

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: P938667

Luminaire Tested: HLB4LSFS5-850LM-3000K

Issue Date: 1/15/2025

Test Information

Test Method: LM-79-2019
Report Number: P938667
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-3000K
Description: 4IN SELECTABLE LUMENS, 90CRI, DIMMING TO 10%
Light Source: SELECTABLE CCT 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 908.9 lumens
Efficiency: N/A
Efficacy: 99.9 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

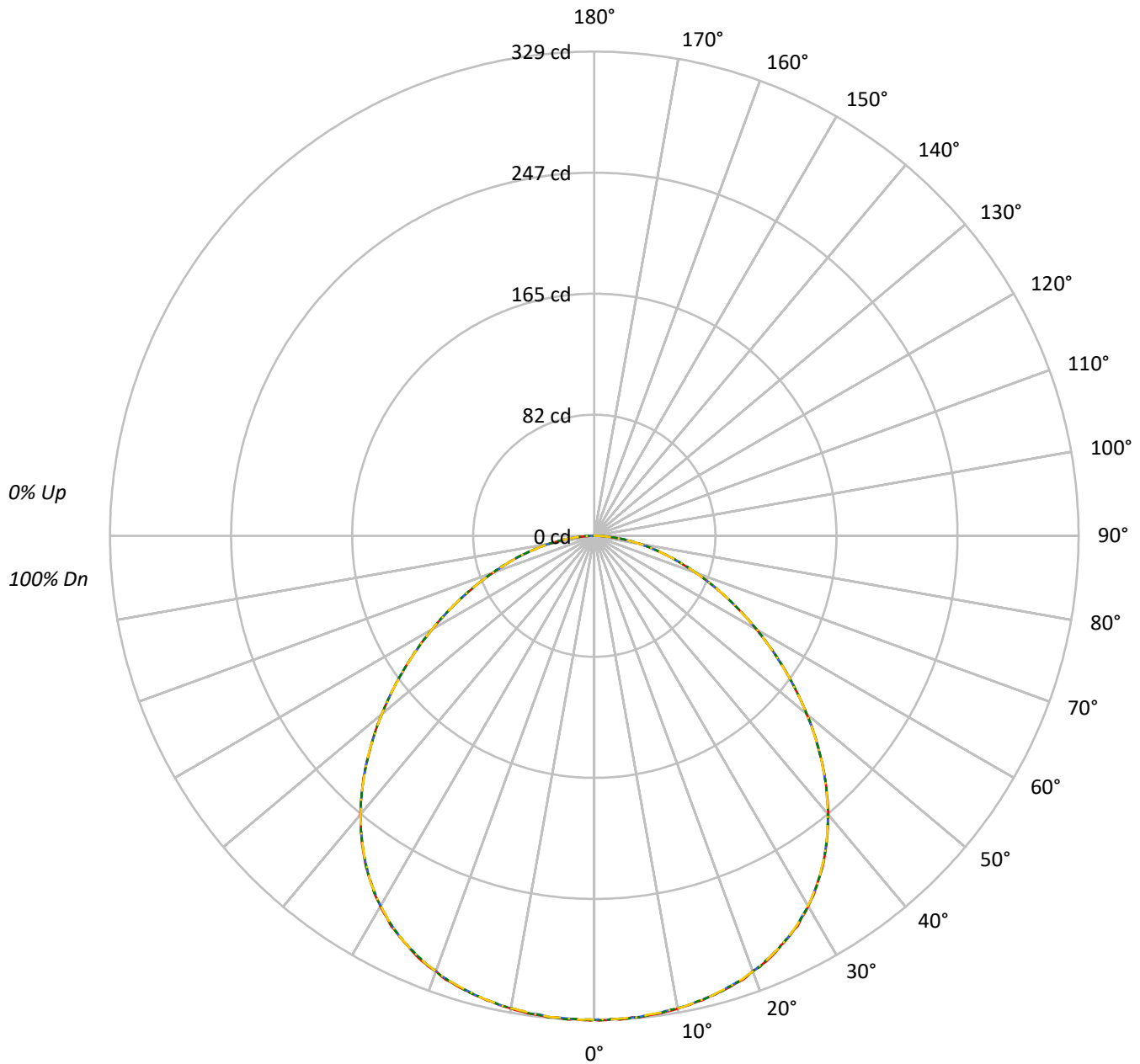
Input Watts (W): 9.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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CATALOG NUMBER: HLB4LSFS5-850LM-3000K

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°	41405	41405	41405	41405
5°	41512	41512	41512	41512
10°	41685	41647	41685	41647
15°	41953	41953	41953	41953
20°	42147	42187	42147	42187
25°	42366	42338	42366	42338
30°	42244	42215	42244	42215
35°	41712	41650	41712	41650
40°	40628	40562	40628	40562
45°	38995	38995	38995	38995
50°	36867	36906	36867	36906
55°	34557	34579	34557	34579
60°	32016	32117	32016	32117
65°	29421	29570	29421	29570
70°	26935	27119	26935	27119
75°	24604	24799	24604	24799
80°	22250	22539	22250	22539
85°	19060	19494	19060	19494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 89.5°

