

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: P775617

Luminaire Tested: HCDJBL510CSD-HCD41TRC-1000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775617
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-3500K
Description: 4 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

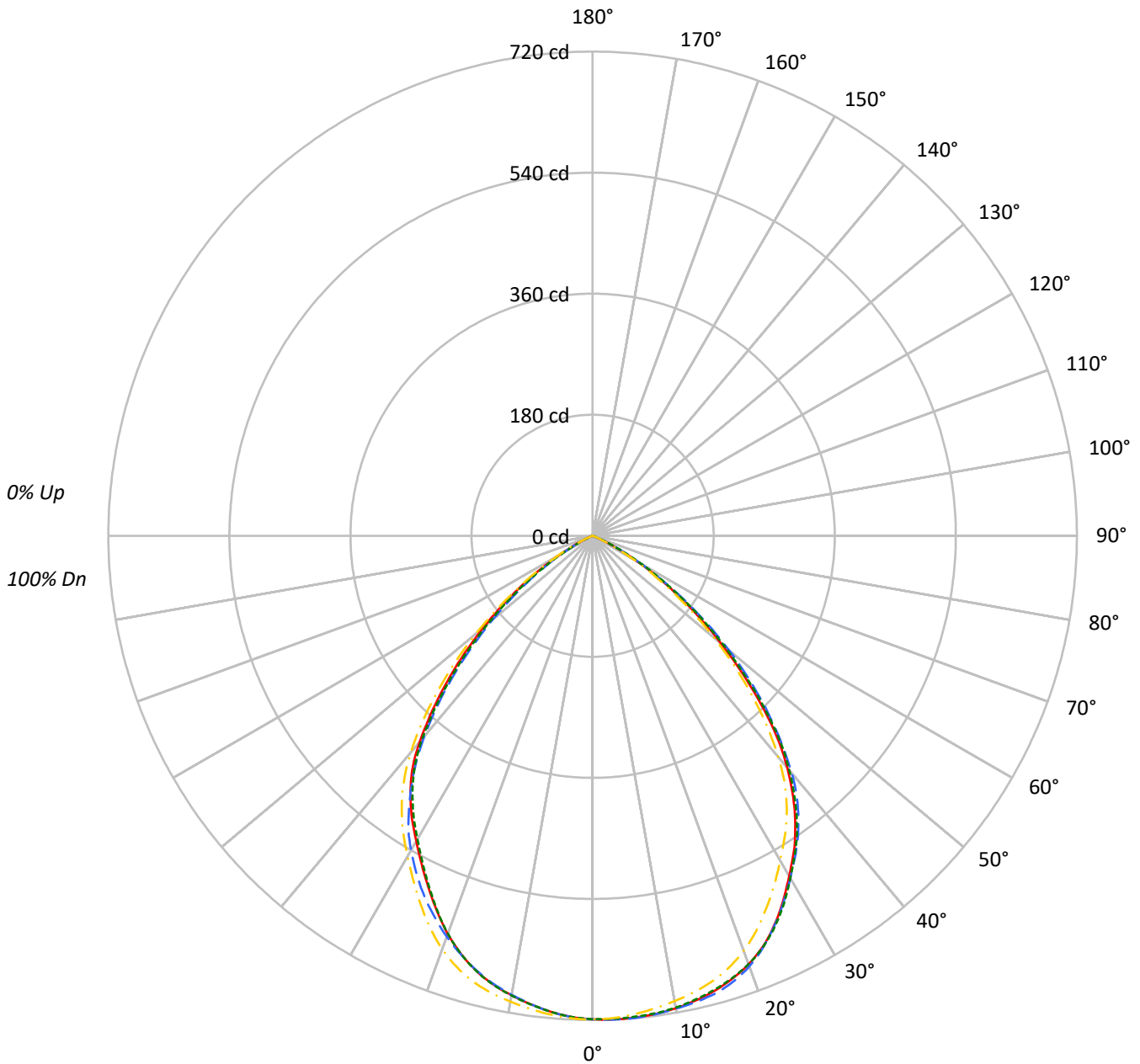
Lumens per Lamp: N/A
Luminaire Lumens: 1253.6 lumens
Efficiency: N/A
Efficacy: 125.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.22
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100		
	1	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	93	91	91	91	91	91	91		
	2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81	81	81	81	81	81		
	3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72	72	72	72	72	72		
	4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64	64	64	64	64	64		
	5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58	58	58	58	58	58		
	6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52	52	52	52	52	52		
	7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47	47	47	47	47	47		
	8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43	43	43	43	43	43		
	9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41	39	39	39	39	39	39		
	10	61	49	42	38	60	49	42	38	48	42	38	47	42	37	46	41	37	36	36	36	36	36	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	90486	90486	90486	90486
5°	90870	90705	89770	89783
10°	91179	91013	88674	88713
15°	91281	91085	87229	87281
20°	90802	90775	84374	84280
25°	88718	89023	80192	79928
30°	84910	85447	76205	75711
35°	80704	81349	72561	71732
40°	73961	74750	65681	64696
45°	63004	64108	54319	52877
50°	48908	50200	41370	39588
55°	34316	35698	27690	25781
60°	19784	21143	14297	12635
65°	6879	7802	3901	3097
70°	221	478	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: 64962 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	5.4
