

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

Report Number: P938663

Luminaire Tested: HLB4LSFS5-700LM-3500K

Issue Date: 1/15/2025

Test Information

Test Method: LM-79-2019
Report Number: P938663
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2404364A001)
Test Lab:
Issue Date: 1/15/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLB4LSFS5-700LM-3500K
Description: 4IN SELECTABLE LUMENS, 90CRI, DIMMING TO 10%
Light Source: SELECTABLE CCT 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 801.2 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.3 / 1.38
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

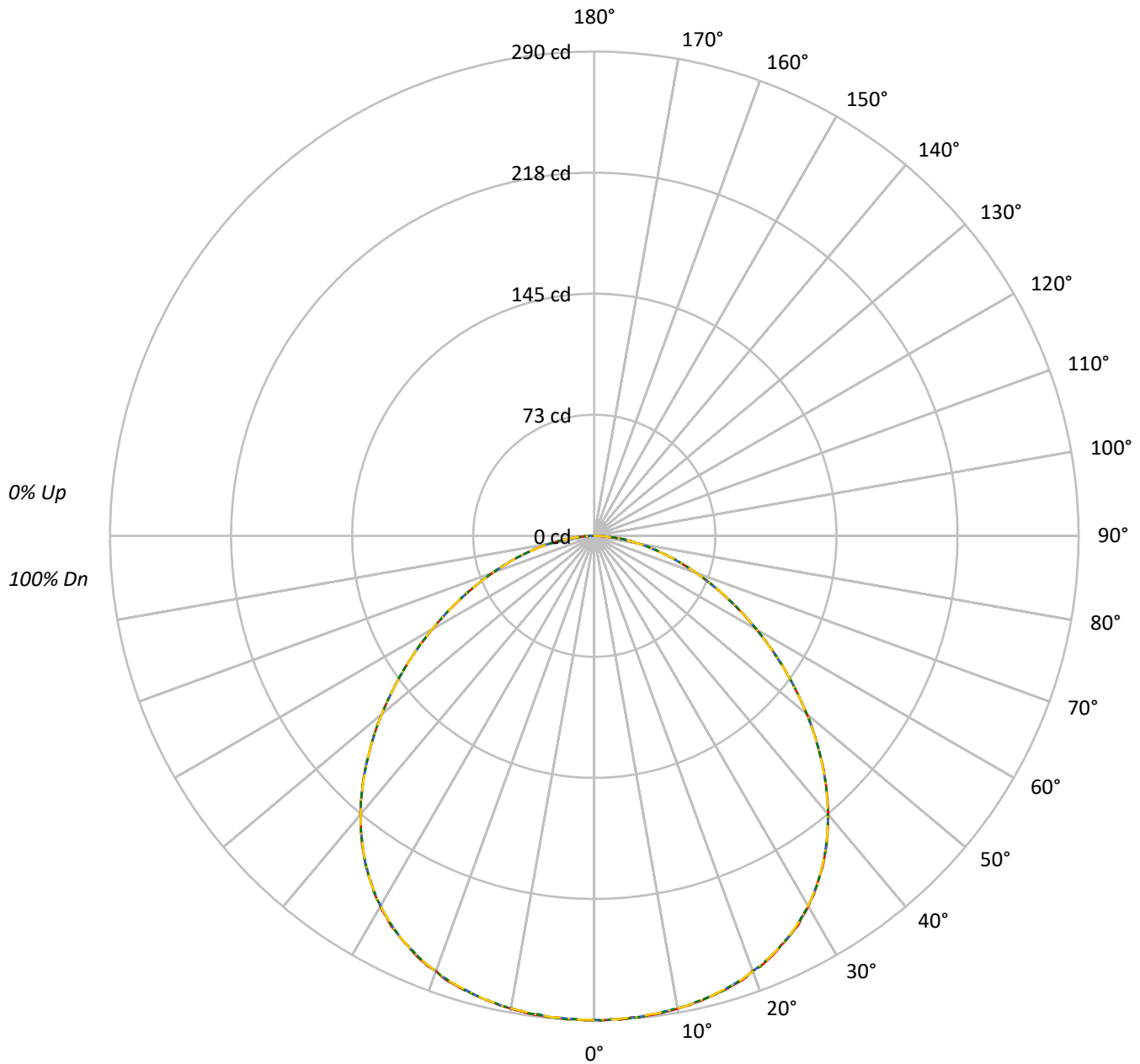
Input Watts (W): 7.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85		
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71		
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60		
4	83	72	63	56	81	70	62	56	68	61	55	66	59	55	63	58	54	52		
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45		
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39		
7	66	53	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35		
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31		
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28		
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	36509	36509	36509	36509
5°	36585	36598	36585	36598
10°	36740	36714	36740	36714
15°	36976	36976	36976	36976
20°	37151	37191	37151	37191
25°	37339	37326	37339	37326
30°	37231	37216	37231	37216
35°	36765	36719	36765	36719
40°	35814	35748	35814	35748
45°	34385	34368	34385	34368
50°	32501	32540	32501	32540
55°	30476	30476	30476	30476
60°	28216	28316	28216	28316
65°	25937	26086	25937	26086
70°	23770	23917	23770	23917
75°	21687	21881	21687	21881
80°	19640	19858	19640	19858
85°	16894	17183	16894	17183

