

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: P775700

Luminaire Tested: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775700
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B009)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K
Description: 4 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 882.0 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.14 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

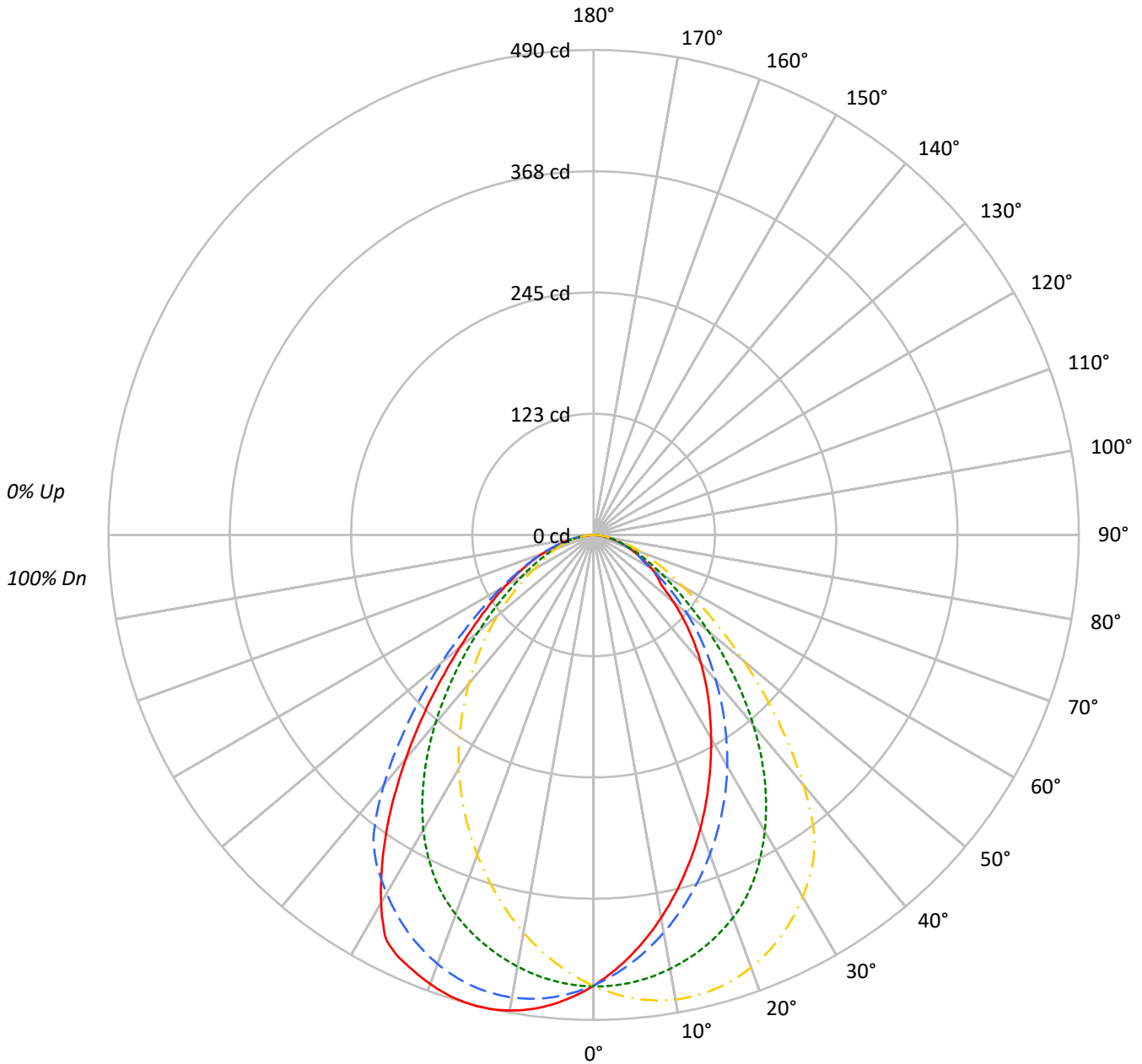
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58																			
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	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	69	57	50	44	56	49	44	54	48	44	53	48	43	42																			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	38	34	57	45	38	34	44	38	33	43	38	33	43	37	33	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	57325	57325	57325	57325
5°	53930	57316	60159	57165
10°	50184	56893	62362	56599
15°	46227	56168	63855	55738
20°	42240	55111	64673	54615
25°	38242	53239	65153	52864
30°	34484	50237	62385	49990
35°	31003	46259	56015	45921
40°	27649	41252	48448	40874
45°	24205	35525	40971	35311
50°	20558	29564	34517	29760
55°	17772	24245	29533	24881
60°	16889	20136	25749	21067
65°	15128	16974	22781	18165
70°	13541	14608	20054	15933
75°	11962	12594	17213	14101
80°	9422	10509	13335	12321
85°	4621	7653	6353	10108

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 225°
 Vertical Angle: 45°
 Luminance: 46702 cd/sqm



