

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: P775834

Luminaire Tested: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775834
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-5000K
Description: 8 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1127.1 lumens
Efficiency: N/A
Efficacy: 112.7 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

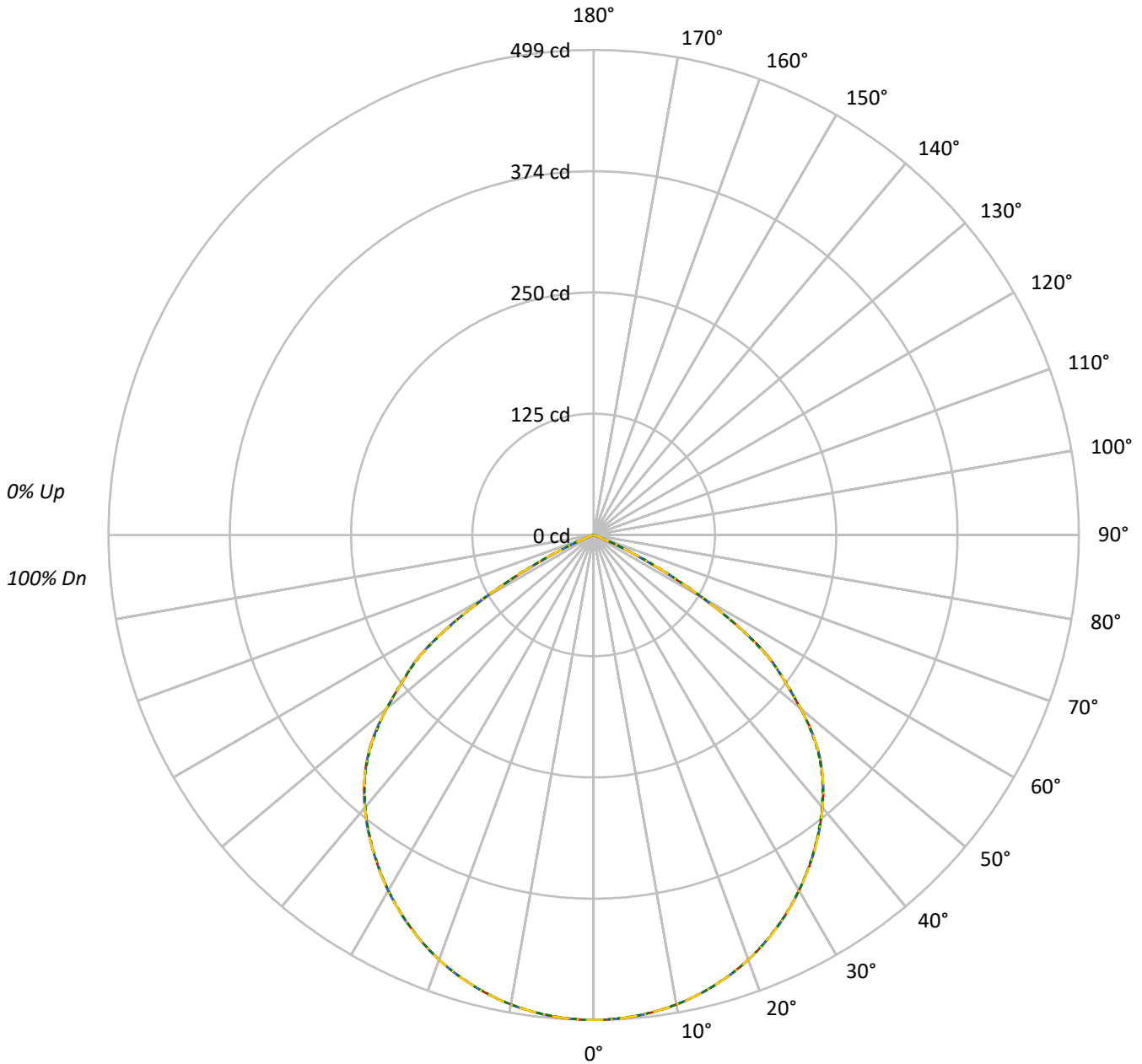
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

