

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: P775619

Luminaire Tested: HCDJBL510CSD-HCD41TRC-1000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775619
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-5000K
Description: 4 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

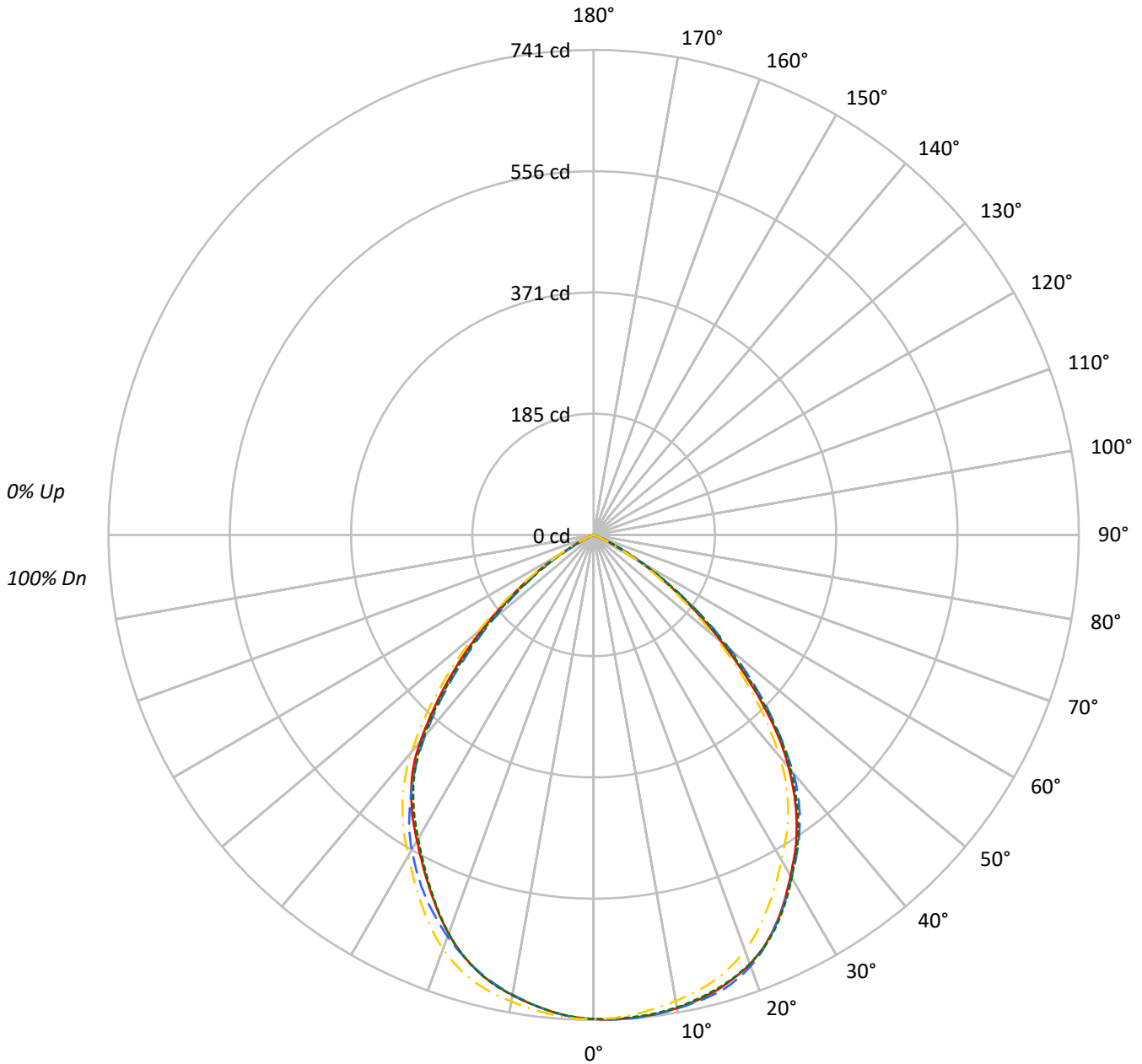
Lumens per Lamp: N/A
Luminaire Lumens: 1290.0 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.22
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	93116	93116	93116	93116
5°	93510	93346	92373	92386
10°	93824	93658	91243	91294
15°	93939	93730	89769	89808
20°	93441	93414	86811	86731
25°	91286	91620	82524	82261
30°	87380	87918	78429	77905
35°	83039	83715	74666	73821
40°	76113	76918	67587	66585
45°	64838	65959	55903	54426
50°	50317	51668	42584	40743
55°	35303	36730	28502	26527
60°	20337	21747	14699	12988
65°	7087	8040	3990	3186
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: 66849 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.8	5.4
10°-20°	198.6	15.4
20°-30°	288.1	22.3
30°-40°	319.5	24.8
40°-50°	259.5	20.1
50°-60°	130.3	10.1
60°-70°	23.7	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°	556.5	43.1
0°-40°	876.1	67.9
0°-60°	1265.8	98.1
0°-90°	1290.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1290.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	740	740	740	740	740	
5°	740	739	731	731	740	70
15°	721	719	689	689	721	203
25°	657	660	594	592	657	302
35°	540	545	486	480	540	336
45°	364	371	314	306	364	279
55°	161	167	130	121	161	145
