

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: P775615

Luminaire Tested: HCDJBL510CSD-HCD41TRC-1000lm-2700K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775615  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B028)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD41TRC-1000lm-2700K  
Description: 4 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

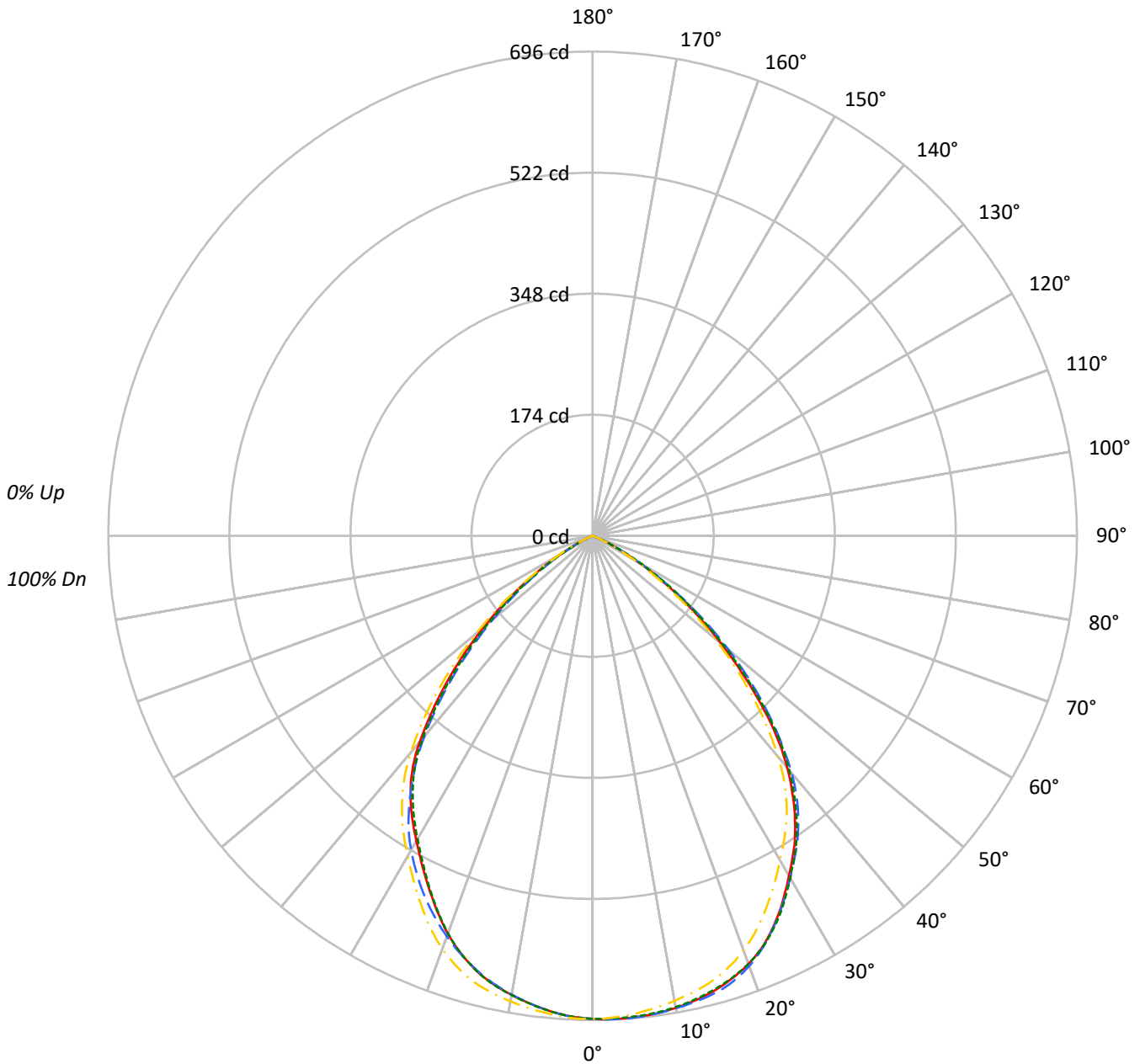
Lumens per Lamp: N/A  
Luminaire Lumens: 1211.0 lumens  
Efficiency: N/A  
Efficacy: 121.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.22  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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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### 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	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	93	91								
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81								
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72								
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52								
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47								
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43								
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41	39								
10	61	49	42	38	60	49	42	38	48	42	38	47	42	37	46	41	37	36								

