

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: P775801

Luminaire Tested: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775801  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B018)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K  
Description: 6 INCH SQUARE MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 905.5 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

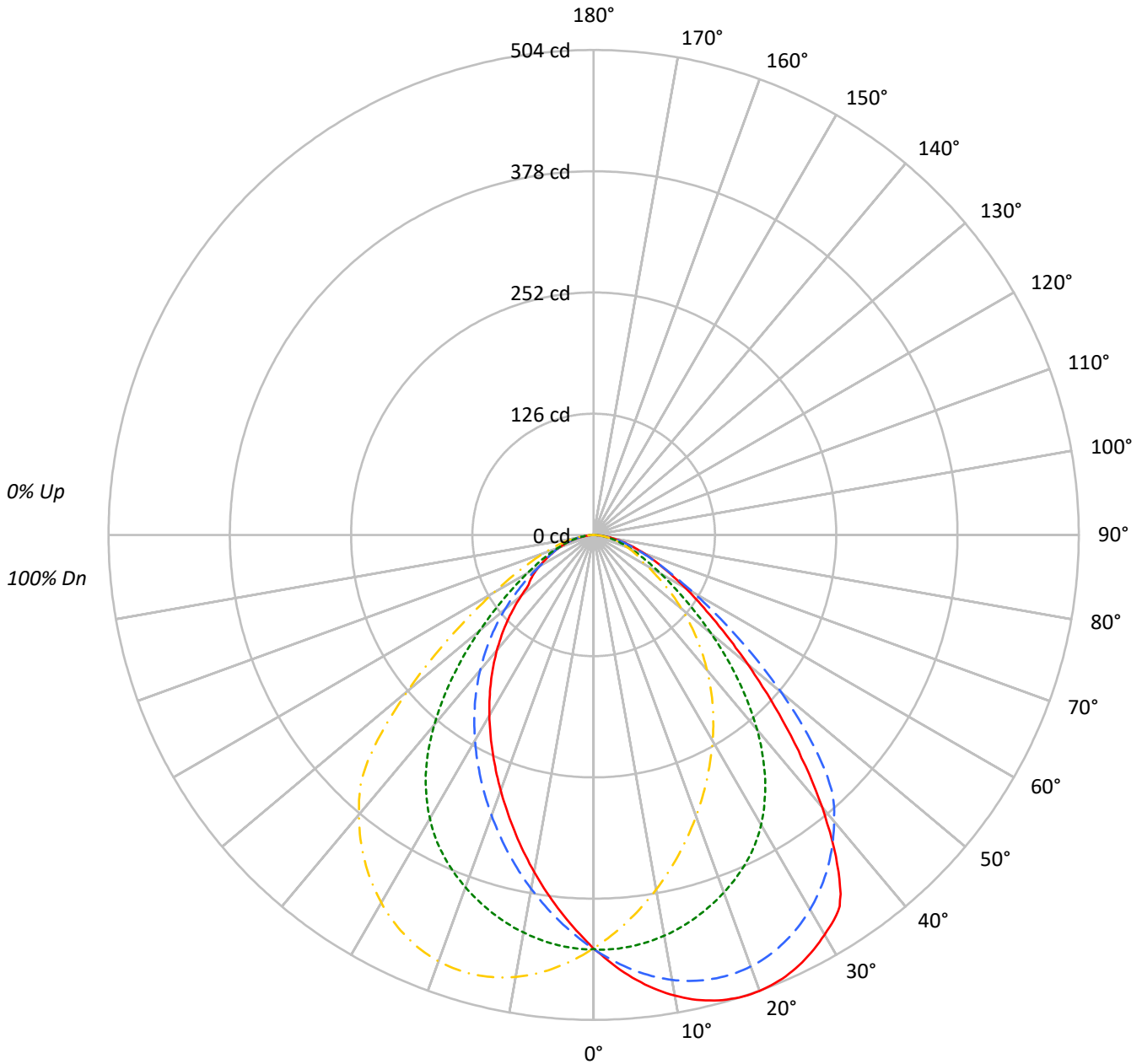
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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			
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87					87			
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76					76			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	54	62	57	53	51					51			
6	75	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	45					45			
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41					41			
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33					33			
10	57	45	38	33	56	45	37	33	44	37	32	43	37	32	42	36	32	31					31			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	18527	18527	18527	18527
5°	19963	18563	16990	18494
10°	21257	18485	15547	18345
15°	22318	18338	14188	18128
20°	23106	18117	12939	17851
25°	23606	17825	11810	17497
30°	23854	17291	10769	16918
35°	23448	16320	9776	15984
40°	20751	14838	8779	14473
45°	17287	12890	7733	12519
50°	13979	10684	6564	10349
55°	11327	8550	5960	8355
60°	9446	6932	5597	6863
65°	8038	5777	5104	5817
70°	6987	4947	4708	5035
75°	6089	4275	4259	4425
80°	5009	3670	3570	3843
85°	3211	2816	1976	3112

