

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: P775630

Luminaire Tested: HCDJBS510CSD-HCD41TRMB-1000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B031)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD41TRMB-1000lm-2700K
Description: 4 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 914.0 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.26
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

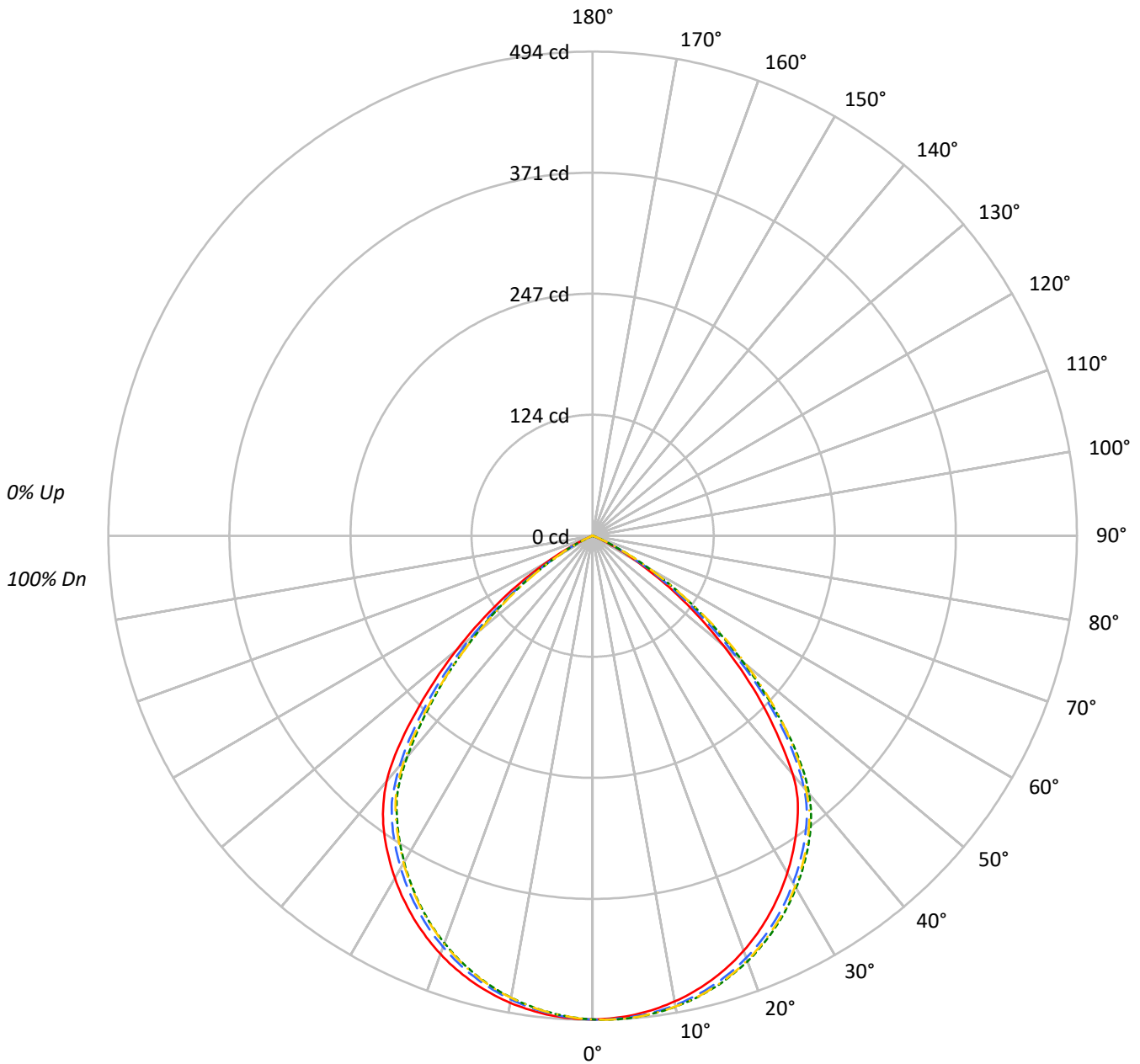
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
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	109	106	103	109	106	104	101	102	100	98	99	97	95	95	94	92	90								
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72								
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64								
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57								
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51								
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46								
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42								
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	40	38								
10	60	49	42	37	59	48	41	37	47	41	37	46	41	36	45	40	36	35								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	62107	62107	62107	62107
5°	61965	62319	62041	61712
10°	61646	62349	61838	61148
15°	61132	62226	61444	60337
20°	60334	61887	60789	59222
25°	59196	61237	59876	57766
30°	57721	60307	58622	55861
35°	55800	58996	56952	53511
40°	52144	56432	53672	48267
45°	43978	49425	45509	39636
50°	34047	39275	35457	29897
55°	23367	28129	24530	19747
60°	12635	16587	13692	9967
65°	3871	5985	4258	2680
70°	368	405	368	368
75°	389	389	389	389
80°	362	362	290	362
85°	144	289	144	289

