

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: P775818

Luminaire Tested: HCDJBL510CSD-HCD81TRC-1000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775818
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B042-HCD81TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD81TRC-1000lm-4000K
Description: 8 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

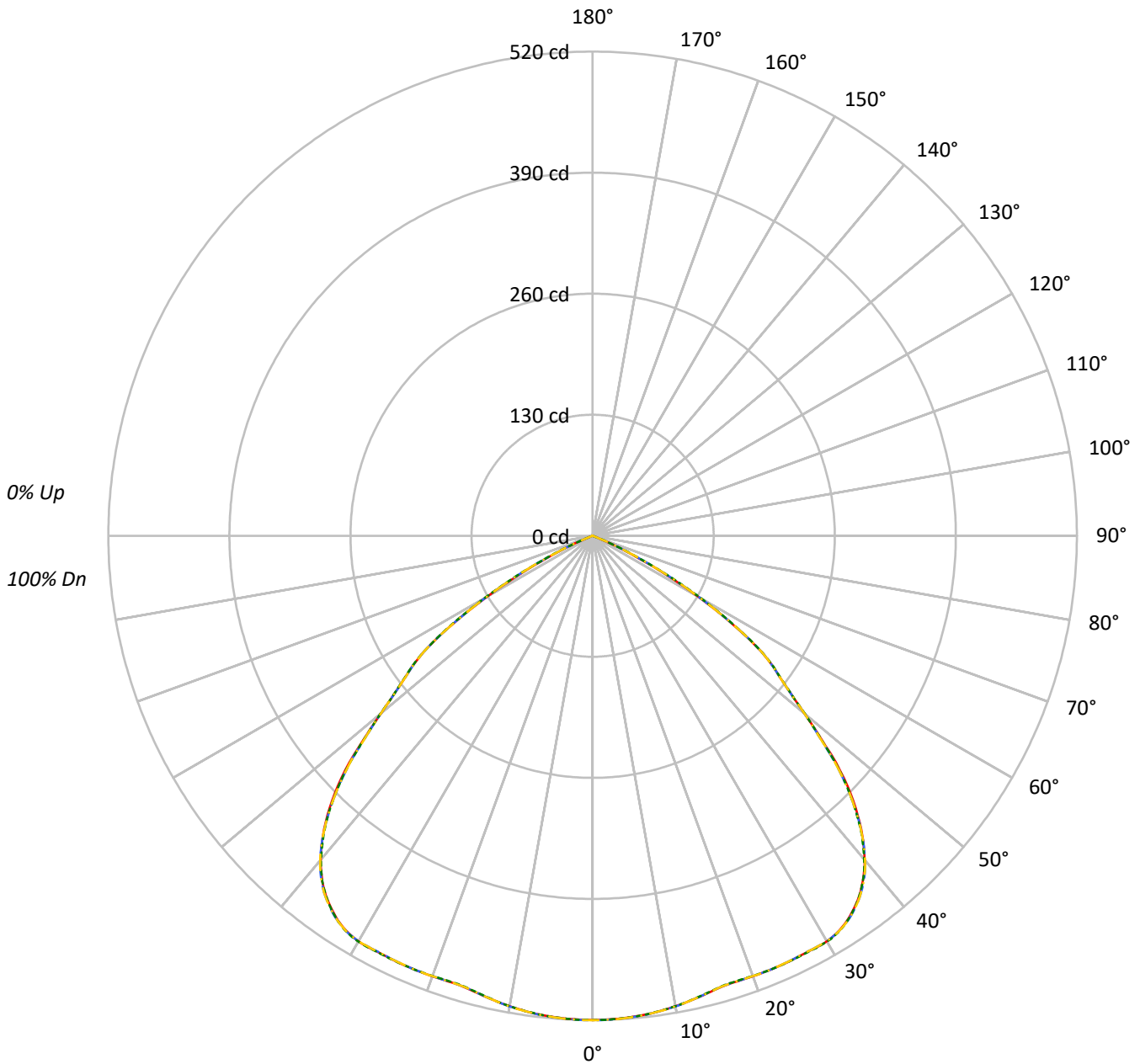
Lumens per Lamp: N/A
Luminaire Lumens: 1273.3 lumens
Efficiency: N/A
Efficacy: 127.3 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.44 / 1.44
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): 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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78								
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68								
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60								
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52								
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37								
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33								
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15882	15882	15882	15882
5°	15884	15887	15884	15887
10°	15907	15904	15907	15904
15°	15968	15952	15968	15952
20°	16355	16346	16355	16346
25°	16961	16964	16961	16964
30°	17729	17743	17729	17743
35°	18225	18236	18225	18236
40°	18106	18082	18106	18082
45°	16912	16822	16912	16822
50°	14097	14121	14097	14121
55°	12104	12136	12104	12136
60°	7968	8182	7968	8182
65°	2832	3244	2832	3244
70°	80	161	80	161
75°	35	47	35	47
80°	18	35	18	35
85°	0	35	0	35

