

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: P775618

Luminaire Tested: HCDJBL510CSD-HCD41TRC-1000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775618
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B028)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD41TRC-1000lm-4000K
Description: 4 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

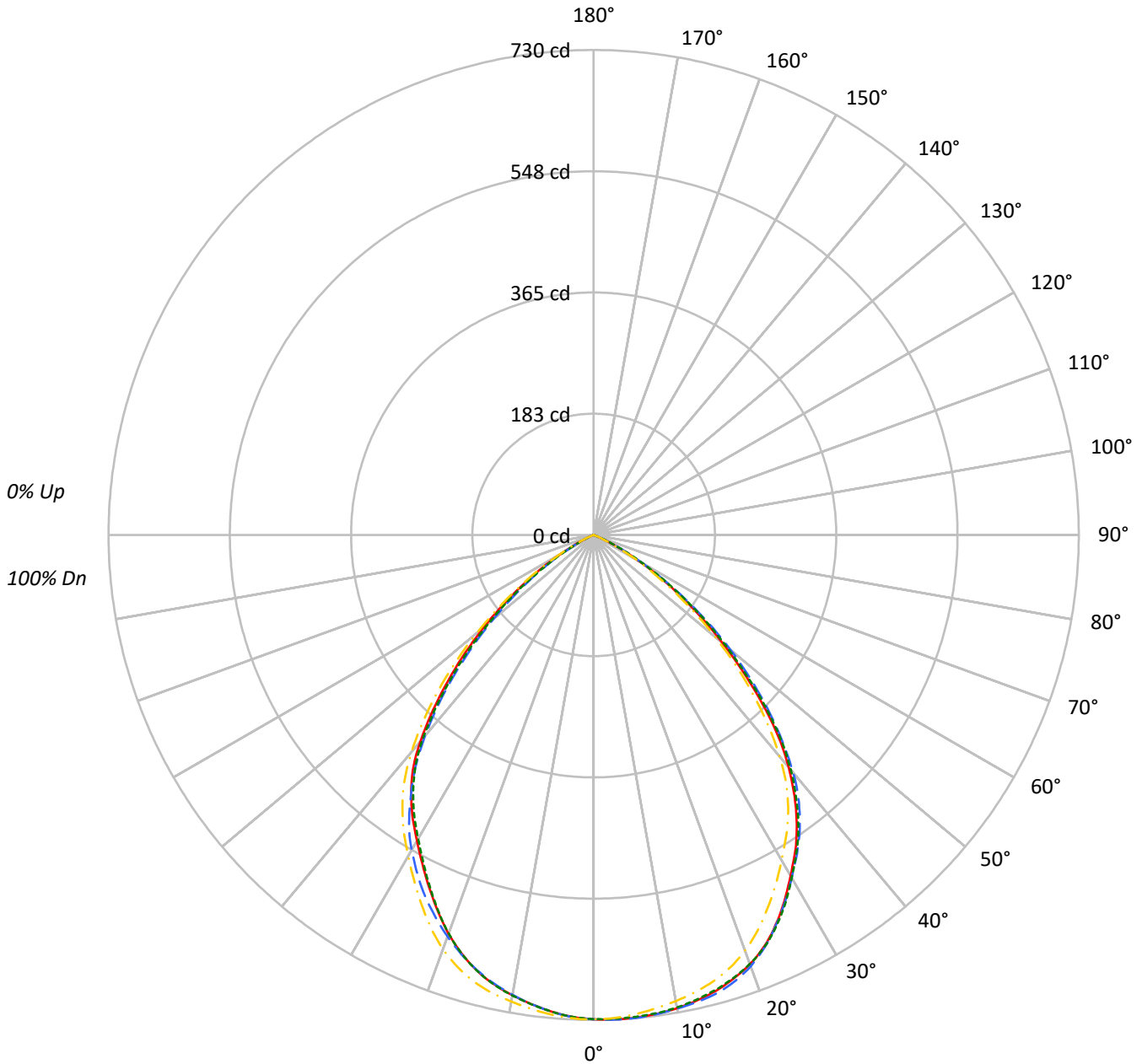
Lumens per Lamp: N/A
Luminaire Lumens: 1271.2 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.22
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



