

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: P775816

Luminaire Tested: HCDJBL510CSD-HCD81TRC-1000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775816
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-3000K
Description: 8 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

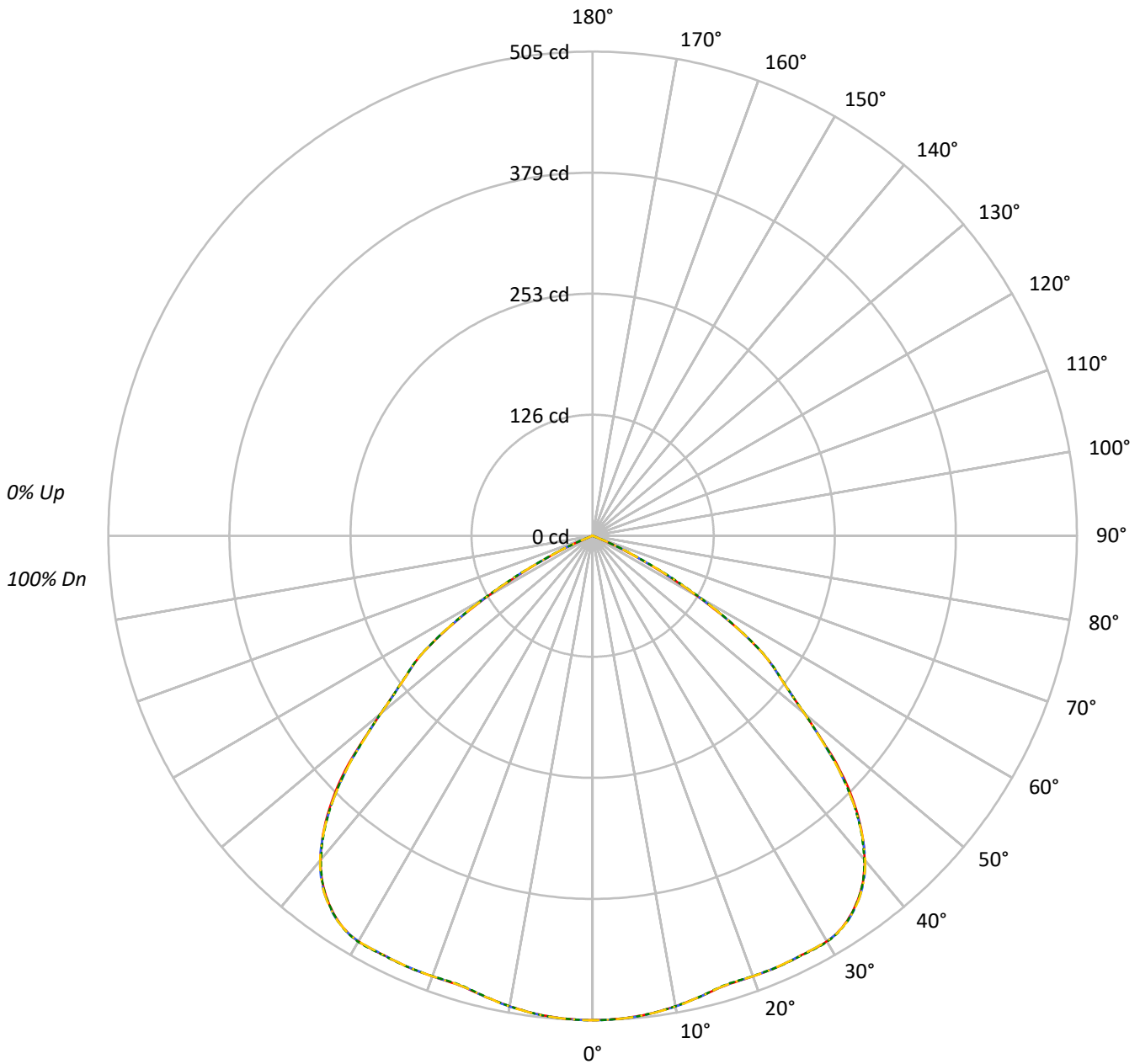
Lumens per Lamp: N/A
Luminaire Lumens: 1236.9 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.44 / 1.44
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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	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°	15427	15427	15427	15427
5°	15431	15434	15431	15434
10°	15451	15448	15451	15448
15°	15510	15494	15510	15494
20°	15887	15878	15887	15878
25°	16476	16479	16476	16479
30°	17221	17235	17221	17235
35°	17704	17715	17704	17715
40°	17588	17564	17588	17564
45°	16429	16342	16429	16342
50°	13693	13717	13693	13717
55°	11758	11785	11758	11785
60°	7736	7950	7736	7950
65°	2752	3150	2752	3150
70°	80	152	80	152
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: 16429 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.9	3.9
10°-20°	139.2	11.3
20°-30°	226.3	18.3
30°-40°	296.1	23.9
40°-50°	287.6	23.3
50°-60°	191.1	15.5
60°-70°	48.1	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°	413.5	33.4
0°-40°	709.5	57.4
0°-60°	1188.3	96.1
0°-90°	1236.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1236.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	505	505	505	505	505	
5°	504	504	504	504	504	48
15°	491	490	491	490	491	139
25°	489	489	489	489	489	226
35°	475	475	475	475	475	296
45°	380	378	380	378	380	288
55°	221	221	221	221	221	191
65°	38	44	38	44	38	45
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°	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3
0.5°	505.2	505.2	505.4	505.5	505.2	505.5	505.4	505.2	505.2	505.2	505.4
1°	505.1	505.2	505.3	505.4	505.2	505.4	505.3	505.2	505.1	505.2	505.3
1.5°	505.0	505.1	505.2	505.3	505.1	505.3	505.2	505.1	505.0	505.1	505.2
2°	504.9	504.9	505.1	505.2	505.0	505.2	505.1	504.9	504.9	504.9	505.1
2.5°	504.7	504.8	504.9	505.0	504.8	505.0	504.9	504.8	504.7	504.8	504.9
