

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: P775710

Luminaire Tested: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775710
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-HCD4TSQMW-1000lm-2700K
Description: 4 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

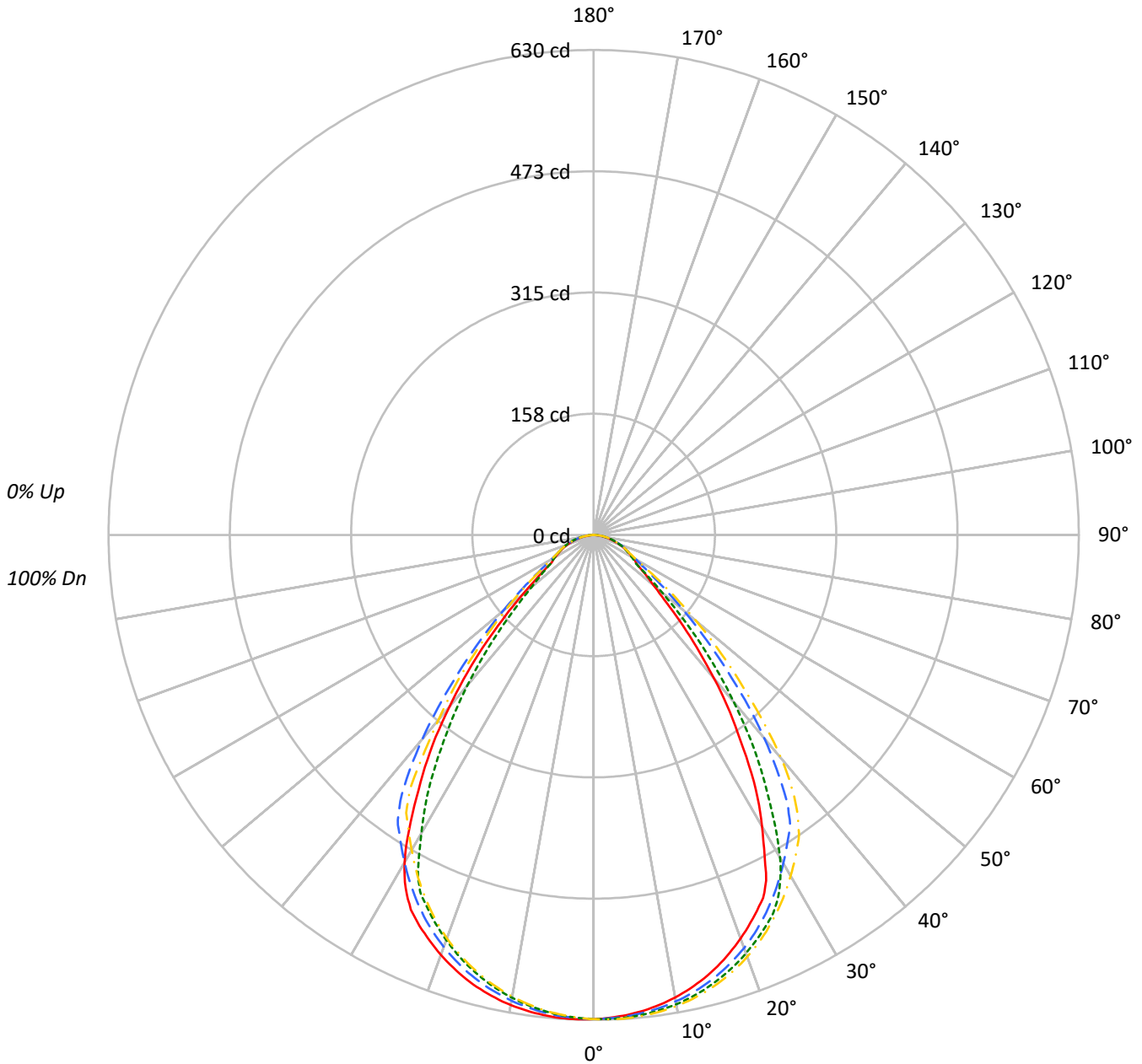
Lumens per Lamp: N/A
Luminaire Lumens: 1040.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.13 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): 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					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			
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	88	101	96	91	86	92	88	85	89	86	83	86	83	81	79					79			
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70					70			
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63					63			
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	59	57					57			
6	79	67	60	55	77	67	59	54	65	59	54	63	58	53	62	57	53	51					51			
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47					47			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43					43			
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39					39			
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	41	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	62162	62162	62162	62162
5°	61834	62260	62320	61864
10°	61224	62127	62238	61284
15°	60210	61684	61858	60323
20°	58673	60829	61050	58893
25°	56799	59667	59841	57028
30°	49876	55218	56039	51109
35°	40917	46287	47288	42474
40°	31380	36502	37599	32928
45°	22058	26489	27551	23498
50°	15608	17730	18637	16161
55°	12356	12201	12924	12614
60°	11584	11228	11426	11565
65°	10899	10759	10829	11156
70°	10057	10317	10202	10808
75°	9051	9777	9395	10426
80°	7172	9050	8140	9790
85°	3516	7372	4877	8619

