

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: P775683

Luminaire Tested: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775683
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD4TRMB-1000lm-4000K
Description: 4 INCH ROUND MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

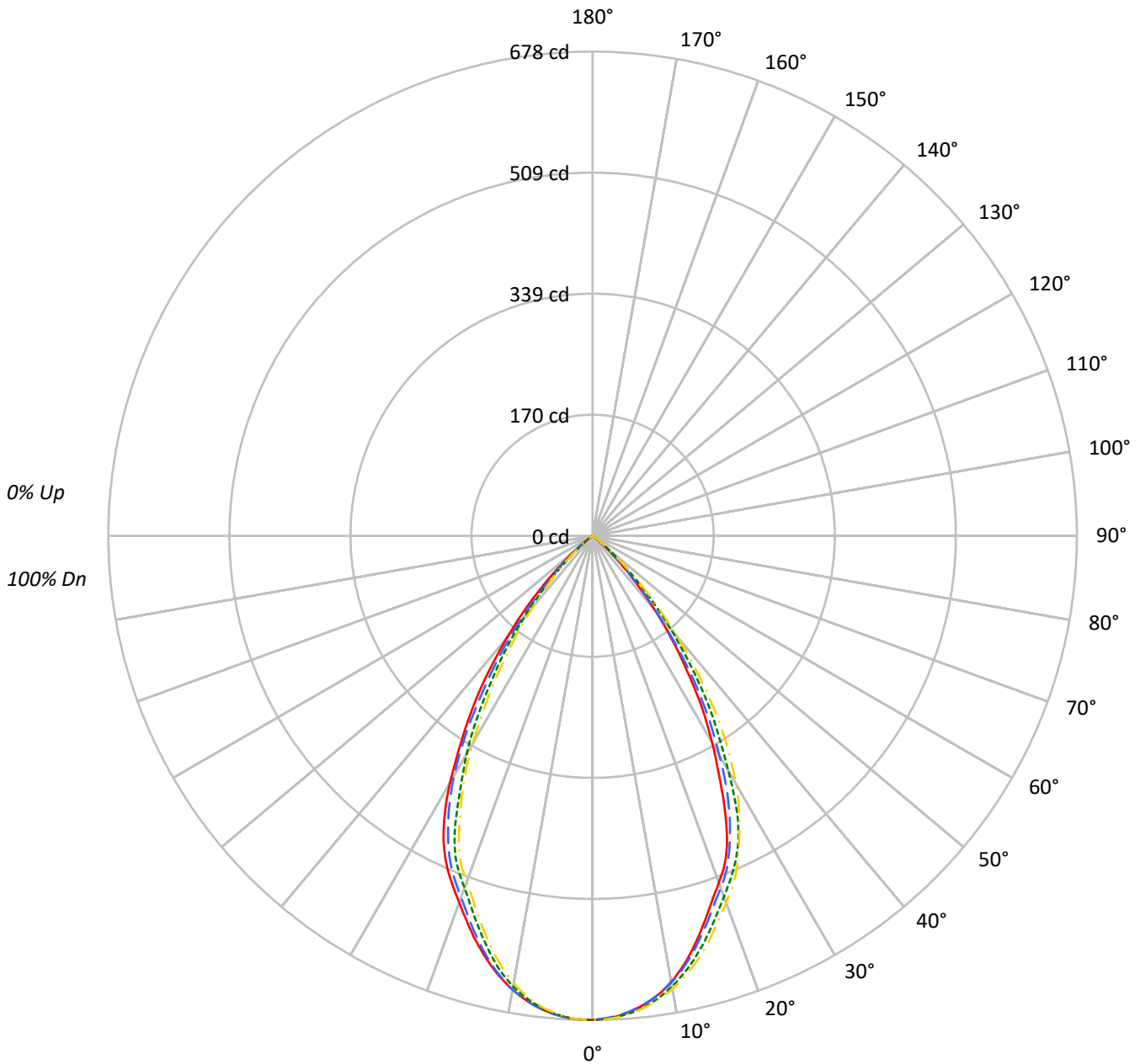
Lumens per Lamp: N/A
Luminaire Lumens: 665.5 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.94
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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								
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86								
3	102	95	90	86	100	94	89	85	91	87	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74								
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69								
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64								
7	82	72	66	62	81	72	66	62	70	65	61	69	65	61	68	64	61	59								
8	78	68	62	58	77	67	62	57	66	61	57	65	60	57	64	60	57	55								
9	74	64	58	54	73	63	58	54	62	57	53	62	57	53	61	56	53	52								
10	70	60	54	50	69	60	54	50	59	54	50	58	53	50	57	53	50	48								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	85314	85314	85314	85314
5°	84199	84490	84743	84578
10°	81045	81850	82476	81876
15°	75268	77340	78382	76467
20°	69227	72012	73151	70244
25°	61473	66764	68069	63376
30°	48653	55207	58026	51254
35°	35367	42019	44738	37671
40°	22129	27748	30787	24331
45°	10002	14879	17139	11426
50°	2898	4542	5932	3407
55°	461	461	614	570
60°	176	176	201	176
65°	119	119	119	119
70°	74	110	110	110
75°	49	97	49	97
80°	0	72	72	72
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 17139 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	9.5
10°-20°	165.1	24.8
20°-30°	210.7	31.7
30°-40°	161.1	24.2