3°	504.6	504.6	504.8	504.9	504.6	504.9	504.8	504.6	504.6	504.6	504.8
3.5°	504.4	504.4	504.6	504.6	504.4	504.6	504.6	504.4	504.4	504.4	504.6
4°	504.1	504.2	504.3	504.4	504.1	504.4	504.3	504.2	504.1	504.2	504.3
4.5°	503.8	503.9	504.0	504.1	503.9	504.1	504.0	503.9	503.8	503.9	504.0
5°	503.5	503.6	503.7	503.8	503.6	503.8	503.7	503.6	503.5	503.6	503.7
5.5°	503.2	503.3	503.4	503.5	503.3	503.5	503.4	503.3	503.2	503.3	503.4
6°	502.8	502.9	503.0	503.1	502.9	503.1	503.0	502.9	502.8	502.9	503.0
6.5°	502.4	502.5	502.6	502.7	502.4	502.7	502.6	502.5	502.4	502.5	502.6
7°	502.0	502.0	502.1	502.2	501.9	502.2	502.1	502.0	502.0	502.0	502.1
7.5°	501.5	501.5	501.6	501.6	501.4	501.6	501.6	501.5	501.5	501.5	501.6
8°	500.8	500.9	500.9	501.0	500.8	501.0	500.9	500.9	500.8	500.9	500.9
8.5°	500.2	500.3	500.4	500.4	500.2	500.4	500.4	500.3	500.2	500.3	500.4
9°	499.7	499.7	499.8	499.8	499.6	499.8	499.8	499.7	499.7	499.7	499.8
9.5°	499.0	499.1	499.1	499.2	499.0	499.2	499.1	499.1	499.0	499.1	499.1
10°	498.4	498.4	498.5	498.5	498.3	498.5	498.5	498.4	498.4	498.4	498.5
10.5°	497.7	497.7	497.8	497.8	497.6	497.8	497.8	497.7	497.7	497.7	497.8
11°	497.0	497.0	497.1	497.1	496.8	497.1	497.1	497.0	497.0	497.0	497.1
11.5°	496.2	496.2	496.3	496.3	496.0	496.3	496.3	496.2	496.2	496.2	496.3
12°	495.4	495.4	495.4	495.4	495.2	495.4	495.4	495.4	495.4	495.4	495.4
12.5°	494.6	494.6	494.6	494.6	494.4	494.6	494.6	494.6	494.6	494.6	494.6
13°	493.9	493.8	493.9	493.8	493.6	493.8	493.9	493.8	493.9	493.8	493.9
13.5°	493.1	493.0	493.0	493.0	492.7	493.0	493.0	493.0	493.1	493.0	493.0
14°	492.3	492.3	492.2	492.2	491.9	492.2	492.2	492.3	492.3	492.3	492.2
14.5°	491.5	491.5	491.4	491.4	491.0	491.4	491.4	491.5	491.5	491.5	491.4
15°	490.7	490.6	490.5	490.5	490.2	490.5	490.5	490.6	490.7	490.6	490.5
15.5°	490.0	489.9	489.8	489.7	489.5	489.7	489.8	489.9	490.0	489.9	489.8
16°	489.5	489.4	489.3	489.1	488.9	489.1	489.3	489.4	489.5	489.4	489.3
16.5°	489.1	489.0	488.9	488.6	488.5	488.6	488.9	489.0	489.1	489.0	488.9
17°	488.8	488.8	488.7	488.4	488.2	488.4	488.7	488.8	488.8	488.8	488.7
17.5°	488.7	488.7	488.5	488.3	488.2	488.3	488.5	488.7	488.7	488.7	488.5
18°	488.7	488.7	488.5	488.4	488.2	488.4	488.5	488.7	488.7	488.7	488.5