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	101	99	97	98	96	94	94	93	91	89								
2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78								
3	95	86	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68								
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52								
6	75	63	55	50	74	62	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	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15235	15235	15235	15235
5°	15228	15222	15228	15222
10°	15212	15209	15212	15209
15°	15171	15168	15171	15168
20°	15111	15108	15111	15108
25°	15017	15011	15017	15011
30°	14898	14884	14898	14884
35°	14755	14737	14755	14737
40°	14591	14559	14591	14559
45°	14261	14209	14261	14209
50°	13204	13204	13204	13204
55°	11753	11625	11753	11625
60°	7846	7956	7846	7956
65°	2781	3323	2781	3323
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: 14261 cd/sqm



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.2	4.2
10°-20°	135.5	12.0
20°-30°	205.4	18.2
30°-40°	247.6	22.0
40°-50°	252.4	22.4
50°-60°	189.7	16.8
60°-70°	49.0	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°	388.1	34.4
0°-40°	635.8	56.4
0°-60°	1077.9	95.6
0°-90°	1127.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1127.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	499	499	499	499	499	
5°	497	497	497	497	497	47
15°	480	480	480	480	480	135
25°	446	446	446	446	446	205
35°	396	395	396	395	396	248
45°	330	329	330	329	330	253
55°	221	218	221	218	221	190
65°	38	46	38	46	38	46
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	499.0	499.0	499.0	499.0	499.0	499.0	499.0	499.0	499.0	499.0	499.0
0.5°	499.0	499.0	499.0	499.0	498.9	499.0	499.0	499.0	499.0	499.0	499.0
1°	499.0	499.0	499.0	498.9	498.8	498.9	499.0	499.0	499.0	499.0	499.0
1.5°	498.9	498.9	498.9	498.9	498.8	498.9	498.9	498.9	498.9	498.9	498.9
2°	498.8	498.8	498.8	498.7	498.5	498.7	498.8	498.8	498.8	498.8	498.8
2.5°	498.4	498.5	498.5	498.5	498.3	498.5	498.5	498.5	498.4	498.5	498.5
3°	498.2	498.3	498.3	498.3	498.1	498.3	498.3	498.3	498.2	498.3	498.3
3.5°	498.0	498.0	498.0	498.0	497.9	498.0	498.0	498.0	498.0	498.0	498.0
4°	497.7	497.7	497.7	497.7	497.5	497.7	497.7	497.7	497.7	497.7	497.7
4.5°	497.4	497.4	497.4	497.4	497.2	497.4	497.4	497.4	497.4	497.4	497.4
5°	496.9	496.9	496.9	496.9	496.7	496.9	496.9	496.9	496.9	496.9	496.9