40°-50°	60.2	9.0
50°-60°	4.9	0.7
60°-70°	0.4	0.1
70°-80°	0.2	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°	438.7	65.9
0°-40°	599.8	90.1
0°-60°	664.9	99.9
0°-90°	665.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	665.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	678	678	678	678	678	
5°	666	669	671	670	666	63
15°	578	594	602	587	578	162
25°	443	481	490	456	443	199
35°	230	274	291	245	230	143
45°	56	84	96	64	56	47
55°	2	2	3	3	2	3
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9
0.5°	677.7	677.2	677.2	677.2	677.7	677.8	678.1	678.4	678.0	677.7	677.7
1°	677.3	676.8	676.7	676.8	677.3	677.5	677.8	678.0	677.9	677.7	677.6
1.5°	676.7	676.0	675.9	676.0	676.8	677.1	677.4	677.7	677.5	677.4	677.5
2°	675.8	675.2	675.0	675.2	676.1	676.5	676.8	677.1	677.1	677.0	677.1
2.5°	674.8	674.0	673.9	674.3	675.3	675.6	675.9	676.4	676.5	676.4	676.5
3°	673.5	672.8	672.7	673.1	674.3	674.7	675.0	675.4	675.6	675.6	675.7
3.5°	672.0	671.2	671.3	671.8	673.1	673.5	673.9	674.4	674.7	674.8	674.8
4°	670.4	669.6	669.6	670.3	671.8	672.3	672.6	673.1	673.5	673.7	673.7
4.5°	668.5	667.7	667.8	668.7	670.5	670.9	671.2	671.7	672.3	672.5	672.5
5°	666.5	665.6	665.7	666.8	668.8	669.2	669.5	670.2	670.8	671.1	671.0
5.5°	664.2	663.2	663.6	664.7	666.9	667.3	667.7	668.4	669.1	669.4	669.2
6°	661.7	660.8	661.2	662.5	664.9	665.3	665.7	666.5	667.3	667.6	667.3
6.5°	659.1	658.3	658.8	660.1	662.6	663.2	663.6	664.4	665.3	665.6	665.3
7°	656.3	655.4	656.1	657.3	660.1	660.8	661.3	662.2	663.0	663.4	663.1
7.5°	653.2	652.5	653.0	654.4	657.3	658.2	658.9	659.6	660.5	661.0	660.7
8°	650.0	649.3	649.9	651.3	654.4	655.3	656.3	657.1	658.0	658.3	658.0
8.5°	646.4	646.0	646.6	648.0	651.2	652.3	653.5	654.3	655.0	655.5	655.1
9°	642.6	642.3	643.0	644.4	647.9	649.2	650.6	651.3	652.1	652.4	652.1
