

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: P775622

Luminaire Tested: HCDJBL510CSD-HCD41TRH-1000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775622  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B029)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD41TRH-1000lm-3500K  
Description: 4 INCH ROUND SHALLOW-WIDE HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

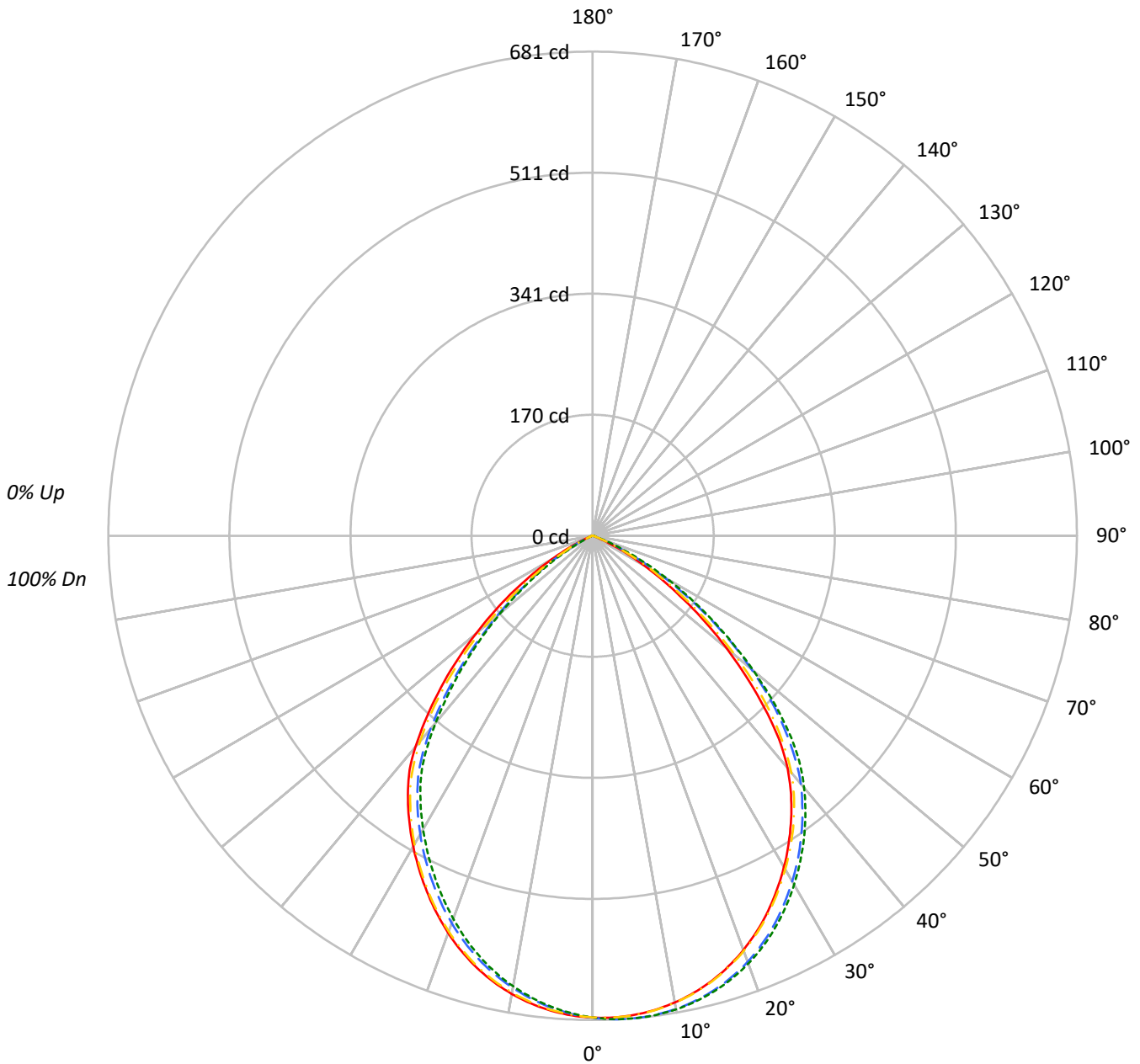
Lumens per Lamp: N/A  
Luminaire Lumens: 1212.2 lumens  
Efficiency: N/A  
Efficacy: 121.2 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.22  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	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	112	109	105	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	77	95	87	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63					63			
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57					57			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46					46			
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42					42			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38					38			
10	60	49	42	37	59	48	41	37	47	41	37	46	41	36	46	40	36	35					35			

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

	0°	90°	180°	270°
0°	85288	85288	85288	85288
5°	85450	86056	84705	83985
10°	85173	86438	83627	82221
15°	84414	86369	81965	79841
20°	83048	85753	79606	76767
25°	80941	84413	76623	73165
30°	78182	82352	73313	69288
35°	74728	79644	69581	64757
40°	70035	75982	63628	56432
45°	60744	69412	53643	45278
50°	48046	57777	42016	33127
55°	34514	44650	29511	21020
60°	21092	30430	16889	10093
65°	8844	16259	6313	3008
70°	1987	4783	1840	1288
75°	1361	1750	1264	875
80°	942	1377	870	580
85°	289	1155	144	144