5.5°	496.5	496.5	496.5	496.5	496.3	496.5	496.5	496.5	496.5	496.5	496.5
6°	496.0	496.1	496.0	496.0	495.9	496.0	496.0	496.1	496.0	496.1	496.0
6.5°	495.5	495.6	495.6	495.5	495.3	495.5	495.6	495.6	495.5	495.6	495.6
7°	494.9	494.9	494.9	494.9	494.8	494.9	494.9	494.9	494.9	494.9	494.9
7.5°	494.3	494.3	494.3	494.4	494.2	494.4	494.3	494.3	494.3	494.3	494.3
8°	493.6	493.6	493.6	493.6	493.5	493.6	493.6	493.6	493.6	493.6	493.6
8.5°	493.0	493.0	493.0	493.0	492.8	493.0	493.0	493.0	493.0	493.0	493.0
9°	492.3	492.3	492.3	492.3	492.2	492.3	492.3	492.3	492.3	492.3	492.3
9.5°	491.4	491.5	491.5	491.5	491.3	491.5	491.5	491.5	491.4	491.5	491.5
10°	490.7	490.7	490.7	490.7	490.6	490.7	490.7	490.7	490.7	490.7	490.7
10.5°	489.8	489.8	489.8	489.8	489.7	489.8	489.8	489.8	489.8	489.8	489.8
11°	488.8	488.8	488.8	489.0	488.7	489.0	488.8	488.8	488.8	488.8	488.8
11.5°	487.9	487.9	487.9	488.0	487.8	488.0	487.9	487.9	487.9	487.9	487.9
12°	486.9	486.9	486.9	486.9	486.8	486.9	486.9	486.9	486.9	486.9	486.9
12.5°	485.9	485.9	485.9	486.0	485.8	486.0	485.9	485.9	485.9	485.9	485.9
13°	484.8	484.8	484.8	484.8	484.7	484.8	484.8	484.8	484.8	484.8	484.8
13.5°	483.6	483.7	483.7	483.7	483.5	483.7	483.7	483.7	483.6	483.7	483.7
14°	482.5	482.6	482.6	482.6	482.3	482.6	482.6	482.6	482.5	482.6	482.6
14.5°	481.3	481.3	481.3	481.3	481.2	481.3	481.3	481.3	481.3	481.3	481.3
15°	480.0	480.0	480.0	480.1	479.9	480.1	480.0	480.0	480.0	480.0	480.0
15.5°	478.7	478.7	478.7	478.7	478.6	478.7	478.7	478.7	478.7	478.7	478.7
16°	477.3	477.4	477.4	477.4	477.2	477.4	477.4	477.4	477.3	477.4	477.4
16.5°	476.0	476.0	476.1	476.1	476.0	476.1	476.1	476.0	476.0	476.0	476.1
17°	474.6	474.6	474.7	474.6	474.5	474.6	474.7	474.6	474.6	474.6	474.7
17.5°	473.1	473.1	473.2	473.2	473.1	473.2	473.2	473.1	473.1	473.1	473.2
18°	471.6	471.6	471.6	471.6	471.5	471.6	471.6	471.6	471.6	471.6	471.6
18.5°	470.0	470.0	470.1	470.1	469.9	470.1	470.1	470.0	470.0	470.0	470.1
19°	468.4	468.4	468.5	468.5	468.3	468.5	468.5	468.4	468.4	468.4	468.5
19.5°	466.8	466.8	466.8	466.8	466.7	466.8	466.8	466.8	466.8	466.8	466.8
20°	465.1	465.1	465.1	465.1	465.0	465.1	465.1	465.1	465.1	465.1	465.1
20.5°	463.3	463.4	463.4	463.4	463.2	463.4	463.4	463.4	463.3	463.4	463.4
21°	461.6	461.6	461.6	461.6	461.5	461.6	461.6	461.6	461.6	461.6	461.6