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 20386 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.6	4.5
10°-20°	115.4	12.7
20°-30°	171.1	18.9
30°-40°	195.6	21.6
40°-50°	170.0	18.8
50°-60°	110.6	12.2
60°-70°	63.0	7.0
70°-80°	31.6	3.5
80°-90°	7.5	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°	327.1	36.1
0°-40°	522.7	57.7
0°-60°	803.4	88.7
0°-90°	905.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	905.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	430	430	430	430	430	
5°	462	430	393	428	462	45
15°	501	411	318	407	501	142
25°	497	375	249	368	497	229
35°	446	310	186	304	446	274
45°	284	212	127	206	284	219
55°	151	114	79	111	151	137
65°	79	57	50	57	79	79
75°	37	26	26	27	37	39
85°	6	6	4	6	6	9
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°	430.3	430.3	430.3	430.3	430.3	430.3	430.3	430.3	430.3	430.3	430.3
0.5°	432.9	432.9	432.9	432.4	431.2	430.3	427.1	425.9	425.9	426.4	427.7
1°	436.3	436.1	435.3	433.7	431.2	428.9	424.6	422.6	422.3	423.0	425.2
1.5°	439.7	439.3	437.7	435.1	431.2	427.5	422.0	419.3	418.6	419.6	422.5
2°	443.1	442.5	440.1	436.3	431.1	426.1	419.4	416.0	415.0	416.4	419.8
2.5°	446.4	445.5	442.5	437.5	431.0	424.5	416.9	412.6	411.4	412.9	417.1
3°	449.6	448.5	444.7	438.6	430.8	423.1	414.1	409.2	407.8	409.5	414.3
3.5°	452.8	451.5	446.9	439.7	430.6	421.6	411.5	405.9	404.1	406.1	411.6
4°	455.9	454.3	449.1	440.8	430.2	419.8	408.7	402.5	400.6	402.7	408.8
4.5°	458.9	457.1	451.2	441.8	429.8	418.3	406.1	398.9	396.8	399.1	406.1
5°	461.9	459.9	453.2	442.8	429.5	416.6	403.3	395.5	393.1	395.7	403.2
5.5°	464.7	462.5	455.3	443.6	429.0	414.8	400.4	392.1	389.4	392.2	400.3
6°	467.4	465.1	457.1	444.4	428.5	413.0	397.6	388.6	385.7	388.6	397.4
6.5°	470.2	467.5	458.9	445.3	428.0	411.3	394.8	385.1	382.0	385.1	394.5
7°	472.7	470.0	460.7	446.0	427.4	409.5	392.0	381.6	378.2	381.6	391.6
7.5°	475.2	472.2	462.4	446.7	426.8	407.5	389.0	378.0	374.4	378.0	388.6
8°	477.5	474.5	463.9	447.3	426.1	405.7	386.1	374.5	370.7	374.4	385.6
8.5°	479.9	476.5	465.5	447.8	425.4	403.6	383.2	370.9	367.0	370.9	382.6
9°	482.1	478.6	466.9	448.2	424.5	401.7	380.2	367.5	363.1	367.3	379.6
9.5°	484.3	480.6	468.2	448.6	423.7	399.7	377.3	363.8	359.4	363.7	376.6
10°	486.2	482.4	469.6	449.0	422.8	397.6	374.2	360.2	355.6	360.1	373.5
10.5°	488.1	484.3	470.8	449.3	422.0	395.5	371.2	356.7	352.0	356.6	370.4
11°	490.0	485.9	471.8	449.5	421.0	393.4	368.1	353.1	348.2	352.9	367.4
11.5°	491.7	487.4	472.9	449.8	419.9	391.2	365.0	349.6	344.3	349.4	364.3
12°	493.3	488.9	473.8	449.8	418.8	388.9	362.0	345.8	340.6	345.7	361.1
12.5°	494.9	490.3	474.7	449.9	417.7	386.7	358.9	342.4	337.0	342.2	358.1
13°	496.2	491.6	475.5	449.8	416.6	384.5	355.7	338.8	333.2	338.5	354.9
13.5°	497.5	492.7	476.2	449.6	415.2	382.2	352.6	335.2	329.4	335.0	351.8
14°	498.6	493.8	476.8	449.5	414.0	379.8	349.5	331.6	325.7	331.3	348.6
14.5°	499.8	494.8	477.3	449.3	412.7	377.5	346.2	328.0	322.0	327.8	345.4
15°	500.7	495.7	477.7	449.0	411.4	375.0	343.1	324.4	318.3	324.2	342.3
15.5°	501.6	496.4	478.1	448.6	409.9	372.7	339.9	320.9	314.6	320.7	339.0
16°	502.3	497.1	478.3	448.2	408.5	370.2	336.8	317.4	310.9	317.1	335.8
16.5°	502.9	497.6	478.5	447.7	407.1	367.8	333.6	313.8	307.4	313.6	332.7
17°	503.4	498.0	478.6	447.1	405.4	365.2	330.3	310.2	303.7	310.0	329.5
17.5°	503.9	498.3	478.6	446.5	403.9	362.8	327.2	306.7	300.1	306.4	326.2
18°	504.2	498.5	478.5	445.9	402.3	360.3	324.0	303.2	296.4	303.0	323.0
18.5°	504.4	498.7	478.3	445.1	400.7	357.7	320.7	299.7	293.0	299.5	319.8
19°	504.4	498.7	478.0	444.2	398.9	355.0	317.6	296.2	289.5	296.0	316.6
19.5°	504.4	498.6	477.7	443.4	397.3	352.5	314.3	292.8	285.9	292.6	313.5
20°	504.3	498.4	477.2	442.4	395.4	349.9	311.0	289.3	282.4	289.1	310.2
20.5°	504.0	498.1	476.7	441.5	393.7	347.3	307.9	285.8	278.9	285.7	306.9
21°	503.6	497.7	476.0	440.4	391.8	344.5	304.6	282.4	275.5	282.2	303.8