65°	24	27	13	11	24	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°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
0.5°	740.2	740.2	740.3	740.5	739.6	739.9	740.0	740.0	739.4	739.3	739.5
1°	740.5	740.5	740.6	740.7	739.9	739.7	739.7	739.7	739.0	738.8	739.1
1.5°	740.7	740.7	740.9	740.9	740.0	739.6	739.4	739.1	738.5	738.3	738.6
2°	740.8	740.9	741.0	741.0	739.9	739.4	739.0	738.4	737.8	737.5	737.8
2.5°	740.8	741.1	741.2	741.0	739.7	739.2	738.6	737.7	737.1	736.8	737.1
3°	740.8	741.1	741.2	741.0	739.6	738.9	738.0	736.9	736.1	735.8	736.2
3.5°	740.8	741.1	741.2	740.9	739.6	738.5	737.3	735.9	734.9	734.6	735.2
4°	740.6	741.0	741.1	740.9	739.3	738.1	736.5	734.9	733.8	733.6	734.0
4.5°	740.4	740.9	741.0	740.7	739.1	737.6	735.8	733.9	732.5	732.2	732.6
5°	740.2	740.6	740.7	740.5	738.9	737.2	734.8	732.6	731.2	730.8	731.2
5.5°	739.7	740.4	740.4	740.1	738.6	736.5	733.9	731.3	729.6	729.3	729.7
6°	739.3	740.0	740.0	739.7	738.3	735.9	732.8	729.9	728.1	727.8	728.1
6.5°	739.0	739.5	739.4	739.2	737.8	735.3	731.7	728.5	726.6	726.2	726.5
7°	738.5	739.0	739.0	738.7	737.4	734.4	730.6	727.1	724.9	724.5	724.8
7.5°	738.0	738.4	738.4	738.1	736.8	733.7	729.4	725.6	723.2	722.8	722.9
8°	737.4	737.6	737.7	737.5	736.2	732.8	728.2	724.1	721.5	721.0	721.2
8.5°	736.7	736.9	737.0	736.8	735.6	731.9	727.1	722.6	719.7	719.2	719.2
9°	735.9	736.1	736.2	735.9	734.7	730.9	725.8	720.9	718.0	717.3	717.2
9.5°	735.1	735.2	735.5	734.9	733.9	729.9	724.4	719.3	716.1	715.4	715.3
10°	734.2	734.2	734.7	734.0	732.9	728.8	723.1	717.6	714.0	713.6	713.3