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16912 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	3.9
10°-20°	143.3	11.3
20°-30°	233.0	18.3
30°-40°	304.8	23.9
40°-50°	296.1	23.3
50°-60°	196.7	15.4
60°-70°	49.5	3.9
70°-80°	0.4	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°	425.6	33.4
0°-40°	730.4	57.4
0°-60°	1223.3	96.1
0°-90°	1273.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1273.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	520	520	520	520	520	
5°	518	518	518	518	518	49
15°	505	505	505	505	505	143
25°	504	504	504	504	504	233
35°	489	489	489	489	489	304
45°	392	390	392	390	392	297
55°	227	228	227	228	227	196
65°	39	45	39	45	39	47
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°	520.2	520.2	520.2	520.2	520.2	520.2	520.2	520.2	520.2	520.2	520.2
0.5°	520.1	520.1	520.3	520.4	520.1	520.4	520.3	520.1	520.1	520.1	520.3
1°	520.0	520.1	520.2	520.3	520.1	520.3	520.2	520.1	520.0	520.1	520.2
1.5°	519.9	520.0	520.1	520.2	520.0	520.2	520.1	520.0	519.9	520.0	520.1
2°	519.8	519.8	520.0	520.1	519.9	520.1	520.0	519.8	519.8	519.8	520.0
2.5°	519.6	519.7	519.8	519.9	519.7	519.9	519.8	519.7	519.6	519.7	519.8
3°	519.5	519.5	519.7	519.8	519.5	519.8	519.7	519.5	519.5	519.5	519.7
3.5°	519.3	519.3	519.5	519.5	519.3	519.5	519.5	519.3	519.3	519.3	519.5
4°	519.0	519.1	519.2	519.3	519.0	519.3	519.2	519.1	519.0	519.1	519.2
4.5°	518.7	518.8	518.9	519.0	518.8	519.0	518.9	518.8	518.7	518.8	518.9
5°	518.3	518.4	518.5	518.7	518.4	518.7	518.5	518.4	518.3	518.4	518.5
5.5°	518.0	518.1	518.2	518.3	518.1	518.3	518.2	518.1	518.0	518.1	518.2
6°	517.6	517.7	517.8	517.9	517.7	517.9	517.8	517.7	517.6	517.7	517.8
6.5°	517.2	517.3	517.4	517.5	517.2	517.5	517.4	517.3	517.2	517.3	517.4
7°	516.8	516.8	516.9	517.0	516.7	517.0	516.9	516.8	516.8	516.8	516.9
7.5°	516.2	516.2	516.3	516.3	516.1	516.3	516.3	516.2	516.2	516.2	516.3
8°	515.6	515.7	515.7	515.8	515.6	515.8	515.7	515.7	515.6	515.7	515.7
8.5°	515.0	515.1	515.2	515.2	515.0	515.2	515.2	515.1	515.0	515.1	515.2
9°	514.5	514.5	514.6	514.6	514.3	514.6	514.6	514.5	514.5	514.5	514.6
9.5°	513.7	513.8	513.8	513.9	513.7	513.9	513.8	513.8	513.7	513.8	513.8
10°	513.1	513.1	513.2	513.2	513.0	513.2	513.2	513.1	513.1	513.1	513.2
10.5°	512.3	512.3	512.5	512.5	512.2	512.5	512.5	512.3	512.3	512.3	512.5
11°	511.6	511.6	511.7	511.7	511.4	511.7	511.7	511.6	511.6	511.6	511.7
11.5°	510.8	510.8	510.9	510.9	510.7	510.9	510.9	510.8	510.8	510.8	510.9
12°	510.0	510.0	510.0	510.0	509.8	510.0	510.0	510.0	510.0	510.0	510.0
12.5°	509.2	509.2	509.2	509.2	509.0	509.2	509.2	509.2	509.2	509.2	509.2
13°	508.5	508.4	508.5	508.4	508.1	508.4	508.5	508.4	508.5	508.4	508.5
13.5°	507.6	507.5	507.5	507.5	507.2	507.5	507.5	507.5	507.6	507.5	507.5
14°	506.8	506.8	506.7	506.7	506.4	506.7	506.7	506.8	506.8	506.8	506.7
14.5°	505.9	505.9	505.8	505.8	505.5	505.8	505.8	505.9	505.9	505.9	505.8
15°	505.2	505.1	505.0	505.0	504.7	505.0	505.0	505.1	505.2	505.1	505.0
15.5°	504.5	504.4	504.3	504.2	503.9	504.2	504.3	504.4	504.5	504.4	504.3
16°	503.9	503.8	503.7	503.5	503.3	503.5	503.7	503.8	503.9	503.8	503.7
16.5°	503.5	503.4	503.3	503.0	502.9	503.0	503.3	503.4	503.5	503.4	503.3
17°	503.2	503.2	503.1	502.8	502.6	502.8	503.1	503.2	503.2	503.2	503.1
17.5°	503.1	503.1	502.9	502.7	502.6	502.7	502.9	503.1	503.1	503.1	502.9
18°	503.1	503.1	502.9	502.8	502.6	502.8	502.9	503.1	503.1	503.1	502.9
18.5°	503.1	503.1	503.0	502.8	502.6	502.8	503.0	503.1	503.1	503.1	503.0
19°	503.2	503.2	503.1	503.0	502.8	503.0	503.1	503.2	503.2	503.2	503.1
19.5°	503.3	503.3	503.2	503.1	502.9	503.1	503.2	503.3	503.3	503.3	503.2
20°	503.4	503.4	503.3	503.2	503.1	503.2	503.3	503.4	503.4	503.4	503.3
20.5°	503.5	503.4	503.4	503.4	503.2	503.4	503.4	503.4	503.5	503.4	503.4
21°	503.5	503.5	503.5	503.5	503.4	503.5	503.5	503.5	503.5	503.5	503.5