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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°	501.8	495.8	473.5	436.8	386.0	336.4	295.0	272.3	265.2	272.2	294.1
23°	501.1	495.0	472.5	435.5	384.0	333.7	291.7	269.0	261.8	268.9	290.9
23.5°	500.2	494.1	471.4	434.1	381.9	330.9	288.6	265.6	258.5	265.6	287.8
24°	499.2	492.9	470.3	432.6	379.7	328.1	285.3	262.3	255.2	262.2	284.5
24.5°	498.0	491.8	468.9	431.2	377.6	325.3	282.1	259.1	251.9	258.9	281.3
25°	496.9	490.6	467.6	429.5	375.2	322.4	279.0	255.7	248.6	255.6	278.1
25.5°	495.6	489.2	466.2	427.9	373.0	319.6	275.7	252.4	245.3	252.4	275.0
26°	494.2	487.8	464.7	426.1	370.5	316.6	272.5	249.2	242.0	249.1	271.7
26.5°	492.6	486.2	463.0	424.3	368.1	313.7	269.4	246.0	238.8	245.9	268.6
27°	491.1	484.7	461.4	422.5	365.5	310.7	266.2	242.7	235.6	242.6	265.4
27.5°	489.5	482.9	459.6	420.5	362.8	307.8	263.0	239.5	232.4	239.5	262.3
28°	487.6	481.2	457.6	418.3	359.9	304.7	259.8	236.2	229.2	236.2	259.2
28.5°	485.8	479.3	455.8	416.2	357.2	301.5	256.7	233.0	226.0	233.0	256.0
29°	483.8	477.2	453.7	413.8	354.1	298.4	253.5	229.9	222.9	229.9	252.8
29.5°	481.8	475.2	451.6	411.4	351.0	295.2	250.4	226.7	219.8	226.8	249.7
30°	479.8	473.0	449.4	408.8	347.8	291.8	247.1	223.7	216.6	223.5	246.5
30.5°	477.6	470.8	447.2	406.2	344.5	288.5	244.0	220.4	213.4	220.5	243.5
31°	475.6	468.5	444.9	403.4	341.1	285.2	240.8	217.2	210.4	217.4	240.3
31.5°	473.5	466.2	442.4	400.3	337.7	281.7	237.6	214.3	207.3	214.3	237.1
32°	471.5	463.7	440.0	397.3	334.1	278.3	234.5	211.1	204.3	211.2	234.0
32.5°	469.0	461.4	437.3	394.0	330.3	274.8	231.3	207.9	201.2	208.1	230.9
33°	466.3	458.9	434.7	390.6	326.4	271.2	228.1	205.0	198.1	205.1	227.7
33.5°	462.9	456.6	432.1	387.2	322.7	267.6	225.0	201.9	195.1	202.1	224.6
34°	457.7	454.1	429.3	383.6	318.7	264.0	221.7	198.8	192.1	198.9	221.4
34.5°	453.1	451.5	426.4	379.7	314.7	260.3	218.5	195.7	189.0	196.0	218.2
35°	446.1	448.3	423.4	375.7	310.5	256.5	215.4	192.7	186.0	192.9	215.2
35.5°	439.5	444.7	420.4	371.7	306.3	252.8	212.3	189.7	183.0	190.0	212.0
36°	433.2	439.7	417.2	367.4	301.9	249.1	209.1	186.7	180.1	187.0	208.8
36.5°	425.0	434.8	413.9	363.1	297.5	245.3	205.8	183.6	177.0	183.9	205.6
37°	418.4	428.4	410.6	358.6	293.0	241.4	202.6	180.6	174.0	180.9	202.5
37.5°	410.3	421.6	407.1	353.8	288.4	237.5	199.4	177.6	171.1	177.9	199.3
38°	402.0	415.9	403.6	348.9	283.5	233.7	196.2	174.6	168.1	175.0	196.1
38.5°	394.4	407.8	399.9	344.0	278.9	229.8	192.9	171.6	165.2	172.0	192.9
39°	385.4	401.0	396.4	339.0	274.0	225.9	189.7	168.6	162.1	169.0	189.9
39.5°	377.7	393.6	392.5	333.7	269.1	221.9	186.4	165.6	159.1	166.1	186.6
40°	369.2	385.1	388.6	328.2	264.0	217.8	183.1	162.6	156.2	163.1	183.3
40.5°	359.8	378.4	384.6	322.7	259.0	213.9	180.0	159.6	153.3	160.2	180.2
41°	352.2	369.7	381.0	317.1	253.9	209.9	176.6	156.7	150.4	157.2	177.1
41.5°	342.9	361.6	376.9	311.1	248.7	205.8	173.3	153.7	147.5	154.3	173.7
42°	334.5	353.9	372.4	305.1	243.5	201.8	170.2	150.8	144.5	151.4	170.6
42.5°	326.1	345.0	367.6	299.2	238.2	197.7	167.0	147.9	141.6	148.4	167.5
43°	316.6	337.6	362.6	293.1	232.9	193.7	163.7	144.9	138.6	145.6	164.3
43.5°	309.3	329.1	356.0	286.7	227.6	189.7	160.4	142.0	135.8	142.6	161.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	283.9	303.8	334.8	267.7	211.7	177.4	150.8	133.2	127.0	133.9	151.7
45.5°	274.9	296.2	327.8	261.2	206.3	173.4	147.6	130.3	124.1	131.1	148.5
46°	268.1	288.1	319.7	254.8	201.1	169.3	144.3	127.4	121.2	128.1	145.4
46.5°	259.3	279.4	311.5	248.1	195.8	165.4	141.2	124.4	118.2	125.2	142.1
47°	252.0	272.3	304.0	241.5	190.5	161.4	137.9	121.5	115.3	122.3	139.0
47.5°	244.6	263.6	295.2	235.0	185.2	157.4	134.7	118.6	112.5	119.5	135.9
48°	236.2	256.7	287.2	228.4	180.0	153.5	131.7	115.7	109.6	116.6	132.7
48.5°	230.2	249.0	279.1	221.8	174.8	149.4	128.5	112.8	106.8	113.7	129.5
49°	221.7	241.0	270.3	215.3	169.5	145.6	125.2	109.8	103.8	110.9	126.5
49.5°	216.0	234.5	262.6	208.6	164.5	141.7	122.2	107.0	101.0	108.0	123.3
50°	208.7	226.1	254.1	202.1	159.5	137.9	119.0	104.1	98.0	105.1	120.2
50.5°	202.1	220.2	245.9	195.6	154.3	134.0	116.0	101.2	95.1	102.3	117.2
51°	196.3	212.4	237.9	189.0	149.4	130.3	112.9	98.4	92.4	99.4	114.0
51.5°	188.8	206.3	229.5	182.7	144.7	126.7	109.8	95.4	89.4	96.6	111.1
52°	184.1	199.9	222.2	176.4	140.0	122.9	106.8	92.6	86.8	93.8	108.0
52.5°	177.2	192.9	214.3	170.2	135.3	119.3	103.9	89.7	85.4	91.0	105.0
53°	172.4	187.4	206.7	164.0	130.9	115.8	100.9	87.5	84.2	88.6	102.1
53.5°	166.8	180.1	199.3	158.0	126.4	112.2	97.9	85.2	83.0	86.3	99.1
54°	161.2	175.2	191.6	152.1	122.2	108.8	95.0	83.1	81.9	83.9	96.3
54.5°	156.6	168.5	185.0	146.4	118.0	105.3	92.2	80.8	80.6	81.6	93.5
55°	150.9	163.4	177.6	140.9	113.9	102.1	89.3	78.7	79.4	79.2	90.6
55.5°	147.0	157.9	171.3	135.6	110.0	98.9	86.6	77.5	78.1	78.0	87.9
56°	141.3	152.3	164.3	130.4	106.2	95.6	83.8	76.3	76.8	76.9	85.2
56.5°	137.7	147.6	158.2	125.4	102.6	92.6	80.9	74.9	75.4	75.5	82.6
57°	132.9	141.8	152.1	120.6	99.0	89.5	78.2	73.7	74.0	74.3	79.9
57.5°	129.1	137.7	145.9	115.9	95.6	86.8	75.7	72.4	72.6	73.0	77.2
58°	125.0	132.2	140.3	111.5	92.4	83.9	73.1	71.0	71.1	71.7	74.7
58.5°	121.0	128.4	134.5	107.2	89.2	81.0	70.5	69.7	69.6	70.3	72.1
59°	117.4	123.3	129.4	103.2	86.3	78.3	68.1	68.4	68.1	69.0	69.6
59.5°	113.3	119.7	124.0	99.2	83.4	75.7	65.6	67.0	66.6	67.6	67.3
60°	109.7	115.1	119.2	95.5	80.5	73.3	63.3	65.6	65.0	66.1	64.9
60.5°	106.1	111.7	114.3	92.0	77.6	70.8	61.0	64.1	63.5	64.7	62.7
61°	102.6	107.4	109.9	88.5	74.9	68.5	59.0	62.8	62.0	63.3	60.5
61.5°	99.3	103.9	105.3	85.2	72.4	66.1	57.7	61.2	60.3	61.9	58.6
62°	96.2	100.1	101.5	82.1	69.9	64.0	56.6	59.8	58.8	60.3	57.2
62.5°	92.9	96.9	97.2	79.1	67.5	61.9	55.3	58.4	57.3	58.9	56.0
63°	90.0	93.3	93.5	76.3	65.2	59.8	54.1	56.9	55.7	57.4	54.8
63.5°	87.0	90.2	89.7	73.4	63.0	57.8	53.0	55.4	54.3	55.9	53.7
64°	84.3	86.9	86.3	70.7	60.8	55.8	51.8	54.0	52.9	54.4	52.6
64.5°	81.4	84.0	82.8	68.2	58.7	54.0	50.5	52.6	51.4	53.1	51.3
65°	78.9	80.9	79.6	65.7	56.7	52.2	49.3	51.1	50.1	51.7	50.2
65.5°	76.3	78.3	76.6	63.5	54.7	50.4	48.2	49.8	48.8	50.2	49.0
66°	73.8	75.3	73.6	61.1	52.8	48.7	46.9	48.5	47.5	48.8	47.8





