

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: P776847

Luminaire Tested: HCDJBL510CSD-HCD42TRMW-500lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776847
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156A001)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD42TRMW-500lm-3500K
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 519.7 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

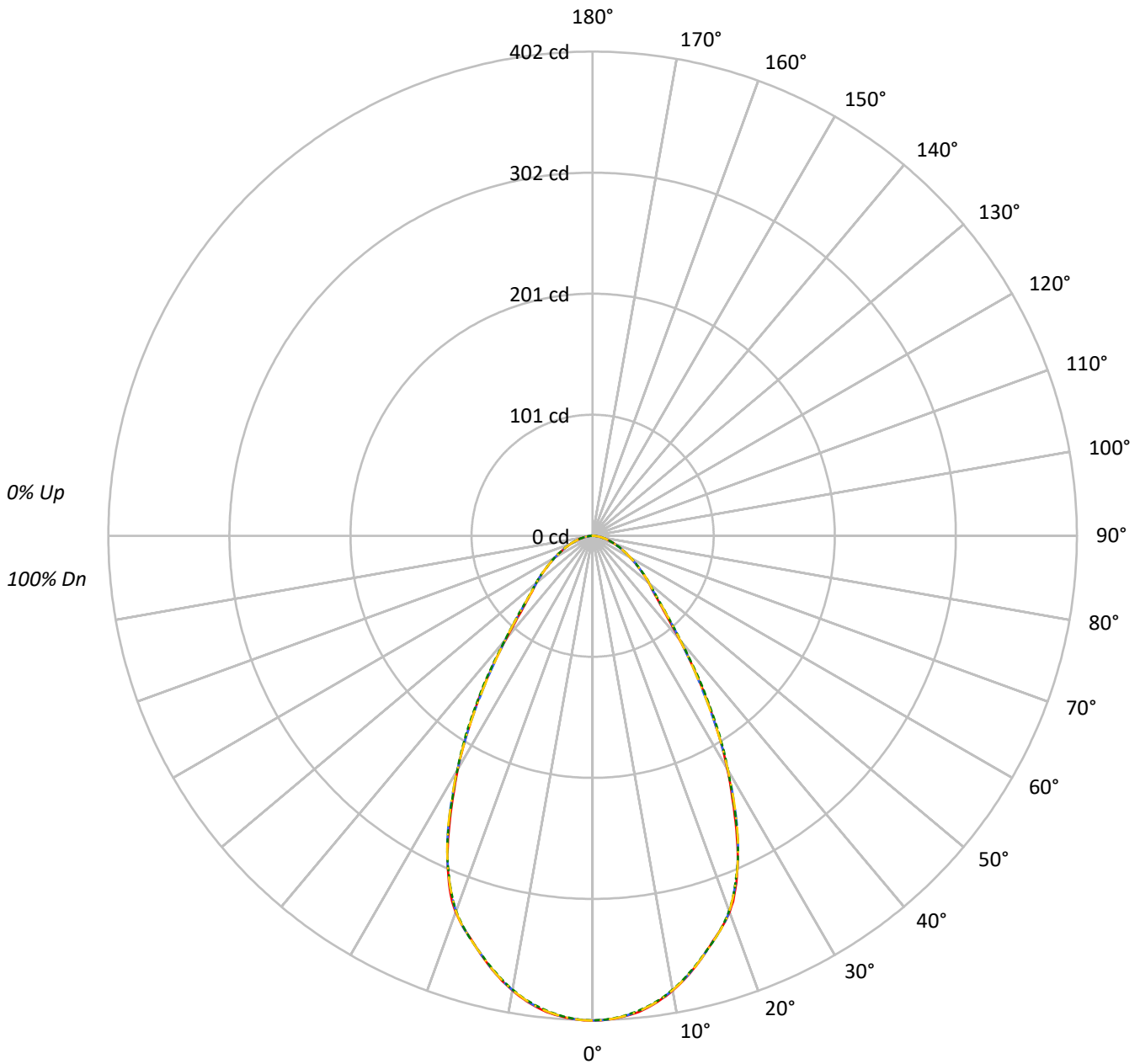
Input Watts (W): 5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53								
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49								
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42								
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	50655	50655	50655	50655
5°	50292	50178	50292	50178
10°	48995	48880	48995	48880
15°	46826	46774	46826	46774
20°	44531	44370	44531	44370
25°	39520	39644	39520	39644
30°	32508	32682	32508	32682
35°	25227	25503	25227	25503
40°	18318	18646	18318	18646
45°	13865	14220	13865	14220
50°	11943	12041	11943	12041
55°	10378	10510	10378	10510
60°	9086	9162	9086	9162
65°	7981	8040	7981	8040
70°	7028	7065	7028	7065
75°	6175	6175	6175	6175
80°	5363	5291	5363	5291
85°	4332	4332	4332	4332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 14220 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.5	7.2
10°-20°	101.0	19.4
20°-30°	129.3	24.9
30°-40°	102.5	19.7
40°-50°	62.7	12.1
50°-60°	42.9	8.3
60°-70°	26.8	5.2
70°-80°	13.6	2.6
80°-90°	3.4	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°	267.7	51.5
0°-40°	370.2	71.2
0°-60°	475.8	91.6
0°-90°	519.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	519.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	402	402	402	402	402	
5°	398	397	398	397	398	38
15°	359	359	359	359	359	101
25°	285	286	285	286	285	129
35°	164	166	164	166	164	102
45°	78	80	78	80	78	62
55°	47	48	47	48	47	43
65°	27	27	27	27	27	27
75°	13	13	13	13	13	14
85°	3	3	3	3	3	3
90°	0	0	0	0	0	