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.8	4.9
10°-20°	119.8	13.6
20°-30°	173.0	19.6
30°-40°	186.1	21.1
40°-50°	154.5	17.5
50°-60°	103.9	11.8
60°-70°	62.9	7.1
70°-80°	31.8	3.6
80°-90°	7.1	0.8
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°	335.6	38.1
0°-40°	521.8	59.2
0°-60°	780.2	88.5
0°-90°	882.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	882.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	456	456	456	456	456	
5°	427	454	476	452	427	40
15°	355	431	490	428	355	99
25°	275	383	469	381	275	126
35°	202	301	365	299	202	126
45°	136	200	230	198	136	105
55°	81	110	135	113	81	74
65°	51	57	76	61	51	51
75°	25	26	35	29	25	26
85°	3	5	4	7	3	5
90°	0	0	0	0	0	



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5
0.5°	452.8	452.8	453.3	454.3	456.2	456.9	457.5	457.8	457.8	457.4	456.8
1°	450.2	450.4	451.5	453.3	456.2	457.8	459.2	460.0	460.2	459.6	458.4
1.5°	447.5	447.9	449.6	452.2	456.1	458.6	460.8	462.1	462.5	461.6	459.9
2°	444.8	445.4	447.6	451.0	455.9	459.4	462.3	464.2	464.7	463.6	461.5
2.5°	441.9	442.7	445.5	449.8	455.7	460.1	463.8	466.1	466.8	465.6	462.9
3°	439.1	440.1	443.5	448.5	455.4	460.8	465.2	468.0	468.9	467.4	464.2
3.5°	436.1	437.3	441.3	447.2	455.1	461.3	466.5	469.9	470.8	469.2	465.5
4°	433.1	434.6	439.0	445.8	454.6	461.9	467.8	471.6	472.7	470.9	466.7
4.5°	430.0	431.6	436.7	444.3	454.2	462.3	469.0	473.2	474.5	472.5	467.7
5°	426.9	428.8	434.4	442.8	453.7	462.7	470.1	474.8	476.2	474.0	468.8
5.5°	423.6	425.8	431.9	441.2	453.1	463.0	471.1	476.3	477.8	475.4	469.7
6°	420.4	422.7	429.5	439.6	452.5	463.3	472.0	477.7	479.3	476.8	470.6
6.5°	417.2	419.5	427.0	437.9	451.8	463.4	472.9	478.9	480.7	478.0	471.4
7°	413.8	416.5	424.4	436.3	451.0	463.5	473.7	480.1	482.1	479.1	472.1
7.5°	410.3	413.2	421.7	434.4	450.2	463.5	474.4	481.2	483.3	480.2	472.7
8°	407.0	410.0	419.1	432.6	449.3	463.5	475.0	482.3	484.4	481.2	473.2
8.5°	403.5	406.7	416.4	430.7	448.3	463.4	475.5	483.2	485.5	482.0	473.6
9°	399.9	403.4	413.6	428.8	447.3	463.2	476.0	484.0	486.4	482.8	474.0
9.5°	396.3	399.9	410.7	426.7	446.3	462.9	476.4	484.7	487.2	483.5	474.3
10°	392.7	396.5	407.9	424.7	445.2	462.6	476.7	485.4	488.0	484.1	474.5
10.5°	389.0	393.1	405.0	422.6	444.0	462.2	476.9	486.0	488.6	484.6	474.7
11°	385.4	389.6	402.1	420.5	442.8	461.8	477.0	486.4	489.2	485.0	474.7
11.5°	381.7	386.1	399.1	418.2	441.5	461.3	477.0	486.8	489.6	485.3	474.6
12°	377.7	382.6	396.0	416.0	440.2	460.7	477.0	487.1	490.0	485.5	474.5
12.5°	374.0	378.8	393.0	413.7	438.8	460.1	476.9	487.2	490.3	485.7	474.3
13°	370.3	375.2	389.9	411.4	437.4	459.4	476.6	487.3	490.4	485.7	474.0
13.5°	366.4	371.6	386.8	409.1	435.9	458.6	476.3	487.3	490.5	485.6	473.6
14°	362.6	368.0	383.5	406.7	434.4	457.7	475.9	487.2	490.5	485.4	473.1
14.5°	358.7	364.3	380.2	404.2	432.8	456.9	475.5	487.0	490.3	485.1	472.5
15°	354.8	360.4	377.0	401.7	431.1	455.9	474.9	486.7	490.1	484.8	471.9
15.5°	350.9	356.7	373.8	399.2	429.4	454.9	474.3	486.3	489.8	484.4	471.2
16°	347.0	353.0	370.5	396.7	427.7	453.7	473.6	485.8	489.4	483.9	470.4
16.5°	343.2	349.2	367.1	394.1	425.9	452.6	472.8	485.3	488.9	483.3	469.5
17°	339.2	345.5	363.8	391.4	424.0	451.3	472.0	484.7	488.3	482.5	468.6
17.5°	335.3	341.5	360.4	388.7	422.0	450.0	471.0	483.9	487.6	481.7	467.5
18°	331.3	337.7	357.1	386.0	420.0	448.5	470.0	483.0	486.8	480.8	466.4
18.5°	327.4	333.9	353.7	383.2	418.0	447.1	468.9	482.1	485.9	479.8	465.2
19°	323.4	330.0	350.2	380.2	415.9	445.6	467.7	481.1	485.0	478.8	464.0
19.5°	319.3	326.1	346.8	377.4	413.7	443.9	466.4	480.0	484.0	477.6	462.7
20°	315.4	322.3	343.2	374.5	411.5	442.3	465.1	478.8	482.9	476.4	461.3
20.5°	311.4	318.4	339.8	371.5	409.2	440.5	463.7	477.5	481.7	475.1	459.7
21°	307.4	314.5	336.3	368.5	406.8	438.7	462.2	476.2	480.5	473.7	458.2