18.5°	488.7	488.7	488.6	488.4	488.2	488.4	488.6	488.7	488.7	488.7	488.6
19°	488.8	488.8	488.7	488.6	488.4	488.6	488.7	488.8	488.8	488.8	488.7
19.5°	488.9	488.9	488.8	488.7	488.5	488.7	488.8	488.9	488.9	488.9	488.8
20°	489.0	489.0	488.9	488.8	488.7	488.8	488.9	489.0	489.0	489.0	488.9
20.5°	489.1	489.0	489.0	489.0	488.8	489.0	489.0	489.0	489.1	489.0	489.0
21°	489.1	489.1	489.1	489.1	489.0	489.1	489.1	489.1	489.1	489.1	489.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	489.3	489.2	489.2	489.3	489.3	489.3	489.2	489.2	489.3	489.2	489.2
23°	489.3	489.2	489.2	489.4	489.3	489.4	489.2	489.2	489.3	489.2	489.2
23.5°	489.3	489.2	489.1	489.3	489.3	489.3	489.1	489.2	489.3	489.2	489.1
24°	489.2	489.1	489.0	489.3	489.3	489.3	489.0	489.1	489.2	489.1	489.0
24.5°	489.2	489.0	489.0	489.3	489.3	489.3	489.0	489.0	489.2	489.0	489.0
25°	489.1	488.9	488.9	489.2	489.2	489.2	488.9	488.9	489.1	488.9	488.9
25.5°	489.0	488.8	488.8	489.2	489.2	489.2	488.8	488.8	489.0	488.8	488.8
26°	488.8	488.7	488.6	489.1	489.1	489.1	488.6	488.7	488.8	488.7	488.6
26.5°	488.7	488.6	488.5	489.0	489.0	489.0	488.5	488.6	488.7	488.6	488.5
27°	488.7	488.5	488.4	488.9	489.0	488.9	488.4	488.5	488.7	488.5	488.4
27.5°	488.7	488.6	488.4	488.9	489.0	488.9	488.4	488.6	488.7	488.6	488.4
28°	488.8	488.6	488.5	489.0	489.1	489.0	488.5	488.6	488.8	488.6	488.5
28.5°	488.9	488.7	488.5	489.1	489.2	489.1	488.5	488.7	488.9	488.7	488.5
29°	488.9	488.7	488.5	489.2	489.2	489.2	488.5	488.7	488.9	488.7	488.5
29.5°	488.8	488.6	488.5	489.1	489.1	489.1	488.5	488.6	488.8	488.6	488.5
30°	488.5	488.4	488.3	488.9	488.9	488.9	488.3	488.4	488.5	488.4	488.3
30.5°	488.1	488.0	488.0	488.6	488.5	488.6	488.0	488.0	488.1	488.0	488.0
31°	487.5	487.4	487.4	488.0	487.9	488.0	487.4	487.4	487.5	487.4	487.4
31.5°	486.7	486.7	486.8	487.3	487.1	487.3	486.8	486.7	486.7	486.7	486.8
32°	485.5	485.6	485.7	486.3	486.0	486.3	485.7	485.6	485.5	485.6	485.7
32.5°	484.3	484.4	484.6	485.0	484.8	485.0	484.6	484.4	484.3	484.4	484.6
33°	482.9	483.0	483.3	483.6	483.3	483.6	483.3	483.0	482.9	483.0	483.3
33.5°	481.3	481.4	481.8	482.0	481.7	482.0	481.8	481.4	481.3	481.4	481.8
34°	479.3	479.6	480.0	480.1	479.7	480.1	480.0	479.6	479.3	479.6	480.0