Luminance: 40380 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.3	3.4
10°-20°	90.9	10.0
20°-30°	140.4	15.5
30°-40°	169.2	18.6
40°-50°	168.5	18.5
50°-60°	140.8	15.5
60°-70°	98.4	10.8
70°-80°	54.0	5.9
80°-90°	15.3	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°	262.6	28.9
0°-40°	431.8	47.5
0°-60°	741.1	81.5
0°-90°	908.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	908.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	329	329	329	329	329	
5°	329	329	329	329	329	31
15°	322	322	322	322	322	91
25°	305	305	305	305	305	141
35°	272	271	272	271	272	169
45°	219	219	219	219	219	169
55°	158	158	158	158	158	141
65°	99	99	99	99	99	98
75°	51	51	51	51	51	54
85°	13	14	13	14	13	15
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°	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0
0.5°	329.4	329.0	328.7	328.9	329.3	328.9	328.7	329.0	329.4	329.0	328.7
1°	329.2	328.8	328.7	328.8	329.3	328.8	328.7	328.8	329.2	328.8	328.7
1.5°	329.2	329.0	329.0	328.9	329.0	328.9	329.0	329.0	329.2	329.0	329.0
2°	328.9	329.0	328.8	328.8	328.7	328.8	328.8	329.0	328.9	329.0	328.8
2.5°	328.8	328.8	328.7	328.8	328.6	328.8	328.7	328.8	328.8	328.8	328.7
3°	329.2	328.8	328.6	328.7	329.0	328.7	328.6	328.8	329.2	328.8	328.6
3.5°	329.0	329.0	328.4	328.5	329.0	328.5	328.4	329.0	329.0	329.0	328.4
4°	328.6	328.5	328.3	328.2	328.8	328.2	328.3	328.5	328.6	328.5	328.3
4.5°	328.2	328.2	328.3	328.3	328.6	328.3	328.3	328.2	328.2	328.2	328.3
5°	328.6	328.4	328.4	328.2	328.6	328.2	328.4	328.4	328.6	328.4	328.4
5.5°	328.6	328.2	328.2	328.1	328.6	328.1	328.2	328.2	328.6	328.2	328.2
6°	328.2	327.9	327.8	327.8	328.2	327.8	327.8	327.9	328.2	327.9	327.8
6.5°	327.9	327.7	327.4	327.7	327.7	327.7	327.4	327.7	327.9	327.7	327.4
7°	327.8	327.6	327.4	327.4	327.4	327.4	327.4	327.6	327.8	327.6	327.4
7.5°	327.7	327.4	327.2	327.2	327.6	327.2	327.2	327.4	327.7	327.4	327.2
8°	327.5	327.2	327.0	327.0	327.4	327.0	327.0	327.2	327.5	327.2	327.0
8.5°	327.1	326.9	326.6	326.8	326.8	326.8	326.6	326.9	327.1	326.9	326.6
9°	326.9	326.6	326.4	326.5	326.4	326.5	326.4	326.6	326.9	326.6	326.4
9.5°	326.6	326.4	326.0	326.3	326.2	326.3	326.0	326.4	326.6	326.4	326.0
10°	326.2	326.2	326.0	325.9	325.9	325.9	326.0	326.2	326.2	326.2	326.0
10.5°	325.9	325.9	325.8	325.7	325.6	325.7	325.8	325.9	325.9	325.9	325.8
11°	325.6	325.5	325.5	325.4	325.5	325.4	325.5	325.5	325.6	325.5	325.5
11.5°	325.3	325.1	325.0	324.9	325.0	324.9	325.0	325.1	325.3	325.1	325.0
12°	324.7	324.6	324.5	324.3	324.5	324.3	324.5	324.6	324.7	324.6	324.5
12.5°	324.3	324.2	324.1	323.9	324.0	323.9	324.1	324.2	324.3	324.2	324.1
13°	324.1	324.0	323.8	323.8	323.7	323.8	323.8	324.0	324.1	324.0	323.8
13.5°	323.4	323.7	323.2	323.7	323.4	323.7	323.2	323.7	323.4	323.7	323.2
14°	322.9	323.1	322.9	322.9	322.9	322.9	322.9	323.1	322.9	323.1	322.9
14.5°	322.5	322.4	322.4	322.2	322.4	322.2	322.4	322.4	322.5	322.4	322.4
15°	322.0	321.7	321.6	321.7	322.0	321.7	321.6	321.7	322.0	321.7	321.6
15.5°	321.3	321.2	321.1	321.2	321.6	321.2	321.1	321.2	321.3	321.2	321.1
16°	321.0	320.7	320.6	320.6	321.0	320.6	320.6	320.7	321.0	320.7	320.6
16.5°	320.4	320.2	319.9	320.2	320.1	320.2	319.9	320.2	320.4	320.2	319.9
17°	319.8	319.5	319.4	319.4	319.5	319.4	319.4	319.5	319.8	319.5	319.4
17.5°	319.1	318.8	318.7	318.7	318.9	318.7	318.7	318.8	319.1	318.8	318.7
18°	318.6	318.1	318.1	317.9	318.3	317.9	318.1	318.1	318.6	318.1	318.1
18.5°	318.1	317.5	317.5	317.3	317.4	317.3	317.5	317.5	318.1	317.5	317.5
19°	317.2	316.9	316.5	316.4	316.8	316.4	316.5	316.9	317.2	316.9	316.5
19.5°	315.9	316.0	315.7	315.9	316.0	315.9	315.7	316.0	315.9	316.0	315.7
20°	314.7	315.2	315.1	315.1	315.0	315.1	315.1	315.2	314.7	315.2	315.1
20.5°	314.2	314.4	314.0	314.2	314.2	314.2	314.0	314.4	314.2	314.4	314.0
21°	313.8	313.6	313.1	313.0	313.7	313.0	313.1	313.6	313.8	313.6	313.1