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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°	503.7	503.6	503.6	503.7	503.7	503.7	503.6	503.6	503.7	503.6	503.6
23°	503.7	503.6	503.6	503.8	503.7	503.8	503.6	503.6	503.7	503.6	503.6
23.5°	503.7	503.6	503.5	503.7	503.7	503.7	503.5	503.6	503.7	503.6	503.5
24°	503.6	503.5	503.4	503.7	503.7	503.7	503.4	503.5	503.6	503.5	503.4
24.5°	503.6	503.4	503.4	503.7	503.7	503.7	503.4	503.4	503.6	503.4	503.4
25°	503.5	503.3	503.3	503.6	503.6	503.6	503.3	503.3	503.5	503.3	503.3
25.5°	503.4	503.2	503.2	503.6	503.6	503.6	503.2	503.2	503.4	503.2	503.2
26°	503.2	503.1	503.0	503.5	503.5	503.5	503.0	503.1	503.2	503.1	503.0
26.5°	503.1	503.0	502.9	503.4	503.4	503.4	502.9	503.0	503.1	503.0	502.9
27°	503.1	502.9	502.8	503.3	503.4	503.3	502.8	502.9	503.1	502.9	502.8
27.5°	503.1	503.0	502.8	503.3	503.4	503.3	502.8	503.0	503.1	503.0	502.8
28°	503.2	503.0	502.9	503.4	503.5	503.4	502.9	503.0	503.2	503.0	502.9
28.5°	503.3	503.1	502.9	503.5	503.6	503.5	502.9	503.1	503.3	503.1	502.9
29°	503.3	503.1	502.9	503.6	503.6	503.6	502.9	503.1	503.3	503.1	502.9
29.5°	503.2	503.0	502.9	503.5	503.5	503.5	502.9	503.0	503.2	503.0	502.9
30°	502.9	502.8	502.7	503.3	503.3	503.3	502.7	502.8	502.9	502.8	502.7
30.5°	502.5	502.4	502.4	503.0	502.9	503.0	502.4	502.4	502.5	502.4	502.4
31°	501.8	501.7	501.7	502.4	502.3	502.4	501.7	501.7	501.8	501.7	501.7
31.5°	501.0	501.0	501.1	501.6	501.4	501.6	501.1	501.0	501.0	501.0	501.1
32°	499.8	500.0	500.1	500.6	500.4	500.6	500.1	500.0	499.8	500.0	500.1
32.5°	498.6	498.7	498.9	499.3	499.1	499.3	498.9	498.7	498.6	498.7	498.9
33°	497.1	497.2	497.5	497.9	497.5	497.9	497.5	497.2	497.1	497.2	497.5
33.5°	495.4	495.5	496.0	496.2	495.9	496.2	496.0	495.5	495.4	495.5	496.0
34°	493.4	493.8	494.2	494.3	493.9	494.3	494.2	493.8	493.4	493.8	494.2
34.5°	491.3	491.7	492.2	492.2	491.8	492.2	492.2	491.7	491.3	491.7	492.2
35°	489.0	489.3	490.0	489.9	489.3	489.9	490.0	489.3	489.0	489.3	490.0
35.5°	486.6	487.0	487.6	487.5	486.9	487.5	487.6	487.0	486.6	487.0	487.6
36°	484.0	484.4	485.0	484.8	484.2	484.8	485.0	484.4	484.0	484.4	485.0
36.5°	481.1	481.7	482.3	482.0	481.4	482.0	482.3	481.7	481.1	481.7	482.3
37°	478.1	478.6	479.3	478.9	478.2	478.9	479.3	478.6	478.1	478.6	479.3
37.5°	474.8	475.5	475.9	475.6	474.8	475.6	475.9	475.5	474.8	475.5	475.9
38°	471.3	471.9	472.4	472.0	471.3	472.0	472.4	471.9	471.3	471.9	472.4
38.5°	467.4	468.1	468.6	468.1	467.3	468.1	468.6	468.1	467.4	468.1	468.6
39°	463.3	464.1	464.4	463.9	463.1	463.9	464.4	464.1	463.3	464.1	464.4
39.5°	459.0	459.7	459.9	459.3	458.5	459.3	459.9	459.7	459.0	459.7	459.9
40°	454.3	454.9	455.1	454.5	453.7	454.5	455.1	454.9	454.3	454.9	455.1
40.5°	449.3	449.8	449.9	449.3	448.5	449.3	449.9	449.8	449.3	449.8	449.9
41°	444.1	444.5	444.4	443.7	443.1	443.7	444.4	444.5	444.1	444.5	444.4
41.5°	438.5	438.8	438.6	438.0	437.4	438.0	438.6	438.8	438.5	438.8	438.6
42°	432.7	432.8	432.4	431.9	431.6	431.9	432.4	432.8	432.7	432.8	432.4
42.5°	426.7	426.6	426.0	425.6	425.3	425.6	426.0	426.6	426.7	426.6	426.0
43°	420.3	420.0	419.3	419.0	418.7	419.0	419.3	420.0	420.3	420.0	419.3