TEST NUMBER: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	66.5	67.7	65.2	54.7	47.4	43.9	43.2	44.5	43.6	44.8	44.1
68°	64.2	65.1	62.6	52.7	45.6	42.4	42.0	43.3	42.4	43.6	42.9
68.5°	62.0	62.8	60.2	50.7	44.0	40.9	40.7	42.1	41.0	42.3	41.6
69°	59.7	60.5	57.7	48.8	42.5	39.5	39.5	40.7	39.8	41.0	40.3
69.5°	57.6	58.2	55.4	47.0	40.7	38.2	38.3	39.5	38.6	39.7	39.1
70°	55.5	56.0	53.3	45.2	39.3	36.7	37.1	38.3	37.4	38.5	37.9
70.5°	53.4	53.8	51.0	43.4	37.8	35.5	35.9	37.1	36.1	37.3	36.7
71°	51.3	51.8	49.0	41.7	36.3	34.2	34.7	35.8	35.0	36.0	35.5
71.5°	49.4	49.7	47.0	40.1	34.9	33.0	33.5	34.7	33.8	34.8	34.3
72°	47.5	47.7	44.9	38.5	33.5	31.7	32.4	33.5	32.6	33.6	33.1
72.5°	45.5	45.7	43.0	37.0	32.2	30.5	31.2	32.3	31.4	32.4	32.0
73°	43.6	43.7	41.1	35.5	30.8	29.4	30.1	31.0	30.2	31.1	30.8
73.5°	41.7	41.9	39.3	34.0	29.5	28.4	29.0	29.9	29.1	30.0	29.6
74°	39.9	40.0	37.5	32.6	28.2	27.3	27.9	28.7	28.0	28.8	28.5
74.5°	38.1	38.2	35.8	31.1	26.9	26.3	26.7	27.6	26.7	27.7	27.4
75°	36.6	36.6	34.2	29.7	25.7	25.4	25.6	26.3	25.6	26.4	26.2
75.5°	34.9	34.9	32.6	28.4	24.6	24.5	24.5	25.2	24.5	25.3	25.1
76°	33.2	33.2	30.9	27.1	23.4	23.6	23.5	24.0	23.4	24.2	24.0
76.5°	31.3	31.4	29.3	25.7	22.3	22.6	22.4	22.9	22.3	23.0	22.9
77°	29.6	29.7	27.7	24.4	21.1	21.6	21.2	21.7	21.1	21.8	21.7
77.5°	28.1	28.2	26.1	23.1	20.0	20.6	20.1	20.6	20.0	20.7	20.6
78°	26.4	26.5	24.7	21.8	18.9	19.7	19.1	19.4	18.8	19.6	19.6
78.5°	24.8	25.0	23.2	20.6	17.9	18.7	18.0	18.3	17.7	18.5	18.5
79°	23.3	23.4	21.7	19.4	16.8	17.7	16.9	17.1	16.5	17.3	17.4
79.5°	21.7	21.9	20.3	18.3	15.8	16.7	15.9	16.0	15.5	16.1	16.2
80°	20.2	20.4	18.9	17.0	14.8	15.7	14.9	14.9	14.4	15.0	15.2
80.5°	18.8	19.0	17.6	15.9	13.8	14.8	13.9	13.7	13.3	13.9	14.2
81°	17.4	17.6	16.2	14.8	12.9	13.8	12.9	12.7	12.2	12.8	13.1
81.5°	15.9	16.1	14.9	13.7	11.9	12.9	11.8	11.4	11.1	11.6	12.0
82°	14.5	14.7	13.7	12.7	10.9	11.9	10.8	10.4	10.1	10.6	11.1
82.5°	13.2	13.4	12.5	11.6	10.1	11.0	9.9	9.4	9.0	9.6	10.1
83°	11.8	12.0	11.3	10.6	9.2	10.1	9.0	8.4	8.0	8.5	9.3
83.5°	10.4	10.6	10.1	9.6	8.4	9.2	8.1	7.5	6.9	7.5	8.4
84°	9.1	9.3	9.1	8.6	7.5	8.3	7.2	6.4	5.9	6.4	7.6
84.5°	7.8	8.1	8.1	7.7	6.6	7.3	6.3	5.4	4.9	5.4	6.6
85°	6.5	6.8	7.1	6.7	5.7	6.4	5.4	4.6	4.0	4.5	5.8
85.5°	5.2	5.6	6.1	5.8	4.9	5.5	4.6	3.9	3.4	3.8	5.0
86°	4.3	4.7	5.2	4.9	4.2	4.7	3.8	3.3	2.9	3.2	4.2
86.5°	3.6	3.9	4.3	4.1	3.4	3.8	3.0	2.7	2.3	2.6	3.5
87°	3.0	3.2	3.5	3.2	2.7	3.0	2.2	2.0	1.7	2.0	2.8
87.5°	2.2	2.3	2.7	2.3	1.9	2.1	1.4	1.3	1.2	1.4	1.9
88°	1.6	1.6	1.8	1.5	1.2	1.3	0.7	0.7	0.7	0.8	1.2
88.5°	0.9	0.9	1.0	0.7	0.5	0.6	0.2	0.2	0.3	0.3	0.5