TEST NUMBER: P776847

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5
0.5°	402.5	402.5	402.4	402.3	402.1	402.3	402.4	402.5	402.5	402.5	402.4
1°	402.4	402.3	402.2	402.2	402.0	402.2	402.2	402.3	402.4	402.3	402.2
1.5°	402.1	402.0	402.0	401.9	401.8	401.9	402.0	402.0	402.1	402.0	402.0
2°	401.8	401.8	401.7	401.6	401.4	401.6	401.7	401.8	401.8	401.8	401.7
2.5°	401.4	401.3	401.2	401.2	400.9	401.2	401.2	401.3	401.4	401.3	401.2
3°	400.9	400.8	400.7	400.6	400.3	400.6	400.7	400.8	400.9	400.8	400.7
3.5°	400.3	400.2	400.0	399.9	399.8	399.9	400.0	400.2	400.3	400.2	400.0
4°	399.6	399.6	399.3	399.2	399.0	399.2	399.3	399.6	399.6	399.6	399.3
4.5°	398.9	398.7	398.5	398.4	398.1	398.4	398.5	398.7	398.9	398.7	398.5
5°	398.1	397.9	397.7	397.6	397.2	397.6	397.7	397.9	398.1	397.9	397.7
5.5°	397.3	396.9	396.6	396.5	396.2	396.5	396.6	396.9	397.3	396.9	396.6
6°	396.1	395.8	395.6	395.4	395.0	395.4	395.6	395.8	396.1	395.8	395.6
6.5°	394.8	394.6	394.3	394.2	393.7	394.2	394.3	394.6	394.8	394.6	394.3
7°	393.5	393.3	393.1	392.9	392.5	392.9	393.1	393.3	393.5	393.3	393.1
7.5°	392.1	391.8	391.6	391.5	391.1	391.5	391.6	391.8	392.1	391.8	391.6
8°	390.5	390.3	390.1	390.0	389.7	390.0	390.1	390.3	390.5	390.3	390.1
8.5°	388.9	388.7	388.5	388.3	388.1	388.3	388.5	388.7	388.9	388.7	388.5
9°	387.2	387.0	386.7	386.6	386.3	386.6	386.7	387.0	387.2	387.0	386.7
9.5°	385.3	385.2	384.9	384.7	384.5	384.7	384.9	385.2	385.3	385.2	384.9
10°	383.4	383.2	383.0	382.8	382.5	382.8	383.0	383.2	383.4	383.2	383.0
10.5°	381.3	381.2	380.9	380.7	380.5	380.7	380.9	381.2	381.3	381.2	380.9
11°	379.2	379.1	378.9	378.6	378.4	378.6	378.9	379.1	379.2	379.1	378.9
11.5°	377.0	376.9	376.6	376.4	376.2	376.4	376.6	376.9	377.0	376.9	376.6
12°	374.7	374.6	374.4	374.2	374.0	374.2	374.4	374.6	374.7	374.6	374.4
12.5°	372.3	372.2	372.1	371.8	371.5	371.8	372.1	372.2	372.3	372.2	372.1
13°	369.9	369.8	369.6	369.4	369.2	369.4	369.6	369.8	369.9	369.8	369.6
13.5°	367.4	367.3	367.2	366.9	366.7	366.9	367.2	367.3	367.4	367.3	367.2
14°	364.8	364.7	364.6	364.4	364.2	364.4	364.6	364.7	364.8	364.7	364.6
14.5°	362.1	362.0	362.0	361.8	361.6	361.8	362.0	362.0	362.1	362.0	362.0
15°	359.4	359.4	359.3	359.2	359.0	359.2	359.3	359.4	359.4	359.4	359.3
15.5°	356.6	356.6	356.7	356.6	356.5	356.6	356.7	356.6	356.6	356.6	356.7
16°	353.9	354.0	354.1	354.1	354.0	354.1	354.1	354.0	353.9	354.0	354.1
16.5°	351.2	351.3	351.5	351.5	351.5	351.5	351.5	351.3	351.2	351.3	351.5
17°	348.7	348.8	349.0	348.9	349.0	348.9	349.0	348.8	348.7	348.8	349.0
17.5°	346.2	346.3	346.5	346.4	346.4	346.4	346.5	346.3	346.2	346.3	346.5
18°	343.8	343.8	343.9	343.8	343.7	343.8	343.9	343.8	343.8	343.8	343.9
18.5°	341.2	341.2	341.2	341.1	340.9	341.1	341.2	341.2	341.2	341.2	341.2
19°	338.5	338.4	338.3	338.1	337.9	338.1	338.3	338.4	338.5	338.4	338.3
19.5°	335.6	335.4	335.1	335.0	334.8	335.0	335.1	335.4	335.6	335.4	335.1
20°	332.5	332.2	331.6	331.6	331.3	331.6	331.6	332.2	332.5	332.2	331.6
20.5°	328.9	328.5	327.8	328.0	327.6	328.0	327.8	328.5	328.9	328.5	327.8
21°	325.3	324.6	323.8	324.1	323.6	324.1	323.8	324.6	325.3	324.6	323.8