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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									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	93	91																			
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81																			
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52																			
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47																			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41	39																			
10	61	49	42	38	60	49	42	38	48	42	38	47	42	37	46	41	37	36																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	91757	91757	91757	91757
5°	92145	91981	91021	91046
10°	92457	92291	89914	89952
15°	92571	92362	88453	88492
20°	92075	92048	85552	85459
25°	89953	90273	81316	81053
30°	86101	86639	77281	76772
35°	81826	82486	73575	72746
40°	74996	75801	66601	65616
45°	63894	64998	55084	53625
50°	49593	50905	41957	40136
55°	34799	36203	28085	26154
60°	20060	21420	14498	12812
65°	6968	7921	3931	3127
70°	221	515	221	184
75°	194	243	194	194
80°	145	217	145	145
85°	0	144	0	144

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 65888 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	5.4
10°-20°	195.7	15.4
20°-30°	283.9	22.3
30°-40°	314.9	24.8
40°-50°	255.7	20.1
50°-60°	128.4	10.1
60°-70°	23.3	1.8
70°-80°	0.5	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°	548.4	43.1
0°-40°	863.3	67.9
0°-60°	1247.3	98.1
0°-90°	1271.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	729	729	729	729	729	
5°	729	728	720	721	729	69
15°	710	709	679	679	710	200
25°	648	650	586	584	648	297
35°	533	537	479	474	533	331
45°	359	365	310	301	359	275
55°	159	165	128	119	159	143
65°	23	27	13	10	23	28
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°	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1
0.5°	729.4	729.4	729.5	729.7	728.8	729.1	729.2	729.2	728.6	728.5	728.7
1°	729.7	729.7	729.8	729.9	729.1	729.0	729.0	729.0	728.2	728.0	728.3
1.5°	729.9	729.9	730.1	730.1	729.2	728.8	728.6	728.3	727.7	727.5	727.8
2°	730.0	730.1	730.2	730.2	729.1	728.6	728.2	727.6	727.1	726.7	727.1
2.5°	730.0	730.3	730.4	730.2	729.0	728.4	727.8	727.0	726.3	726.0	726.3
3°	730.0	730.3	730.4	730.2	728.8	728.1	727.3	726.1	725.4	725.1	725.5
3.5°	730.0	730.3	730.4	730.1	728.8	727.7	726.5	725.2	724.2	723.9	724.4
4°	729.8	730.2	730.3	730.1	728.5	727.4	725.8	724.2	723.1	722.9	723.3
