

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: P869794

Luminaire Tested: HLBSL406FS5-3500K

Issue Date: 9/3/2024

Test Information

Test Method: LM-79-2019
Report Number: P869794
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2402870-01A001)
Test Lab:
Issue Date: 9/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLBSL406FS5-3500K
Description: 4IN 750LM, 90CRI, DIMMING TO 10%
Light Source: SELECTABLE CCT 90CRI / 3500K CCT
Ballast/Driver: -

Summary

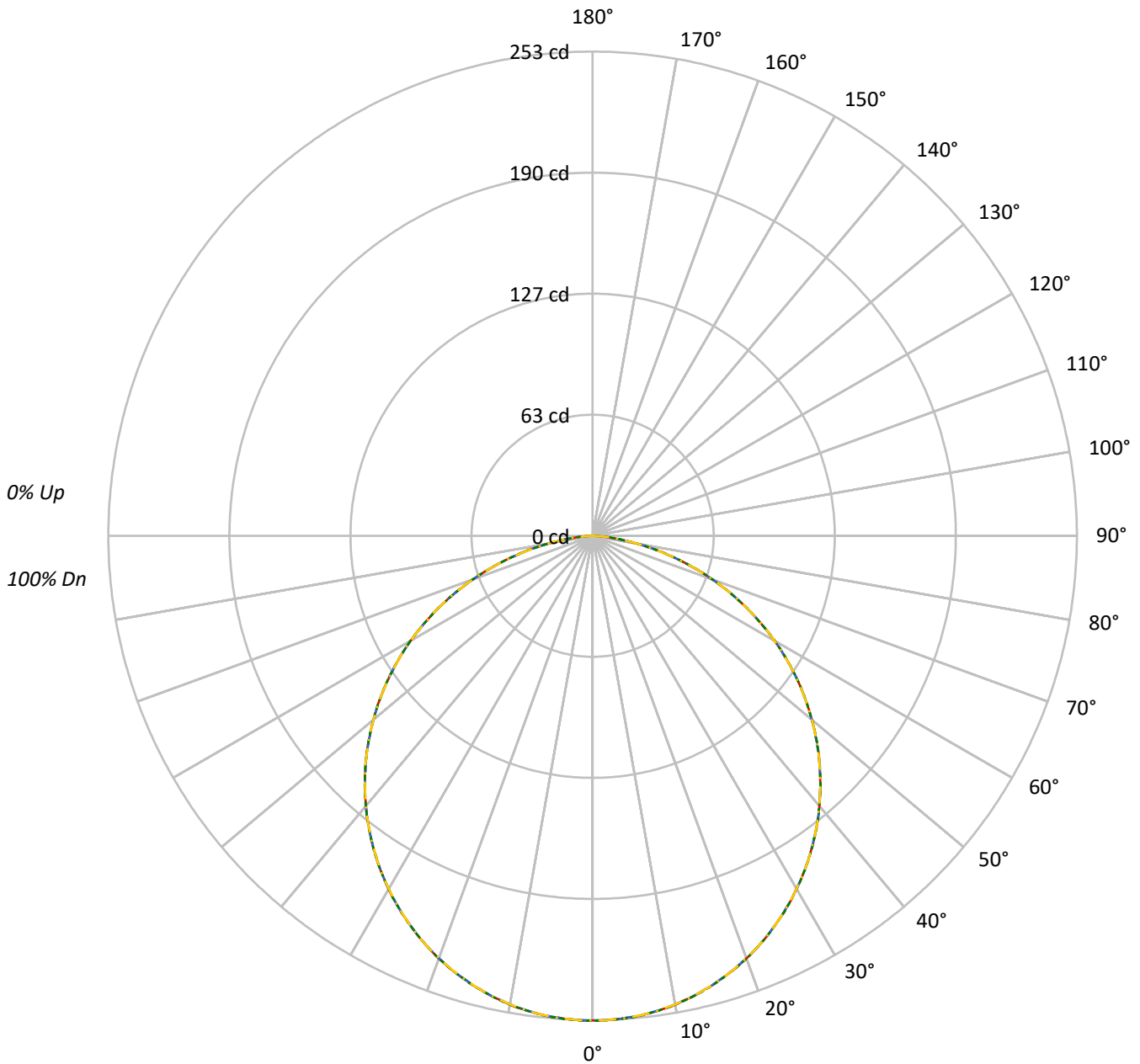
Lumens per Lamp: N/A
Luminaire Lumens: 710.0 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.37
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 8.5
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									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																			
2	99	91	84	78	96	89	83	78	85	80	76	82	78	74	79	76	72	70																			
3	90	80	72	65	88	78	71	65	75	69	63	73	67	62	70	65	61	59																			
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	50																			
5	76	63	54	48	74	62	54	47	60	52	47	58	51	46	56	50	46	44																			
6	70	57	48	41	68	56	47	41	54	47	41	52	46	41	51	45	40	38																			
7	65	52	43	37	63	51	42	36	49	42	36	48	41	36	46	40	36	34																			
8	61	47	38	33	59	46	38	33	45	38	32	44	37	32	43	36	32	30																			
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	27																			
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	30	26	24																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	31878	31878	31878	31878
5°	31861	31886	31861	31886
10°	31782	31794	31782	31794
15°	31647	31660	31647	31660
20°	31473	31486	31473	31486
25°	31230	31243	31230	31243
30°	30967	30967	30967	30967
35°	30650	30665	30650	30665
40°	30278	30294	30278	30294
45°	29829	29847	29829	29847
50°	29270	29290	29270	29290
55°	28567	28611	28567	28611
60°	27611	27662	27611	27662
65°	26324	26384	26324	26384
70°	24396	24469	24396	24469
75°	21541	21589	21541	21589
80°	17031	17176	17031	17176
85°	9963	10252	9963	10252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 29847 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.0	3.4
10°-20°	68.5	9.7
20°-30°	103.7	14.6
30°-40°	124.8	17.6
40°-50°	129.2	18.2
50°-60°	116.3	16.4
60°-70°	87.4	12.3
70°-80°	47.0	6.6
80°-90°	9.3	1.3
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°	196.1	27.6
0°-40°	320.9	45.2
0°-60°	566.4	79.8
0°-90°	710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	710.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	253	253	253	253	253	
5°	252	252	252	252	252	24
15°	243	243	243	243	243	69
25°	225	225	225	225	225	104
35°	200	200	200	200	200	125
45°	168	168	168	168	168	129
55°	130	130	130	130	130	116
65°	88	89	88	89	88	87
75°	44	44	44	44	44	47
85°	7	7	7	7	7	9
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°	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3
0.5°	253.4	253.4	253.3	253.2	253.4	253.2	253.3	253.4	253.4	253.4	253.3