10.5°	733.1	733.2	734.0	733.1	732.0	727.5	721.6	715.9	712.1	711.8	711.3
11°	732.1	732.2	733.2	732.1	730.8	726.1	720.1	714.0	710.0	709.8	709.0
11.5°	730.9	731.0	732.3	730.9	729.5	724.6	718.6	712.2	707.9	707.8	706.8
12°	729.8	729.9	731.5	729.7	728.2	723.2	717.0	710.4	705.5	705.6	704.6
12.5°	728.5	728.8	730.6	728.3	726.9	721.6	715.4	708.5	703.2	703.5	702.2
13°	727.3	727.6	729.7	726.9	725.6	720.0	713.8	706.6	700.7	701.1	699.6
13.5°	725.8	726.2	728.7	725.5	724.1	718.2	712.0	704.6	698.0	698.8	697.0
14°	724.3	724.7	727.6	724.0	722.6	716.5	710.1	702.3	695.3	696.3	694.1
14.5°	722.8	723.1	726.3	722.4	721.0	714.6	708.1	699.9	692.3	693.6	691.2
15°	721.0	721.5	725.0	720.5	719.4	712.6	705.9	697.4	689.0	690.8	688.2
15.5°	719.2	719.6	723.4	718.6	717.7	710.5	703.7	694.6	685.6	687.8	685.0
16°	717.2	717.5	721.8	716.5	715.7	708.3	701.2	691.9	682.0	684.5	681.6
16.5°	715.1	715.2	719.8	714.3	713.8	705.8	698.6	688.8	678.3	681.2	678.4
17°	712.9	712.9	717.7	711.8	711.8	703.4	695.7	685.7	674.4	677.8	675.1
17.5°	710.5	710.4	715.3	709.4	709.7	700.6	692.7	682.3	670.4	674.0	671.6
18°	708.3	707.9	712.9	706.7	707.4	697.9	689.8	678.5	666.4	670.2	668.1
18.5°	705.8	705.2	710.2	703.9	705.1	695.0	686.5	674.9	662.1	665.9	664.3
19°	703.4	702.4	707.3	701.1	702.7	692.1	683.1	671.0	657.6	661.8	660.6
19.5°	700.7	699.5	704.3	698.3	700.2	689.0	679.5	666.8	653.0	657.4	656.8
20°	697.7	696.4	701.2	695.2	697.5	685.7	675.8	662.5	648.2	652.8	652.9
20.5°	694.7	693.2	697.7	691.9	694.5	682.3	671.8	657.8	643.4	647.8	648.8
21°	691.4	689.8	694.1	688.6	691.5	678.6	667.6	653.0	638.1	642.8	644.6