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 37252 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.4	5.7
10°-20°	168.0	16.2
20°-30°	244.9	23.5
30°-40°	246.3	23.7
40°-50°	161.5	15.5
50°-60°	78.3	7.5
60°-70°	47.5	4.6
70°-80°	27.4	2.6
80°-90°	6.9	0.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	472.2	45.4
0°-40°	718.5	69.1
0°-60°	958.2	92.1
0°-90°	1040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1040.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	629	629	629	629	629	
5°	623	628	628	624	623	59
15°	588	603	604	590	588	166
25°	521	547	549	523	521	235
35°	339	384	392	352	339	211
45°	158	190	197	168	158	124
55°	72	71	75	73	72	67
65°	47	46	46	48	47	46
75°	24	26	25	27	24	25
85°	3	6	4	8	3	5
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°	628.9	628.9	628.9	628.9	628.9	628.9	628.9	628.9	628.9	628.9	628.9
0.5°	628.8	628.6	628.7	628.7	629.1	629.2	629.4	629.5	629.3	628.9	628.6
1°	628.5	628.3	628.6	628.8	629.2	629.4	629.6	629.7	629.4	628.9	628.5
1.5°	628.0	628.0	628.5	628.8	629.2	629.5	629.8	629.8	629.5	628.9	628.3
2°	627.5	627.6	628.3	628.8	629.2	629.5	629.8	629.8	629.5	628.8	628.0
2.5°	627.0	627.2	628.0	628.6	629.1	629.5	629.8	629.8	629.5	628.7	627.7
3°	626.3	626.6	627.6	628.4	628.8	629.4	629.7	629.8	629.3	628.5	627.3
3.5°	625.7	626.0	627.2	628.2	628.6	629.2	629.6	629.6	629.1	628.2	626.8
4°	625.0	625.4	626.7	627.9	628.3	629.0	629.4	629.5	628.9	627.8	626.4
4.5°	624.1	624.6	626.1	627.5	628.0	628.6	629.2	629.2	628.6	627.4	625.8
5°	623.2	623.8	625.4	627.0	627.5	628.3	628.8	628.8	628.1	626.9	625.0
5.5°	622.3	622.9	624.7	626.5	627.0	627.8	628.4	628.4	627.7	626.4	624.3
6°	621.3	622.0	624.0	625.9	626.4	627.2	627.9	627.9	627.1	625.7	623.5
6.5°	620.2	621.0	623.2	625.3	625.7	626.7	627.3	627.3	626.4	625.0	622.6
7°	618.9	619.8	622.3	624.6	624.9	626.0	626.7	626.7	625.8	624.3	621.6
7.5°	617.6	618.6	621.3	623.8	624.1	625.3	626.0	625.9	625.0	623.4	620.6
8°	616.3	617.4	620.1	622.9	623.2	624.5	625.2	625.1	624.2	622.5	619.5
8.5°	614.8	615.9	619.1	622.0	622.3	623.6	624.3	624.3	623.3	621.5	618.3
9°	613.3	614.5	617.9	621.0	621.3	622.7	623.4	623.4	622.3	620.5	617.1
9.5°	611.7	613.0	616.6	619.8	620.2	621.7	622.4	622.3	621.2	619.3	615.8
10°	610.0	611.5	615.2	618.7	619.0	620.5	621.4	621.3	620.1	618.1	614.4
10.5°	608.2	609.8	613.8	617.4	617.7	619.3	620.2	620.1	618.9	616.9	612.9
11°	606.4	608.0	612.3	616.1	616.4	618.0	619.0	618.9	617.7	615.5	611.3
11.5°	604.5	606.2	610.7	614.7	614.9	616.7	617.7	617.5	616.3	614.1	609.7
12°	602.4	604.3	609.0	613.2	613.4	615.4	616.4	616.1	614.8	612.6	608.0
12.5°	600.2	602.3	607.2	611.6	611.8	613.9	614.9	614.6	613.3	611.0	606.2
13°	598.0	600.2	605.4	610.1	610.2	612.2	613.4	613.1	611.7	609.4	604.4
13.5°	595.8	598.0	603.6	608.3	608.5	610.7	611.8	611.4	610.0	607.6	602.4
14°	593.5	595.7	601.4	606.6	606.7	608.9	610.1	609.7	608.2	605.7	600.3
14.5°	591.0	593.3	599.4	604.7	604.8	607.0	608.3	608.0	606.4	603.8	598.2
15°	588.4	590.9	597.2	602.8	602.8	605.2	606.5	606.0	604.5	601.9	596.0
15.5°	585.7	588.4	595.0	600.7	600.7	603.3	604.6	604.1	602.4	599.7	593.7
16°	583.0	585.8	592.6	598.6	598.5	601.0	602.6	602.0	600.2	597.6	591.4
16.5°	580.1	583.1	590.2	596.3	596.2	598.9	600.4	599.8	598.0	595.3	588.9
17°	577.2	580.3	587.8	594.1	593.9	596.6	598.2	597.7	595.8	593.0	586.4
17.5°	574.1	577.4	585.2	591.8	591.5	594.4	595.9	595.4	593.3	590.6	583.8
18°	571.1	574.5	582.5	589.3	589.0	592.0	593.5	592.9	590.8	588.1	581.1
18.5°	567.8	571.3	579.8	586.8	586.5	589.4	591.1	590.4	588.4	585.6	578.3
19°	564.6	568.2	576.9	584.3	583.8	586.7	588.6	587.8	585.8	582.9	575.5
19.5°	561.2	564.9	574.0	581.5	581.1	584.3	586.0	585.1	583.2	580.1	572.6
20°	557.8	561.7	571.0	578.7	578.3	581.4	583.2	582.5	580.4	577.3	569.5
20.5°	554.4	558.3	567.8	575.8	575.4	578.6	580.5	579.6	577.5	574.4	566.3
21°	550.9	554.8	564.6	572.9	572.4	575.7	577.6	576.7	574.6	571.5	563.2