1°	253.3	253.3	253.3	253.2	253.4	253.2	253.3	253.3	253.3	253.3	253.3
1.5°	253.2	253.2	253.2	253.1	253.3	253.1	253.2	253.2	253.2	253.2	253.2
2°	253.1	253.1	253.1	253.0	253.2	253.0	253.1	253.1	253.1	253.1	253.1
2.5°	253.0	253.0	253.0	252.9	253.1	252.9	253.0	253.0	253.0	253.0	253.0
3°	252.9	252.9	252.9	252.8	253.0	252.8	252.9	252.9	252.9	252.9	252.9
3.5°	252.8	252.7	252.7	252.6	252.9	252.6	252.7	252.7	252.8	252.7	252.7
4°	252.5	252.6	252.5	252.5	252.6	252.5	252.5	252.6	252.5	252.6	252.5
4.5°	252.4	252.5	252.4	252.3	252.5	252.3	252.4	252.5	252.4	252.5	252.4
5°	252.2	252.2	252.1	252.1	252.4	252.1	252.1	252.2	252.2	252.2	252.1
5.5°	252.0	252.0	251.9	251.9	252.1	251.9	251.9	252.0	252.0	252.0	251.9
6°	251.7	251.7	251.7	251.6	251.8	251.6	251.7	251.7	251.7	251.7	251.7
6.5°	251.4	251.3	251.4	251.3	251.5	251.3	251.4	251.3	251.4	251.3	251.4
7°	251.1	251.0	251.0	250.9	251.1	250.9	251.0	251.0	251.1	251.0	251.0
7.5°	250.7	250.7	250.6	250.5	250.8	250.5	250.6	250.7	250.7	250.7	250.6
8°	250.3	250.3	250.3	250.2	250.5	250.2	250.3	250.3	250.3	250.3	250.3
8.5°	250.0	249.9	249.9	249.8	250.0	249.8	249.9	249.9	250.0	249.9	249.9
9°	249.7	249.6	249.5	249.5	249.6	249.5	249.5	249.6	249.7	249.6	249.5
9.5°	249.3	249.1	249.1	249.0	249.2	249.0	249.1	249.1	249.3	249.1	249.1
10°	248.7	248.7	248.6	248.5	248.8	248.5	248.6	248.7	248.7	248.7	248.6
10.5°	248.2	248.2	248.1	248.0	248.3	248.0	248.1	248.2	248.2	248.2	248.1
11°	247.6	247.7	247.6	247.6	247.8	247.6	247.6	247.7	247.6	247.7	247.6
11.5°	247.1	247.1	247.1	247.0	247.2	247.0	247.1	247.1	247.1	247.1	247.1
12°	246.7	246.6	246.6	246.5	246.7	246.5	246.6	246.6	246.7	246.6	246.6
12.5°	246.1	246.0	246.0	245.9	246.1	245.9	246.0	246.0	246.1	246.0	246.0
13°	245.5	245.4	245.4	245.3	245.5	245.3	245.4	245.4	245.5	245.4	245.4
13.5°	244.8	244.9	244.8	244.7	244.9	244.7	244.8	244.9	244.8	244.9	244.8
14°	244.1	244.2	244.1	244.0	244.2	244.0	244.1	244.2	244.1	244.2	244.1
14.5°	243.6	243.6	243.6	243.4	243.7	243.4	243.6	243.6	243.6	243.6	243.6
15°	242.9	242.8	242.8	242.8	243.0	242.8	242.8	242.8	242.9	242.8	242.8
15.5°	242.1	242.1	242.1	242.0	242.3	242.0	242.1	242.1	242.1	242.1	242.1
16°	241.4	241.4	241.4	241.3	241.4	241.3	241.4	241.4	241.4	241.4	241.4
16.5°	240.8	240.8	240.7	240.6	240.7	240.6	240.7	240.8	240.8	240.8	240.7
17°	240.0	240.0	239.9	239.8	239.9	239.8	239.9	240.0	240.0	240.0	239.9
17.5°	239.2	239.2	239.1	239.0	239.2	239.0	239.1	239.2	239.2	239.2	239.1
18°	238.4	238.4	238.3	238.3	238.4	238.3	238.3	238.4	238.4	238.4	238.3
18.5°	237.6	237.5	237.4	237.4	237.6	237.4	237.4	237.5	237.6	237.5	237.4
19°	236.7	236.7	236.6	236.5	236.7	236.5	236.6	236.7	236.7	236.7	236.6
19.5°	235.8	235.8	235.7	235.6	235.8	235.6	235.7	235.8	235.8	235.8	235.7
20°	235.0	235.0	234.9	234.8	235.1	234.8	234.9	235.0	235.0	235.0	234.9
20.5°	234.1	234.0	234.0	233.9	234.1	233.9	234.0	234.0	234.1	234.0	234.0
21°	233.1	233.1	233.0	233.0	233.2	233.0	233.0	233.1	233.1	233.1	233.0



