

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P775833

Luminaire Tested: HCDJBS510CSD-HCD81TRMB-1000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775833
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B045-HCD81TRMB)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD81TRMB-1000lm-4000K
Description: 8 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1110.6 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.37
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

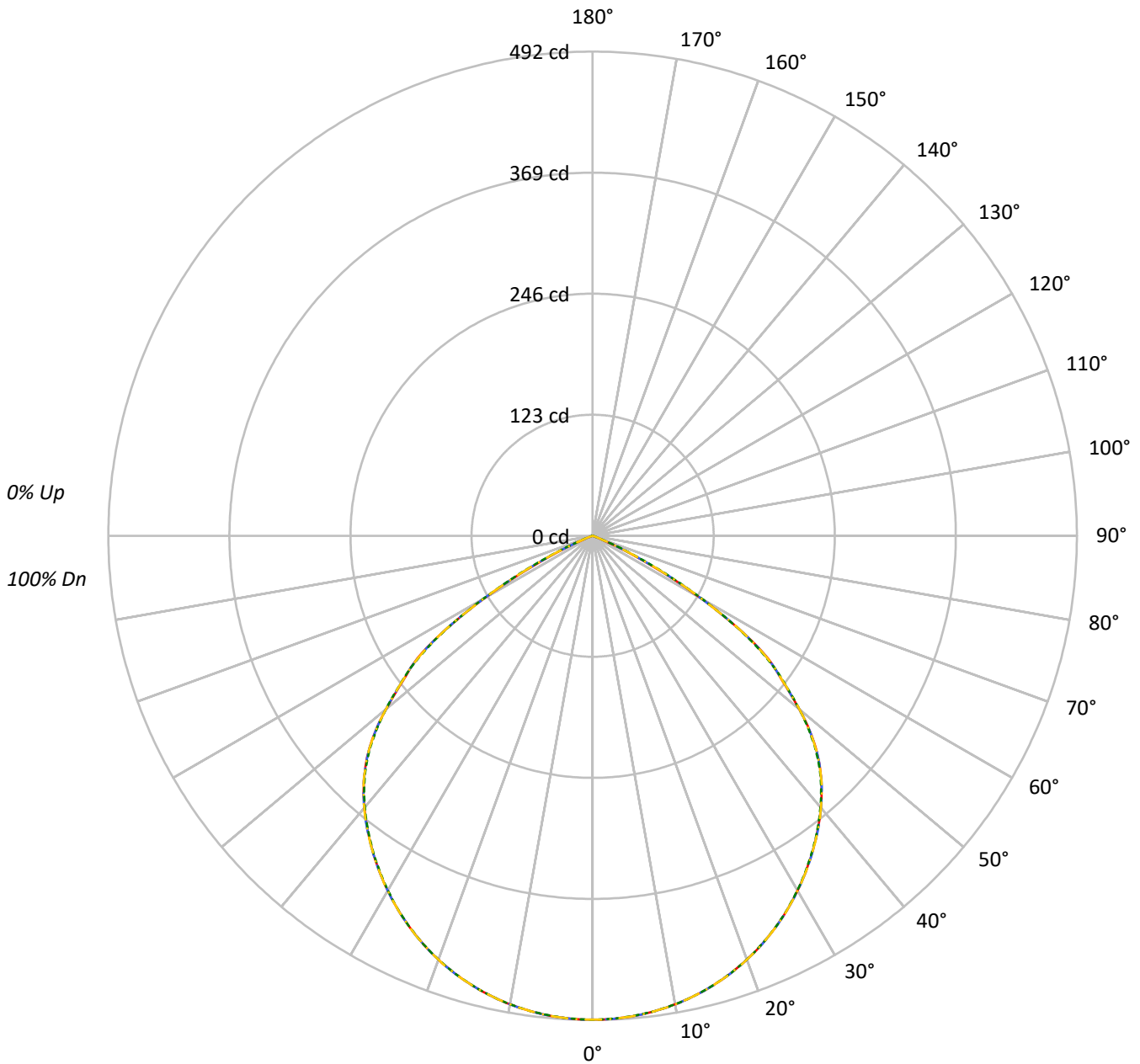
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100		
	1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89	89	89	89	89	89		
	2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78	78	78	78	78	78		
	3	95	86	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68	68	68	68	68	68		
	4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59	59	59	59	59	59		
	5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52	52	52		
	6	75	63	55	50	74	62	55	49	61	54	49	59	53	49	58	52	48	46	46	46	46	46	46		
	7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41	41	41	41	41	41		
	8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37		
	9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33	33	33	33	33	33		
	10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15012	15012	15012	15012
5°	15008	15002	15008	15002
10°	14989	14986	14989	14986
15°	14950	14947	14950	14947
20°	14890	14887	14890	14887
25°	14798	14792	14798	14792
30°	14679	14669	14679	14669
35°	14539	14521	14539	14521
40°	14375	14348	14375	14348
45°	14050	14002	14050	14002
50°	13014	13014	13014	13014
55°	11582	11455	11582	11455
60°	7736	7840	7736	7840
65°	2738	3280	2738	3280
70°	27	312	27	312
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14050 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	4.2
10°-20°	133.5	12.0
20°-30°	202.4	18.2
30°-40°	244.0	22.0
40°-50°	248.8	22.4
50°-60°	186.9	16.8
60°-70°	48.3	4.3
70°-80°	0.1	0.0
80°-90°	0.0	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°	382.5	34.4
0°-40°	626.5	56.4
0°-60°	1062.2	95.6
0°-90°	1110.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1110.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	492	492	492	492	492	
5°	490	490	490	490	490	47
15°	473	473	473	473	473	133
25°	439	439	439	439	439	202
35°	390	390	390	390	390	244
45°	325	324	325	324	325	249
55°	218	215	218	215	218	187