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°

Vertical Angle: 45°

Luminance: 49816 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.6	5.1
10°-20°	132.6	14.5
20°-30°	197.2	21.6
30°-40°	228.0	24.9
40°-50°	192.4	21.0
50°-60°	97.9	10.7
60°-70°	18.3	2.0
70°-80°	0.8	0.1
80°-90°	0.2	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°	376.5	41.2
0°-40°	604.4	66.1
0°-60°	894.7	97.9
0°-90°	914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	914.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	494	494	494	494	494	
5°	490	493	491	488	490	47
15°	469	478	472	463	469	132
25°	426	441	431	416	426	196
35°	363	384	371	348	363	226
45°	247	278	256	223	247	189
55°	106	128	112	90	106	96
65°	13	20	14	9	13	17
75°	1	1	1	1	1	1
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°	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5
0.5°	493.4	493.4	493.6	493.7	493.8	493.8	493.8	493.4	493.3	493.4	493.3
1°	493.3	493.5	493.7	493.8	493.9	494.0	493.9	493.5	493.3	493.3	493.1
1.5°	493.1	493.4	493.7	493.9	493.9	494.1	494.0	493.6	493.2	493.0	492.8
2°	492.9	493.3	493.6	494.0	494.0	494.2	494.1	493.6	493.1	492.8	492.4
2.5°	492.5	493.0	493.5	494.0	494.0	494.1	493.9	493.5	492.9	492.5	492.1
3°	492.2	492.8	493.3	493.8	494.0	494.1	493.9	493.2	492.7	492.2	491.6
3.5°	491.8	492.5	493.2	493.7	493.8	494.0	493.9	493.1	492.3	491.7	491.2
4°	491.5	492.2	492.9	493.5	493.7	493.9	493.7	493.0	492.0	491.3	490.7
4.5°	491.0	491.8	492.7	493.2	493.5	493.7	493.4	492.8	491.6	490.7	490.0
5°	490.5	491.4	492.3	493.0	493.3	493.4	493.1	492.4	491.1	490.2	489.4
5.5°	489.9	490.9	491.9	492.7	492.9	493.2	492.9	492.0	490.7	489.7	488.7
6°	489.2	490.4	491.6	492.3	492.6	492.8	492.5	491.6	490.1	489.0	488.0
6.5°	488.5	489.8	491.0	491.9	492.2	492.4	492.0	491.2	489.5	488.4	487.3
7°	487.9	489.2	490.5	491.5	491.7	491.9	491.5	490.7	488.8	487.5	486.5
7.5°	487.1	488.5	489.9	490.9	491.1	491.5	491.0	490.1	488.1	486.8	485.6
8°	486.3	487.8	489.3	490.4	490.6	490.9	490.4	489.4	487.3	485.9	484.7
8.5°	485.4	487.0	488.6	489.7	490.0	490.3	489.8	488.7	486.5	485.0	483.7
9°	484.4	486.2	487.9	489.0	489.3	489.7	489.2	488.0	485.7	484.1	482.6
9.5°	483.4	485.3	487.1	488.3	488.6	489.0	488.4	487.3	484.9	483.1	481.5
10°	482.4	484.4	486.2	487.6	487.9	488.3	487.7	486.5	483.9	482.1	480.4
10.5°	481.3	483.4	485.3	486.7	487.1	487.5	486.8	485.6	482.9	481.0	479.2
11°	480.2	482.3	484.4	485.8	486.2	486.6	486.0	484.7	481.9	479.8	478.0
11.5°	479.1	481.2	483.4	484.9	485.3	485.7	485.0	483.7	480.8	478.6	476.7
12°	477.7	480.1	482.3	483.9	484.4	484.7	484.1	482.6	479.6	477.4	475.3
12.5°	476.5	478.9	481.2	482.9	483.4	483.7	483.0	481.5	478.3	476.1	473.9
13°	475.1	477.7	480.0	481.9	482.3	482.7	482.0	480.5	477.1	474.7	472.4
13.5°	473.8	476.4	478.8	480.7	481.2	481.5	480.8	479.3	475.8	473.3	470.9
14°	472.3	475.0	477.6	479.5	480.0	480.5	479.7	478.0	474.4	471.9	469.4
14.5°	470.8	473.6	476.2	478.3	478.8	479.2	478.4	476.7	473.1	470.4	467.7
15°	469.2	472.1	474.8	477.0	477.6	478.0	477.1	475.4	471.6	468.8	466.0
15.5°	467.6	470.4	473.5	475.6	476.3	476.6	475.7	473.9	470.1	467.2	464.4
16°	465.9	469.0	472.0	474.2	474.9	475.3	474.3	472.5	468.5	465.5	462.7
16.5°	464.2	467.4	470.4	472.8	473.4	473.8	472.9	471.0	466.9	463.8	460.8
17°	462.5	465.7	468.9	471.3	472.0	472.3	471.4	469.5	465.2	462.1	458.9
17.5°	460.6	463.9	467.3	469.7	470.4	470.7	469.8	467.9	463.4	460.2	456.9
18°	458.6	462.1	465.5	468.1	468.8	469.1	468.2	466.1	461.6	458.3	454.8
18.5°	456.7	460.3	463.7	466.5	467.1	467.6	466.5	464.4	459.9	456.4	452.8
19°	454.6	458.3	462.0	464.7	465.5	465.9	464.7	462.7	458.0	454.3	450.8
19.5°	452.6	456.4	460.1	463.0	463.8	464.1	462.9	460.9	456.1	452.3	448.6
20°	450.5	454.3	458.2	461.2	462.1	462.3	461.1	459.0	453.9	450.2	446.4
20.5°	448.3	452.3	456.3	459.3	460.2	460.5	459.2	457.1	452.0	448.1	444.1
21°	446.1	450.1	454.2	457.4	458.4	458.7	457.3	455.0	449.8	445.8	441.8