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	455.9	456.0	456.0	456.0	455.8	456.0	456.0	456.0	455.9	456.0	456.0
23°	454.0	454.0	454.0	454.0	453.9	454.0	454.0	454.0	454.0	454.0	454.0
23.5°	452.0	452.1	452.1	452.1	451.9	452.1	452.1	452.1	452.0	452.1	452.1
24°	449.9	449.9	450.1	449.9	449.8	449.9	450.1	449.9	449.9	449.9	450.1
24.5°	447.8	447.9	448.0	447.9	447.7	447.9	448.0	447.9	447.8	447.9	448.0
25°	445.8	445.8	445.9	445.8	445.6	445.8	445.9	445.8	445.8	445.8	445.9
25.5°	443.6	443.7	443.8	443.7	443.4	443.7	443.8	443.7	443.6	443.7	443.8
26°	441.4	441.4	441.5	441.4	441.2	441.4	441.5	441.4	441.4	441.4	441.5
26.5°	439.2	439.3	439.3	439.2	439.0	439.2	439.3	439.3	439.2	439.3	439.3
27°	436.9	436.9	437.1	436.9	436.7	436.9	437.1	436.9	436.9	436.9	437.1
27.5°	434.6	434.7	434.7	434.6	434.4	434.6	434.7	434.7	434.6	434.7	434.7
28°	432.3	432.4	432.4	432.3	432.0	432.3	432.4	432.4	432.3	432.4	432.4
28.5°	429.9	429.9	430.0	429.9	429.7	429.9	430.0	429.9	429.9	429.9	430.0
29°	427.5	427.6	427.6	427.5	427.1	427.5	427.6	427.6	427.5	427.6	427.6
29.5°	425.0	425.1	425.1	425.0	424.7	425.0	425.1	425.1	425.0	425.1	425.1
30°	422.6	422.7	422.7	422.5	422.2	422.5	422.7	422.7	422.6	422.7	422.7
30.5°	420.1	420.1	420.1	420.0	419.7	420.0	420.1	420.1	420.1	420.1	420.1
31°	417.4	417.6	417.7	417.3	417.1	417.3	417.7	417.6	417.4	417.6	417.7
31.5°	414.9	415.0	415.0	414.8	414.5	414.8	415.0	415.0	414.9	415.0	415.0
32°	412.3	412.4	412.4	412.2	411.8	412.2	412.4	412.4	412.3	412.4	412.4
32.5°	409.7	409.8	409.8	409.5	409.1	409.5	409.8	409.8	409.7	409.8	409.8
33°	406.9	407.1	407.1	406.9	406.5	406.9	407.1	407.1	406.9	407.1	407.1
33.5°	404.2	404.3	404.4	404.1	403.7	404.1	404.4	404.3	404.2	404.3	404.4
34°	401.5	401.6	401.7	401.4	401.0	401.4	401.7	401.6	401.5	401.6	401.7
34.5°	398.7	398.8	398.9	398.6	398.3	398.6	398.9	398.8	398.7	398.8	398.9
35°	395.9	396.0	396.1	395.8	395.4	395.8	396.1	396.0	395.9	396.0	396.1
35.5°	393.0	393.3	393.3	392.9	392.5	392.9	393.3	393.3	393.0	393.3	393.3
36°	390.3	390.4	390.5	390.1	389.6	390.1	390.5	390.4	390.3	390.4	390.5
36.5°	387.4	387.5	387.6	387.2	386.8	387.2	387.6	387.5	387.4	387.5	387.6
37°	384.4	384.5	384.6	384.2	383.9	384.2	384.6	384.5	384.4	384.5	384.6
37.5°	381.4	381.6	381.7	381.2	380.8	381.2	381.7	381.6	381.4	381.6	381.7
38°	378.4	378.5	378.8	378.2	377.9	378.2	378.8	378.5	378.4	378.5	378.8
38.5°	375.3	375.6	375.7	375.2	374.8	375.2	375.7	375.6	375.3	375.6	375.7
39°	372.4	372.6	372.7	372.2	371.7	372.2	372.7	372.6	372.4	372.6	372.7
39.5°	369.3	369.4	369.5	369.1	368.5	369.1	369.5	369.4	369.3	369.4	369.5
40°	366.1	366.3	366.3	365.9	365.3	365.9	366.3	366.3	366.1	366.3	366.3
40.5°	362.9	363.0	363.1	362.6	362.1	362.6	363.1	363.0	362.9	363.0	363.1
41°	359.6	359.8	359.9	359.4	358.8	359.4	359.9	359.8	359.6	359.8	359.9
41.5°	356.3	356.4	356.5	356.0	355.5	356.0	356.5	356.4	356.3	356.4	356.5
42°	352.9	353.0	353.1	352.5	352.0	352.5	353.1	353.0	352.9	353.0	353.1
42.5°	349.3	349.6	349.6	349.0	348.5	349.0	349.6	349.6	349.3	349.6	349.6
43°	345.8	345.9	345.9	345.4	344.9	345.4	345.9	345.9	345.8	345.9	345.9
43.5°	342.1	342.2	342.2	341.7	341.1	341.7	342.2	342.2	342.1	342.2	342.2