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 89.5°

Luminance: 36054 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.6	3.4
10°-20°	80.2	10.0
20°-30°	123.8	15.5
30°-40°	149.2	18.6
40°-50°	148.6	18.5
50°-60°	124.1	15.5
60°-70°	86.8	10.8
70°-80°	47.6	5.9
80°-90°	13.5	1.7
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°	231.5	28.9
0°-40°	380.7	47.5
0°-60°	653.3	81.5
0°-90°	801.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	801.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	290	290	290	290	290	
5°	290	290	290	290	290	28
15°	284	284	284	284	284	80
25°	269	269	269	269	269	124
35°	239	239	239	239	239	149
45°	193	193	193	193	193	149
55°	139	139	139	139	139	124
65°	87	88	87	88	87	87
75°	45	45	45	45	45	47
85°	12	12	12	12	12	13
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°	290.1	290.1	290.1	290.1	290.1	290.1	290.1	290.1	290.1	290.1	290.1
0.5°	290.3	290.1	289.8	289.9	290.3	289.9	289.8	290.1	290.3	290.1	289.8
1°	290.2	289.8	289.8	289.8	290.3	289.8	289.8	289.8	290.2	289.8	289.8
1.5°	290.2	290.0	290.0	289.9	290.0	289.9	290.0	290.0	290.2	290.0	290.0
2°	289.9	290.0	289.8	289.8	289.8	289.8	289.8	290.0	289.9	290.0	289.8
2.5°	289.8	289.8	289.8	289.8	289.7	289.8	289.8	289.8	289.8	289.8	289.8
3°	290.2	289.8	289.7	289.8	290.1	289.8	289.7	289.8	290.2	289.8	289.7
3.5°	290.0	290.0	289.5	289.6	290.0	289.6	289.5	290.0	290.0	290.0	289.5
4°	289.7	289.6	289.4	289.3	289.8	289.3	289.4	289.6	289.7	289.6	289.4
4.5°	289.3	289.3	289.4	289.4	289.7	289.4	289.4	289.3	289.3	289.3	289.4
5°	289.6	289.5	289.5	289.3	289.7	289.3	289.5	289.5	289.6	289.5	289.5
5.5°	289.6	289.3	289.3	289.2	289.7	289.2	289.3	289.3	289.6	289.3	289.3
6°	289.3	289.1	289.0	289.0	289.3	289.0	289.0	289.1	289.3	289.1	289.0
6.5°	289.1	288.9	288.6	288.9	288.8	288.9	288.6	288.9	289.1	288.9	288.6
7°	289.0	288.8	288.6	288.6	288.6	288.6	288.6	288.8	289.0	288.8	288.6
7.5°	288.9	288.6	288.5	288.5	288.8	288.5	288.5	288.6	288.9	288.6	288.5
8°	288.7	288.5	288.3	288.3	288.6	288.3	288.3	288.5	288.7	288.5	288.3
8.5°	288.3	288.2	287.9	288.1	288.0	288.1	287.9	288.2	288.3	288.2	287.9
9°	288.2	287.9	287.8	287.8	287.8	287.8	287.8	287.9	288.2	287.9	287.8
9.5°	287.9	287.8	287.4	287.6	287.5	287.6	287.4	287.8	287.9	287.8	287.4
10°	287.5	287.5	287.4	287.3	287.3	287.3	287.4	287.5	287.5	287.5	287.4
10.5°	287.3	287.3	287.2	287.1	287.0	287.1	287.2	287.3	287.3	287.3	287.2
11°	287.0	286.9	287.0	286.8	287.0	286.8	287.0	286.9	287.0	286.9	287.0
11.5°	286.8	286.5	286.5	286.4	286.5	286.4	286.5	286.5	286.8	286.5	286.5
12°	286.3	286.2	286.0	285.9	286.0	285.9	286.0	286.2	286.3	286.2	286.0
12.5°	285.9	285.8	285.7	285.5	285.6	285.5	285.7	285.8	285.9	285.8	285.7
13°	285.7	285.6	285.4	285.5	285.3	285.5	285.4	285.6	285.7	285.6	285.4
13.5°	285.1	285.3	284.9	285.3	285.1	285.3	284.9	285.3	285.1	285.3	284.9
14°	284.7	284.8	284.6	284.6	284.7	284.6	284.6	284.8	284.7	284.8	284.6
14.5°	284.3	284.2	284.2	284.0	284.2	284.0	284.2	284.2	284.3	284.2	284.2
15°	283.8	283.6	283.5	283.6	283.8	283.6	283.5	283.6	283.8	283.6	283.5
15.5°	283.2	283.2	283.0	283.2	283.5	283.2	283.0	283.2	283.2	283.2	283.0
16°	283.0	282.7	282.6	282.6	283.0	282.6	282.6	282.7	283.0	282.7	282.6
16.5°	282.5	282.2	282.0	282.2	282.2	282.2	282.0	282.2	282.5	282.2	282.0
17°	281.9	281.7	281.6	281.5	281.7	281.5	281.6	281.7	281.9	281.7	281.6
17.5°	281.3	281.0	281.0	281.0	281.1	281.0	281.0	281.0	281.3	281.0	281.0
18°	280.9	280.5	280.5	280.2	280.6	280.2	280.5	280.5	280.9	280.5	280.5
18.5°	280.5	279.9	279.9	279.7	279.8	279.7	279.9	279.9	280.5	279.9	279.9
19°	279.6	279.4	279.0	278.9	279.2	278.9	279.0	279.4	279.6	279.4	279.0
19.5°	278.4	278.5	278.3	278.4	278.5	278.4	278.3	278.5	278.4	278.5	278.3
20°	277.4	277.9	277.8	277.7	277.7	277.7	277.8	277.9	277.4	277.9	277.8
20.5°	276.9	277.2	276.8	277.0	276.9	277.0	276.8	277.2	276.9	277.2	276.8
21°	276.6	276.4	276.0	275.9	276.5	275.9	276.0	276.4	276.6	276.4	276.0