10°-20°	193.0	15.4
20°-30°	280.0	22.3
30°-40°	310.5	24.8
40°-50°	252.1	20.1
50°-60°	126.6	10.1
60°-70°	23.0	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°	540.8	43.1
0°-40°	851.3	67.9
0°-60°	1230.1	98.1
0°-90°	1253.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1253.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	719	719	719	719	719	
5°	719	718	711	711	719	68
15°	701	699	670	670	701	198
25°	639	641	578	576	639	293
35°	525	530	472	467	525	326
45°	354	360	305	297	354	271
55°	156	163	126	118	156	141
65°	23	26	13	10	23	27
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°	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0
0.5°	719.3	719.3	719.4	719.6	718.8	719.0	719.1	719.1	718.6	718.5	718.7
1°	719.6	719.6	719.7	719.8	719.0	718.9	718.9	718.9	718.2	717.9	718.3
1.5°	719.8	719.8	720.0	720.0	719.1	718.8	718.6	718.3	717.6	717.4	717.7
2°	719.9	720.0	720.1	720.1	719.0	718.6	718.2	717.5	717.0	716.7	717.0
2.5°	719.9	720.2	720.3	720.1	718.9	718.4	717.7	716.9	716.3	716.0	716.3
3°	719.9	720.2	720.3	720.1	718.8	718.0	717.2	716.1	715.4	715.0	715.5
3.5°	719.9	720.2	720.3	720.0	718.8	717.6	716.5	715.1	714.2	713.9	714.4
4°	719.7	720.1	720.2	720.0	718.5	717.3	715.8	714.2	713.1	712.9	713.3
4.5°	719.5	720.0	720.1	719.8	718.3	716.8	715.0	713.2	711.8	711.5	711.9
5°	719.3	719.7	719.8	719.6	718.0	716.4	714.1	711.9	710.6	710.2	710.6
5.5°	718.9	719.5	719.5	719.2	717.7	715.8	713.2	710.7	709.0	708.7	709.1
6°	718.5	719.1	719.1	718.9	717.4	715.1	712.1	709.3	707.6	707.3	707.6
6.5°	718.2	718.7	718.6	718.4	717.0	714.5	711.1	708.0	706.1	705.7	706.0
7°	717.6	718.2	718.2	717.8	716.6	713.7	710.0	706.5	704.5	704.1	704.4
7.5°	717.2	717.5	717.5	717.3	716.0	713.0	708.8	705.1	702.8	702.4	702.5
8°	716.6	716.8	716.9	716.7	715.5	712.1	707.7	703.6	701.2	700.6	700.8