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	330.3	330.3	330.2	329.6	329.1	329.6	330.2	330.3	330.3	330.3	330.2
45.5°	326.0	326.0	325.9	325.3	324.7	325.3	325.9	326.0	326.0	326.0	325.9
46°	321.6	321.6	321.4	320.8	320.1	320.8	321.4	321.6	321.6	321.6	321.4
46.5°	316.9	316.9	316.7	316.0	315.6	316.0	316.7	316.9	316.9	316.9	316.7
47°	312.0	312.0	311.7	311.1	310.6	311.1	311.7	312.0	312.0	312.0	311.7
47.5°	306.9	306.9	306.6	306.0	305.4	306.0	306.6	306.9	306.9	306.9	306.6
48°	301.6	301.6	301.4	300.7	300.3	300.7	301.4	301.6	301.6	301.6	301.4
48.5°	296.1	296.1	295.8	295.4	295.0	295.4	295.8	296.1	296.1	296.1	295.8
49°	290.2	290.2	290.1	289.8	289.6	289.8	290.1	290.2	290.2	290.2	290.1
49.5°	284.3	284.2	284.3	284.0	283.9	284.0	284.3	284.2	284.3	284.2	284.3
50°	278.0	278.2	278.4	278.2	278.0	278.2	278.4	278.2	278.0	278.2	278.4
50.5°	271.5	272.0	272.3	272.2	272.2	272.2	272.3	272.0	271.5	272.0	272.3
51°	265.4	265.6	265.9	266.2	266.4	266.2	265.9	265.6	265.4	265.6	265.9
51.5°	259.3	259.4	259.8	260.1	260.5	260.1	259.8	259.4	259.3	259.4	259.8
52°	253.2	253.4	253.9	254.3	254.8	254.3	253.9	253.4	253.2	253.4	253.9
52.5°	247.5	247.7	248.2	248.7	249.2	248.7	248.2	247.7	247.5	247.7	248.2
53°	242.0	242.2	242.8	243.2	243.6	243.2	242.8	242.2	242.0	242.2	242.8
53.5°	236.9	237.1	237.3	237.5	237.9	237.5	237.3	237.1	236.9	237.1	237.3
54°	232.1	231.9	231.9	231.8	231.8	231.8	231.9	231.9	232.1	231.9	231.9
54.5°	226.8	226.6	226.1	225.6	225.2	225.6	226.1	226.6	226.8	226.6	226.1
55°	220.8	220.4	219.8	219.0	218.4	219.0	219.8	220.4	220.8	220.4	219.8
55.5°	213.8	213.3	212.6	212.0	211.3	212.0	212.6	213.3	213.8	213.3	212.6
56°	205.9	205.6	204.9	204.3	203.6	204.3	204.9	205.6	205.9	205.6	204.9
56.5°	197.3	196.9	196.7	196.1	195.6	196.1	196.7	196.9	197.3	196.9	196.7
57°	188.2	188.0	187.9	187.4	186.7	187.4	187.9	188.0	188.2	188.0	187.9
57.5°	178.6	178.6	178.6	178.1	177.7	178.1	178.6	178.6	178.6	178.6	178.6
58°	168.9	169.0	169.1	168.8	168.4	168.8	169.1	169.0	168.9	169.0	169.1
58.5°	159.0	159.0	159.3	159.2	158.8	159.2	159.3	159.0	159.0	159.0	159.3
59°	148.9	149.1	149.4	149.5	149.4	149.5	149.4	149.1	148.9	149.1	149.4
59.5°	138.8	139.0	139.5	139.9	139.9	139.9	139.5	139.0	138.8	139.0	139.5
60°	128.5	129.0	129.6	130.4	130.3	130.4	129.6	129.0	128.5	129.0	129.6
60.5°	118.4	118.9	119.8	120.7	120.9	120.7	119.8	118.9	118.4	118.9	119.8
61°	108.6	109.2	110.1	111.2	111.5	111.2	110.1	109.2	108.6	109.2	110.1
61.5°	99.0	99.5	100.7	101.7	102.3	101.7	100.7	99.5	99.0	99.5	100.7
62°	89.4	90.2	91.4	92.6	93.5	92.6	91.4	90.2	89.4	90.2	91.4
62.5°	79.9	80.8	82.5	83.8	84.6	83.8	82.5	80.8	79.9	80.8	82.5
63°	70.9	71.8	73.7	75.1	76.1	75.1	73.7	71.8	70.9	71.8	73.7
63.5°	62.2	63.2	65.2	66.9	68.5	66.9	65.2	63.2	62.2	63.2	65.2
64°	53.9	55.0	57.0	59.3	61.1	59.3	57.0	55.0	53.9	55.0	57.0
64.5°	45.9	47.3	49.4	51.8	53.5	51.8	49.4	47.3	45.9	47.3	49.4
65°	38.5	40.3	42.3	44.5	46.0	44.5	42.3	40.3	38.5	40.3	42.3
65.5°	31.7	33.7	35.5	37.6	39.0	37.6	35.5	33.7	31.7	33.7	35.5
66°	25.4	27.8	29.2	31.3	32.6	31.3	29.2	27.8	25.4	27.8	29.2