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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°	311.9	311.2	310.7	310.6	310.4	310.6	310.7	311.2	311.9	311.2	310.7
23°	306.7	306.2	306.1	305.7	305.6	305.7	306.1	306.2	306.7	306.2	306.1
23.5°	301.5	301.0	301.3	300.6	300.9	300.6	301.3	301.0	301.5	301.0	301.3
24°	296.1	295.7	296.3	295.5	296.0	295.5	296.3	295.7	296.1	295.7	296.3
24.5°	290.5	290.3	291.1	290.2	290.9	290.2	291.1	290.3	290.5	290.3	291.1
25°	284.6	284.7	285.7	285.0	285.5	285.0	285.7	284.7	284.6	284.7	285.7
25.5°	278.5	279.2	280.1	279.8	279.9	279.8	280.1	279.2	278.5	279.2	280.1
26°	272.2	273.5	274.3	274.3	273.9	274.3	274.3	273.5	272.2	273.5	274.3
26.5°	265.8	267.7	268.3	268.7	267.7	268.7	268.3	267.7	265.8	267.7	268.3
27°	259.6	261.6	262.3	262.9	261.4	262.9	262.3	261.6	259.6	261.6	262.3
27.5°	253.4	255.4	256.1	256.9	255.0	256.9	256.1	255.4	253.4	255.4	256.1
28°	247.3	249.1	249.9	250.6	248.6	250.6	249.9	249.1	247.3	249.1	249.9
28.5°	241.3	242.8	243.6	244.3	242.4	244.3	243.6	242.8	241.3	242.8	243.6
29°	235.4	236.3	237.4	237.8	236.5	237.8	237.4	236.3	235.4	236.3	237.4
29.5°	229.6	230.0	231.2	231.3	230.7	231.3	231.2	230.0	229.6	230.0	231.2
30°	223.7	223.6	224.8	224.9	224.9	224.9	224.8	223.6	223.7	223.6	224.8
30.5°	217.7	217.3	218.5	218.6	219.4	218.6	218.5	217.3	217.7	217.3	218.5
31°	211.7	210.9	212.1	212.4	213.6	212.4	212.1	210.9	211.7	210.9	212.1
31.5°	205.6	204.8	205.8	206.2	207.7	206.2	205.8	204.8	205.6	204.8	205.8
32°	199.3	198.6	199.5	200.1	201.7	200.1	199.5	198.6	199.3	198.6	199.5
32.5°	193.3	192.6	193.3	194.0	195.7	194.0	193.3	192.6	193.3	192.6	193.3
33°	187.2	186.7	186.9	188.0	189.5	188.0	186.9	186.7	187.2	186.7	186.9
33.5°	181.7	180.8	180.6	182.0	183.3	182.0	180.6	180.8	181.7	180.8	180.6
34°	175.9	174.8	174.4	176.0	177.4	176.0	174.4	174.8	175.9	174.8	174.4
34.5°	170.1	169.0	168.3	170.1	171.6	170.1	168.3	169.0	170.1	169.0	168.3
35°	164.2	163.3	162.5	164.3	166.0	164.3	162.5	163.3	164.2	163.3	162.5
35.5°	158.5	157.6	156.8	158.6	160.4	158.6	156.8	157.6	158.5	157.6	156.8
36°	152.9	151.9	151.2	153.1	155.0	153.1	151.2	151.9	152.9	151.9	151.2
36.5°	147.3	146.5	145.9	147.6	149.4	147.6	145.9	146.5	147.3	146.5	145.9
37°	141.7	141.1	140.6	142.3	143.9	142.3	140.6	141.1	141.7	141.1	140.6
37.5°	136.3	135.9	135.5	137.3	138.4	137.3	135.5	135.9	136.3	135.9	135.5
38°	130.9	130.8	130.7	132.3	133.0	132.3	130.7	130.8	130.9	130.8	130.7
38.5°	125.8	125.9	126.0	127.5	127.7	127.5	126.0	125.9	125.8	125.9	126.0
39°	120.9	121.2	121.4	122.8	122.7	122.8	121.4	121.2	120.9	121.2	121.4
39.5°	116.1	116.6	117.0	118.1	118.0	118.1	117.0	116.6	116.1	116.6	117.0
40°	111.5	112.1	112.7	113.7	113.5	113.7	112.7	112.1	111.5	112.1	112.7
40.5°	107.2	107.7	108.6	109.3	109.3	109.3	108.6	107.7	107.2	107.7	108.6
41°	103.1	103.6	104.7	105.2	105.4	105.2	104.7	103.6	103.1	103.6	104.7
41.5°	99.1	99.7	101.0	101.3	101.8	101.3	101.0	99.7	99.1	99.7	101.0
42°	95.5	96.0	97.4	97.6	98.3	97.6	97.4	96.0	95.5	96.0	97.4
42.5°	92.0	92.6	94.1	94.2	94.9	94.2	94.1	92.6	92.0	92.6	94.1
43°	88.7	89.4	90.8	90.9	91.6	90.9	90.8	89.4	88.7	89.4	90.8
43.5°	85.7	86.3	87.7	87.8	88.4	87.8	87.7	86.3	85.7	86.3	87.7



