381.9	397.0	418.7
23.5°	356.7	364.7	364.1	370.7	386.7	410.2
24°	345.8	353.9	352.6	359.7	376.3	400.8
24.5°	334.5	342.4	341.1	349.3	366.4	390.9
25°	323.5	330.3	329.9	338.6	356.8	380.7
25.5°	312.9	318.5	318.5	328.2	347.1	369.8
26°	302.3	306.2	306.8	317.8	337.3	358.7
26.5°	291.4	294.4	295.3	307.5	327.3	347.3
27°	280.5	281.9	284.1	296.5	316.7	335.8
27.5°	269.4	269.8	272.9	285.5	305.7	324.4
28°	258.7	257.9	261.7	274.0	293.9	313.1
28.5°	247.7	245.8	251.0	262.5	282.1	301.7
29°	236.7	233.6	239.8	251.1	269.6	290.0
29.5°	225.7	222.2	228.9	240.3	258.1	278.4
30°	214.9	211.0	217.8	229.4	246.1	266.7
30.5°	203.8	200.0	206.7	218.7	235.0	255.0
31°	193.0	189.4	195.0	208.1	223.8	242.8
31.5°	182.2	179.5	183.8	198.2	212.9	230.8
32°	171.7	169.5	173.2	188.2	202.1	218.7
32.5°	161.3	159.9	162.9	178.1	191.9	206.6
33°	151.4	150.2	153.1	167.7	181.2	194.5
33.5°	141.6	140.3	143.7	157.4	170.4	182.5
34°	132.2	131.1	134.3	147.3	159.3	170.8
34.5°	123.2	122.2	125.4	137.0	148.6	159.6
35°	114.3	113.7	116.5	127.2	137.8	149.0
35.5°	105.6	105.7	108.4	117.7	127.2	138.9
36°	98.0	98.3	100.1	108.5	117.1	129.1
36.5°	90.6	91.0	92.1	99.6	107.4	119.4
37°	83.0	84.1	84.6	90.9	98.3	110.3
37.5°	75.6	77.4	77.4	82.4	89.6	101.7
38°	68.0	70.8	70.8	74.1	81.4	93.4
38.5°	61.9	64.7	64.4	66.2	73.4	85.3
39°	55.8	58.9	58.5	58.9	65.9	77.8
39.5°	50.1	53.4	52.9	52.0	58.9	70.7
40°	44.6	48.3	47.6	45.4	52.0	64.0
40.5°	39.8	43.4	42.5	39.8	45.9	57.7
41°	35.1	38.9	37.8	35.3	40.2	51.6
41.5°	30.9	35.2	34.2	31.8	35.2	46.3
42°	27.1	31.6	30.5	28.3	31.7	41.2
42.5°	23.8	27.9	27.0	24.8	28.2	36.5
43°	20.8	24.3	23.4	21.3	24.6	32.8
43.5°	18.1	20.7	19.8	18.8	21.1	29.2