34.5°	477.3	477.6	478.1	478.1	477.7	478.1	478.1	477.6	477.3	477.6	478.1
35°	475.0	475.3	475.9	475.8	475.3	475.8	475.9	475.3	475.0	475.3	475.9
35.5°	472.7	473.1	473.6	473.5	473.0	473.5	473.6	473.1	472.7	473.1	473.6
36°	470.1	470.5	471.1	470.9	470.3	470.9	471.1	470.5	470.1	470.5	471.1
36.5°	467.4	467.9	468.5	468.2	467.6	468.2	468.5	467.9	467.4	467.9	468.5
37°	464.4	464.9	465.5	465.2	464.5	465.2	465.5	464.9	464.4	464.9	465.5
37.5°	461.3	461.9	462.3	462.0	461.3	462.0	462.3	461.9	461.3	461.9	462.3
38°	457.8	458.4	458.9	458.5	457.8	458.5	458.9	458.4	457.8	458.4	458.9
38.5°	454.0	454.7	455.2	454.7	453.9	454.7	455.2	454.7	454.0	454.7	455.2
39°	450.0	450.8	451.1	450.6	449.8	450.6	451.1	450.8	450.0	450.8	451.1
39.5°	445.8	446.6	446.8	446.1	445.3	446.1	446.8	446.6	445.8	446.6	446.8
40°	441.3	441.9	442.1	441.5	440.7	441.5	442.1	441.9	441.3	441.9	442.1
40.5°	436.5	437.0	437.1	436.5	435.6	436.5	437.1	437.0	436.5	437.0	437.1
41°	431.4	431.8	431.7	431.0	430.4	431.0	431.7	431.8	431.4	431.8	431.7
41.5°	425.9	426.2	426.0	425.4	424.9	425.4	426.0	426.2	425.9	426.2	426.0
42°	420.3	420.4	420.0	419.5	419.2	419.5	420.0	420.4	420.3	420.4	420.0
42.5°	414.5	414.4	413.8	413.4	413.1	413.4	413.8	414.4	414.5	414.4	413.8
43°	408.3	408.0	407.3	407.0	406.8	407.0	407.3	408.0	408.3	408.0	407.3
43.5°	401.8	401.3	400.3	400.2	400.1	400.2	400.3	401.3	401.8	401.3	400.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	380.5	379.6	378.2	378.2	378.5	378.2	378.2	379.6	380.5	379.6	378.2
45.5°	372.8	371.8	370.1	370.3	370.6	370.3	370.1	371.8	372.8	371.8	370.1
46°	364.6	363.6	362.0	362.2	362.7	362.2	362.0	363.6	364.6	363.6	362.0
46.5°	356.0	355.1	353.5	353.7	354.2	353.7	353.5	355.1	356.0	355.1	353.5
47°	347.1	346.1	344.6	344.8	345.2	344.8	344.6	346.1	347.1	346.1	344.6
47.5°	337.1	336.1	334.6	334.9	335.3	334.9	334.6	336.1	337.1	336.1	334.6
48°	326.3	325.5	324.3	324.8	325.2	324.8	324.3	325.5	326.3	325.5	324.3
48.5°	316.3	315.9	314.8	315.2	315.7	315.2	314.8	315.9	316.3	315.9	314.8
49°	307.0	306.8	306.1	306.4	306.8	306.4	306.1	306.8	307.0	306.8	306.1
49.5°	297.7	297.6	297.3	297.5	297.7	297.5	297.3	297.6	297.7	297.6	297.3
50°	288.3	288.2	288.2	288.5	288.8	288.5	288.2	288.2	288.3	288.2	288.2