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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°	274.1	273.8	273.5	273.6	273.6	273.6	273.5	273.8	274.1	273.8	273.5
23°	273.1	272.9	272.6	272.6	272.6	272.6	272.6	272.9	273.1	272.9	272.6
23.5°	272.1	271.7	271.6	271.6	271.6	271.6	271.6	271.7	272.1	271.7	271.6
24°	271.0	271.0	270.8	270.6	270.8	270.6	270.8	271.0	271.0	271.0	270.8
24.5°	269.6	270.1	269.7	269.6	269.8	269.6	269.7	270.1	269.6	270.1	269.7
25°	268.9	268.7	268.7	268.6	268.8	268.6	268.7	268.7	268.9	268.7	268.7
25.5°	267.9	267.6	267.6	267.6	267.6	267.6	267.6	267.6	267.9	267.6	267.6
26°	266.8	266.6	266.5	266.5	266.7	266.5	266.5	266.6	266.8	266.6	266.5
26.5°	265.5	265.4	265.3	265.2	265.5	265.2	265.3	265.4	265.5	265.4	265.3
27°	264.5	264.3	264.1	264.0	264.2	264.0	264.1	264.3	264.5	264.3	264.1
27.5°	263.6	263.1	262.8	262.9	262.9	262.9	262.8	263.1	263.6	263.1	262.8
28°	262.0	261.7	261.5	261.5	261.7	261.5	261.5	261.7	262.0	261.7	261.5
28.5°	260.2	260.2	260.0	260.2	260.2	260.2	260.0	260.2	260.2	260.2	260.0
29°	259.2	259.0	258.7	258.7	258.9	258.7	258.7	259.0	259.2	259.0	258.7
29.5°	257.9	257.5	257.3	257.2	257.5	257.2	257.3	257.5	257.9	257.5	257.3
30°	256.2	256.0	255.9	255.7	256.1	255.7	255.9	256.0	256.2	256.0	255.9
30.5°	254.5	254.4	254.5	254.4	254.7	254.4	254.5	254.4	254.5	254.4	254.5
31°	253.2	252.9	252.9	252.9	253.1	252.9	252.9	252.9	253.2	252.9	252.9
31.5°	251.8	251.6	251.1	251.2	251.5	251.2	251.1	251.6	251.8	251.6	251.1
32°	249.9	249.9	249.6	249.5	250.0	249.5	249.6	249.9	249.9	249.9	249.6
32.5°	247.9	248.1	248.1	247.9	248.1	247.9	248.1	248.1	247.9	248.1	248.1
33°	246.3	246.3	246.5	246.2	246.1	246.2	246.5	246.3	246.3	246.3	246.5
33.5°	244.7	244.7	244.5	244.5	244.5	244.5	244.5	244.7	244.7	244.7	244.5
34°	242.8	243.0	242.5	242.6	242.8	242.6	242.5	243.0	242.8	243.0	242.5
34.5°	241.2	240.9	240.7	240.6	241.0	240.6	240.7	240.9	241.2	240.9	240.7
35°	239.3	238.8	238.9	238.8	239.0	238.8	238.9	238.8	239.3	238.8	238.9
35.5°	237.2	237.1	236.9	237.0	237.0	237.0	236.9	237.1	237.2	237.1	236.9
36°	235.1	235.2	234.9	235.0	235.2	235.0	234.9	235.2	235.1	235.2	234.9
36.5°	233.2	233.2	232.9	233.0	232.9	233.0	232.9	233.2	233.2	233.2	232.9
37°	231.2	231.0	230.8	230.8	230.9	230.8	230.8	231.0	231.2	231.0	230.8
37.5°	228.9	228.9	228.6	228.6	228.9	228.6	228.6	228.9	228.9	228.9	228.6
38°	226.7	226.9	226.6	226.6	226.8	226.6	226.6	226.9	226.7	226.9	226.6
38.5°	224.6	224.6	224.3	224.4	224.6	224.4	224.3	224.6	224.6	224.6	224.3
39°	222.2	222.2	222.2	222.1	222.3	222.1	222.2	222.2	222.2	222.2	222.2
39.5°	220.1	220.0	219.9	219.9	219.8	219.9	219.9	220.0	220.1	220.0	219.9
40°	218.0	217.8	217.6	217.7	217.6	217.7	217.6	217.8	218.0	217.8	217.6
40.5°	215.6	215.3	215.1	215.2	215.4	215.2	215.1	215.3	215.6	215.3	215.1
41°	213.2	212.9	212.8	212.8	213.2	212.8	212.8	212.9	213.2	212.9	212.8
41.5°	210.7	210.5	210.4	210.4	210.6	210.4	210.4	210.5	210.7	210.5	210.4
42°	208.2	208.2	208.2	208.0	208.2	208.0	208.2	208.2	208.2	208.2	208.2
42.5°	205.8	205.7	205.6	205.6	205.8	205.6	205.6	205.7	205.8	205.7	205.6
43°	203.4	203.2	203.1	203.1	203.4	203.1	203.1	203.2	203.4	203.2	203.1