8.5°	715.9	716.1	716.2	716.0	714.8	711.2	706.5	702.2	699.4	698.9	698.9
9°	715.1	715.4	715.5	715.1	714.0	710.3	705.3	700.5	697.7	697.1	697.0
9.5°	714.3	714.4	714.7	714.2	713.2	709.3	704.0	699.0	695.9	695.2	695.1
10°	713.5	713.5	714.0	713.3	712.2	708.2	702.7	697.3	693.9	693.5	693.2
10.5°	712.5	712.6	713.3	712.5	711.3	707.0	701.3	695.7	692.0	691.7	691.2
11°	711.4	711.5	712.6	711.4	710.2	705.6	699.8	693.9	690.0	689.8	689.0
11.5°	710.3	710.4	711.6	710.3	708.9	704.2	698.4	692.1	687.9	687.8	686.9
12°	709.2	709.3	710.9	709.1	707.7	702.8	696.8	690.4	685.6	685.7	684.7
12.5°	708.0	708.2	710.0	707.8	706.4	701.3	695.2	688.5	683.3	683.6	682.4
13°	706.8	707.1	709.1	706.4	705.1	699.7	693.7	686.6	680.9	681.4	679.9
13.5°	705.3	705.7	708.1	705.0	703.6	697.9	691.9	684.7	678.4	679.1	677.3
14°	703.8	704.3	707.1	703.5	702.2	696.3	690.1	682.5	675.7	676.7	674.5
14.5°	702.4	702.7	705.8	702.0	700.6	694.4	688.1	680.1	672.8	674.0	671.7
15°	700.6	701.2	704.6	700.2	699.1	692.4	686.0	677.7	669.5	671.3	668.8
15.5°	698.9	699.3	703.0	698.4	697.4	690.5	683.8	675.0	666.2	668.4	665.7
16°	697.0	697.2	701.5	696.3	695.6	688.3	681.5	672.3	662.8	665.2	662.4
16.5°	694.9	695.0	699.5	694.1	693.7	685.9	678.9	669.3	659.2	662.0	659.3
17°	692.8	692.8	697.4	691.7	691.7	683.5	676.1	666.3	655.3	658.7	656.1
17.5°	690.5	690.4	695.1	689.3	689.7	680.8	673.2	663.0	651.5	655.0	652.6
18°	688.3	687.9	692.8	686.7	687.5	678.2	670.4	659.4	647.6	651.3	649.2
18.5°	685.9	685.3	690.2	684.1	685.2	675.3	667.2	655.9	643.4	647.2	645.6
19°	683.5	682.6	687.4	681.4	682.9	672.5	663.8	652.0	639.1	643.1	642.0
19.5°	680.9	679.8	684.5	678.6	680.4	669.5	660.3	648.0	634.6	638.9	638.2
20°	678.0	676.8	681.5	675.6	677.8	666.3	656.7	643.8	630.0	634.4	634.5
20.5°	675.1	673.7	678.0	672.3	674.9	663.0	652.9	639.3	625.3	629.5	630.5
21°	671.9	670.4	674.5	669.1	672.0	659.5	648.8	634.6	620.1	624.7	626.4



