

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: P775722

Luminaire Tested: HCDJBL510CSD-HCD61TRH-1000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775722
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B036)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD61TRH-1000lm-3500K
Description: 6 INCH ROUND SHALLOW-WIDE HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

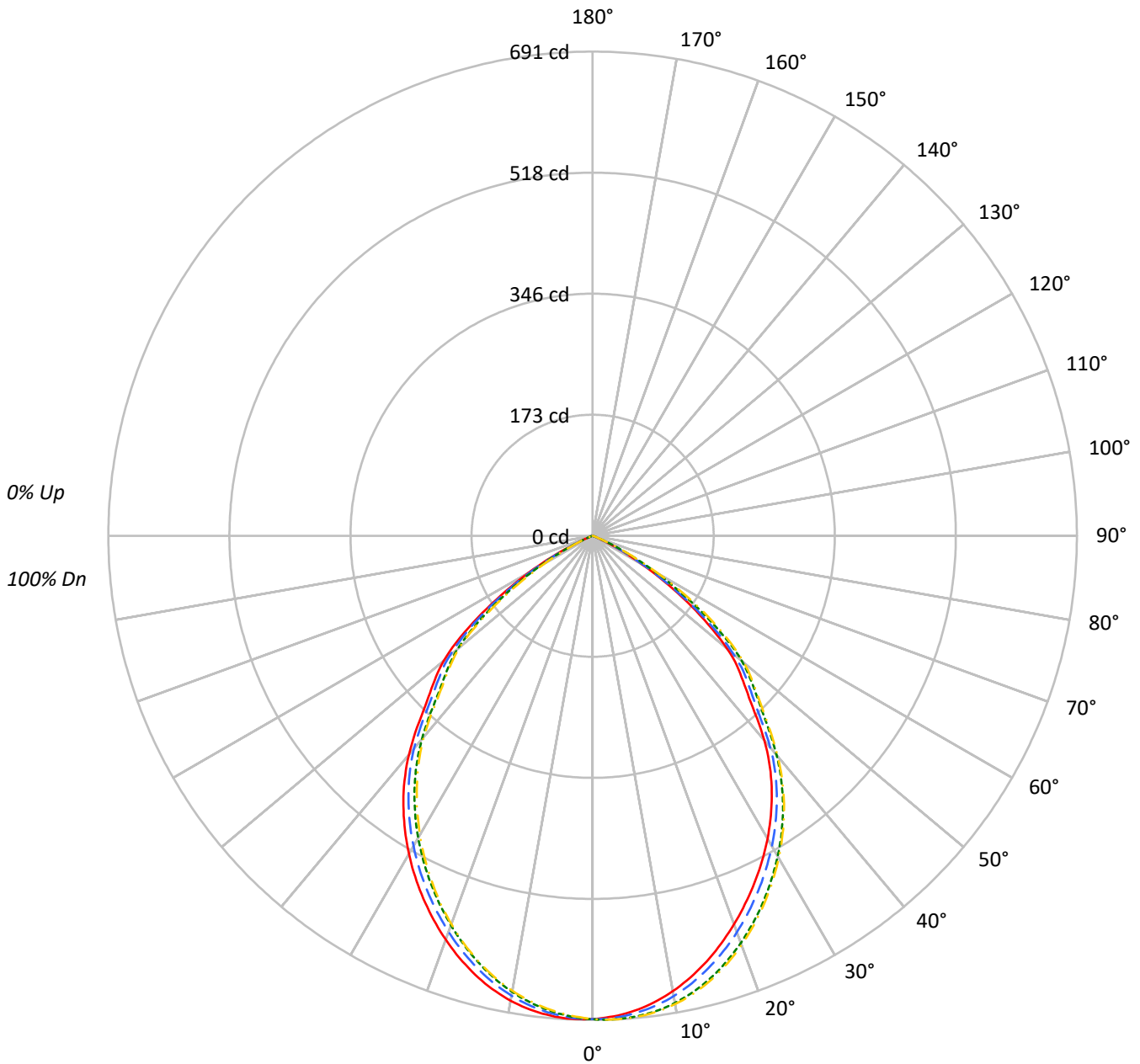
Lumens per Lamp: N/A
Luminaire Lumens: 1231.9 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.2
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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	112	108	105	103	109	106	103	101	102	100	98	98	97	95	95	93	92	90								
2	104	98	93	89	102	96	92	87	93	89	86	90	87	84	87	84	82	80								
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71								
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63								
5	84	73	65	60	82	72	65	60	70	64	59	68	63	58	66	62	58	56								
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52	50								
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45								
8	68	56	49	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41								
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37								
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	37815	37815	37815	37815
5°	37448	37921	37833	37470
10°	36734	37686	37508	36795
15°	35687	37055	36799	35772
20°	34420	36076	35767	34501
25°	33056	34853	34562	33074
30°	31600	33442	33182	31511
35°	29821	31675	31507	29654
40°	27287	29212	29169	27129
45°	24010	26026	25933	23840
50°	21355	23684	23590	21458
55°	15741	18226	18360	16171
60°	9001	11238	11512	9659
65°	2594	4216	3982	3373
70°	64	96	64	192
75°	42	42	42	42
80°	32	32	32	32
85°	63	0	0	63