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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°	230.2	230.1	230.2	230.0	230.2	230.0	230.2	230.1	230.2	230.1	230.2
23°	229.3	229.2	229.2	229.1	229.2	229.1	229.2	229.2	229.3	229.2	229.2
23.5°	228.3	228.2	228.1	228.0	228.2	228.0	228.1	228.2	228.3	228.2	228.1
24°	227.1	227.1	227.1	227.1	227.1	227.1	227.1	227.1	227.1	227.1	227.1
24.5°	226.0	226.0	226.0	226.0	226.1	226.0	226.0	226.0	226.0	226.0	226.0
25°	224.9	224.9	224.9	224.8	225.0	224.8	224.9	224.9	224.9	224.9	224.9
25.5°	223.9	223.9	223.9	223.8	224.0	223.8	223.9	223.9	223.9	223.9	223.9
26°	222.8	222.8	222.7	222.7	222.8	222.7	222.7	222.8	222.8	222.8	222.7
26.5°	221.7	221.6	221.5	221.5	221.6	221.5	221.5	221.6	221.7	221.6	221.5
27°	220.5	220.5	220.4	220.4	220.5	220.4	220.4	220.5	220.5	220.5	220.4
27.5°	219.2	219.2	219.2	219.2	219.3	219.2	219.2	219.2	219.2	219.2	219.2
28°	218.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1
28.5°	216.9	216.8	216.8	216.8	216.9	216.8	216.8	216.8	216.9	216.8	216.8
29°	215.7	215.6	215.6	215.6	215.7	215.6	215.6	215.6	215.7	215.6	215.6
29.5°	214.4	214.4	214.3	214.3	214.4	214.3	214.3	214.4	214.4	214.4	214.3
30°	213.1	213.1	213.0	213.0	213.1	213.0	213.0	213.1	213.1	213.1	213.0
30.5°	211.9	211.8	211.8	211.8	211.9	211.8	211.8	211.8	211.9	211.8	211.8
31°	210.5	210.4	210.5	210.4	210.5	210.4	210.5	210.4	210.5	210.4	210.5
31.5°	209.2	209.2	209.2	209.1	209.3	209.1	209.2	209.2	209.2	209.2	209.2
32°	207.8	207.8	207.8	207.8	207.9	207.8	207.8	207.8	207.8	207.8	207.8
32.5°	206.6	206.5	206.5	206.5	206.7	206.5	206.5	206.5	206.6	206.5	206.5
33°	205.2	205.1	205.1	205.1	205.2	205.1	205.1	205.1	205.2	205.1	205.1
33.5°	203.8	203.7	203.8	203.7	203.9	203.7	203.8	203.7	203.8	203.7	203.8
34°	202.3	202.3	202.3	202.3	202.4	202.3	202.3	202.3	202.3	202.3	202.3
34.5°	200.9	200.9	200.9	200.9	201.1	200.9	200.9	200.9	200.9	200.9	200.9
35°	199.5	199.4	199.4	199.4	199.6	199.4	199.4	199.4	199.5	199.4	199.4
35.5°	198.1	198.0	198.0	198.0	198.2	198.0	198.0	198.0	198.1	198.0	198.0
36°	196.6	196.5	196.5	196.5	196.6	196.5	196.5	196.5	196.6	196.5	196.5
36.5°	195.1	195.1	195.1	195.1	195.2	195.1	195.1	195.1	195.1	195.1	195.1
37°	193.5	193.5	193.5	193.5	193.7	193.5	193.5	193.5	193.5	193.5	193.5
37.5°	192.1	192.0	192.1	192.0	192.2	192.0	192.1	192.0	192.1	192.0	192.1
38°	190.5	190.5	190.5	190.4	190.6	190.4	190.5	190.5	190.5	190.5	190.5
38.5°	189.1	189.0	189.0	188.9	189.1	188.9	189.0	189.0	189.1	189.0	189.0
39°	187.5	187.5	187.5	187.4	187.6	187.4	187.5	187.5	187.5	187.5	187.5
39.5°	185.8	185.9	185.9	185.8	185.9	185.8	185.9	185.9	185.8	185.9	185.9
40°	184.3	184.3	184.3	184.3	184.4	184.3	184.3	184.3	184.3	184.3	184.3
40.5°	182.6	182.6	182.6	182.6	182.7	182.6	182.6	182.6	182.6	182.6	182.6
41°	181.1	181.0	181.0	181.0	181.2	181.0	181.0	181.0	181.1	181.0	181.0
41.5°	179.4	179.4	179.3	179.3	179.5	179.3	179.3	179.4	179.4	179.4	179.3
42°	177.8	177.8	177.7	177.7	177.9	177.7	177.7	177.8	177.8	177.8	177.7
42.5°	176.1	176.1	176.1	176.1	176.3	176.1	176.1	176.1	176.1	176.1	176.1
43°	174.4	174.4	174.4	174.3	174.5	174.3	174.4	174.4	174.4	174.4	174.4