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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°	661.3	659.5	662.7	658.2	662.1	647.8	635.7	619.4	604.5	609.0	613.8
23°	657.3	655.6	658.2	654.4	658.2	643.6	630.9	614.2	599.1	603.5	609.4
23.5°	653.0	651.5	653.8	650.5	654.2	639.3	626.1	608.7	593.7	598.0	605.2
24°	648.5	647.4	649.1	646.4	650.1	634.8	621.0	603.2	588.2	592.5	600.8
24.5°	643.8	643.2	644.5	642.4	645.7	630.2	616.1	597.6	582.9	586.8	596.4
25°	638.9	639.0	639.7	638.3	641.1	625.7	611.0	592.0	577.5	581.2	591.7
25.5°	634.0	634.6	634.8	634.1	636.4	620.9	605.9	586.2	572.1	575.5	586.9
26°	628.9	630.3	629.7	629.8	631.6	616.2	600.7	580.8	566.8	569.9	582.1
26.5°	623.7	625.9	624.8	625.6	626.6	611.3	595.4	575.2	561.4	564.1	577.1
27°	618.3	621.5	619.7	621.1	621.3	606.2	590.3	569.6	556.1	558.3	572.0
27.5°	612.7	616.9	614.5	616.5	616.1	601.0	585.0	564.0	550.6	552.7	566.7
28°	607.1	612.1	609.2	611.8	610.6	595.9	579.6	558.4	545.2	547.1	561.5
28.5°	601.4	607.4	603.8	606.9	604.9	590.6	574.2	552.8	540.0	541.6	556.2
29°	595.7	602.4	598.3	602.0	599.3	585.2	568.6	547.3	534.7	536.3	550.8
29.5°	590.2	597.5	593.2	597.0	593.7	579.9	563.2	542.0	529.5	530.8	545.4
30°	584.3	592.6	587.9	591.8	588.0	574.5	557.8	536.6	524.4	525.4	539.9
30.5°	578.8	587.6	582.5	586.6	582.1	569.2	552.4	531.2	519.5	520.1	534.5
31°	573.2	582.4	577.0	581.4	576.5	564.0	547.1	526.1	514.5	514.9	528.8
31.5°	567.8	577.3	571.9	576.1	571.0	558.6	541.9	521.1	509.4	509.6	522.8
32°	562.0	572.1	566.6	570.9	565.5	553.4	536.7	516.0	504.4	504.5	516.5
32.5°	556.7	566.9	561.5	565.5	559.9	548.2	531.5	510.9	499.6	499.2	509.9
33°	551.0	561.3	556.1	560.1	554.5	542.9	526.2	505.7	494.3	493.7	502.9
33.5°	545.0	555.5	550.8	554.3	548.6	537.5	520.6	500.3	488.9	487.9	495.6
34°	538.4	549.1	545.1	548.1	542.6	531.6	515.0	494.9	483.5	482.2	488.4
34.5°	531.9	542.6	539.1	541.4	536.2	525.7	509.2	489.3	477.9	476.1	480.8
35°	525.3	535.6	532.9	534.6	529.5	519.3	503.3	483.6	472.3	470.1	473.2
35.5°	518.4	528.7	526.9	527.8	522.8	512.9	497.2	477.8	466.5	463.8	465.7
36°	511.6	521.5	520.7	520.4	516.1	506.4	490.7	471.9	460.5	457.5	457.9
36.5°	504.6	514.3	514.2	513.1	508.7	499.4	484.0	465.7	454.3	450.6	450.0
37°	497.2	506.7	507.2	505.6	501.5	492.1	477.1	459.1	447.7	443.8	442.1
37.5°	489.8	498.9	500.5	497.9	494.0	484.6	470.0	452.6	441.0	436.7	434.2
38°	481.9	490.9	493.1	490.0	486.3	477.1	462.8	445.4	433.9	428.7	426.0
38.5°	474.2	482.8	485.5	481.9	478.6	469.4	454.8	437.6	426.2	420.2	417.2
39°	466.6	474.8	477.8	474.0	471.1	461.4	446.5	429.6	417.8	411.5	407.6
39.5°	458.4	466.3	469.5	465.6	463.1	453.3	438.1	421.1	409.0	402.7	398.3
40°	450.2	457.5	460.5	456.9	455.0	444.7	429.4	412.4	399.8	393.4	388.9
40.5°	441.5	448.4	451.4	447.7	446.5	435.9	420.4	403.6	390.5	383.7	379.2
41°	433.2	439.1	442.1	438.5	438.1	426.9	411.2	394.5	381.2	374.1	369.7
41.5°	424.2	429.7	432.6	429.2	429.3	417.7	402.0	385.4	371.7	364.5	359.9
42°	415.1	420.3	423.2	420.0	420.4	408.2	392.8	376.0	362.3	354.5	350.0
42.5°	405.3	410.6	413.7	410.6	410.8	398.7	383.4	366.6	352.8	344.3	340.0