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 26274 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	5.3
10°-20°	180.0	14.6
20°-30°	257.6	20.9
30°-40°	285.1	23.1
40°-50°	250.5	20.3
50°-60°	159.5	12.9
60°-70°	34.0	2.8
70°-80°	0.3	0.0
80°-90°	0.1	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°	502.4	40.8
0°-40°	787.6	63.9
0°-60°	1197.6	97.2
0°-90°	1231.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1231.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	690	690	690	690	690	
5°	680	689	688	681	680	64
15°	629	653	648	630	629	177
25°	546	576	571	547	546	251
35°	446	473	471	443	446	277
45°	310	336	334	308	310	241
55°	165	191	192	169	165	147
65°	20	32	31	26	20	27
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	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°	689.8	689.8	689.8	689.8	689.8	689.8	689.8	689.8	689.8	689.8	689.8
0.5°	689.3	689.6	689.9	689.8	690.5	690.4	690.1	690.0	690.0	690.0	689.9
1°	688.8	689.2	689.8	689.8	690.7	690.7	690.4	690.3	690.2	690.0	689.7
1.5°	688.2	688.8	689.5	689.8	691.0	691.1	690.7	690.5	690.2	689.9	689.4
2°	687.3	688.2	689.1	689.6	691.0	691.2	691.0	690.6	690.2	689.6	689.0
2.5°	686.5	687.4	688.6	689.3	691.0	691.3	691.0	690.6	690.0	689.3	688.5
3°	685.6	686.6	687.9	689.0	690.7	691.2	691.0	690.4	689.8	688.9	687.8
3.5°	684.4	685.7	687.2	688.5	690.5	691.0	690.8	690.2	689.4	688.3	687.0
4°	683.2	684.6	686.4	687.8	690.1	690.7	690.5	689.9	688.9	687.6	686.1
4.5°	681.8	683.5	685.4	687.0	689.7	690.4	690.2	689.5	688.3	686.8	685.1
5°	680.5	682.1	684.2	686.2	689.1	689.9	689.7	688.9	687.5	685.9	684.1
5.5°	678.9	680.7	683.0	685.3	688.5	689.3	689.2	688.3	686.6	684.8	682.9
6°	677.2	679.1	681.7	684.2	687.6	688.7	688.5	687.4	685.7	683.6	681.4
6.5°	675.5	677.5	680.3	683.0	686.7	687.8	687.6	686.5	684.6	682.4	680.1
7°	673.6	675.7	678.7	681.6	685.7	686.9	686.7	685.5	683.5	681.0	678.5
7.5°	671.6	673.9	677.1	680.2	684.4	685.9	685.7	684.3	682.1	679.5	676.8
8°	669.5	671.8	675.2	678.6	683.3	684.7	684.5	683.0	680.7	677.9	675.0
8.5°	667.2	669.7	673.3	677.1	681.8	683.5	683.3	681.6	679.1	676.1	673.0
9°	664.9	667.4	671.4	675.2	680.3	682.0	681.8	680.1	677.4	674.3	671.0
9.5°	662.5	665.2	669.2	673.3	678.6	680.6	680.3	678.5	675.6	672.3	668.9
10°	659.9	662.6	666.9	671.4	677.0	678.9	678.7	676.8	673.8	670.2	666.6
10.5°	657.2	660.0	664.6	669.2	675.1	677.2	677.0	674.9	671.8	668.1	664.2
11°	654.4	657.4	662.1	666.9	673.1	675.3	675.1	672.8	669.5	665.8	661.7
11.5°	651.5	654.6	659.6	664.5	671.0	673.2	673.0	670.7	667.2	663.3	659.1
12°	648.6	651.7	657.0	662.0	668.8	671.2	671.0	668.5	664.9	660.7	656.5
12.5°	645.5	648.8	654.2	659.6	666.4	668.9	668.7	666.2	662.5	658.1	653.7
13°	642.3	645.8	651.3	656.9	663.9	666.6	666.3	663.7	659.8	655.3	650.8
13.5°	639.0	642.6	648.3	654.1	661.3	664.1	663.8	661.1	657.2	652.5	647.9
14°	635.7	639.4	645.3	651.1	658.6	661.5	661.2	658.4	654.3	649.5	644.7
14.5°	632.3	635.9	642.0	648.3	655.8	658.7	658.4	655.6	651.3	646.5	641.4
15°	628.8	632.5	638.8	645.1	652.9	655.9	655.6	652.6	648.4	643.3	638.2
15.5°	625.3	629.1	635.4	641.9	649.9	652.9	652.6	649.6	645.3	640.1	634.9
16°	621.5	625.5	632.0	638.4	646.8	650.0	649.5	646.5	641.8	636.8	631.4
16.5°	617.9	621.8	628.6	635.3	643.5	646.8	646.3	643.3	638.6	633.3	627.9
17°	614.0	618.1	625.0	631.8	640.2	643.6	643.1	640.0	635.2	629.9	624.3
17.5°	610.1	614.4	621.2	628.2	636.8	640.1	639.8	636.5	631.8	626.3	620.7
18°	606.2	610.6	617.6	624.4	633.2	636.7	636.1	632.9	628.2	622.7	616.8
18.5°	602.3	606.6	613.8	620.9	629.6	633.0	632.6	629.4	624.4	618.9	613.1
19°	598.2	602.8	609.9	617.1	625.9	629.4	629.0	625.7	620.8	615.2	609.2
19.5°	594.3	598.8	606.0	613.4	622.2	625.7	625.3	622.1	617.0	611.4	605.4
20°	590.0	594.7	602.0	609.3	618.4	621.8	621.4	618.2	613.1	607.4	601.3
20.5°	585.9	590.6	597.9	605.3	614.4	618.0	617.6	614.3	609.3	603.5	597.4
21°	581.6	586.5	593.9	601.3	610.4	614.0	613.6	610.3	605.3	599.5	593.1