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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°	539.7	544.0	554.5	563.5	563.3	566.6	568.4	567.7	565.5	562.1	553.1
23°	535.9	540.3	550.8	560.4	560.0	563.4	565.2	564.5	562.3	558.8	549.5
23.5°	532.1	536.4	547.1	557.1	556.7	560.2	561.9	561.2	559.2	555.4	545.8
24°	528.0	532.5	543.4	553.7	553.4	556.9	558.5	557.9	555.9	552.0	542.1
24.5°	524.5	528.7	539.6	550.3	550.0	553.5	554.9	554.5	552.4	548.6	538.3
25°	520.8	524.7	535.6	546.7	547.1	550.1	551.3	551.0	548.7	545.1	534.3
25.5°	514.8	520.7	531.6	543.1	543.1	546.6	547.7	547.6	545.3	541.5	530.4
26°	508.2	516.8	527.5	539.5	537.7	542.9	543.9	544.0	541.9	537.8	526.2
26.5°	502.0	513.1	523.4	535.8	533.1	539.4	540.1	540.2	535.8	534.0	522.1
27°	492.7	508.4	519.2	531.9	527.8	536.1	536.2	536.4	531.1	530.0	517.9
27.5°	482.8	501.2	514.9	528.5	521.8	531.5	532.3	532.9	525.9	526.4	513.6
28°	473.1	495.4	510.5	524.7	515.1	526.0	528.1	527.9	519.9	521.9	509.2
28.5°	463.7	487.4	506.1	519.0	508.2	521.4	524.1	522.1	513.5	516.0	504.9
29°	454.6	478.0	501.7	513.9	500.7	515.7	520.0	517.5	506.5	511.1	500.3
29.5°	445.8	468.5	497.3	508.8	492.7	509.5	515.8	511.9	499.1	505.7	495.9
30°	437.0	459.0	492.7	502.9	483.8	503.0	511.5	505.6	491.0	499.6	491.2
30.5°	428.4	449.7	488.1	496.5	474.4	496.1	507.3	499.1	482.5	493.0	486.6
31°	419.8	440.6	483.5	489.4	464.7	488.4	503.0	492.1	473.3	486.1	482.0
31.5°	411.0	432.0	478.8	482.3	454.5	480.8	498.6	484.6	463.3	478.7	477.4
32°	401.4	423.3	474.3	474.6	444.2	472.4	494.1	476.6	453.0	471.0	472.7
32.5°	392.1	414.9	469.5	466.5	433.7	463.2	489.6	468.3	442.7	462.5	467.9
33°	381.9	406.2	465.1	457.5	423.3	453.7	485.0	459.2	432.4	453.7	463.2
33.5°	371.3	397.5	460.8	448.7	413.1	443.8	480.7	449.7	421.8	444.2	458.5
34°	360.2	388.2	456.4	439.1	403.1	433.7	476.4	439.8	411.4	434.5	454.4
34.5°	349.8	378.7	449.4	429.0	393.3	423.6	470.8	429.6	401.5	424.5	449.1
35°	339.1	368.9	441.5	418.9	383.6	413.5	463.6	419.2	391.9	414.1	441.2
35.5°	329.0	358.6	434.7	408.9	373.9	403.5	457.3	409.4	382.4	404.1	434.0
36°	319.0	348.0	426.1	399.0	364.3	393.8	451.0	399.4	372.7	394.3	427.4
36.5°	309.6	337.5	416.3	389.2	354.5	384.1	443.4	389.6	362.8	384.5	418.6
37°	300.1	327.2	406.3	379.2	344.5	374.4	435.6	379.8	353.4	374.8	408.7
37.5°	290.9	317.7	395.9	369.8	334.3	365.2	427.3	370.5	343.3	365.6	398.7
38°	281.7	307.7	385.7	360.4	323.9	355.5	418.5	361.0	333.0	356.2	388.5
38.5°	272.3	298.5	375.3	351.1	313.6	346.1	409.6	351.9	322.4	347.1	377.8
39°	262.7	289.4	365.2	341.8	303.5	336.6	399.8	342.2	312.0	337.8	367.5
39.5°	253.0	280.5	355.0	332.3	293.2	326.7	389.7	332.6	301.8	328.5	356.8
40°	243.2	271.0	344.4	323.0	282.9	316.9	379.0	322.6	291.4	318.9	346.1
40.5°	233.6	262.2	333.8	313.4	272.9	306.9	368.1	312.7	281.4	309.0	335.1
41°	224.2	253.0	323.0	303.6	263.5	296.8	356.6	302.5	271.4	299.1	324.3
41.5°	215.2	243.9	312.4	293.9	253.8	287.1	344.9	292.5	262.1	289.3	313.5
42°	206.2	234.6	301.5	284.1	244.4	277.5	333.1	282.6	252.5	279.6	302.6
42.5°	197.8	225.5	290.6	274.5	235.0	267.8	321.4	272.6	243.2	270.1	291.9