4.5°	729.6	730.1	730.2	729.9	728.3	726.9	725.1	723.2	721.8	721.5	721.9
5°	729.4	729.8	729.9	729.7	728.1	726.4	724.1	721.9	720.5	720.1	720.5
5.5°	729.0	729.6	729.6	729.3	727.8	725.8	723.2	720.7	719.0	718.7	719.1
6°	728.5	729.2	729.2	729.0	727.5	725.2	722.1	719.3	717.5	717.2	717.5
6.5°	728.2	728.7	728.6	728.4	727.1	724.5	721.1	717.9	716.0	715.6	715.9
7°	727.7	728.2	728.2	727.9	726.6	723.7	719.9	716.4	714.3	713.9	714.2
7.5°	727.3	727.6	727.6	727.4	726.0	723.0	718.8	715.0	712.7	712.2	712.3
8°	726.6	726.9	727.0	726.7	725.5	722.1	717.6	713.5	711.0	710.5	710.7
8.5°	725.9	726.1	726.2	726.0	724.9	721.2	716.4	712.0	709.2	708.7	708.7
9°	725.2	725.4	725.5	725.2	724.0	720.2	715.2	710.4	707.5	706.9	706.8
9.5°	724.3	724.4	724.7	724.2	723.2	719.3	713.8	708.8	705.6	705.0	704.9
10°	723.5	723.5	724.0	723.3	722.2	718.1	712.6	707.1	703.6	703.2	702.9
10.5°	722.4	722.5	723.3	722.4	721.3	716.9	711.1	705.4	701.7	701.4	700.9
11°	721.4	721.5	722.5	721.4	720.1	715.5	709.6	703.6	699.6	699.4	698.7
11.5°	720.2	720.3	721.6	720.2	718.9	714.0	708.1	701.8	697.5	697.4	696.5
12°	719.2	719.3	720.9	719.1	717.6	712.7	706.6	700.1	695.2	695.3	694.3
12.5°	717.9	718.1	719.9	717.7	716.3	711.1	705.0	698.2	692.9	693.2	692.0
13°	716.7	717.0	719.1	716.3	715.0	709.5	703.4	696.3	690.5	690.9	689.4
13.5°	715.2	715.6	718.0	714.9	713.5	707.7	701.6	694.3	687.9	688.6	686.8
14°	713.7	714.1	717.0	713.4	712.0	706.0	699.7	692.1	685.1	686.2	684.0
14.5°	712.2	712.6	715.7	711.8	710.5	704.1	697.7	689.6	682.2	683.4	681.1
15°	710.5	711.0	714.4	710.0	708.9	702.2	695.6	687.2	678.9	680.7	678.2
15.5°	708.7	709.1	712.9	708.1	707.2	700.2	693.4	684.5	675.6	677.8	675.0
16°	706.8	707.0	711.3	706.0	705.3	697.9	691.0	681.8	672.1	674.5	671.7
16.5°	704.7	704.8	709.3	703.8	703.4	695.5	688.4	678.7	668.4	671.3	668.5
17°	702.5	702.5	707.2	701.4	701.4	693.1	685.5	675.7	664.5	667.9	665.3
17.5°	700.2	700.1	704.9	699.0	699.3	690.4	682.6	672.3	660.6	664.2	661.8
18°	697.9	697.5	702.5	696.4	697.1	687.8	679.8	668.6	656.6	660.4	658.3
18.5°	695.5	694.9	699.8	693.6	694.8	684.8	676.5	665.1	652.4	656.2	654.6
19°	693.1	692.2	697.0	690.9	692.5	682.0	673.1	661.2	648.0	652.1	651.0
19.5°	690.5	689.3	694.1	688.1	690.0	678.9	669.6	657.1	643.5	647.8	647.2
20°	687.5	686.3	691.0	685.0	687.3	675.7	665.9	652.9	638.8	643.3	643.4
20.5°	684.6	683.1	687.5	681.8	684.4	672.3	662.0	648.2	634.1	638.4	639.3
21°	681.3	679.8	684.0	678.5	681.4	668.7	657.9	643.5	628.8	633.4	635.2