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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°	680.4	678.6	681.9	677.4	681.3	666.6	654.1	637.4	622.0	626.7	631.6
23°	676.4	674.6	677.4	673.4	677.4	662.3	649.2	632.0	616.5	621.0	627.1
23.5°	671.9	670.4	672.8	669.4	673.2	657.8	644.3	626.4	610.9	615.4	622.7
24°	667.3	666.2	668.0	665.2	668.9	653.3	639.1	620.7	605.3	609.7	618.3
24.5°	662.5	661.9	663.2	661.0	664.4	648.5	633.9	615.0	599.8	603.9	613.7
25°	657.4	657.5	658.3	656.9	659.8	643.9	628.7	609.2	594.3	598.1	608.9
25.5°	652.4	653.0	653.3	652.5	654.9	639.0	623.5	603.2	588.7	592.2	604.0
26°	647.2	648.6	648.0	648.1	649.9	634.1	618.2	597.7	583.3	586.5	599.0
26.5°	641.8	644.1	642.9	643.8	644.8	629.0	612.7	591.9	577.7	580.5	593.8
27°	636.3	639.5	637.7	639.2	639.4	623.8	607.4	586.2	572.2	574.5	588.6
27.5°	630.5	634.8	632.3	634.4	633.9	618.5	602.0	580.4	566.5	568.8	583.2
28°	624.8	629.9	626.9	629.6	628.3	613.1	596.4	574.6	561.0	563.0	577.8
28.5°	618.9	625.0	621.4	624.6	622.4	607.7	590.9	568.9	555.7	557.4	572.3
29°	613.0	619.9	615.7	619.4	616.7	602.2	585.1	563.2	550.2	551.8	566.8
29.5°	607.3	614.9	610.4	614.3	610.9	596.7	579.6	557.7	544.9	546.2	561.2
30°	601.3	609.8	604.9	609.0	605.0	591.2	574.0	552.1	539.7	540.6	555.6
30.5°	595.6	604.6	599.4	603.7	599.0	585.7	568.5	546.6	534.5	535.2	550.0
31°	589.8	599.3	593.7	598.3	593.2	580.4	563.0	541.4	529.4	529.9	544.1
31.5°	584.2	594.1	588.5	592.8	587.6	574.9	557.6	536.3	524.2	524.4	538.0
32°	578.3	588.7	583.1	587.4	581.9	569.4	552.3	531.0	519.1	519.2	531.5
32.5°	572.8	583.4	577.8	581.9	576.1	564.1	546.9	525.7	514.1	513.6	524.7
33°	567.0	577.6	572.2	576.4	570.6	558.6	541.5	520.4	508.6	508.0	517.5
33.5°	560.8	571.7	566.8	570.4	564.5	553.1	535.7	514.8	503.1	502.0	510.0
34°	554.1	565.0	560.9	564.0	558.3	547.0	530.0	509.3	497.5	496.2	502.5
34.5°	547.3	558.3	554.7	557.2	551.7	540.9	524.0	503.5	491.8	490.0	494.8
35°	540.5	551.2	548.4	550.1	544.9	534.3	517.9	497.6	486.0	483.8	487.0
35.5°	533.5	544.0	542.2	543.1	538.0	527.8	511.6	491.7	480.0	477.3	479.2
36°	526.4	536.7	535.8	535.5	531.1	521.1	504.9	485.6	473.9	470.8	471.2
36.5°	519.3	529.2	529.1	528.0	523.5	513.9	498.1	479.2	467.5	463.7	463.1
37°	511.6	521.4	522.0	520.3	516.1	506.4	490.9	472.5	460.7	456.7	455.0
37.5°	504.0	513.4	515.0	512.4	508.3	498.7	483.7	465.8	453.8	449.3	446.8
38°	495.9	505.1	507.5	504.3	500.4	490.9	476.2	458.3	446.5	441.1	438.3
38.5°	487.9	496.8	499.6	495.9	492.5	483.0	468.0	450.3	438.6	432.4	429.3
39°	480.2	488.6	491.7	487.7	484.7	474.8	459.5	442.1	429.9	423.4	419.5
39.5°	471.7	479.8	483.1	479.1	476.5	466.5	450.8	433.3	420.9	414.3	409.9
40°	463.3	470.8	473.9	470.1	468.2	457.6	441.9	424.4	411.4	404.9	400.2
40.5°	454.3	461.4	464.5	460.7	459.5	448.6	432.6	415.3	401.9	394.8	390.2
41°	445.8	451.9	455.0	451.2	450.8	439.3	423.1	405.9	392.3	384.9	380.4
41.5°	436.5	442.2	445.2	441.7	441.8	429.8	413.7	396.5	382.5	375.1	370.3
42°	427.1	432.5	435.5	432.2	432.6	420.0	404.2	386.9	372.9	364.8	360.2
42.5°	417.0	422.6	425.8	422.6	422.8	410.3	394.5	377.2	363.0	354.3	349.8