65°	38	45	38	45	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°	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7
0.5°	491.7	491.7	491.7	491.7	491.6	491.7	491.7	491.7	491.7	491.7	491.7
1°	491.7	491.7	491.7	491.6	491.5	491.6	491.7	491.7	491.7	491.7	491.7
1.5°	491.6	491.6	491.6	491.6	491.5	491.6	491.6	491.6	491.6	491.6	491.6
2°	491.5	491.5	491.5	491.4	491.3	491.4	491.5	491.5	491.5	491.5	491.5
2.5°	491.2	491.3	491.3	491.3	491.1	491.3	491.3	491.3	491.2	491.3	491.3
3°	491.0	491.1	491.1	491.1	490.9	491.1	491.1	491.1	491.0	491.1	491.1
3.5°	490.7	490.7	490.7	490.7	490.6	490.7	490.7	490.7	490.7	490.7	490.7
4°	490.4	490.4	490.4	490.4	490.2	490.4	490.4	490.4	490.4	490.4	490.4
4.5°	490.1	490.1	490.1	490.1	489.9	490.1	490.1	490.1	490.1	490.1	490.1
5°	489.7	489.7	489.7	489.7	489.5	489.7	489.7	489.7	489.7	489.7	489.7
5.5°	489.3	489.3	489.3	489.3	489.1	489.3	489.3	489.3	489.3	489.3	489.3
6°	488.8	488.9	488.8	488.8	488.6	488.8	488.8	488.9	488.8	488.9	488.8
6.5°	488.2	488.3	488.3	488.2	488.1	488.2	488.3	488.3	488.2	488.3	488.3
7°	487.7	487.7	487.7	487.7	487.6	487.7	487.7	487.7	487.7	487.7	487.7
7.5°	487.1	487.1	487.1	487.2	487.0	487.2	487.1	487.1	487.1	487.1	487.1
8°	486.4	486.4	486.4	486.4	486.3	486.4	486.4	486.4	486.4	486.4	486.4
8.5°	485.8	485.8	485.8	485.8	485.6	485.8	485.8	485.8	485.8	485.8	485.8
9°	485.1	485.1	485.1	485.1	485.0	485.1	485.1	485.1	485.1	485.1	485.1
9.5°	484.2	484.3	484.3	484.3	484.1	484.3	484.3	484.3	484.2	484.3	484.3
10°	483.5	483.5	483.5	483.5	483.4	483.5	483.5	483.5	483.5	483.5	483.5
10.5°	482.7	482.7	482.7	482.7	482.6	482.7	482.7	482.7	482.7	482.7	482.7
11°	481.7	481.7	481.7	481.8	481.6	481.8	481.7	481.7	481.7	481.7	481.7
11.5°	480.8	480.8	480.8	480.9	480.7	480.9	480.8	480.8	480.8	480.8	480.8
12°	479.8	479.8	479.8	479.8	479.7	479.8	479.8	479.8	479.8	479.8	479.8
12.5°	478.8	478.8	478.8	478.9	478.7	478.9	478.8	478.8	478.8	478.8	478.8
13°	477.7	477.7	477.7	477.7	477.6	477.7	477.7	477.7	477.7	477.7	477.7
13.5°	476.6	476.7	476.7	476.7	476.5	476.7	476.7	476.7	476.6	476.7	476.7
14°	475.4	475.5	475.5	475.5	475.3	475.5	475.5	475.5	475.4	475.5	475.5
14.5°	474.3	474.3	474.3	474.3	474.2	474.3	474.3	474.3	474.3	474.3	474.3
15°	473.0	473.0	473.0	473.1	472.9	473.1	473.0	473.0	473.0	473.0	473.0
15.5°	471.7	471.7	471.7	471.7	471.6	471.7	471.7	471.7	471.7	471.7	471.7
16°	470.4	470.5	470.5	470.5	470.3	470.5	470.5	470.5	470.4	470.5	470.5
16.5°	469.0	469.0	469.1	469.1	469.0	469.1	469.1	469.0	469.0	469.0	469.1
17°	467.6	467.6	467.7	467.6	467.5	467.6	467.7	467.6	467.6	467.6	467.7