9.5°	638.4	638.4	639.3	640.7	644.3	645.9	647.5	648.4	648.8	649.1	648.8
10°	634.2	634.2	635.2	636.7	640.5	642.4	644.1	645.0	645.4	645.6	645.2
10.5°	629.8	629.8	630.8	632.6	636.8	638.6	640.5	641.6	641.8	641.9	641.5
11°	624.7	625.0	626.3	628.1	632.6	634.7	636.8	637.9	638.1	638.0	637.5
11.5°	619.6	620.0	621.6	623.5	628.3	630.7	633.1	634.0	634.0	633.9	633.2
12°	614.1	614.8	616.6	618.7	624.0	626.5	629.0	630.0	630.0	629.6	628.8
12.5°	608.5	609.2	611.2	613.7	619.3	622.0	624.6	625.8	625.7	625.1	624.2
13°	602.6	603.5	605.8	608.6	614.4	617.4	620.3	621.5	621.2	620.3	619.1
13.5°	596.5	597.7	600.2	603.1	609.6	612.7	615.6	616.8	616.6	615.6	614.1
14°	590.3	591.7	594.6	597.7	604.3	607.8	610.8	612.1	611.7	610.5	608.8
14.5°	584.0	585.7	588.7	592.2	599.0	602.8	605.7	607.1	606.7	605.3	603.2
15°	577.7	579.4	582.7	586.4	593.6	597.5	600.7	602.0	601.6	599.9	597.6
15.5°	571.1	573.2	576.6	580.7	588.3	592.2	595.5	596.8	596.4	594.6	591.9
16°	564.6	566.9	570.7	574.8	582.6	586.9	590.3	591.5	591.0	589.0	586.1
16.5°	558.3	560.8	564.7	569.0	577.0	581.4	584.7	586.4	585.7	583.4	580.2
17°	552.0	554.5	558.6	563.3	571.4	575.9	579.3	580.8	580.1	577.7	574.3
17.5°	545.7	548.3	552.6	557.5	565.6	570.2	573.7	575.0	574.4	571.9	568.2
18°	539.4	542.2	546.7	551.6	559.9	564.6	568.1	569.7	568.7	566.1	562.3
18.5°	533.3	536.5	540.8	545.8	554.1	559.1	562.6	564.0	562.9	560.2	556.2
19°	527.6	530.9	535.4	540.2	548.5	553.6	557.1	558.4	557.3	554.4	550.2
19.5°	522.3	525.6	529.9	534.9	543.2	548.1	551.8	553.1	551.9	548.7	544.3
20°	516.9	520.4	524.7	529.6	537.7	542.8	546.8	547.8	546.2	543.2	538.8
20.5°	511.7	515.0	519.4	524.3	532.5	537.6	541.5	542.7	541.1	537.7	533.3
21°	506.3	509.8	514.0	518.9	527.2	532.5	536.1	537.5	535.8	532.5	527.9