43°	395.8	401.1	404.2	401.0	401.3	389.3	373.9	357.1	343.4	334.4	330.1
43.5°	385.7	391.4	394.5	391.5	391.1	379.3	364.2	347.7	333.8	324.4	320.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	354.0	361.7	365.0	362.1	360.2	349.3	334.7	318.9	305.2	294.6	290.1
45.5°	343.4	351.8	355.1	352.7	349.4	338.9	324.8	309.7	295.7	284.8	280.4
46°	332.7	341.8	345.1	342.8	338.7	328.3	314.8	300.1	286.1	275.0	270.3
46.5°	321.8	331.7	335.2	332.5	328.1	318.0	304.9	290.6	276.7	265.4	260.5
47°	311.2	321.5	325.0	322.1	317.6	307.6	294.8	281.0	267.1	255.9	250.5
47.5°	300.8	311.0	314.9	312.2	307.0	297.1	284.8	271.5	257.7	246.2	240.9
48°	290.3	300.8	304.9	302.0	296.8	286.7	274.8	261.9	248.3	236.8	231.1
48.5°	279.8	290.5	294.7	291.8	286.7	276.2	265.1	252.6	239.0	227.7	221.6
49°	270.0	280.4	284.7	281.5	276.5	266.2	255.2	242.9	229.6	218.3	212.2
49.5°	259.7	270.2	274.7	271.3	266.4	256.1	245.4	233.5	220.5	209.2	202.9
50°	249.8	259.9	264.5	261.1	256.4	246.1	235.7	224.0	211.3	200.1	193.6
50.5°	239.7	249.6	254.4	251.0	246.8	235.9	226.0	214.6	202.4	191.3	184.7
51°	230.1	239.6	244.1	240.8	236.9	226.2	216.4	205.4	193.3	182.3	175.9
51.5°	220.3	229.9	234.2	231.0	227.3	216.7	207.0	196.3	184.6	173.7	167.4
52°	211.0	220.0	224.3	221.3	217.8	207.1	197.7	187.3	176.0	165.2	158.9
52.5°	201.4	210.2	214.4	211.6	208.1	198.0	188.4	178.1	167.3	156.9	150.6
53°	192.3	200.6	204.6	202.0	198.8	188.5	179.1	169.3	158.8	148.4	142.5
53.5°	182.8	191.1	194.5	192.4	189.6	179.4	170.2	160.6	150.4	140.3	134.8
54°	174.0	181.8	184.8	182.8	180.4	170.4	161.4	152.0	142.1	132.4	127.1
54.5°	165.2	172.4	175.3	173.7	171.4	161.8	152.7	143.7	134.0	124.6	119.4
55°	156.4	163.6	166.0	164.6	162.7	153.2	144.3	135.3	126.2	116.9	112.1
55.5°	147.7	154.5	156.6	155.8	154.2	144.6	135.8	127.1	118.4	109.6	105.0
56°	139.4	145.7	147.6	147.0	145.4	136.3	127.5	119.2	110.8	102.3	98.4
56.5°	131.2	137.0	138.8	138.2	137.0	128.1	119.6	111.5	103.3	95.7	91.8
57°	122.9	128.7	130.1	129.9	128.7	120.2	111.7	103.7	96.5	89.0	85.3
57.5°	115.0	120.5	121.5	121.6	120.8	112.6	104.1	96.7	89.7	82.4	78.7
58°	107.4	112.4	113.2	113.6	112.9	105.0	97.1	89.8	82.8	75.8	72.1
58.5°	99.9	104.6	105.3	105.7	105.2	98.0	90.2	82.7	76.0	69.0	66.2
59°	92.7	97.0	97.5	97.9	98.2	91.2	83.2	75.7	69.1	63.1	60.5
59.5°	85.4	89.7	90.1	90.6	91.0	84.3	76.3	68.7	62.8	57.3	54.8
60°	78.6	82.4	82.9	83.4	84.0	77.3	69.4	62.4	56.8	51.7	49.6
60.5°	71.8	75.3	75.9	76.5	76.8	70.5	63.3	56.4	51.1	46.5	44.6
61°	65.3	68.7	69.1	69.5	69.8	64.3	57.1	50.7	45.5	41.5	39.9
61.5°	59.3	62.3	62.9	63.2	63.3	58.1	51.5	45.2	40.3	36.8	35.4
62°	53.2	56.2	56.9	57.0	57.2	52.4	46.1	39.9	35.3	32.3	31.2
62.5°	47.5	50.2	51.1	51.1	51.2	46.8	40.9	35.0	30.7	28.1	27.3
63°	42.2	44.6	45.5	45.4	45.6	41.5	36.0	30.6	26.1	24.3	23.6
63.5°	37.0	39.3	40.4	40.0	40.3	36.5	31.5	26.2	22.2	20.6	20.2
64°	32.3	34.8	35.4	35.2	35.3	31.7	27.3	22.4	18.6	17.4	17.3
64.5°	27.7	30.5	31.3	31.0	30.6	27.4	23.3	18.7	15.2	14.6	14.5
65°	23.1	26.0	27.2	26.7	26.2	23.3	19.7	15.4	13.1	12.5	12.5
65.5°	18.4	21.6	23.0	22.5	22.2	19.5	16.3	13.3	11.0	10.6	10.6
66°	13.8	17.2	18.9	18.2	18.4	16.1	13.9	11.0	8.8	8.6	8.7