43°	189.5	216.4	279.6	264.9	225.6	258.3	310.1	263.2	234.1	260.7	281.5
43.5°	181.4	207.6	268.6	255.8	216.4	249.1	298.8	253.9	224.7	251.7	270.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	157.8	182.8	237.5	228.9	189.5	222.2	266.5	226.7	197.1	225.3	239.9
45.5°	150.5	175.0	227.6	220.3	180.7	213.0	256.6	218.0	188.4	217.0	230.0
46°	143.5	167.3	218.3	211.7	172.3	204.4	246.9	209.0	179.7	208.2	220.6
46.5°	136.8	159.7	209.3	203.2	163.9	196.0	237.0	200.2	171.4	199.6	211.3
47°	130.3	152.4	200.6	194.8	156.1	187.4	227.6	191.4	163.3	191.2	202.5
47.5°	124.5	145.3	192.1	186.5	148.5	179.2	218.2	182.8	155.6	183.0	193.8
48°	119.1	138.5	183.6	178.3	141.2	171.1	208.7	174.7	148.1	174.9	185.2
48.5°	114.2	131.9	175.4	170.1	134.4	162.9	199.8	166.7	141.1	167.1	176.9
49°	109.7	125.7	167.6	162.3	127.7	155.3	190.5	158.9	134.1	159.4	168.9
49.5°	105.4	120.0	159.9	154.9	121.4	147.6	181.6	151.1	127.6	152.2	161.1
50°	101.5	114.5	152.4	147.7	115.3	140.5	173.1	144.0	121.2	145.0	153.7
50.5°	98.0	109.5	145.1	140.7	109.4	133.4	164.7	136.8	115.1	138.2	146.3
51°	94.7	105.0	138.2	134.2	103.9	126.8	156.7	130.1	109.4	131.6	139.5
51.5°	91.5	100.8	131.6	127.6	98.9	120.5	149.0	123.7	104.1	125.4	132.9
52°	88.5	97.1	125.3	121.5	94.1	114.5	141.7	117.7	99.1	119.4	126.6
52.5°	85.5	93.5	119.5	115.4	90.1	108.6	134.4	111.5	94.3	113.4	120.6
53°	82.7	90.2	113.8	109.6	86.1	103.1	127.8	105.8	90.0	108.0	114.8
53.5°	79.7	87.1	108.5	103.9	82.1	97.8	121.2	100.6	86.2	102.6	109.4
54°	76.9	84.2	103.3	98.7	78.1	92.9	115.1	95.6	82.5	97.5	104.2
54.5°	74.2	81.3	98.6	93.7	74.2	88.9	109.1	90.8	78.7	92.7	99.5
55°	71.7	78.5	94.1	89.0	70.8	84.8	103.7	86.8	75.0	88.8	95.0
55.5°	69.5	75.7	89.9	84.8	68.1	80.8	98.2	82.9	71.6	84.9	90.6
56°	67.9	73.0	85.9	80.7	66.0	76.7	93.1	79.0	68.7	81.0	87.0
56.5°	66.7	70.3	82.2	77.0	64.7	72.7	89.0	75.1	66.3	77.2	83.3
57°	65.6	68.0	78.8	73.5	63.5	69.3	84.8	71.6	64.7	73.3	79.6
57.5°	64.4	65.9	75.5	70.2	62.4	66.3	80.7	68.4	63.5	70.0	76.0
58°	63.3	64.5	72.6	67.1	61.3	63.9	76.6	65.7	62.4	67.0	73.1
58.5°	62.2	63.3	70.0	64.6	60.2	62.4	72.4	63.4	61.3	64.6	70.3
59°	61.0	62.1	67.5	63.0	59.0	61.1	69.3	61.9	60.1	62.7	67.7
59.5°	59.8	61.0	65.3	61.7	57.9	60.0	66.5	60.6	59.0	61.4	65.4
60°	58.6	59.9	63.2	60.5	56.8	58.9	64.0	59.5	57.8	60.2	63.2
60.5°	57.3	58.7	61.3	59.4	55.7	57.7	61.8	58.3	56.7	59.1	61.2
61°	56.2	57.5	59.5	58.2	54.5	56.6	59.9	57.2	55.5	58.0	59.4
61.5°	55.0	56.3	57.8	57.0	53.4	55.5	58.0	56.1	54.2	56.8	57.7
62°	53.7	55.1	56.3	55.9	52.4	54.3	56.3	54.9	53.1	55.7	56.1
62.5°	52.4	53.7	54.6	54.8	51.3	53.2	54.6	53.6	52.0	54.4	54.4
63°	51.3	52.5	53.2	53.6	50.2	52.0	53.1	52.5	50.8	53.2	53.0
63.5°	50.1	51.3	51.8	52.4	49.1	50.9	51.7	51.3	49.7	52.1	51.7
64°	48.9	50.1	50.6	51.3	48.1	49.8	50.3	50.1	48.6	50.9	50.4
64.5°	47.7	49.0	49.4	50.2	47.0	48.7	49.1	49.0	47.4	49.7	49.2
65°	46.6	47.7	48.3	49.1	46.0	47.7	48.0	47.8	46.3	48.6	48.0
65.5°	45.4	46.5	47.2	48.0	44.9	46.6	46.8	46.7	45.2	47.4	46.9
66°	44.2	45.4	46.0	46.9	43.9	45.5	45.7	45.5	44.1	46.3	45.8