43.5°	413.6	413.2	412.1	412.0	411.9	412.0	412.1	413.2	413.6	413.2	412.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	391.7	390.8	389.3	389.3	389.6	389.3	389.3	390.8	391.7	390.8	389.3
45.5°	383.8	382.7	381.0	381.2	381.6	381.2	381.0	382.7	383.8	382.7	381.0
46°	375.4	374.3	372.6	372.8	373.4	372.8	372.6	374.3	375.4	374.3	372.6
46.5°	366.5	365.6	363.9	364.1	364.6	364.1	363.9	365.6	366.5	365.6	363.9
47°	357.3	356.3	354.8	355.0	355.4	355.0	354.8	356.3	357.3	356.3	354.8
47.5°	347.0	346.0	344.5	344.8	345.2	344.8	344.5	346.0	347.0	346.0	344.5
48°	336.0	335.1	333.9	334.4	334.8	334.4	333.9	335.1	336.0	335.1	333.9
48.5°	325.7	325.2	324.1	324.5	325.0	324.5	324.1	325.2	325.7	325.2	324.1
49°	316.0	315.8	315.2	315.5	315.8	315.5	315.2	315.8	316.0	315.8	315.2
49.5°	306.4	306.3	306.0	306.2	306.4	306.2	306.0	306.3	306.4	306.3	306.0
50°	296.8	296.7	296.7	297.0	297.3	297.0	296.7	296.7	296.8	296.7	296.7
50.5°	287.7	287.8	287.7	288.0	288.2	288.0	287.7	287.8	287.7	287.8	287.7
51°	279.5	279.5	279.4	279.7	279.4	279.7	279.4	279.5	279.5	279.5	279.4
51.5°	271.8	271.7	271.6	271.8	271.9	271.8	271.6	271.7	271.8	271.7	271.6
52°	264.3	264.3	264.3	264.6	264.9	264.6	264.3	264.3	264.3	264.3	264.3
52.5°	257.5	257.6	257.5	257.9	258.2	257.9	257.5	257.6	257.5	257.6	257.5
53°	251.4	251.3	251.3	251.8	252.0	251.8	251.3	251.3	251.4	251.3	251.3
53.5°	245.6	245.6	245.6	246.0	246.2	246.0	245.6	245.6	245.6	245.6	245.6
54°	240.0	239.9	239.9	240.4	240.4	240.4	239.9	239.9	240.0	239.9	239.9
54.5°	234.1	234.1	234.1	234.4	234.5	234.4	234.1	234.1	234.1	234.1	234.1
55°	227.4	227.4	227.4	228.0	228.0	228.0	227.4	227.4	227.4	227.4	227.4
55.5°	219.8	219.8	219.9	220.6	220.4	220.6	219.9	219.8	219.8	219.8	219.9
56°	211.1	211.3	211.6	212.2	212.1	212.2	211.6	211.3	211.1	211.3	211.6
56.5°	202.0	202.1	202.5	203.2	203.2	203.2	202.5	202.1	202.0	202.1	202.5
57°	192.5	192.6	193.1	193.7	193.5	193.7	193.1	192.6	192.5	192.6	193.1
57.5°	182.5	182.7	183.1	183.9	183.9	183.9	183.1	182.7	182.5	182.7	183.1
58°	172.5	172.5	173.1	174.1	174.3	174.1	173.1	172.5	172.5	172.5	173.1
58.5°	162.0	162.3	162.8	164.0	164.4	164.0	162.8	162.3	162.0	162.3	162.8
59°	151.5	151.9	152.5	153.7	154.2	153.7	152.5	151.9	151.5	151.9	152.5
59.5°	140.9	141.4	142.1	143.6	144.2	143.6	142.1	141.4	140.9	141.4	142.1
60°	130.5	131.1	132.1	133.4	134.0	133.4	132.1	131.1	130.5	131.1	132.1
60.5°	120.1	120.8	122.1	123.5	124.2	123.5	122.1	120.8	120.1	120.8	122.1
61°	109.9	110.8	112.3	113.7	114.2	113.7	112.3	110.8	109.9	110.8	112.3
61.5°	100.2	101.1	102.8	104.1	104.5	104.1	102.8	101.1	100.2	101.1	102.8
62°	90.6	91.6	93.4	94.5	95.1	94.5	93.4	91.6	90.6	91.6	93.4
62.5°	81.1	82.3	84.3	85.3	86.1	85.3	84.3	82.3	81.1	82.3	84.3
63°	71.8	73.1	75.3	76.4	77.2	76.4	75.3	73.1	71.8	73.1	75.3
63.5°	63.0	64.2	66.6	67.8	68.6	67.8	66.6	64.2	63.0	64.2	66.6
64°	54.7	56.0	58.2	59.5	60.1	59.5	58.2	56.0	54.7	56.0	58.2
64.5°	46.7	48.1	50.2	51.4	51.9	51.4	50.2	48.1	46.7	48.1	50.2
65°	39.2	40.7	43.0	44.2	44.9	44.2	43.0	40.7	39.2	40.7	43.0
65.5°	32.5	34.0	35.9	37.3	38.1	37.3	35.9	34.0	32.5	34.0	35.9
66°	25.9	28.0	29.4	30.8	31.6	30.8	29.4	28.0	25.9	28.0	29.4