TEST NUMBER: P775617

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.7	8.3	9.7	9.3	10.5	8.9	6.9	4.2	3.1	3.3	3.4
68°	3.8	6.1	7.3	7.0	8.1	6.5	4.6	3.1	2.0	2.3	2.3
68.5°	3.0	4.4	5.2	5.1	5.8	4.1	3.1	2.1	1.1	1.5	1.5
69°	2.2	3.6	3.5	3.5	3.4	2.8	2.1	1.3	0.7	0.9	0.9
69.5°	1.3	2.9	2.8	2.8	2.2	1.8	1.1	0.8	0.6	0.6	0.6
70°	0.6	2.2	2.1	2.1	1.3	0.9	0.7	0.6	0.6	0.6	0.6
70.5°	0.5	1.3	1.3	1.3	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: P775617
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P775617

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	719.0	719.0	719.0	719.0	719.0	719.0
0.5°	718.9	718.4	718.8	719.1	719.4	719.3
1°	718.5	717.9	718.6	719.1	719.6	719.6
1.5°	717.9	717.4	718.3	719.1	719.6	719.8
2°	717.4	716.8	717.7	718.8	719.5	719.9
2.5°	716.7	716.1	717.2	718.4	719.4	719.9
3°	715.9	715.3	716.4	717.8	719.2	719.9
3.5°	714.9	714.3	715.6	717.2	718.9	719.9
4°	713.8	713.2	714.6	716.6	718.5	719.7
4.5°	712.6	712.0	713.5	715.8	718.0	719.5
5°	711.2	710.7	712.3	714.8	717.6	719.3
5.5°	709.8	709.2	711.1	713.9	717.1	718.9
6°	708.2	707.8	709.8	712.9	716.5	718.5
6.5°	706.6	706.2	708.4	711.8	715.8	718.2
7°	705.0	704.7	707.1	710.8	715.1	717.6
7.5°	703.3	703.0	705.5	709.7	714.3	717.2
8°	701.7	701.4	704.1	708.5	713.6	716.6
8.5°	699.9	699.7	702.5	707.4	712.7	715.9
9°	698.1	697.9	700.9	706.1	711.6	715.1
9.5°	696.4	696.1	699.3	704.8	710.5	714.3
10°	694.6	694.2	697.5	703.4	709.3	713.5
10.5°	692.8	692.3	695.9	702.1	708.1	712.5
11°	690.9	690.4	694.1	700.7	706.8	711.4
11.5°	688.9	688.2	692.1	699.3	705.4	710.3
12°	687.0	686.1	690.3	697.8	704.1	709.2
12.5°	684.9	683.7	688.2	696.2	702.5	708.0
13°	682.7	681.4	686.0	694.6	700.8	706.8
13.5°	680.5	678.7	683.8	692.8	699.2	705.3
14°	678.0	675.9	681.4	690.8	697.3	703.8
14.5°	675.5	673.0	678.7	688.7	695.4	702.4
15°	672.8	669.9	675.9	686.3	693.3	700.6
15.5°	669.8	666.5	672.9	683.8	690.9	698.9
16°	666.6	663.0	669.6	681.3	688.5	697.0
16.5°	663.3	659.4	666.2	678.5	685.8	694.9
17°	659.9	655.6	662.7	675.5	683.2	692.8
17.5°	656.4	651.6	659.0	672.2	680.4	690.5
18°	652.5	647.5	655.1	669.0	677.5	688.3
18.5°	648.6	643.2	651.3	665.5	674.5	685.9
19°	644.5	638.9	647.1	661.9	671.5	683.5
19.5°	640.1	634.2	642.7	658.0	668.3	680.9
20°	635.5	629.3	638.1	654.0	665.0	678.0
20.5°	630.8	624.5	633.5	649.9	661.4	675.1
21°	625.9	619.3	628.6	645.4	657.5	671.9