50.5°	279.5	279.6	279.5	279.7	279.9	279.7	279.5	279.6	279.5	279.6	279.5
51°	271.5	271.5	271.4	271.6	271.4	271.6	271.4	271.5	271.5	271.5	271.4
51.5°	264.0	263.9	263.8	264.0	264.1	264.0	263.8	263.9	264.0	263.9	263.8
52°	256.7	256.7	256.7	257.1	257.4	257.1	256.7	256.7	256.7	256.7	256.7
52.5°	250.1	250.2	250.1	250.5	250.8	250.5	250.1	250.2	250.1	250.2	250.1
53°	244.2	244.1	244.1	244.6	244.8	244.6	244.1	244.1	244.2	244.1	244.1
53.5°	238.6	238.6	238.6	239.0	239.2	239.0	238.6	238.6	238.6	238.6	238.6
54°	233.2	233.1	233.1	233.5	233.5	233.5	233.1	233.1	233.2	233.1	233.1
54.5°	227.4	227.4	227.4	227.7	227.8	227.7	227.4	227.4	227.4	227.4	227.4
55°	220.9	220.9	220.9	221.4	221.4	221.4	220.9	220.9	220.9	220.9	220.9
55.5°	213.5	213.5	213.6	214.3	214.1	214.3	213.6	213.5	213.5	213.5	213.6
56°	205.0	205.2	205.5	206.1	206.0	206.1	205.5	205.2	205.0	205.2	205.5
56.5°	196.2	196.3	196.7	197.4	197.4	197.4	196.7	196.3	196.2	196.3	196.7
57°	186.9	187.1	187.6	188.2	188.0	188.2	187.6	187.1	186.9	187.1	187.6
57.5°	177.3	177.5	177.9	178.7	178.7	178.7	177.9	177.5	177.3	177.5	177.9
58°	167.6	167.6	168.2	169.1	169.3	169.1	168.2	167.6	167.6	167.6	168.2
58.5°	157.4	157.7	158.2	159.3	159.7	159.3	158.2	157.7	157.4	157.7	158.2
59°	147.2	147.6	148.2	149.3	149.8	149.3	148.2	147.6	147.2	147.6	148.2
59.5°	136.8	137.4	138.1	139.5	140.1	139.5	138.1	137.4	136.8	137.4	138.1
60°	126.7	127.4	128.3	129.6	130.2	129.6	128.3	127.4	126.7	127.4	128.3
60.5°	116.6	117.4	118.6	120.0	120.6	120.0	118.6	117.4	116.6	117.4	118.6
61°	106.7	107.7	109.1	110.4	110.9	110.4	109.1	107.7	106.7	107.7	109.1
61.5°	97.4	98.2	99.9	101.1	101.5	101.1	99.9	98.2	97.4	98.2	99.9
62°	88.0	89.0	90.7	91.8	92.4	91.8	90.7	89.0	88.0	89.0	90.7
62.5°	78.8	79.9	81.8	82.9	83.7	82.9	81.8	79.9	78.8	79.9	81.8
63°	69.7	71.0	73.2	74.2	75.0	74.2	73.2	71.0	69.7	71.0	73.2
63.5°	61.2	62.4	64.7	65.8	66.6	65.8	64.7	62.4	61.2	62.4	64.7
64°	53.2	54.4	56.5	57.8	58.4	57.8	56.5	54.4	53.2	54.4	56.5
64.5°	45.4	46.7	48.8	49.9	50.4	49.9	48.8	46.7	45.4	46.7	48.8
65°	38.1	39.5	41.7	43.0	43.6	43.0	41.7	39.5	38.1	39.5	41.7
65.5°	31.5	33.1	34.9	36.2	37.0	36.2	34.9	33.1	31.5	33.1	34.9
66°	25.2	27.2	28.6	29.9	30.7	29.9	28.6	27.2	25.2	27.2	28.6



