

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: P938670

Luminaire Tested: HLB4LSFS5-850LM-5000K

Issue Date: 1/15/2025

Test Information

Test Method: LM-79-2019
Report Number: P938670
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: HLB4LSFS5-850LM-5000K
Description: 4IN SELECTABLE LUMENS, 90CRI, DIMMING TO 10%
Light Source: SELECTABLE CCT 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 949.3 lumens
Efficiency: N/A
Efficacy: 104.3 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

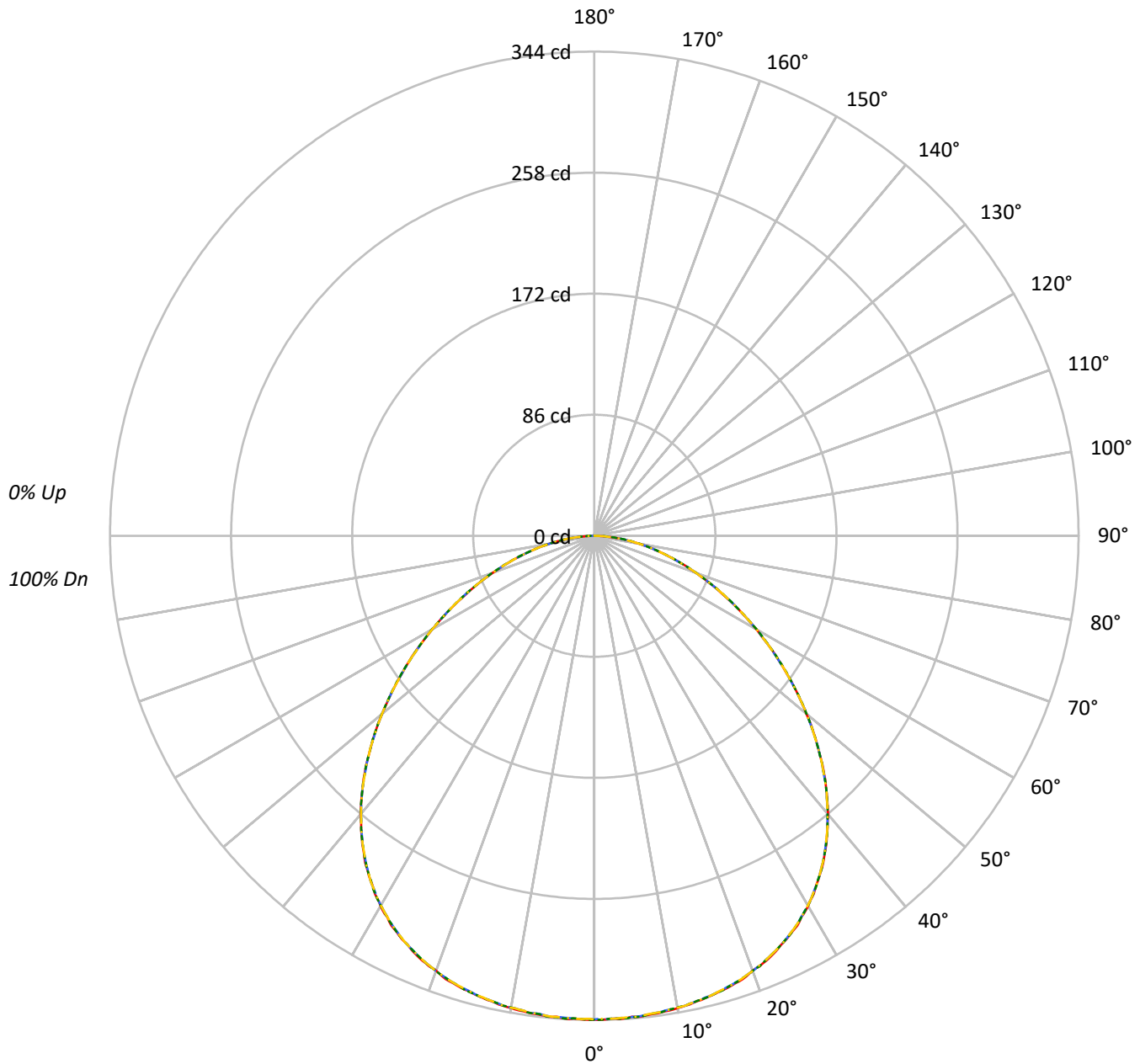
Input Watts (W): 9.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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CATALOG NUMBER: HLB4LSFS5-850LM-5000K

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	43255	43255	43255	43255
5°	43357	43357	43357	43357
10°	43538	43500	43538	43500
15°	43816	43816	43816	43816
20°	44022	44062	44022	44062
25°	44241	44213	44241	44213
30°	44119	44090	44119	44090
35°	43571	43494	43571	43494
40°	42435	42353	42435	42353
45°	40739	40721	40739	40721
50°	38492	38551	38492	38551
55°	36093	36115	36093	36115
60°	33451	33552	33451	33552
65°	30732	30880	30732	30880
70°	28149	28333	28149	28333
75°	25674	25917	25674	25917
80°	23264	23554	23264	23554
85°	19927	20360	19927	20360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 89.5°