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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°	487.5	490.7	494.8	501.4	511.2	516.4	519.7	521.3	520.1	516.6	511.6
23°	479.9	483.3	487.6	495.3	505.7	510.6	513.5	515.4	514.7	511.0	505.6
23.5°	471.7	475.3	480.0	488.3	499.9	504.4	506.7	508.8	508.9	505.3	499.1
24°	462.6	466.4	472.0	481.1	494.0	497.8	499.5	502.1	502.9	499.5	492.4
24.5°	452.9	456.7	463.5	473.4	487.6	491.1	492.2	494.8	496.7	493.2	485.1
25°	442.7	446.4	455.2	465.6	480.8	483.8	484.5	487.4	490.2	486.7	477.5
25.5°	432.0	435.9	446.5	457.1	473.6	476.1	476.3	479.5	483.3	479.8	469.6
26°	420.8	425.2	437.8	448.9	465.8	468.0	468.4	471.5	475.8	472.6	461.6
26.5°	409.5	414.4	428.3	440.3	457.3	459.6	460.5	463.4	467.8	464.7	453.1
27°	398.0	403.9	418.7	431.4	448.2	451.1	452.6	455.3	459.3	456.1	444.6
27.5°	387.1	393.5	408.8	422.2	438.1	442.4	444.6	447.1	450.6	447.1	436.2
28°	376.1	383.6	398.2	412.4	427.5	433.5	436.4	438.9	440.9	437.6	427.2
28.5°	365.3	374.1	387.5	402.1	415.9	424.0	428.2	430.5	431.1	427.8	418.0
29°	355.0	364.6	376.7	391.6	404.1	414.4	419.8	422.0	421.2	417.1	408.4
29.5°	344.9	355.0	365.6	380.5	392.0	404.4	410.6	412.9	410.2	406.1	398.4
30°	334.8	345.3	354.5	368.8	379.9	393.9	401.2	403.7	399.3	394.8	387.6
30.5°	324.8	335.2	343.9	356.6	368.3	383.1	391.2	393.8	387.6	382.9	376.9
31°	314.6	324.8	333.1	344.7	357.0	372.0	381.4	384.2	376.3	371.0	365.8
31.5°	304.4	314.1	322.7	332.2	346.2	360.7	371.2	373.7	364.9	359.0	354.6
32°	294.1	303.2	312.0	320.0	336.0	349.3	361.2	363.1	354.1	347.5	342.9
32.5°	283.8	291.8	301.3	308.2	325.6	338.0	351.2	352.1	343.2	336.2	331.6
33°	273.1	280.5	290.5	296.0	315.7	326.9	340.9	341.3	332.8	325.1	319.6
33.5°	262.1	269.3	279.6	284.0	305.2	315.8	330.1	330.3	322.0	314.2	307.5
34°	251.3	258.6	268.3	272.3	294.7	305.3	319.5	319.4	312.1	303.3	295.2
34.5°	240.8	247.4	257.2	261.0	283.9	295.0	308.5	308.1	301.5	292.8	283.6
35°	230.2	237.0	246.1	249.7	273.5	285.2	297.4	297.1	291.2	282.4	271.5
35.5°	220.2	227.0	234.6	238.8	261.9	274.9	285.8	286.1	280.7	271.9	260.1
36°	210.3	216.9	223.1	228.2	250.8	264.4	274.3	275.1	270.6	261.3	249.1
36.5°	200.6	207.1	212.0	217.8	239.9	254.3	262.7	263.9	259.8	250.5	238.4
37°	191.1	197.0	200.3	207.5	229.1	244.1	251.2	252.6	249.1	239.4	227.6
37.5°	181.6	187.2	189.1	197.4	218.4	233.4	239.6	241.8	238.3	228.5	217.5
38°	172.2	177.1	178.0	187.2	208.3	222.7	228.9	231.2	227.7	217.6	207.2
38.5°	162.7	167.1	167.7	177.3	198.2	211.9	217.9	220.8	217.4	206.8	197.0
39°	153.5	157.3	157.9	167.6	188.7	201.4	207.1	210.4	207.3	197.1	186.9
39.5°	143.9	147.1	148.0	158.6	178.6	190.9	196.3	200.1	197.2	186.5	177.0
40°	134.7	137.4	138.3	149.1	168.9	180.8	185.6	189.6	187.4	176.7	167.1
40.5°	125.6	127.8	129.5	140.3	159.4	170.8	175.0	179.4	177.5	167.3	157.3
41°	116.7	118.6	120.7	131.6	150.2	161.2	164.8	169.1	168.4	158.5	147.5