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CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	77.9	78.5	79.3	79.6	79.9	79.6	79.3	78.5	77.9	78.5	79.3
45.5°	75.7	76.1	76.9	77.2	77.4	77.2	76.9	76.1	75.7	76.1	76.9
46°	73.5	73.9	74.6	75.0	75.1	75.0	74.6	73.9	73.5	73.9	74.6
46.5°	71.5	71.8	72.4	72.8	72.9	72.8	72.4	71.8	71.5	71.8	72.4
47°	69.6	69.9	70.4	70.8	71.0	70.8	70.4	69.9	69.6	69.9	70.4
47.5°	67.9	68.0	68.5	69.0	69.2	69.0	68.5	68.0	67.9	68.0	68.5
48°	66.2	66.4	66.9	67.3	67.5	67.3	66.9	66.4	66.2	66.4	66.9
48.5°	64.8	64.9	65.3	65.8	65.9	65.8	65.3	64.9	64.8	64.9	65.3
49°	63.5	63.6	63.9	64.2	64.4	64.2	63.9	63.6	63.5	63.6	63.9
49.5°	62.3	62.4	62.6	62.8	62.9	62.8	62.6	62.4	62.3	62.4	62.6
50°	61.0	61.1	61.2	61.4	61.5	61.4	61.2	61.1	61.0	61.1	61.2
50.5°	59.7	59.8	59.9	60.1	60.1	60.1	59.9	59.8	59.7	59.8	59.9
51°	58.3	58.4	58.5	58.8	58.8	58.8	58.5	58.4	58.3	58.4	58.5
51.5°	56.9	56.9	57.1	57.4	57.5	57.4	57.1	56.9	56.9	56.9	57.1
52°	55.4	55.5	55.7	56.0	56.1	56.0	55.7	55.5	55.4	55.5	55.7
52.5°	54.0	54.1	54.3	54.5	54.7	54.5	54.3	54.1	54.0	54.1	54.3
53°	52.6	52.7	52.9	53.1	53.3	53.1	52.9	52.7	52.6	52.7	52.9
53.5°	51.2	51.3	51.5	51.8	51.9	51.8	51.5	51.3	51.2	51.3	51.5
54°	49.9	50.0	50.2	50.4	50.5	50.4	50.2	50.0	49.9	50.0	50.2
54.5°	48.6	48.7	48.9	49.1	49.2	49.1	48.9	48.7	48.6	48.7	48.9
55°	47.3	47.4	47.6	47.8	47.9	47.8	47.6	47.4	47.3	47.4	47.6
55.5°	46.1	46.2	46.4	46.6	46.6	46.6	46.4	46.2	46.1	46.2	46.4
56°	44.9	45.0	45.2	45.3	45.4	45.3	45.2	45.0	44.9	45.0	45.2
56.5°	43.7	43.8	44.0	44.1	44.2	44.1	44.0	43.8	43.7	43.8	44.0
57°	42.5	42.6	42.8	43.0	43.0	43.0	42.8	42.6	42.5	42.6	42.8
57.5°	41.3	41.5	41.7	41.8	41.9	41.8	41.7	41.5	41.3	41.5	41.7
58°	40.3	40.4	40.5	40.7	40.7	40.7	40.5	40.4	40.3	40.4	40.5
58.5°	39.2	39.3	39.5	39.6	39.6	39.6	39.5	39.3	39.2	39.3	39.5
59°	38.2	38.2	38.3	38.4	38.5	38.4	38.3	38.2	38.2	38.2	38.3
59.5°	37.1	37.1	37.2	37.4	37.5	37.4	37.2	37.1	37.1	37.1	37.2
60°	36.1	36.1	36.2	36.3	36.4	36.3	36.2	36.1	36.1	36.1	36.2
60.5°	35.0	35.1	35.2	35.3	35.4	35.3	35.2	35.1	35.0	35.1	35.2
61°	34.1	34.1	34.2	34.3	34.4	34.3	34.2	34.1	34.1	34.1	34.2
61.5°	33.1	33.1	33.3	33.4	33.4	33.4	33.3	33.1	33.1	33.1	33.3
62°	32.2	32.2	32.3	32.4	32.4	32.4	32.3	32.2	32.2	32.2	32.3
62.5°	31.2	31.3	31.3	31.4	31.5	31.4	31.3	31.3	31.2	31.3	31.3
63°	30.3	30.3	30.4	30.5	30.5	30.5	30.4	30.3	30.3	30.3	30.4
63.5°	29.4	29.4	29.5	29.6	29.6	29.6	29.5	29.4	29.4	29.4	29.5
64°	28.5	28.6	28.6	28.7	28.7	28.7	28.6	28.6	28.5	28.6	28.6
64.5°	27.7	27.7	27.8	27.8	27.9	27.8	27.8	27.7	27.7	27.7	27.8
65°	26.8	26.8	26.9	26.9	27.0	26.9	26.9	26.8	26.8	26.8	26.9
65.5°	26.0	26.0	26.0	26.1	26.1	26.1	26.0	26.0	26.0	26.0	26.0
66°	25.1	25.2	25.2	25.3	25.3	25.3	25.2	25.2	25.1	25.2	25.2