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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°	439.1	443.5	447.8	451.2	452.1	452.4	451.0	448.8	443.2	438.9	434.6
23°	436.7	441.2	445.6	449.1	450.0	450.3	448.9	446.6	440.9	436.6	432.1
23.5°	434.2	438.7	443.4	447.0	447.9	448.0	446.7	444.3	438.6	434.1	429.4
24°	431.6	436.3	441.1	444.7	445.6	445.9	444.4	442.1	436.2	431.6	426.9
24.5°	429.0	433.9	438.7	442.4	443.4	443.5	442.1	439.7	433.8	429.1	424.2
25°	426.3	431.4	436.2	440.0	441.0	441.2	439.7	437.3	431.2	426.4	421.5
25.5°	423.6	428.8	433.8	437.7	438.7	438.8	437.3	434.9	428.6	423.8	418.6
26°	420.9	426.1	431.2	435.2	436.3	436.4	434.9	432.4	426.0	421.0	415.8
26.5°	418.2	423.4	428.7	432.7	433.8	433.8	432.3	429.8	423.3	418.2	412.9
27°	415.3	420.7	426.0	430.2	431.2	431.3	429.7	427.2	420.6	415.5	410.0
27.5°	412.4	417.9	423.4	427.7	428.6	428.7	427.1	424.5	417.9	412.6	407.0
28°	409.4	415.1	420.7	425.0	426.1	426.2	424.5	421.8	415.2	409.7	403.9
28.5°	406.4	412.1	417.8	422.3	423.4	423.4	421.8	419.0	412.3	406.8	400.9
29°	403.4	409.2	414.9	419.5	420.7	420.6	418.9	416.3	409.3	403.7	397.9
29.5°	400.3	406.2	412.1	416.8	417.9	417.8	416.1	413.5	406.4	400.7	394.6
30°	397.2	403.3	409.2	414.0	415.0	415.0	413.2	410.5	403.4	397.6	391.3
30.5°	394.0	400.2	406.2	411.1	412.2	411.9	410.3	407.6	400.4	394.5	388.2
31°	390.8	397.1	403.2	408.0	409.2	409.0	407.2	404.6	397.2	391.3	384.9
31.5°	387.4	393.9	400.1	405.1	406.2	406.0	404.2	401.6	394.0	388.0	381.5
32°	384.1	390.7	397.0	402.1	403.2	403.0	401.2	398.5	390.8	384.8	378.2
32.5°	380.7	387.3	393.8	399.0	400.0	399.8	398.1	395.4	387.6	381.4	374.6
33°	377.3	384.0	390.6	395.8	397.0	396.6	395.0	392.2	384.4	378.1	371.2
33.5°	373.9	380.6	387.3	392.7	393.8	393.4	391.8	388.9	381.0	374.7	367.6
34°	370.4	377.3	384.1	389.4	390.6	390.3	388.4	385.7	377.6	371.1	364.2
34.5°	366.8	373.8	380.7	386.2	387.3	386.9	385.0	382.3	374.2	367.6	360.4
35°	363.2	370.3	377.2	382.7	384.0	383.6	381.6	378.8	370.7	364.0	356.7
35.5°	359.4	366.7	373.7	379.4	380.5	380.2	378.2	375.4	367.1	360.3	352.6
36°	355.8	363.1	370.2	375.8	377.1	376.7	374.6	371.9	363.3	356.4	348.7
36.5°	351.8	359.4	366.6	372.3	373.6	373.1	371.0	368.2	359.4	352.3	344.6
37°	347.9	355.6	362.9	368.6	369.8	369.3	367.2	364.4	355.5	348.3	340.3
37.5°	343.7	351.4	358.9	364.7	365.9	365.4	363.4	360.5	351.2	343.9	335.1
38°	339.5	347.3	354.8	360.8	361.9	361.4	359.4	356.4	346.7	339.1	329.7
38.5°	334.7	342.7	350.5	356.6	357.7	357.1	354.8	352.0	342.1	333.9	324.0
39°	329.5	337.6	345.9	352.3	353.1	352.3	349.7	347.3	337.2	328.4	318.2
39.5°	323.8	332.0	340.7	347.7	348.5	347.1	344.4	342.2	332.0	322.8	312.1
40°	317.4	326.1	335.1	342.8	343.5	341.6	339.0	336.7	326.7	316.8	305.9
40.5°	310.3	320.1	329.4	337.6	338.1	336.1	333.3	331.1	320.8	310.7	299.4
41°	303.4	313.9	323.5	332.0	332.5	330.3	327.6	325.3	314.6	304.5	292.9
41.5°	296.4	307.5	317.3	326.1	326.5	324.5	321.9	319.2	307.8	298.0	286.2
42°	289.3	300.7	311.2	319.7	320.1	318.5	316.1	313.0	301.1	291.4	279.3
42.5°	282.3	293.9	304.7	313.1	313.7	312.5	310.1	306.8	293.8	284.6	272.1
43°	275.4	287.0	298.1	306.4	307.0	306.3	303.9	300.0	286.3	277.5	264.9
43.5°	268.3	279.9	291.3	299.3	300.0	299.9	297.5	293.4	278.7	270.2	257.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	247.1	258.2	269.6	276.5	277.7	279.9	277.8	272.2	255.7	247.7	235.6
45.5°	240.0	250.7	261.9	268.3	269.9	273.0	270.8	265.1	248.0	240.0	228.3
46°	232.8	243.5	254.4	260.4	262.1	265.8	263.9	257.5	240.4	232.0	221.0
46.5°	225.5	236.1	246.5	252.4	254.3	258.7	257.0	250.2	232.7	224.1	213.6
47°	218.0	228.8	238.8	244.3	246.2	251.1	249.6	242.4	225.4	216.2	206.4
47.5°	210.5	221.5	231.0	236.1	238.5	243.7	242.5	234.8	218.0	208.4	199.0
48°	203.1	214.1	222.8	228.2	230.9	236.2	235.0	227.2	210.6	200.6	191.8
48.5°	195.6	206.6	214.8	220.3	223.3	228.7	227.8	220.2	203.2	192.6	184.6
49°	188.3	199.4	206.7	212.5	215.6	221.1	220.2	212.3	195.8	184.9	177.3
49.5°	181.0	192.0	198.8	204.7	208.0	213.4	212.9	204.8	188.4	177.2	170.0
50°	173.9	184.5	190.8	197.2	200.6	205.6	205.2	197.3	181.1	169.8	162.7
50.5°	166.7	177.0	182.9	189.3	193.1	197.9	197.6	190.0	173.8	162.2	155.3
51°	159.8	169.4	174.9	181.8	185.6	190.2	189.7	182.8	166.8	155.0	148.1
51.5°	152.7	162.1	167.3	174.2	178.2	182.6	182.4	175.6	159.5	147.7	141.0
52°	145.8	154.6	159.8	166.9	170.9	174.9	174.7	168.4	152.4	140.7	133.9
52.5°	139.1	147.3	152.5	159.2	163.5	167.4	167.1	161.1	145.4	133.8	126.9
53°	132.4	140.1	144.9	152.3	156.3	159.9	159.6	154.1	138.5	127.1	120.0
53.5°	125.7	133.0	137.7	145.0	149.1	152.5	152.2	147.0	131.6	120.4	113.3
54°	119.1	125.8	130.7	137.9	142.0	145.1	144.6	140.1	124.9	114.1	106.8
54.5°	112.7	118.8	123.8	130.6	134.9	137.8	137.3	133.2	118.4	108.1	100.5
55°	106.5	112.1	117.1	124.1	128.2	130.7	130.2	126.5	111.8	101.7	94.2
55.5°	100.3	105.3	110.4	117.5	121.5	123.7	122.9	119.7	105.4	95.5	88.5
56°	94.2	98.9	104.0	110.8	114.7	116.8	115.9	113.3	99.1	89.9	82.7
56.5°	88.2	92.6	97.7	104.1	108.1	109.9	109.1	106.6	93.2	84.3	77.0
57°	82.4	86.3	91.6	98.2	101.7	103.4	102.5	100.3	87.4	78.8	71.2
57.5°	76.7	80.3	85.6	92.0	95.5	96.9	96.0	94.2	81.6	73.2	65.9
58°	71.0	74.5	79.6	86.0	89.5	90.7	89.9	88.2	75.7	67.6	60.7
58.5°	65.7	68.9	73.9	80.2	83.5	84.5	83.7	82.1	69.9	62.6	55.8
59°	60.3	63.6	68.5	74.6	77.5	78.3	77.6	76.0	64.5	57.4	51.1
59.5°	55.3	58.4	63.2	69.2	71.6	72.1	71.5	70.0	59.5	52.7	46.5
60°	50.2	53.3	58.0	63.9	65.9	66.5	65.8	64.5	54.4	47.9	42.2
60.5°	45.6	48.5	53.0	58.9	60.6	61.0	60.4	59.1	49.4	43.5	37.9
61°	41.0	43.8	48.3	53.8	55.3	55.7	55.0	53.7	44.7	39.1	34.0
61.5°	36.7	39.5	43.7	48.9	50.1	50.4	49.8	48.6	40.4	35.1	30.4
62°	33.0	35.3	39.4	44.4	45.2	45.5	45.0	43.7	35.9	31.1	26.7
62.5°	29.4	31.9	35.3	39.9	40.4	40.8	40.3	38.8	31.8	27.4	23.4
63°	25.7	28.5	31.9	35.7	35.9	36.3	35.8	34.2	27.8	23.9	20.3
63.5°	22.1	25.1	28.5	32.0	31.6	32.0	31.5	30.0	24.1	20.7	17.5
64°	18.5	21.7	25.1	28.3	27.5	27.9	27.6	26.0	20.6	17.6	14.8
64.5°	15.6	18.4	21.7	24.7	23.6	24.1	23.8	22.2	17.4	14.8	12.4
65°	13.0	15.6	18.3	21.0	20.1	20.6	20.3	18.7	14.3	12.8	10.6
65.5°	10.8	13.1	15.5	17.4	16.8	17.2	17.0	15.6	12.0	10.7	8.9
66°	8.8	10.7	12.9	14.4	13.8	14.2	14.0	13.3	9.8	8.6	7.2