17.5°	466.2	466.2	466.3	466.3	466.2	466.3	466.3	466.2	466.2	466.2	466.3
18°	464.7	464.7	464.7	464.7	464.6	464.7	464.7	464.7	464.7	464.7	464.7
18.5°	463.1	463.1	463.2	463.2	463.0	463.2	463.2	463.1	463.1	463.1	463.2
19°	461.6	461.6	461.7	461.7	461.4	461.7	461.7	461.6	461.6	461.6	461.7
19.5°	460.0	460.0	460.0	460.0	459.9	460.0	460.0	460.0	460.0	460.0	460.0
20°	458.3	458.3	458.3	458.3	458.2	458.3	458.3	458.3	458.3	458.3	458.3
20.5°	456.5	456.6	456.6	456.6	456.4	456.6	456.6	456.6	456.5	456.6	456.6
21°	454.8	454.8	454.8	454.8	454.7	454.8	454.8	454.8	454.8	454.8	454.8



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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°	449.3	449.4	449.4	449.4	449.2	449.4	449.4	449.4	449.3	449.4	449.4
23°	447.4	447.4	447.4	447.4	447.3	447.4	447.4	447.4	447.4	447.4	447.4
23.5°	445.4	445.5	445.5	445.5	445.3	445.5	445.5	445.5	445.4	445.5	445.5
24°	443.4	443.4	443.5	443.4	443.3	443.4	443.5	443.4	443.4	443.4	443.5
24.5°	441.3	441.4	441.5	441.4	441.2	441.4	441.5	441.4	441.3	441.4	441.5
25°	439.3	439.3	439.4	439.3	439.1	439.3	439.4	439.3	439.3	439.3	439.4
25.5°	437.1	437.2	437.3	437.2	437.0	437.2	437.3	437.2	437.1	437.2	437.3
26°	435.0	435.0	435.1	435.0	434.8	435.0	435.1	435.0	435.0	435.0	435.1
26.5°	432.8	432.9	432.9	432.8	432.6	432.8	432.9	432.9	432.8	432.9	432.9
27°	430.6	430.6	430.7	430.6	430.4	430.6	430.7	430.6	430.6	430.6	430.7
27.5°	428.3	428.4	428.4	428.3	428.1	428.3	428.4	428.4	428.3	428.4	428.4
28°	425.9	426.1	426.1	425.9	425.7	425.9	426.1	426.1	425.9	426.1	426.1
28.5°	423.6	423.6	423.7	423.6	423.4	423.6	423.7	423.6	423.6	423.6	423.7
29°	421.2	421.3	421.3	421.2	420.9	421.2	421.3	421.3	421.2	421.3	421.3
29.5°	418.8	418.9	418.9	418.8	418.5	418.8	418.9	418.9	418.8	418.9	418.9
30°	416.4	416.5	416.5	416.3	416.1	416.3	416.5	416.5	416.4	416.5	416.5
30.5°	414.0	414.0	414.0	413.9	413.6	413.9	414.0	414.0	414.0	414.0	414.0
31°	411.4	411.5	411.6	411.2	411.0	411.2	411.6	411.5	411.4	411.5	411.6
31.5°	408.8	408.9	408.9	408.7	408.4	408.7	408.9	408.9	408.8	408.9	408.9
32°	406.3	406.4	406.4	406.2	405.8	406.2	406.4	406.4	406.3	406.4	406.4
32.5°	403.7	403.8	403.8	403.5	403.2	403.5	403.8	403.8	403.7	403.8	403.8
33°	401.0	401.2	401.2	401.0	400.5	401.0	401.2	401.2	401.0	401.2	401.2
33.5°	398.3	398.4	398.5	398.2	397.8	398.2	398.5	398.4	398.3	398.4	398.5
34°	395.6	395.7	395.8	395.5	395.2	395.5	395.8	395.7	395.6	395.7	395.8