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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°	310.9	310.6	310.3	310.4	310.3	310.4	310.3	310.6	310.9	310.6	310.3
23°	309.8	309.5	309.3	309.3	309.2	309.3	309.3	309.5	309.8	309.5	309.3
23.5°	308.7	308.2	308.1	308.1	308.1	308.1	308.1	308.2	308.7	308.2	308.1
24°	307.4	307.4	307.2	306.9	307.2	306.9	307.2	307.4	307.4	307.4	307.2
24.5°	305.9	306.4	306.0	305.9	306.0	305.9	306.0	306.4	305.9	306.4	306.0
25°	305.1	304.8	304.8	304.7	304.9	304.7	304.8	304.8	305.1	304.8	304.8
25.5°	303.9	303.5	303.6	303.5	303.5	303.5	303.6	303.5	303.9	303.5	303.6
26°	302.6	302.4	302.3	302.3	302.5	302.3	302.3	302.4	302.6	302.4	302.3
26.5°	301.2	301.1	300.9	300.8	301.2	300.8	300.9	301.1	301.2	301.1	300.9
27°	300.0	299.8	299.6	299.5	299.7	299.5	299.6	299.8	300.0	299.8	299.6
27.5°	299.0	298.5	298.2	298.2	298.2	298.2	298.2	298.5	299.0	298.5	298.2
28°	297.2	296.8	296.7	296.7	296.8	296.7	296.7	296.8	297.2	296.8	296.7
28.5°	295.2	295.2	295.0	295.1	295.2	295.1	295.0	295.2	295.2	295.2	295.0
29°	294.0	293.8	293.5	293.5	293.7	293.5	293.5	293.8	294.0	293.8	293.5
29.5°	292.5	292.1	291.9	291.7	292.1	291.7	291.9	292.1	292.5	292.1	291.9
30°	290.7	290.4	290.3	290.1	290.5	290.1	290.3	290.4	290.7	290.4	290.3
30.5°	288.7	288.6	288.7	288.6	289.0	288.6	288.7	288.6	288.7	288.6	288.7
31°	287.3	286.9	286.9	286.9	287.1	286.9	286.9	286.9	287.3	286.9	286.9
31.5°	285.6	285.4	284.9	285.0	285.3	285.0	284.9	285.4	285.6	285.4	284.9
32°	283.4	283.4	283.1	283.0	283.6	283.0	283.1	283.4	283.4	283.4	283.1
32.5°	281.2	281.4	281.4	281.2	281.5	281.2	281.4	281.4	281.2	281.4	281.4
33°	279.5	279.5	279.6	279.3	279.2	279.3	279.6	279.5	279.5	279.5	279.6
33.5°	277.6	277.6	277.3	277.3	277.3	277.3	277.3	277.6	277.6	277.6	277.3
34°	275.5	275.6	275.1	275.2	275.5	275.2	275.1	275.6	275.5	275.6	275.1
34.5°	273.6	273.3	273.0	273.0	273.4	273.0	273.0	273.3	273.6	273.3	273.0
35°	271.5	270.9	271.0	270.9	271.1	270.9	271.0	270.9	271.5	270.9	271.0
35.5°	269.1	269.0	268.7	268.8	268.8	268.8	268.7	269.0	269.1	269.0	268.7
36°	266.7	266.9	266.4	266.6	266.8	266.6	266.4	266.9	266.7	266.9	266.4
36.5°	264.5	264.5	264.2	264.3	264.3	264.3	264.2	264.5	264.5	264.5	264.2
37°	262.2	262.1	261.8	261.8	262.0	261.8	261.8	262.1	262.2	262.1	261.8
37.5°	259.6	259.6	259.3	259.4	259.7	259.4	259.3	259.6	259.6	259.6	259.3
38°	257.2	257.3	257.0	257.0	257.3	257.0	257.0	257.3	257.2	257.3	257.0
38.5°	254.7	254.8	254.5	254.6	254.7	254.6	254.5	254.8	254.7	254.8	254.5
39°	252.1	252.1	252.1	252.0	252.1	252.0	252.1	252.1	252.1	252.1	252.1
39.5°	249.7	249.5	249.5	249.5	249.4	249.5	249.5	249.5	249.7	249.5	249.5
40°	247.3	247.0	246.9	246.9	246.9	246.9	246.9	247.0	247.3	247.0	246.9
40.5°	244.6	244.3	244.0	244.2	244.3	244.2	244.0	244.3	244.6	244.3	244.0
41°	241.8	241.5	241.4	241.4	241.9	241.4	241.4	241.5	241.8	241.5	241.4
41.5°	239.0	238.8	238.7	238.7	238.9	238.7	238.7	238.8	239.0	238.8	238.7
42°	236.1	236.1	236.1	236.0	236.2	236.0	236.1	236.1	236.1	236.1	236.1
42.5°	233.4	233.4	233.3	233.3	233.4	233.3	233.3	233.4	233.4	233.4	233.3
43°	230.7	230.5	230.4	230.4	230.7	230.4	230.4	230.5	230.7	230.5	230.4