TEST NUMBER: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.3	5.3	6.7	7.1	7.5	7.8	7.6	6.6	3.0	3.3	2.7
68°	3.6	4.0	5.1	5.3	5.4	5.6	5.4	4.4	1.8	2.3	1.9
68.5°	3.0	3.2	3.7	3.9	3.4	3.5	3.3	3.0	1.2	1.5	1.4
69°	2.3	2.5	3.0	3.2	2.3	2.4	2.2	2.0	1.1	1.2	1.1
69.5°	1.7	1.8	2.4	2.5	1.6	1.6	1.5	1.4	1.1	1.1	1.1
70°	1.0	1.1	1.7	1.7	1.1	1.1	1.1	1.1	1.0	1.0	1.0
70.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
71°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
71.5°	0.9	0.9	0.9	1.0	0.9	0.9	1.0	1.0	1.0	1.0	1.0
72°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
73°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
73.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.9
74°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
74.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
75.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7
76°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
76.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
77°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
78°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
78.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6
79°	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5
80.5°	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5
81°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4
82°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4
82.5°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3
83°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.3
83.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3
84°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.2
84.5°	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.2
85°	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.2
85.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.2
86°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1
86.5°	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1
87°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
87.5°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
88°	0.0	0.0	0.1	0.1	0.0	0.1	0.1	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: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-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	0.0	0.0