TEST NUMBER: P775710

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	40.7	41.8	42.6	43.6	40.8	42.3	42.4	42.1	40.8	42.9	42.5
68°	39.6	40.6	41.5	42.5	39.8	41.2	41.2	41.0	39.7	41.8	41.4
68.5°	38.4	39.4	40.3	41.4	38.7	40.2	40.1	39.9	38.6	40.6	40.3
69°	37.3	38.3	39.2	40.3	37.7	39.1	39.0	38.8	37.5	39.5	39.1
69.5°	35.9	37.1	38.0	39.3	36.7	38.0	37.9	37.6	36.4	38.4	38.0
70°	34.8	36.3	36.9	38.2	35.7	37.0	36.7	36.5	35.3	37.3	36.9
70.5°	33.8	35.1	35.7	37.1	34.7	36.0	35.6	35.4	34.3	36.2	35.8
71°	32.7	33.9	34.6	36.2	33.7	34.9	34.5	34.3	33.2	35.1	34.7
71.5°	31.7	32.6	33.5	35.1	32.7	33.8	33.4	33.2	32.1	33.9	33.6
72°	30.5	31.4	32.4	34.1	31.7	32.8	32.3	32.1	31.0	32.8	32.5
72.5°	29.4	30.2	31.3	33.0	30.7	31.8	31.2	31.0	30.0	31.7	31.4
73°	28.2	29.1	30.2	32.0	29.6	30.8	30.1	29.9	28.9	30.6	30.3
73.5°	27.1	27.9	29.1	30.9	28.6	29.7	29.1	28.8	27.8	29.5	29.2
74°	25.9	26.8	28.0	29.9	27.7	28.7	28.0	27.7	26.8	28.4	28.1
74.5°	24.8	25.6	26.8	28.8	26.7	27.7	26.9	26.6	25.7	27.3	27.1
75°	23.7	24.4	25.7	27.8	25.6	26.6	25.9	25.5	24.6	26.2	26.0
75.5°	22.6	23.3	24.6	26.7	24.6	25.6	24.8	24.4	23.6	25.1	24.9
76°	21.4	22.1	23.5	25.7	23.6	24.6	23.7	23.3	22.5	24.0	23.8
76.5°	20.3	21.0	22.4	24.7	22.7	23.6	22.7	22.2	21.5	23.0	22.7
77°	19.2	19.8	21.3	23.6	21.7	22.6	21.7	21.1	20.4	21.9	21.6
77.5°	18.1	18.7	20.2	22.6	20.7	21.6	20.7	20.0	19.4	20.8	20.6
78°	17.0	17.5	19.2	21.5	19.7	20.5	19.6	18.9	18.4	19.7	19.5
78.5°	15.9	16.4	18.1	20.5	18.7	19.5	18.6	17.8	17.3	18.6	18.4
79°	14.8	15.2	17.1	19.4	17.8	18.5	17.6	16.7	16.3	17.5	17.4
79.5°	13.7	14.1	16.0	18.4	16.8	17.5	16.6	15.6	15.3	16.5	16.4
80°	12.6	13.0	15.0	17.4	15.9	16.5	15.6	14.6	14.3	15.4	15.4
80.5°	11.6	11.9	14.0	16.3	14.9	15.5	14.7	13.5	13.3	14.3	14.3
81°	10.5	10.7	13.0	15.3	14.0	14.5	13.7	12.5	12.3	13.2	13.4
81.5°	9.4	9.6	12.0	14.3	13.0	13.6	12.8	11.6	11.3	12.2	12.4
82°	8.3	8.6	11.0	13.3	12.1	12.6	11.8	10.6	10.2	11.1	11.4
82.5°	7.3	7.6	10.1	12.4	11.2	11.7	10.9	9.7	9.2	10.0	10.5
83°	6.2	6.7	9.2	11.4	10.3	10.7	10.0	8.8	8.3	9.1	9.6
83.5°	5.1	5.7	8.3	10.5	9.3	9.8	9.2	7.9	7.3	8.1	8.8
84°	4.1	4.9	7.4	9.5	8.4	8.8	8.3	7.0	6.3	7.1	8.0
84.5°	3.6	4.1	6.6	8.6	7.5	7.9	7.5	6.2	5.3	6.2	7.2
85°	3.1	3.5	5.8	7.6	6.5	7.0	6.6	5.3	4.3	5.2	6.4
85.5°	2.5	2.9	4.9	6.7	5.6	6.0	5.8	4.5	3.6	4.4	5.5
86°	2.0	2.4	4.1	5.7	4.7	5.1	5.0	3.9	3.0	3.8	4.8
86.5°	1.5	1.9	3.4	4.8	3.8	4.2	4.2	3.3	2.6	3.3	4.0
87°	1.1	1.3	2.6	3.9	2.9	3.3	3.4	2.7	2.2	2.8	3.2
87.5°	0.6	0.8	1.9	3.0	2.0	2.4	2.6	2.1	1.7	2.2	2.4
88°	0.2	0.3	1.1	2.2	1.2	1.5	1.8	1.6	1.3	1.7	1.7
88.5°	0.0	0.1	0.4	1.3	0.4	0.7	1.0	1.0	0.9	1.2	0.9