TEST NUMBER: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	12.0	13.0	12.6	12.6	14.1	18.2
45.5°	10.6	11.0	10.7	11.0	12.3	15.6
46°	9.0	9.1	9.1	9.4	10.6	13.2
46.5°	7.6	7.6	7.7	8.1	9.0	11.1
47°	6.1	6.5	6.5	6.9	7.7	9.3
47.5°	5.6	5.9	5.9	6.2	6.7	7.8
48°	5.3	5.5	5.6	5.8	6.1	6.7
48.5°	5.1	5.3	5.3	5.5	5.7	6.1
49°	4.9	5.1	5.1	5.3	5.5	5.8
49.5°	4.6	4.8	4.9	5.0	5.3	5.5
50°	4.3	4.6	4.6	4.8	5.0	5.3
50.5°	4.0	4.2	4.3	4.5	4.8	5.0
51°	3.8	4.0	4.0	4.2	4.5	4.8
51.5°	3.6	3.8	3.8	3.9	4.2	4.5
52°	3.4	3.5	3.6	3.7	3.9	4.2
52.5°	3.2	3.3	3.4	3.5	3.7	3.9
53°	3.0	3.1	3.2	3.3	3.5	3.7
53.5°	2.9	3.0	3.0	3.1	3.3	3.5
54°	2.7	2.8	2.8	3.0	3.1	3.3
54.5°	2.6	2.6	2.7	2.8	2.9	3.1
55°	2.4	2.5	2.5	2.6	2.8	2.9
55.5°	2.3	2.4	2.4	2.5	2.6	2.7
56°	2.2	2.2	2.3	2.4	2.5	2.6
56.5°	2.0	2.1	2.1	2.2	2.3	2.4
57°	1.9	2.0	2.0	2.1	2.2	2.3
57.5°	1.8	1.9	1.9	2.0	2.1	2.1
58°	1.7	1.8	1.8	1.9	2.0	2.0
58.5°	1.7	1.7	1.7	1.8	1.9	1.9
59°	1.6	1.6	1.6	1.7	1.8	1.8
59.5°	1.4	1.4	1.6	1.6	1.7	1.7
60°	1.3	1.4	1.4	1.4	1.6	1.6
60.5°	1.2	1.3	1.3	1.3	1.4	1.4
61°	1.2	1.2	1.2	1.3	1.3	1.4
61.5°	1.1	1.1	1.2	1.2	1.2	1.3
62°	1.1	1.1	1.1	1.1	1.2	1.2
62.5°	1.0	1.0	1.0	1.1	1.1	1.1
63°	0.9	1.0	1.0	1.0	1.0	1.1
63.5°	0.9	0.9	0.9	1.0	1.0	1.0
64°	0.8	0.9	0.9	0.9	0.9	1.0
64.5°	0.8	0.8	0.8	0.8	0.9	0.9
65°	0.8	0.8	0.8	0.8	0.8	0.9
65.5°	0.7	0.7	0.7	0.8	0.8	0.8
66°	0.7	0.7	0.7	0.7	0.7	0.8



TEST NUMBER: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.6	0.6	0.6	0.6	0.6	0.6
68°	0.5	0.6	0.6	0.6	0.6	0.6
68.5°	0.5	0.5	0.5	0.5	0.5	0.6
69°	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.4	0.5	0.5	0.5	0.5	0.5
70°	0.4	0.4	0.4	0.4	0.5	0.5
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3	0.3
73°	0.3	0.3	0.3	0.3	0.3	0.3
73.5°	0.3	0.3	0.3	0.3	0.3	0.3
74°	0.3	0.3	0.3	0.3	0.3	0.3
74.5°	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.2	0.2
77°	0.2	0.2	0.2	0.2	0.2	0.2
77.5°	0.1	0.2	0.2	0.2	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	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.0	0.0
82°	0.1	0.1	0.1	0.1	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: P775657

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMB-1000lm-3500K

**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°	442.6	457.9	472.9	476.6	474.8	473.3	469.0	459.7	445.8	432.0	408.7
22°	434.8	451.5	468.1	471.8	469.0	467.8	464.2	454.0	438.5	423.2	397.8



44°	25.6	31.5	41.1	44.6	44.4	41.5	38.4	33.8	27.8	20.8	15.6
44.5°	21.8	27.4	35.2	38.7	38.5	36.0	32.9	29.2	24.1	18.1	13.7



66.5°	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6
67°	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6



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°	401.5	403.7	407.2	415.1	427.9	442.6
22°	390.8	393.9	396.7	404.5	418.0	434.8



44°	15.7	17.9	17.1	16.6	18.5	25.6
44.5°	13.5	15.4	14.8	14.6	16.2	21.8

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66.5°	0.6	0.7	0.7	0.7	0.7	0.7
67°	0.6	0.6	0.6	0.6	0.7	0.7

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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)