43.5°	200.9	200.6	200.5	200.6	200.8	200.6	200.5	200.6	200.9	200.6	200.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	193.2	192.9	192.9	193.0	193.1	193.0	192.9	192.9	193.2	192.9	192.9
45.5°	190.4	190.3	190.3	190.3	190.2	190.3	190.3	190.3	190.4	190.3	190.3
46°	187.7	187.8	187.7	187.7	187.6	187.7	187.7	187.8	187.7	187.8	187.7
46.5°	185.0	185.1	185.1	185.1	185.0	185.1	185.1	185.1	185.0	185.1	185.1
47°	182.3	182.3	182.4	182.4	182.4	182.4	182.4	182.3	182.3	182.3	182.4
47.5°	179.7	179.5	179.6	179.6	179.9	179.6	179.6	179.5	179.7	179.5	179.6
48°	177.1	176.9	176.8	176.8	177.1	176.8	176.8	176.9	177.1	176.9	176.8
48.5°	174.4	174.3	174.3	174.3	174.3	174.3	174.3	174.3	174.4	174.3	174.3
49°	171.8	171.7	171.6	171.5	171.7	171.5	171.6	171.7	171.8	171.7	171.6
49.5°	168.8	168.8	168.7	168.8	169.0	168.8	168.7	168.8	168.8	168.8	168.7
50°	166.0	166.0	166.0	166.2	166.2	166.2	166.0	166.0	166.0	166.0	166.0
50.5°	163.4	163.2	163.3	163.5	163.4	163.5	163.3	163.2	163.4	163.2	163.3
51°	160.6	160.6	160.6	160.6	160.7	160.6	160.6	160.6	160.6	160.6	160.6
51.5°	157.8	157.8	157.9	157.9	158.0	157.9	157.9	157.8	157.8	157.8	157.9
52°	155.1	155.1	155.1	155.1	155.2	155.1	155.1	155.1	155.1	155.1	155.1
52.5°	152.3	152.3	152.3	152.4	152.5	152.4	152.3	152.3	152.3	152.3	152.3
53°	149.7	149.6	149.5	149.7	149.8	149.7	149.5	149.6	149.7	149.6	149.5
53.5°	147.0	146.7	146.8	147.0	147.1	147.0	146.8	146.7	147.0	146.7	146.8
54°	144.0	144.0	144.0	144.2	144.5	144.2	144.0	144.0	144.0	144.0	144.0
54.5°	141.2	141.2	141.4	141.6	141.7	141.6	141.4	141.2	141.2	141.2	141.4
55°	138.9	138.7	138.7	138.9	138.9	138.9	138.7	138.7	138.9	138.7	138.7
55.5°	136.1	135.9	136.0	136.1	136.3	136.1	136.0	135.9	136.1	135.9	136.0
56°	133.3	133.1	133.3	133.4	133.4	133.4	133.3	133.1	133.3	133.1	133.3
56.5°	130.7	130.6	130.6	130.7	130.8	130.7	130.6	130.6	130.7	130.6	130.6
57°	128.0	127.9	127.8	128.0	128.2	128.0	127.8	127.9	128.0	127.9	127.8
57.5°	125.3	125.0	125.2	125.3	125.6	125.3	125.2	125.0	125.3	125.0	125.2
58°	122.7	122.5	122.5	122.7	122.7	122.7	122.5	122.5	122.7	122.5	122.5
58.5°	119.9	119.9	119.9	120.1	120.2	120.1	119.9	119.9	119.9	119.9	119.9
59°	117.2	117.3	117.4	117.5	117.5	117.5	117.4	117.3	117.2	117.3	117.4
59.5°	114.7	114.6	114.8	114.8	115.0	114.8	114.8	114.6	114.7	114.6	114.8
60°	112.1	112.1	112.2	112.3	112.5	112.3	112.2	112.1	112.1	112.1	112.2
60.5°	109.5	109.5	109.6	109.8	109.9	109.8	109.6	109.5	109.5	109.5	109.6
61°	107.0	107.0	107.1	107.2	107.3	107.2	107.1	107.0	107.0	107.0	107.1
61.5°	104.4	104.5	104.6	104.6	104.8	104.6	104.6	104.5	104.4	104.5	104.6
62°	101.9	102.0	102.0	102.2	102.2	102.2	102.0	102.0	101.9	102.0	102.0
62.5°	99.4	99.5	99.5	99.7	99.7	99.7	99.5	99.5	99.4	99.5	99.5
63°	96.9	96.9	97.0	97.1	97.2	97.1	97.0	96.9	96.9	96.9	97.0
63.5°	94.4	94.5	94.6	94.7	94.8	94.7	94.6	94.5	94.4	94.5	94.6
64°	92.0	92.1	92.2	92.3	92.4	92.3	92.2	92.1	92.0	92.1	92.2
64.5°	89.5	89.6	89.8	89.9	89.9	89.9	89.8	89.6	89.5	89.6	89.8
65°	87.1	87.3	87.4	87.5	87.6	87.5	87.4	87.3	87.1	87.3	87.4
65.5°	84.8	84.9	85.1	85.1	85.2	85.1	85.1	84.9	84.8	84.9	85.1
66°	82.5	82.5	82.7	82.7	82.8	82.7	82.7	82.5	82.5	82.5	82.7