TEST NUMBER: P775710
CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1



TEST NUMBER: P775710

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	628.9	628.9	628.9	628.9	628.9	628.9
0.5°	628.2	628.7	628.7	628.8	628.9	628.8
1°	628.0	628.4	628.3	628.4	628.6	628.5
1.5°	627.6	628.0	627.8	627.9	628.1	628.0
2°	627.2	627.6	627.3	627.3	627.5	627.5
2.5°	626.7	627.1	626.7	626.7	626.9	627.0
3°	626.1	626.5	626.0	626.0	626.2	626.3
3.5°	625.4	625.9	625.4	625.3	625.5	625.7
4°	624.7	625.1	624.6	624.5	624.7	625.0
4.5°	623.9	624.4	623.7	623.6	623.8	624.1
5°	623.0	623.5	622.7	622.7	622.9	623.2
5.5°	622.1	622.6	621.7	621.6	621.9	622.3
6°	621.1	621.5	620.6	620.5	620.8	621.3
6.5°	620.0	620.4	619.5	619.4	619.6	620.2
7°	618.8	619.2	618.2	618.1	618.4	618.9
7.5°	617.5	618.0	616.9	616.8	617.0	617.6
8°	616.2	616.6	615.5	615.4	615.7	616.3
8.5°	614.8	615.2	614.0	613.9	614.2	614.8
9°	613.4	613.7	612.5	612.3	612.6	613.3
9.5°	611.8	612.1	610.9	610.7	611.0	611.7
10°	610.1	610.6	609.2	608.9	609.3	610.0
10.5°	608.4	608.9	607.4	607.2	607.4	608.2
11°	606.6	607.0	605.6	605.3	605.6	606.4
11.5°	604.8	605.1	603.6	603.3	603.7	604.5
12°	602.8	603.2	601.5	601.2	601.5	602.4
12.5°	600.7	601.0	599.4	599.1	599.3	600.2
13°	598.6	598.9	597.2	596.9	597.2	598.0
13.5°	596.3	596.7	595.0	594.7	594.9	595.8
14°	594.1	594.4	592.6	592.3	592.6	593.5
14.5°	591.7	592.0	590.2	589.8	590.0	591.0
15°	589.3	589.5	587.7	587.3	587.4	588.4
15.5°	586.7	586.9	585.0	584.7	584.7	585.7
16°	584.1	584.3	582.3	582.0	582.1	583.0
16.5°	581.3	581.6	579.6	579.2	579.3	580.1
17°	578.5	578.7	576.8	576.4	576.4	577.2
17.5°	575.6	575.8	573.8	573.4	573.3	574.1
18°	572.7	572.7	570.8	570.4	570.3	571.1
18.5°	569.5	569.6	567.6	567.4	567.1	567.8
19°	566.4	566.5	564.4	564.1	563.8	564.6
19.5°	563.2	563.2	561.1	560.9	560.5	561.2
20°	559.8	559.9	557.7	557.5	557.0	557.8
20.5°	556.4	556.5	554.3	553.9	553.5	554.4
21°	552.9	553.0	550.7	550.5	549.9	550.9