34.5°	392.9	393.0	393.1	392.8	392.4	392.8	393.1	393.0	392.9	393.0	393.1
35°	390.1	390.2	390.3	390.0	389.6	390.0	390.3	390.2	390.1	390.2	390.3
35.5°	387.3	387.5	387.5	387.2	386.8	387.2	387.5	387.5	387.3	387.5	387.5
36°	384.6	384.7	384.8	384.4	383.9	384.4	384.8	384.7	384.6	384.7	384.8
36.5°	381.7	381.8	381.9	381.5	381.1	381.5	381.9	381.8	381.7	381.8	381.9
37°	378.8	378.9	379.0	378.6	378.3	378.6	379.0	378.9	378.8	378.9	379.0
37.5°	375.9	376.1	376.2	375.6	375.2	375.6	376.2	376.1	375.9	376.1	376.2
38°	372.9	373.0	373.2	372.7	372.4	372.7	373.2	373.0	372.9	373.0	373.2
38.5°	369.9	370.1	370.2	369.8	369.3	369.8	370.2	370.1	369.9	370.1	370.2
39°	366.9	367.1	367.2	366.7	366.3	366.7	367.2	367.1	366.9	367.1	367.2
39.5°	363.9	364.0	364.1	363.7	363.1	363.7	364.1	364.0	363.9	364.0	364.1
40°	360.7	360.9	360.9	360.5	360.0	360.5	360.9	360.9	360.7	360.9	360.9
40.5°	357.6	357.7	357.8	357.3	356.8	357.3	357.8	357.7	357.6	357.7	357.8
41°	354.3	354.5	354.6	354.1	353.6	354.1	354.6	354.5	354.3	354.5	354.6
41.5°	351.1	351.2	351.3	350.8	350.3	350.8	351.3	351.2	351.1	351.2	351.3
42°	347.7	347.8	347.9	347.4	346.9	347.4	347.9	347.8	347.7	347.8	347.9
42.5°	344.2	344.5	344.5	343.9	343.4	343.9	344.5	344.5	344.2	344.5	344.5
43°	340.8	340.9	340.9	340.4	339.8	340.4	340.9	340.9	340.8	340.9	340.9
43.5°	337.1	337.2	337.2	336.7	336.2	336.7	337.2	337.2	337.1	337.2	337.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	325.4	325.4	325.3	324.8	324.3	324.8	325.3	325.4	325.4	325.4	325.3
45.5°	321.2	321.2	321.1	320.5	320.0	320.5	321.1	321.2	321.2	321.2	321.1
46°	316.9	316.9	316.7	316.1	315.5	316.1	316.7	316.9	316.9	316.9	316.7
46.5°	312.3	312.3	312.1	311.4	311.0	311.4	312.1	312.3	312.3	312.3	312.1
47°	307.5	307.5	307.2	306.5	306.0	306.5	307.2	307.5	307.5	307.5	307.2
47.5°	302.4	302.4	302.1	301.5	301.0	301.5	302.1	302.4	302.4	302.4	302.1
48°	297.2	297.2	297.0	296.4	295.9	296.4	297.0	297.2	297.2	297.2	297.0
48.5°	291.7	291.7	291.5	291.1	290.7	291.1	291.5	291.7	291.7	291.7	291.5
49°	286.0	286.0	285.9	285.5	285.3	285.5	285.9	286.0	286.0	286.0	285.9
49.5°	280.2	280.1	280.2	279.9	279.8	279.9	280.2	280.1	280.2	280.1	280.2
50°	274.0	274.1	274.3	274.1	274.0	274.1	274.3	274.1	274.0	274.1	274.3
50.5°	267.6	268.0	268.3	268.2	268.2	268.2	268.3	268.0	267.6	268.0	268.3
51°	261.5	261.7	262.0	262.3	262.5	262.3	262.0	261.7	261.5	261.7	262.0
51.5°	255.5	255.6	256.0	256.3	256.7	256.3	256.0	255.6	255.5	255.6	256.0
52°	249.5	249.7	250.2	250.6	251.1	250.6	250.2	249.7	249.5	249.7	250.2