43°	407.3	412.7	415.9	412.6	413.0	400.6	384.8	367.4	353.3	344.1	339.7
43.5°	396.9	402.7	405.9	402.8	402.4	390.4	374.8	357.8	343.5	333.8	329.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	364.3	372.2	375.6	372.6	370.6	359.4	344.4	328.2	314.1	303.1	298.5
45.5°	353.3	362.0	365.4	362.9	359.5	348.8	334.3	318.7	304.3	293.1	288.5
46°	342.4	351.7	355.2	352.7	348.5	337.9	323.9	308.8	294.4	283.0	278.2
46.5°	331.2	341.3	344.9	342.1	337.7	327.2	313.8	299.1	284.8	273.1	268.0
47°	320.3	330.8	334.5	331.5	326.8	316.5	303.3	289.1	274.8	263.3	257.8
47.5°	309.5	320.1	324.0	321.2	315.9	305.8	293.1	279.4	265.1	253.3	247.9
48°	298.7	309.5	313.8	310.8	305.5	295.0	282.7	269.5	255.5	243.7	237.8
48.5°	288.0	298.9	303.2	300.2	295.0	284.2	272.8	259.9	245.9	234.3	228.0
49°	277.8	288.5	293.0	289.7	284.6	273.9	262.6	250.0	236.2	224.6	218.3
49.5°	267.3	278.0	282.6	279.2	274.1	263.5	252.6	240.3	226.9	215.2	208.8
50°	257.0	267.5	272.2	268.7	263.9	253.2	242.5	230.5	217.5	205.9	199.2
50.5°	246.7	256.8	261.8	258.3	253.9	242.7	232.6	220.9	208.3	196.9	190.1
51°	236.8	246.6	251.2	247.8	243.8	232.7	222.7	211.4	198.9	187.6	181.0
51.5°	226.7	236.6	241.0	237.7	233.9	223.0	213.0	202.0	189.9	178.8	172.2
52°	217.1	226.4	230.8	227.7	224.1	213.1	203.4	192.7	181.1	170.0	163.5
52.5°	207.2	216.3	220.7	217.8	214.2	203.7	193.9	183.2	172.1	161.5	155.0
53°	197.8	206.4	210.5	207.9	204.6	194.0	184.3	174.2	163.4	152.7	146.6
53.5°	188.1	196.7	200.2	197.9	195.1	184.6	175.1	165.3	154.8	144.4	138.8
54°	179.1	187.1	190.2	188.1	185.7	175.3	166.1	156.5	146.2	136.2	130.8
54.5°	170.0	177.4	180.4	178.8	176.4	166.5	157.1	147.8	137.9	128.2	122.9
55°	160.9	168.3	170.9	169.4	167.4	157.6	148.5	139.2	129.9	120.3	115.4
55.5°	152.0	159.0	161.2	160.3	158.7	148.8	139.7	130.8	121.8	112.7	108.0
56°	143.4	150.0	151.9	151.2	149.6	140.2	131.2	122.7	114.0	105.3	101.2
56.5°	135.0	141.0	142.8	142.2	141.0	131.8	123.1	114.8	106.3	98.4	94.5
57°	126.5	132.5	133.8	133.6	132.5	123.7	115.0	106.8	99.3	91.6	87.8
57.5°	118.4	124.0	125.0	125.1	124.4	115.8	107.1	99.5	92.3	84.8	80.9
58°	110.5	115.6	116.5	116.9	116.1	108.0	99.9	92.4	85.2	78.0	74.2
58.5°	102.8	107.6	108.4	108.8	108.3	100.9	92.8	85.1	78.2	71.0	68.2
59°	95.3	99.8	100.4	100.8	101.0	93.9	85.6	77.9	71.1	65.0	62.3
59.5°	87.9	92.3	92.7	93.2	93.6	86.7	78.5	70.7	64.6	59.0	56.4
60°	80.8	84.8	85.3	85.9	86.4	79.6	71.5	64.2	58.4	53.2	51.1
60.5°	73.9	77.5	78.1	78.7	79.0	72.5	65.2	58.0	52.6	47.9	45.9
61°	67.2	70.7	71.1	71.6	71.8	66.1	58.8	52.2	46.8	42.7	41.1
61.5°	61.0	64.1	64.7	65.1	65.2	59.8	53.0	46.5	41.5	37.9	36.5
62°	54.7	57.8	58.6	58.7	58.9	54.0	47.5	41.1	36.4	33.3	32.1
62.5°	48.8	51.6	52.6	52.6	52.7	48.2	42.1	36.0	31.6	28.9	28.0
63°	43.4	45.9	46.8	46.7	46.9	42.7	37.0	31.5	26.9	25.0	24.3
63.5°	38.1	40.4	41.6	41.2	41.5	37.5	32.4	27.0	22.8	21.2	20.8
64°	33.3	35.8	36.5	36.3	36.4	32.6	28.0	23.0	19.1	17.9	17.8
64.5°	28.5	31.4	32.2	31.9	31.5	28.2	24.0	19.2	15.7	15.0	14.9
65°	23.8	26.8	27.9	27.5	27.0	24.0	20.3	15.9	13.4	12.9	12.9
65.5°	19.0	22.2	23.7	23.1	22.8	20.1	16.7	13.7	11.3	10.9	10.9
66°	14.2	17.7	19.4	18.8	19.0	16.5	14.3	11.3	9.1	8.9	9.0