TEST NUMBER: P775710

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	542.0	542.2	539.6	539.1	538.7	539.7
23°	538.2	538.4	535.8	535.3	534.9	535.9
23.5°	534.5	534.5	532.0	531.1	531.0	532.1
24°	530.6	530.7	528.0	527.1	527.0	528.0
24.5°	526.6	526.7	523.9	522.9	522.9	524.5
25°	522.5	522.9	519.9	518.7	518.7	520.8
25.5°	518.5	519.4	515.7	514.2	514.7	514.8
26°	514.5	514.7	511.5	510.1	510.4	508.2
26.5°	510.9	507.6	507.4	505.4	506.7	502.0
27°	506.8	502.1	503.7	501.1	502.7	492.7
27.5°	500.3	494.3	499.3	496.4	496.4	482.8
28°	493.8	484.8	492.7	491.7	489.8	473.1
28.5°	487.5	475.3	486.2	487.0	483.3	463.7
29°	478.9	466.0	480.0	482.4	474.4	454.6
29.5°	469.6	456.7	471.2	477.4	465.0	445.8
30°	460.3	447.8	462.2	472.8	455.3	437.0
30.5°	451.2	438.6	452.6	468.0	446.2	428.4
31°	442.3	429.8	443.7	463.2	437.1	419.8
31.5°	433.2	420.9	434.5	458.3	428.2	411.0
32°	424.4	411.9	425.8	453.4	419.7	401.4
32.5°	415.6	402.5	417.2	448.6	411.5	392.1
33°	406.9	393.0	408.5	444.0	403.0	381.9
33.5°	398.0	383.1	399.8	439.9	394.8	371.3
34°	388.7	372.8	391.2	435.4	386.1	360.2
34.5°	379.3	362.5	382.0	428.0	377.1	349.8
35°	369.8	352.0	372.7	419.2	367.5	339.1
35.5°	359.9	341.5	363.3	412.6	358.1	329.0
36°	349.9	331.5	353.4	403.1	347.9	319.0
36.5°	339.7	321.4	343.7	391.3	338.0	309.6
37°	329.7	311.9	333.7	379.4	327.6	300.1
37.5°	319.8	302.3	323.9	367.7	317.9	290.9
38°	310.2	292.9	314.0	356.1	308.3	281.7
38.5°	300.9	283.6	304.8	345.0	299.1	272.3
39°	291.4	274.5	295.4	334.2	290.1	262.7
39.5°	282.3	264.8	286.7	323.8	281.3	253.0
40°	273.3	255.2	277.7	313.8	272.6	243.2
40.5°	264.6	245.9	268.7	304.2	264.0	233.6
41°	255.4	236.4	259.9	294.8	255.3	224.2
41.5°	246.4	227.1	251.2	285.4	246.3	215.2
42°	237.3	218.0	242.2	276.2	237.4	206.2
42.5°	228.5	209.2	233.2	267.2	228.6	197.8
43°	219.5	200.5	224.4	258.0	219.7	189.5
43.5°	210.6	192.1	215.5	248.6	211.0	181.4

TEST NUMBER: P775710

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	185.8	168.1	190.4	220.5	186.4	157.8
45.5°	178.2	160.4	182.7	211.6	178.8	150.5
46°	170.3	152.9	175.0	203.0	171.2	143.5
46.5°	162.7	145.6	167.3	194.5	163.7	136.8
47°	155.4	138.7	159.9	186.5	156.5	130.3
47.5°	148.3	131.9	152.4	178.9	149.5	124.5
48°	141.2	125.9	145.3	171.7	142.6	119.1
48.5°	134.6	119.9	138.6	164.8	136.0	114.2
49°	128.0	114.6	132.1	157.8	129.7	109.7
49.5°	122.0	109.7	125.9	151.3	123.8	105.4
50°	116.0	105.1	120.0	144.9	118.3	101.5
50.5°	110.7	100.9	114.6	138.7	113.1	98.0
51°	105.7	97.2	109.4	132.7	108.4	94.7
51.5°	101.1	93.7	104.9	126.8	104.0	91.5
52°	96.9	90.5	100.8	121.2	100.0	88.5
52.5°	93.1	87.4	96.8	115.8	96.3	85.5
53°	89.6	84.4	93.2	110.7	92.8	82.7
53.5°	86.6	81.5	89.8	105.8	89.5	79.7
54°	83.7	78.6	86.5	101.2	86.4	76.9
54.5°	80.8	75.9	83.7	96.8	83.4	74.2
55°	77.8	73.2	80.7	92.7	80.7	71.7
55.5°	74.9	70.6	77.8	88.8	77.8	69.5
56°	72.3	68.4	75.1	85.2	75.1	67.9
56.5°	69.6	66.6	72.4	81.8	72.4	66.7
57°	67.2	65.2	69.8	78.5	69.9	65.6
57.5°	65.1	64.1	67.4	75.5	67.6	64.4
58°	63.3	62.9	65.4	72.7	65.7	63.3
58.5°	62.0	61.8	63.8	70.1	64.2	62.2
59°	60.9	60.7	62.6	67.7	63.1	61.0
59.5°	59.8	59.7	61.4	65.3	61.9	59.8
60°	58.7	58.5	60.3	63.3	60.8	58.6
60.5°	57.6	57.5	59.2	61.4	59.5	57.3
61°	56.4	56.4	58.0	59.6	58.4	56.2
61.5°	55.3	55.3	56.9	57.9	57.2	55.0
62°	54.1	54.1	55.8	56.3	56.0	53.7
62.5°	53.0	53.0	54.5	54.8	54.6	52.4
63°	51.9	52.0	53.4	53.3	53.4	51.3
63.5°	50.8	50.9	52.3	52.0	52.2	50.1
64°	49.7	49.9	51.2	50.7	51.0	48.9
64.5°	48.6	48.8	50.0	49.6	49.8	47.7
65°	47.6	47.7	49.0	48.5	48.6	46.6
65.5°	46.5	46.7	47.9	47.3	47.4	45.4
66°	45.4	45.6	46.7	46.2	46.2	44.2