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	22.7	22.8	22.9	22.9	22.9	22.9	22.9	22.8	22.7	22.8	22.9
68°	22.0	22.0	22.1	22.2	22.2	22.2	22.1	22.0	22.0	22.0	22.1
68.5°	21.2	21.3	21.3	21.3	21.4	21.3	21.3	21.3	21.2	21.3	21.3
69°	20.5	20.5	20.5	20.6	20.6	20.6	20.5	20.5	20.5	20.5	20.5
69.5°	19.8	19.8	19.8	19.9	19.9	19.9	19.8	19.8	19.8	19.8	19.8
70°	19.1	19.2	19.1	19.2	19.2	19.2	19.1	19.2	19.1	19.2	19.1
70.5°	18.4	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.4	18.5	18.5
71°	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
71.5°	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
72°	16.4	16.4	16.4	16.5	16.5	16.5	16.4	16.4	16.4	16.4	16.4
72.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
73°	15.1	15.1	15.1	15.2	15.2	15.2	15.1	15.1	15.1	15.1	15.1
73.5°	14.5	14.5	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.6
74°	13.9	13.9	13.9	14.0	14.0	14.0	13.9	13.9	13.9	13.9	13.9
74.5°	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
75°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
75.5°	12.1	12.1	12.1	12.1	12.2	12.1	12.1	12.1	12.1	12.1	12.1
76°	11.6	11.5	11.5	11.6	11.6	11.6	11.5	11.5	11.6	11.5	11.5
76.5°	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
77°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
77.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
78°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
78.5°	8.9	8.9	8.8	8.8	8.9	8.8	8.8	8.9	8.9	8.9	8.8
79°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
79.5°	7.9	7.9	7.8	7.9	7.9	7.9	7.8	7.9	7.9	7.9	7.8
80°	7.4	7.4	7.3	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.3
80.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
81°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
81.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
82°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
82.5°	5.1	5.1	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.1	5.1
83°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
83.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
84°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
84.5°	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.3
85°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85.5°	2.6	2.5	2.6	2.5	2.6	2.5	2.6	2.5	2.6	2.5	2.6
86°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
86.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
87°	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.5
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
88°	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8
88.5°	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.5