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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°	670.5	668.7	672.0	667.5	671.4	656.9	644.6	628.1	612.9	617.5	622.4
23°	666.5	664.7	667.5	663.6	667.5	652.7	639.7	622.8	607.5	612.0	618.0
23.5°	662.1	660.6	663.0	659.6	663.4	648.2	634.9	617.2	602.0	606.4	613.7
24°	657.6	656.4	658.2	655.5	659.2	643.7	629.7	611.7	596.4	600.8	609.2
24.5°	652.9	652.2	653.5	651.4	654.8	639.0	624.7	606.0	591.1	595.1	604.7
25°	647.8	647.9	648.7	647.3	650.1	634.5	619.5	600.3	585.6	589.4	600.0
25.5°	642.9	643.5	643.7	643.0	645.3	629.6	614.4	594.4	580.1	583.6	595.2
26°	637.7	639.1	638.6	638.7	640.5	624.8	609.1	589.0	574.8	577.9	590.2
26.5°	632.5	634.7	633.5	634.4	635.4	619.9	603.8	583.3	569.3	572.0	585.2
27°	627.0	630.2	628.4	629.8	630.1	614.7	598.5	577.6	563.8	566.2	580.0
27.5°	621.3	625.5	623.1	625.1	624.7	609.5	593.2	571.9	558.3	560.5	574.7
28°	615.7	620.7	617.8	620.4	619.1	604.2	587.7	566.3	552.8	554.8	569.4
28.5°	609.9	615.9	612.3	615.4	613.3	598.8	582.2	560.6	547.6	549.2	564.0
29°	604.1	610.8	606.7	610.4	607.7	593.4	576.6	555.0	542.2	543.8	558.5
29.5°	598.4	605.9	601.5	605.4	602.0	588.0	571.1	549.6	536.9	538.2	553.0
30°	592.5	600.9	596.1	600.1	596.2	582.6	565.6	544.1	531.8	532.7	547.5
30.5°	586.9	595.8	590.6	594.8	590.2	577.2	560.2	538.6	526.7	527.4	542.0
31°	581.2	590.5	585.1	589.6	584.5	571.9	554.8	533.5	521.7	522.1	536.2
31.5°	575.7	585.4	579.9	584.1	579.0	566.5	549.4	528.4	516.6	516.8	530.1
32°	569.8	580.1	574.6	578.9	573.4	561.1	544.2	523.3	511.5	511.6	523.7
32.5°	564.5	574.9	569.4	573.4	567.7	555.9	538.9	518.0	506.6	506.1	517.1
33°	558.7	569.2	563.8	567.9	562.3	550.5	533.6	512.8	501.2	500.6	509.9
33.5°	552.6	563.3	558.5	562.1	556.3	545.0	527.9	507.3	495.7	494.7	502.6
34°	546.0	556.8	552.7	555.8	550.2	539.0	522.2	501.8	490.3	488.9	495.2
34.5°	539.4	550.2	546.6	549.0	543.7	533.1	516.3	496.2	484.6	482.8	487.5
35°	532.6	543.1	540.4	542.1	536.9	526.5	510.4	490.4	478.9	476.7	479.9
35.5°	525.7	536.1	534.3	535.2	530.1	520.1	504.2	484.5	473.0	470.3	472.2
36°	518.8	528.8	528.0	527.7	523.4	513.5	497.5	478.5	466.9	463.9	464.3
36.5°	511.7	521.5	521.4	520.3	515.8	506.4	490.8	472.2	460.6	457.0	456.3
37°	504.2	513.8	514.3	512.7	508.6	499.0	483.8	465.6	454.0	450.0	448.3
37.5°	496.7	505.9	507.5	504.9	500.9	491.4	476.6	459.0	447.2	442.8	440.3
38°	488.7	497.7	500.1	496.9	493.1	483.8	469.3	451.6	439.9	434.7	431.9
38.5°	480.8	489.5	492.3	488.7	485.3	476.0	461.2	443.7	432.2	426.1	423.0
39°	473.1	481.4	484.5	480.6	477.7	467.9	452.8	435.6	423.6	417.2	413.3
39.5°	464.8	472.8	476.1	472.1	469.6	459.7	444.2	427.0	414.7	408.3	403.9
40°	456.5	463.9	466.9	463.3	461.4	451.0	435.4	418.2	405.4	398.9	394.3
40.5°	447.7	454.6	457.7	454.0	452.8	442.0	426.3	409.2	396.0	389.1	384.5
41°	439.3	445.3	448.3	444.7	444.2	432.9	416.9	400.0	386.5	379.3	374.9
41.5°	430.2	435.7	438.7	435.2	435.3	423.5	407.7	390.8	376.9	369.6	364.9
42°	420.9	426.2	429.1	425.9	426.3	413.9	398.3	381.3	367.4	359.4	354.9
42.5°	410.9	416.4	419.5	416.4	416.6	404.3	388.8	371.7	357.8	349.1	344.7