TEST NUMBER: P775816

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	10.1	13.1	14.2	14.7	14.9	14.7	14.2	13.1	10.1	13.1	14.2
68°	6.1	9.4	10.4	11.0	11.5	11.0	10.4	9.4	6.1	9.4	10.4
68.5°	2.7	6.2	6.8	7.4	8.5	7.4	6.8	6.2	2.7	6.2	6.8
69°	1.6	3.8	4.6	4.9	6.1	4.9	4.6	3.8	1.6	3.8	4.6
69.5°	1.1	2.2	3.1	2.9	3.9	2.9	3.1	2.2	1.1	2.2	3.1
70°	0.9	1.3	1.6	1.5	1.7	1.5	1.6	1.3	0.9	1.3	1.6
70.5°	0.6	0.8	1.0	1.0	0.8	1.0	1.0	0.8	0.6	0.8	1.0
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: P775816
CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

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: P775816

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	505.3	505.3	505.3	505.3	505.3	505.3
0.5°	505.5	505.2	505.5	505.4	505.2	505.2
1°	505.4	505.2	505.4	505.3	505.2	505.1
1.5°	505.3	505.1	505.3	505.2	505.1	505.0
2°	505.2	505.0	505.2	505.1	504.9	504.9
2.5°	505.0	504.8	505.0	504.9	504.8	504.7
3°	504.9	504.6	504.9	504.8	504.6	504.6
3.5°	504.6	504.4	504.6	504.6	504.4	504.4
4°	504.4	504.1	504.4	504.3	504.2	504.1
4.5°	504.1	503.9	504.1	504.0	503.9	503.8
5°	503.8	503.6	503.8	503.7	503.6	503.5
5.5°	503.5	503.3	503.5	503.4	503.3	503.2
6°	503.1	502.9	503.1	503.0	502.9	502.8
6.5°	502.7	502.4	502.7	502.6	502.5	502.4
7°	502.2	501.9	502.2	502.1	502.0	502.0
7.5°	501.6	501.4	501.6	501.6	501.5	501.5
8°	501.0	500.8	501.0	500.9	500.9	500.8
8.5°	500.4	500.2	500.4	500.4	500.3	500.2
9°	499.8	499.6	499.8	499.8	499.7	499.7
9.5°	499.2	499.0	499.2	499.1	499.1	499.0
10°	498.5	498.3	498.5	498.5	498.4	498.4
10.5°	497.8	497.6	497.8	497.8	497.7	497.7
11°	497.1	496.8	497.1	497.1	497.0	497.0
11.5°	496.3	496.0	496.3	496.3	496.2	496.2
12°	495.4	495.2	495.4	495.4	495.4	495.4
12.5°	494.6	494.4	494.6	494.6	494.6	494.6
13°	493.8	493.6	493.8	493.9	493.8	493.9
13.5°	493.0	492.7	493.0	493.0	493.0	493.1
14°	492.2	491.9	492.2	492.2	492.3	492.3
14.5°	491.4	491.0	491.4	491.4	491.5	491.5
15°	490.5	490.2	490.5	490.5	490.6	490.7
15.5°	489.7	489.5	489.7	489.8	489.9	490.0
16°	489.1	488.9	489.1	489.3	489.4	489.5
16.5°	488.6	488.5	488.6	488.9	489.0	489.1
17°	488.4	488.2	488.4	488.7	488.8	488.8
17.5°	488.3	488.2	488.3	488.5	488.7	488.7
18°	488.4	488.2	488.4	488.5	488.7	488.7
18.5°	488.4	488.2	488.4	488.6	488.7	488.7
19°	488.6	488.4	488.6	488.7	488.8	488.8
19.5°	488.7	488.5	488.7	488.8	488.9	488.9
20°	488.8	488.7	488.8	488.9	489.0	489.0
20.5°	489.0	488.8	489.0	489.0	489.0	489.1
21°	489.1	489.0	489.1	489.1	489.1	489.1