Luminance: 43265 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	3.4
10°-20°	95.0	10.0
20°-30°	146.7	15.5
30°-40°	176.7	18.6
40°-50°	176.0	18.5
50°-60°	147.0	15.5
60°-70°	102.8	10.8
70°-80°	56.4	5.9
80°-90°	16.0	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°	274.3	28.9
0°-40°	451.0	47.5
0°-60°	774.1	81.5
0°-90°	949.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	949.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	344	344	344	344	344	
5°	343	343	343	343	343	33
15°	336	336	336	336	336	95
25°	319	318	319	318	319	147
35°	284	283	284	283	284	177
45°	229	229	229	229	229	176
55°	164	165	164	165	164	147
65°	103	104	103	104	103	103
75°	53	53	53	53	53	56
85°	14	14	14	14	14	16
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°	343.7	343.7	343.7	343.7	343.7	343.7	343.7	343.7	343.7	343.7	343.7
0.5°	344.0	343.7	343.3	343.5	343.9	343.5	343.3	343.7	344.0	343.7	343.3
1°	343.8	343.4	343.3	343.4	343.9	343.4	343.3	343.4	343.8	343.4	343.3
1.5°	343.8	343.6	343.6	343.5	343.6	343.5	343.6	343.6	343.8	343.6	343.6
2°	343.5	343.6	343.4	343.4	343.3	343.4	343.4	343.6	343.5	343.6	343.4
2.5°	343.4	343.4	343.3	343.4	343.2	343.4	343.3	343.4	343.4	343.4	343.3
3°	343.8	343.4	343.2	343.3	343.7	343.3	343.2	343.4	343.8	343.4	343.2
3.5°	343.6	343.6	343.0	343.1	343.6	343.1	343.0	343.6	343.6	343.6	343.0
4°	343.2	343.1	342.9	342.8	343.4	342.8	342.9	343.1	343.2	343.1	342.9
4.5°	342.8	342.8	342.9	342.9	343.2	342.9	342.9	342.8	342.8	342.8	342.9
5°	343.2	343.0	343.0	342.8	343.2	342.8	343.0	343.0	343.2	343.0	343.0
5.5°	343.2	342.8	342.8	342.6	343.2	342.6	342.8	342.8	343.2	342.8	342.8
6°	342.8	342.5	342.4	342.4	342.8	342.4	342.4	342.5	342.8	342.5	342.4
6.5°	342.5	342.3	342.0	342.3	342.2	342.3	342.0	342.3	342.5	342.3	342.0
7°	342.4	342.1	342.0	342.0	342.0	342.0	342.0	342.1	342.4	342.1	342.0
7.5°	342.3	342.0	341.8	341.8	342.1	341.8	341.8	342.0	342.3	342.0	341.8
8°	342.0	341.8	341.5	341.5	342.0	341.5	341.5	341.8	342.0	341.8	341.5
8.5°	341.6	341.5	341.1	341.4	341.3	341.4	341.1	341.5	341.6	341.5	341.1
9°	341.5	341.1	340.9	341.0	340.9	341.0	340.9	341.1	341.5	341.1	340.9
9.5°	341.1	340.9	340.5	340.8	340.7	340.8	340.5	340.9	341.1	340.9	340.5
10°	340.7	340.7	340.5	340.4	340.4	340.4	340.5	340.7	340.7	340.7	340.5
10.5°	340.4	340.4	340.3	340.2	340.1	340.2	340.3	340.4	340.4	340.4	340.3
11°	340.1	339.9	340.0	339.8	340.0	339.8	340.0	339.9	340.1	339.9	340.0
11.5°	339.8	339.5	339.4	339.3	339.4	339.3	339.4	339.5	339.8	339.5	339.4
12°	339.2	339.1	338.9	338.7	338.9	338.7	338.9	339.1	339.2	339.1	338.9
12.5°	338.7	338.7	338.5	338.3	338.4	338.3	338.5	338.7	338.7	338.7	338.5
13°	338.5	338.4	338.1	338.2	338.1	338.2	338.1	338.4	338.5	338.4	338.1
13.5°	337.8	338.1	337.5	338.1	337.8	338.1	337.5	338.1	337.8	338.1	337.5
14°	337.3	337.5	337.2	337.2	337.3	337.2	337.2	337.5	337.3	337.5	337.2
14.5°	336.9	336.7	336.7	336.5	336.7	336.5	336.7	336.7	336.9	336.7	336.7
15°	336.3	336.0	335.9	336.0	336.3	336.0	335.9	336.0	336.3	336.0	335.9
15.5°	335.6	335.5	335.3	335.5	335.9	335.5	335.3	335.5	335.6	335.5	335.3
16°	335.3	335.0	334.8	334.8	335.3	334.8	334.8	335.0	335.3	335.0	334.8
16.5°	334.7	334.4	334.2	334.4	334.3	334.4	334.2	334.4	334.7	334.4	334.2
17°	334.0	333.7	333.6	333.6	333.7	333.6	333.6	333.7	334.0	333.7	333.6
17.5°	333.3	333.0	332.9	332.9	333.0	332.9	332.9	333.0	333.3	333.0	332.9
18°	332.8	332.3	332.3	332.0	332.5	332.0	332.3	332.3	332.8	332.3	332.3
18.5°	332.3	331.6	331.6	331.4	331.5	331.4	331.6	331.6	332.3	331.6	331.6
19°	331.3	331.0	330.6	330.5	330.8	330.5	330.6	331.0	331.3	331.0	330.6
19.5°	329.9	330.0	329.7	329.9	330.0	329.9	329.7	330.0	329.9	330.0	329.7
20°	328.7	329.2	329.1	329.1	329.0	329.1	329.1	329.2	328.7	329.2	329.1
20.5°	328.1	328.4	328.0	328.2	328.1	328.2	328.0	328.4	328.1	328.4	328.0
21°	327.7	327.5	327.0	326.9	327.6	326.9	327.0	327.5	327.7	327.5	327.0