TEST NUMBER: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-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: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	430.3	430.3	430.3	430.3	430.3	430.3
0.5°	429.5	431.1	432.7	432.0	432.4	432.9
1°	428.0	430.9	433.8	434.4	435.5	436.3
1.5°	426.5	430.7	435.1	436.7	438.6	439.7
2°	424.8	430.5	436.1	438.9	441.7	443.1
2.5°	423.3	430.2	437.1	441.2	444.6	446.4
3°	421.6	429.7	438.0	443.3	447.6	449.6
3.5°	419.8	429.3	438.9	445.5	450.6	452.8
4°	418.1	428.9	439.7	447.5	453.3	455.9
4.5°	416.3	428.4	440.7	449.4	456.1	458.9
5°	414.4	427.9	441.4	451.4	458.7	461.9
5.5°	412.6	427.2	442.1	453.2	461.4	464.7
6°	410.7	426.6	442.7	455.1	463.8	467.4
6.5°	408.7	425.9	443.2	456.7	466.2	470.2
7°	406.8	425.2	443.8	458.3	468.5	472.7
7.5°	404.7	424.3	444.2	459.9	470.8	475.2
8°	402.7	423.5	444.6	461.4	472.9	477.5
8.5°	400.7	422.6	445.0	462.7	475.0	479.9
9°	398.5	421.7	445.3	464.0	476.9	482.1
9.5°	396.4	420.7	445.5	465.3	478.8	484.3
10°	394.2	419.6	445.6	466.5	480.6	486.2
10.5°	392.0	418.5	445.7	467.5	482.2	488.1
11°	389.7	417.4	445.7	468.5	483.8	490.0
11.5°	387.5	416.3	445.6	469.4	485.4	491.7
12°	385.2	414.9	445.5	470.2	486.7	493.3
12.5°	382.9	413.7	445.4	471.0	488.0	494.9
13°	380.5	412.4	445.1	471.6	489.3	496.2
13.5°	378.1	411.1	444.7	472.2	490.4	497.5
14°	375.6	409.6	444.3	472.7	491.3	498.6
14.5°	373.2	408.2	443.9	473.0	492.2	499.8
15°	370.7	406.7	443.4	473.4	493.0	500.7
15.5°	368.3	405.1	442.9	473.6	493.6	501.6
16°	365.8	403.6	442.2	473.7	494.3	502.3
16.5°	363.3	402.0	441.5	473.7	494.7	502.9
17°	360.6	400.3	440.8	473.6	495.0	503.4
17.5°	358.1	398.6	440.0	473.5	495.3	503.9
18°	355.5	396.9	439.0	473.3	495.4	504.2
18.5°	352.9	395.1	438.0	473.0	495.4	504.4
19°	350.3	393.3	437.1	472.5	495.4	504.4
19.5°	347.6	391.5	436.0	472.0	495.2	504.4
20°	344.9	389.6	434.8	471.5	494.9	504.3
20.5°	342.3	387.7	433.6	470.8	494.5	504.0
21°	339.5	385.6	432.4	470.0	494.0	503.6