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

	0°	90°	180°	270°
0°	87403	87403	87403	87403
5°	87774	87623	86713	86726
10°	88074	87920	85658	85697
15°	88180	87984	84271	84310
20°	87722	87695	81494	81414
25°	85690	85996	77470	77220
30°	82032	82541	73619	73139
35°	77954	78584	70088	69289
40°	71448	72203	63447	62494
45°	60869	61919	52468	51080
50°	47244	48497	39960	38237
55°	33153	34492	26746	24903
60°	19104	20413	13818	12207
65°	6641	7534	3752	2978
70°	221	478	221	184
75°	194	243	194	194
80°	145	217	145	145
85°	0	144	0	144

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 62755 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.6	5.4
10°-20°	186.4	15.4
20°-30°	270.5	22.3
30°-40°	300.0	24.8
40°-50°	243.6	20.1
50°-60°	122.3	10.1
60°-70°	22.2	1.8
70°-80°	0.5	0.0
80°-90°	0.1	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°	522.4	43.1
0°-40°	822.4	67.9
0°-60°	1188.2	98.1
0°-90°	1211.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1211.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	694	694	694	694	694	
5°	695	694	686	686	695	66
15°	677	675	647	647	677	191
25°	617	619	558	556	617	283
35°	507	512	456	451	507	315
45°	342	348	295	287	342	262
55°	151	157	122	114	151	136
65°	22	25	13	10	22	26
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°	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5
0.5°	694.8	694.8	694.9	695.1	694.3	694.5	694.6	694.6	694.1	694.0	694.2
1°	695.1	695.1	695.2	695.3	694.5	694.4	694.4	694.4	693.7	693.5	693.8
1.5°	695.3	695.3	695.5	695.5	694.6	694.3	694.1	693.8	693.2	693.0	693.3
2°	695.4	695.5	695.6	695.6	694.5	694.1	693.7	693.1	692.6	692.3	692.6
2.5°	695.4	695.7	695.8	695.6	694.4	693.9	693.3	692.5	691.9	691.6	691.9
3°	695.4	695.7	695.8	695.6	694.3	693.6	692.8	691.7	691.0	690.7	691.1
3.5°	695.4	695.7	695.8	695.5	694.3	693.2	692.1	690.8	689.9	689.6	690.1
4°	695.2	695.6	695.7	695.5	694.0	692.9	691.4	689.9	688.8	688.6	689.0
4.5°	695.0	695.5	695.6	695.3	693.8	692.4	690.7	688.9	687.6	687.3	687.7
5°	694.8	695.2	695.3	695.1	693.6	692.0	689.8	687.7	686.4	686.0	686.4
5.5°	694.4	695.0	695.0	694.7	693.3	691.4	688.9	686.5	684.9	684.6	685.0
6°	694.0	694.6	694.6	694.4	693.0	690.8	687.9	685.2	683.5	683.2	683.5