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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°	324.7	324.4	324.1	324.2	324.1	324.2	324.1	324.4	324.7	324.4	324.1
23°	323.5	323.3	323.0	323.0	322.9	323.0	323.0	323.3	323.5	323.3	323.0
23.5°	322.4	321.9	321.8	321.8	321.8	321.8	321.8	321.9	322.4	321.9	321.8
24°	321.1	321.1	320.8	320.6	320.8	320.6	320.8	321.1	321.1	321.1	320.8
24.5°	319.5	320.1	319.6	319.5	319.6	319.5	319.6	320.1	319.5	320.1	319.6
25°	318.6	318.4	318.4	318.2	318.4	318.2	318.4	318.4	318.6	318.4	318.4
25.5°	317.4	317.0	317.1	317.0	317.0	317.0	317.1	317.0	317.4	317.0	317.1
26°	316.1	315.8	315.7	315.7	316.0	315.7	315.7	315.8	316.1	315.8	315.7
26.5°	314.6	314.5	314.3	314.2	314.6	314.2	314.3	314.5	314.6	314.5	314.3
27°	313.4	313.1	312.9	312.8	313.0	312.8	312.9	313.1	313.4	313.1	312.9
27.5°	312.3	311.7	311.4	311.5	311.5	311.5	311.4	311.7	312.3	311.7	311.4
28°	310.4	310.0	309.9	309.9	310.0	309.9	309.9	310.0	310.4	310.0	309.9
28.5°	308.3	308.3	308.1	308.3	308.3	308.3	308.1	308.3	308.3	308.3	308.1
29°	307.1	306.8	306.6	306.6	306.7	306.6	306.6	306.8	307.1	306.8	306.6
29.5°	305.5	305.1	304.9	304.7	305.0	304.7	304.9	305.1	305.5	305.1	304.9
30°	303.6	303.3	303.3	303.0	303.4	303.0	303.3	303.3	303.6	303.3	303.3
30.5°	301.6	301.4	301.6	301.4	301.8	301.4	301.6	301.4	301.6	301.4	301.6
31°	300.0	299.7	299.7	299.6	299.9	299.6	299.7	299.7	300.0	299.7	299.7
31.5°	298.3	298.1	297.6	297.6	298.0	297.6	297.6	298.1	298.3	298.1	297.6
32°	296.0	296.0	295.7	295.6	296.2	295.6	295.7	296.0	296.0	296.0	295.7
32.5°	293.7	293.9	293.9	293.7	294.0	293.7	293.9	293.9	293.7	293.9	293.9
33°	291.9	291.9	292.0	291.7	291.6	291.7	292.0	291.9	291.9	291.9	292.0
33.5°	289.9	289.9	289.7	289.7	289.7	289.7	289.7	289.9	289.9	289.9	289.7
34°	287.7	287.9	287.4	287.5	287.7	287.5	287.4	287.9	287.7	287.9	287.4
34.5°	285.8	285.4	285.2	285.1	285.6	285.1	285.2	285.4	285.8	285.4	285.2
35°	283.6	283.0	283.0	283.0	283.1	283.0	283.0	283.0	283.6	283.0	283.0
35.5°	281.1	280.9	280.7	280.8	280.8	280.8	280.7	280.9	281.1	280.9	280.7
36°	278.5	278.7	278.3	278.5	278.6	278.5	278.3	278.7	278.5	278.7	278.3
36.5°	276.3	276.3	275.9	276.1	276.0	276.1	275.9	276.3	276.3	276.3	275.9
37°	273.9	273.7	273.5	273.5	273.6	273.5	273.5	273.7	273.9	273.7	273.5
37.5°	271.2	271.2	270.8	270.9	271.2	270.9	270.8	271.2	271.2	271.2	270.8
38°	268.6	268.8	268.4	268.4	268.7	268.4	268.4	268.8	268.6	268.8	268.4
38.5°	266.1	266.2	265.8	265.9	266.1	265.9	265.8	266.2	266.1	266.2	265.8
39°	263.3	263.3	263.3	263.2	263.3	263.2	263.3	263.3	263.3	263.3	263.3
39.5°	260.8	260.6	260.5	260.5	260.5	260.5	260.5	260.6	260.8	260.6	260.5
40°	258.3	258.0	257.8	257.9	257.8	257.9	257.8	258.0	258.3	258.0	257.8
40.5°	255.5	255.1	254.9	255.0	255.2	255.0	254.9	255.1	255.5	255.1	254.9
41°	252.6	252.2	252.1	252.1	252.7	252.1	252.1	252.2	252.6	252.2	252.1
41.5°	249.6	249.4	249.3	249.3	249.5	249.3	249.3	249.4	249.6	249.4	249.3
42°	246.6	246.6	246.6	246.5	246.7	246.5	246.6	246.6	246.6	246.6	246.6
42.5°	243.8	243.7	243.7	243.7	243.8	243.7	243.7	243.7	243.8	243.7	243.7
43°	240.9	240.8	240.6	240.6	240.9	240.6	240.6	240.8	240.9	240.8	240.6