43.5°	172.8	172.7	172.7	172.7	172.8	172.7	172.7	172.7	172.8	172.7	172.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	167.6	167.5	167.6	167.6	167.7	167.6	167.6	167.5	167.6	167.5	167.6
45.5°	165.8	165.7	165.8	165.8	165.9	165.8	165.8	165.7	165.8	165.7	165.8
46°	164.2	164.0	164.1	164.0	164.2	164.0	164.1	164.0	164.2	164.0	164.1
46.5°	162.3	162.2	162.2	162.2	162.4	162.2	162.2	162.2	162.3	162.2	162.2
47°	160.5	160.5	160.4	160.4	160.6	160.4	160.4	160.5	160.5	160.5	160.4
47.5°	158.7	158.7	158.7	158.7	158.8	158.7	158.7	158.7	158.7	158.7	158.7
48°	156.8	156.8	156.8	156.8	157.0	156.8	156.8	156.8	156.8	156.8	156.8
48.5°	155.0	155.0	155.0	155.0	155.2	155.0	155.0	155.0	155.0	155.0	155.0
49°	153.2	153.2	153.2	153.2	153.4	153.2	153.2	153.2	153.2	153.2	153.2
49.5°	151.3	151.3	151.3	151.3	151.4	151.3	151.3	151.3	151.3	151.3	151.3
50°	149.5	149.5	149.5	149.5	149.6	149.5	149.5	149.5	149.5	149.5	149.5
50.5°	147.6	147.6	147.6	147.6	147.7	147.6	147.6	147.6	147.6	147.6	147.6
51°	145.7	145.7	145.7	145.7	145.8	145.7	145.7	145.7	145.7	145.7	145.7
51.5°	143.8	143.8	143.8	143.8	143.9	143.8	143.8	143.8	143.8	143.8	143.8
52°	142.0	142.0	142.0	141.9	142.1	141.9	142.0	142.0	142.0	142.0	142.0
52.5°	139.9	139.9	140.0	139.9	140.1	139.9	140.0	139.9	139.9	139.9	140.0
53°	138.1	138.0	138.0	138.0	138.1	138.0	138.0	138.0	138.1	138.0	138.0
53.5°	136.2	136.1	136.1	136.1	136.2	136.1	136.1	136.1	136.2	136.1	136.1
54°	134.2	134.1	134.1	134.1	134.2	134.1	134.1	134.1	134.2	134.1	134.1
54.5°	132.2	132.1	132.2	132.2	132.3	132.2	132.2	132.1	132.2	132.1	132.2
55°	130.2	130.2	130.2	130.2	130.4	130.2	130.2	130.2	130.2	130.2	130.2
55.5°	128.3	128.2	128.2	128.2	128.4	128.2	128.2	128.2	128.3	128.2	128.2
56°	126.1	126.1	126.2	126.1	126.3	126.1	126.2	126.1	126.1	126.1	126.2
56.5°	124.1	124.2	124.2	124.2	124.3	124.2	124.2	124.2	124.1	124.2	124.2
57°	122.2	122.2	122.1	122.1	122.3	122.1	122.1	122.2	122.2	122.2	122.1
57.5°	120.1	120.0	120.0	120.1	120.2	120.1	120.0	120.0	120.1	120.0	120.0
58°	118.0	118.0	118.0	118.0	118.2	118.0	118.0	118.0	118.0	118.0	118.0
58.5°	116.0	116.0	116.0	116.0	116.1	116.0	116.0	116.0	116.0	116.0	116.0
59°	114.0	114.0	114.0	114.0	114.1	114.0	114.0	114.0	114.0	114.0	114.0
59.5°	111.8	111.8	111.8	111.8	111.9	111.8	111.8	111.8	111.8	111.8	111.8
60°	109.7	109.7	109.7	109.7	109.9	109.7	109.7	109.7	109.7	109.7	109.7
60.5°	107.7	107.6	107.7	107.7	107.8	107.7	107.7	107.6	107.7	107.6	107.7
61°	105.6	105.6	105.6	105.6	105.7	105.6	105.6	105.6	105.6	105.6	105.6
61.5°	103.4	103.4	103.4	103.4	103.5	103.4	103.4	103.4	103.4	103.4	103.4
62°	101.3	101.3	101.3	101.3	101.4	101.3	101.3	101.3	101.3	101.3	101.3
62.5°	99.2	99.2	99.2	99.2	99.3	99.2	99.2	99.2	99.2	99.2	99.2
63°	97.0	97.0	97.1	97.1	97.1	97.1	97.1	97.0	97.0	97.0	97.1
63.5°	94.8	94.8	94.8	94.9	94.9	94.9	94.8	94.8	94.8	94.8	94.8
64°	92.7	92.7	92.7	92.7	92.8	92.7	92.7	92.7	92.7	92.7	92.7
64.5°	90.6	90.6	90.6	90.6	90.7	90.6	90.6	90.6	90.6	90.6	90.6
65°	88.4	88.4	88.5	88.4	88.6	88.4	88.5	88.4	88.4	88.4	88.5
65.5°	86.1	86.1	86.2	86.2	86.3	86.2	86.2	86.1	86.1	86.1	86.2
66°	83.9	84.0	84.0	84.0	84.1	84.0	84.0	84.0	83.9	84.0	84.0