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	295.4	302.8	325.6	359.3	398.9	432.8	457.3	471.7	476.4	469.1	453.0
23°	291.3	298.8	321.9	356.0	396.1	430.5	455.5	470.1	475.0	467.5	451.2
23.5°	287.4	295.0	318.4	352.8	393.0	428.2	453.6	468.4	473.5	465.8	449.3
24°	283.4	291.0	314.7	349.2	389.9	425.7	451.5	466.8	472.1	464.1	447.3
24.5°	279.3	287.1	311.1	345.8	386.7	423.0	449.5	465.0	470.7	462.2	445.2
25°	275.4	283.2	307.3	342.2	383.4	420.2	447.4	463.2	469.2	460.4	443.1
25.5°	271.5	279.2	303.7	338.6	380.0	417.3	445.3	461.5	467.2	458.6	440.8
26°	267.6	275.3	300.0	334.8	376.5	414.4	443.0	459.8	465.0	456.9	438.6
26.5°	263.7	271.5	296.3	331.2	372.9	411.2	440.7	458.0	462.7	455.0	436.2
27°	259.8	267.5	292.6	327.4	369.2	407.9	438.3	456.1	460.3	453.1	433.8
27.5°	256.0	263.7	288.9	323.6	365.4	404.6	435.9	453.6	456.5	450.6	431.4
28°	252.1	259.8	285.1	319.7	361.6	401.1	433.4	451.1	451.3	448.0	428.9
28.5°	248.4	256.0	281.4	315.8	357.7	397.5	430.8	448.6	446.0	445.4	426.3
29°	244.7	252.1	277.5	311.8	353.8	393.8	428.1	445.8	441.1	442.6	423.6
29.5°	240.9	248.5	273.7	307.9	349.7	389.9	425.3	441.5	435.2	438.3	420.9
30°	237.3	244.8	269.8	303.8	345.7	385.9	422.5	436.1	429.3	433.1	418.2
30.5°	233.6	241.0	265.9	299.8	341.4	382.0	419.5	430.9	423.4	427.8	415.4
31°	230.0	237.0	262.0	295.7	337.3	377.9	416.4	425.9	417.4	422.7	412.6
31.5°	226.3	233.6	258.0	291.6	332.9	373.6	413.2	420.0	410.8	417.0	409.7
32°	222.7	229.9	254.1	287.5	328.6	369.4	410.1	414.1	404.5	411.2	406.8
32.5°	219.2	226.3	250.2	283.4	324.2	365.0	407.0	408.1	398.2	405.5	403.9
33°	215.7	222.7	246.3	279.2	319.7	360.6	403.7	402.3	391.6	399.5	400.9
33.5°	212.2	219.2	242.4	275.1	315.0	356.1	400.3	396.0	384.9	393.5	397.8
34°	208.8	215.7	238.4	270.8	310.6	351.5	396.7	389.8	378.0	387.1	394.3
34.5°	205.2	212.1	234.4	266.6	305.8	346.6	392.7	383.3	371.3	380.9	390.5
35°	201.8	208.4	230.5	262.3	301.1	342.0	388.7	377.0	364.6	374.6	386.5
35.5°	198.4	205.2	226.5	258.1	296.3	337.0	384.4	370.4	357.7	368.4	382.6
36°	195.1	201.7	222.7	253.8	291.3	332.1	379.9	363.9	350.7	361.9	378.4
36.5°	191.7	198.3	218.7	249.6	286.4	327.1	374.5	357.2	344.0	355.4	373.4
37°	188.3	194.9	214.9	245.3	281.6	321.9	368.2	350.7	337.0	349.1	367.3
37.5°	184.9	191.4	211.0	240.9	276.5	316.6	361.9	344.0	329.9	342.6	361.4
38°	181.5	188.0	207.2	236.6	271.4	311.3	355.8	337.3	322.7	336.0	355.4
38.5°	178.2	184.6	203.5	232.2	266.3	306.0	349.5	330.3	316.1	329.3	349.4
39°	175.0	181.3	199.7	227.8	261.3	300.6	342.8	324.0	309.2	323.0	342.8
39.5°	171.6	178.0	195.9	223.4	256.2	295.1	336.1	317.1	302.1	316.5	336.3
40°	168.3	174.5	192.2	219.0	251.1	289.5	329.4	310.2	294.9	309.8	329.6
40.5°	165.0	171.2	188.5	214.7	245.8	284.0	322.7	303.4	288.7	303.0	323.0
41°	161.7	167.9	184.9	210.3	240.7	278.4	315.8	297.1	282.0	296.9	316.4
41.5°	158.5	164.6	181.2	206.0	235.5	272.8	309.0	290.4	274.9	290.4	309.4
42°	155.2	161.3	177.6	201.6	230.4	267.2	302.1	283.4	268.4	283.6	302.7
42.5°	152.0	158.0	174.0	197.4	225.2	261.4	295.4	277.1	262.2	277.4	295.8
43°	148.8	154.7	170.4	193.1	220.0	255.8	288.6	270.8	255.7	271.2	289.2
43.5°	145.5	151.5	166.8	188.8	214.8	250.1	281.8	264.0	248.5	264.7	282.3