41.5°	107.8	109.6	112.1	123.0	140.6	151.6	154.9	158.7	158.9	149.1	138.1
42°	99.7	100.8	103.8	114.3	131.3	142.3	145.2	148.7	149.1	140.5	128.8
42.5°	91.7	92.6	96.1	106.4	122.4	133.1	135.6	139.2	139.8	131.8	119.9
43°	84.1	84.6	88.3	98.5	113.9	123.8	126.2	129.8	130.8	123.7	111.4
43.5°	76.5	76.9	81.1	90.7	105.7	114.5	117.5	120.7	121.6	114.9	103.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	56.2	55.7	61.1	69.2	83.6	88.8	93.0	95.6	96.3	92.1	81.1
45.5°	50.1	49.5	55.3	62.6	76.2	80.4	85.1	87.8	88.4	84.6	73.8
46°	44.5	43.8	49.7	56.4	68.8	72.0	77.3	79.9	80.5	77.1	67.2
46.5°	39.0	38.5	44.6	50.8	62.0	64.6	69.5	72.1	72.6	69.8	61.0
47°	35.1	34.7	39.5	45.3	55.4	57.7	62.4	64.7	65.3	63.0	55.0
47.5°	31.3	30.8	35.6	40.0	49.1	51.2	55.7	57.9	58.6	56.7	49.4
48°	27.5	26.9	31.7	35.1	43.1	45.2	49.6	51.4	52.2	50.7	44.2
48.5°	23.8	23.1	27.9	30.8	37.5	39.5	43.7	45.4	46.2	44.6	39.4
49°	20.0	19.2	24.0	27.1	32.3	34.5	38.2	39.6	40.5	39.1	34.8
49.5°	17.3	16.7	20.1	23.8	27.4	29.7	33.0	34.4	35.2	34.1	30.6
50°	14.8	14.3	17.0	20.4	23.2	25.4	28.2	29.6	30.3	29.3	26.7
50.5°	12.6	12.2	14.3	17.0	19.4	21.5	23.9	25.3	25.9	25.1	23.0
51°	10.6	10.2	11.8	13.7	16.1	18.0	19.9	21.3	21.8	21.1	19.8
51.5°	8.7	8.4	9.6	11.1	14.0	14.8	16.4	17.7	18.1	17.8	16.7
52°	7.1	6.8	7.6	8.8	11.9	12.6	14.0	14.5	14.8	14.7	14.0
52.5°	5.7	5.4	5.9	6.7	9.8	10.5	11.6	12.4	12.6	12.6	12.0
53°	4.3	4.1	4.4	5.0	7.7	8.3	9.2	10.2	10.5	10.4	10.0
53.5°	3.8	3.6	3.9	3.7	5.6	6.1	6.8	8.1	8.3	8.3	8.0
54°	3.3	2.9	3.3	3.0	3.5	4.0	4.5	5.9	6.1	6.2	5.9
54.5°	2.7	2.3	2.7	2.6	2.5	2.8	3.2	3.8	4.0	4.0	4.0
55°	2.1	1.8	2.1	2.1	2.1	2.2	2.4	2.7	2.8	2.9	2.9
55.5°	1.6	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.2
56°	1.5	1.4	1.4	1.5	1.6	1.7	1.7	1.8	1.9	1.9	1.9
56.5°	1.3	1.3	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.7
57°	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.5
57.5°	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4
58°	0.9	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.2	1.2	1.2
58.5°	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.1	1.1	1.1	1.1
59°	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
59.5°	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
60°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
60.5°	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
61°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
61.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
62°	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
62.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
63°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
63.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
64°	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
64.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
65.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P775683