TEST NUMBER: P938663

CATALOG NUMBER: HLB4LSFS5-700LM-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	75.6	75.7	75.7	75.9	76.0	75.9	75.7	75.7	75.6	75.7	75.7
68°	73.4	73.4	73.4	73.6	73.7	73.6	73.4	73.4	73.4	73.4	73.4
68.5°	71.1	71.2	71.2	71.4	71.4	71.4	71.2	71.2	71.1	71.2	71.2
69°	68.9	68.9	69.1	69.2	69.2	69.2	69.1	68.9	68.9	68.9	69.1
69.5°	66.8	66.8	66.9	67.0	67.1	67.0	66.9	66.8	66.8	66.8	66.9
70°	64.6	64.6	64.7	64.8	65.0	64.8	64.7	64.6	64.6	64.6	64.7
70.5°	62.5	62.5	62.6	62.8	62.8	62.8	62.6	62.5	62.5	62.5	62.6
71°	60.4	60.4	60.5	60.7	60.8	60.7	60.5	60.4	60.4	60.4	60.5
71.5°	58.3	58.3	58.3	58.6	58.8	58.6	58.3	58.3	58.3	58.3	58.3
72°	56.3	56.3	56.3	56.5	56.7	56.5	56.3	56.3	56.3	56.3	56.3
72.5°	54.2	54.2	54.4	54.5	54.7	54.5	54.4	54.2	54.2	54.2	54.4
73°	52.3	52.2	52.4	52.6	52.7	52.6	52.4	52.2	52.3	52.2	52.4
73.5°	50.4	50.2	50.4	50.6	50.7	50.6	50.4	50.2	50.4	50.2	50.4
74°	48.4	48.4	48.4	48.7	48.9	48.7	48.4	48.4	48.4	48.4	48.4
74.5°	46.5	46.4	46.5	46.7	46.9	46.7	46.5	46.4	46.5	46.4	46.5
75°	44.6	44.6	44.6	44.9	45.0	44.9	44.6	44.6	44.6	44.6	44.6
75.5°	42.8	42.7	42.8	43.0	43.1	43.0	42.8	42.7	42.8	42.7	42.8
76°	40.9	40.8	40.9	41.1	41.3	41.1	40.9	40.8	40.9	40.8	40.9
76.5°	39.1	39.1	39.1	39.3	39.4	39.3	39.1	39.1	39.1	39.1	39.1
77°	37.3	37.3	37.3	37.5	37.7	37.5	37.3	37.3	37.3	37.3	37.3
77.5°	35.6	35.5	35.6	35.8	35.9	35.8	35.6	35.5	35.6	35.5	35.6
78°	33.8	33.7	33.8	34.0	34.2	34.0	33.8	33.7	33.8	33.7	33.8
78.5°	32.1	32.0	32.1	32.3	32.6	32.3	32.1	32.0	32.1	32.0	32.1
79°	30.4	30.4	30.5	30.6	30.9	30.6	30.5	30.4	30.4	30.4	30.5
79.5°	28.7	28.7	28.7	28.9	29.1	28.9	28.7	28.7	28.7	28.7	28.7
80°	27.1	27.0	27.1	27.2	27.4	27.2	27.1	27.0	27.1	27.0	27.1
80.5°	25.4	25.5	25.4	25.6	25.7	25.6	25.4	25.5	25.4	25.5	25.4
81°	23.8	23.9	23.9	24.0	24.1	24.0	23.9	23.9	23.8	23.9	23.9
81.5°	22.2	22.3	22.3	22.4	22.5	22.4	22.3	22.3	22.2	22.3	22.3
82°	20.6	20.6	20.7	20.9	20.9	20.9	20.7	20.6	20.6	20.6	20.7
82.5°	19.1	19.1	19.2	19.3	19.3	19.3	19.2	19.1	19.1	19.1	19.2
83°	17.6	17.6	17.6	17.8	17.8	17.8	17.6	17.6	17.6	17.6	17.6
83.5°	16.1	16.1	16.1	16.3	16.3	16.3	16.1	16.1	16.1	16.1	16.1
84°	14.5	14.5	14.6	14.8	14.8	14.8	14.6	14.5	14.5	14.5	14.6
84.5°	13.1	13.1	13.2	13.3	13.3	13.3	13.2	13.1	13.1	13.1	13.2
85°	11.7	11.7	11.8	11.8	11.9	11.8	11.8	11.7	11.7	11.7	11.8
85.5°	10.2	10.2	10.2	10.3	10.4	10.3	10.2	10.2	10.2	10.2	10.2
86°	8.8	8.8	8.9	8.9	9.0	8.9	8.9	8.8	8.8	8.8	8.9
86.5°	7.4	7.4	7.6	7.7	7.9	7.7	7.6	7.4	7.4	7.4	7.6
87°	6.0	6.2	6.4	6.4	6.8	6.4	6.4	6.2	6.0	6.2	6.4
87.5°	4.6	5.0	5.2	5.2	5.7	5.2	5.2	5.0	4.6	5.0	5.2
88°	3.7	3.8	4.0	4.2	4.7	4.2	4.0	3.8	3.7	3.8	4.0
88.5°	2.7	2.8	2.9	3.5	3.9	3.5	2.9	2.8	2.7	2.8	2.9