43.5°	238.1	237.7	237.5	237.7	237.9	237.7	237.5	237.7	238.1	237.7	237.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	228.9	228.5	228.5	228.6	228.8	228.6	228.5	228.5	228.9	228.5	228.5
45.5°	225.6	225.5	225.5	225.5	225.4	225.5	225.5	225.5	225.6	225.5	225.5
46°	222.3	222.5	222.4	222.3	222.3	222.3	222.4	222.5	222.3	222.5	222.4
46.5°	219.2	219.3	219.3	219.3	219.2	219.3	219.3	219.3	219.2	219.3	219.3
47°	216.0	216.0	216.1	216.1	216.1	216.1	216.1	216.0	216.0	216.0	216.1
47.5°	212.9	212.7	212.8	212.8	213.1	212.8	212.8	212.7	212.9	212.7	212.8
48°	209.8	209.6	209.5	209.5	209.9	209.5	209.5	209.6	209.8	209.6	209.5
48.5°	206.6	206.6	206.6	206.5	206.6	206.5	206.6	206.6	206.6	206.6	206.6
49°	203.5	203.4	203.3	203.2	203.4	203.2	203.3	203.4	203.5	203.4	203.3
49.5°	200.0	200.0	199.9	200.0	200.2	200.0	199.9	200.0	200.0	200.0	199.9
50°	196.6	196.7	196.7	197.0	196.9	197.0	196.7	196.7	196.6	196.7	196.7
50.5°	193.6	193.4	193.5	193.7	193.6	193.7	193.5	193.4	193.6	193.4	193.5
51°	190.3	190.3	190.3	190.3	190.4	190.3	190.3	190.3	190.3	190.3	190.3
51.5°	186.9	186.9	187.0	187.1	187.2	187.1	187.0	186.9	186.9	186.9	187.0
52°	183.7	183.7	183.7	183.8	183.9	183.8	183.7	183.7	183.7	183.7	183.7
52.5°	180.5	180.4	180.5	180.6	180.7	180.6	180.5	180.4	180.5	180.4	180.5
53°	177.3	177.3	177.2	177.3	177.4	177.3	177.2	177.3	177.3	177.3	177.2
53.5°	174.1	173.9	174.0	174.1	174.3	174.1	174.0	173.9	174.1	173.9	174.0
54°	170.6	170.6	170.6	170.9	171.2	170.9	170.6	170.6	170.6	170.6	170.6
54.5°	167.3	167.3	167.5	167.8	167.9	167.8	167.5	167.3	167.3	167.3	167.5
55°	164.5	164.3	164.3	164.6	164.6	164.6	164.3	164.3	164.5	164.3	164.3
55.5°	161.3	161.0	161.1	161.3	161.5	161.3	161.1	161.0	161.3	161.0	161.1
56°	157.9	157.7	157.9	158.1	158.1	158.1	157.9	157.7	157.9	157.7	157.9
56.5°	154.9	154.7	154.7	154.9	155.0	154.9	154.7	154.7	154.9	154.7	154.7
57°	151.6	151.5	151.5	151.7	151.9	151.7	151.5	151.5	151.6	151.5	151.5
57.5°	148.4	148.1	148.3	148.4	148.8	148.4	148.3	148.1	148.4	148.1	148.3
58°	145.3	145.1	145.2	145.4	145.4	145.4	145.2	145.1	145.3	145.1	145.2
58.5°	142.1	142.1	142.1	142.3	142.5	142.3	142.1	142.1	142.1	142.1	142.1
59°	138.9	139.0	139.1	139.2	139.2	139.2	139.1	139.0	138.9	139.0	139.1
59.5°	135.9	135.8	136.0	136.0	136.3	136.0	136.0	135.8	135.9	135.8	136.0
60°	132.9	132.8	132.9	133.0	133.3	133.0	132.9	132.8	132.9	132.8	132.9
60.5°	129.7	129.7	129.8	130.1	130.2	130.1	129.8	129.7	129.7	129.7	129.8
61°	126.8	126.8	126.8	127.0	127.1	127.0	126.8	126.8	126.8	126.8	126.8
61.5°	123.7	123.8	123.9	123.9	124.1	123.9	123.9	123.8	123.7	123.8	123.9
62°	120.7	120.8	120.9	121.1	121.1	121.1	120.9	120.8	120.7	120.8	120.9
62.5°	117.8	117.8	117.9	118.1	118.2	118.1	117.9	117.8	117.8	117.8	117.9
63°	114.8	114.8	115.0	115.0	115.1	115.0	115.0	114.8	114.8	114.8	115.0
63.5°	111.9	112.0	112.1	112.1	112.3	112.1	112.1	112.0	111.9	112.0	112.1
64°	109.0	109.1	109.3	109.3	109.4	109.3	109.3	109.1	109.0	109.1	109.3
64.5°	106.0	106.2	106.4	106.5	106.5	106.5	106.4	106.2	106.0	106.2	106.4
65°	103.2	103.4	103.6	103.7	103.7	103.7	103.6	103.4	103.2	103.4	103.6
65.5°	100.5	100.6	100.8	100.9	100.9	100.9	100.8	100.6	100.5	100.6	100.8
66°	97.8	97.8	98.0	98.0	98.1	98.0	98.0	97.8	97.8	97.8	98.0