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
68°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
68.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
69°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
69.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
70°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
70.5°	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3
71°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
71.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
72°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
72.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
73°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
75.5°	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2
76°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
76.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
77°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
81.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
82°	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
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: P775683
CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P775683

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	677.9	677.9	677.9	677.9	677.9	677.9
0.5°	677.7	677.9	678.0	678.1	678.1	677.7
1°	677.7	677.8	677.8	677.9	677.8	677.3
1.5°	677.5	677.5	677.5	677.5	677.3	676.7
2°	677.1	677.0	677.0	676.9	676.5	675.8
2.5°	676.5	676.3	676.1	676.0	675.5	674.8
3°	675.7	675.3	675.2	675.0	674.5	673.5
3.5°	674.7	674.1	674.0	673.7	673.0	672.0
4°	673.4	672.8	672.7	672.3	671.4	670.4
4.5°	672.0	671.2	671.0	670.6	669.7	668.5
5°	670.6	669.5	669.1	668.6	667.7	666.5
5.5°	668.8	667.5	667.0	666.5	665.3	664.2
6°	666.8	665.3	664.8	664.1	663.0	661.7
6.5°	664.7	663.0	662.4	661.5	660.4	659.1
7°	662.4	660.5	659.6	658.7	657.3	656.3
7.5°	659.9	657.8	656.7	655.5	654.2	653.2
8°	657.2	654.8	653.5	652.2	651.0	650.0
8.5°	654.3	651.7	650.2	648.6	647.3	646.4
9°	651.1	648.3	646.5	644.7	643.5	642.6
9.5°	647.8	644.6	642.6	640.5	639.0	638.4
10°	644.2	640.7	638.4	636.2	634.8	634.2
10.5°	640.3	636.6	633.9	631.5	630.2	629.8
11°	636.3	632.2	629.2	626.5	625.2	624.7
11.5°	632.0	627.4	624.1	621.3	619.8	619.6
12°	627.3	622.4	618.8	615.7	614.2	614.1
12.5°	622.4	617.0	613.1	609.9	608.5	608.5
13°	617.4	611.3	607.3	604.0	602.5	602.6
13.5°	611.9	605.5	601.2	597.7	596.5	596.5
14°	606.3	599.5	595.0	591.4	589.9	590.3
14.5°	600.5	593.2	588.6	585.1	583.4	584.0
15°	594.6	586.9	582.1	578.6	577.0	577.7
15.5°	588.5	580.6	575.6	572.1	570.5	571.1
16°	582.4	574.1	569.0	565.3	564.0	564.6
16.5°	576.2	567.8	562.5	558.7	557.5	558.3
17°	569.9	561.4	555.8	552.1	550.9	552.0
17.5°	563.6	554.9	549.3	545.7	544.4	545.7
18°	557.4	548.3	542.9	539.1	538.1	539.4
18.5°	551.2	542.1	536.4	532.7	531.8	533.3
19°	545.0	535.8	530.2	526.6	526.0	527.6
19.5°	539.1	530.0	524.6	521.0	520.3	522.3
20°	533.4	524.5	518.8	515.5	514.8	516.9
20.5°	527.9	519.1	513.4	510.1	509.6	511.7
21°	522.5	513.8	507.9	504.5	504.3	506.3