TEST NUMBER: P938663
CATALOG NUMBER: HLB4LSFS5-700LM-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	0.0	0.0

TEST NUMBER: P938663

CATALOG NUMBER: HLB4LSFS5-700LM-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	290.1	290.1	290.1	290.1	290.1	290.1
0.5°	289.9	290.3	289.9	289.8	290.1	290.3
1°	289.8	290.3	289.8	289.8	289.8	290.2
1.5°	289.9	290.0	289.9	290.0	290.0	290.2
2°	289.8	289.8	289.8	289.8	290.0	289.9
2.5°	289.8	289.7	289.8	289.8	289.8	289.8
3°	289.8	290.1	289.8	289.7	289.8	290.2
3.5°	289.6	290.0	289.6	289.5	290.0	290.0
4°	289.3	289.8	289.3	289.4	289.6	289.7
4.5°	289.4	289.7	289.4	289.4	289.3	289.3
5°	289.3	289.7	289.3	289.5	289.5	289.6
5.5°	289.2	289.7	289.2	289.3	289.3	289.6
6°	289.0	289.3	289.0	289.0	289.1	289.3
6.5°	288.9	288.8	288.9	288.6	288.9	289.1
7°	288.6	288.6	288.6	288.6	288.8	289.0
7.5°	288.5	288.8	288.5	288.5	288.6	288.9
8°	288.3	288.6	288.3	288.3	288.5	288.7
8.5°	288.1	288.0	288.1	287.9	288.2	288.3
9°	287.8	287.8	287.8	287.8	287.9	288.2
9.5°	287.6	287.5	287.6	287.4	287.8	287.9
10°	287.3	287.3	287.3	287.4	287.5	287.5
10.5°	287.1	287.0	287.1	287.2	287.3	287.3
11°	286.8	287.0	286.8	287.0	286.9	287.0
11.5°	286.4	286.5	286.4	286.5	286.5	286.8
12°	285.9	286.0	285.9	286.0	286.2	286.3
12.5°	285.5	285.6	285.5	285.7	285.8	285.9
13°	285.5	285.3	285.5	285.4	285.6	285.7
13.5°	285.3	285.1	285.3	284.9	285.3	285.1
14°	284.6	284.7	284.6	284.6	284.8	284.7
14.5°	284.0	284.2	284.0	284.2	284.2	284.3
15°	283.6	283.8	283.6	283.5	283.6	283.8
15.5°	283.2	283.5	283.2	283.0	283.2	283.2
16°	282.6	283.0	282.6	282.6	282.7	283.0
16.5°	282.2	282.2	282.2	282.0	282.2	282.5
17°	281.5	281.7	281.5	281.6	281.7	281.9
17.5°	281.0	281.1	281.0	281.0	281.0	281.3
18°	280.2	280.6	280.2	280.5	280.5	280.9
18.5°	279.7	279.8	279.7	279.9	279.9	280.5
19°	278.9	279.2	278.9	279.0	279.4	279.6
19.5°	278.4	278.5	278.4	278.3	278.5	278.4
20°	277.7	277.7	277.7	277.8	277.9	277.4
20.5°	277.0	276.9	277.0	276.8	277.2	276.9
21°	275.9	276.5	275.9	276.0	276.4	276.6