TEST NUMBER: P775617

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	610.2	603.4	613.2	631.2	645.5	661.3
23°	604.7	597.8	607.7	626.0	641.1	657.3
23.5°	599.1	592.3	602.4	620.8	636.8	653.0
24°	593.5	586.8	596.9	615.6	632.1	648.5
24.5°	587.7	581.2	591.4	610.3	627.4	643.8
25°	582.0	575.6	585.9	604.8	622.5	638.9
25.5°	576.3	570.0	580.5	599.5	617.8	634.0
26°	570.4	564.6	574.8	594.1	612.8	628.9
26.5°	564.4	558.9	569.3	588.7	607.8	623.7
27°	558.6	553.3	563.7	583.1	602.7	618.3
27.5°	552.9	547.7	558.2	577.6	597.5	612.7
28°	547.2	542.3	552.5	572.0	592.1	607.1
28.5°	541.6	536.9	547.2	566.5	586.8	601.4
29°	535.9	531.3	541.9	561.0	581.3	595.7
29.5°	530.5	526.1	536.5	555.7	576.0	590.2
30°	525.2	521.0	531.1	550.4	570.6	584.3
30.5°	520.0	515.8	526.0	545.1	565.4	578.8
31°	514.7	510.8	520.9	539.8	560.2	573.2
31.5°	509.3	505.5	515.6	534.7	554.8	567.8
32°	504.1	500.4	510.4	529.2	549.4	562.0
32.5°	498.8	495.2	505.3	524.0	544.1	556.7
33°	493.1	489.7	499.9	518.6	538.7	551.0
33.5°	487.3	484.2	494.3	512.8	532.9	545.0
34°	481.5	478.4	488.7	506.9	526.7	538.4
34.5°	475.6	472.7	482.8	500.9	520.2	531.9
35°	469.4	466.9	476.9	494.7	513.7	525.3
35.5°	463.3	461.0	471.0	488.5	506.9	518.4
36°	456.7	454.7	464.9	481.9	500.1	511.6
36.5°	449.9	448.3	458.6	475.5	492.9	504.6
37°	442.7	441.6	451.9	468.6	485.6	497.2
37.5°	435.6	434.9	445.2	461.2	477.9	489.8
38°	427.9	427.6	438.1	453.9	470.1	481.9
38.5°	419.6	419.9	430.5	446.3	462.4	474.2
39°	410.8	411.7	422.5	438.1	454.3	466.6
39.5°	402.0	403.0	413.9	429.4	446.1	458.4
40°	392.4	393.8	404.9	420.4	437.5	450.2
40.5°	382.8	384.4	395.9	411.4	428.7	441.5
41°	372.9	374.8	386.7	402.1	419.3	433.2
41.5°	363.2	364.9	377.2	392.9	409.8	424.2
42°	353.1	355.6	367.9	383.5	400.7	415.1
42.5°	343.1	345.8	358.4	373.8	391.2	405.3
43°	333.0	336.2	349.0	364.2	381.5	395.8
43.5°	323.3	326.1	339.3	354.5	371.4	385.7