43.5°	227.9	227.6	227.4	227.6	227.8	227.6	227.4	227.6	227.9	227.6	227.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	219.1	218.8	218.8	218.9	219.1	218.9	218.8	218.8	219.1	218.8	218.8
45.5°	216.0	215.9	215.9	215.9	215.8	215.9	215.9	215.9	216.0	215.9	215.9
46°	212.9	213.0	213.0	212.9	212.8	212.9	213.0	213.0	212.9	213.0	213.0
46.5°	209.9	210.0	210.0	210.0	209.9	210.0	210.0	210.0	209.9	210.0	210.0
47°	206.8	206.8	206.9	206.9	206.9	206.9	206.9	206.8	206.8	206.8	206.9
47.5°	203.9	203.6	203.7	203.7	204.0	203.7	203.7	203.6	203.9	203.6	203.7
48°	200.9	200.7	200.6	200.6	200.9	200.6	200.6	200.7	200.9	200.7	200.6
48.5°	197.8	197.8	197.8	197.7	197.8	197.7	197.8	197.8	197.8	197.8	197.8
49°	194.8	194.8	194.7	194.6	194.8	194.6	194.7	194.8	194.8	194.8	194.7
49.5°	191.5	191.5	191.4	191.5	191.7	191.5	191.4	191.5	191.5	191.5	191.4
50°	188.3	188.3	188.3	188.6	188.5	188.6	188.3	188.3	188.3	188.3	188.3
50.5°	185.3	185.2	185.2	185.5	185.3	185.5	185.2	185.2	185.3	185.2	185.2
51°	182.2	182.2	182.2	182.2	182.3	182.2	182.2	182.2	182.2	182.2	182.2
51.5°	179.0	179.0	179.1	179.2	179.2	179.2	179.1	179.0	179.0	179.0	179.1
52°	175.9	175.9	175.9	176.0	176.1	176.0	175.9	175.9	175.9	175.9	175.9
52.5°	172.8	172.7	172.8	172.9	173.0	172.9	172.8	172.7	172.8	172.7	172.8
53°	169.8	169.7	169.6	169.8	169.9	169.8	169.6	169.7	169.8	169.7	169.6
53.5°	166.7	166.5	166.6	166.7	166.9	166.7	166.6	166.5	166.7	166.5	166.6
54°	163.4	163.3	163.4	163.6	163.9	163.6	163.4	163.3	163.4	163.3	163.4
54.5°	160.2	160.2	160.4	160.6	160.8	160.6	160.4	160.2	160.2	160.2	160.4
55°	157.5	157.3	157.3	157.6	157.6	157.6	157.3	157.3	157.5	157.3	157.3
55.5°	154.4	154.1	154.3	154.4	154.6	154.4	154.3	154.1	154.4	154.1	154.3
56°	151.2	151.0	151.2	151.4	151.4	151.4	151.2	151.0	151.2	151.0	151.2
56.5°	148.3	148.1	148.1	148.3	148.4	148.3	148.1	148.1	148.3	148.1	148.1
57°	145.2	145.1	145.0	145.3	145.4	145.3	145.0	145.1	145.2	145.1	145.0
57.5°	142.1	141.8	142.0	142.1	142.5	142.1	142.0	141.8	142.1	141.8	142.0
58°	139.2	138.9	139.0	139.2	139.2	139.2	139.0	138.9	139.2	138.9	139.0
58.5°	136.1	136.1	136.1	136.2	136.4	136.2	136.1	136.1	136.1	136.1	136.1
59°	133.0	133.1	133.1	133.3	133.3	133.3	133.1	133.1	133.0	133.1	133.1
59.5°	130.1	130.1	130.2	130.2	130.5	130.2	130.2	130.1	130.1	130.1	130.2
60°	127.2	127.1	127.3	127.4	127.6	127.4	127.3	127.1	127.2	127.1	127.3
60.5°	124.2	124.2	124.3	124.5	124.7	124.5	124.3	124.2	124.2	124.2	124.3
61°	121.4	121.4	121.4	121.6	121.7	121.6	121.4	121.4	121.4	121.4	121.4
61.5°	118.4	118.5	118.7	118.7	118.8	118.7	118.7	118.5	118.4	118.5	118.7
62°	115.6	115.7	115.7	115.9	115.9	115.9	115.7	115.7	115.6	115.7	115.7
62.5°	112.7	112.8	112.9	113.1	113.1	113.1	112.9	112.8	112.7	112.8	112.9
63°	109.9	109.9	110.1	110.1	110.2	110.1	110.1	109.9	109.9	109.9	110.1
63.5°	107.1	107.2	107.3	107.4	107.5	107.4	107.3	107.2	107.1	107.2	107.3
64°	104.4	104.5	104.6	104.7	104.8	104.7	104.6	104.5	104.4	104.5	104.6
64.5°	101.5	101.7	101.8	101.9	101.9	101.9	101.8	101.7	101.5	101.7	101.8
65°	98.8	99.0	99.2	99.2	99.3	99.2	99.2	99.0	98.8	99.0	99.2
65.5°	96.2	96.3	96.5	96.6	96.6	96.6	96.5	96.3	96.2	96.3	96.5
66°	93.6	93.6	93.8	93.8	94.0	93.8	93.8	93.6	93.6	93.6	93.8