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 69412 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.9	5.3
10°-20°	179.7	14.8
20°-30°	261.1	21.5
30°-40°	292.5	24.1
40°-50°	246.2	20.3
50°-60°	132.6	10.9
60°-70°	32.7	2.7
70°-80°	3.1	0.3
80°-90°	0.5	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°	504.6	41.6
0°-40°	797.1	65.8
0°-60°	1175.9	97.0
0°-90°	1212.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1212.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	678	678	678	678	678	
5°	676	681	670	665	676	64
15°	648	663	629	613	648	183
25°	583	608	552	527	583	268
35°	486	518	453	422	486	303
45°	341	390	301	254	341	261
55°	157	204	134	96	157	142
65°	30	55	21	10	30	33
75°	3	4	3	2	3	3
85°	0	1	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°	677.7	677.7	677.7	677.7	677.7	677.7	677.7	677.7	677.7	677.7	677.7
0.5°	678.1	678.5	678.7	678.5	678.3	677.9	677.7	677.5	677.5	677.5	677.3
1°	678.2	679.0	679.3	679.2	678.9	678.5	677.9	677.4	677.0	676.7	676.3
1.5°	678.3	679.3	680.0	679.8	679.5	678.9	678.1	677.3	676.5	675.9	675.4
2°	678.3	679.6	680.4	680.4	680.1	679.2	678.1	676.9	676.0	675.1	674.4
2.5°	678.2	679.8	680.8	680.8	680.5	679.4	678.1	676.5	675.3	674.1	673.1
3°	678.0	680.0	681.0	681.1	680.8	679.6	677.9	676.1	674.6	673.1	672.0
3.5°	677.7	680.0	681.2	681.4	681.0	679.6	677.7	675.6	673.6	671.9	670.6
4°	677.4	679.8	681.3	681.5	681.2	679.6	677.5	675.0	672.7	670.7	669.3
4.5°	676.9	679.6	681.3	681.6	681.3	679.5	677.0	674.3	671.7	669.5	667.7
5°	676.4	679.4	681.2	681.7	681.2	679.3	676.5	673.4	670.5	668.0	666.2
5.5°	675.8	679.1	681.0	681.6	681.2	679.0	676.0	672.6	669.3	666.6	664.6
6°	675.1	678.7	680.9	681.4	681.0	678.7	675.3	671.6	668.0	665.0	662.9
6.5°	674.3	678.2	680.5	681.1	680.7	678.2	674.6	670.5	666.6	663.4	661.0
7°	673.5	677.6	680.1	680.8	680.4	677.7	673.7	669.4	665.1	661.7	659.0
7.5°	672.5	676.9	679.5	680.4	679.8	677.0	672.9	668.1	663.6	659.8	657.1
8°	671.5	676.2	678.9	679.8	679.3	676.3	671.9	666.8	661.9	657.9	655.0
8.5°	670.3	675.3	678.3	679.2	678.7	675.6	670.7	665.3	660.1	655.8	652.8
9°	669.2	674.4	677.6	678.5	678.0	674.7	669.6	663.8	658.3	653.7	650.5
9.5°	667.8	673.3	676.6	677.8	677.3	673.7	668.3	662.2	656.3	651.7	648.2
10°	666.5	672.3	675.7	676.8	676.4	672.7	667.0	660.6	654.4	649.4	645.9
10.5°	665.0	671.0	674.7	675.9	675.4	671.6	665.5	658.7	652.2	647.0	643.3
11°	663.5	669.8	673.5	674.9	674.4	670.3	664.0	656.8	650.0	644.6	640.7
11.5°	661.8	668.3	672.4	673.7	673.2	669.0	662.4	654.9	647.7	642.0	638.1
12°	660.2	666.9	671.0	672.5	672.1	667.5	660.8	652.9	645.3	639.4	635.3
12.5°	658.3	665.3	669.6	671.1	670.7	666.1	658.9	650.6	642.9	636.8	632.4
13°	656.4	663.7	668.1	669.8	669.4	664.5	657.1	648.5	640.3	634.0	629.6
13.5°	654.4	661.9	666.5	668.2	667.8	662.9	655.1	646.2	637.7	631.0	626.5
14°	652.3	660.1	664.9	666.7	666.3	661.2	653.1	643.8	634.8	628.1	623.4
14.5°	650.1	658.2	663.2	664.9	664.6	659.3	650.9	641.2	632.0	625.0	620.3
15°	647.9	656.2	661.3	663.2	662.9	657.4	648.8	638.5	629.1	622.0	617.1
15.5°	645.5	654.0	659.3	661.3	661.0	655.4	646.4	635.8	626.0	618.6	613.5
16°	643.1	651.9	657.4	659.4	659.0	653.2	644.1	633.1	622.9	615.3	610.1
16.5°	640.5	649.6	655.2	657.4	657.1	651.0	641.5	630.1	619.5	612.0	606.6
17°	637.9	647.1	653.0	655.2	655.0	648.8	638.9	627.1	616.3	608.5	603.1
17.5°	635.1	644.7	650.6	652.9	652.7	646.4	636.2	624.1	612.8	604.8	599.2
18°	632.3	642.1	648.2	650.5	650.4	643.9	633.4	621.0	609.3	601.1	595.5
18.5°	629.4	639.4	645.8	648.0	648.0	641.4	630.6	617.7	605.7	597.3	591.6
19°	626.4	636.6	643.1	645.5	645.5	638.7	627.6	614.4	601.9	593.3	587.7
19.5°	623.3	633.7	640.4	642.9	643.0	636.0	624.6	610.8	598.2	589.5	583.6
20°	620.1	630.7	637.6	640.1	640.3	633.1	621.4	607.3	594.4	585.6	579.5
20.5°	616.7	627.7	634.6	637.3	637.5	630.2	618.3	603.7	590.4	581.3	575.4
21°	613.3	624.5	631.6	634.4	634.6	627.1	615.0	600.1	586.3	577.2	571.2