TEST NUMBER: P775818

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	10.4	13.4	14.6	15.1	15.3	15.1	14.6	13.4	10.4	13.4	14.6
68°	6.3	9.7	10.7	11.3	11.9	11.3	10.7	9.7	6.3	9.7	10.7
68.5°	2.7	6.4	7.0	7.7	8.7	7.7	7.0	6.4	2.7	6.4	7.0
69°	1.7	3.9	4.7	5.0	6.3	5.0	4.7	3.9	1.7	3.9	4.7
69.5°	1.2	2.3	3.2	2.9	4.0	2.9	3.2	2.3	1.2	2.3	3.2
70°	0.9	1.4	1.7	1.6	1.8	1.6	1.7	1.4	0.9	1.4	1.7
70.5°	0.6	0.8	1.1	1.1	0.8	1.1	1.1	0.8	0.6	0.8	1.1
71°	0.5	0.6	0.8	0.8	0.7	0.8	0.8	0.6	0.5	0.6	0.8
71.5°	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6
72°	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
72.5°	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.5
73°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5
73.5°	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
74°	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.4
74.5°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4
75°	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
75.5°	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
76°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
76.5°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
77°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
77.5°	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
78°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
78.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
79°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
79.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
80°	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
83°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
84°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
84.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775818
CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

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: P775818

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	520.2	520.2	520.2	520.2	520.2	520.2
0.5°	520.4	520.1	520.4	520.3	520.1	520.1
1°	520.3	520.1	520.3	520.2	520.1	520.0
1.5°	520.2	520.0	520.2	520.1	520.0	519.9
2°	520.1	519.9	520.1	520.0	519.8	519.8
2.5°	519.9	519.7	519.9	519.8	519.7	519.6
3°	519.8	519.5	519.8	519.7	519.5	519.5
3.5°	519.5	519.3	519.5	519.5	519.3	519.3
4°	519.3	519.0	519.3	519.2	519.1	519.0
4.5°	519.0	518.8	519.0	518.9	518.8	518.7
5°	518.7	518.4	518.7	518.5	518.4	518.3
5.5°	518.3	518.1	518.3	518.2	518.1	518.0
6°	517.9	517.7	517.9	517.8	517.7	517.6
6.5°	517.5	517.2	517.5	517.4	517.3	517.2
7°	517.0	516.7	517.0	516.9	516.8	516.8
7.5°	516.3	516.1	516.3	516.3	516.2	516.2
8°	515.8	515.6	515.8	515.7	515.7	515.6
8.5°	515.2	515.0	515.2	515.2	515.1	515.0
9°	514.6	514.3	514.6	514.6	514.5	514.5
9.5°	513.9	513.7	513.9	513.8	513.8	513.7
10°	513.2	513.0	513.2	513.2	513.1	513.1
10.5°	512.5	512.2	512.5	512.5	512.3	512.3
11°	511.7	511.4	511.7	511.7	511.6	511.6
11.5°	510.9	510.7	510.9	510.9	510.8	510.8
12°	510.0	509.8	510.0	510.0	510.0	510.0
12.5°	509.2	509.0	509.2	509.2	509.2	509.2
13°	508.4	508.1	508.4	508.5	508.4	508.5
13.5°	507.5	507.2	507.5	507.5	507.5	507.6
14°	506.7	506.4	506.7	506.7	506.8	506.8
14.5°	505.8	505.5	505.8	505.8	505.9	505.9
15°	505.0	504.7	505.0	505.0	505.1	505.2
15.5°	504.2	503.9	504.2	504.3	504.4	504.5
16°	503.5	503.3	503.5	503.7	503.8	503.9
16.5°	503.0	502.9	503.0	503.3	503.4	503.5
17°	502.8	502.6	502.8	503.1	503.2	503.2
17.5°	502.7	502.6	502.7	502.9	503.1	503.1
18°	502.8	502.6	502.8	502.9	503.1	503.1
18.5°	502.8	502.6	502.8	503.0	503.1	503.1
19°	503.0	502.8	503.0	503.1	503.2	503.2
19.5°	503.1	502.9	503.1	503.2	503.3	503.3
20°	503.2	503.1	503.2	503.3	503.4	503.4
20.5°	503.4	503.2	503.4	503.4	503.4	503.5
21°	503.5	503.4	503.5	503.5	503.5	503.5