52.5°	243.8	244.1	244.6	245.1	245.5	245.1	244.6	244.1	243.8	244.1	244.6
53°	238.5	238.7	239.2	239.6	240.1	239.6	239.2	238.7	238.5	238.7	239.2
53.5°	233.5	233.7	233.9	234.1	234.4	234.1	233.9	233.7	233.5	233.7	233.9
54°	228.7	228.5	228.5	228.4	228.4	228.4	228.5	228.5	228.7	228.5	228.5
54.5°	223.5	223.3	222.8	222.3	221.9	222.3	222.8	223.3	223.5	223.3	222.8
55°	217.6	217.2	216.5	215.8	215.2	215.8	216.5	217.2	217.6	217.2	216.5
55.5°	210.7	210.1	209.5	208.9	208.2	208.9	209.5	210.1	210.7	210.1	209.5
56°	202.9	202.6	201.9	201.3	200.6	201.3	201.9	202.6	202.9	202.6	201.9
56.5°	194.4	194.1	193.9	193.2	192.7	193.2	193.9	194.1	194.4	194.1	193.9
57°	185.5	185.3	185.1	184.6	184.0	184.6	185.1	185.3	185.5	185.3	185.1
57.5°	176.0	176.0	176.0	175.5	175.1	175.5	176.0	176.0	176.0	176.0	176.0
58°	166.5	166.6	166.7	166.3	165.9	166.3	166.7	166.6	166.5	166.6	166.7
58.5°	156.7	156.7	157.0	156.9	156.5	156.9	157.0	156.7	156.7	156.7	157.0
59°	146.7	146.9	147.2	147.3	147.2	147.3	147.2	146.9	146.7	146.9	147.2
59.5°	136.7	136.9	137.5	137.9	137.9	137.9	137.5	136.9	136.7	136.9	137.5
60°	126.7	127.1	127.7	128.5	128.4	128.5	127.7	127.1	126.7	127.1	127.7
60.5°	116.7	117.2	118.0	119.0	119.1	119.0	118.0	117.2	116.7	117.2	118.0
61°	107.0	107.6	108.5	109.5	109.8	109.5	108.5	107.6	107.0	107.6	108.5
61.5°	97.6	98.1	99.2	100.2	100.8	100.2	99.2	98.1	97.6	98.1	99.2
62°	88.1	88.8	90.1	91.3	92.1	91.3	90.1	88.8	88.1	88.8	90.1
62.5°	78.8	79.6	81.3	82.5	83.4	82.5	81.3	79.6	78.8	79.6	81.3
63°	69.8	70.8	72.7	74.0	75.0	74.0	72.7	70.8	69.8	70.8	72.7
63.5°	61.3	62.3	64.3	66.0	67.5	66.0	64.3	62.3	61.3	62.3	64.3
64°	53.1	54.2	56.2	58.4	60.2	58.4	56.2	54.2	53.1	54.2	56.2
64.5°	45.3	46.6	48.7	51.0	52.7	51.0	48.7	46.6	45.3	46.6	48.7
65°	37.9	39.7	41.7	43.9	45.4	43.9	41.7	39.7	37.9	39.7	41.7
65.5°	31.2	33.2	35.0	37.1	38.4	37.1	35.0	33.2	31.2	33.2	35.0
66°	25.0	27.4	28.8	30.9	32.1	30.9	28.8	27.4	25.0	27.4	28.8



TEST NUMBER: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	9.6	12.9	14.4	16.2	17.1	16.2	14.4	12.9	9.6	12.9	14.4
68°	5.6	8.9	10.9	12.2	13.3	12.2	10.9	8.9	5.6	8.9	10.9
68.5°	2.1	6.0	7.9	9.2	10.6	9.2	7.9	6.0	2.1	6.0	7.9
69°	1.1	3.6	5.0	6.4	7.9	6.4	5.0	3.6	1.1	3.6	5.0
69.5°	0.6	1.6	2.8	4.2	5.7	4.2	2.8	1.6	0.6	1.6	2.8
70°	0.3	0.7	1.6	2.4	3.5	2.4	1.6	0.7	0.3	0.7	1.6
70.5°	0.1	0.4	0.9	1.2	1.4	1.2	0.9	0.4	0.1	0.4	0.9
71°	0.1	0.2	0.5	0.6	0.5	0.6	0.5	0.2	0.1	0.2	0.5
71.5°	0.1	0.1	0.3	0.3	0.1	0.3	0.3	0.1	0.1	0.1	0.3
72°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