TEST NUMBER: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	331.2	379.5	428.2	467.1	491.8	501.8
23°	328.5	377.4	426.7	466.0	490.9	501.1
23.5°	325.6	375.2	425.0	464.8	489.9	500.2
24°	322.9	373.0	423.4	463.4	488.7	499.2
24.5°	319.9	370.6	421.7	462.1	487.5	498.0
25°	317.1	368.3	419.9	460.6	486.2	496.9
25.5°	314.2	365.8	418.0	459.0	484.8	495.6
26°	311.2	363.4	416.2	457.3	483.2	494.2
26.5°	308.3	360.8	414.1	455.7	481.6	492.6
27°	305.3	358.2	412.1	453.8	480.1	491.1
27.5°	302.3	355.3	409.8	451.9	478.2	489.5
28°	299.1	352.6	407.6	450.0	476.4	487.6
28.5°	296.0	349.6	405.2	447.9	474.4	485.8
29°	292.9	346.6	402.7	445.8	472.4	483.8
29.5°	289.6	343.5	400.1	443.6	470.3	481.8
30°	286.2	340.3	397.4	441.3	468.1	479.8
30.5°	283.0	337.0	394.5	438.9	465.8	477.6
31°	279.6	333.7	391.6	436.5	463.4	475.6
31.5°	276.2	330.2	388.5	434.0	461.1	473.5
32°	272.9	326.7	385.3	431.4	458.5	471.5
32.5°	269.3	323.1	382.0	428.7	456.1	469.0
33°	265.8	319.5	378.6	426.1	453.5	466.3
33.5°	262.3	315.8	375.0	423.3	451.0	462.9
34°	258.8	311.9	371.4	420.5	448.6	457.7
34.5°	255.1	308.1	367.7	417.5	446.1	453.1
35°	251.5	304.1	363.8	414.4	443.0	446.1
35.5°	247.9	299.8	359.7	411.4	439.7	439.5
36°	244.2	295.6	355.6	408.1	435.4	433.2
36.5°	240.5	291.1	351.5	404.8	430.1	425.0
37°	236.8	286.6	347.0	401.5	424.9	418.4
37.5°	233.0	281.9	342.4	398.0	417.8	410.3
38°	229.3	277.1	337.5	394.4	411.8	402.0
38.5°	225.2	272.3	332.4	390.6	404.9	394.4
39°	221.3	267.4	327.3	387.1	397.1	385.4
39.5°	217.4	262.5	321.8	383.4	391.0	377.7
40°	213.4	257.5	316.1	379.5	382.9	369.2
40.5°	209.5	252.4	310.4	375.4	375.1	359.8
41°	205.4	247.2	304.6	371.7	368.0	352.2
41.5°	201.4	242.3	298.8	367.8	359.5	342.9
42°	197.4	237.1	292.8	363.7	352.0	334.5
42.5°	193.3	231.8	286.7	359.5	343.9	326.1
43°	189.4	226.6	280.5	355.0	335.3	316.6
43.5°	185.3	221.4	274.3	350.1	328.1	309.3