TEST NUMBER: P938663

CATALOG NUMBER: HLB4LSFS5-700LM-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	273.6	273.6	273.6	273.5	273.8	274.1
23°	272.6	272.6	272.6	272.6	272.9	273.1
23.5°	271.6	271.6	271.6	271.6	271.7	272.1
24°	270.6	270.8	270.6	270.8	271.0	271.0
24.5°	269.6	269.8	269.6	269.7	270.1	269.6
25°	268.6	268.8	268.6	268.7	268.7	268.9
25.5°	267.6	267.6	267.6	267.6	267.6	267.9
26°	266.5	266.7	266.5	266.5	266.6	266.8
26.5°	265.2	265.5	265.2	265.3	265.4	265.5
27°	264.0	264.2	264.0	264.1	264.3	264.5
27.5°	262.9	262.9	262.9	262.8	263.1	263.6
28°	261.5	261.7	261.5	261.5	261.7	262.0
28.5°	260.2	260.2	260.2	260.0	260.2	260.2
29°	258.7	258.9	258.7	258.7	259.0	259.2
29.5°	257.2	257.5	257.2	257.3	257.5	257.9
30°	255.7	256.1	255.7	255.9	256.0	256.2
30.5°	254.4	254.7	254.4	254.5	254.4	254.5
31°	252.9	253.1	252.9	252.9	252.9	253.2
31.5°	251.2	251.5	251.2	251.1	251.6	251.8
32°	249.5	250.0	249.5	249.6	249.9	249.9
32.5°	247.9	248.1	247.9	248.1	248.1	247.9
33°	246.2	246.1	246.2	246.5	246.3	246.3
33.5°	244.5	244.5	244.5	244.5	244.7	244.7
34°	242.6	242.8	242.6	242.5	243.0	242.8
34.5°	240.6	241.0	240.6	240.7	240.9	241.2
35°	238.8	239.0	238.8	238.9	238.8	239.3
35.5°	237.0	237.0	237.0	236.9	237.1	237.2
36°	235.0	235.2	235.0	234.9	235.2	235.1
36.5°	233.0	232.9	233.0	232.9	233.2	233.2
37°	230.8	230.9	230.8	230.8	231.0	231.2
37.5°	228.6	228.9	228.6	228.6	228.9	228.9
38°	226.6	226.8	226.6	226.6	226.9	226.7
38.5°	224.4	224.6	224.4	224.3	224.6	224.6
39°	222.1	222.3	222.1	222.2	222.2	222.2
39.5°	219.9	219.8	219.9	219.9	220.0	220.1
40°	217.7	217.6	217.7	217.6	217.8	218.0
40.5°	215.2	215.4	215.2	215.1	215.3	215.6
41°	212.8	213.2	212.8	212.8	212.9	213.2
41.5°	210.4	210.6	210.4	210.4	210.5	210.7
42°	208.0	208.2	208.0	208.2	208.2	208.2
42.5°	205.6	205.8	205.6	205.6	205.7	205.8
43°	203.1	203.4	203.1	203.1	203.2	203.4
43.5°	200.6	200.8	200.6	200.5	200.6	200.9



TEST NUMBER: P938663

CATALOG NUMBER: HLB4LSFS5-700LM-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	193.0	193.1	193.0	192.9	192.9	193.2
45.5°	190.3	190.2	190.3	190.3	190.3	190.4
46°	187.7	187.6	187.7	187.7	187.8	187.7
46.5°	185.1	185.0	185.1	185.1	185.1	185.0
47°	182.4	182.4	182.4	182.4	182.3	182.3
47.5°	179.6	179.9	179.6	179.6	179.5	179.7
48°	176.8	177.1	176.8	176.8	176.9	177.1
48.5°	174.3	174.3	174.3	174.3	174.3	174.4
49°	171.5	171.7	171.5	171.6	171.7	171.8
49.5°	168.8	169.0	168.8	168.7	168.8	168.8
50°	166.2	166.2	166.2	166.0	166.0	166.0
50.5°	163.5	163.4	163.5	163.3	163.2	163.4
51°	160.6	160.7	160.6	160.6	160.6	160.6
51.5°	157.9	158.0	157.9	157.9	157.8	157.8
52°	155.1	155.2	155.1	155.1	155.1	155.1
52.5°	152.4	152.5	152.4	152.3	152.3	152.3
53°	149.7	149.8	149.7	149.5	149.6	149.7
53.5°	147.0	147.1	147.0	146.8	146.7	147.0
54°	144.2	144.5	144.2	144.0	144.0	144.0
54.5°	141.6	141.7	141.6	141.4	141.2	141.2
55°	138.9	138.9	138.9	138.7	138.7	138.9
55.5°	136.1	136.3	136.1	136.0	135.9	136.1
56°	133.4	133.4	133.4	133.3	133.1	133.3
56.5°	130.7	130.8	130.7	130.6	130.6	130.7
57°	128.0	128.2	128.0	127.8	127.9	128.0
57.5°	125.3	125.6	125.3	125.2	125.0	125.3
58°	122.7	122.7	122.7	122.5	122.5	122.7
58.5°	120.1	120.2	120.1	119.9	119.9	119.9
59°	117.5	117.5	117.5	117.4	117.3	117.2
59.5°	114.8	115.0	114.8	114.8	114.6	114.7
60°	112.3	112.5	112.3	112.2	112.1	112.1
60.5°	109.8	109.9	109.8	109.6	109.5	109.5
61°	107.2	107.3	107.2	107.1	107.0	107.0
61.5°	104.6	104.8	104.6	104.6	104.5	104.4
62°	102.2	102.2	102.2	102.0	102.0	101.9
62.5°	99.7	99.7	99.7	99.5	99.5	99.4
63°	97.1	97.2	97.1	97.0	96.9	96.9
63.5°	94.7	94.8	94.7	94.6	94.5	94.4
64°	92.3	92.4	92.3	92.2	92.1	92.0
64.5°	89.9	89.9	89.9	89.8	89.6	89.5
65°	87.5	87.6	87.5	87.4	87.3	87.1
65.5°	85.1	85.2	85.1	85.1	84.9	84.8
66°	82.7	82.8	82.7	82.7	82.5	82.5