TEST NUMBER: P869794

CATALOG NUMBER: HLBSL406FS5-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	77.5	77.5	77.5	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.5
68°	75.2	75.2	75.2	75.3	75.4	75.3	75.2	75.2	75.2	75.2	75.2
68.5°	73.0	73.0	73.1	73.1	73.2	73.1	73.1	73.0	73.0	73.0	73.1
69°	70.8	70.8	70.9	70.9	71.0	70.9	70.9	70.8	70.8	70.8	70.9
69.5°	68.6	68.6	68.7	68.7	68.8	68.7	68.7	68.6	68.6	68.6	68.7
70°	66.3	66.3	66.4	66.4	66.5	66.4	66.4	66.3	66.3	66.3	66.4
70.5°	64.1	64.1	64.2	64.2	64.3	64.2	64.2	64.1	64.1	64.1	64.2
71°	61.9	62.0	62.0	62.0	62.1	62.0	62.0	62.0	61.9	62.0	62.0
71.5°	59.7	59.7	59.8	59.8	59.9	59.8	59.8	59.7	59.7	59.7	59.8
72°	57.5	57.5	57.6	57.6	57.7	57.6	57.6	57.5	57.5	57.5	57.6
72.5°	55.2	55.2	55.3	55.3	55.4	55.3	55.3	55.2	55.2	55.2	55.3
73°	53.0	53.0	53.1	53.1	53.2	53.1	53.1	53.0	53.0	53.0	53.1
73.5°	50.8	50.9	50.9	51.0	51.0	51.0	50.9	50.9	50.8	50.9	50.9
74°	48.7	48.7	48.7	48.8	48.9	48.8	48.7	48.7	48.7	48.7	48.7
74.5°	46.5	46.5	46.5	46.5	46.6	46.5	46.5	46.5	46.5	46.5	46.5
75°	44.3	44.3	44.3	44.4	44.4	44.4	44.3	44.3	44.3	44.3	44.3
75.5°	42.1	42.1	42.2	42.2	42.3	42.2	42.2	42.1	42.1	42.1	42.2
76°	40.0	40.0	40.0	40.1	40.2	40.1	40.0	40.0	40.0	40.0	40.0
76.5°	37.8	37.8	37.9	38.0	38.2	38.0	37.9	37.8	37.8	37.8	37.9
77°	35.7	35.8	35.7	35.8	36.1	35.8	35.7	35.8	35.7	35.8	35.7
77.5°	33.6	33.7	33.7	33.7	34.0	33.7	33.7	33.7	33.6	33.7	33.7
78°	31.6	31.6	31.7	31.6	31.9	31.6	31.7	31.6	31.6	31.6	31.7
78.5°	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
79°	27.5	27.5	27.5	27.5	27.7	27.5	27.5	27.5	27.5	27.5	27.5
79.5°	25.5	25.5	25.5	25.6	25.7	25.6	25.5	25.5	25.5	25.5	25.5
80°	23.5	23.5	23.6	23.7	23.7	23.7	23.6	23.5	23.5	23.5	23.6
80.5°	21.6	21.6	21.6	21.7	21.7	21.7	21.6	21.6	21.6	21.6	21.6
81°	19.7	19.7	19.8	19.8	19.9	19.8	19.8	19.7	19.7	19.7	19.8
81.5°	17.9	17.9	18.0	18.0	18.1	18.0	18.0	17.9	17.9	17.9	18.0
82°	16.0	16.0	16.1	16.2	16.2	16.2	16.1	16.0	16.0	16.0	16.1
82.5°	14.4	14.4	14.4	14.5	14.5	14.5	14.4	14.4	14.4	14.4	14.4
83°	12.7	12.7	12.7	12.8	12.8	12.8	12.7	12.7	12.7	12.7	12.7
83.5°	11.0	11.1	11.2	11.2	11.3	11.2	11.2	11.1	11.0	11.1	11.2
84°	9.6	9.6	9.7	9.8	9.8	9.8	9.7	9.6	9.6	9.6	9.7
84.5°	8.2	8.2	8.3	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.3
85°	6.9	6.9	7.0	7.0	7.1	7.0	7.0	6.9	6.9	6.9	7.0
85.5°	5.6	5.6	5.6	5.7	5.9	5.7	5.6	5.6	5.6	5.6	5.6
86°	4.3	4.4	4.5	4.6	4.8	4.6	4.5	4.4	4.3	4.4	4.5
86.5°	3.5	3.4	3.5	3.6	3.8	3.6	3.5	3.4	3.5	3.4	3.5
87°	2.6	2.5	2.6	2.6	2.8	2.6	2.6	2.5	2.6	2.5	2.6
87.5°	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8
88°	1.2	1.1	1.2	1.3	1.3	1.3	1.2	1.1	1.2	1.1	1.2
88.5°	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.7