TEST NUMBER: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	493.5	493.5	493.5	493.5	493.5	493.5
0.5°	493.2	493.2	493.4	493.3	493.1	493.4
1°	492.9	492.9	493.1	493.0	492.9	493.3
1.5°	492.5	492.5	492.7	492.7	492.6	493.1
2°	492.2	492.1	492.2	492.3	492.1	492.9
2.5°	491.8	491.6	491.8	491.7	491.7	492.5
3°	491.3	491.1	491.2	491.2	491.3	492.2
3.5°	490.7	490.6	490.6	490.7	490.8	491.8
4°	490.1	490.0	490.0	490.1	490.3	491.5
4.5°	489.4	489.3	489.3	489.4	489.7	491.0
5°	488.7	488.5	488.5	488.7	489.0	490.5
5.5°	488.0	487.8	487.7	487.9	488.4	489.9
6°	487.2	486.9	486.8	487.2	487.6	489.2
6.5°	486.4	486.1	485.9	486.3	486.8	488.5
7°	485.5	485.2	485.1	485.4	486.0	487.9
7.5°	484.5	484.2	484.1	484.4	485.2	487.1
8°	483.5	483.1	483.1	483.3	484.2	486.3
8.5°	482.4	482.1	482.0	482.3	483.1	485.4
9°	481.3	480.9	480.8	481.2	482.0	484.4
9.5°	480.2	479.7	479.6	480.0	480.9	483.4
10°	479.0	478.5	478.3	478.8	479.7	482.4
10.5°	477.7	477.3	477.1	477.6	478.6	481.3
11°	476.4	476.0	475.8	476.3	477.2	480.2
11.5°	475.0	474.5	474.4	474.8	475.9	479.1
12°	473.6	473.1	472.9	473.4	474.6	477.7
12.5°	472.2	471.6	471.4	471.9	473.1	476.5
13°	470.6	470.0	469.7	470.4	471.6	475.1
13.5°	469.0	468.4	468.1	468.8	470.1	473.8
14°	467.4	466.7	466.5	467.2	468.5	472.3
14.5°	465.7	465.0	464.7	465.5	466.9	470.8
15°	463.9	463.1	462.9	463.6	465.1	469.2
15.5°	462.1	461.3	461.1	461.8	463.3	467.6
16°	460.2	459.4	459.3	460.0	461.5	465.9
16.5°	458.4	457.5	457.3	458.1	459.6	464.2
17°	456.4	455.3	455.1	456.1	457.7	462.5
17.5°	454.3	453.3	453.1	454.0	455.6	460.6
18°	452.2	451.2	451.0	451.8	453.7	458.6
18.5°	450.0	449.0	448.8	449.7	451.6	456.7
19°	447.9	446.8	446.5	447.5	449.3	454.6
19.5°	445.6	444.5	444.3	445.2	447.2	452.6
20°	443.3	442.2	442.0	442.9	445.1	450.5
20.5°	441.0	439.8	439.5	440.5	442.7	448.3
21°	438.6	437.3	437.1	438.1	440.3	446.1