TEST NUMBER: P938667

CATALOG NUMBER: HLB4LSFS5-850LM-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	85.8	85.8	85.8	86.1	86.2	86.1	85.8	85.8	85.8	85.8	85.8
68°	83.2	83.2	83.3	83.5	83.6	83.5	83.3	83.2	83.2	83.2	83.3
68.5°	80.6	80.7	80.8	81.0	81.0	81.0	80.8	80.7	80.6	80.7	80.8
69°	78.1	78.2	78.4	78.5	78.5	78.5	78.4	78.2	78.1	78.2	78.4
69.5°	75.8	75.8	75.8	76.0	76.2	76.0	75.8	75.8	75.8	75.8	75.8
70°	73.2	73.3	73.4	73.6	73.7	73.6	73.4	73.3	73.2	73.3	73.4
70.5°	70.9	70.9	71.0	71.2	71.3	71.2	71.0	70.9	70.9	70.9	71.0
71°	68.5	68.5	68.6	68.8	68.9	68.8	68.6	68.5	68.5	68.5	68.6
71.5°	66.2	66.2	66.2	66.5	66.7	66.5	66.2	66.2	66.2	66.2	66.2
72°	63.9	63.9	63.9	64.1	64.3	64.1	63.9	63.9	63.9	63.9	63.9
72.5°	61.5	61.5	61.7	61.9	62.0	61.9	61.7	61.5	61.5	61.5	61.7
73°	59.3	59.3	59.4	59.7	59.7	59.7	59.4	59.3	59.3	59.3	59.4
73.5°	57.1	57.0	57.1	57.4	57.5	57.4	57.1	57.0	57.1	57.0	57.1
74°	54.9	54.9	54.9	55.2	55.4	55.2	54.9	54.9	54.9	54.9	54.9
74.5°	52.8	52.6	52.8	53.0	53.2	53.0	52.8	52.6	52.8	52.6	52.8
75°	50.6	50.6	50.6	50.9	51.0	50.9	50.6	50.6	50.6	50.6	50.6
75.5°	48.5	48.4	48.5	48.8	48.9	48.8	48.5	48.4	48.5	48.4	48.5
76°	46.4	46.3	46.4	46.6	46.8	46.6	46.4	46.3	46.4	46.3	46.4
76.5°	44.4	44.3	44.4	44.5	44.7	44.5	44.4	44.3	44.4	44.3	44.4
77°	42.3	42.3	42.3	42.6	42.8	42.6	42.3	42.3	42.3	42.3	42.3
77.5°	40.4	40.3	40.4	40.6	40.7	40.6	40.4	40.3	40.4	40.3	40.4
78°	38.4	38.3	38.4	38.6	38.8	38.6	38.4	38.3	38.4	38.3	38.4
78.5°	36.4	36.3	36.4	36.7	37.0	36.7	36.4	36.3	36.4	36.3	36.4
79°	34.5	34.5	34.5	34.7	35.0	34.7	34.5	34.5	34.5	34.5	34.5
79.5°	32.6	32.6	32.6	32.8	33.0	32.8	32.6	32.6	32.6	32.6	32.6
80°	30.7	30.6	30.7	30.9	31.1	30.9	30.7	30.6	30.7	30.6	30.7
80.5°	28.9	28.9	28.9	29.0	29.2	29.0	28.9	28.9	28.9	28.9	28.9
81°	27.0	27.1	27.1	27.2	27.4	27.2	27.1	27.1	27.0	27.1	27.1
81.5°	25.2	25.3	25.3	25.4	25.5	25.4	25.3	25.3	25.2	25.3	25.3
82°	23.4	23.4	23.5	23.7	23.7	23.7	23.5	23.4	23.4	23.4	23.5
82.5°	21.6	21.7	21.8	21.9	21.9	21.9	21.8	21.7	21.6	21.7	21.8
83°	19.9	19.9	20.0	20.2	20.2	20.2	20.0	19.9	19.9	19.9	20.0
83.5°	18.2	18.2	18.3	18.5	18.5	18.5	18.3	18.2	18.2	18.2	18.3
84°	16.5	16.5	16.6	16.7	16.8	16.7	16.6	16.5	16.5	16.5	16.6
84.5°	14.9	14.9	15.0	15.0	15.1	15.0	15.0	14.9	14.9	14.9	15.0
85°	13.2	13.2	13.3	13.4	13.5	13.4	13.3	13.2	13.2	13.2	13.3
85.5°	11.6	11.6	11.6	11.7	11.8	11.7	11.6	11.6	11.6	11.6	11.6
86°	10.0	10.0	10.1	10.1	10.2	10.1	10.1	10.0	10.0	10.0	10.1
86.5°	8.4	8.4	8.6	8.7	8.9	8.7	8.6	8.4	8.4	8.4	8.6
87°	6.8	7.1	7.3	7.3	7.7	7.3	7.3	7.1	6.8	7.1	7.3
87.5°	5.2	5.7	5.9	5.9	6.5	5.9	5.9	5.7	5.2	5.7	5.9
88°	4.1	4.3	4.6	4.8	5.3	4.8	4.6	4.3	4.1	4.3	4.6
88.5°	3.0	3.2	3.3	4.0	4.5	4.0	3.3	3.2	3.0	3.2	3.3