TEST NUMBER: P775818

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	503.7	503.7	503.7	503.6	503.6	503.7
23°	503.8	503.7	503.8	503.6	503.6	503.7
23.5°	503.7	503.7	503.7	503.5	503.6	503.7
24°	503.7	503.7	503.7	503.4	503.5	503.6
24.5°	503.7	503.7	503.7	503.4	503.4	503.6
25°	503.6	503.6	503.6	503.3	503.3	503.5
25.5°	503.6	503.6	503.6	503.2	503.2	503.4
26°	503.5	503.5	503.5	503.0	503.1	503.2
26.5°	503.4	503.4	503.4	502.9	503.0	503.1
27°	503.3	503.4	503.3	502.8	502.9	503.1
27.5°	503.3	503.4	503.3	502.8	503.0	503.1
28°	503.4	503.5	503.4	502.9	503.0	503.2
28.5°	503.5	503.6	503.5	502.9	503.1	503.3
29°	503.6	503.6	503.6	502.9	503.1	503.3
29.5°	503.5	503.5	503.5	502.9	503.0	503.2
30°	503.3	503.3	503.3	502.7	502.8	502.9
30.5°	503.0	502.9	503.0	502.4	502.4	502.5
31°	502.4	502.3	502.4	501.7	501.7	501.8
31.5°	501.6	501.4	501.6	501.1	501.0	501.0
32°	500.6	500.4	500.6	500.1	500.0	499.8
32.5°	499.3	499.1	499.3	498.9	498.7	498.6
33°	497.9	497.5	497.9	497.5	497.2	497.1
33.5°	496.2	495.9	496.2	496.0	495.5	495.4
34°	494.3	493.9	494.3	494.2	493.8	493.4
34.5°	492.2	491.8	492.2	492.2	491.7	491.3
35°	489.9	489.3	489.9	490.0	489.3	489.0
35.5°	487.5	486.9	487.5	487.6	487.0	486.6
36°	484.8	484.2	484.8	485.0	484.4	484.0
36.5°	482.0	481.4	482.0	482.3	481.7	481.1
37°	478.9	478.2	478.9	479.3	478.6	478.1
37.5°	475.6	474.8	475.6	475.9	475.5	474.8
38°	472.0	471.3	472.0	472.4	471.9	471.3
38.5°	468.1	467.3	468.1	468.6	468.1	467.4
39°	463.9	463.1	463.9	464.4	464.1	463.3
39.5°	459.3	458.5	459.3	459.9	459.7	459.0
40°	454.5	453.7	454.5	455.1	454.9	454.3
40.5°	449.3	448.5	449.3	449.9	449.8	449.3
41°	443.7	443.1	443.7	444.4	444.5	444.1
41.5°	438.0	437.4	438.0	438.6	438.8	438.5
42°	431.9	431.6	431.9	432.4	432.8	432.7
42.5°	425.6	425.3	425.6	426.0	426.6	426.7
43°	419.0	418.7	419.0	419.3	420.0	420.3