TEST NUMBER: P938670

CATALOG NUMBER: HLB4LSFS5-850LM-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	89.6	89.7	89.7	89.9	90.0	89.9	89.7	89.7	89.6	89.7	89.7
68°	86.9	86.9	87.0	87.2	87.4	87.2	87.0	86.9	86.9	86.9	87.0
68.5°	84.2	84.3	84.4	84.6	84.6	84.6	84.4	84.3	84.2	84.3	84.4
69°	81.6	81.7	81.8	82.0	82.0	82.0	81.8	81.7	81.6	81.7	81.8
69.5°	79.1	79.1	79.2	79.4	79.5	79.4	79.2	79.1	79.1	79.1	79.2
70°	76.5	76.6	76.7	76.8	77.0	76.8	76.7	76.6	76.5	76.6	76.7
70.5°	74.0	74.0	74.2	74.4	74.5	74.4	74.2	74.0	74.0	74.0	74.2
71°	71.6	71.6	71.7	71.9	72.0	71.9	71.7	71.6	71.6	71.6	71.7
71.5°	69.1	69.1	69.1	69.4	69.6	69.4	69.1	69.1	69.1	69.1	69.1
72°	66.7	66.7	66.7	67.0	67.2	67.0	66.7	66.7	66.7	66.7	66.7
72.5°	64.3	64.3	64.4	64.6	64.8	64.6	64.4	64.3	64.3	64.3	64.4
73°	62.0	61.9	62.1	62.3	62.4	62.3	62.1	61.9	62.0	61.9	62.1
73.5°	59.7	59.5	59.7	59.9	60.1	59.9	59.7	59.5	59.7	59.5	59.7
74°	57.3	57.3	57.3	57.6	57.9	57.6	57.3	57.3	57.3	57.3	57.3
74.5°	55.1	54.9	55.1	55.4	55.6	55.4	55.1	54.9	55.1	54.9	55.1
75°	52.8	52.8	52.9	53.1	53.3	53.1	52.9	52.8	52.8	52.8	52.9
75.5°	50.7	50.6	50.7	50.9	51.1	50.9	50.7	50.6	50.7	50.6	50.7
76°	48.5	48.4	48.5	48.6	48.9	48.6	48.5	48.4	48.5	48.4	48.5
76.5°	46.4	46.3	46.4	46.5	46.7	46.5	46.4	46.3	46.4	46.3	46.4
77°	44.2	44.1	44.2	44.5	44.7	44.5	44.2	44.1	44.2	44.1	44.2
77.5°	42.2	42.1	42.2	42.4	42.5	42.4	42.2	42.1	42.2	42.1	42.2
78°	40.1	40.0	40.1	40.3	40.5	40.3	40.1	40.0	40.1	40.0	40.1
78.5°	38.0	37.9	38.0	38.3	38.6	38.3	38.0	37.9	38.0	37.9	38.0
79°	36.0	36.0	36.1	36.3	36.6	36.3	36.1	36.0	36.0	36.0	36.1
79.5°	34.0	34.0	34.0	34.3	34.5	34.3	34.0	34.0	34.0	34.0	34.0
80°	32.1	32.0	32.1	32.3	32.5	32.3	32.1	32.0	32.1	32.0	32.1
80.5°	30.1	30.2	30.1	30.3	30.5	30.3	30.1	30.2	30.1	30.2	30.1
81°	28.2	28.3	28.3	28.4	28.6	28.4	28.3	28.3	28.2	28.3	28.3
81.5°	26.3	26.4	26.4	26.6	26.7	26.6	26.4	26.4	26.3	26.4	26.4
82°	24.5	24.5	24.5	24.7	24.8	24.7	24.5	24.5	24.5	24.5	24.5
82.5°	22.6	22.7	22.8	22.9	22.9	22.9	22.8	22.7	22.6	22.7	22.8
83°	20.8	20.8	20.9	21.1	21.1	21.1	20.9	20.8	20.8	20.8	20.9
83.5°	19.0	19.0	19.1	19.3	19.4	19.3	19.1	19.0	19.0	19.0	19.1
84°	17.2	17.2	17.3	17.5	17.6	17.5	17.3	17.2	17.2	17.2	17.3
84.5°	15.5	15.5	15.6	15.7	15.8	15.7	15.6	15.5	15.5	15.5	15.6
85°	13.8	13.8	13.9	14.0	14.1	14.0	13.9	13.8	13.8	13.8	13.9
85.5°	12.1	12.1	12.1	12.2	12.3	12.2	12.1	12.1	12.1	12.1	12.1
86°	10.4	10.4	10.5	10.5	10.6	10.5	10.5	10.4	10.4	10.4	10.5
86.5°	8.7	8.7	9.0	9.1	9.3	9.1	9.0	8.7	8.7	8.7	9.0
87°	7.1	7.4	7.6	7.6	8.1	7.6	7.6	7.4	7.1	7.4	7.6
87.5°	5.4	5.9	6.2	6.2	6.8	6.2	6.2	5.9	5.4	5.9	6.2
88°	4.3	4.5	4.8	5.0	5.5	5.0	4.8	4.5	4.3	4.5	4.8
88.5°	3.1	3.3	3.5	4.2	4.7	4.2	3.5	3.3	3.1	3.3	3.5