6.5°	693.7	694.2	694.1	693.9	692.6	690.2	686.9	683.9	682.1	681.7	682.0
7°	693.2	693.7	693.7	693.4	692.2	689.4	685.8	682.5	680.5	680.1	680.4
7.5°	692.8	693.1	693.1	692.9	691.6	688.7	684.7	681.1	678.9	678.5	678.6
8°	692.2	692.4	692.5	692.3	691.1	687.9	683.6	679.7	677.3	676.8	677.0
8.5°	691.5	691.7	691.8	691.6	690.5	687.0	682.5	678.3	675.6	675.1	675.1
9°	690.8	691.0	691.1	690.8	689.7	686.1	681.3	676.7	674.0	673.4	673.3
9.5°	690.0	690.1	690.4	689.9	688.9	685.2	680.0	675.2	672.2	671.6	671.5
10°	689.2	689.2	689.7	689.0	688.0	684.1	678.8	673.6	670.3	669.9	669.6
10.5°	688.2	688.3	689.0	688.2	687.1	682.9	677.4	672.0	668.5	668.2	667.7
11°	687.2	687.3	688.3	687.2	686.0	681.6	676.0	670.3	666.5	666.3	665.6
11.5°	686.1	686.2	687.4	686.1	684.8	680.2	674.6	668.6	664.5	664.4	663.5
12°	685.1	685.2	686.7	685.0	683.6	678.9	673.1	666.9	662.3	662.4	661.4
12.5°	683.9	684.1	685.8	683.7	682.4	677.4	671.6	665.1	660.1	660.4	659.2
13°	682.7	683.0	685.0	682.4	681.1	675.9	670.1	663.3	657.8	658.2	656.8
13.5°	681.3	681.7	684.0	681.0	679.7	674.2	668.4	661.4	655.3	656.0	654.3
14°	679.9	680.3	683.0	679.6	678.3	672.6	666.6	659.3	652.7	653.7	651.6
14.5°	678.5	678.8	681.8	678.1	676.8	670.8	664.7	657.0	649.9	651.1	648.9
15°	676.8	677.3	680.6	676.4	675.3	668.9	662.7	654.7	646.8	648.5	646.1
15.5°	675.1	675.5	679.1	674.6	673.7	667.0	660.6	652.1	643.6	645.7	643.1
16°	673.3	673.5	677.6	672.6	671.9	664.9	658.3	649.5	640.2	642.6	639.8
16.5°	671.3	671.4	675.7	670.5	670.1	662.6	655.8	646.6	636.7	639.4	636.8
17°	669.2	669.2	673.7	668.2	668.2	660.3	653.1	643.7	633.0	636.2	633.7
17.5°	667.0	666.9	671.5	665.9	666.2	657.7	650.3	640.4	629.3	632.7	630.4
18°	664.9	664.5	669.2	663.4	664.1	655.2	647.6	636.9	625.5	629.1	627.1
18.5°	662.6	662.0	666.7	660.8	661.9	652.4	644.5	633.5	621.5	625.1	623.6
19°	660.3	659.4	664.0	658.2	659.7	649.7	641.2	629.8	617.3	621.2	620.1
19.5°	657.8	656.7	661.2	655.5	657.3	646.8	637.8	625.9	613.0	617.1	616.5
20°	655.0	653.8	658.3	652.6	654.8	643.7	634.3	621.9	608.5	612.8	612.9
20.5°	652.2	650.8	655.0	649.5	652.0	640.4	630.6	617.5	604.0	608.1	609.0
21°	649.1	647.6	651.6	646.4	649.2	637.0	626.7	613.0	599.0	603.4	605.1