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	9.7	13.1	14.6	16.4	17.4	16.4	14.6	13.1	9.7	13.1	14.6
68°	5.6	9.1	11.1	12.4	13.5	12.4	11.1	9.1	5.6	9.1	11.1
68.5°	2.1	6.1	8.0	9.4	10.8	9.4	8.0	6.1	2.1	6.1	8.0
69°	1.1	3.6	5.1	6.5	8.0	6.5	5.1	3.6	1.1	3.6	5.1
69.5°	0.6	1.6	2.9	4.3	5.8	4.3	2.9	1.6	0.6	1.6	2.9
70°	0.3	0.7	1.6	2.5	3.5	2.5	1.6	0.7	0.3	0.7	1.6
70.5°	0.1	0.4	1.0	1.2	1.4	1.2	1.0	0.4	0.1	0.4	1.0
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: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

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: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	499.0	499.0	499.0	499.0	499.0	499.0
0.5°	499.0	498.9	499.0	499.0	499.0	499.0
1°	498.9	498.8	498.9	499.0	499.0	499.0
1.5°	498.9	498.8	498.9	498.9	498.9	498.9
2°	498.7	498.5	498.7	498.8	498.8	498.8
2.5°	498.5	498.3	498.5	498.5	498.5	498.4
3°	498.3	498.1	498.3	498.3	498.3	498.2
3.5°	498.0	497.9	498.0	498.0	498.0	498.0
4°	497.7	497.5	497.7	497.7	497.7	497.7
4.5°	497.4	497.2	497.4	497.4	497.4	497.4
5°	496.9	496.7	496.9	496.9	496.9	496.9
5.5°	496.5	496.3	496.5	496.5	496.5	496.5
6°	496.0	495.9	496.0	496.0	496.1	496.0
6.5°	495.5	495.3	495.5	495.6	495.6	495.5
7°	494.9	494.8	494.9	494.9	494.9	494.9
7.5°	494.4	494.2	494.4	494.3	494.3	494.3
8°	493.6	493.5	493.6	493.6	493.6	493.6
8.5°	493.0	492.8	493.0	493.0	493.0	493.0
9°	492.3	492.2	492.3	492.3	492.3	492.3
9.5°	491.5	491.3	491.5	491.5	491.5	491.4
10°	490.7	490.6	490.7	490.7	490.7	490.7
10.5°	489.8	489.7	489.8	489.8	489.8	489.8
11°	489.0	488.7	489.0	488.8	488.8	488.8
11.5°	488.0	487.8	488.0	487.9	487.9	487.9
12°	486.9	486.8	486.9	486.9	486.9	486.9
12.5°	486.0	485.8	486.0	485.9	485.9	485.9
13°	484.8	484.7	484.8	484.8	484.8	484.8
13.5°	483.7	483.5	483.7	483.7	483.7	483.6
14°	482.6	482.3	482.6	482.6	482.6	482.5
14.5°	481.3	481.2	481.3	481.3	481.3	481.3
15°	480.1	479.9	480.1	480.0	480.0	480.0
15.5°	478.7	478.6	478.7	478.7	478.7	478.7
16°	477.4	477.2	477.4	477.4	477.4	477.3
16.5°	476.1	476.0	476.1	476.1	476.0	476.0
17°	474.6	474.5	474.6	474.7	474.6	474.6
17.5°	473.2	473.1	473.2	473.2	473.1	473.1
18°	471.6	471.5	471.6	471.6	471.6	471.6
18.5°	470.1	469.9	470.1	470.1	470.0	470.0
19°	468.5	468.3	468.5	468.5	468.4	468.4
19.5°	466.8	466.7	466.8	466.8	466.8	466.8
20°	465.1	465.0	465.1	465.1	465.1	465.1
20.5°	463.4	463.2	463.4	463.4	463.4	463.3
21°	461.6	461.5	461.6	461.6	461.6	461.6