72.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
73°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	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: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-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: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	491.7	491.7	491.7	491.7	491.7	491.7
0.5°	491.7	491.6	491.7	491.7	491.7	491.7
1°	491.6	491.5	491.6	491.7	491.7	491.7
1.5°	491.6	491.5	491.6	491.6	491.6	491.6
2°	491.4	491.3	491.4	491.5	491.5	491.5
2.5°	491.3	491.1	491.3	491.3	491.3	491.2
3°	491.1	490.9	491.1	491.1	491.1	491.0
3.5°	490.7	490.6	490.7	490.7	490.7	490.7
4°	490.4	490.2	490.4	490.4	490.4	490.4
4.5°	490.1	489.9	490.1	490.1	490.1	490.1
5°	489.7	489.5	489.7	489.7	489.7	489.7
5.5°	489.3	489.1	489.3	489.3	489.3	489.3
6°	488.8	488.6	488.8	488.8	488.9	488.8
6.5°	488.2	488.1	488.2	488.3	488.3	488.2
7°	487.7	487.6	487.7	487.7	487.7	487.7
7.5°	487.2	487.0	487.2	487.1	487.1	487.1
8°	486.4	486.3	486.4	486.4	486.4	486.4
8.5°	485.8	485.6	485.8	485.8	485.8	485.8
9°	485.1	485.0	485.1	485.1	485.1	485.1
9.5°	484.3	484.1	484.3	484.3	484.3	484.2
10°	483.5	483.4	483.5	483.5	483.5	483.5
10.5°	482.7	482.6	482.7	482.7	482.7	482.7
11°	481.8	481.6	481.8	481.7	481.7	481.7
11.5°	480.9	480.7	480.9	480.8	480.8	480.8
12°	479.8	479.7	479.8	479.8	479.8	479.8
12.5°	478.9	478.7	478.9	478.8	478.8	478.8
13°	477.7	477.6	477.7	477.7	477.7	477.7
13.5°	476.7	476.5	476.7	476.7	476.7	476.6
14°	475.5	475.3	475.5	475.5	475.5	475.4
14.5°	474.3	474.2	474.3	474.3	474.3	474.3
15°	473.1	472.9	473.1	473.0	473.0	473.0
15.5°	471.7	471.6	471.7	471.7	471.7	471.7
16°	470.5	470.3	470.5	470.5	470.5	470.4
16.5°	469.1	469.0	469.1	469.1	469.0	469.0
17°	467.6	467.5	467.6	467.7	467.6	467.6
17.5°	466.3	466.2	466.3	466.3	466.2	466.2
18°	464.7	464.6	464.7	464.7	464.7	464.7
18.5°	463.2	463.0	463.2	463.2	463.1	463.1
19°	461.7	461.4	461.7	461.7	461.6	461.6
19.5°	460.0	459.9	460.0	460.0	460.0	460.0
20°	458.3	458.2	458.3	458.3	458.3	458.3
20.5°	456.6	456.4	456.6	456.6	456.6	456.5
21°	454.8	454.7	454.8	454.8	454.8	454.8

TEST NUMBER: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	449.4	449.2	449.4	449.4	449.4	449.3
23°	447.4	447.3	447.4	447.4	447.4	447.4
23.5°	445.5	445.3	445.5	445.5	445.5	445.4
24°	443.4	443.3	443.4	443.5	443.4	443.4
24.5°	441.4	441.2	441.4	441.5	441.4	441.3
25°	439.3	439.1	439.3	439.4	439.3	439.3
25.5°	437.2	437.0	437.2	437.3	437.2	437.1