43°	401.4	406.7	409.9	406.6	406.9	394.7	379.2	362.1	348.2	339.0	334.7
43.5°	391.1	396.8	400.0	397.0	396.5	384.7	369.3	352.6	338.5	329.0	324.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	359.0	366.8	370.2	367.2	365.2	354.2	339.4	323.4	309.5	298.7	294.2
45.5°	348.2	356.7	360.1	357.6	354.3	343.7	329.4	314.0	299.8	288.8	284.3
46°	337.4	346.6	350.0	347.6	343.5	332.9	319.2	304.3	290.1	278.8	274.1
46.5°	326.3	336.3	339.9	337.2	332.7	322.4	309.2	294.7	280.6	269.2	264.1
47°	315.6	326.0	329.6	326.6	322.0	311.9	298.9	284.9	270.8	259.5	254.0
47.5°	305.0	315.4	319.3	316.6	311.3	301.3	288.8	275.4	261.3	249.6	244.2
48°	294.4	305.0	309.2	306.3	301.0	290.7	278.6	265.6	251.8	240.1	234.4
48.5°	283.8	294.6	298.8	295.8	290.7	280.1	268.8	256.1	242.4	230.9	224.7
49°	273.8	284.3	288.7	285.4	280.4	269.9	258.7	246.3	232.8	221.3	215.1
49.5°	263.4	274.0	278.5	275.1	270.1	259.7	248.9	236.8	223.5	212.1	205.8
50°	253.3	263.6	268.2	264.7	260.0	249.5	239.0	227.1	214.3	202.9	196.3
50.5°	243.1	253.1	258.0	254.5	250.2	239.2	229.2	217.7	205.3	194.0	187.3
51°	233.3	243.0	247.5	244.1	240.3	229.3	219.4	208.3	196.0	184.9	178.3
51.5°	223.4	233.1	237.5	234.3	230.5	219.8	209.9	199.1	187.2	176.1	169.7
52°	214.0	223.1	227.4	224.4	220.8	210.0	200.4	189.9	178.5	167.5	161.1
52.5°	204.2	213.1	217.4	214.6	211.0	200.7	191.1	180.6	169.6	159.1	152.7
53°	195.0	203.4	207.5	204.8	201.6	191.2	181.6	171.6	161.0	150.5	144.5
53.5°	185.4	193.8	197.3	195.1	192.2	181.9	172.6	162.9	152.5	142.3	136.7
54°	176.5	184.3	187.4	185.4	183.0	172.8	163.6	154.2	144.1	134.2	128.8
54.5°	167.5	174.8	177.7	176.1	173.8	164.1	154.8	145.7	135.9	126.3	121.1
55°	158.6	165.8	168.4	166.9	165.0	155.3	146.3	137.2	128.0	118.5	113.7
55.5°	149.8	156.7	158.8	158.0	156.4	146.6	137.7	128.8	120.0	111.1	106.5
56°	141.4	147.8	149.7	149.0	147.5	138.2	129.3	120.9	112.3	103.7	99.7
56.5°	133.1	138.9	140.7	140.1	138.9	129.9	121.3	113.1	104.8	97.0	93.1
57°	124.6	130.5	131.9	131.7	130.5	121.9	113.3	105.2	97.8	90.3	86.5
57.5°	116.7	122.2	123.2	123.3	122.5	114.1	105.5	98.1	90.9	83.6	79.8
58°	108.9	113.9	114.8	115.2	114.5	106.5	98.5	91.0	84.0	76.8	73.1
58.5°	101.3	106.0	106.8	107.2	106.7	99.4	91.4	83.9	77.0	70.0	67.2
59°	94.0	98.4	98.9	99.3	99.5	92.5	84.4	76.7	70.1	64.0	61.4
59.5°	86.6	90.9	91.3	91.9	92.3	85.4	77.4	69.7	63.7	58.1	55.6
60°	79.7	83.6	84.1	84.6	85.1	78.4	70.4	63.3	57.6	52.4	50.3
60.5°	72.8	76.4	76.9	77.6	77.9	71.5	64.2	57.2	51.8	47.2	45.2
61°	66.2	69.7	70.1	70.5	70.7	65.2	57.9	51.4	46.1	42.0	40.5
61.5°	60.1	63.2	63.8	64.1	64.2	59.0	52.2	45.8	40.9	37.3	35.9
62°	53.9	57.0	57.7	57.8	58.0	53.2	46.8	40.5	35.8	32.8	31.6
62.5°	48.1	50.9	51.8	51.8	51.9	47.5	41.5	35.5	31.1	28.5	27.6
63°	42.8	45.2	46.1	46.0	46.2	42.0	36.5	31.0	26.5	24.6	24.0
63.5°	37.5	39.8	41.0	40.6	40.9	37.0	31.9	26.6	22.5	20.9	20.5
64°	32.8	35.3	35.9	35.7	35.8	32.2	27.6	22.7	18.8	17.7	17.6
64.5°	28.1	30.9	31.7	31.4	31.0	27.7	23.6	18.9	15.4	14.8	14.7
65°	23.4	26.4	27.5	27.1	26.6	23.6	20.0	15.7	13.2	12.7	12.7
65.5°	18.7	21.9	23.3	22.8	22.5	19.8	16.5	13.5	11.1	10.7	10.7
66°	14.0	17.4	19.1	18.5	18.7	16.3	14.1	11.1	8.9	8.7	8.8