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	136.0	141.8	156.3	176.1	199.6	233.0	261.5	245.3	230.2	246.5	262.4
45.5°	132.8	138.6	152.8	171.9	194.5	227.3	254.6	238.4	224.2	239.9	255.8
46°	129.8	135.5	149.4	167.8	189.5	221.7	247.9	232.5	218.9	233.7	249.2
46.5°	126.5	132.3	145.9	163.6	184.5	216.0	241.5	226.8	212.9	228.5	243.0
47°	123.4	129.1	142.5	159.6	179.5	210.4	235.0	220.5	206.4	222.5	236.5
47.5°	120.3	125.9	139.0	155.5	174.6	204.8	228.3	213.9	201.8	216.0	230.2
48°	117.3	122.8	135.8	151.5	169.7	199.3	221.7	209.0	196.8	210.9	223.8
48.5°	114.1	119.6	132.4	147.5	165.0	193.9	215.8	203.4	190.9	205.8	218.1
49°	111.1	116.6	129.1	143.7	160.3	188.5	209.7	197.1	185.7	199.9	212.0
49.5°	108.1	113.5	125.8	139.8	155.7	183.2	203.4	191.6	181.3	194.1	206.0
50°	105.0	110.4	122.5	135.9	151.0	177.7	197.3	186.7	176.3	189.5	200.0
50.5°	101.9	107.3	119.3	132.1	146.6	172.6	191.8	181.2	170.7	184.4	194.8
51°	99.0	104.3	116.1	128.5	142.2	167.3	185.9	175.3	166.9	178.3	189.1
51.5°	96.0	101.3	112.9	124.8	138.0	162.4	180.1	171.2	162.8	174.2	183.5
52°	93.1	98.3	109.8	121.2	133.7	157.2	175.0	166.4	157.5	169.6	178.1
52.5°	90.2	95.3	106.7	117.7	129.5	152.4	169.7	160.7	153.7	164.4	173.5
53°	87.5	92.3	103.7	114.2	125.5	147.4	164.1	156.6	150.0	159.5	167.9
53.5°	84.9	89.4	100.6	110.8	121.7	142.7	159.0	152.5	145.7	155.7	162.7
54°	83.3	86.6	97.6	107.4	117.8	137.9	154.2	147.7	141.5	151.1	158.1
54.5°	82.2	83.8	94.7	104.1	114.1	133.3	149.3	143.3	138.3	146.2	153.6
55°	81.0	81.2	91.8	101.0	110.5	128.9	144.3	139.7	134.6	142.8	148.6
55.5°	79.9	78.7	89.0	97.9	107.0	124.4	140.1	135.6	130.5	138.9	144.1
56°	78.6	77.4	86.1	94.9	103.6	120.2	135.5	131.3	127.6	134.2	139.9
56.5°	77.3	76.3	83.3	91.9	100.3	116.2	130.9	128.0	124.3	130.9	135.5
57°	76.0	75.0	80.6	89.0	97.0	112.2	126.9	124.3	120.5	127.5	131.1
57.5°	74.6	73.8	77.9	86.1	94.0	108.3	122.9	120.3	117.8	123.4	127.5
58°	73.3	72.5	75.3	83.4	90.9	104.7	118.6	117.4	114.8	120.1	123.4
58.5°	71.8	71.3	72.7	80.8	88.1	101.1	115.0	114.1	111.3	117.1	119.4
59°	70.2	69.9	70.2	78.2	85.4	97.7	111.3	110.3	108.4	113.5	115.9
59.5°	68.7	68.6	67.7	75.5	82.7	94.3	107.5	107.6	105.3	110.3	112.3
60°	67.1	67.2	65.4	73.1	80.0	91.1	104.1	104.6	102.3	107.5	108.5
60.5°	65.4	65.7	63.0	70.6	77.3	88.0	100.8	101.2	99.5	104.1	105.3
61°	63.8	64.2	60.8	68.4	74.5	85.1	97.3	98.6	96.6	101.1	102.1
61.5°	62.2	62.7	58.9	66.1	72.1	82.3	94.3	95.6	93.9	98.3	98.7
62°	60.5	61.1	57.0	63.9	69.8	79.4	91.3	92.5	91.2	95.2	95.7
62.5°	58.9	59.5	55.9	61.8	67.5	76.5	88.1	89.9	88.7	92.5	92.8
63°	57.3	58.0	54.7	59.7	65.2	73.9	85.4	87.2	86.3	89.9	89.6
63.5°	55.7	56.4	53.6	57.7	63.1	71.4	82.7	84.5	83.8	86.9	87.0
64°	54.0	54.9	52.5	55.8	61.0	69.0	80.1	81.9	81.4	84.4	84.4
64.5°	52.4	53.3	51.3	53.8	58.9	66.6	77.4	79.3	78.9	81.9	81.7
65°	50.8	51.8	50.1	52.0	57.0	64.4	74.6	76.7	76.5	79.4	79.1
65.5°	49.2	50.2	48.9	50.3	55.0	62.2	72.1	74.5	74.0	76.9	76.4
66°	47.6	48.7	47.7	48.5	53.1	60.0	69.7	71.9	71.7	74.4	73.8