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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°	638.7	637.0	640.1	635.8	639.5	625.7	614.0	598.3	583.9	588.3	592.9
23°	634.9	633.2	635.8	632.1	635.8	621.7	609.4	593.3	578.7	583.0	588.7
23.5°	630.7	629.3	631.5	628.3	631.9	617.5	604.8	588.0	573.5	577.7	584.6
24°	626.4	625.3	627.0	624.4	627.9	613.2	599.9	582.7	568.2	572.4	580.4
24.5°	621.9	621.3	622.5	620.5	623.7	608.7	595.1	577.3	563.1	566.9	576.1
25°	617.1	617.2	617.9	616.6	619.3	604.4	590.2	571.9	557.9	561.5	571.6
25.5°	612.4	613.0	613.2	612.5	614.7	599.8	585.3	566.3	552.6	556.0	567.0
26°	607.5	608.8	608.3	608.4	610.1	595.2	580.3	561.1	547.5	550.5	562.3
26.5°	602.5	604.6	603.5	604.3	605.3	590.5	575.2	555.6	542.3	544.9	557.5
27°	597.3	600.3	598.6	600.0	600.2	585.6	570.2	550.2	537.1	539.3	552.5
27.5°	591.9	595.9	593.6	595.5	595.1	580.6	565.1	544.8	531.8	533.9	547.4
28°	586.5	591.3	588.5	591.0	589.8	575.6	559.9	539.4	526.6	528.5	542.4
28.5°	581.0	586.7	583.3	586.3	584.3	570.5	554.6	534.0	521.6	523.2	537.2
29°	575.5	581.9	578.0	581.5	578.9	565.3	549.2	528.7	516.5	518.0	532.0
29.5°	570.1	577.2	573.0	576.7	573.5	560.2	544.0	523.5	511.5	512.7	526.8
30°	564.5	572.5	567.9	571.7	568.0	554.9	538.8	518.3	506.6	507.5	521.5
30.5°	559.1	567.6	562.7	566.7	562.3	549.8	533.6	513.1	501.8	502.4	516.3
31°	553.6	562.6	557.4	561.7	556.9	544.8	528.5	508.2	497.0	497.4	510.8
31.5°	548.4	557.7	552.4	556.5	551.5	539.6	523.4	503.4	492.1	492.3	505.0
32°	542.8	552.6	547.3	551.4	546.2	534.5	518.4	498.5	487.3	487.4	498.9
32.5°	537.7	547.6	542.4	546.2	540.8	529.5	513.4	493.5	482.6	482.2	492.6
33°	532.2	542.2	537.1	541.0	535.6	524.4	508.3	488.5	477.5	476.9	485.8
33.5°	526.4	536.6	532.0	535.4	529.9	519.2	502.9	483.3	472.3	471.3	478.8
34°	520.1	530.4	526.5	529.4	524.1	513.5	497.5	478.1	467.0	465.7	471.8
34.5°	513.8	524.1	520.7	523.0	517.9	507.8	491.9	472.7	461.6	459.9	464.4
35°	507.4	517.4	514.8	516.4	511.5	501.6	486.2	467.1	456.2	454.1	457.1
35.5°	500.8	510.7	509.0	509.8	505.0	495.5	480.3	461.5	450.6	448.0	449.8
36°	494.2	503.8	503.0	502.7	498.6	489.2	474.0	455.8	444.8	441.9	442.3
36.5°	487.5	496.8	496.7	495.7	491.4	482.4	467.5	449.8	438.8	435.3	434.7
37°	480.3	489.5	490.0	488.4	484.5	475.4	460.8	443.5	432.5	428.7	427.1
37.5°	473.2	482.0	483.5	481.0	477.2	468.1	454.0	437.2	426.0	421.8	419.4
38°	465.5	474.2	476.4	473.4	469.7	460.8	447.0	430.2	419.1	414.1	411.5
38.5°	458.0	466.3	468.9	465.5	462.3	453.4	439.3	422.7	411.7	405.9	403.0
39°	450.7	458.6	461.5	457.8	455.0	445.7	431.3	415.0	403.6	397.5	393.8
39.5°	442.8	450.4	453.5	449.7	447.3	437.9	423.2	406.8	395.1	389.0	384.7
40°	434.9	441.9	444.8	441.3	439.5	429.6	414.8	398.4	386.2	380.0	375.6
40.5°	426.5	433.1	436.0	432.5	431.3	421.1	406.1	389.9	377.2	370.6	366.3
41°	418.5	424.2	427.1	423.6	423.2	412.4	397.2	381.0	368.2	361.3	357.1
41.5°	409.8	415.1	417.9	414.6	414.7	403.5	388.4	372.2	359.0	352.1	347.6
42°	401.0	406.0	408.8	405.7	406.1	394.3	379.4	363.2	350.0	342.4	338.1
42.5°	391.5	396.7	399.7	396.7	396.9	385.2	370.3	354.1	340.8	332.6	328.4