TEST NUMBER: P775619

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.8	8.5	10.0	9.6	10.8	9.2	7.1	4.4	3.2	3.4	3.5
68°	3.9	6.3	7.5	7.3	8.3	6.7	4.7	3.2	2.0	2.3	2.3
68.5°	3.1	4.5	5.3	5.2	6.0	4.3	3.2	2.1	1.2	1.5	1.5
69°	2.2	3.7	3.6	3.6	3.5	2.9	2.1	1.4	0.7	1.0	1.0
69.5°	1.4	3.0	2.9	2.9	2.2	1.8	1.2	0.9	0.6	0.6	0.6
70°	0.6	2.2	2.1	2.1	1.4	1.0	0.7	0.6	0.6	0.6	0.6
70.5°	0.5	1.4	1.4	1.4	0.9	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: P775619
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

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: P775619

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	739.9	739.9	739.9	739.9	739.9	739.9
0.5°	739.7	739.2	739.6	740.0	740.3	740.2
1°	739.3	738.8	739.4	740.0	740.5	740.5
1.5°	738.8	738.3	739.1	740.0	740.5	740.7
2°	738.3	737.6	738.6	739.6	740.4	740.8
2.5°	737.5	736.9	738.0	739.2	740.3	740.8
3°	736.7	736.0	737.2	738.7	740.1	740.8
3.5°	735.7	735.1	736.3	738.0	739.7	740.8
4°	734.5	733.9	735.4	737.4	739.3	740.6
4.5°	733.2	732.7	734.2	736.5	738.9	740.4
5°	731.9	731.3	733.0	735.6	738.5	740.2
5.5°	730.4	729.8	731.7	734.6	737.9	739.7
6°	728.8	728.3	730.4	733.6	737.3	739.3
6.5°	727.2	726.7	729.0	732.5	736.5	739.0
7°	725.5	725.1	727.6	731.4	735.9	738.5
7.5°	723.7	723.4	726.0	730.3	735.1	738.0
8°	722.0	721.7	724.5	729.1	734.3	737.4
8.5°	720.2	720.0	722.9	727.9	733.3	736.7
9°	718.4	718.2	721.3	726.6	732.3	735.9
9.5°	716.6	716.3	719.6	725.2	731.1	735.1
10°	714.8	714.4	717.8	723.9	729.9	734.2
10.5°	712.9	712.4	716.1	722.5	728.7	733.1
11°	711.0	710.4	714.3	721.1	727.3	732.1
11.5°	708.9	708.2	712.2	719.6	725.9	730.9
12°	706.9	706.0	710.3	718.1	724.5	729.8
12.5°	704.8	703.6	708.2	716.4	722.9	728.5
13°	702.5	701.1	705.9	714.8	721.2	727.3
13.5°	700.3	698.4	703.7	712.9	719.5	725.8
14°	697.7	695.5	701.1	710.8	717.6	724.3
14.5°	695.1	692.5	698.4	708.7	715.5	722.8
15°	692.3	689.3	695.5	706.3	713.4	721.0
15.5°	689.2	685.9	692.4	703.7	711.0	719.2
16°	686.0	682.3	689.1	701.0	708.5	717.2
16.5°	682.6	678.5	685.6	698.2	705.7	715.1
17°	679.1	674.6	681.9	695.1	703.1	712.9
17.5°	675.4	670.5	678.1	691.8	700.2	710.5
18°	671.5	666.3	674.2	688.4	697.2	708.3
18.5°	667.4	661.9	670.2	684.8	694.1	705.8
19°	663.2	657.4	665.8	681.1	691.0	703.4
19.5°	658.7	652.6	661.4	677.1	687.7	700.7
20°	654.0	647.6	656.7	673.0	684.3	697.7
20.5°	649.1	642.6	651.9	668.7	680.6	694.7
21°	644.1	637.3	646.9	664.1	676.6	691.4