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	43.4	44.1	43.8	43.6	47.8	53.9	62.6	65.2	65.0	67.5	66.7
68°	42.0	42.7	42.4	42.1	46.1	52.0	60.4	63.0	62.9	65.2	64.4
68.5°	40.7	41.3	41.1	40.6	44.4	50.2	58.2	60.8	60.7	63.0	62.1
69°	39.4	39.9	39.9	39.1	42.8	48.4	56.0	58.7	58.7	60.8	59.9
69.5°	38.1	38.6	38.6	37.7	41.2	46.5	54.0	56.6	56.6	58.7	57.7
70°	36.8	37.3	37.2	36.4	39.7	44.8	51.9	54.5	54.5	56.6	55.7
70.5°	35.6	35.8	36.0	35.1	38.1	43.1	49.9	52.6	52.6	54.5	53.6
71°	34.4	34.7	34.8	33.9	36.7	41.5	48.0	50.5	50.6	52.6	51.6
71.5°	33.2	33.5	33.5	32.6	35.2	39.8	46.0	48.6	48.6	50.5	49.6
72°	31.9	32.3	32.2	31.4	33.8	38.2	44.1	46.6	46.6	48.5	47.7
72.5°	30.7	31.1	31.0	30.1	32.4	36.7	42.3	44.7	44.7	46.5	45.7
73°	29.5	29.9	29.7	29.0	31.1	35.1	40.5	42.9	42.8	44.7	43.9
73.5°	28.2	28.7	28.5	27.9	29.7	33.6	38.7	41.0	40.9	42.7	42.0
74°	27.0	27.4	27.2	26.9	28.4	32.2	36.9	39.1	39.0	40.8	40.2
74.5°	25.8	26.2	26.1	26.0	27.1	30.7	35.2	37.3	37.2	39.0	38.4
75°	24.6	25.0	25.0	25.0	25.9	29.3	33.5	35.6	35.4	37.2	36.7
75.5°	23.4	23.8	23.8	24.0	24.6	28.0	31.8	33.8	33.6	35.3	34.9
76°	22.2	22.6	22.6	22.9	23.4	26.6	30.3	32.0	31.8	33.6	33.2
76.5°	21.0	21.4	21.5	21.9	22.2	25.2	28.6	30.2	30.0	31.8	31.5
77°	19.9	20.2	20.4	20.9	21.1	23.9	27.1	28.6	28.4	30.1	29.9
77.5°	18.7	19.0	19.3	19.8	19.9	22.6	25.5	26.9	26.6	28.3	28.3
78°	17.6	17.8	18.2	18.8	18.8	21.3	24.0	25.3	24.9	26.7	26.7
78.5°	16.4	16.7	17.1	17.8	17.7	20.0	22.5	23.6	23.3	25.0	25.2
79°	15.3	15.5	16.1	16.7	16.6	18.8	21.1	22.0	21.6	23.3	23.6
79.5°	14.1	14.3	15.0	15.7	15.6	17.6	19.7	20.3	20.0	21.7	22.1
80°	13.0	13.1	13.9	14.7	14.5	16.4	18.3	18.7	18.4	20.1	20.7
80.5°	11.9	12.0	12.9	13.7	13.5	15.2	16.9	17.2	16.8	18.5	19.2
81°	10.8	10.8	11.9	12.7	12.5	14.1	15.6	15.6	15.2	16.9	17.8
81.5°	9.7	9.7	10.9	11.7	11.6	13.0	14.3	14.1	13.7	15.4	16.5
82°	8.6	8.6	10.0	10.8	10.6	11.9	13.0	12.8	12.2	13.9	15.1
82.5°	7.5	7.7	9.0	9.8	9.7	10.9	11.8	11.4	10.8	12.5	13.9
83°	6.5	6.7	8.1	8.9	8.8	9.8	10.7	10.2	9.4	11.1	12.6
83.5°	5.4	5.8	7.3	8.0	7.9	8.9	9.6	9.1	8.0	10.0	11.4
84°	4.4	5.0	6.4	7.0	7.0	7.9	8.6	7.9	6.6	8.8	10.3
84.5°	3.6	4.2	5.6	6.1	6.1	6.9	7.5	6.7	5.2	7.7	9.3
85°	3.2	3.6	4.8	5.2	5.3	5.9	6.5	5.5	4.4	6.6	8.2
85.5°	2.7	3.1	4.0	4.3	4.4	4.9	5.4	4.7	3.8	5.4	7.2
86°	2.2	2.5	3.3	3.4	3.6	4.0	4.5	3.9	3.2	4.6	6.1
86.5°	1.8	2.0	2.5	2.6	2.8	3.1	3.5	3.2	2.7	3.9	5.1
87°	1.3	1.4	1.8	1.8	2.0	2.2	2.6	2.4	2.1	3.2	4.1
87.5°	0.9	0.9	1.0	1.1	1.2	1.4	1.7	1.7	1.6	2.4	3.2
88°	0.5	0.4	0.4	0.3	0.5	0.7	0.9	1.1	1.1	1.7	2.3
88.5°	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	1.0	1.4