TEST NUMBER: P775618

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.7	8.4	9.9	9.5	10.6	9.0	7.0	4.3	3.2	3.4	3.5
68°	3.9	6.2	7.4	7.1	8.2	6.6	4.6	3.2	2.0	2.3	2.3
68.5°	3.0	4.4	5.3	5.1	5.9	4.2	3.2	2.1	1.2	1.5	1.5
69°	2.2	3.7	3.6	3.6	3.5	2.8	2.1	1.4	0.7	0.9	0.9
69.5°	1.4	2.9	2.8	2.8	2.2	1.8	1.2	0.8	0.6	0.6	0.6
70°	0.6	2.2	2.1	2.1	1.4	0.9	0.7	0.6	0.6	0.6	0.6
70.5°	0.5	1.4	1.4	1.4	0.8	0.6	0.6	0.5	0.5	0.6	0.6
71°	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6
71.5°	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5
73.5°	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5
74°	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5
74.5°	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
77°	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4
77.5°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
80°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
80.5°	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
81°	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
81.5°	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
82°	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
82.5°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
83°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
84°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
84.5°	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1
85°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
85.5°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.1	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: P775618
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-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	0.1	0.1



TEST NUMBER: P775618

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	729.1	729.1	729.1	729.1	729.1	729.1
0.5°	729.0	728.4	728.8	729.2	729.5	729.4
1°	728.5	728.0	728.6	729.2	729.7	729.7
1.5°	728.0	727.5	728.3	729.2	729.7	729.9
2°	727.5	726.9	727.8	728.8	729.6	730.0
2.5°	726.7	726.1	727.3	728.4	729.5	730.0
3°	725.9	725.3	726.4	727.9	729.3	730.0
3.5°	725.0	724.3	725.6	727.3	729.0	730.0
4°	723.8	723.2	724.6	726.6	728.5	729.8
4.5°	722.5	722.0	723.5	725.8	728.1	729.6
5°	721.2	720.7	722.3	724.9	727.7	729.4
5.5°	719.7	719.2	721.1	723.9	727.2	729.0
6°	718.1	717.7	719.7	722.9	726.5	728.5
6.5°	716.6	716.1	718.3	721.8	725.8	728.2
7°	714.9	714.6	717.0	720.8	725.2	727.7
7.5°	713.2	712.9	715.4	719.6	724.3	727.3
8°	711.5	711.2	713.9	718.4	723.6	726.6
8.5°	709.7	709.5	712.3	717.3	722.6	725.9
9°	707.9	707.7	710.8	716.0	721.6	725.2
9.5°	706.1	705.8	709.1	714.7	720.4	724.3
10°	704.4	703.9	707.3	713.3	719.3	723.5
10.5°	702.5	702.0	705.6	711.9	718.0	722.4
11°	700.6	700.1	703.8	710.6	716.7	721.4
11.5°	698.6	697.8	701.8	709.1	715.3	720.2
12°	696.6	695.7	699.9	707.6	713.9	719.2
12.5°	694.5	693.3	697.8	705.9	712.3	717.9
13°	692.3	690.9	695.6	704.4	710.7	716.7
13.5°	690.1	688.2	693.4	702.5	709.0	715.2
14°	687.5	685.3	690.9	700.5	707.1	713.7
14.5°	684.9	682.4	688.2	698.4	705.1	712.2
15°	682.2	679.2	685.3	696.0	703.0	710.5
15.5°	679.1	675.9	682.3	693.4	700.6	708.7
16°	676.0	672.3	679.0	690.8	698.2	706.8
16.5°	672.6	668.6	675.6	688.0	695.4	704.7
17°	669.2	664.7	672.0	684.9	692.8	702.5
17.5°	665.6	660.7	668.2	681.7	690.0	700.2
18°	661.7	656.5	664.3	678.4	687.0	697.9
18.5°	657.7	652.2	660.4	674.8	684.0	695.5
19°	653.5	647.8	656.1	671.1	680.9	693.1
19.5°	649.1	643.1	651.7	667.3	677.7	690.5
20°	644.5	638.1	647.1	663.2	674.3	687.5
20.5°	639.6	633.2	642.4	659.0	670.6	684.6
21°	634.7	628.0	637.4	654.4	666.7	681.3