26°	435.0	434.8	435.0	435.1	435.0	435.0
26.5°	432.8	432.6	432.8	432.9	432.9	432.8
27°	430.6	430.4	430.6	430.7	430.6	430.6
27.5°	428.3	428.1	428.3	428.4	428.4	428.3
28°	425.9	425.7	425.9	426.1	426.1	425.9
28.5°	423.6	423.4	423.6	423.7	423.6	423.6
29°	421.2	420.9	421.2	421.3	421.3	421.2
29.5°	418.8	418.5	418.8	418.9	418.9	418.8
30°	416.3	416.1	416.3	416.5	416.5	416.4
30.5°	413.9	413.6	413.9	414.0	414.0	414.0
31°	411.2	411.0	411.2	411.6	411.5	411.4
31.5°	408.7	408.4	408.7	408.9	408.9	408.8
32°	406.2	405.8	406.2	406.4	406.4	406.3
32.5°	403.5	403.2	403.5	403.8	403.8	403.7
33°	401.0	400.5	401.0	401.2	401.2	401.0
33.5°	398.2	397.8	398.2	398.5	398.4	398.3
34°	395.5	395.2	395.5	395.8	395.7	395.6
34.5°	392.8	392.4	392.8	393.1	393.0	392.9
35°	390.0	389.6	390.0	390.3	390.2	390.1
35.5°	387.2	386.8	387.2	387.5	387.5	387.3
36°	384.4	383.9	384.4	384.8	384.7	384.6
36.5°	381.5	381.1	381.5	381.9	381.8	381.7
37°	378.6	378.3	378.6	379.0	378.9	378.8
37.5°	375.6	375.2	375.6	376.2	376.1	375.9
38°	372.7	372.4	372.7	373.2	373.0	372.9
38.5°	369.8	369.3	369.8	370.2	370.1	369.9
39°	366.7	366.3	366.7	367.2	367.1	366.9
39.5°	363.7	363.1	363.7	364.1	364.0	363.9
40°	360.5	360.0	360.5	360.9	360.9	360.7
40.5°	357.3	356.8	357.3	357.8	357.7	357.6
41°	354.1	353.6	354.1	354.6	354.5	354.3
41.5°	350.8	350.3	350.8	351.3	351.2	351.1
42°	347.4	346.9	347.4	347.9	347.8	347.7
42.5°	343.9	343.4	343.9	344.5	344.5	344.2
43°	340.4	339.8	340.4	340.9	340.9	340.8
43.5°	336.7	336.2	336.7	337.2	337.2	337.1

TEST NUMBER: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	324.8	324.3	324.8	325.3	325.4	325.4
45.5°	320.5	320.0	320.5	321.1	321.2	321.2
46°	316.1	315.5	316.1	316.7	316.9	316.9
46.5°	311.4	311.0	311.4	312.1	312.3	312.3
47°	306.5	306.0	306.5	307.2	307.5	307.5
47.5°	301.5	301.0	301.5	302.1	302.4	302.4
48°	296.4	295.9	296.4	297.0	297.2	297.2
48.5°	291.1	290.7	291.1	291.5	291.7	291.7
49°	285.5	285.3	285.5	285.9	286.0	286.0
49.5°	279.9	279.8	279.9	280.2	280.1	280.2
50°	274.1	274.0	274.1	274.3	274.1	274.0
50.5°	268.2	268.2	268.2	268.3	268.0	267.6
51°	262.3	262.5	262.3	262.0	261.7	261.5
51.5°	256.3	256.7	256.3	256.0	255.6	255.5
52°	250.6	251.1	250.6	250.2	249.7	249.5
52.5°	245.1	245.5	245.1	244.6	244.1	243.8
53°	239.6	240.1	239.6	239.2	238.7	238.5
53.5°	234.1	234.4	234.1	233.9	233.7	233.5
54°	228.4	228.4	228.4	228.5	228.5	228.7
54.5°	222.3	221.9	222.3	222.8	223.3	223.5
55°	215.8	215.2	215.8	216.5	217.2	217.6
55.5°	208.9	208.2	208.9	209.5	210.1	210.7