43.5°	412.0	411.9	412.0	412.1	413.2	413.6



TEST NUMBER: P775818

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	389.3	389.6	389.3	389.3	390.8	391.7
45.5°	381.2	381.6	381.2	381.0	382.7	383.8
46°	372.8	373.4	372.8	372.6	374.3	375.4
46.5°	364.1	364.6	364.1	363.9	365.6	366.5
47°	355.0	355.4	355.0	354.8	356.3	357.3
47.5°	344.8	345.2	344.8	344.5	346.0	347.0
48°	334.4	334.8	334.4	333.9	335.1	336.0
48.5°	324.5	325.0	324.5	324.1	325.2	325.7
49°	315.5	315.8	315.5	315.2	315.8	316.0
49.5°	306.2	306.4	306.2	306.0	306.3	306.4
50°	297.0	297.3	297.0	296.7	296.7	296.8
50.5°	288.0	288.2	288.0	287.7	287.8	287.7
51°	279.7	279.4	279.7	279.4	279.5	279.5
51.5°	271.8	271.9	271.8	271.6	271.7	271.8
52°	264.6	264.9	264.6	264.3	264.3	264.3
52.5°	257.9	258.2	257.9	257.5	257.6	257.5
53°	251.8	252.0	251.8	251.3	251.3	251.4
53.5°	246.0	246.2	246.0	245.6	245.6	245.6
54°	240.4	240.4	240.4	239.9	239.9	240.0
54.5°	234.4	234.5	234.4	234.1	234.1	234.1
55°	228.0	228.0	228.0	227.4	227.4	227.4
55.5°	220.6	220.4	220.6	219.9	219.8	219.8
56°	212.2	212.1	212.2	211.6	211.3	211.1
56.5°	203.2	203.2	203.2	202.5	202.1	202.0
57°	193.7	193.5	193.7	193.1	192.6	192.5
57.5°	183.9	183.9	183.9	183.1	182.7	182.5
58°	174.1	174.3	174.1	173.1	172.5	172.5
58.5°	164.0	164.4	164.0	162.8	162.3	162.0
59°	153.7	154.2	153.7	152.5	151.9	151.5
59.5°	143.6	144.2	143.6	142.1	141.4	140.9
60°	133.4	134.0	133.4	132.1	131.1	130.5
60.5°	123.5	124.2	123.5	122.1	120.8	120.1
61°	113.7	114.2	113.7	112.3	110.8	109.9
61.5°	104.1	104.5	104.1	102.8	101.1	100.2
62°	94.5	95.1	94.5	93.4	91.6	90.6
62.5°	85.3	86.1	85.3	84.3	82.3	81.1
63°	76.4	77.2	76.4	75.3	73.1	71.8
63.5°	67.8	68.6	67.8	66.6	64.2	63.0
64°	59.5	60.1	59.5	58.2	56.0	54.7
64.5°	51.4	51.9	51.4	50.2	48.1	46.7
65°	44.2	44.9	44.2	43.0	40.7	39.2
65.5°	37.3	38.1	37.3	35.9	34.0	32.5
66°	30.8	31.6	30.8	29.4	28.0	25.9