TEST NUMBER: P938667
CATALOG NUMBER: HLB4LSFS5-850LM-3000K

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: P938667

CATALOG NUMBER: HLB4LSFS5-850LM-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	329.0	329.0	329.0	329.0	329.0	329.0
0.5°	328.9	329.3	328.9	328.7	329.0	329.4
1°	328.8	329.3	328.8	328.7	328.8	329.2
1.5°	328.9	329.0	328.9	329.0	329.0	329.2
2°	328.8	328.7	328.8	328.8	329.0	328.9
2.5°	328.8	328.6	328.8	328.7	328.8	328.8
3°	328.7	329.0	328.7	328.6	328.8	329.2
3.5°	328.5	329.0	328.5	328.4	329.0	329.0
4°	328.2	328.8	328.2	328.3	328.5	328.6
4.5°	328.3	328.6	328.3	328.3	328.2	328.2
5°	328.2	328.6	328.2	328.4	328.4	328.6
5.5°	328.1	328.6	328.1	328.2	328.2	328.6
6°	327.8	328.2	327.8	327.8	327.9	328.2
6.5°	327.7	327.7	327.7	327.4	327.7	327.9
7°	327.4	327.4	327.4	327.4	327.6	327.8
7.5°	327.2	327.6	327.2	327.2	327.4	327.7
8°	327.0	327.4	327.0	327.0	327.2	327.5
8.5°	326.8	326.8	326.8	326.6	326.9	327.1
9°	326.5	326.4	326.5	326.4	326.6	326.9
9.5°	326.3	326.2	326.3	326.0	326.4	326.6
10°	325.9	325.9	325.9	326.0	326.2	326.2
10.5°	325.7	325.6	325.7	325.8	325.9	325.9
11°	325.4	325.5	325.4	325.5	325.5	325.6
11.5°	324.9	325.0	324.9	325.0	325.1	325.3
12°	324.3	324.5	324.3	324.5	324.6	324.7
12.5°	323.9	324.0	323.9	324.1	324.2	324.3
13°	323.8	323.7	323.8	323.8	324.0	324.1
13.5°	323.7	323.4	323.7	323.2	323.7	323.4
14°	322.9	322.9	322.9	322.9	323.1	322.9
14.5°	322.2	322.4	322.2	322.4	322.4	322.5
15°	321.7	322.0	321.7	321.6	321.7	322.0
15.5°	321.2	321.6	321.2	321.1	321.2	321.3
16°	320.6	321.0	320.6	320.6	320.7	321.0
16.5°	320.2	320.1	320.2	319.9	320.2	320.4
17°	319.4	319.5	319.4	319.4	319.5	319.8
17.5°	318.7	318.9	318.7	318.7	318.8	319.1
18°	317.9	318.3	317.9	318.1	318.1	318.6
18.5°	317.3	317.4	317.3	317.5	317.5	318.1
19°	316.4	316.8	316.4	316.5	316.9	317.2
19.5°	315.9	316.0	315.9	315.7	316.0	315.9
20°	315.1	315.0	315.1	315.1	315.2	314.7
20.5°	314.2	314.2	314.2	314.0	314.4	314.2
21°	313.0	313.7	313.0	313.1	313.6	313.8