TEST NUMBER: P775618

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	618.7	611.9	621.8	640.0	654.5	670.5
23°	613.1	606.2	616.2	634.8	650.1	666.5
23.5°	607.5	600.6	610.8	629.5	645.7	662.1
24°	601.8	595.1	605.3	624.3	641.0	657.6
24.5°	595.9	589.4	599.7	618.8	636.2	652.9
25°	590.1	583.7	594.1	613.2	631.2	647.8
25.5°	584.3	578.0	588.6	607.9	626.5	642.9
26°	578.3	572.5	582.9	602.4	621.4	637.7
26.5°	572.4	566.7	577.3	597.0	616.3	632.5
27°	566.5	561.0	571.6	591.3	611.1	627.0
27.5°	560.7	555.3	566.1	585.7	605.9	621.3
28°	554.9	549.9	560.3	580.0	600.4	615.7
28.5°	549.2	544.4	554.9	574.5	595.1	609.9
29°	543.5	538.7	549.4	568.9	589.5	604.1
29.5°	537.9	533.5	544.0	563.5	584.0	598.4
30°	532.5	528.3	538.5	558.1	578.6	592.5
30.5°	527.3	523.1	533.4	552.7	573.3	586.9
31°	521.9	517.9	528.2	547.3	568.0	581.2
31.5°	516.4	512.6	522.9	542.2	562.6	575.7
32°	511.2	507.4	517.6	536.6	557.1	569.8
32.5°	505.8	502.2	512.3	531.4	551.8	564.5
33°	500.1	496.6	506.9	525.9	546.3	558.7
33.5°	494.2	491.0	501.2	520.0	540.4	552.6
34°	488.3	485.1	495.5	514.0	534.1	546.0
34.5°	482.3	479.3	489.5	507.9	527.5	539.4
35°	476.0	473.5	483.6	501.6	520.9	532.6
35.5°	469.8	467.5	477.6	495.3	514.0	525.7
36°	463.1	461.1	471.5	488.7	507.1	518.8
36.5°	456.2	454.5	465.1	482.2	499.8	511.7
37°	448.9	447.8	458.2	475.1	492.4	504.2
37.5°	441.7	441.0	451.4	467.7	484.6	496.7
38°	433.9	433.6	444.2	460.2	476.7	488.7
38.5°	425.4	425.7	436.6	452.5	468.8	480.8
39°	416.6	417.4	428.4	444.2	460.6	473.1
39.5°	407.7	408.6	419.7	435.4	452.3	464.8
40°	397.9	399.4	410.6	426.3	443.6	456.5
40.5°	388.1	389.8	401.5	417.1	434.7	447.7
41°	378.1	380.0	392.1	407.8	425.2	439.3
41.5°	368.3	370.0	382.4	398.4	415.6	430.2
42°	358.1	360.6	373.1	388.9	406.3	420.9
42.5°	347.9	350.6	363.4	379.1	396.6	410.9
43°	337.7	340.9	353.9	369.3	386.9	401.4
43.5°	327.8	330.6	344.1	359.4	376.6	391.1



TEST NUMBER: P775618

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	296.7	301.3	314.9	329.4	346.0	359.0
45.5°	286.9	291.3	305.2	319.4	335.6	348.2
46°	276.6	281.7	295.6	309.4	325.1	337.4
46.5°	266.6	271.9	285.8	299.0	314.3	326.3
47°	256.8	262.2	276.1	289.0	303.8	315.6
47.5°	247.2	252.2	266.2	278.9	293.3	305.0
48°	237.4	242.8	256.4	268.9	282.8	294.4
48.5°	228.0	233.1	246.6	258.7	272.2	283.8
49°	218.4	223.8	236.9	249.2	262.0	273.8
49.5°	209.6	214.4	227.2	239.1	251.7	263.4
50°	200.0	205.0	217.7	229.2	241.5	253.3
50.5°	191.0	195.7	207.9	219.4	231.2	243.1
51°	181.9	186.7	198.6	209.9	221.3	233.3
51.5°	173.1	177.7	189.3	200.2	211.6	223.4
52°	164.6	169.0	180.1	191.0	202.1	214.0
52.5°	156.0	160.4	170.9	181.5	192.4	204.2
53°	147.6	151.7	162.1	172.3	183.2	195.0
53.5°	139.4	143.2	153.2	162.9	174.0	185.4
54°	131.4	135.0	144.5	154.1	165.0	176.5
54.5°	123.4	127.1	136.1	145.5	156.3	167.5
55°	115.8	119.2	127.8	136.6	147.6	158.6
55.5°	108.4	111.3	119.5	128.0	139.1	149.8
56°	101.1	103.8	111.5	120.0	130.8	141.4
56.5°	94.3	96.5	103.7	112.0	122.9	133.1
57°	87.5	89.3	96.2	104.2	115.0	124.6
57.5°	80.8	82.2	88.6	96.5	107.1	116.7
58°	74.1	75.7	81.8	89.1	99.7	108.9
58.5°	67.9	69.0	74.7	82.1	92.7	101.3
59°	61.9	62.7	68.1	75.2	85.7	94.0
59.5°	56.1	56.8	61.7	68.7	78.9	86.6
60°	50.7	50.9	55.6	62.2	72.4	79.7
60.5°	45.5	45.4	49.8	56.4	65.9	72.8
61°	40.5	40.0	44.2	50.7	59.7	66.2
61.5°	35.8	35.6	39.0	45.3	53.9	60.1
62°	31.4	31.4	34.9	40.0	48.2	53.9
62.5°	27.3	27.2	30.7	35.7	42.8	48.1
63°	23.6	23.0	26.6	31.6	37.7	42.8
63.5°	20.2	18.7	22.4	27.5	33.5	37.5
64°	17.1	15.6	18.3	23.4	29.4	32.8
64.5°	14.4	12.9	15.1	19.3	25.3	28.1
65°	12.5	10.5	12.4	16.2	21.1	23.4
65.5°	10.5	8.5	10.0	13.2	17.0	18.7
66°	8.5	6.7	7.9	10.6	13.8	14.0