TEST NUMBER: P775683

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	506.0	497.0	490.4	486.2	485.2	487.5
23°	499.5	490.4	483.3	478.3	477.3	479.9
23.5°	492.7	483.2	475.6	469.8	469.2	471.7
24°	485.4	475.0	466.8	460.5	460.0	462.6
24.5°	477.6	466.0	458.1	450.8	450.4	452.9
25°	469.3	456.4	448.4	440.6	440.4	442.7
25.5°	460.8	446.0	438.4	430.6	430.3	432.0
26°	451.7	435.0	427.7	420.8	419.6	420.8
26.5°	442.4	423.6	417.0	411.0	409.2	409.5
27°	432.8	412.5	405.5	401.3	398.6	398.0
27.5°	422.7	401.6	393.4	391.0	387.7	387.1
28°	412.4	391.4	381.7	380.7	377.0	376.1
28.5°	402.1	381.4	370.4	370.0	366.3	365.3
29°	391.5	371.8	359.5	358.8	355.2	355.0
29.5°	380.9	362.4	348.8	347.3	344.1	344.9
30°	370.6	352.7	338.3	335.7	332.8	334.8
30.5°	360.1	342.8	328.1	323.7	321.2	324.8
31°	349.9	332.6	317.9	311.6	309.9	314.6
31.5°	340.0	321.7	307.8	300.2	298.3	304.4
32°	329.9	310.7	297.3	288.7	287.4	294.1
32.5°	319.9	299.6	287.1	277.5	276.8	283.8
33°	310.0	288.2	276.6	266.7	266.4	273.1
33.5°	300.0	276.8	266.0	255.6	256.1	262.1
34°	289.4	265.9	255.4	244.9	245.8	251.3
34.5°	278.6	255.5	244.5	234.2	235.4	240.8
35°	267.4	245.2	233.9	223.5	225.0	230.2
35.5°	256.6	235.5	223.7	212.8	214.6	220.2
36°	244.6	226.2	213.5	202.7	204.1	210.3
36.5°	233.3	216.5	203.9	193.1	193.5	200.6
37°	221.8	207.1	194.1	183.5	183.3	191.1
37.5°	210.8	197.5	184.6	174.2	173.4	181.6
38°	199.8	187.5	175.1	164.9	163.9	172.2
38.5°	189.5	177.5	165.8	155.9	154.7	162.7
39°	179.0	167.7	156.8	147.3	146.1	153.5
39.5°	168.8	157.9	147.5	138.4	137.6	143.9
40°	158.6	148.1	138.5	130.2	129.3	134.7
40.5°	149.0	138.6	129.8	121.9	121.1	125.6
41°	139.3	129.7	121.2	114.1	113.4	116.7
41.5°	129.9	120.8	112.9	106.7	105.6	107.8
42°	120.8	112.4	104.8	99.7	98.3	99.7
42.5°	111.8	103.9	97.0	92.7	91.1	91.7
43°	103.2	95.9	89.6	86.2	84.4	84.1
43.5°	95.5	87.4	82.5	79.7	77.7	76.5



TEST NUMBER: P775683

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	72.7	64.2	62.9	61.9	59.8	56.2
45.5°	66.0	57.2	56.9	56.4	54.3	50.1
46°	59.7	50.7	51.3	51.4	49.4	44.5
46.5°	53.7	44.6	45.9	46.6	44.5	39.0
47°	48.1	39.2	40.8	41.8	39.8	35.1
47.5°	43.0	35.3	36.1	37.5	36.1	31.3
48°	38.0	31.4	32.4	33.9	32.4	27.5
48.5°	33.6	27.6	28.6	30.4	28.6	23.8
49°	29.5	23.9	24.9	26.8	24.8	20.0
49.5°	25.8	20.1	21.2	23.2	21.0	17.3
50°	22.3	17.4	18.2	19.7	18.1	14.8
50.5°	19.2	15.1	15.6	16.7	15.1	12.6
51°	16.4	12.9	13.2	14.1	12.7	10.6
51.5°	14.0	11.0	11.0	11.7	10.5	8.7
52°	12.1	9.2	9.0	9.5	8.4	7.1
52.5°	10.3	7.6	7.4	7.5	6.6	5.7
53°	8.4	6.1	5.8	5.7	5.0	4.3
53.5°	6.6	4.7	4.4	4.2	3.7	3.8
54°	4.7	3.6	3.8	3.6	3.2	3.3
54.5°	3.6	3.0	3.3	2.9	2.6	2.7
55°	2.7	2.6	2.7	2.3	2.1	2.1
55.5°	2.1	2.1	2.1	1.7	1.7	1.6
56°	1.9	1.7	1.6	1.6	1.5	1.5
56.5°	1.6	1.5	1.4	1.4	1.4	1.3
57°	1.5	1.3	1.3	1.3	1.2	1.2
57.5°	1.3	1.2	1.2	1.2	1.1	1.1
58°	1.2	1.1	1.1	1.1	0.9	0.9
58.5°	1.1	0.9	0.9	0.9	0.9	0.8
59°	0.9	0.8	0.8	0.8	0.8	0.8
59.5°	0.8	0.8	0.8	0.8	0.7	0.7
60°	0.8	0.7	0.7	0.7	0.7	0.7
60.5°	0.7	0.7	0.7	0.7	0.7	0.6
61°	0.7	0.6	0.6	0.6	0.6	0.6
61.5°	0.6	0.6	0.6	0.6	0.6	0.6
62°	0.6	0.6	0.6	0.6	0.5	0.5
62.5°	0.6	0.5	0.5	0.5	0.5	0.5
63°	0.5	0.5	0.5	0.5	0.5	0.5
63.5°	0.5	0.5	0.5	0.5	0.5	0.5
64°	0.5	0.5	0.5	0.5	0.4	0.4
64.5°	0.5	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4	0.4
65.5°	0.4	0.4	0.4	0.4	0.4	0.4
66°	0.4	0.4	0.4	0.4	0.4	0.3