TEST NUMBER: P938667

CATALOG NUMBER: HLB4LSFS5-850LM-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	310.4	310.3	310.4	310.3	310.6	310.9
23°	309.3	309.2	309.3	309.3	309.5	309.8
23.5°	308.1	308.1	308.1	308.1	308.2	308.7
24°	306.9	307.2	306.9	307.2	307.4	307.4
24.5°	305.9	306.0	305.9	306.0	306.4	305.9
25°	304.7	304.9	304.7	304.8	304.8	305.1
25.5°	303.5	303.5	303.5	303.6	303.5	303.9
26°	302.3	302.5	302.3	302.3	302.4	302.6
26.5°	300.8	301.2	300.8	300.9	301.1	301.2
27°	299.5	299.7	299.5	299.6	299.8	300.0
27.5°	298.2	298.2	298.2	298.2	298.5	299.0
28°	296.7	296.8	296.7	296.7	296.8	297.2
28.5°	295.1	295.2	295.1	295.0	295.2	295.2
29°	293.5	293.7	293.5	293.5	293.8	294.0
29.5°	291.7	292.1	291.7	291.9	292.1	292.5
30°	290.1	290.5	290.1	290.3	290.4	290.7
30.5°	288.6	289.0	288.6	288.7	288.6	288.7
31°	286.9	287.1	286.9	286.9	286.9	287.3
31.5°	285.0	285.3	285.0	284.9	285.4	285.6
32°	283.0	283.6	283.0	283.1	283.4	283.4
32.5°	281.2	281.5	281.2	281.4	281.4	281.2
33°	279.3	279.2	279.3	279.6	279.5	279.5
33.5°	277.3	277.3	277.3	277.3	277.6	277.6
34°	275.2	275.5	275.2	275.1	275.6	275.5
34.5°	273.0	273.4	273.0	273.0	273.3	273.6
35°	270.9	271.1	270.9	271.0	270.9	271.5
35.5°	268.8	268.8	268.8	268.7	269.0	269.1
36°	266.6	266.8	266.6	266.4	266.9	266.7
36.5°	264.3	264.3	264.3	264.2	264.5	264.5
37°	261.8	262.0	261.8	261.8	262.1	262.2
37.5°	259.4	259.7	259.4	259.3	259.6	259.6
38°	257.0	257.3	257.0	257.0	257.3	257.2
38.5°	254.6	254.7	254.6	254.5	254.8	254.7
39°	252.0	252.1	252.0	252.1	252.1	252.1
39.5°	249.5	249.4	249.5	249.5	249.5	249.7
40°	246.9	246.9	246.9	246.9	247.0	247.3
40.5°	244.2	244.3	244.2	244.0	244.3	244.6
41°	241.4	241.9	241.4	241.4	241.5	241.8
41.5°	238.7	238.9	238.7	238.7	238.8	239.0
42°	236.0	236.2	236.0	236.1	236.1	236.1
42.5°	233.3	233.4	233.3	233.3	233.4	233.4
43°	230.4	230.7	230.4	230.4	230.5	230.7
43.5°	227.6	227.8	227.6	227.4	227.6	227.9



TEST NUMBER: P938667

CATALOG NUMBER: HLB4LSFS5-850LM-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	218.9	219.1	218.9	218.8	218.8	219.1
45.5°	215.9	215.8	215.9	215.9	215.9	216.0
46°	212.9	212.8	212.9	213.0	213.0	212.9
46.5°	210.0	209.9	210.0	210.0	210.0	209.9
47°	206.9	206.9	206.9	206.9	206.8	206.8
47.5°	203.7	204.0	203.7	203.7	203.6	203.9
48°	200.6	200.9	200.6	200.6	200.7	200.9
48.5°	197.7	197.8	197.7	197.8	197.8	197.8
49°	194.6	194.8	194.6	194.7	194.8	194.8
49.5°	191.5	191.7	191.5	191.4	191.5	191.5
50°	188.6	188.5	188.6	188.3	188.3	188.3
50.5°	185.5	185.3	185.5	185.2	185.2	185.3
51°	182.2	182.3	182.2	182.2	182.2	182.2
51.5°	179.2	179.2	179.2	179.1	179.0	179.0
52°	176.0	176.1	176.0	175.9	175.9	175.9
52.5°	172.9	173.0	172.9	172.8	172.7	172.8
53°	169.8	169.9	169.8	169.6	169.7	169.8
53.5°	166.7	166.9	166.7	166.6	166.5	166.7
54°	163.6	163.9	163.6	163.4	163.3	163.4
54.5°	160.6	160.8	160.6	160.4	160.2	160.2
55°	157.6	157.6	157.6	157.3	157.3	157.5
55.5°	154.4	154.6	154.4	154.3	154.1	154.4
56°	151.4	151.4	151.4	151.2	151.0	151.2
56.5°	148.3	148.4	148.3	148.1	148.1	148.3
57°	145.3	145.4	145.3	145.0	145.1	145.2
57.5°	142.1	142.5	142.1	142.0	141.8	142.1
58°	139.2	139.2	139.2	139.0	138.9	139.2
58.5°	136.2	136.4	136.2	136.1	136.1	136.1
59°	133.3	133.3	133.3	133.1	133.1	133.0
59.5°	130.2	130.5	130.2	130.2	130.1	130.1
60°	127.4	127.6	127.4	127.3	127.1	127.2
60.5°	124.5	124.7	124.5	124.3	124.2	124.2
61°	121.6	121.7	121.6	121.4	121.4	121.4
61.5°	118.7	118.8	118.7	118.7	118.5	118.4
62°	115.9	115.9	115.9	115.7	115.7	115.6
62.5°	113.1	113.1	113.1	112.9	112.8	112.7
63°	110.1	110.2	110.1	110.1	109.9	109.9
63.5°	107.4	107.5	107.4	107.3	107.2	107.1
64°	104.7	104.8	104.7	104.6	104.5	104.4
64.5°	101.9	101.9	101.9	101.8	101.7	101.5
65°	99.2	99.3	99.2	99.2	99.0	98.8
65.5°	96.6	96.6	96.6	96.5	96.3	96.2
66°	93.8	94.0	93.8	93.8	93.6	93.6