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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°	602.5	614.5	621.8	624.8	625.3	617.5	604.4	588.5	573.8	564.1	558.0
23°	598.9	610.8	618.4	621.4	622.1	614.0	600.8	584.5	569.6	559.8	553.5
23.5°	595.0	607.2	614.9	618.1	618.7	610.6	597.0	580.4	565.1	555.2	548.9
24°	591.0	603.5	611.3	614.5	615.2	607.0	593.1	576.3	560.8	550.6	544.2
24.5°	587.0	599.5	607.5	610.8	611.6	603.3	589.2	572.0	556.3	546.1	539.5
25°	582.9	595.7	603.7	607.1	607.9	599.5	585.2	567.8	551.8	541.5	534.9
25.5°	578.7	591.8	599.9	603.4	604.3	595.8	581.2	563.5	547.2	536.6	530.1
26°	574.5	587.6	595.8	599.4	600.4	591.8	577.2	559.1	542.8	531.9	525.2
26.5°	570.1	583.5	591.9	595.5	596.3	587.7	572.9	554.6	538.0	527.0	520.4
27°	565.9	579.2	587.7	591.5	592.4	583.6	568.7	550.2	533.2	522.2	515.4
27.5°	561.3	574.9	583.5	587.4	588.2	579.4	564.2	545.7	528.6	517.4	510.4
28°	556.7	570.5	579.1	583.2	584.1	575.1	560.0	541.1	523.8	512.4	505.5
28.5°	552.2	566.2	574.8	578.8	579.9	570.9	555.5	536.3	518.9	507.5	500.3
29°	547.5	561.6	570.3	574.5	575.5	566.6	550.9	531.7	514.2	502.6	495.2
29.5°	542.8	557.1	565.9	570.1	571.2	562.1	546.3	527.0	509.3	497.4	490.1
30°	538.0	552.3	561.2	565.5	566.7	557.5	541.8	522.3	504.5	492.4	484.8
30.5°	533.2	547.6	556.6	561.1	562.1	552.9	537.1	517.5	499.4	487.3	479.6
31°	528.3	543.0	551.9	556.4	557.6	548.4	532.3	512.6	494.5	482.1	474.2
31.5°	523.4	538.0	547.2	551.7	552.8	543.6	527.4	507.7	489.5	477.0	468.8
32°	518.3	533.1	542.2	546.8	548.0	538.7	522.8	503.0	484.5	471.7	463.3
32.5°	513.3	528.1	537.5	542.1	543.3	534.0	517.8	498.0	479.4	466.3	457.7
33°	507.9	523.1	532.5	537.3	538.4	529.2	512.9	493.1	474.2	460.9	452.2
33.5°	502.9	518.1	527.4	532.3	533.4	524.1	507.9	487.8	468.9	455.4	446.4
34°	497.4	512.9	522.2	527.3	528.6	519.2	502.9	482.8	463.6	450.0	440.7
34.5°	492.1	507.5	517.3	522.2	523.4	514.2	497.8	477.5	458.3	444.3	435.0
35°	486.4	502.0	512.0	517.2	518.4	509.0	492.5	472.2	452.9	438.7	429.0
35.5°	481.2	496.8	506.6	511.8	513.2	503.7	487.1	466.9	447.4	433.0	422.9
36°	475.5	491.3	501.1	506.6	507.9	498.4	481.8	461.5	441.8	427.2	417.0
36.5°	469.9	485.7	495.8	501.1	502.5	493.0	476.3	456.1	436.2	421.2	410.4
37°	463.9	480.0	490.2	495.5	496.9	487.4	470.7	450.4	430.4	414.8	403.3
37.5°	458.4	474.3	484.6	490.0	491.4	481.9	465.3	444.7	424.4	407.7	395.7
38°	452.1	468.6	478.8	484.4	485.9	476.3	459.4	438.9	417.9	400.4	387.7
38.5°	445.9	462.8	473.2	478.6	480.2	470.5	453.5	432.8	411.0	392.8	379.5
39°	439.3	456.5	467.5	472.9	474.5	464.7	447.6	426.2	403.6	384.9	371.1
39.5°	433.1	450.2	461.5	467.1	468.7	458.6	441.4	419.0	395.8	376.7	362.7
40°	426.3	443.9	455.3	460.9	462.5	452.6	434.7	411.8	387.3	368.3	354.2
40.5°	419.1	437.3	448.9	454.7	456.3	446.1	427.5	404.0	378.9	359.7	345.3
41°	411.8	430.3	442.2	448.4	450.0	439.7	420.2	396.1	370.5	350.9	336.5
41.5°	404.1	422.9	435.0	441.4	443.5	432.8	412.7	388.3	362.0	342.4	327.9
42°	396.2	415.3	427.5	434.3	436.8	425.7	404.8	380.2	353.3	332.9	318.6
42.5°	387.8	407.4	419.9	426.9	429.7	418.1	397.0	371.8	344.6	323.9	309.6
43°	378.9	399.2	412.1	419.1	422.5	410.2	388.9	363.0	336.1	315.0	300.3