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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°	568.7	573.8	581.2	588.7	598.0	601.5	601.2	597.9	593.0	587.0	580.6
23°	564.4	569.5	576.9	584.4	593.7	597.3	597.0	593.8	588.8	582.8	576.2
23.5°	560.0	565.2	572.5	580.1	589.4	593.0	592.6	589.5	584.4	578.5	571.9
24°	555.5	560.7	568.0	575.6	585.2	588.7	588.4	585.1	580.2	574.2	567.5
24.5°	551.1	556.3	563.6	571.3	580.7	584.0	583.9	580.6	575.7	569.6	563.1
25°	546.5	551.8	559.1	566.6	576.2	579.6	579.4	576.2	571.4	565.3	558.5
25.5°	542.1	547.4	554.6	562.2	571.6	575.0	574.8	571.7	566.9	560.7	554.1
26°	537.4	542.9	550.0	557.6	567.0	570.3	570.1	567.2	562.4	556.2	549.4
26.5°	532.7	538.2	545.3	552.9	562.4	565.7	565.6	562.6	557.7	551.5	544.9
27°	528.2	533.7	540.6	548.3	557.7	560.8	560.9	557.7	553.2	546.8	540.2
27.5°	523.4	529.0	536.0	543.3	552.8	556.1	556.2	553.1	548.5	542.2	535.4
28°	518.7	524.2	531.1	538.5	548.1	551.4	551.2	548.4	543.7	537.4	530.6
28.5°	513.8	519.4	526.2	533.6	543.1	546.2	546.2	543.5	539.0	532.5	525.9
29°	508.9	514.7	521.3	528.7	538.2	541.2	541.3	538.4	534.1	527.7	521.0
29.5°	504.0	509.7	516.5	523.6	533.3	536.2	536.4	533.5	529.2	522.8	516.2
30°	499.2	504.9	511.5	518.7	528.3	531.3	531.2	528.6	524.2	517.8	511.1
30.5°	494.0	499.9	506.4	513.7	522.9	525.9	525.9	523.5	519.1	512.7	506.0
31°	488.8	494.8	501.4	508.4	517.8	520.6	520.8	518.1	514.1	507.8	501.0
31.5°	483.7	489.7	496.1	503.1	512.4	515.3	515.4	513.1	508.8	502.6	496.0
32°	478.6	484.7	490.9	497.8	507.2	510.2	510.1	507.8	503.7	497.3	490.8
32.5°	473.3	479.3	485.6	492.5	501.8	504.6	504.5	502.5	498.5	492.1	485.4
33°	467.9	474.0	480.2	487.2	496.3	499.0	499.2	497.0	493.1	486.8	480.1
33.5°	462.5	468.5	474.8	481.6	490.6	493.4	493.5	491.5	487.5	481.6	474.8
34°	456.9	463.1	469.3	476.2	485.0	487.9	487.8	485.9	482.0	476.0	469.3
34.5°	451.3	457.6	463.7	470.3	479.3	481.8	482.0	480.1	476.4	470.4	463.8
35°	445.6	451.9	458.1	464.6	473.3	476.1	476.2	474.3	470.8	464.9	458.1
35.5°	439.7	446.2	452.4	458.7	467.5	470.0	470.2	468.5	464.9	459.3	452.4
36°	433.8	440.5	446.5	452.8	461.5	464.1	464.2	462.6	459.2	453.6	447.0
36.5°	427.7	434.4	440.6	446.6	455.5	457.6	458.0	456.4	453.2	447.6	441.2
37°	421.7	428.3	434.6	440.5	448.9	451.4	451.6	450.2	447.3	441.7	435.1
37.5°	415.5	422.0	428.4	434.3	442.6	444.8	445.1	443.9	440.9	435.8	429.1
38°	408.9	415.8	422.1	427.7	436.1	438.3	438.7	437.3	434.5	429.6	423.3
38.5°	402.4	409.2	415.6	421.1	429.3	431.6	432.0	430.6	428.2	423.2	416.8
39°	395.6	402.6	408.8	414.4	422.5	424.6	425.1	423.9	421.7	416.8	410.3
39.5°	388.5	395.3	401.7	407.2	415.4	417.5	418.1	416.9	414.8	410.0	403.3
40°	381.3	388.0	394.2	399.8	408.2	410.4	410.8	409.9	407.6	403.0	396.8
40.5°	373.4	380.3	386.7	392.3	400.5	402.8	403.5	402.5	400.3	395.8	389.2
41°	365.8	372.7	379.0	384.7	393.1	395.4	395.9	394.9	393.0	388.2	381.7
41.5°	358.4	365.0	371.3	377.1	385.6	387.8	388.5	387.4	385.3	380.4	374.0
42°	350.8	357.3	363.7	369.5	378.1	380.7	381.3	380.2	378.0	373.2	367.0
42.5°	342.5	349.3	355.7	361.6	370.5	373.0	373.8	372.9	370.5	365.7	359.2
43°	335.1	341.7	348.2	354.0	362.7	365.3	366.1	365.0	362.7	357.8	351.5