TEST NUMBER: P775619

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	627.9	620.9	631.0	649.5	664.2	680.4
23°	622.2	615.2	625.3	644.2	659.8	676.4
23.5°	616.5	609.5	619.9	638.9	655.3	671.9
24°	610.7	603.9	614.2	633.5	650.5	667.3
24.5°	604.7	598.1	608.6	628.0	645.6	662.5
25°	598.9	592.4	602.9	622.3	640.6	657.4
25.5°	593.0	586.6	597.4	616.9	635.8	652.4
26°	586.9	580.9	591.5	611.3	630.6	647.2
26.5°	580.8	575.1	585.8	605.8	625.4	641.8
27°	574.9	569.3	580.1	600.0	620.2	636.3
27.5°	569.0	563.6	574.4	594.4	614.9	630.5
28°	563.1	558.0	568.6	588.6	609.3	624.8
28.5°	557.4	552.5	563.1	583.0	603.9	618.9
29°	551.5	546.7	557.6	577.3	598.2	613.0
29.5°	545.9	541.4	552.0	571.9	592.7	607.3
30°	540.4	536.1	546.5	566.3	587.1	601.3
30.5°	535.1	530.8	541.3	560.9	581.8	595.6
31°	529.6	525.6	536.0	555.4	576.5	589.8
31.5°	524.1	520.1	530.6	550.2	570.9	584.2
32°	518.8	514.9	525.3	544.6	565.4	578.3
32.5°	513.3	509.6	519.9	539.2	559.9	572.8
33°	507.5	503.9	514.4	533.7	554.4	567.0
33.5°	501.5	498.3	508.6	527.7	548.4	560.8
34°	495.5	492.3	502.9	521.6	542.0	554.1
34.5°	489.4	486.4	496.8	515.5	535.3	547.3
35°	483.0	480.5	490.7	509.1	528.6	540.5
35.5°	476.7	474.4	484.6	502.7	521.6	533.5
36°	469.9	467.9	478.4	495.9	514.6	526.4
36.5°	463.0	461.3	471.9	489.3	507.2	519.3
37°	455.5	454.4	465.0	482.2	499.7	511.6
37.5°	448.3	447.5	458.1	474.6	491.8	504.0
38°	440.4	440.1	450.8	467.0	483.8	495.9
38.5°	431.7	432.1	443.0	459.2	475.8	487.9
39°	422.8	423.6	434.7	450.8	467.5	480.2
39.5°	413.7	414.7	425.9	441.9	459.0	471.7
40°	403.8	405.3	416.7	432.6	450.2	463.3
40.5°	393.9	395.6	407.4	423.3	441.1	454.3
41°	383.7	385.7	397.9	413.8	431.5	445.8
41.5°	373.7	375.5	388.1	404.3	421.7	436.5
42°	363.4	365.9	378.6	394.6	412.3	427.1
42.5°	353.0	355.8	368.8	384.7	402.5	417.0
43°	342.7	346.0	359.1	374.8	392.6	407.3
43.5°	332.7	335.5	349.2	364.8	382.1	396.9