TEST NUMBER: P869794
CATALOG NUMBER: HLBSL406FS5-3500K

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: P869794

CATALOG NUMBER: HLBSL406FS5-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	253.3	253.3	253.3	253.3	253.3	253.3
0.5°	253.2	253.4	253.2	253.3	253.4	253.4
1°	253.2	253.4	253.2	253.3	253.3	253.3
1.5°	253.1	253.3	253.1	253.2	253.2	253.2
2°	253.0	253.2	253.0	253.1	253.1	253.1
2.5°	252.9	253.1	252.9	253.0	253.0	253.0
3°	252.8	253.0	252.8	252.9	252.9	252.9
3.5°	252.6	252.9	252.6	252.7	252.7	252.8
4°	252.5	252.6	252.5	252.5	252.6	252.5
4.5°	252.3	252.5	252.3	252.4	252.5	252.4
5°	252.1	252.4	252.1	252.1	252.2	252.2
5.5°	251.9	252.1	251.9	251.9	252.0	252.0
6°	251.6	251.8	251.6	251.7	251.7	251.7
6.5°	251.3	251.5	251.3	251.4	251.3	251.4
7°	250.9	251.1	250.9	251.0	251.0	251.1
7.5°	250.5	250.8	250.5	250.6	250.7	250.7
8°	250.2	250.5	250.2	250.3	250.3	250.3
8.5°	249.8	250.0	249.8	249.9	249.9	250.0
9°	249.5	249.6	249.5	249.5	249.6	249.7
9.5°	249.0	249.2	249.0	249.1	249.1	249.3
10°	248.5	248.8	248.5	248.6	248.7	248.7
10.5°	248.0	248.3	248.0	248.1	248.2	248.2
11°	247.6	247.8	247.6	247.6	247.7	247.6
11.5°	247.0	247.2	247.0	247.1	247.1	247.1
12°	246.5	246.7	246.5	246.6	246.6	246.7
12.5°	245.9	246.1	245.9	246.0	246.0	246.1
13°	245.3	245.5	245.3	245.4	245.4	245.5
13.5°	244.7	244.9	244.7	244.8	244.9	244.8
14°	244.0	244.2	244.0	244.1	244.2	244.1
14.5°	243.4	243.7	243.4	243.6	243.6	243.6
15°	242.8	243.0	242.8	242.8	242.8	242.9
15.5°	242.0	242.3	242.0	242.1	242.1	242.1
16°	241.3	241.4	241.3	241.4	241.4	241.4
16.5°	240.6	240.7	240.6	240.7	240.8	240.8
17°	239.8	239.9	239.8	239.9	240.0	240.0
17.5°	239.0	239.2	239.0	239.1	239.2	239.2
18°	238.3	238.4	238.3	238.3	238.4	238.4
18.5°	237.4	237.6	237.4	237.4	237.5	237.6
19°	236.5	236.7	236.5	236.6	236.7	236.7
19.5°	235.6	235.8	235.6	235.7	235.8	235.8
20°	234.8	235.1	234.8	234.9	235.0	235.0
20.5°	233.9	234.1	233.9	234.0	234.0	234.1
21°	233.0	233.2	233.0	233.0	233.1	233.1