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-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	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	402.5	402.5	402.5	402.5	402.5	402.5
0.5°	402.3	402.1	402.3	402.4	402.5	402.5
1°	402.2	402.0	402.2	402.2	402.3	402.4
1.5°	401.9	401.8	401.9	402.0	402.0	402.1
2°	401.6	401.4	401.6	401.7	401.8	401.8
2.5°	401.2	400.9	401.2	401.2	401.3	401.4
3°	400.6	400.3	400.6	400.7	400.8	400.9
3.5°	399.9	399.8	399.9	400.0	400.2	400.3
4°	399.2	399.0	399.2	399.3	399.6	399.6
4.5°	398.4	398.1	398.4	398.5	398.7	398.9
5°	397.6	397.2	397.6	397.7	397.9	398.1
5.5°	396.5	396.2	396.5	396.6	396.9	397.3
6°	395.4	395.0	395.4	395.6	395.8	396.1
6.5°	394.2	393.7	394.2	394.3	394.6	394.8
7°	392.9	392.5	392.9	393.1	393.3	393.5
7.5°	391.5	391.1	391.5	391.6	391.8	392.1
8°	390.0	389.7	390.0	390.1	390.3	390.5
8.5°	388.3	388.1	388.3	388.5	388.7	388.9
9°	386.6	386.3	386.6	386.7	387.0	387.2
9.5°	384.7	384.5	384.7	384.9	385.2	385.3
10°	382.8	382.5	382.8	383.0	383.2	383.4
10.5°	380.7	380.5	380.7	380.9	381.2	381.3
11°	378.6	378.4	378.6	378.9	379.1	379.2
11.5°	376.4	376.2	376.4	376.6	376.9	377.0
12°	374.2	374.0	374.2	374.4	374.6	374.7
12.5°	371.8	371.5	371.8	372.1	372.2	372.3
13°	369.4	369.2	369.4	369.6	369.8	369.9
13.5°	366.9	366.7	366.9	367.2	367.3	367.4
14°	364.4	364.2	364.4	364.6	364.7	364.8
14.5°	361.8	361.6	361.8	362.0	362.0	362.1
15°	359.2	359.0	359.2	359.3	359.4	359.4
15.5°	356.6	356.5	356.6	356.7	356.6	356.6
16°	354.1	354.0	354.1	354.1	354.0	353.9
16.5°	351.5	351.5	351.5	351.5	351.3	351.2
17°	348.9	349.0	348.9	349.0	348.8	348.7
17.5°	346.4	346.4	346.4	346.5	346.3	346.2
18°	343.8	343.7	343.8	343.9	343.8	343.8
18.5°	341.1	340.9	341.1	341.2	341.2	341.2
19°	338.1	337.9	338.1	338.3	338.4	338.5
19.5°	335.0	334.8	335.0	335.1	335.4	335.6
20°	331.6	331.3	331.6	331.6	332.2	332.5
20.5°	328.0	327.6	328.0	327.8	328.5	328.9
21°	324.1	323.6	324.1	323.8	324.6	325.3