43.5°	328.1	334.6	341.2	347.0	355.5	358.1	358.8	357.4	354.7	349.8	343.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	309.7	316.1	322.3	327.8	335.7	338.2	338.9	337.4	334.5	329.5	323.6
45.5°	303.9	310.4	316.6	322.0	329.7	332.1	332.8	331.3	328.4	323.6	317.6
46°	298.5	305.0	311.0	316.4	323.9	326.2	326.9	325.4	322.6	317.8	311.9
46.5°	293.1	299.6	305.5	310.8	318.2	320.6	321.3	319.9	317.0	312.2	306.3
47°	287.8	294.2	300.3	305.4	312.6	315.0	315.7	314.3	311.4	306.8	301.0
47.5°	282.5	289.0	294.9	300.0	307.1	309.6	310.3	308.7	306.0	301.4	295.6
48°	277.1	283.6	289.3	294.7	301.6	304.2	304.8	303.4	300.7	296.1	290.3
48.5°	271.1	277.5	283.5	289.0	296.2	298.8	299.5	298.2	295.3	290.7	285.0
49°	264.6	270.5	276.6	282.6	290.3	293.1	294.0	292.6	289.5	284.7	279.2
49.5°	258.0	263.6	269.8	276.0	284.1	287.1	287.9	286.3	283.2	278.2	272.6
50°	250.4	255.8	262.0	268.8	277.7	281.0	281.8	280.0	276.6	271.7	266.1
50.5°	242.4	247.9	254.4	261.3	270.6	274.0	274.8	273.5	269.8	264.8	258.8
51°	234.3	240.0	246.0	253.2	263.1	266.2	267.3	266.1	262.5	257.3	251.3
51.5°	226.0	231.6	237.7	244.7	255.1	258.4	259.8	258.1	255.0	249.5	243.6
52°	217.5	223.0	229.0	235.8	246.4	250.3	251.8	250.1	246.8	241.4	235.6
52.5°	208.9	214.3	220.5	226.8	237.5	242.0	243.5	241.8	238.1	232.9	227.4
53°	200.1	205.5	211.3	217.4	228.2	233.4	235.3	233.1	228.9	224.0	219.1
53.5°	191.3	196.4	202.3	207.9	218.9	224.8	227.0	224.6	219.9	215.3	210.4
54°	182.3	187.4	192.9	198.3	209.5	215.7	218.3	215.3	210.6	206.2	201.6
54.5°	173.5	178.8	183.6	188.9	200.2	206.7	209.3	206.2	201.2	197.1	192.7
55°	164.7	169.7	174.1	179.3	190.7	197.9	200.6	197.3	192.1	187.9	184.0
55.5°	155.8	160.7	164.8	169.9	181.6	188.6	191.8	188.1	183.2	178.6	174.9
56°	147.1	151.6	155.5	160.3	172.2	179.2	182.5	178.6	174.0	169.2	165.9
56.5°	138.5	142.9	146.1	151.1	163.0	170.2	173.3	169.6	164.9	160.0	156.9
57°	130.0	133.9	136.8	141.8	153.8	160.7	164.1	160.6	155.9	151.0	148.1
57.5°	121.5	125.2	127.9	133.0	145.0	151.7	155.1	151.8	147.3	141.9	138.9
58°	113.2	116.5	119.1	124.1	136.2	142.5	145.8	142.8	138.5	132.9	130.2
58.5°	105.2	108.1	110.4	115.7	127.7	133.7	136.7	134.2	130.2	124.4	121.7
59°	97.2	99.6	101.9	107.3	119.1	124.7	127.5	125.4	121.6	116.0	113.1
59.5°	89.7	91.6	93.9	99.0	110.8	116.1	118.5	117.2	113.1	108.0	105.0
60°	82.1	83.4	85.9	91.2	102.5	107.5	109.8	108.5	105.0	100.4	97.2
60.5°	74.7	75.8	78.2	83.5	94.7	99.6	101.6	100.6	97.3	92.8	89.5
61°	67.7	68.4	70.7	75.7	87.0	91.6	93.5	92.8	89.6	85.3	81.8
61.5°	60.8	61.4	63.6	69.0	79.3	83.6	85.3	85.0	82.0	77.7	74.2
62°	54.1	54.5	57.0	62.0	71.5	75.6	77.1	77.1	74.3	70.1	66.5
62.5°	47.9	48.1	50.5	55.3	64.2	67.7	68.9	69.2	66.6	63.3	59.8
63°	41.8	41.9	44.4	49.1	57.3	60.4	61.5	62.0	58.7	56.8	53.3
63.5°	35.5	36.3	38.5	43.1	50.6	53.3	54.5	54.8	51.4	50.5	47.1
64°	30.4	31.7	34.0	37.3	44.2	46.7	47.9	48.2	44.2	44.3	41.3
64.5°	25.2	27.2	29.4	32.6	38.1	40.4	41.5	41.6	37.3	38.6	35.8
65°	20.0	22.9	24.9	28.0	32.5	34.4	35.6	35.6	30.7	33.1	30.8
65.5°	14.8	18.4	20.3	23.3	27.1	28.9	30.0	29.8	24.8	28.0	26.2
66°	10.9	14.0	15.7	18.6	22.2	23.7	24.9	24.5	19.3	23.1	21.7