TEST NUMBER: P869794
 CATALOG NUMBER: HLBSL406FS5-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	230.0	230.2	230.0	230.2	230.1	230.2
23°	229.1	229.2	229.1	229.2	229.2	229.3
23.5°	228.0	228.2	228.0	228.1	228.2	228.3
24°	227.1	227.1	227.1	227.1	227.1	227.1
24.5°	226.0	226.1	226.0	226.0	226.0	226.0
25°	224.8	225.0	224.8	224.9	224.9	224.9
25.5°	223.8	224.0	223.8	223.9	223.9	223.9
26°	222.7	222.8	222.7	222.7	222.8	222.8
26.5°	221.5	221.6	221.5	221.5	221.6	221.7
27°	220.4	220.5	220.4	220.4	220.5	220.5
27.5°	219.2	219.3	219.2	219.2	219.2	219.2
28°	218.1	218.1	218.1	218.1	218.1	218.1
28.5°	216.8	216.9	216.8	216.8	216.8	216.9
29°	215.6	215.7	215.6	215.6	215.6	215.7
29.5°	214.3	214.4	214.3	214.3	214.4	214.4
30°	213.0	213.1	213.0	213.0	213.1	213.1
30.5°	211.8	211.9	211.8	211.8	211.8	211.9
31°	210.4	210.5	210.4	210.5	210.4	210.5
31.5°	209.1	209.3	209.1	209.2	209.2	209.2
32°	207.8	207.9	207.8	207.8	207.8	207.8
32.5°	206.5	206.7	206.5	206.5	206.5	206.6
33°	205.1	205.2	205.1	205.1	205.1	205.2
33.5°	203.7	203.9	203.7	203.8	203.7	203.8
34°	202.3	202.4	202.3	202.3	202.3	202.3
34.5°	200.9	201.1	200.9	200.9	200.9	200.9
35°	199.4	199.6	199.4	199.4	199.4	199.5
35.5°	198.0	198.2	198.0	198.0	198.0	198.1
36°	196.5	196.6	196.5	196.5	196.5	196.6
36.5°	195.1	195.2	195.1	195.1	195.1	195.1
37°	193.5	193.7	193.5	193.5	193.5	193.5
37.5°	192.0	192.2	192.0	192.1	192.0	192.1
38°	190.4	190.6	190.4	190.5	190.5	190.5
38.5°	188.9	189.1	188.9	189.0	189.0	189.1
39°	187.4	187.6	187.4	187.5	187.5	187.5
39.5°	185.8	185.9	185.8	185.9	185.9	185.8
40°	184.3	184.4	184.3	184.3	184.3	184.3
40.5°	182.6	182.7	182.6	182.6	182.6	182.6
41°	181.0	181.2	181.0	181.0	181.0	181.1
41.5°	179.3	179.5	179.3	179.3	179.4	179.4
42°	177.7	177.9	177.7	177.7	177.8	177.8
42.5°	176.1	176.3	176.1	176.1	176.1	176.1
43°	174.3	174.5	174.3	174.4	174.4	174.4
43.5°	172.7	172.8	172.7	172.7	172.7	172.8



TEST NUMBER: P869794
 CATALOG NUMBER: HLBSL406FS5-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	167.6	167.7	167.6	167.6	167.5	167.6
45.5°	165.8	165.9	165.8	165.8	165.7	165.8
46°	164.0	164.2	164.0	164.1	164.0	164.2
46.5°	162.2	162.4	162.2	162.2	162.2	162.3
47°	160.4	160.6	160.4	160.4	160.5	160.5
47.5°	158.7	158.8	158.7	158.7	158.7	158.7
48°	156.8	157.0	156.8	156.8	156.8	156.8
48.5°	155.0	155.2	155.0	155.0	155.0	155.0
49°	153.2	153.4	153.2	153.2	153.2	153.2
49.5°	151.3	151.4	151.3	151.3	151.3	151.3
50°	149.5	149.6	149.5	149.5	149.5	149.5
50.5°	147.6	147.7	147.6	147.6	147.6	147.6
51°	145.7	145.8	145.7	145.7	145.7	145.7
51.5°	143.8	143.9	143.8	143.8	143.8	143.8
52°	141.9	142.1	141.9	142.0	142.0	142.0
52.5°	139.9	140.1	139.9	140.0	139.9	139.9
53°	138.0	138.1	138.0	138.0	138.0	138.1
53.5°	136.1	136.2	136.1	136.1	136.1	136.2
54°	134.1	134.2	134.1	134.1	134.1	134.2
54.5°	132.2	132.3	132.2	132.2	132.1	132.2
55°	130.2	130.4	130.2	130.2	130.2	130.2
55.5°	128.2	128.4	128.2	128.2	128.2	128.3
56°	126.1	126.3	126.1	126.2	126.1	126.1
56.5°	124.2	124.3	124.2	124.2	124.2	124.1
57°	122.1	122.3	122.1	122.1	122.2	122.2
57.5°	120.1	120.2	120.1	120.0	120.0	120.1
58°	118.0	118.2	118.0	118.0	118.0	118.0
58.5°	116.0	116.1	116.0	116.0	116.0	116.0
59°	114.0	114.1	114.0	114.0	114.0	114.0
59.5°	111.8	111.9	111.8	111.8	111.8	111.8
60°	109.7	109.9	109.7	109.7	109.7	109.7
60.5°	107.7	107.8	107.7	107.7	107.6	107.7
61°	105.6	105.7	105.6	105.6	105.6	105.6
61.5°	103.4	103.5	103.4	103.4	103.4	103.4
62°	101.3	101.4	101.3	101.3	101.3	101.3
62.5°	99.2	99.3	99.2	99.2	99.2	99.2
63°	97.1	97.1	97.1	97.1	97.0	97.0
63.5°	94.9	94.9	94.9	94.8	94.8	94.8
64°	92.7	92.8	92.7	92.7	92.7	92.7
64.5°	90.6	90.7	90.6	90.6	90.6	90.6
65°	88.4	88.6	88.4	88.5	88.4	88.4
65.5°	86.2	86.3	86.2	86.2	86.1	86.1
66°	84.0	84.1	84.0	84.0	84.0	83.9