TEST NUMBER: P775618

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.4	3.2	3.5	4.7	6.2	4.7
68°	2.3	2.4	2.7	3.4	4.4	3.9
68.5°	1.5	1.7	2.0	2.6	3.6	3.0
69°	0.9	0.8	1.4	1.9	2.8	2.2
69.5°	0.6	0.6	0.6	1.3	2.1	1.4
70°	0.6	0.5	0.5	0.5	1.3	0.6
70.5°	0.6	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.4	0.4	0.5	0.5
72.5°	0.5	0.5	0.4	0.4	0.4	0.5
73°	0.5	0.4	0.4	0.4	0.4	0.5
73.5°	0.5	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.3	0.3	0.3	0.4
76°	0.4	0.4	0.3	0.3	0.3	0.4
76.5°	0.4	0.3	0.3	0.3	0.3	0.3
77°	0.4	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.2	0.2	0.3
79.5°	0.3	0.3	0.2	0.2	0.2	0.2
80°	0.3	0.2	0.2	0.2	0.2	0.2
80.5°	0.2	0.2	0.2	0.2	0.2	0.2
81°	0.2	0.2	0.2	0.2	0.2	0.2
81.5°	0.2	0.2	0.2	0.2	0.2	0.2
82°	0.2	0.2	0.2	0.2	0.1	0.2
82.5°	0.2	0.2	0.2	0.1	0.1	0.1
83°	0.2	0.2	0.1	0.1	0.1	0.1
83.5°	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
84.5°	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.1	0.0
85.5°	0.1	0.1	0.1	0.1	0.0	0.0
86°	0.1	0.1	0.1	0.1	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: P775618

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.1	0.1	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°	677.9	676.2	680.1	674.9	678.3	664.9	653.6	638.6	623.5	628.2	631.0
22°	674.4	672.5	676.1	671.4	674.9	661.1	649.3	633.4	618.3	622.9	626.8



44°	380.6	387.0	390.1	387.2	386.5	374.4	359.2	342.7	328.6	318.8	314.5
44.5°	369.3	377.0	380.1	377.4	375.5	364.2	349.3	333.2	319.1	308.6	304.4



66.5°	10.4	14.0	15.7	15.1	15.3	13.9	11.8	8.8	6.7	6.6	6.8
67°	7.1	11.0	12.6	12.1	12.9	11.5	9.4	6.6	4.6	4.6	4.8



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

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21.5°	629.5	622.8	632.4	649.7	662.8	677.9
22°	624.1	617.2	627.1	645.0	658.7	674.4



44°	317.0	320.9	334.2	349.6	366.5	380.6
44.5°	306.8	311.0	324.5	339.5	356.4	369.3



66.5°	6.5	5.3	6.1	8.4	10.8	10.4
67°	4.6	4.0	4.6	6.4	8.3	7.1

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

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(END OF REPORT)