TEST NUMBER: P775722

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	3.4	5.9	6.8	7.6	11.6	12.5	13.5	13.2	8.8	12.8	12.1
68°	2.7	4.0	4.8	5.1	8.6	9.3	10.0	9.9	5.3	9.8	9.4
68.5°	2.0	3.1	2.9	3.2	5.5	6.1	6.7	6.7	1.8	6.8	6.6
69°	1.2	2.3	2.3	2.5	2.5	3.0	3.4	3.5	0.8	3.9	3.9
69.5°	0.5	1.3	1.7	1.8	1.2	1.6	1.8	2.0	0.5	2.4	2.3
70°	0.4	0.5	1.0	1.0	0.6	0.7	0.8	0.9	0.4	1.2	1.2
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.6	0.6
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
72°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
72.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
73°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
73.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
74°	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
74.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
77°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
77.5°	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2
78°	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
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°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
83°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
84°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
84.5°	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
85.5°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
86°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
86.5°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
87°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
87.5°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
88°	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
88.5°	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1



TEST NUMBER: P775722
CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.1	0.3	0.3	0.2	0.1	0.0	0.0	0.1	0.0	0.2	0.1



TEST NUMBER: P775722

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	689.8	689.8	689.8	689.8	689.8	689.8
0.5°	689.4	689.7	689.4	689.0	689.1	689.3
1°	689.1	689.2	688.8	688.4	688.5	688.8
1.5°	688.6	688.5	687.9	687.5	687.6	688.2
2°	688.1	687.7	687.1	686.7	686.9	687.3
2.5°	687.3	686.8	686.2	685.7	685.9	686.5
3°	686.5	685.9	685.1	684.6	684.8	685.6
3.5°	685.7	684.7	684.0	683.5	683.7	684.4
4°	684.6	683.6	682.8	682.2	682.5	683.2
4.5°	683.5	682.2	681.4	680.8	681.1	681.8
5°	682.2	680.9	680.1	679.5	679.7	680.5
5.5°	680.9	679.3	678.5	677.8	678.0	678.9
6°	679.5	677.8	676.9	676.2	676.3	677.2
6.5°	677.8	676.1	675.2	674.5	674.5	675.5
7°	676.1	674.3	673.3	672.6	672.7	673.6
7.5°	674.4	672.3	671.4	670.6	670.7	671.6
8°	672.4	670.3	669.3	668.6	668.6	669.5
8.5°	670.3	668.2	667.2	666.4	666.4	667.2
9°	668.2	665.9	664.9	664.2	664.0	664.9
9.5°	665.9	663.5	662.6	661.8	661.6	662.5
10°	663.5	661.0	660.1	659.4	659.0	659.9
10.5°	661.0	658.4	657.5	656.8	656.5	657.2
11°	658.3	655.7	654.8	654.1	653.7	654.4
11.5°	655.6	652.8	652.0	651.3	650.9	651.5
12°	652.9	650.0	649.1	648.4	647.9	648.6
12.5°	649.9	646.9	646.1	645.4	644.8	645.5
13°	646.9	643.8	643.1	642.4	641.6	642.3
13.5°	643.7	640.5	639.9	639.0	638.4	639.0
14°	640.5	637.2	636.6	635.7	635.1	635.7
14.5°	637.3	633.9	633.2	632.4	631.7	632.3
15°	633.8	630.3	629.7	628.9	628.1	628.8
15.5°	630.2	626.8	626.1	625.4	624.5	625.3
16°	626.7	623.1	622.4	621.6	620.9	621.5
16.5°	623.1	619.4	618.7	618.0	617.1	617.9
17°	619.5	615.6	614.9	614.2	613.4	614.0
17.5°	615.7	611.7	611.0	610.2	609.3	610.1
18°	611.8	607.8	607.0	606.3	605.4	606.2
18.5°	607.9	603.7	602.9	602.3	601.3	602.3
19°	603.8	599.7	598.8	598.1	597.3	598.2
19.5°	599.9	595.6	594.7	594.0	593.1	594.3
20°	595.8	591.4	590.3	589.6	588.9	590.0
20.5°	591.7	587.1	586.1	585.4	584.7	585.9
21°	587.6	582.7	581.8	580.9	580.3	581.6