TEST NUMBER: P775816

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	489.3	489.3	489.3	489.2	489.2	489.3
23°	489.4	489.3	489.4	489.2	489.2	489.3
23.5°	489.3	489.3	489.3	489.1	489.2	489.3
24°	489.3	489.3	489.3	489.0	489.1	489.2
24.5°	489.3	489.3	489.3	489.0	489.0	489.2
25°	489.2	489.2	489.2	488.9	488.9	489.1
25.5°	489.2	489.2	489.2	488.8	488.8	489.0
26°	489.1	489.1	489.1	488.6	488.7	488.8
26.5°	489.0	489.0	489.0	488.5	488.6	488.7
27°	488.9	489.0	488.9	488.4	488.5	488.7
27.5°	488.9	489.0	488.9	488.4	488.6	488.7
28°	489.0	489.1	489.0	488.5	488.6	488.8
28.5°	489.1	489.2	489.1	488.5	488.7	488.9
29°	489.2	489.2	489.2	488.5	488.7	488.9
29.5°	489.1	489.1	489.1	488.5	488.6	488.8
30°	488.9	488.9	488.9	488.3	488.4	488.5
30.5°	488.6	488.5	488.6	488.0	488.0	488.1
31°	488.0	487.9	488.0	487.4	487.4	487.5
31.5°	487.3	487.1	487.3	486.8	486.7	486.7
32°	486.3	486.0	486.3	485.7	485.6	485.5
32.5°	485.0	484.8	485.0	484.6	484.4	484.3
33°	483.6	483.3	483.6	483.3	483.0	482.9
33.5°	482.0	481.7	482.0	481.8	481.4	481.3
34°	480.1	479.7	480.1	480.0	479.6	479.3
34.5°	478.1	477.7	478.1	478.1	477.6	477.3
35°	475.8	475.3	475.8	475.9	475.3	475.0
35.5°	473.5	473.0	473.5	473.6	473.1	472.7
36°	470.9	470.3	470.9	471.1	470.5	470.1
36.5°	468.2	467.6	468.2	468.5	467.9	467.4
37°	465.2	464.5	465.2	465.5	464.9	464.4
37.5°	462.0	461.3	462.0	462.3	461.9	461.3
38°	458.5	457.8	458.5	458.9	458.4	457.8
38.5°	454.7	453.9	454.7	455.2	454.7	454.0
39°	450.6	449.8	450.6	451.1	450.8	450.0
39.5°	446.1	445.3	446.1	446.8	446.6	445.8
40°	441.5	440.7	441.5	442.1	441.9	441.3
40.5°	436.5	435.6	436.5	437.1	437.0	436.5
41°	431.0	430.4	431.0	431.7	431.8	431.4
41.5°	425.4	424.9	425.4	426.0	426.2	425.9
42°	419.5	419.2	419.5	420.0	420.4	420.3
42.5°	413.4	413.1	413.4	413.8	414.4	414.5
43°	407.0	406.8	407.0	407.3	408.0	408.3
43.5°	400.2	400.1	400.2	400.3	401.3	401.8