43°	382.3	387.5	390.5	387.4	387.7	376.0	361.2	344.9	331.7	323.0	318.9
43.5°	372.5	378.0	381.0	378.1	377.7	366.4	351.8	335.9	322.5	313.4	309.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	342.0	349.4	352.6	349.8	347.9	337.4	323.3	308.1	294.8	284.5	280.2
45.5°	331.7	339.8	343.0	340.7	337.5	327.4	313.8	299.1	285.6	275.1	270.8
46°	321.4	330.2	333.4	331.1	327.2	317.2	304.1	289.8	276.3	265.6	261.1
46.5°	310.9	320.4	323.8	321.2	317.0	307.2	294.5	280.7	267.3	256.4	251.6
47°	300.7	310.6	314.0	311.2	306.8	297.1	284.7	271.4	258.0	247.2	242.0
47.5°	290.5	300.5	304.2	301.6	296.5	287.0	275.1	262.3	248.9	237.8	232.7
48°	280.4	290.5	294.5	291.7	286.7	276.9	265.4	253.0	239.9	228.8	223.3
48.5°	270.3	280.6	284.6	281.8	276.9	266.8	256.1	244.0	230.9	220.0	214.1
49°	260.8	270.8	275.0	271.9	267.1	257.1	246.5	234.7	221.8	210.8	204.9
49.5°	250.9	261.0	265.3	262.1	257.3	247.4	237.1	225.6	212.9	202.0	196.0
50°	241.3	251.1	255.5	252.2	247.7	237.7	227.7	216.4	204.1	193.3	187.0
50.5°	231.6	241.1	245.8	242.5	238.4	227.9	218.4	207.3	195.5	184.8	178.4
51°	222.3	231.5	235.8	232.6	228.9	218.5	209.0	198.4	186.7	176.1	169.9
51.5°	212.8	222.1	226.3	223.2	219.6	209.3	199.9	189.6	178.3	167.8	161.7
52°	203.8	212.5	216.7	213.7	210.3	200.0	190.9	180.9	170.0	159.6	153.5
52.5°	194.5	203.0	207.1	204.4	201.0	191.2	182.0	172.0	161.6	151.6	145.5
53°	185.7	193.7	197.6	195.1	192.0	182.1	173.0	163.5	153.4	143.4	137.7
53.5°	176.6	184.6	187.9	185.8	183.1	173.3	164.4	155.2	145.3	135.6	130.3
54°	168.1	175.6	178.5	176.6	174.3	164.6	155.9	146.9	137.3	127.8	122.7
54.5°	159.6	166.5	169.3	167.8	165.6	156.3	147.5	138.8	129.5	120.3	115.3
55°	151.1	158.0	160.4	159.0	157.2	148.0	139.4	130.7	121.9	112.9	108.3
55.5°	142.7	149.3	151.3	150.5	149.0	139.7	131.2	122.7	114.3	105.8	101.4
56°	134.7	140.8	142.6	142.0	140.5	131.7	123.1	115.1	107.0	98.8	95.0
56.5°	126.7	132.4	134.1	133.5	132.4	123.7	115.5	107.7	99.8	92.4	88.7
57°	118.7	124.3	125.6	125.4	124.3	116.1	107.9	100.2	93.2	86.0	82.4
57.5°	111.1	116.4	117.3	117.4	116.7	108.7	100.5	93.4	86.6	79.6	76.0
58°	103.7	108.5	109.3	109.7	109.0	101.4	93.8	86.7	80.0	73.2	69.7
58.5°	96.5	101.0	101.7	102.1	101.6	94.7	87.1	79.9	73.4	66.7	64.0
59°	89.5	93.7	94.2	94.6	94.8	88.1	80.4	73.1	66.8	61.0	58.5
59.5°	82.5	86.6	87.0	87.5	87.9	81.4	73.7	66.4	60.7	55.4	53.0
60°	75.9	79.6	80.1	80.6	81.1	74.7	67.1	60.3	54.9	50.0	48.0
60.5°	69.4	72.8	73.3	73.9	74.2	68.1	61.2	54.5	49.4	45.0	43.1
61°	63.1	66.4	66.8	67.2	67.4	62.1	55.2	49.0	44.0	40.0	38.5
61.5°	57.3	60.2	60.8	61.1	61.2	56.2	49.8	43.7	38.9	35.5	34.2
62°	51.4	54.3	55.0	55.1	55.3	50.7	44.6	38.5	34.1	31.2	30.1
62.5°	45.9	48.5	49.4	49.4	49.5	45.3	39.5	33.8	29.6	27.1	26.3
63°	40.7	43.1	44.0	43.9	44.1	40.0	34.7	29.5	25.2	23.4	22.8
63.5°	35.7	37.9	39.0	38.6	38.9	35.2	30.4	25.3	21.4	19.9	19.5
64°	31.2	33.6	34.2	34.0	34.1	30.6	26.3	21.6	17.9	16.8	16.7
64.5°	26.7	29.4	30.2	29.9	29.5	26.4	22.5	18.0	14.7	14.1	14.0
65°	22.3	25.1	26.2	25.8	25.3	22.5	19.0	14.9	12.6	12.1	12.1
65.5°	17.8	20.8	22.2	21.7	21.4	18.8	15.7	12.8	10.6	10.2	10.2
66°	13.3	16.6	18.2	17.6	17.8	15.5	13.4	10.6	8.5	8.3	8.4