43.5°	369.7	390.9	404.2	411.3	414.7	402.3	380.6	354.4	327.6	306.1	291.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	341.3	364.9	379.7	386.9	390.0	376.6	354.8	328.3	301.4	279.0	263.7
45.5°	331.5	356.1	371.5	378.6	380.9	367.6	345.9	319.6	292.9	270.2	254.5
46°	321.6	347.0	362.9	370.1	371.9	358.4	336.9	310.8	284.0	261.3	245.2
46.5°	312.0	337.5	354.3	361.4	362.6	349.2	327.7	301.9	275.3	252.5	236.1
47°	302.3	328.3	345.7	352.7	352.9	339.7	318.3	292.9	266.6	243.7	227.0
47.5°	292.6	318.8	336.6	343.8	343.4	330.0	309.0	284.1	257.9	235.4	218.0
48°	282.9	309.4	327.6	334.8	333.6	320.4	299.6	275.3	249.0	226.5	209.2
48.5°	273.3	299.9	318.6	325.7	323.9	310.7	290.1	266.5	240.4	217.9	200.7
49°	264.0	290.4	309.8	316.6	314.2	300.9	280.6	257.4	231.8	209.3	191.9
49.5°	254.5	280.7	300.5	307.3	304.6	291.2	271.2	248.7	223.3	201.0	183.5
50°	245.4	271.2	291.3	297.8	295.1	281.3	261.5	239.6	214.6	192.7	175.1
50.5°	235.8	261.7	281.9	288.3	286.0	271.6	252.0	230.8	206.1	184.4	167.0
51°	226.8	252.4	272.7	278.9	276.1	262.1	242.5	221.6	197.8	176.4	159.1
51.5°	217.7	242.9	263.2	269.3	266.8	252.8	233.2	213.1	189.6	168.4	151.5
52°	208.9	233.9	254.2	260.2	257.7	243.5	223.9	204.3	181.4	160.4	143.8
52.5°	199.9	224.8	244.6	250.6	248.8	233.9	214.8	195.5	173.3	152.5	136.5
53°	191.2	215.6	235.2	241.2	239.3	224.6	205.6	186.8	165.3	144.9	129.0
53.5°	182.5	206.5	225.7	231.5	230.0	215.6	196.8	178.5	157.4	137.4	122.0
54°	174.0	197.6	216.5	222.4	221.0	206.6	187.7	170.0	149.7	129.9	115.1
54.5°	165.5	189.0	207.2	213.0	212.5	197.7	179.2	161.5	142.0	122.7	108.4
55°	157.3	180.3	198.1	204.1	203.5	188.8	170.6	153.5	134.5	115.7	102.1
55.5°	149.0	171.7	189.0	194.8	194.6	180.3	162.3	145.5	127.0	108.8	96.2
56°	141.2	163.3	179.9	186.3	185.9	171.6	154.0	137.5	119.8	102.2	90.1
56.5°	133.3	155.1	171.1	177.4	177.6	163.2	145.8	129.6	112.6	96.0	84.1
57°	125.8	146.9	162.0	168.7	168.9	154.9	137.9	122.2	105.7	89.8	78.2
57.5°	118.2	138.9	153.5	159.9	160.5	146.9	130.2	114.8	98.9	83.6	72.2
58°	111.0	131.1	145.1	151.9	152.4	139.1	122.8	107.5	92.4	77.5	66.9
58.5°	103.9	123.5	136.8	143.5	144.1	131.4	115.5	100.5	86.0	71.3	61.9
59°	97.1	115.7	128.6	135.3	136.3	123.9	108.3	94.0	79.6	65.7	56.9
59.5°	90.5	108.4	120.6	127.1	128.6	116.6	101.3	87.4	73.2	60.4	52.1
60°	83.8	101.2	112.8	119.7	120.9	109.3	95.0	80.8	67.1	55.2	47.7
60.5°	77.5	94.1	105.3	112.0	113.5	102.5	88.7	74.3	61.4	50.4	43.2
61°	71.4	87.1	97.9	104.3	106.1	96.1	82.4	68.4	56.0	45.6	39.1
61.5°	65.6	80.6	91.0	97.2	99.3	89.7	76.1	62.8	50.7	41.2	35.2
62°	60.0	74.2	84.1	90.1	92.5	83.3	69.7	57.3	45.7	37.0	31.6
62.5°	54.4	68.0	77.4	83.2	85.8	77.0	64.0	52.1	40.7	33.1	28.1
63°	49.0	61.9	71.0	76.6	79.1	70.6	58.5	46.9	36.3	29.2	24.7
63.5°	43.7	56.1	64.9	69.9	72.3	64.9	53.4	42.3	32.0	25.8	21.7
64°	38.5	50.4	59.0	63.8	66.1	59.3	48.3	37.9	28.1	22.5	18.9
64.5°	34.1	44.9	53.4	57.8	60.2	53.8	43.7	33.8	24.6	19.5	16.2
65°	29.7	39.7	48.0	52.2	54.6	48.7	39.2	29.8	21.2	16.8	13.9
65.5°	25.4	35.2	42.8	46.8	49.1	43.7	35.0	26.2	18.0	14.3	12.2
66°	21.0	31.1	37.9	41.6	43.8	39.0	30.9	22.9	15.3	12.1	10.6





TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	10.9	18.9	26.0	28.8	29.9	26.3	20.6	14.3	10.1	8.0	5.6
68°	8.7	15.9	22.0	25.0	25.9	22.7	17.6	12.1	8.6	6.5	4.9
68.5°	7.1	13.2	18.0	21.0	22.2	19.4	14.9	10.8	7.1	5.2	4.5
69°	6.2	10.9	14.9	17.1	18.7	16.4	12.6	9.5	5.7	4.7	4.1
69.5°	5.7	9.0	12.2	14.2	15.5	13.7	11.1	8.2	5.3	4.4	3.8
70°	5.4	7.5	9.9	11.7	13.0	12.0	9.6	6.8	5.0	4.0	3.6
70.5°	5.1	6.2	8.0	9.5	11.4	10.4	8.2	5.6	4.7	3.8	3.4
71°	4.8	5.3	6.5	7.8	9.8	8.7	6.7	5.1	4.4	3.6	3.1
71.5°	4.5	4.9	5.5	6.4	8.3	7.0	5.3	4.8	4.0	3.3	2.9
72°	4.1	4.6	4.9	5.4	6.7	5.4	4.9	4.5	3.8	3.1	2.8
72.5°	3.9	4.2	4.5	4.9	5.2	4.9	4.6	4.1	3.5	2.9	2.6
73°	3.7	3.9	4.1	4.6	4.8	4.6	4.2	3.9	3.3	2.7	2.4
73.5°	3.4	3.7	3.9	4.2	4.5	4.2	3.9	3.6	3.1	2.6	2.3
74°	3.2	3.5	3.7	3.9	4.1	3.9	3.7	3.4	2.9	2.4	2.1
74.5°	3.0	3.2	3.4	3.7	3.9	3.7	3.4	3.2	2.7	2.2	2.0
75°	2.8	3.0	3.2	3.4	3.6	3.4	3.2	3.0	2.6	2.1	1.8
75.5°	2.6	2.8	3.0	3.2	3.4	3.2	3.0	2.8	2.4	2.0	1.7
76°	2.5	2.7	2.8	3.0	3.2	3.0	2.8	2.6	2.2	1.8	1.6
76.5°	2.3	2.5	2.6	2.8	3.0	2.8	2.6	2.4	2.1	1.7	1.5
77°	2.2	2.3	2.5	2.6	2.8	2.6	2.5	2.3	2.0	1.6	1.3
77.5°	2.0	2.2	2.3	2.5	2.6	2.5	2.3	2.1	1.8	1.5	1.2
78°	1.9	2.1	2.2	2.3	2.4	2.3	2.1	2.0	1.7	1.3	1.1
78.5°	1.8	1.9	2.0	2.2	2.3	2.2	2.0	1.8	1.6	1.2	1.0
79°	1.6	1.8	1.9	2.0	2.1	2.0	1.9	1.7	1.5	1.1	0.9
79.5°	1.5	1.7	1.8	1.9	2.0	1.9	1.7	1.6	1.3	1.0	0.9
80°	1.3	1.5	1.6	1.8	1.9	1.8	1.6	1.5	1.2	0.9	0.8
80.5°	1.2	1.3	1.5	1.7	1.7	1.7	1.5	1.3	1.1	0.8	0.7
81°	1.1	1.2	1.3	1.6	1.6	1.5	1.3	1.2	1.0	0.7	0.6
81.5°	1.0	1.1	1.2	1.5	1.5	1.3	1.2	1.1	0.9	0.6	0.6
82°	0.8	1.0	1.1	1.3	1.3	1.2	1.1	1.0	0.8	0.5	0.5
82.5°	0.7	0.9	1.1	1.2	1.2	1.2	1.0	0.9	0.6	0.4	0.5
83°	0.6	0.8	1.0	1.1	1.1	1.1	1.0	0.8	0.5	0.4	0.4
83.5°	0.4	0.7	0.9	1.0	1.0	1.0	0.9	0.7	0.4	0.3	0.4
84°	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	0.2	0.3
84.5°	0.2	0.5	0.7	0.8	0.9	0.8	0.7	0.5	0.2	0.2	0.2
85°	0.2	0.4	0.7	0.8	0.8	0.8	0.7	0.4	0.1	0.2	0.2
85.5°	0.1	0.4	0.6	0.7	0.7	0.7	0.6	0.4	0.1	0.1	0.1
86°	0.1	0.3	0.6	0.6	0.7	0.6	0.5	0.3	0.1	0.1	0.1
86.5°	0.1	0.3	0.5	0.6	0.6	0.6	0.5	0.3	0.1	0.1	0.0
87°	0.1	0.3	0.4	0.5	0.5	0.5	0.4	0.2	0.0	0.0	0.0
87.5°	0.0	0.2	0.4	0.4	0.5	0.4	0.3	0.2	0.0	0.0	0.0
88°	0.0	0.1	0.3	0.4	0.4	0.4	0.3	0.1	0.0	0.0	0.0
88.5°	0.0	0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.0



TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**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	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1



TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	677.7	677.7	677.7	677.7	677.7	677.7
0.5°	676.8	676.5	676.5	676.9	677.4	678.1
1°	675.9	675.6	675.8	676.4	677.3	678.2
1.5°	674.9	674.6	674.9	675.8	677.0	678.3
2°	673.7	673.4	673.9	675.2	676.6	678.3
2.5°	672.6	672.3	672.9	674.4	676.2	678.2
3°	671.2	670.9	671.9	673.5	675.7	678.0
3.5°	669.8	669.6	670.6	672.6	675.1	677.7
4°	668.3	668.0	669.4	671.6	674.4	677.4
4.5°	666.8	666.5	667.9	670.4	673.6	676.9
5°	665.1	664.8	666.5	669.3	672.8	676.4
5.5°	663.4	663.1	664.9	668.0	671.8	675.8
6°	661.5	661.3	663.3	666.7	670.7	675.1
6.5°	659.6	659.4	661.5	665.2	669.6	674.3
7°	657.7	657.4	659.6	663.6	668.4	673.5
7.5°	655.6	655.3	657.8	661.9	667.1	672.5
8°	653.4	653.0	655.7	660.2	665.9	671.5
8.5°	651.1	650.8	653.6	658.4	664.4	670.3
9°	648.9	648.5	651.4	656.5	662.9	669.2
9.5°	646.5	646.0	649.1	654.5	661.1	667.8
10°	644.0	643.4	646.7	652.4	659.4	666.5
10.5°	641.4	640.8	644.2	650.3	657.7	665.0
11°	638.7	638.1	641.7	648.1	655.8	663.5
11.5°	635.9	635.3	639.0	645.8	653.8	661.8
12°	633.1	632.4	636.3	643.3	651.8	660.2
12.5°	630.1	629.3	633.4	640.7	649.5	658.3
13°	627.1	626.3	630.4	638.2	647.3	656.4
13.5°	624.0	623.1	627.4	635.4	645.0	654.4
14°	620.8	619.7	624.3	632.6	642.6	652.3
14.5°	617.5	616.4	621.0	629.7	640.1	650.1
15°	614.0	612.8	617.7	626.8	637.5	647.9
15.5°	610.6	609.2	614.2	623.7	634.7	645.5
16°	607.0	605.6	610.7	620.5	631.9	643.1
16.5°	603.3	601.8	607.0	617.3	629.1	640.5
17°	599.5	598.0	603.4	613.9	626.2	637.9
17.5°	595.7	594.1	599.5	610.5	623.0	635.1
18°	591.9	590.0	595.7	606.9	619.9	632.3
18.5°	587.8	585.9	591.7	603.3	616.5	629.4
19°	583.8	581.7	587.6	599.5	613.2	626.4
19.5°	579.5	577.6	583.6	595.8	609.8	623.3
20°	575.3	573.2	579.4	591.9	606.3	620.1
20.5°	571.0	568.8	575.2	587.9	602.7	616.7
21°	566.7	564.3	570.7	583.9	598.9	613.3



TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	553.2	550.6	557.6	571.4	587.4	602.5
23°	548.6	546.0	552.9	567.1	583.4	598.9
23.5°	544.0	541.3	548.5	562.8	579.3	595.0
24°	539.2	536.5	543.8	558.2	575.1	591.0
24.5°	534.5	531.8	539.1	553.7	570.9	587.0
25°	529.7	526.9	534.3	549.2	566.6	582.9
25.5°	524.7	522.0	529.6	544.6	562.2	578.7
26°	519.9	517.3	524.7	540.0	557.9	574.5
26.5°	514.9	512.3	520.0	535.3	553.4	570.1
27°	509.9	507.4	515.1	530.5	548.9	565.9
27.5°	504.9	502.3	510.2	525.8	544.3	561.3
28°	499.9	497.3	505.2	520.9	539.5	556.7
28.5°	494.7	492.2	500.2	516.0	534.9	552.2
29°	489.7	487.2	495.3	511.1	530.0	547.5
29.5°	484.5	482.0	490.2	506.1	525.2	542.8
30°	479.2	476.8	485.1	501.1	520.4	538.0
30.5°	473.9	471.5	480.0	495.9	515.3	533.2
31°	468.5	466.2	474.6	490.8	510.2	528.3
31.5°	463.1	460.8	469.3	485.6	505.2	523.4
32°	457.5	455.4	464.0	480.3	500.1	518.3
32.5°	452.1	449.9	458.6	474.9	494.9	513.3
33°	446.5	444.3	453.1	469.6	489.4	507.9
33.5°	440.9	438.9	447.7	464.1	484.0	502.9
34°	435.2	433.2	442.2	458.6	478.6	497.4
34.5°	429.4	427.4	436.4	452.9	472.9	492.1
35°	423.4	421.5	430.6	447.4	467.4	486.4
35.5°	417.5	415.5	424.8	441.6	461.7	481.2
36°	411.4	409.0	418.8	435.8	456.0	475.5
36.5°	404.4	402.1	412.3	429.5	450.2	469.9
37°	397.0	394.6	405.0	423.3	444.0	463.9
37.5°	389.3	386.5	397.5	416.3	437.7	458.4
38°	381.1	378.2	389.4	409.0	431.3	452.1
38.5°	372.8	369.7	381.1	401.3	424.6	445.9
39°	364.3	361.2	372.7	393.5	417.6	439.3
39.5°	355.6	352.5	364.1	385.7	410.1	433.1
40°	346.6	343.5	355.6	377.4	402.1	426.3
40.5°	337.9	334.5	346.8	369.0	394.3	419.1
41°	328.7	325.6	338.3	360.5	386.1	411.8
41.5°	319.7	316.7	329.5	351.7	377.8	404.1
42°	310.4	307.9	320.8	342.9	369.4	396.2
42.5°	301.4	298.8	312.1	334.1	360.5	387.8
43°	292.0	289.8	303.5	325.0	351.6	378.9
43.5°	283.0	281.0	294.7	315.7	342.4	369.7



TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	255.7	254.4	268.0	288.3	314.3	341.3
45.5°	246.7	245.6	259.0	278.7	304.7	331.5
46°	237.8	236.8	249.8	269.9	295.1	321.6
46.5°	229.1	228.0	240.6	260.6	285.2	312.0
47°	220.1	219.3	231.9	251.4	275.4	302.3
47.5°	211.5	210.7	222.8	242.0	265.7	292.6
48°	203.1	202.2	214.2	233.0	256.0	282.9
48.5°	194.6	193.8	205.4	223.6	246.2	273.3
49°	186.2	185.6	196.7	214.8	236.8	264.0
49.5°	177.8	177.3	188.3	205.7	227.3	254.5
50°	169.7	169.2	179.8	196.8	217.8	245.4
50.5°	161.6	161.1	171.4	187.3	208.5	235.8
51°	153.9	153.4	163.0	179.2	199.5	226.8
51.5°	146.3	145.7	155.0	170.4	190.6	217.7
52°	138.5	138.1	147.0	161.9	181.9	208.9
52.5°	131.2	130.8	139.3	152.9	173.1	199.9
53°	123.9	123.4	131.5	145.2	164.7	191.2
53.5°	116.9	116.3	123.8	137.1	156.5	182.5
54°	110.0	109.3	116.4	128.9	148.3	174.0
54.5°	103.3	102.6	109.3	121.2	140.5	165.5
55°	97.3	95.8	102.3	113.8	132.7	157.3
55.5°	91.2	89.4	95.2	106.5	125.2	149.0
56°	85.2	83.0	88.6	99.5	117.8	141.2
56.5°	79.1	76.9	82.1	92.5	110.8	133.3
57°	72.9	71.0	75.8	85.9	103.7	125.8
57.5°	67.6	65.2	69.7	79.7	96.9	118.2
58°	62.4	59.7	63.8	73.6	90.3	111.0
58.5°	57.3	54.4	58.3	67.8	83.9	103.9
59°	52.6	49.4	52.9	62.1	77.7	97.1
59.5°	47.9	44.7	48.0	56.8	71.7	90.5
60°	43.4	40.1	43.2	51.8	65.9	83.8
60.5°	39.2	35.9	38.7	46.8	60.3	77.5
61°	35.3	32.2	34.9	42.2	54.9	71.4
61.5°	31.4	28.6	31.3	37.9	49.8	65.6
62°	27.9	25.1	27.7	34.4	45.1	60.0
62.5°	24.7	21.4	24.0	30.8	40.3	54.4
63°	21.7	18.5	20.4	27.3	35.9	49.0
63.5°	18.7	16.1	17.6	23.7	32.1	43.7
64°	16.1	13.7	15.1	20.2	28.5	38.5
64.5°	13.7	11.8	13.1	17.4	24.9	34.1
65°	12.2	10.1	11.2	14.9	21.2	29.7
65.5°	10.8	8.6	9.6	12.6	18.2	25.4
66°	9.3	7.3	8.2	10.7	15.4	21.0



TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	5.1	4.9	5.3	6.3	9.0	10.9
68°	4.6	4.6	4.8	5.5	7.6	8.7
68.5°	4.2	4.2	4.5	4.9	6.3	7.1
69°	4.0	3.9	4.1	4.6	5.5	6.2
69.5°	3.7	3.7	3.9	4.2	5.0	5.7
70°	3.5	3.5	3.7	4.0	4.7	5.4
70.5°	3.3	3.3	3.4	3.7	4.4	5.1
71°	3.0	3.0	3.2	3.5	4.0	4.8
71.5°	2.8	2.8	3.0	3.3	3.8	4.5
72°	2.7	2.7	2.8	3.1	3.6	4.1
72.5°	2.5	2.5	2.6	2.9	3.3	3.9
73°	2.3	2.3	2.4	2.7	3.1	3.7
73.5°	2.2	2.2	2.3	2.5	2.9	3.4
74°	2.0	2.0	2.1	2.3	2.7	3.2
74.5°	1.9	1.9	2.0	2.2	2.5	3.0
75°	1.8	1.8	1.9	2.1	2.4	2.8
75.5°	1.7	1.7	1.8	1.9	2.2	2.6
76°	1.6	1.6	1.6	1.8	2.1	2.5
76.5°	1.5	1.5	1.5	1.7	1.9	2.3
77°	1.3	1.3	1.3	1.6	1.8	2.2
77.5°	1.2	1.2	1.2	1.5	1.7	2.0
78°	1.1	1.1	1.2	1.3	1.6	1.9
78.5°	1.0	1.0	1.1	1.2	1.3	1.8
79°	0.9	0.9	1.0	1.1	1.2	1.6
79.5°	0.9	0.9	0.9	1.0	1.1	1.5
80°	0.8	0.8	0.8	0.9	1.0	1.3
80.5°	0.7	0.7	0.8	0.8	0.9	1.2
81°	0.7	0.7	0.7	0.7	0.8	1.1
81.5°	0.6	0.6	0.6	0.7	0.7	1.0
82°	0.5	0.5	0.6	0.6	0.6	0.8
82.5°	0.5	0.5	0.5	0.5	0.5	0.7
83°	0.4	0.4	0.4	0.5	0.4	0.6
83.5°	0.4	0.3	0.4	0.4	0.4	0.4
84°	0.3	0.3	0.3	0.4	0.3	0.3
84.5°	0.2	0.2	0.2	0.3	0.3	0.2
85°	0.2	0.1	0.2	0.2	0.2	0.2
85.5°	0.1	0.1	0.1	0.2	0.2	0.1
86°	0.0	0.0	0.0	0.1	0.1	0.1
86.5°	0.0	0.0	0.0	0.0	0.1	0.1
87°	0.0	0.0	0.0	0.0	0.0	0.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.1	0.0	0.0	0.0	0.0
88.5°	0.1	0.1	0.1	0.0	0.0	0.0



TEST NUMBER: P775622

CATALOG NUMBER: HCDJBL510CSD-HCD41TRH-1000lm-3500K

**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

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1121 Highway 74 South  
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°	609.8	621.3	628.5	631.1	631.7	624.0	611.5	596.2	582.2	572.8	566.8
22°	606.3	617.9	625.2	628.0	628.5	620.8	607.9	592.3	578.1	568.6	562.4



44°	360.4	382.4	396.2	403.3	406.7	393.9	372.2	345.9	318.8	296.9	281.9
44.5°	351.1	373.8	388.1	395.1	398.6	385.3	363.5	337.2	310.1	288.1	272.7



66.5°	16.7	27.0	34.0	36.7	39.0	34.5	27.1	19.7	13.0	10.7	8.9
67°	13.5	22.9	29.9	32.7	34.3	30.3	23.7	16.8	11.5	9.3	7.3



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



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21.5°	562.1	559.9	566.4	579.9	595.2	609.8
22°	557.7	555.2	562.0	575.6	591.3	606.3



44°	273.9	272.2	285.8	306.6	333.2	360.4
44.5°	264.9	263.2	276.7	297.2	324.0	351.1

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66.5°	8.0	6.3	6.9	8.9	13.1	16.7
67°	6.5	5.4	6.0	7.5	10.9	13.5

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89°	0.1	0.1	0.0	0.1	0.0	0.0
89.5°	0.1	0.0	0.0	0.1	0.0	0.0

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(END OF REPORT)