TEST NUMBER: P775816

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	378.2	378.5	378.2	378.2	379.6	380.5
45.5°	370.3	370.6	370.3	370.1	371.8	372.8
46°	362.2	362.7	362.2	362.0	363.6	364.6
46.5°	353.7	354.2	353.7	353.5	355.1	356.0
47°	344.8	345.2	344.8	344.6	346.1	347.1
47.5°	334.9	335.3	334.9	334.6	336.1	337.1
48°	324.8	325.2	324.8	324.3	325.5	326.3
48.5°	315.2	315.7	315.2	314.8	315.9	316.3
49°	306.4	306.8	306.4	306.1	306.8	307.0
49.5°	297.5	297.7	297.5	297.3	297.6	297.7
50°	288.5	288.8	288.5	288.2	288.2	288.3
50.5°	279.7	279.9	279.7	279.5	279.6	279.5
51°	271.6	271.4	271.6	271.4	271.5	271.5
51.5°	264.0	264.1	264.0	263.8	263.9	264.0
52°	257.1	257.4	257.1	256.7	256.7	256.7
52.5°	250.5	250.8	250.5	250.1	250.2	250.1
53°	244.6	244.8	244.6	244.1	244.1	244.2
53.5°	239.0	239.2	239.0	238.6	238.6	238.6
54°	233.5	233.5	233.5	233.1	233.1	233.2
54.5°	227.7	227.8	227.7	227.4	227.4	227.4
55°	221.4	221.4	221.4	220.9	220.9	220.9
55.5°	214.3	214.1	214.3	213.6	213.5	213.5
56°	206.1	206.0	206.1	205.5	205.2	205.0
56.5°	197.4	197.4	197.4	196.7	196.3	196.2
57°	188.2	188.0	188.2	187.6	187.1	186.9
57.5°	178.7	178.7	178.7	177.9	177.5	177.3
58°	169.1	169.3	169.1	168.2	167.6	167.6
58.5°	159.3	159.7	159.3	158.2	157.7	157.4
59°	149.3	149.8	149.3	148.2	147.6	147.2
59.5°	139.5	140.1	139.5	138.1	137.4	136.8
60°	129.6	130.2	129.6	128.3	127.4	126.7
60.5°	120.0	120.6	120.0	118.6	117.4	116.6
61°	110.4	110.9	110.4	109.1	107.7	106.7
61.5°	101.1	101.5	101.1	99.9	98.2	97.4
62°	91.8	92.4	91.8	90.7	89.0	88.0
62.5°	82.9	83.7	82.9	81.8	79.9	78.8
63°	74.2	75.0	74.2	73.2	71.0	69.7
63.5°	65.8	66.6	65.8	64.7	62.4	61.2
64°	57.8	58.4	57.8	56.5	54.4	53.2
64.5°	49.9	50.4	49.9	48.8	46.7	45.4
65°	43.0	43.6	43.0	41.7	39.5	38.1
65.5°	36.2	37.0	36.2	34.9	33.1	31.5
66°	29.9	30.7	29.9	28.6	27.2	25.2



TEST NUMBER: P775816
 CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	14.7	14.9	14.7	14.2	13.1	10.1
68°	11.0	11.5	11.0	10.4	9.4	6.1
68.5°	7.4	8.5	7.4	6.8	6.2	2.7
69°	4.9	6.1	4.9	4.6	3.8	1.6
69.5°	2.9	3.9	2.9	3.1	2.2	1.1
70°	1.5	1.7	1.5	1.6	1.3	0.9
70.5°	1.0	0.8	1.0	1.0	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: P775816

CATALOG NUMBER: HCDJBL510CSD-HCD81TRC-1000lm-3000K

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°	489.2	489.2	489.1	489.2	489.1	489.2	489.1	489.2	489.2	489.2	489.1
22°	489.3	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.3	489.2	489.2



44°	394.9	394.4	393.2	393.1	393.2	393.1	393.2	394.4	394.9	394.4	393.2
44.5°	387.9	387.3	385.8	385.8	385.9	385.8	385.8	387.3	387.9	387.3	385.8



66.5°	20.2	21.8	23.3	24.3	24.6	24.3	23.3	21.8	20.2	21.8	23.3
67°	15.1	17.0	18.2	19.2	19.4	19.2	18.2	17.0	15.1	17.0	18.2



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°	489.2	489.1	489.2	489.1	489.2	489.2
22°	489.2	489.2	489.2	489.2	489.2	489.3



44°	393.1	393.2	393.1	393.2	394.4	394.9
44.5°	385.8	385.9	385.8	385.8	387.3	387.9



66.5°	24.3	24.6	24.3	23.3	21.8	20.2
67°	19.2	19.4	19.2	18.2	17.0	15.1

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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)