TEST NUMBER: P938667

CATALOG NUMBER: HLB4LSFS5-850LM-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	86.1	86.2	86.1	85.8	85.8	85.8
68°	83.5	83.6	83.5	83.3	83.2	83.2
68.5°	81.0	81.0	81.0	80.8	80.7	80.6
69°	78.5	78.5	78.5	78.4	78.2	78.1
69.5°	76.0	76.2	76.0	75.8	75.8	75.8
70°	73.6	73.7	73.6	73.4	73.3	73.2
70.5°	71.2	71.3	71.2	71.0	70.9	70.9
71°	68.8	68.9	68.8	68.6	68.5	68.5
71.5°	66.5	66.7	66.5	66.2	66.2	66.2
72°	64.1	64.3	64.1	63.9	63.9	63.9
72.5°	61.9	62.0	61.9	61.7	61.5	61.5
73°	59.7	59.7	59.7	59.4	59.3	59.3
73.5°	57.4	57.5	57.4	57.1	57.0	57.1
74°	55.2	55.4	55.2	54.9	54.9	54.9
74.5°	53.0	53.2	53.0	52.8	52.6	52.8
75°	50.9	51.0	50.9	50.6	50.6	50.6
75.5°	48.8	48.9	48.8	48.5	48.4	48.5
76°	46.6	46.8	46.6	46.4	46.3	46.4
76.5°	44.5	44.7	44.5	44.4	44.3	44.4
77°	42.6	42.8	42.6	42.3	42.3	42.3
77.5°	40.6	40.7	40.6	40.4	40.3	40.4
78°	38.6	38.8	38.6	38.4	38.3	38.4
78.5°	36.7	37.0	36.7	36.4	36.3	36.4
79°	34.7	35.0	34.7	34.5	34.5	34.5
79.5°	32.8	33.0	32.8	32.6	32.6	32.6
80°	30.9	31.1	30.9	30.7	30.6	30.7
80.5°	29.0	29.2	29.0	28.9	28.9	28.9
81°	27.2	27.4	27.2	27.1	27.1	27.0
81.5°	25.4	25.5	25.4	25.3	25.3	25.2
82°	23.7	23.7	23.7	23.5	23.4	23.4
82.5°	21.9	21.9	21.9	21.8	21.7	21.6
83°	20.2	20.2	20.2	20.0	19.9	19.9
83.5°	18.5	18.5	18.5	18.3	18.2	18.2
84°	16.7	16.8	16.7	16.6	16.5	16.5
84.5°	15.0	15.1	15.0	15.0	14.9	14.9
85°	13.4	13.5	13.4	13.3	13.2	13.2
85.5°	11.7	11.8	11.7	11.6	11.6	11.6
86°	10.1	10.2	10.1	10.1	10.0	10.0
86.5°	8.7	8.9	8.7	8.6	8.4	8.4
87°	7.3	7.7	7.3	7.3	7.1	6.8
87.5°	5.9	6.5	5.9	5.9	5.7	5.2
88°	4.8	5.3	4.8	4.6	4.3	4.1
88.5°	4.0	4.5	4.0	3.3	3.2	3.0



TEST NUMBER: P938667
CATALOG NUMBER: HLB4LSFS5-850LM-3000K

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°	312.7	312.5	312.5	312.1	312.4	312.1	312.5	312.5	312.7	312.5	312.5
22°	311.9	311.5	311.4	311.2	311.2	311.2	311.4	311.5	311.9	311.5	311.4



44°	224.8	224.8	224.6	224.8	224.8	224.8	224.6	224.8	224.8	224.8	224.6
44.5°	222.0	221.9	221.7	221.8	221.9	221.8	221.7	221.9	222.0	221.9	221.7



66.5°	90.9	91.0	91.1	91.2	91.3	91.2	91.1	91.0	90.9	91.0	91.1
67°	88.3	88.4	88.4	88.7	88.8	88.7	88.4	88.4	88.3	88.4	88.4



89°	1.9	2.1	2.5	3.2	3.7	3.2	2.5	2.1	1.9	2.1	2.5
89.5°	0.8	1.4	2.0	2.4	2.8	2.4	2.0	1.4	0.8	1.4	2.0





21.5°	312.1	312.4	312.1	312.5	312.5	312.7
22°	311.2	311.2	311.2	311.4	311.5	311.9



44°	224.8	224.8	224.8	224.6	224.8	224.8
44.5°	221.8	221.9	221.8	221.7	221.9	222.0



66.5°	91.2	91.3	91.2	91.1	91.0	90.9
67°	88.7	88.8	88.7	88.4	88.4	88.3



89°	3.2	3.7	3.2	2.5	2.1	1.9
89.5°	2.4	2.8	2.4	2.0	1.4	0.8



(END OF REPORT)