TEST NUMBER: P938670
CATALOG NUMBER: HLB4LSFS5-850LM-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	0.0	0.0



TEST NUMBER: P938670

CATALOG NUMBER: HLB4LSFS5-850LM-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	343.7	343.7	343.7	343.7	343.7	343.7
0.5°	343.5	343.9	343.5	343.3	343.7	344.0
1°	343.4	343.9	343.4	343.3	343.4	343.8
1.5°	343.5	343.6	343.5	343.6	343.6	343.8
2°	343.4	343.3	343.4	343.4	343.6	343.5
2.5°	343.4	343.2	343.4	343.3	343.4	343.4
3°	343.3	343.7	343.3	343.2	343.4	343.8
3.5°	343.1	343.6	343.1	343.0	343.6	343.6
4°	342.8	343.4	342.8	342.9	343.1	343.2
4.5°	342.9	343.2	342.9	342.9	342.8	342.8
5°	342.8	343.2	342.8	343.0	343.0	343.2
5.5°	342.6	343.2	342.6	342.8	342.8	343.2
6°	342.4	342.8	342.4	342.4	342.5	342.8
6.5°	342.3	342.2	342.3	342.0	342.3	342.5
7°	342.0	342.0	342.0	342.0	342.1	342.4
7.5°	341.8	342.1	341.8	341.8	342.0	342.3
8°	341.5	342.0	341.5	341.5	341.8	342.0
8.5°	341.4	341.3	341.4	341.1	341.5	341.6
9°	341.0	340.9	341.0	340.9	341.1	341.5
9.5°	340.8	340.7	340.8	340.5	340.9	341.1
10°	340.4	340.4	340.4	340.5	340.7	340.7
10.5°	340.2	340.1	340.2	340.3	340.4	340.4
11°	339.8	340.0	339.8	340.0	339.9	340.1
11.5°	339.3	339.4	339.3	339.4	339.5	339.8
12°	338.7	338.9	338.7	338.9	339.1	339.2
12.5°	338.3	338.4	338.3	338.5	338.7	338.7
13°	338.2	338.1	338.2	338.1	338.4	338.5
13.5°	338.1	337.8	338.1	337.5	338.1	337.8
14°	337.2	337.3	337.2	337.2	337.5	337.3
14.5°	336.5	336.7	336.5	336.7	336.7	336.9
15°	336.0	336.3	336.0	335.9	336.0	336.3
15.5°	335.5	335.9	335.5	335.3	335.5	335.6
16°	334.8	335.3	334.8	334.8	335.0	335.3
16.5°	334.4	334.3	334.4	334.2	334.4	334.7
17°	333.6	333.7	333.6	333.6	333.7	334.0
17.5°	332.9	333.0	332.9	332.9	333.0	333.3
18°	332.0	332.5	332.0	332.3	332.3	332.8
18.5°	331.4	331.5	331.4	331.6	331.6	332.3
19°	330.5	330.8	330.5	330.6	331.0	331.3
19.5°	329.9	330.0	329.9	329.7	330.0	329.9
20°	329.1	329.0	329.1	329.1	329.2	328.7
20.5°	328.2	328.1	328.2	328.0	328.4	328.1
21°	326.9	327.6	326.9	327.0	327.5	327.7