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	455.5	455.5	455.5	455.5	455.5	455.5
0.5°	456.2	456.0	454.9	453.9	453.2	452.8
1°	457.0	455.9	453.8	452.0	450.8	450.2
1.5°	457.8	455.7	452.7	450.0	448.3	447.5
2°	458.5	455.4	451.4	448.1	445.7	444.8
2.5°	459.1	455.1	450.1	445.9	443.0	441.9
3°	459.7	454.7	448.8	443.8	440.4	439.1
3.5°	460.2	454.2	447.4	441.6	437.7	436.1
4°	460.6	453.7	445.9	439.4	434.8	433.1
4.5°	460.9	453.1	444.4	436.9	431.9	430.0
5°	461.2	452.5	442.9	434.6	428.9	426.9
5.5°	461.4	451.7	441.3	432.1	426.0	423.6
6°	461.6	451.0	439.6	429.6	422.9	420.4
6.5°	461.7	450.2	437.8	427.0	419.8	417.2
7°	461.7	449.3	436.0	424.6	416.7	413.8
7.5°	461.6	448.4	434.2	421.9	413.5	410.3
8°	461.5	447.4	432.3	419.2	410.2	407.0
8.5°	461.3	446.3	430.4	416.5	406.9	403.5
9°	461.0	445.2	428.4	413.7	403.5	399.9
9.5°	460.7	444.1	426.3	410.8	400.2	396.3
10°	460.3	442.9	424.2	407.9	396.8	392.7
10.5°	459.8	441.6	422.1	405.1	393.4	389.0
11°	459.3	440.3	419.9	402.1	389.9	385.4
11.5°	458.7	438.9	417.7	399.1	386.3	381.7
12°	458.0	437.4	415.4	396.1	382.8	377.7
12.5°	457.3	436.0	413.1	393.0	379.1	374.0
13°	456.5	434.5	410.8	389.9	375.5	370.3
13.5°	455.5	432.9	408.4	386.8	371.9	366.4
14°	454.7	431.3	406.1	383.7	368.2	362.6
14.5°	453.7	429.6	403.6	380.4	364.5	358.7
15°	452.6	427.8	401.1	377.1	360.8	354.8
15.5°	451.5	426.1	398.6	373.9	357.0	350.9
16°	450.3	424.3	396.1	370.6	353.3	347.0
16.5°	449.1	422.4	393.5	367.4	349.6	343.2
17°	447.7	420.5	390.9	364.1	345.8	339.2
17.5°	446.3	418.5	388.2	360.7	342.0	335.3
18°	444.9	416.5	385.6	357.3	338.2	331.3
18.5°	443.4	414.4	382.8	354.0	334.3	327.4
19°	441.8	412.2	379.9	350.5	330.5	323.4
19.5°	440.2	410.1	377.1	347.2	326.8	319.3
20°	438.5	407.8	374.3	343.8	322.9	315.4
20.5°	436.6	405.5	371.4	340.3	319.1	311.4
21°	434.8	403.1	368.4	336.8	315.2	307.4

TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	428.8	395.6	359.4	326.4	303.6	295.4
23°	426.7	392.9	356.2	322.9	299.6	291.3
23.5°	424.4	390.1	353.2	319.4	295.9	287.4
24°	422.1	387.0	350.0	315.8	292.0	283.4
24.5°	419.7	384.1	346.7	312.3	288.1	279.3
25°	417.2	380.7	343.3	308.7	284.1	275.4
25.5°	414.6	377.5	340.0	305.1	280.4	271.5
26°	411.8	374.0	336.5	301.5	276.5	267.6
26.5°	408.9	370.6	332.9	297.9	272.6	263.7
27°	405.9	367.2	329.3	294.3	268.8	259.8
27.5°	402.7	363.5	325.6	290.6	265.0	256.0
28°	399.3	359.6	321.8	286.9	261.1	252.1
28.5°	395.9	356.0	318.1	283.3	257.3	248.4
29°	392.4	352.1	314.3	279.7	253.6	244.7
29.5°	388.7	348.1	310.5	276.0	249.9	240.9
30°	385.1	344.0	306.5	272.2	246.2	237.3
30.5°	381.3	339.8	302.7	268.5	242.5	233.6
31°	377.2	335.5	298.6	264.7	238.8	230.0
31.5°	373.0	331.1	294.6	260.9	235.1	226.3
32°	368.8	326.8	290.5	257.2	231.6	222.7
32.5°	364.5	322.3	286.5	253.3	227.9	219.2
33°	360.0	317.6	282.3	249.5	224.3	215.7
33.5°	355.5	313.0	278.1	245.7	220.8	212.2
34°	350.7	308.4	273.9	241.8	217.3	208.8
34.5°	346.0	303.6	269.7	237.9	213.9	205.2
35°	341.2	298.9	265.4	234.0	210.4	201.8
35.5°	336.3	293.9	261.2	230.2	207.0	198.4
36°	331.3	289.2	256.9	226.4	203.5	195.1
36.5°	326.1	284.3	252.6	222.6	200.2	191.7
37°	321.0	279.2	248.3	218.8	196.8	188.3
37.5°	315.8	274.3	244.0	214.9	193.5	184.9
38°	310.5	269.1	239.7	211.1	190.0	181.5
38.5°	305.1	264.1	235.3	207.4	186.7	178.2
39°	299.8	259.0	231.0	203.7	183.5	175.0
39.5°	294.4	254.0	226.6	200.1	180.2	171.6
40°	288.9	248.8	222.3	196.3	176.7	168.3
40.5°	283.3	243.7	217.9	192.6	173.5	165.0
41°	277.7	238.6	213.6	189.0	170.3	161.7
41.5°	272.2	233.5	209.2	185.3	166.9	158.5
42°	266.5	228.4	204.9	181.7	163.7	155.2
42.5°	261.1	223.3	200.6	178.1	160.4	152.0
43°	255.4	218.2	196.4	174.5	157.3	148.8
43.5°	249.7	213.2	192.1	170.9	153.9	145.5



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	233.1	198.4	179.6	160.4	144.5	136.0
45.5°	227.5	193.5	175.4	157.0	141.2	132.8
46°	221.9	188.7	171.5	153.6	138.2	129.8
46.5°	216.5	183.9	167.3	150.1	135.0	126.5
47°	211.0	179.2	163.3	146.7	131.9	123.4
47.5°	205.7	174.5	159.3	143.3	128.7	120.3
48°	200.3	169.9	155.5	140.0	125.7	117.3
48.5°	195.1	165.3	151.6	136.7	122.6	114.1
49°	189.8	160.9	147.7	133.4	119.5	111.1
49.5°	184.7	156.5	143.9	130.1	116.4	108.1
50°	179.5	152.0	140.3	126.8	113.4	105.0
50.5°	174.5	147.8	136.5	123.6	110.4	101.9
51°	169.6	143.6	132.9	120.4	107.3	99.0
51.5°	164.8	139.5	129.3	117.3	104.3	96.0
52°	159.9	135.5	125.8	114.1	101.4	93.1
52.5°	155.0	131.5	122.3	111.1	98.5	90.2
53°	150.3	127.7	119.0	108.0	95.5	87.5
53.5°	145.8	124.0	115.5	105.0	92.5	84.9
54°	141.2	120.3	112.2	102.0	89.7	83.3
54.5°	136.9	116.8	109.1	99.1	86.9	82.2
55°	132.7	113.4	105.9	96.2	84.2	81.0
55.5°	128.5	110.0	102.9	93.4	81.5	79.9
56°	124.5	106.8	99.8	90.6	79.0	78.6
56.5°	120.6	103.6	96.9	87.8	77.6	77.3
57°	116.9	100.5	94.0	85.1	76.5	76.0
57.5°	113.2	97.5	91.3	82.4	75.2	74.6
58°	109.7	94.6	88.6	79.8	74.0	73.3
58.5°	106.3	91.8	85.9	77.3	72.7	71.8
59°	102.9	89.1	83.3	74.7	71.4	70.2
59.5°	99.7	86.4	80.8	72.2	70.2	68.7
60°	96.6	83.7	78.3	69.8	68.8	67.1
60.5°	93.6	81.2	75.8	67.5	67.4	65.4
61°	90.7	78.7	73.4	65.2	66.0	63.8
61.5°	87.8	76.4	71.2	63.1	64.5	62.2
62°	85.2	73.9	69.0	61.0	62.9	60.5
62.5°	82.6	71.6	66.9	59.0	61.4	58.9
63°	80.0	69.4	64.7	57.2	59.9	57.3
63.5°	77.4	67.2	62.7	55.8	58.4	55.7
64°	74.7	65.0	60.6	54.7	56.8	54.0
64.5°	72.2	63.0	58.7	53.6	55.3	52.4
65°	69.9	61.0	56.8	52.5	53.8	50.8
65.5°	67.6	59.1	55.0	51.3	52.3	49.2
66°	65.4	57.1	53.2	50.1	50.7	47.6