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	456.0	455.8	456.0	456.0	456.0	455.9
23°	454.0	453.9	454.0	454.0	454.0	454.0
23.5°	452.1	451.9	452.1	452.1	452.1	452.0
24°	449.9	449.8	449.9	450.1	449.9	449.9
24.5°	447.9	447.7	447.9	448.0	447.9	447.8
25°	445.8	445.6	445.8	445.9	445.8	445.8
25.5°	443.7	443.4	443.7	443.8	443.7	443.6
26°	441.4	441.2	441.4	441.5	441.4	441.4
26.5°	439.2	439.0	439.2	439.3	439.3	439.2
27°	436.9	436.7	436.9	437.1	436.9	436.9
27.5°	434.6	434.4	434.6	434.7	434.7	434.6
28°	432.3	432.0	432.3	432.4	432.4	432.3
28.5°	429.9	429.7	429.9	430.0	429.9	429.9
29°	427.5	427.1	427.5	427.6	427.6	427.5
29.5°	425.0	424.7	425.0	425.1	425.1	425.0
30°	422.5	422.2	422.5	422.7	422.7	422.6
30.5°	420.0	419.7	420.0	420.1	420.1	420.1
31°	417.3	417.1	417.3	417.7	417.6	417.4
31.5°	414.8	414.5	414.8	415.0	415.0	414.9
32°	412.2	411.8	412.2	412.4	412.4	412.3
32.5°	409.5	409.1	409.5	409.8	409.8	409.7
33°	406.9	406.5	406.9	407.1	407.1	406.9
33.5°	404.1	403.7	404.1	404.4	404.3	404.2
34°	401.4	401.0	401.4	401.7	401.6	401.5
34.5°	398.6	398.3	398.6	398.9	398.8	398.7
35°	395.8	395.4	395.8	396.1	396.0	395.9
35.5°	392.9	392.5	392.9	393.3	393.3	393.0
36°	390.1	389.6	390.1	390.5	390.4	390.3
36.5°	387.2	386.8	387.2	387.6	387.5	387.4
37°	384.2	383.9	384.2	384.6	384.5	384.4
37.5°	381.2	380.8	381.2	381.7	381.6	381.4
38°	378.2	377.9	378.2	378.8	378.5	378.4
38.5°	375.2	374.8	375.2	375.7	375.6	375.3
39°	372.2	371.7	372.2	372.7	372.6	372.4
39.5°	369.1	368.5	369.1	369.5	369.4	369.3
40°	365.9	365.3	365.9	366.3	366.3	366.1
40.5°	362.6	362.1	362.6	363.1	363.0	362.9
41°	359.4	358.8	359.4	359.9	359.8	359.6
41.5°	356.0	355.5	356.0	356.5	356.4	356.3
42°	352.5	352.0	352.5	353.1	353.0	352.9
42.5°	349.0	348.5	349.0	349.6	349.6	349.3
43°	345.4	344.9	345.4	345.9	345.9	345.8
43.5°	341.7	341.1	341.7	342.2	342.2	342.1

TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	329.6	329.1	329.6	330.2	330.3	330.3
45.5°	325.3	324.7	325.3	325.9	326.0	326.0
46°	320.8	320.1	320.8	321.4	321.6	321.6
46.5°	316.0	315.6	316.0	316.7	316.9	316.9
47°	311.1	310.6	311.1	311.7	312.0	312.0
47.5°	306.0	305.4	306.0	306.6	306.9	306.9
48°	300.7	300.3	300.7	301.4	301.6	301.6
48.5°	295.4	295.0	295.4	295.8	296.1	296.1
49°	289.8	289.6	289.8	290.1	290.2	290.2
49.5°	284.0	283.9	284.0	284.3	284.2	284.3
50°	278.2	278.0	278.2	278.4	278.2	278.0
50.5°	272.2	272.2	272.2	272.3	272.0	271.5
51°	266.2	266.4	266.2	265.9	265.6	265.4
51.5°	260.1	260.5	260.1	259.8	259.4	259.3
52°	254.3	254.8	254.3	253.9	253.4	253.2
52.5°	248.7	249.2	248.7	248.2	247.7	247.5
53°	243.2	243.6	243.2	242.8	242.2	242.0
53.5°	237.5	237.9	237.5	237.3	237.1	236.9
54°	231.8	231.8	231.8	231.9	231.9	232.1
54.5°	225.6	225.2	225.6	226.1	226.6	226.8
55°	219.0	218.4	219.0	219.8	220.4	220.8
55.5°	212.0	211.3	212.0	212.6	213.3	213.8
56°	204.3	203.6	204.3	204.9	205.6	205.9
56.5°	196.1	195.6	196.1	196.7	196.9	197.3
57°	187.4	186.7	187.4	187.9	188.0	188.2
57.5°	178.1	177.7	178.1	178.6	178.6	178.6
58°	168.8	168.4	168.8	169.1	169.0	168.9
58.5°	159.2	158.8	159.2	159.3	159.0	159.0
59°	149.5	149.4	149.5	149.4	149.1	148.9
59.5°	139.9	139.9	139.9	139.5	139.0	138.8
60°	130.4	130.3	130.4	129.6	129.0	128.5
60.5°	120.7	120.9	120.7	119.8	118.9	118.4
61°	111.2	111.5	111.2	110.1	109.2	108.6
61.5°	101.7	102.3	101.7	100.7	99.5	99.0
62°	92.6	93.5	92.6	91.4	90.2	89.4
62.5°	83.8	84.6	83.8	82.5	80.8	79.9
63°	75.1	76.1	75.1	73.7	71.8	70.9
63.5°	66.9	68.5	66.9	65.2	63.2	62.2
64°	59.3	61.1	59.3	57.0	55.0	53.9
64.5°	51.8	53.5	51.8	49.4	47.3	45.9
65°	44.5	46.0	44.5	42.3	40.3	38.5
65.5°	37.6	39.0	37.6	35.5	33.7	31.7
66°	31.3	32.6	31.3	29.2	27.8	25.4



TEST NUMBER: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	16.4	17.4	16.4	14.6	13.1	9.7
68°	12.4	13.5	12.4	11.1	9.1	5.6
68.5°	9.4	10.8	9.4	8.0	6.1	2.1
69°	6.5	8.0	6.5	5.1	3.6	1.1
69.5°	4.3	5.8	4.3	2.9	1.6	0.6
70°	2.5	3.5	2.5	1.6	0.7	0.3
70.5°	1.2	1.4	1.2	1.0	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: P775834

CATALOG NUMBER: HCDJBL510CSD-HCD81TRMB-1000lm-5000K

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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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

Scaled Data Report



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

Scaled Data Report





21.5°	459.8	459.8	459.8	459.8	459.5	459.8	459.8	459.8	459.8	459.8	459.8
22°	457.8	457.8	457.9	457.9	457.7	457.9	457.9	457.8	457.8	457.8	457.9



44°	338.3	338.4	338.3	337.7	337.3	337.7	338.3	338.4	338.3	338.4	338.3
44.5°	334.3	334.4	334.4	333.8	333.1	333.8	334.4	334.4	334.3	334.4	334.4



66.5°	20.0	22.5	23.7	25.7	26.9	25.7	23.7	22.5	20.0	22.5	23.7
67°	14.8	17.3	19.0	20.7	21.6	20.7	19.0	17.3	14.8	17.3	19.0



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

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

Scaled Data Report





21.5°	459.8	459.5	459.8	459.8	459.8	459.8
22°	457.9	457.7	457.9	457.9	457.8	457.8



44°	337.7	337.3	337.7	338.3	338.4	338.3
44.5°	333.8	333.1	333.8	334.4	334.4	334.3



66.5°	25.7	26.9	25.7	23.7	22.5	20.0
67°	20.7	21.6	20.7	19.0	17.3	14.8

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

Scaled Data Report



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

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

Scaled Data Report



(END OF REPORT)