TEST NUMBER: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	431.0	429.8	429.4	430.4	433.0	439.1
23°	428.4	427.2	426.8	427.9	430.3	436.7
23.5°	425.7	424.4	424.1	425.2	427.6	434.2
24°	423.0	421.6	421.2	422.5	425.0	431.6
24.5°	420.2	418.8	418.4	419.6	422.3	429.0
25°	417.4	416.0	415.6	416.8	419.6	426.3
25.5°	414.5	413.0	412.6	413.8	416.7	423.6
26°	411.6	410.0	409.6	410.9	413.8	420.9
26.5°	408.5	407.0	406.6	408.0	410.8	418.2
27°	405.6	403.9	403.6	404.9	407.8	415.3
27.5°	402.4	400.8	400.4	401.8	404.8	412.4
28°	399.3	397.5	397.2	398.6	401.7	409.4
28.5°	396.1	394.4	394.0	395.5	398.5	406.4
29°	392.9	391.2	390.7	392.2	395.4	403.4
29.5°	389.5	387.9	387.4	389.0	392.2	400.3
30°	386.3	384.4	384.1	385.6	389.0	397.2
30.5°	382.8	381.1	380.6	382.3	385.6	394.0
31°	379.4	377.6	377.1	378.7	382.2	390.8
31.5°	376.0	374.2	373.6	375.4	378.9	387.4
32°	372.5	370.6	370.0	372.0	375.5	384.1
32.5°	368.9	367.1	366.6	368.4	372.1	380.7
33°	365.2	363.5	363.0	364.7	368.5	377.3
33.5°	361.6	359.8	359.3	361.2	364.8	373.9
34°	357.9	356.0	355.6	357.6	361.2	370.4
34.5°	354.1	352.2	351.7	353.7	357.6	366.8
35°	350.2	348.3	347.9	349.8	353.6	363.2
35.5°	346.1	344.4	344.0	346.0	350.0	359.4
36°	342.1	340.2	339.9	342.1	346.1	355.8
36.5°	337.8	335.9	335.7	338.0	341.9	351.8
37°	333.1	331.4	331.3	333.5	337.7	347.9
37.5°	327.6	326.2	326.4	329.1	333.5	343.7
38°	321.7	320.4	320.7	323.7	328.2	339.5
38.5°	315.6	314.0	314.7	317.8	322.6	334.7
39°	309.0	307.6	308.4	311.7	316.8	329.5
39.5°	302.2	300.8	301.8	305.2	310.6	323.8
40°	295.3	293.8	294.9	298.5	304.1	317.4
40.5°	288.3	286.6	287.8	291.7	297.1	310.3
41°	281.5	279.5	280.8	284.9	290.0	303.4
41.5°	274.6	272.1	273.5	277.7	282.5	296.4
42°	267.7	265.3	266.3	270.6	275.2	289.3
42.5°	261.0	258.1	259.0	263.4	267.8	282.3
43°	254.2	251.1	251.4	256.0	260.1	275.4
43.5°	247.4	243.7	243.9	248.4	252.5	268.3