56°	201.3	200.6	201.3	201.9	202.6	202.9
56.5°	193.2	192.7	193.2	193.9	194.1	194.4
57°	184.6	184.0	184.6	185.1	185.3	185.5
57.5°	175.5	175.1	175.5	176.0	176.0	176.0
58°	166.3	165.9	166.3	166.7	166.6	166.5
58.5°	156.9	156.5	156.9	157.0	156.7	156.7
59°	147.3	147.2	147.3	147.2	146.9	146.7
59.5°	137.9	137.9	137.9	137.5	136.9	136.7
60°	128.5	128.4	128.5	127.7	127.1	126.7
60.5°	119.0	119.1	119.0	118.0	117.2	116.7
61°	109.5	109.8	109.5	108.5	107.6	107.0
61.5°	100.2	100.8	100.2	99.2	98.1	97.6
62°	91.3	92.1	91.3	90.1	88.8	88.1
62.5°	82.5	83.4	82.5	81.3	79.6	78.8
63°	74.0	75.0	74.0	72.7	70.8	69.8
63.5°	66.0	67.5	66.0	64.3	62.3	61.3
64°	58.4	60.2	58.4	56.2	54.2	53.1
64.5°	51.0	52.7	51.0	48.7	46.6	45.3
65°	43.9	45.4	43.9	41.7	39.7	37.9
65.5°	37.1	38.4	37.1	35.0	33.2	31.2
66°	30.9	32.1	30.9	28.8	27.4	25.0



TEST NUMBER: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	16.2	17.1	16.2	14.4	12.9	9.6
68°	12.2	13.3	12.2	10.9	8.9	5.6
68.5°	9.2	10.6	9.2	7.9	6.0	2.1
69°	6.4	7.9	6.4	5.0	3.6	1.1
69.5°	4.2	5.7	4.2	2.8	1.6	0.6
70°	2.4	3.5	2.4	1.6	0.7	0.3
70.5°	1.2	1.4	1.2	0.9	0.4	0.1
71°	0.6	0.5	0.6	0.5	0.2	0.1
71.5°	0.3	0.1	0.3	0.3	0.1	0.1
72°	0.1	0.1	0.1	0.1	0.1	0.1
72.5°	0.1	0.1	0.1	0.1	0.1	0.1
73°	0.1	0.1	0.1	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	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: P775833

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-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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Cooper Lighting Solutions Photometric Lab
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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°	453.0	453.0	453.0	453.0	452.8	453.0	453.0	453.0	453.0	453.0	453.0
22°	451.2	451.2	451.3	451.3	451.0	451.3	451.3	451.2	451.2	451.2	451.3



44°	333.3	333.4	333.3	332.8	332.4	332.8	333.3	333.4	333.3	333.4	333.3
44.5°	329.4	329.5	329.5	328.9	328.3	328.9	329.5	329.5	329.4	329.5	329.5



66.5°	19.7	22.2	23.3	25.3	26.5	25.3	23.3	22.2	19.7	22.2	23.3
67°	14.6	17.0	18.7	20.4	21.3	20.4	18.7	17.0	14.6	17.0	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°	453.0	452.8	453.0	453.0	453.0	453.0
22°	451.3	451.0	451.3	451.3	451.2	451.2



44°	332.8	332.4	332.8	333.3	333.4	333.3
44.5°	328.9	328.3	328.9	329.5	329.5	329.4



66.5°	25.3	26.5	25.3	23.3	22.2	19.7
67°	20.4	21.3	20.4	18.7	17.0	14.6

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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)