TEST NUMBER: P938663

CATALOG NUMBER: HLB4LSFS5-700LM-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	75.9	76.0	75.9	75.7	75.7	75.6
68°	73.6	73.7	73.6	73.4	73.4	73.4
68.5°	71.4	71.4	71.4	71.2	71.2	71.1
69°	69.2	69.2	69.2	69.1	68.9	68.9
69.5°	67.0	67.1	67.0	66.9	66.8	66.8
70°	64.8	65.0	64.8	64.7	64.6	64.6
70.5°	62.8	62.8	62.8	62.6	62.5	62.5
71°	60.7	60.8	60.7	60.5	60.4	60.4
71.5°	58.6	58.8	58.6	58.3	58.3	58.3
72°	56.5	56.7	56.5	56.3	56.3	56.3
72.5°	54.5	54.7	54.5	54.4	54.2	54.2
73°	52.6	52.7	52.6	52.4	52.2	52.3
73.5°	50.6	50.7	50.6	50.4	50.2	50.4
74°	48.7	48.9	48.7	48.4	48.4	48.4
74.5°	46.7	46.9	46.7	46.5	46.4	46.5
75°	44.9	45.0	44.9	44.6	44.6	44.6
75.5°	43.0	43.1	43.0	42.8	42.7	42.8
76°	41.1	41.3	41.1	40.9	40.8	40.9
76.5°	39.3	39.4	39.3	39.1	39.1	39.1
77°	37.5	37.7	37.5	37.3	37.3	37.3
77.5°	35.8	35.9	35.8	35.6	35.5	35.6
78°	34.0	34.2	34.0	33.8	33.7	33.8
78.5°	32.3	32.6	32.3	32.1	32.0	32.1
79°	30.6	30.9	30.6	30.5	30.4	30.4
79.5°	28.9	29.1	28.9	28.7	28.7	28.7
80°	27.2	27.4	27.2	27.1	27.0	27.1
80.5°	25.6	25.7	25.6	25.4	25.5	25.4
81°	24.0	24.1	24.0	23.9	23.9	23.8
81.5°	22.4	22.5	22.4	22.3	22.3	22.2
82°	20.9	20.9	20.9	20.7	20.6	20.6
82.5°	19.3	19.3	19.3	19.2	19.1	19.1
83°	17.8	17.8	17.8	17.6	17.6	17.6
83.5°	16.3	16.3	16.3	16.1	16.1	16.1
84°	14.8	14.8	14.8	14.6	14.5	14.5
84.5°	13.3	13.3	13.3	13.2	13.1	13.1
85°	11.8	11.9	11.8	11.8	11.7	11.7
85.5°	10.3	10.4	10.3	10.2	10.2	10.2
86°	8.9	9.0	8.9	8.9	8.8	8.8
86.5°	7.7	7.9	7.7	7.6	7.4	7.4
87°	6.4	6.8	6.4	6.4	6.2	6.0
87.5°	5.2	5.7	5.2	5.2	5.0	4.6
88°	4.2	4.7	4.2	4.0	3.8	3.7
88.5°	3.5	3.9	3.5	2.9	2.8	2.7



TEST NUMBER: P938663
CATALOG NUMBER: HLB4LSFS5-700LM-3500K

CANDELA DISTRIBUTION (continued):

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



Report Generated By 670245859 / DESKTOP-T8S5UU9





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







21.5°	275.7	275.5	275.4	275.2	275.4	275.2	275.4	275.5	275.7	275.5	275.4
22°	274.9	274.6	274.5	274.4	274.4	274.4	274.5	274.6	274.9	274.6	274.5



44°	198.2	198.1	198.0	198.1	198.1	198.1	198.0	198.1	198.2	198.1	198.0
44.5°	195.7	195.6	195.4	195.5	195.6	195.5	195.4	195.6	195.7	195.6	195.4



66.5°	80.1	80.2	80.3	80.4	80.5	80.4	80.3	80.2	80.1	80.2	80.3
67°	77.8	78.0	78.0	78.2	78.2	78.2	78.0	78.0	77.8	78.0	78.0



89°	1.6	1.9	2.2	2.8	3.2	2.8	2.2	1.9	1.6	1.9	2.2
89.5°	0.7	1.2	1.7	2.1	2.5	2.1	1.7	1.2	0.7	1.2	1.7





21.5°	275.2	275.4	275.2	275.4	275.5	275.7
22°	274.4	274.4	274.4	274.5	274.6	274.9



44°	198.1	198.1	198.1	198.0	198.1	198.2
44.5°	195.5	195.6	195.5	195.4	195.6	195.7



66.5°	80.4	80.5	80.4	80.3	80.2	80.1
67°	78.2	78.2	78.2	78.0	78.0	77.8



89°	2.8	3.2	2.8	2.2	1.9	1.6
89.5°	2.1	2.5	2.1	1.7	1.2	0.7



(END OF REPORT)