TEST NUMBER: P775722

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	574.7	569.6	568.3	567.5	567.1	568.7
23°	570.4	565.1	563.7	562.6	562.7	564.4
23.5°	566.0	560.5	559.1	558.1	558.1	560.0
24°	561.5	556.0	554.3	553.3	553.6	555.5
24.5°	557.0	551.4	549.6	548.6	548.8	551.1
25°	552.5	546.8	544.8	543.6	544.1	546.5
25.5°	548.0	542.2	540.0	539.0	539.6	542.1
26°	543.3	537.4	535.0	533.8	534.8	537.4
26.5°	538.7	532.5	530.3	529.0	530.1	532.7
27°	534.0	527.8	525.2	523.9	525.2	528.2
27.5°	529.3	522.9	520.2	518.9	520.2	523.4
28°	524.6	517.9	515.1	513.8	515.2	518.7
28.5°	519.7	513.0	510.1	508.6	510.3	513.8
29°	514.8	508.0	504.9	503.3	505.3	508.9
29.5°	510.0	502.9	499.7	498.1	500.1	504.0
30°	505.0	497.8	494.3	493.0	494.9	499.2
30.5°	499.9	492.6	489.0	487.6	489.7	494.0
31°	494.9	487.4	483.6	482.1	484.5	488.8
31.5°	489.6	482.1	478.2	476.7	479.1	483.7
32°	484.4	476.8	472.7	471.2	473.8	478.6
32.5°	479.2	471.4	467.2	465.7	468.3	473.3
33°	473.8	465.8	461.7	460.2	462.8	467.9
33.5°	468.4	460.2	456.1	454.5	457.3	462.5
34°	462.8	454.6	450.5	448.8	451.7	456.9
34.5°	457.2	448.9	444.6	443.1	446.0	451.3
35°	451.6	443.1	438.8	437.3	440.2	445.6
35.5°	445.9	437.2	433.1	431.5	434.4	439.7
36°	440.2	431.2	427.1	425.6	428.5	433.8
36.5°	434.2	425.2	421.2	419.6	422.6	427.7
37°	428.1	419.0	414.9	413.6	416.5	421.7
37.5°	422.0	412.7	408.7	407.5	410.3	415.5
38°	415.7	406.3	402.5	401.2	404.0	408.9
38.5°	409.2	399.7	396.0	394.7	397.4	402.4
39°	402.5	393.1	389.6	388.3	391.0	395.6
39.5°	395.9	386.1	382.6	381.6	383.9	388.5
40°	388.9	379.1	375.5	374.4	376.6	381.3
40.5°	381.6	371.7	368.1	367.1	369.0	373.4
41°	374.0	364.2	360.7	359.5	361.7	365.8
41.5°	366.5	356.6	353.1	352.2	354.0	358.4
42°	359.2	349.5	345.8	344.7	346.8	350.8
42.5°	351.7	342.0	338.3	336.8	338.8	342.5
43°	344.2	334.2	330.6	329.5	331.2	335.1