TEST NUMBER: P938670

CATALOG NUMBER: HLB4LSFS5-850LM-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	324.2	324.1	324.2	324.1	324.4	324.7
23°	323.0	322.9	323.0	323.0	323.3	323.5
23.5°	321.8	321.8	321.8	321.8	321.9	322.4
24°	320.6	320.8	320.6	320.8	321.1	321.1
24.5°	319.5	319.6	319.5	319.6	320.1	319.5
25°	318.2	318.4	318.2	318.4	318.4	318.6
25.5°	317.0	317.0	317.0	317.1	317.0	317.4
26°	315.7	316.0	315.7	315.7	315.8	316.1
26.5°	314.2	314.6	314.2	314.3	314.5	314.6
27°	312.8	313.0	312.8	312.9	313.1	313.4
27.5°	311.5	311.5	311.5	311.4	311.7	312.3
28°	309.9	310.0	309.9	309.9	310.0	310.4
28.5°	308.3	308.3	308.3	308.1	308.3	308.3
29°	306.6	306.7	306.6	306.6	306.8	307.1
29.5°	304.7	305.0	304.7	304.9	305.1	305.5
30°	303.0	303.4	303.0	303.3	303.3	303.6
30.5°	301.4	301.8	301.4	301.6	301.4	301.6
31°	299.6	299.9	299.6	299.7	299.7	300.0
31.5°	297.6	298.0	297.6	297.6	298.1	298.3
32°	295.6	296.2	295.6	295.7	296.0	296.0
32.5°	293.7	294.0	293.7	293.9	293.9	293.7
33°	291.7	291.6	291.7	292.0	291.9	291.9
33.5°	289.7	289.7	289.7	289.7	289.9	289.9
34°	287.5	287.7	287.5	287.4	287.9	287.7
34.5°	285.1	285.6	285.1	285.2	285.4	285.8
35°	283.0	283.1	283.0	283.0	283.0	283.6
35.5°	280.8	280.8	280.8	280.7	280.9	281.1
36°	278.5	278.6	278.5	278.3	278.7	278.5
36.5°	276.1	276.0	276.1	275.9	276.3	276.3
37°	273.5	273.6	273.5	273.5	273.7	273.9
37.5°	270.9	271.2	270.9	270.8	271.2	271.2
38°	268.4	268.7	268.4	268.4	268.8	268.6
38.5°	265.9	266.1	265.9	265.8	266.2	266.1
39°	263.2	263.3	263.2	263.3	263.3	263.3
39.5°	260.5	260.5	260.5	260.5	260.6	260.8
40°	257.9	257.8	257.9	257.8	258.0	258.3
40.5°	255.0	255.2	255.0	254.9	255.1	255.5
41°	252.1	252.7	252.1	252.1	252.2	252.6
41.5°	249.3	249.5	249.3	249.3	249.4	249.6
42°	246.5	246.7	246.5	246.6	246.6	246.6
42.5°	243.7	243.8	243.7	243.7	243.7	243.8
43°	240.6	240.9	240.6	240.6	240.8	240.9
43.5°	237.7	237.9	237.7	237.5	237.7	238.1



TEST NUMBER: P938670

CATALOG NUMBER: HLB4LSFS5-850LM-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	228.6	228.8	228.6	228.5	228.5	228.9
45.5°	225.5	225.4	225.5	225.5	225.5	225.6
46°	222.3	222.3	222.3	222.4	222.5	222.3
46.5°	219.3	219.2	219.3	219.3	219.3	219.2
47°	216.1	216.1	216.1	216.1	216.0	216.0
47.5°	212.8	213.1	212.8	212.8	212.7	212.9
48°	209.5	209.9	209.5	209.5	209.6	209.8
48.5°	206.5	206.6	206.5	206.6	206.6	206.6
49°	203.2	203.4	203.2	203.3	203.4	203.5
49.5°	200.0	200.2	200.0	199.9	200.0	200.0
50°	197.0	196.9	197.0	196.7	196.7	196.6
50.5°	193.7	193.6	193.7	193.5	193.4	193.6
51°	190.3	190.4	190.3	190.3	190.3	190.3
51.5°	187.1	187.2	187.1	187.0	186.9	186.9
52°	183.8	183.9	183.8	183.7	183.7	183.7
52.5°	180.6	180.7	180.6	180.5	180.4	180.5
53°	177.3	177.4	177.3	177.2	177.3	177.3
53.5°	174.1	174.3	174.1	174.0	173.9	174.1
54°	170.9	171.2	170.9	170.6	170.6	170.6
54.5°	167.8	167.9	167.8	167.5	167.3	167.3
55°	164.6	164.6	164.6	164.3	164.3	164.5
55.5°	161.3	161.5	161.3	161.1	161.0	161.3
56°	158.1	158.1	158.1	157.9	157.7	157.9
56.5°	154.9	155.0	154.9	154.7	154.7	154.9
57°	151.7	151.9	151.7	151.5	151.5	151.6
57.5°	148.4	148.8	148.4	148.3	148.1	148.4
58°	145.4	145.4	145.4	145.2	145.1	145.3
58.5°	142.3	142.5	142.3	142.1	142.1	142.1
59°	139.2	139.2	139.2	139.1	139.0	138.9
59.5°	136.0	136.3	136.0	136.0	135.8	135.9
60°	133.0	133.3	133.0	132.9	132.8	132.9
60.5°	130.1	130.2	130.1	129.8	129.7	129.7
61°	127.0	127.1	127.0	126.8	126.8	126.8
61.5°	123.9	124.1	123.9	123.9	123.8	123.7
62°	121.1	121.1	121.1	120.9	120.8	120.7
62.5°	118.1	118.2	118.1	117.9	117.8	117.8
63°	115.0	115.1	115.0	115.0	114.8	114.8
63.5°	112.1	112.3	112.1	112.1	112.0	111.9
64°	109.3	109.4	109.3	109.3	109.1	109.0
64.5°	106.5	106.5	106.5	106.4	106.2	106.0
65°	103.7	103.7	103.7	103.6	103.4	103.2
65.5°	100.9	100.9	100.9	100.8	100.6	100.5
66°	98.0	98.1	98.0	98.0	97.8	97.8