TEST NUMBER: P775615

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.5	8.0	9.4	9.0	10.1	8.6	6.7	4.1	3.0	3.2	3.3
68°	3.7	5.9	7.0	6.8	7.8	6.3	4.4	3.0	1.9	2.2	2.2
68.5°	2.9	4.2	5.0	4.9	5.6	4.0	3.0	2.0	1.1	1.4	1.4
69°	2.1	3.5	3.4	3.4	3.3	2.7	2.0	1.3	0.7	0.9	0.9
69.5°	1.3	2.8	2.7	2.7	2.1	1.7	1.1	0.8	0.6	0.6	0.6
70°	0.6	2.1	2.0	2.0	1.3	0.9	0.7	0.6	0.6	0.6	0.6
70.5°	0.5	1.3	1.3	1.3	0.8	0.6	0.6	0.5	0.5	0.6	0.6
71°	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6
71.5°	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5
73.5°	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5
74°	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5
74.5°	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
77°	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4
77.5°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
80°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
80.5°	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
81°	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
81.5°	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
82°	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
82.5°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
83°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
84°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
84.5°	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1
85°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
85.5°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.1	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: P775615  
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-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	0.1	0.1



TEST NUMBER: P775615

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	694.5	694.5	694.5	694.5	694.5	694.5
0.5°	694.4	693.9	694.3	694.6	694.9	694.8
1°	694.0	693.5	694.1	694.6	695.1	695.1
1.5°	693.5	693.0	693.8	694.6	695.1	695.3
2°	693.0	692.4	693.3	694.3	695.0	695.4
2.5°	692.3	691.7	692.8	693.9	694.9	695.4
3°	691.5	690.9	692.0	693.4	694.7	695.4
3.5°	690.6	690.0	691.2	692.8	694.4	695.4
4°	689.5	688.9	690.3	692.2	694.0	695.2
4.5°	688.3	687.8	689.2	691.4	693.6	695.0
5°	687.0	686.5	688.1	690.5	693.2	694.8
5.5°	685.6	685.1	686.9	689.6	692.7	694.4
6°	684.1	683.7	685.6	688.6	692.1	694.0
6.5°	682.6	682.2	684.3	687.6	691.4	693.7
7°	681.0	680.7	683.0	686.6	690.8	693.2
7.5°	679.4	679.1	681.5	685.5	690.0	692.8
8°	677.8	677.5	680.1	684.4	689.3	692.2
8.5°	676.1	675.9	678.6	683.3	688.4	691.5
9°	674.4	674.2	677.1	682.1	687.4	690.8
9.5°	672.7	672.4	675.5	680.8	686.3	690.0
10°	671.0	670.6	673.8	679.5	685.2	689.2
10.5°	669.2	668.8	672.2	678.2	684.0	688.2
11°	667.4	666.9	670.5	676.9	682.7	687.2
11.5°	665.5	664.8	668.6	675.5	681.4	686.1
12°	663.6	662.8	666.8	674.1	680.1	685.1
12.5°	661.6	660.5	664.8	672.5	678.6	683.9
13°	659.5	658.2	662.7	671.0	677.0	682.7
13.5°	657.4	655.6	660.6	669.2	675.4	681.3
14°	655.0	652.9	658.2	667.3	673.6	679.9
14.5°	652.5	650.1	655.6	665.3	671.7	678.5
15°	649.9	647.1	652.9	663.0	669.7	676.8
15.5°	647.0	643.9	650.0	660.6	667.4	675.1
16°	644.0	640.4	646.9	658.1	665.1	673.3
16.5°	640.7	636.9	643.6	655.4	662.5	671.3
17°	637.4	633.2	640.1	652.5	660.0	669.2
17.5°	634.0	629.4	636.5	649.4	657.3	667.0
18°	630.3	625.4	632.8	646.3	654.5	664.9
18.5°	626.5	621.3	629.1	642.9	651.6	662.6
19°	622.5	617.1	625.0	639.3	648.7	660.3
19.5°	618.3	612.6	620.8	635.6	645.6	657.8
20°	613.9	607.9	616.4	631.7	642.4	655.0
20.5°	609.3	603.2	611.9	627.7	638.8	652.2
21°	604.6	598.2	607.2	623.4	635.1	649.1