TEST NUMBER: P775710

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	42.2	42.5	43.5	42.9	42.6	40.7
68°	41.1	41.5	42.4	41.7	41.4	39.6
68.5°	40.1	40.4	41.3	40.5	40.2	38.4
69°	39.0	39.4	40.2	39.4	39.1	37.3
69.5°	37.9	38.4	39.1	38.2	37.9	35.9
70°	36.9	37.4	38.0	37.1	36.7	34.8
70.5°	35.8	36.2	37.0	36.1	35.6	33.8
71°	34.8	35.2	36.3	35.0	34.4	32.7
71.5°	33.7	34.3	35.2	33.8	33.3	31.7
72°	32.7	33.3	34.0	32.7	32.2	30.5
72.5°	31.6	32.3	32.9	31.6	31.0	29.4
73°	30.6	31.4	31.8	30.5	29.8	28.2
73.5°	29.6	30.3	30.7	29.3	28.7	27.1
74°	28.5	29.3	29.7	28.2	27.5	25.9
74.5°	27.5	28.3	28.6	27.1	26.3	24.8
75°	26.4	27.3	27.5	26.0	25.2	23.7
75.5°	25.4	26.3	26.5	24.9	24.0	22.6
76°	24.3	25.3	25.4	23.7	22.9	21.4
76.5°	23.3	24.2	24.4	22.6	21.7	20.3
77°	22.3	23.2	23.3	21.6	20.5	19.2
77.5°	21.2	22.2	22.3	20.5	19.4	18.1
78°	20.2	21.2	21.2	19.4	18.2	17.0
78.5°	19.1	20.2	20.2	18.3	17.1	15.9
79°	18.1	19.2	19.1	17.3	15.9	14.8
79.5°	17.1	18.2	18.1	16.2	14.8	13.7
80°	16.0	17.2	17.0	15.2	13.6	12.6
80.5°	15.0	16.2	16.0	14.2	12.5	11.6
81°	14.0	15.3	15.0	13.2	11.4	10.5
81.5°	13.1	14.3	14.0	12.2	10.4	9.4
82°	12.1	13.3	13.0	11.2	9.3	8.3
82.5°	11.1	12.4	12.0	10.3	8.4	7.3
83°	10.2	11.4	11.0	9.4	7.4	6.2
83.5°	9.2	10.4	10.0	8.5	6.5	5.1
84°	8.3	9.5	9.0	7.6	5.6	4.1
84.5°	7.3	8.6	8.1	6.8	4.8	3.6
85°	6.4	7.6	7.1	5.9	4.1	3.1
85.5°	5.4	6.7	6.1	5.1	3.5	2.5
86°	4.5	5.7	5.1	4.2	2.9	2.0
86.5°	3.5	4.8	4.2	3.4	2.3	1.5
87°	2.6	3.8	3.3	2.6	1.7	1.1
87.5°	1.7	3.0	2.5	1.9	1.1	0.6
88°	0.9	2.1	1.7	1.1	0.5	0.2
88.5°	0.3	1.2	0.9	0.3	0.2	0.0



TEST NUMBER: P775710
CATALOG NUMBER: HCDJBL510CSD-HCD4TSQMW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.1	0.1	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°	547.2	551.2	561.3	569.9	569.4	572.7	574.7	573.8	571.7	568.3	560.0
22°	543.4	547.6	557.9	566.7	566.4	569.6	571.6	570.8	568.7	565.3	556.5



44°	173.5	198.8	257.8	246.4	207.2	239.9	287.5	244.7	215.2	242.5	259.8
44.5°	165.6	190.8	247.6	237.5	198.3	231.0	277.1	235.9	206.2	234.1	249.6



66.5°	43.1	44.2	44.9	45.8	42.8	44.4	44.6	44.4	43.0	45.2	44.7
67°	41.9	43.0	43.8	44.7	41.8	43.3	43.5	43.3	41.9	44.0	43.6



89°	0.0	0.1	0.1	0.5	0.1	0.2	0.4	0.5	0.5	0.7	0.4
89.5°	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.1

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21.5°	549.4	549.5	547.1	546.7	546.2	547.2
22°	545.8	545.8	543.4	543.0	542.5	543.4



44°	202.2	183.9	207.0	239.1	202.4	173.5
44.5°	194.1	175.9	198.8	229.8	194.4	165.6

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66.5°	44.3	44.6	45.7	45.1	45.0	43.1
67°	43.3	43.6	44.6	44.0	43.8	41.9

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89°	0.1	0.4	0.2	0.1	0.1	0.0
89.5°	0.0	0.1	0.1	0.1	0.1	0.0

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(END OF REPORT)