TEST NUMBER: P869794
 CATALOG NUMBER: HLBSL406FS5-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	77.6	77.6	77.6	77.5	77.5	77.5
68°	75.3	75.4	75.3	75.2	75.2	75.2
68.5°	73.1	73.2	73.1	73.1	73.0	73.0
69°	70.9	71.0	70.9	70.9	70.8	70.8
69.5°	68.7	68.8	68.7	68.7	68.6	68.6
70°	66.4	66.5	66.4	66.4	66.3	66.3
70.5°	64.2	64.3	64.2	64.2	64.1	64.1
71°	62.0	62.1	62.0	62.0	62.0	61.9
71.5°	59.8	59.9	59.8	59.8	59.7	59.7
72°	57.6	57.7	57.6	57.6	57.5	57.5
72.5°	55.3	55.4	55.3	55.3	55.2	55.2
73°	53.1	53.2	53.1	53.1	53.0	53.0
73.5°	51.0	51.0	51.0	50.9	50.9	50.8
74°	48.8	48.9	48.8	48.7	48.7	48.7
74.5°	46.5	46.6	46.5	46.5	46.5	46.5
75°	44.4	44.4	44.4	44.3	44.3	44.3
75.5°	42.2	42.3	42.2	42.2	42.1	42.1
76°	40.1	40.2	40.1	40.0	40.0	40.0
76.5°	38.0	38.2	38.0	37.9	37.8	37.8
77°	35.8	36.1	35.8	35.7	35.8	35.7
77.5°	33.7	34.0	33.7	33.7	33.7	33.6
78°	31.6	31.9	31.6	31.7	31.6	31.6
78.5°	29.6	29.6	29.6	29.6	29.6	29.6
79°	27.5	27.7	27.5	27.5	27.5	27.5
79.5°	25.6	25.7	25.6	25.5	25.5	25.5
80°	23.7	23.7	23.7	23.6	23.5	23.5
80.5°	21.7	21.7	21.7	21.6	21.6	21.6
81°	19.8	19.9	19.8	19.8	19.7	19.7
81.5°	18.0	18.1	18.0	18.0	17.9	17.9
82°	16.2	16.2	16.2	16.1	16.0	16.0
82.5°	14.5	14.5	14.5	14.4	14.4	14.4
83°	12.8	12.8	12.8	12.7	12.7	12.7
83.5°	11.2	11.3	11.2	11.2	11.1	11.0
84°	9.8	9.8	9.8	9.7	9.6	9.6
84.5°	8.3	8.3	8.3	8.3	8.2	8.2
85°	7.0	7.1	7.0	7.0	6.9	6.9
85.5°	5.7	5.9	5.7	5.6	5.6	5.6
86°	4.6	4.8	4.6	4.5	4.4	4.3
86.5°	3.6	3.8	3.6	3.5	3.4	3.5
87°	2.6	2.8	2.6	2.6	2.5	2.6
87.5°	1.8	1.9	1.8	1.8	1.8	1.8
88°	1.3	1.3	1.3	1.2	1.1	1.2
88.5°	0.8	0.8	0.8	0.7	0.6	0.6



TEST NUMBER: P869794
CATALOG NUMBER: HLBSL406FS5-3500K

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



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

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21.5°	232.2	232.2	232.2	232.0	232.3	232.0	232.2	232.2	232.2	232.2	232.2
22°	231.2	231.2	231.2	231.1	231.2	231.1	231.2	231.2	231.2	231.2	231.2



44°	171.0	170.9	171.0	170.9	171.1	170.9	171.0	170.9	171.0	170.9	171.0
44.5°	169.3	169.2	169.3	169.2	169.4	169.2	169.3	169.2	169.3	169.2	169.3



66.5°	81.8	81.8	81.8	81.9	81.9	81.9	81.8	81.8	81.8	81.8	81.8
67°	79.6	79.6	79.7	79.7	79.8	79.7	79.7	79.6	79.6	79.6	79.7



89°	0.2	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.3
89.5°	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.2

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21.5°	232.0	232.3	232.0	232.2	232.2	232.2
22°	231.1	231.2	231.1	231.2	231.2	231.2



44°	170.9	171.1	170.9	171.0	170.9	171.0
44.5°	169.2	169.4	169.2	169.3	169.2	169.3

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66.5°	81.9	81.9	81.9	81.8	81.8	81.8
67°	79.7	79.8	79.7	79.7	79.6	79.6

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89°	0.4	0.5	0.4	0.3	0.3	0.2
89.5°	0.2	0.3	0.2	0.2	0.1	0.1

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(END OF REPORT)