TEST NUMBER: P775615

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	589.4	582.9	592.3	609.7	623.5	638.7
23°	584.1	577.5	587.0	604.7	619.3	634.9
23.5°	578.7	572.2	581.9	599.7	615.1	630.7
24°	573.3	566.9	576.6	594.7	610.6	626.4
24.5°	567.7	561.5	571.3	589.5	606.0	621.9
25°	562.2	556.1	566.0	584.2	601.3	617.1
25.5°	556.7	550.6	560.8	579.1	596.8	612.4
26°	550.9	545.3	555.2	573.9	592.0	607.5
26.5°	545.2	539.8	549.9	568.7	587.1	602.5
27°	539.6	534.4	544.5	563.3	582.2	597.3
27.5°	534.1	529.0	539.2	558.0	577.2	591.9
28°	528.6	523.8	533.7	552.5	572.0	586.5
28.5°	523.2	518.6	528.6	547.2	566.9	581.0
29°	517.7	513.2	523.4	541.9	561.6	575.5
29.5°	512.4	508.2	518.2	536.8	556.4	570.1
30°	507.3	503.3	513.0	531.6	551.1	564.5
30.5°	502.3	498.3	508.1	526.5	546.1	559.1
31°	497.2	493.4	503.2	521.4	541.1	553.6
31.5°	492.0	488.3	498.1	516.5	535.9	548.4
32°	487.0	483.4	493.1	511.2	530.7	542.8
32.5°	481.9	478.4	488.1	506.2	525.6	537.7
33°	476.4	473.1	482.9	501.0	520.4	532.2
33.5°	470.8	467.7	477.5	495.4	514.8	526.4
34°	465.1	462.1	472.1	489.7	508.8	520.1
34.5°	459.4	456.6	466.3	483.9	502.5	513.8
35°	453.4	451.0	460.6	477.9	496.2	507.4
35.5°	447.5	445.3	454.9	471.9	489.7	500.8
36°	441.1	439.2	449.1	465.5	483.1	494.2
36.5°	434.6	433.0	443.0	459.3	476.2	487.5
37°	427.6	426.6	436.5	452.6	469.0	480.3
37.5°	420.8	420.1	430.0	445.5	461.6	473.2
38°	413.4	413.1	423.2	438.4	454.1	465.5
38.5°	405.3	405.6	415.9	431.1	446.6	458.0
39°	396.9	397.7	408.1	423.2	438.8	450.7
39.5°	388.4	389.3	399.8	414.8	430.9	442.8
40°	379.0	380.4	391.2	406.1	422.6	434.9
40.5°	369.7	371.3	382.4	397.4	414.1	426.5
41°	360.2	362.0	373.5	388.5	405.1	418.5
41.5°	350.8	352.5	364.3	379.5	395.9	409.8
42°	341.1	343.5	355.4	370.4	387.1	401.0
42.5°	331.4	334.0	346.2	361.1	377.8	391.5
43°	321.7	324.8	337.1	351.8	368.5	382.3
43.5°	312.3	315.0	327.8	342.4	358.7	372.5



TEST NUMBER: P775615

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	282.6	287.0	300.0	313.8	329.6	342.0
45.5°	273.3	277.5	290.7	304.3	319.7	331.7
46°	263.5	268.3	281.6	294.7	309.7	321.4
46.5°	254.0	259.0	272.2	284.8	299.5	310.9
47°	244.6	249.8	263.0	275.3	289.4	300.7
47.5°	235.5	240.3	253.6	265.7	279.4	290.5
48°	226.2	231.3	244.3	256.2	269.4	280.4
48.5°	217.2	222.1	234.9	246.5	259.3	270.3
49°	208.0	213.1	225.7	237.4	249.6	260.8
49.5°	199.6	204.2	216.5	227.8	239.8	250.9
50°	190.5	195.3	207.3	218.4	230.1	241.3
50.5°	181.9	186.4	198.0	209.0	220.3	231.6
51°	173.3	177.8	189.2	199.9	210.8	222.3
51.5°	164.9	169.3	180.3	190.7	201.5	212.8
52°	156.8	161.0	171.6	181.9	192.5	203.8
52.5°	148.6	152.8	162.8	172.9	183.3	194.5
53°	140.6	144.5	154.4	164.1	174.5	185.7
53.5°	132.8	136.5	146.0	155.2	165.8	176.6
54°	125.1	128.7	137.7	146.8	157.2	168.1
54.5°	117.5	121.0	129.7	138.6	148.9	159.6
55°	110.3	113.5	121.7	130.2	140.6	151.1
55.5°	103.2	106.0	113.8	121.9	132.6	142.7
56°	96.3	98.9	106.2	114.3	124.6	134.7
56.5°	89.8	91.9	98.8	106.7	117.0	126.7
57°	83.4	85.1	91.6	99.2	109.5	118.7
57.5°	77.0	78.3	84.4	91.9	102.0	111.1
58°	70.6	72.1	77.9	84.9	95.0	103.7
58.5°	64.7	65.8	71.2	78.2	88.3	96.5
59°	59.0	59.8	64.9	71.7	81.6	89.5
59.5°	53.5	54.1	58.8	65.5	75.2	82.5
60°	48.3	48.5	53.0	59.3	69.0	75.9
60.5°	43.4	43.3	47.5	53.8	62.8	69.4
61°	38.5	38.1	42.1	48.3	56.9	63.1
61.5°	34.1	33.9	37.1	43.2	51.4	57.3
62°	29.9	29.9	33.2	38.1	46.0	51.4
62.5°	26.0	25.9	29.2	34.0	40.7	45.9
63°	22.5	21.9	25.3	30.1	35.9	40.7
63.5°	19.2	17.8	21.3	26.2	31.9	35.7
64°	16.3	14.8	17.4	22.3	28.0	31.2
64.5°	13.7	12.3	14.4	18.4	24.1	26.7
65°	11.9	10.0	11.8	15.4	20.1	22.3
65.5°	10.0	8.1	9.5	12.6	16.2	17.8
66°	8.1	6.4	7.5	10.1	13.1	13.3