TEST NUMBER: P775619

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	301.1	305.8	319.5	334.3	351.1	364.3
45.5°	291.2	295.6	309.7	324.1	340.5	353.3
46°	280.7	285.8	300.0	314.0	329.9	342.4
46.5°	270.6	275.9	290.0	303.4	319.0	331.2
47°	260.6	266.1	280.2	293.3	308.3	320.3
47.5°	250.8	256.0	270.2	283.1	297.7	309.5
48°	240.9	246.4	260.2	272.9	287.0	298.7
48.5°	231.3	236.6	250.2	262.6	276.2	288.0
49°	221.6	227.1	240.4	252.9	265.9	277.8
49.5°	212.7	217.6	230.6	242.6	255.4	267.3
50°	203.0	208.1	220.9	232.6	245.1	257.0
50.5°	193.8	198.6	211.0	222.7	234.6	246.7
51°	184.6	189.4	201.6	213.0	224.6	236.8
51.5°	175.7	180.4	192.1	203.2	214.7	226.7
52°	167.0	171.5	182.8	193.8	205.1	217.1
52.5°	158.3	162.8	173.4	184.2	195.3	207.2
53°	149.7	153.9	164.5	174.8	185.9	197.8
53.5°	141.4	145.4	155.5	165.3	176.6	188.1
54°	133.3	137.0	146.6	156.4	167.4	179.1
54.5°	125.2	128.9	138.1	147.6	158.6	170.0
55°	117.5	120.9	129.7	138.6	149.7	160.9
55.5°	110.0	112.9	121.3	129.9	141.2	152.0
56°	102.6	105.4	113.2	121.8	132.8	143.4
56.5°	95.7	97.9	105.3	113.7	124.7	135.0
57°	88.8	90.7	97.6	105.7	116.7	126.5
57.5°	82.0	83.4	89.9	97.9	108.7	118.4
58°	75.2	76.8	83.0	90.4	101.2	110.5
58.5°	68.9	70.1	75.8	83.3	94.1	102.8
59°	62.8	63.7	69.1	76.4	86.9	95.3
59.5°	57.0	57.6	62.6	69.8	80.1	87.9
60°	51.4	51.6	56.4	63.1	73.5	80.8
60.5°	46.2	46.1	50.6	57.3	66.9	73.9
61°	41.1	40.6	44.9	51.4	60.6	67.2
61.5°	36.4	36.2	39.6	46.0	54.7	61.0
62°	31.9	31.9	35.4	40.6	49.0	54.7
62.5°	27.7	27.6	31.1	36.3	43.4	48.8
63°	24.0	23.4	27.0	32.1	38.3	43.4
63.5°	20.5	19.0	22.7	27.9	34.0	38.1
64°	17.4	15.8	18.6	23.8	29.9	33.3
64.5°	14.6	13.1	15.4	19.6	25.7	28.5
65°	12.7	10.7	12.6	16.4	21.4	23.8
65.5°	10.7	8.6	10.1	13.4	17.3	19.0
66°	8.6	6.8	8.0	10.8	14.0	14.2



TEST NUMBER: P775619

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.4	3.2	3.5	4.8	6.3	4.8
68°	2.3	2.5	2.8	3.4	4.5	3.9
68.5°	1.5	1.7	2.0	2.7	3.6	3.1
69°	1.0	0.9	1.4	1.9	2.9	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: P775619
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-5000K

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°	687.9	686.2	690.2	684.9	688.3	674.8	663.3	648.0	632.8	637.5	640.3
22°	684.4	682.5	686.1	681.3	684.9	670.8	658.9	642.8	627.4	632.1	636.1



44°	386.2	392.7	395.9	392.9	392.3	379.9	364.5	347.8	333.5	323.5	319.1
44.5°	374.8	382.6	385.8	383.0	381.1	369.6	354.5	338.1	323.8	313.1	308.9



66.5°	10.6	14.2	15.9	15.4	15.6	14.1	11.9	9.0	6.8	6.7	6.9
67°	7.3	11.2	12.8	12.3	13.1	11.6	9.5	6.7	4.7	4.7	4.9



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°	638.9	632.0	641.7	659.3	672.7	687.9
22°	633.3	626.4	636.4	654.5	668.5	684.4



44°	321.7	325.6	339.2	354.7	371.9	386.2
44.5°	311.3	315.6	329.3	344.5	361.7	374.8



66.5°	6.6	5.3	6.2	8.5	11.0	10.6
67°	4.7	4.1	4.7	6.5	8.4	7.3

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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)