TEST NUMBER: P775617

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	292.6	297.1	310.5	324.8	341.2	354.0
45.5°	282.9	287.3	301.0	315.0	330.9	343.4
46°	272.8	277.8	291.6	305.1	320.6	332.7
46.5°	262.9	268.1	281.8	294.9	310.0	321.8
47°	253.2	258.6	272.3	285.0	299.6	311.2
47.5°	243.8	248.7	262.5	275.1	289.3	300.8
48°	234.1	239.4	252.9	265.2	278.9	290.3
48.5°	224.8	229.9	243.2	255.2	268.4	279.8
49°	215.4	220.7	233.6	245.7	258.4	270.0
49.5°	206.7	211.4	224.1	235.8	248.2	259.7
50°	197.2	202.2	214.6	226.0	238.2	249.8
50.5°	188.3	193.0	205.0	216.4	228.0	239.7
51°	179.4	184.1	195.9	207.0	218.3	230.1
51.5°	170.7	175.3	186.7	197.4	208.6	220.3
52°	162.3	166.7	177.6	188.3	199.3	211.0
52.5°	153.8	158.2	168.5	179.0	189.8	201.4
53°	145.5	149.6	159.8	169.9	180.7	192.3
53.5°	137.4	141.3	151.1	160.6	171.6	182.8
54°	129.6	133.2	142.5	151.9	162.7	174.0
54.5°	121.7	125.3	134.2	143.4	154.1	165.2
55°	114.2	117.5	126.0	134.7	145.5	156.4
55.5°	106.9	109.8	117.8	126.2	137.2	147.7
56°	99.7	102.4	110.0	118.4	129.0	139.4
56.5°	93.0	95.1	102.3	110.5	121.2	131.2
57°	86.3	88.1	94.8	102.7	113.4	122.9
57.5°	79.7	81.1	87.4	95.1	105.6	115.0
58°	73.1	74.6	80.6	87.9	98.4	107.4
58.5°	67.0	68.1	73.7	80.9	91.4	99.9
59°	61.0	61.9	67.2	74.2	84.5	92.7
59.5°	55.3	56.0	60.8	67.8	77.8	85.4
60°	50.0	50.2	54.8	61.4	71.4	78.6
60.5°	44.9	44.8	49.1	55.7	65.0	71.8
61°	39.9	39.5	43.6	50.0	58.9	65.3
61.5°	35.3	35.1	38.5	44.7	53.2	59.3
62°	31.0	31.0	34.4	39.5	47.6	53.2
62.5°	26.9	26.8	30.3	35.2	42.2	47.5
63°	23.3	22.7	26.2	31.2	37.2	42.2
63.5°	19.9	18.4	22.1	27.2	33.1	37.0
64°	16.9	15.3	18.0	23.1	29.0	32.3
64.5°	14.2	12.7	14.9	19.1	25.0	27.7
65°	12.3	10.4	12.2	16.0	20.8	23.1
65.5°	10.4	8.4	9.8	13.1	16.8	18.4
66°	8.4	6.6	7.8	10.5	13.6	13.8



TEST NUMBER: P775617

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.3	3.1	3.4	4.7	6.1	4.7
68°	2.3	2.4	2.7	3.3	4.4	3.8
68.5°	1.5	1.7	2.0	2.6	3.5	3.0
69°	0.9	0.8	1.3	1.9	2.8	2.2
69.5°	0.6	0.6	0.6	1.2	2.1	1.3
70°	0.6	0.5	0.5	0.5	1.2	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: P775617

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3500K

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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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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21.5°	668.5	666.8	670.7	665.6	668.9	655.8	644.6	629.7	614.9	619.5	622.3
22°	665.1	663.2	666.7	662.1	665.6	651.9	640.3	624.7	609.7	614.3	618.1



44°	375.3	381.6	384.7	381.8	381.2	369.2	354.3	338.0	324.1	314.4	310.1
44.5°	364.2	371.8	374.9	372.2	370.3	359.1	344.5	328.6	314.7	304.3	300.2



66.5°	10.3	13.8	15.4	14.9	15.1	13.7	11.6	8.7	6.6	6.5	6.7
67°	7.0	10.9	12.4	11.9	12.7	11.3	9.2	6.5	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°	620.8	614.2	623.6	640.7	653.7	668.5
22°	615.4	608.7	618.4	636.1	649.6	665.1



44°	312.6	316.4	329.6	344.7	361.4	375.3
44.5°	302.5	306.7	320.1	334.8	351.5	364.2

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66.5°	6.4	5.2	6.0	8.3	10.7	10.3
67°	4.6	3.9	4.6	6.3	8.2	7.0

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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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Scaled Data Report



(END OF REPORT)