TEST NUMBER: P775615

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.2	3.0	3.3	4.5	5.9	4.5
68°	2.2	2.3	2.6	3.2	4.2	3.7
68.5°	1.4	1.6	1.9	2.5	3.4	2.9
69°	0.9	0.8	1.3	1.8	2.7	2.1
69.5°	0.6	0.6	0.6	1.2	2.0	1.3
70°	0.6	0.5	0.5	0.5	1.2	0.6
70.5°	0.6	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.4	0.4	0.5	0.5
72.5°	0.5	0.5	0.4	0.4	0.4	0.5
73°	0.5	0.4	0.4	0.4	0.4	0.5
73.5°	0.5	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.3	0.3	0.3	0.4
76°	0.4	0.4	0.3	0.3	0.3	0.4
76.5°	0.4	0.3	0.3	0.3	0.3	0.3
77°	0.4	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.2	0.2	0.3
79.5°	0.3	0.3	0.2	0.2	0.2	0.2
80°	0.3	0.2	0.2	0.2	0.2	0.2
80.5°	0.2	0.2	0.2	0.2	0.2	0.2
81°	0.2	0.2	0.2	0.2	0.2	0.2
81.5°	0.2	0.2	0.2	0.2	0.2	0.2
82°	0.2	0.2	0.2	0.2	0.1	0.2
82.5°	0.2	0.2	0.2	0.1	0.1	0.1
83°	0.2	0.2	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.1	0.1	0.1	0.1
84°	0.1	0.1	0.1	0.1	0.1	0.1
84.5°	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.1	0.0
85.5°	0.1	0.1	0.1	0.1	0.0	0.0
86°	0.1	0.1	0.1	0.1	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: P775615  
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.1	0.1	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°	645.8	644.2	647.9	643.0	646.2	633.4	622.6	608.3	594.0	598.4	601.1
22°	642.5	640.6	644.1	639.5	643.0	629.7	618.5	603.4	589.0	593.4	597.1



44°	362.5	368.6	371.6	368.8	368.2	356.6	342.2	326.5	313.1	303.7	299.6
44.5°	351.8	359.1	362.1	359.5	357.7	346.9	332.8	317.4	304.0	293.9	289.9



66.5°	9.9	13.3	14.9	14.4	14.6	13.2	11.2	8.4	6.4	6.3	6.5
67°	6.8	10.5	12.0	11.5	12.3	10.9	8.9	6.3	4.4	4.4	4.6



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1



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21.5°	599.7	593.3	602.4	618.9	631.4	645.8
22°	594.5	588.0	597.4	614.4	627.5	642.5



44°	302.0	305.7	318.4	333.0	349.1	362.5
44.5°	292.2	296.2	309.2	323.4	339.5	351.8

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66.5°	6.2	5.0	5.8	8.0	10.3	9.9
67°	4.4	3.8	4.4	6.1	7.9	6.8

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89°	0.1	0.1	0.0	0.0	0.0	0.0
89.5°	0.1	0.1	0.0	0.0	0.0	0.0

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(END OF REPORT)