43.5°	336.4	326.7	323.1	322.0	324.0	328.1



TEST NUMBER: P775722

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	316.4	307.5	304.2	303.3	305.3	309.7
45.5°	310.5	301.6	298.3	297.6	299.6	303.9
46°	304.9	296.1	292.9	292.1	294.2	298.5
46.5°	299.3	290.8	287.5	286.8	288.9	293.1
47°	294.2	285.6	282.2	281.5	283.6	287.8
47.5°	288.9	280.2	277.0	276.2	278.4	282.5
48°	283.7	275.2	271.9	271.0	273.1	277.1
48.5°	278.5	269.7	266.7	265.6	267.6	271.1
49°	272.8	264.2	261.0	259.8	261.5	264.6
49.5°	266.5	257.8	255.1	253.8	255.0	258.0
50°	259.9	251.6	248.7	247.4	248.0	250.4
50.5°	252.9	244.3	241.8	240.2	240.4	242.4
51°	245.2	236.8	234.2	232.4	232.5	234.3
51.5°	237.6	228.8	226.2	224.0	224.4	226.0
52°	229.8	220.7	217.7	215.4	215.6	217.5
52.5°	221.6	212.1	209.0	206.7	206.8	208.9
53°	213.3	203.6	200.2	197.7	197.9	200.1
53.5°	204.7	194.9	191.2	188.7	188.9	191.3
54°	196.2	186.3	182.2	179.7	179.9	182.3
54.5°	187.6	177.8	173.4	170.6	170.8	173.5
55°	179.2	169.2	164.4	161.5	161.9	164.7
55.5°	170.5	160.4	155.7	152.3	153.2	155.8
56°	161.7	151.9	146.9	143.4	144.5	147.1
56.5°	153.2	143.5	138.4	134.7	136.0	138.5
57°	144.4	135.2	129.7	126.0	127.4	130.0
57.5°	136.0	127.0	121.4	117.6	119.0	121.5
58°	127.6	118.9	113.3	109.5	110.9	113.2
58.5°	119.1	110.9	105.5	101.4	103.1	105.2
59°	110.9	103.1	97.8	93.8	95.0	97.2
59.5°	103.1	95.5	90.1	86.3	87.7	89.7
60°	95.4	88.1	82.8	79.1	80.4	82.1
60.5°	87.8	80.5	75.7	72.2	73.2	74.7
61°	80.1	73.5	68.8	65.7	66.2	67.7
61.5°	72.4	66.5	62.4	59.6	60.0	60.8
62°	65.3	59.7	56.1	53.4	53.7	54.1
62.5°	58.4	53.2	50.0	47.8	47.6	47.9
63°	51.8	46.9	44.3	42.3	41.8	41.8
63.5°	45.5	41.0	39.1	37.3	36.6	35.5
64°	39.5	35.3	34.6	33.2	32.3	30.4
64.5°	34.1	30.7	30.3	28.9	28.1	25.2
65°	28.8	26.0	25.9	24.8	23.7	20.0
65.5°	24.0	21.4	21.4	20.6	19.5	14.8
66°	19.7	16.8	17.1	16.5	15.1	10.9