TEST NUMBER: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	173.2	205.6	255.2	331.6	303.8	283.9
45.5°	169.1	200.4	248.9	323.9	294.9	274.9
46°	165.1	195.2	242.3	316.7	287.9	268.1
46.5°	161.1	190.0	235.9	309.3	279.6	259.3
47°	157.2	184.9	229.5	300.8	272.0	252.0
47.5°	153.3	179.6	222.9	293.3	264.5	244.6
48°	149.3	174.4	216.5	285.0	256.0	236.2
48.5°	145.5	169.4	210.2	276.5	249.7	230.2
49°	141.7	164.3	203.7	268.9	241.5	221.7
49.5°	138.0	159.4	197.3	260.2	235.0	216.0
50°	134.1	154.5	191.0	252.1	228.0	208.7
50.5°	130.3	149.6	184.7	244.3	220.3	202.1
51°	126.7	144.9	178.4	236.0	214.4	196.3
51.5°	123.1	140.3	172.4	228.6	206.6	188.8
52°	119.5	135.9	166.5	220.5	201.2	184.1
52.5°	115.9	131.5	160.6	212.8	194.6	177.2
53°	112.5	127.1	154.6	205.7	188.2	172.4
53.5°	109.1	122.9	149.2	197.9	182.5	166.8
54°	105.8	118.9	143.7	191.1	175.7	161.2
54.5°	102.6	115.1	138.5	183.8	170.9	156.6
55°	99.3	111.3	133.4	177.2	164.2	150.9
55.5°	96.3	107.6	128.6	170.7	159.6	147.0
56°	93.3	104.0	123.9	163.9	153.7	141.3
56.5°	90.3	100.8	119.4	158.1	148.9	137.7
57°	87.7	97.4	115.0	151.9	143.9	132.9
57.5°	84.9	94.1	111.0	146.3	138.7	129.1
58°	82.3	91.1	107.0	140.4	134.4	125.0
58.5°	79.6	88.1	103.1	135.1	129.3	121.0
59°	76.9	85.2	99.5	129.9	125.6	117.4
59.5°	74.4	82.4	96.1	124.8	120.8	113.3
60°	72.1	79.7	92.7	120.0	117.3	109.7
60.5°	69.8	77.1	89.4	115.2	112.7	106.1
61°	67.6	74.5	86.3	111.0	109.4	102.6
61.5°	65.4	72.2	83.3	106.5	105.2	99.3
62°	63.3	69.8	80.4	102.6	102.1	96.2
62.5°	61.2	67.5	77.7	98.6	98.2	92.9
63°	59.3	65.2	75.0	94.8	95.1	90.0
63.5°	57.4	63.1	72.4	91.2	91.7	87.0
64°	55.5	61.0	69.8	87.8	88.7	84.3
64.5°	53.8	59.0	67.5	84.3	85.3	81.4
65°	52.1	57.1	65.1	81.2	82.7	78.9
65.5°	50.3	55.1	62.9	78.1	79.5	76.3
66°	48.7	53.3	60.6	75.1	77.1	73.8