TEST NUMBER: P775818

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	15.1	15.3	15.1	14.6	13.4	10.4
68°	11.3	11.9	11.3	10.7	9.7	6.3
68.5°	7.7	8.7	7.7	7.0	6.4	2.7
69°	5.0	6.3	5.0	4.7	3.9	1.7
69.5°	2.9	4.0	2.9	3.2	2.3	1.2
70°	1.6	1.8	1.6	1.7	1.4	0.9
70.5°	1.1	0.8	1.1	1.1	0.8	0.6
71°	0.8	0.7	0.8	0.8	0.6	0.5
71.5°	0.6	0.6	0.6	0.6	0.5	0.5
72°	0.6	0.6	0.6	0.5	0.5	0.5
72.5°	0.5	0.6	0.5	0.5	0.5	0.4
73°	0.5	0.5	0.5	0.5	0.4	0.4
73.5°	0.5	0.5	0.5	0.4	0.4	0.4
74°	0.4	0.5	0.4	0.4	0.4	0.3
74.5°	0.4	0.4	0.4	0.4	0.3	0.3
75°	0.4	0.4	0.4	0.3	0.3	0.3
75.5°	0.4	0.4	0.4	0.3	0.3	0.3
76°	0.3	0.3	0.3	0.3	0.3	0.3
76.5°	0.3	0.3	0.3	0.3	0.2	0.2
77°	0.3	0.3	0.3	0.3	0.2	0.2
77.5°	0.3	0.3	0.3	0.2	0.2	0.2
78°	0.2	0.2	0.2	0.2	0.2	0.2
78.5°	0.2	0.2	0.2	0.2	0.2	0.2
79°	0.2	0.2	0.2	0.2	0.2	0.2
79.5°	0.2	0.2	0.2	0.2	0.1	0.1
80°	0.2	0.2	0.2	0.1	0.1	0.1
80.5°	0.2	0.2	0.2	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1
83°	0.1	0.1	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	0.0	0.0
84.5°	0.1	0.1	0.1	0.0	0.0	0.0
85°	0.1	0.1	0.1	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775818
CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-4000K

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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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°	503.6	503.6	503.5	503.6	503.5	503.6	503.5	503.6	503.6	503.6	503.5
22°	503.7	503.6	503.6	503.6	503.6	503.6	503.6	503.6	503.7	503.6	503.6



44°	406.6	406.0	404.8	404.7	404.8	404.7	404.8	406.0	406.6	406.0	404.8
44.5°	399.3	398.7	397.2	397.2	397.3	397.2	397.2	398.7	399.3	398.7	397.2



66.5°	20.8	22.5	24.0	25.0	25.3	25.0	24.0	22.5	20.8	22.5	24.0
67°	15.5	17.5	18.7	19.8	20.0	19.8	18.7	17.5	15.5	17.5	18.7



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

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21.5°	503.6	503.5	503.6	503.5	503.6	503.6
22°	503.6	503.6	503.6	503.6	503.6	503.7

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44°	404.7	404.8	404.7	404.8	406.0	406.6
44.5°	397.2	397.3	397.2	397.2	398.7	399.3

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66.5°	25.0	25.3	25.0	24.0	22.5	20.8
67°	19.8	20.0	19.8	18.7	17.5	15.5

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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)