TEST NUMBER: P775722

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	10.8	7.6	8.0	7.9	6.5	3.4
68°	8.3	5.4	5.8	5.6	4.6	2.7
68.5°	5.8	3.7	3.8	3.7	3.7	2.0
69°	3.3	2.9	3.0	2.9	2.9	1.2
69.5°	2.0	2.1	2.2	2.1	2.1	0.5
70°	1.0	1.2	1.2	1.2	1.2	0.4
70.5°	0.5	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.3	0.3	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3	0.3
73°	0.3	0.3	0.3	0.3	0.3	0.3
73.5°	0.3	0.3	0.3	0.3	0.3	0.3
74°	0.3	0.3	0.3	0.3	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.2	0.2
77°	0.2	0.2	0.2	0.2	0.2	0.2
77.5°	0.2	0.2	0.2	0.2	0.2	0.2
78°	0.2	0.2	0.2	0.2	0.2	0.2
78.5°	0.1	0.2	0.2	0.2	0.2	0.1
79°	0.1	0.1	0.2	0.2	0.2	0.1
79.5°	0.1	0.1	0.2	0.2	0.1	0.1
80°	0.1	0.1	0.2	0.2	0.1	0.1
80.5°	0.1	0.1	0.2	0.2	0.1	0.1
81°	0.1	0.1	0.2	0.2	0.1	0.1
81.5°	0.1	0.1	0.2	0.2	0.1	0.1
82°	0.1	0.1	0.2	0.2	0.1	0.1
82.5°	0.1	0.1	0.2	0.2	0.1	0.1
83°	0.1	0.1	0.2	0.2	0.1	0.1
83.5°	0.1	0.1	0.2	0.2	0.1	0.1
84°	0.1	0.1	0.2	0.2	0.1	0.1
84.5°	0.1	0.1	0.2	0.2	0.1	0.1
85°	0.1	0.1	0.2	0.2	0.2	0.1
85.5°	0.1	0.1	0.2	0.2	0.2	0.1
86°	0.1	0.1	0.2	0.2	0.2	0.1
86.5°	0.1	0.1	0.2	0.3	0.2	0.1
87°	0.1	0.1	0.3	0.3	0.3	0.1
87.5°	0.1	0.2	0.3	0.4	0.3	0.1
88°	0.1	0.2	0.4	0.5	0.4	0.1
88.5°	0.1	0.2	0.5	0.6	0.5	0.1



TEST NUMBER: P775722

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.1	0.4	0.7	0.5	0.7	0.1

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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°	577.4	582.3	589.6	597.1	606.4	609.8	609.4	606.2	601.1	595.4	589.0
22°	573.0	578.0	585.4	593.0	602.3	605.8	605.4	602.1	597.1	591.3	584.8



44°	321.6	328.2	334.5	340.3	348.6	351.2	351.8	350.4	347.5	342.4	336.5
44.5°	315.5	322.0	328.3	333.9	342.0	344.5	345.1	343.9	340.9	335.8	329.6



66.5°	7.9	10.8	12.3	14.0	17.7	19.0	20.1	19.6	15.7	18.8	17.7
67°	5.4	8.1	9.4	10.6	14.7	15.7	16.8	16.4	12.2	15.7	14.9



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

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21.5°	583.4	578.3	577.3	576.5	576.1	577.4
22°	579.0	574.0	572.8	571.8	571.5	573.0



44°	329.3	319.9	316.6	315.4	317.6	321.6
44.5°	322.6	313.6	310.2	309.3	311.3	315.5

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66.5°	15.9	13.2	13.8	13.3	11.9	7.9
67°	13.3	10.0	10.7	10.4	9.0	5.4

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89°	0.1	0.3	0.5	0.7	0.5	0.1
89.5°	0.1	0.3	0.6	0.7	0.6	0.1

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(END OF REPORT)