TEST NUMBER: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	44.0	48.0	54.5	67.0	69.0	66.5
68°	42.6	46.2	52.5	64.4	66.7	64.2
68.5°	41.1	44.6	50.6	62.0	64.2	62.0
69°	39.7	43.1	48.8	59.6	61.9	59.7
69.5°	38.4	41.5	47.0	57.3	59.6	57.6
70°	37.1	40.0	45.2	55.0	57.3	55.5
70.5°	35.7	38.5	43.5	52.9	55.1	53.4
71°	34.5	37.0	41.9	50.7	53.0	51.3
71.5°	33.3	35.6	40.2	48.7	50.9	49.4
72°	32.1	34.3	38.6	46.6	48.9	47.5
72.5°	30.8	33.0	37.1	44.8	46.9	45.5
73°	29.7	31.7	35.6	42.9	45.0	43.6
73.5°	28.6	30.4	34.2	40.9	43.0	41.7
74°	27.6	29.1	32.8	39.2	41.1	39.9
74.5°	26.4	27.9	31.3	37.4	39.3	38.1
75°	25.5	26.6	29.9	35.7	37.5	36.6
75.5°	24.6	25.4	28.6	34.1	35.8	34.9
76°	23.7	24.2	27.2	32.5	34.1	33.2
76.5°	22.7	23.1	25.9	30.8	32.5	31.3
77°	21.7	21.9	24.6	29.2	30.7	29.6
77.5°	20.7	20.8	23.4	27.7	29.1	28.1
78°	19.7	19.7	22.2	26.1	27.5	26.4
78.5°	18.8	18.7	20.8	24.6	25.9	24.8
79°	17.8	17.6	19.7	23.1	24.3	23.3
79.5°	16.7	16.5	18.5	21.6	22.8	21.7
80°	15.8	15.5	17.4	20.2	21.2	20.2
80.5°	14.8	14.5	16.2	18.9	19.8	18.8
81°	13.8	13.6	15.1	17.6	18.3	17.4
81.5°	12.9	12.6	14.0	16.2	16.8	15.9
82°	11.9	11.6	12.9	14.9	15.4	14.5
82.5°	11.0	10.7	11.8	13.7	14.1	13.2
83°	10.1	9.8	10.8	12.5	12.8	11.8
83.5°	9.2	8.9	9.8	11.3	11.3	10.4
84°	8.3	8.1	8.8	10.2	10.0	9.1
84.5°	7.3	7.1	7.9	9.1	8.8	7.8
85°	6.4	6.3	6.8	8.1	7.7	6.5
85.5°	5.5	5.5	5.9	7.0	6.5	5.2
86°	4.6	4.7	5.0	6.1	5.5	4.3
86.5°	3.8	3.9	4.1	5.1	4.6	3.6
87°	3.0	3.1	3.3	4.2	3.8	3.0
87.5°	2.1	2.3	2.4	3.4	3.0	2.2
88°	1.3	1.5	1.6	2.6	2.1	1.6
88.5°	0.6	0.8	0.7	1.7	1.4	0.9



TEST NUMBER: P775801

CATALOG NUMBER: HCDJBL510CSD-HCD6TSQH-HCD6TSQLWW-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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Scaled Data Report





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

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21.5°	503.1	497.1	475.3	439.2	389.9	341.8	301.4	279.1	272.0	278.9	300.5
22°	502.5	496.5	474.5	438.0	388.0	339.2	298.2	275.7	268.7	275.5	297.4



44°	300.1	320.2	349.7	280.6	222.3	185.6	157.2	139.0	132.9	139.6	157.9
44.5°	292.1	312.7	342.7	274.1	217.0	181.5	154.0	136.1	129.9	136.8	154.7



66.5°	71.2	72.9	70.6	58.9	50.9	47.1	45.6	47.2	46.1	47.5	46.5
67°	68.9	70.1	67.9	56.8	49.1	45.4	44.4	45.8	44.8	46.1	45.3



89°	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1
89.5°	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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21.5°	336.8	383.7	431.0	469.1	493.3	503.1
22°	334.0	381.7	429.6	468.2	492.6	502.5



44°	181.2	216.2	267.9	344.2	319.3	300.1
44.5°	177.3	211.0	261.5	337.7	311.6	292.1



66.5°	47.1	51.4	58.6	72.4	74.1	71.2
67°	45.5	49.7	56.4	69.5	71.8	68.9

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89°	0.1	0.2	0.2	0.9	0.6	0.3
89.5°	0.0	0.0	0.0	0.2	0.1	0.0

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(END OF REPORT)