TEST NUMBER: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	226.6	222.7	221.3	225.3	230.4	247.1
45.5°	219.5	215.5	213.8	217.6	222.9	240.0
46°	212.3	208.6	206.7	209.9	215.7	232.8
46.5°	204.9	201.2	199.3	202.2	208.4	225.5
47°	197.7	194.4	192.0	194.5	201.2	218.0
47.5°	190.5	187.0	184.6	186.9	193.8	210.5
48°	183.2	180.3	177.7	179.4	186.6	203.1
48.5°	176.1	173.1	170.4	171.8	179.4	195.6
49°	169.1	166.3	163.5	164.6	172.3	188.3
49.5°	162.0	159.5	156.4	157.4	165.2	181.0
50°	155.0	152.7	149.4	150.1	158.1	173.9
50.5°	148.3	145.9	142.5	143.1	151.1	166.7
51°	141.6	139.2	135.9	136.4	144.3	159.8
51.5°	134.9	132.8	129.2	129.7	137.4	152.7
52°	128.2	126.4	122.8	123.2	130.9	145.8
52.5°	121.9	120.1	116.3	116.7	124.3	139.1
53°	115.4	113.7	110.2	110.6	117.9	132.4
53.5°	109.0	107.6	103.9	104.6	111.5	125.7
54°	102.7	101.5	98.0	98.6	105.3	119.1
54.5°	96.8	95.7	92.3	92.9	99.2	112.7
55°	91.0	90.0	86.7	87.4	93.4	106.5
55.5°	85.3	84.2	81.3	82.0	87.5	100.3
56°	79.6	78.6	75.9	76.8	81.8	94.2
56.5°	73.9	73.2	70.7	71.7	76.2	88.2
57°	68.2	67.9	65.8	66.7	71.0	82.4
57.5°	63.0	62.8	61.0	61.9	65.7	76.7
58°	57.8	57.7	56.4	57.4	60.8	71.0
58.5°	52.8	52.9	52.0	53.0	55.8	65.7
59°	47.9	48.2	47.6	48.6	51.3	60.3
59.5°	43.3	43.8	43.6	44.5	46.8	55.3
60°	39.0	39.6	39.7	40.7	42.6	50.2
60.5°	34.9	35.3	35.9	36.8	38.4	45.6
61°	31.0	31.9	32.7	33.7	34.5	41.0
61.5°	27.2	28.6	29.5	30.5	31.2	36.7
62°	23.7	25.2	26.3	27.3	27.8	33.0
62.5°	20.6	21.8	23.1	24.1	24.4	29.4
63°	17.6	18.5	19.9	20.9	21.1	25.7
63.5°	14.9	15.7	17.2	18.2	18.2	22.1
64°	12.4	13.2	14.7	15.7	15.6	18.5
64.5°	10.7	11.0	12.4	13.3	13.0	15.6
65°	9.1	9.0	10.4	11.1	10.9	13.0
65.5°	7.4	7.3	8.5	9.1	8.9	10.8
66°	5.8	5.8	6.7	7.4	7.1	8.8