TEST NUMBER: P775683

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.3	0.3	0.3	0.3	0.3	0.3
68°	0.3	0.3	0.3	0.3	0.3	0.3
68.5°	0.3	0.3	0.3	0.3	0.3	0.3
69°	0.3	0.3	0.3	0.3	0.3	0.3
69.5°	0.3	0.3	0.3	0.3	0.3	0.2
70°	0.3	0.3	0.3	0.3	0.2	0.2
70.5°	0.3	0.3	0.3	0.2	0.2	0.2
71°	0.3	0.2	0.2	0.2	0.2	0.2
71.5°	0.2	0.2	0.2	0.2	0.2	0.2
72°	0.2	0.2	0.2	0.2	0.2	0.2
72.5°	0.2	0.2	0.2	0.2	0.2	0.2
73°	0.2	0.2	0.2	0.2	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.1
74.5°	0.2	0.2	0.2	0.2	0.1	0.1
75°	0.2	0.2	0.2	0.2	0.1	0.1
75.5°	0.2	0.2	0.2	0.1	0.1	0.1
76°	0.2	0.1	0.1	0.1	0.1	0.1
76.5°	0.1	0.1	0.1	0.1	0.1	0.1
77°	0.1	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.0
80.5°	0.1	0.1	0.1	0.1	0.0	0.0
81°	0.1	0.1	0.1	0.1	0.0	0.0
81.5°	0.1	0.1	0.1	0.1	0.0	0.0
82°	0.1	0.1	0.1	0.0	0.0	0.0
82.5°	0.1	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: P775683

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

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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°	500.7	504.1	508.1	513.4	522.0	527.4	531.3	532.4	530.6	527.0	522.6
22°	494.4	497.7	501.7	507.8	516.7	522.0	525.7	527.1	525.4	521.7	517.3



44°	69.6	69.5	74.0	83.0	98.4	105.5	108.8	111.7	112.7	107.0	95.9
44.5°	62.4	62.4	67.4	76.1	91.0	97.1	100.9	103.5	104.2	99.5	88.5



66.5°	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4



89°	0.0	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	0.0

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21.5°	517.1	508.5	502.7	499.4	498.5	500.7
22°	511.9	502.9	496.7	493.2	492.2	494.4



44°	88.0	79.5	75.7	73.5	71.4	69.6
44.5°	80.3	71.7	69.2	67.5	65.5	62.4

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66.5°	0.4	0.4	0.4	0.4	0.3	0.3
67°	0.4	0.4	0.3	0.3	0.3	0.3

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

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(END OF REPORT)