TEST NUMBER: P938670

CATALOG NUMBER: HLB4LSFS5-850LM-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	89.9	90.0	89.9	89.7	89.7	89.6
68°	87.2	87.4	87.2	87.0	86.9	86.9
68.5°	84.6	84.6	84.6	84.4	84.3	84.2
69°	82.0	82.0	82.0	81.8	81.7	81.6
69.5°	79.4	79.5	79.4	79.2	79.1	79.1
70°	76.8	77.0	76.8	76.7	76.6	76.5
70.5°	74.4	74.5	74.4	74.2	74.0	74.0
71°	71.9	72.0	71.9	71.7	71.6	71.6
71.5°	69.4	69.6	69.4	69.1	69.1	69.1
72°	67.0	67.2	67.0	66.7	66.7	66.7
72.5°	64.6	64.8	64.6	64.4	64.3	64.3
73°	62.3	62.4	62.3	62.1	61.9	62.0
73.5°	59.9	60.1	59.9	59.7	59.5	59.7
74°	57.6	57.9	57.6	57.3	57.3	57.3
74.5°	55.4	55.6	55.4	55.1	54.9	55.1
75°	53.1	53.3	53.1	52.9	52.8	52.8
75.5°	50.9	51.1	50.9	50.7	50.6	50.7
76°	48.6	48.9	48.6	48.5	48.4	48.5
76.5°	46.5	46.7	46.5	46.4	46.3	46.4
77°	44.5	44.7	44.5	44.2	44.1	44.2
77.5°	42.4	42.5	42.4	42.2	42.1	42.2
78°	40.3	40.5	40.3	40.1	40.0	40.1
78.5°	38.3	38.6	38.3	38.0	37.9	38.0
79°	36.3	36.6	36.3	36.1	36.0	36.0
79.5°	34.3	34.5	34.3	34.0	34.0	34.0
80°	32.3	32.5	32.3	32.1	32.0	32.1
80.5°	30.3	30.5	30.3	30.1	30.2	30.1
81°	28.4	28.6	28.4	28.3	28.3	28.2
81.5°	26.6	26.7	26.6	26.4	26.4	26.3
82°	24.7	24.8	24.7	24.5	24.5	24.5
82.5°	22.9	22.9	22.9	22.8	22.7	22.6
83°	21.1	21.1	21.1	20.9	20.8	20.8
83.5°	19.3	19.4	19.3	19.1	19.0	19.0
84°	17.5	17.6	17.5	17.3	17.2	17.2
84.5°	15.7	15.8	15.7	15.6	15.5	15.5
85°	14.0	14.1	14.0	13.9	13.8	13.8
85.5°	12.2	12.3	12.2	12.1	12.1	12.1
86°	10.5	10.6	10.5	10.5	10.4	10.4
86.5°	9.1	9.3	9.1	9.0	8.7	8.7
87°	7.6	8.1	7.6	7.6	7.4	7.1
87.5°	6.2	6.8	6.2	6.2	5.9	5.4
88°	5.0	5.5	5.0	4.8	4.5	4.3
88.5°	4.2	4.7	4.2	3.5	3.3	3.1



TEST NUMBER: P938670
CATALOG NUMBER: HLB4LSFS5-850LM-5000K

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°	326.6	326.4	326.3	326.0	326.3	326.0	326.3	326.4	326.6	326.4	326.3
22°	325.7	325.3	325.2	325.1	325.1	325.1	325.2	325.3	325.7	325.3	325.2



44°	234.8	234.7	234.6	234.7	234.7	234.7	234.6	234.7	234.8	234.7	234.6
44.5°	231.9	231.8	231.5	231.7	231.8	231.7	231.5	231.8	231.9	231.8	231.5



66.5°	94.9	95.0	95.2	95.3	95.3	95.3	95.2	95.0	94.9	95.0	95.2
67°	92.2	92.4	92.4	92.6	92.7	92.6	92.4	92.4	92.2	92.4	92.4



89°	2.0	2.2	2.6	3.3	3.8	3.3	2.6	2.2	2.0	2.2	2.6
89.5°	0.8	1.4	2.0	2.5	3.0	2.5	2.0	1.4	0.8	1.4	2.0





21.5°	326.0	326.3	326.0	326.3	326.4	326.6
22°	325.1	325.1	325.1	325.2	325.3	325.7



44°	234.7	234.7	234.7	234.6	234.7	234.8
44.5°	231.7	231.8	231.7	231.5	231.8	231.9



66.5°	95.3	95.3	95.3	95.2	95.0	94.9
67°	92.6	92.7	92.6	92.4	92.4	92.2



89°	3.3	3.8	3.3	2.6	2.2	2.0
89.5°	2.5	3.0	2.5	2.0	1.4	0.8



(END OF REPORT)