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	310.6	310.4	310.6	310.7	311.2	311.9
23°	305.7	305.6	305.7	306.1	306.2	306.7
23.5°	300.6	300.9	300.6	301.3	301.0	301.5
24°	295.5	296.0	295.5	296.3	295.7	296.1
24.5°	290.2	290.9	290.2	291.1	290.3	290.5
25°	285.0	285.5	285.0	285.7	284.7	284.6
25.5°	279.8	279.9	279.8	280.1	279.2	278.5
26°	274.3	273.9	274.3	274.3	273.5	272.2
26.5°	268.7	267.7	268.7	268.3	267.7	265.8
27°	262.9	261.4	262.9	262.3	261.6	259.6
27.5°	256.9	255.0	256.9	256.1	255.4	253.4
28°	250.6	248.6	250.6	249.9	249.1	247.3
28.5°	244.3	242.4	244.3	243.6	242.8	241.3
29°	237.8	236.5	237.8	237.4	236.3	235.4
29.5°	231.3	230.7	231.3	231.2	230.0	229.6
30°	224.9	224.9	224.9	224.8	223.6	223.7
30.5°	218.6	219.4	218.6	218.5	217.3	217.7
31°	212.4	213.6	212.4	212.1	210.9	211.7
31.5°	206.2	207.7	206.2	205.8	204.8	205.6
32°	200.1	201.7	200.1	199.5	198.6	199.3
32.5°	194.0	195.7	194.0	193.3	192.6	193.3
33°	188.0	189.5	188.0	186.9	186.7	187.2
33.5°	182.0	183.3	182.0	180.6	180.8	181.7
34°	176.0	177.4	176.0	174.4	174.8	175.9
34.5°	170.1	171.6	170.1	168.3	169.0	170.1
35°	164.3	166.0	164.3	162.5	163.3	164.2
35.5°	158.6	160.4	158.6	156.8	157.6	158.5
36°	153.1	155.0	153.1	151.2	151.9	152.9
36.5°	147.6	149.4	147.6	145.9	146.5	147.3
37°	142.3	143.9	142.3	140.6	141.1	141.7
37.5°	137.3	138.4	137.3	135.5	135.9	136.3
38°	132.3	133.0	132.3	130.7	130.8	130.9
38.5°	127.5	127.7	127.5	126.0	125.9	125.8
39°	122.8	122.7	122.8	121.4	121.2	120.9
39.5°	118.1	118.0	118.1	117.0	116.6	116.1
40°	113.7	113.5	113.7	112.7	112.1	111.5
40.5°	109.3	109.3	109.3	108.6	107.7	107.2
41°	105.2	105.4	105.2	104.7	103.6	103.1
41.5°	101.3	101.8	101.3	101.0	99.7	99.1
42°	97.6	98.3	97.6	97.4	96.0	95.5
42.5°	94.2	94.9	94.2	94.1	92.6	92.0
43°	90.9	91.6	90.9	90.8	89.4	88.7
43.5°	87.8	88.4	87.8	87.7	86.3	85.7



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	79.6	79.9	79.6	79.3	78.5	77.9
45.5°	77.2	77.4	77.2	76.9	76.1	75.7
46°	75.0	75.1	75.0	74.6	73.9	73.5
46.5°	72.8	72.9	72.8	72.4	71.8	71.5
47°	70.8	71.0	70.8	70.4	69.9	69.6
47.5°	69.0	69.2	69.0	68.5	68.0	67.9
48°	67.3	67.5	67.3	66.9	66.4	66.2
48.5°	65.8	65.9	65.8	65.3	64.9	64.8
49°	64.2	64.4	64.2	63.9	63.6	63.5
49.5°	62.8	62.9	62.8	62.6	62.4	62.3
50°	61.4	61.5	61.4	61.2	61.1	61.0
50.5°	60.1	60.1	60.1	59.9	59.8	59.7
51°	58.8	58.8	58.8	58.5	58.4	58.3
51.5°	57.4	57.5	57.4	57.1	56.9	56.9
52°	56.0	56.1	56.0	55.7	55.5	55.4
52.5°	54.5	54.7	54.5	54.3	54.1	54.0
53°	53.1	53.3	53.1	52.9	52.7	52.6
53.5°	51.8	51.9	51.8	51.5	51.3	51.2
54°	50.4	50.5	50.4	50.2	50.0	49.9
54.5°	49.1	49.2	49.1	48.9	48.7	48.6
55°	47.8	47.9	47.8	47.6	47.4	47.3
55.5°	46.6	46.6	46.6	46.4	46.2	46.1
56°	45.3	45.4	45.3	45.2	45.0	44.9
56.5°	44.1	44.2	44.1	44.0	43.8	43.7
57°	43.0	43.0	43.0	42.8	42.6	42.5
57.5°	41.8	41.9	41.8	41.7	41.5	41.3
58°	40.7	40.7	40.7	40.5	40.4	40.3
58.5°	39.6	39.6	39.6	39.5	39.3	39.2
59°	38.4	38.5	38.4	38.3	38.2	38.2
59.5°	37.4	37.5	37.4	37.2	37.1	37.1
60°	36.3	36.4	36.3	36.2	36.1	36.1
60.5°	35.3	35.4	35.3	35.2	35.1	35.0
61°	34.3	34.4	34.3	34.2	34.1	34.1
61.5°	33.4	33.4	33.4	33.3	33.1	33.1
62°	32.4	32.4	32.4	32.3	32.2	32.2
62.5°	31.4	31.5	31.4	31.3	31.3	31.2
63°	30.5	30.5	30.5	30.4	30.3	30.3
63.5°	29.6	29.6	29.6	29.5	29.4	29.4
64°	28.7	28.7	28.7	28.6	28.6	28.5
64.5°	27.8	27.9	27.8	27.8	27.7	27.7
65°	26.9	27.0	26.9	26.9	26.8	26.8
65.5°	26.1	26.1	26.1	26.0	26.0	26.0
66°	25.3	25.3	25.3	25.2	25.2	25.1