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	59.1	51.7	48.1	46.5	46.2	43.4
68°	57.0	49.9	46.5	45.2	44.7	42.0
68.5°	55.1	48.2	45.0	44.0	43.3	40.7
69°	53.2	46.5	43.4	42.7	41.9	39.4
69.5°	51.3	44.9	41.9	41.4	40.5	38.1
70°	49.5	43.3	40.5	40.1	39.2	36.8
70.5°	47.7	41.8	39.1	38.8	37.9	35.6
71°	46.0	40.2	37.6	37.5	36.6	34.4
71.5°	44.2	38.7	36.4	36.2	35.4	33.2
72°	42.6	37.2	35.1	35.0	34.1	31.9
72.5°	40.9	36.0	33.8	33.7	32.9	30.7
73°	39.3	34.6	32.6	32.5	31.6	29.5
73.5°	37.7	33.2	31.3	31.2	30.4	28.2
74°	36.2	31.7	30.1	30.0	29.1	27.0
74.5°	34.6	30.3	28.9	28.8	27.9	25.8
75°	33.1	29.0	27.8	27.6	26.6	24.6
75.5°	31.7	27.7	26.7	26.5	25.4	23.4
76°	30.2	26.4	25.7	25.3	24.1	22.2
76.5°	28.8	25.2	24.7	24.1	22.9	21.0
77°	27.4	23.9	23.7	23.0	21.7	19.9
77.5°	26.0	22.7	22.7	21.8	20.5	18.7
78°	24.7	21.5	21.6	20.7	19.3	17.6
78.5°	23.3	20.4	20.6	19.6	18.1	16.4
79°	22.0	19.2	19.5	18.5	16.9	15.3
79.5°	20.7	18.1	18.5	17.4	15.7	14.1
80°	19.4	17.0	17.4	16.3	14.5	13.0
80.5°	18.2	15.9	16.4	15.2	13.4	11.9
81°	17.0	14.8	15.3	14.2	12.2	10.8
81.5°	15.8	13.8	14.3	13.1	11.1	9.7
82°	14.6	12.8	13.3	12.1	10.1	8.6
82.5°	13.5	11.8	12.3	11.1	9.0	7.5
83°	12.4	10.8	11.3	10.2	8.0	6.5
83.5°	11.3	9.8	10.3	9.2	7.0	5.4
84°	10.2	8.9	9.4	8.3	6.1	4.4
84.5°	9.2	7.9	8.4	7.4	5.3	3.6
85°	8.2	7.0	7.4	6.5	4.5	3.2
85.5°	7.2	6.1	6.5	5.6	3.9	2.7
86°	6.2	5.3	5.5	4.8	3.3	2.2
86.5°	5.1	4.4	4.6	3.9	2.7	1.8
87°	4.2	3.6	3.7	3.1	2.1	1.3
87.5°	3.3	2.8	2.8	2.4	1.5	0.9
88°	2.4	2.0	2.0	1.6	1.0	0.5
88.5°	1.5	1.2	1.2	0.8	0.5	0.2



TEST NUMBER: P775700

CATALOG NUMBER: HCDJBL510CSD-HCD4TQSH-HCD4TSQLWW-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.1	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°	303.3	310.6	332.7	365.5	404.3	436.8	460.6	474.7	479.2	472.2	456.5
22°	299.4	306.7	329.1	362.4	401.7	434.8	459.0	473.3	477.8	470.7	454.9



44°	142.4	148.3	163.3	184.6	209.7	244.4	274.7	257.2	242.9	257.9	275.4
44.5°	139.2	145.1	159.8	180.3	204.6	238.8	268.1	251.5	236.9	252.4	268.8



66.5°	46.2	47.2	46.3	46.8	51.3	57.9	67.2	69.7	69.4	72.0	71.4
67°	44.7	45.6	45.0	45.2	49.5	55.9	64.9	67.4	67.2	69.8	68.9



89°	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.6
89.5°	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2

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°	432.9	400.7	365.4	333.4	311.3	303.3
22°	430.9	398.1	362.4	329.9	307.4	299.4



44°	244.1	208.3	187.9	167.4	150.9	142.4
44.5°	238.7	203.3	183.7	163.9	147.6	139.2



66.5°	63.2	55.3	51.5	49.0	49.2	46.2
67°	61.1	53.4	49.8	47.8	47.7	44.7

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

Scaled Data Report



89°	0.7	0.4	0.4	0.3	0.1	0.0
89.5°	0.2	0.1	0.1	0.1	0.1	0.0

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

Scaled Data Report



(END OF REPORT)