TEST NUMBER: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	2.3	2.9	3.2	3.2	3.2	4.3
68°	1.7	2.3	2.5	2.7	2.3	3.6
68.5°	1.3	1.7	1.8	2.1	2.1	3.0
69°	1.1	1.1	1.1	1.6	1.8	2.3
69.5°	1.1	1.1	1.0	1.1	1.5	1.7
70°	1.0	1.0	1.0	1.0	1.2	1.0
70.5°	1.0	1.0	1.0	1.0	1.0	1.0
71°	1.0	1.0	1.0	1.0	0.9	1.0
71.5°	0.9	0.9	0.9	0.9	0.9	0.9
72°	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9	0.9
73°	0.9	0.9	0.9	0.9	0.8	0.9
73.5°	0.8	0.8	0.8	0.8	0.8	0.8
74°	0.8	0.8	0.8	0.8	0.8	0.8
74.5°	0.8	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.7	0.8
75.5°	0.7	0.7	0.7	0.7	0.7	0.7
76°	0.7	0.7	0.7	0.7	0.7	0.7
76.5°	0.7	0.7	0.7	0.7	0.7	0.7
77°	0.7	0.7	0.7	0.7	0.6	0.7
77.5°	0.6	0.6	0.6	0.6	0.6	0.6
78°	0.6	0.6	0.6	0.6	0.6	0.6
78.5°	0.6	0.6	0.6	0.6	0.5	0.6
79°	0.6	0.6	0.6	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.4	0.5
80.5°	0.5	0.5	0.5	0.5	0.4	0.4
81°	0.4	0.5	0.5	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.3	0.4
82°	0.4	0.4	0.4	0.4	0.3	0.3
82.5°	0.4	0.4	0.4	0.3	0.3	0.3
83°	0.3	0.3	0.3	0.3	0.2	0.3
83.5°	0.3	0.3	0.3	0.3	0.2	0.2
84°	0.3	0.3	0.3	0.3	0.2	0.2
84.5°	0.2	0.2	0.2	0.2	0.1	0.1
85°	0.2	0.2	0.2	0.2	0.1	0.1
85.5°	0.2	0.2	0.2	0.2	0.1	0.1
86°	0.1	0.1	0.1	0.1	0.1	0.1
86.5°	0.1	0.1	0.1	0.1	0.1	0.0
87°	0.1	0.1	0.1	0.1	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: P775630

CATALOG NUMBER: HCDJBL510CSD-HCD41TRMB-1000lm-2700K

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°	443.8	448.0	452.2	455.3	456.3	456.6	455.1	453.0	447.7	443.6	439.5
22°	441.5	445.8	450.0	453.3	454.2	454.4	453.2	451.0	445.4	441.4	437.1



44°	261.4	272.8	284.2	291.8	292.9	293.4	291.1	286.5	271.1	262.8	250.3
44.5°	254.3	265.4	276.8	284.2	285.2	286.8	284.7	279.8	263.3	255.4	243.0



66.5°	7.0	8.7	10.6	11.7	11.7	12.1	11.8	11.1	7.5	6.6	5.4
67°	5.6	6.9	8.5	9.2	9.6	9.9	9.7	8.8	5.3	4.5	3.7



89°	0.0	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	0.0

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21.5°	436.1	434.9	434.5	435.6	437.8	443.8
22°	433.6	432.4	432.0	433.0	435.4	441.5



44°	240.4	236.8	236.3	240.7	245.1	261.4
44.5°	233.6	229.6	228.8	233.0	237.8	254.3

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66.5°	4.2	4.6	5.2	5.8	5.5	7.0
67°	3.2	3.5	3.9	4.4	4.3	5.6

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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)