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	22.9	22.9	22.9	22.9	22.8	22.7
68°	22.2	22.2	22.2	22.1	22.0	22.0
68.5°	21.3	21.4	21.3	21.3	21.3	21.2
69°	20.6	20.6	20.6	20.5	20.5	20.5
69.5°	19.9	19.9	19.9	19.8	19.8	19.8
70°	19.2	19.2	19.2	19.1	19.2	19.1
70.5°	18.5	18.5	18.5	18.5	18.5	18.4
71°	17.8	17.8	17.8	17.8	17.8	17.8
71.5°	17.1	17.1	17.1	17.1	17.1	17.1
72°	16.5	16.5	16.5	16.4	16.4	16.4
72.5°	15.8	15.8	15.8	15.8	15.8	15.8
73°	15.2	15.2	15.2	15.1	15.1	15.1
73.5°	14.6	14.6	14.6	14.6	14.5	14.5
74°	14.0	14.0	14.0	13.9	13.9	13.9
74.5°	13.3	13.3	13.3	13.3	13.3	13.3
75°	12.7	12.7	12.7	12.7	12.7	12.7
75.5°	12.1	12.2	12.1	12.1	12.1	12.1
76°	11.6	11.6	11.6	11.5	11.5	11.6
76.5°	11.0	11.0	11.0	11.0	11.0	11.0
77°	10.5	10.5	10.5	10.5	10.5	10.5
77.5°	9.9	9.9	9.9	9.9	9.9	9.9
78°	9.4	9.4	9.4	9.4	9.4	9.4
78.5°	8.8	8.9	8.8	8.8	8.9	8.9
79°	8.4	8.4	8.4	8.4	8.4	8.4
79.5°	7.9	7.9	7.9	7.8	7.9	7.9
80°	7.3	7.3	7.3	7.3	7.4	7.4
80.5°	6.9	6.9	6.9	6.9	6.9	6.9
81°	6.4	6.4	6.4	6.4	6.4	6.4
81.5°	5.9	5.9	5.9	5.9	5.9	5.9
82°	5.5	5.5	5.5	5.5	5.5	5.5
82.5°	5.1	5.0	5.1	5.1	5.1	5.1
83°	4.6	4.6	4.6	4.6	4.6	4.6
83.5°	4.2	4.2	4.2	4.2	4.2	4.2
84°	3.8	3.8	3.8	3.8	3.8	3.8
84.5°	3.3	3.3	3.3	3.3	3.3	3.4
85°	3.0	3.0	3.0	3.0	3.0	3.0
85.5°	2.5	2.6	2.5	2.6	2.5	2.6
86°	2.2	2.2	2.2	2.2	2.2	2.2
86.5°	1.8	1.8	1.8	1.8	1.8	1.8
87°	1.4	1.5	1.4	1.5	1.5	1.5
87.5°	1.1	1.1	1.1	1.1	1.1	1.1
88°	0.8	0.8	0.8	0.8	0.8	0.7
88.5°	0.5	0.6	0.5	0.5	0.4	0.4



TEST NUMBER: P776847

CATALOG NUMBER: HCDJBL510CSD-HCD42TRMW-500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.1	0.2	0.1	0.1	0.0	0.0

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1121 Highway 74 South
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°	321.0	320.5	319.6	319.8	319.3	319.8	319.6	320.5	321.0	320.5	319.6
22°	316.5	316.0	315.2	315.3	314.8	315.3	315.2	316.0	316.5	316.0	315.2



44°	82.9	83.5	84.8	84.9	85.4	84.9	84.8	83.5	82.9	83.5	84.8
44.5°	80.3	81.0	82.0	82.2	82.6	82.2	82.0	81.0	80.3	81.0	82.0



66.5°	24.3	24.4	24.4	24.5	24.5	24.5	24.4	24.4	24.3	24.4	24.4
67°	23.6	23.6	23.6	23.7	23.7	23.7	23.6	23.6	23.6	23.6	23.6



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

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21.5°	319.8	319.3	319.8	319.6	320.5	321.0
22°	315.3	314.8	315.3	315.2	316.0	316.5



44°	84.9	85.4	84.9	84.8	83.5	82.9
44.5°	82.2	82.6	82.2	82.0	81.0	80.3

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66.5°	24.5	24.5	24.5	24.4	24.4	24.3
67°	23.7	23.7	23.7	23.6	23.6	23.6

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

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(END OF REPORT)