

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO

Report Number: P565399

Luminaire Tested: **HLBQL4069FS1E-4000K-UNIT**

Issue Date: 8/31/2021

Test Information

Test Method: LM-79-08
Report Number: P565399
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2109887E005)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 8/31/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HLBQL4069FS1E-4000K-UNIT
Description: 4in Surface Mount Downlight Fixture with Color Selectable Switch
Light Source: (48) 4000K CCT, 94 CRI LEDS
Ballast/Driver: -

Summary

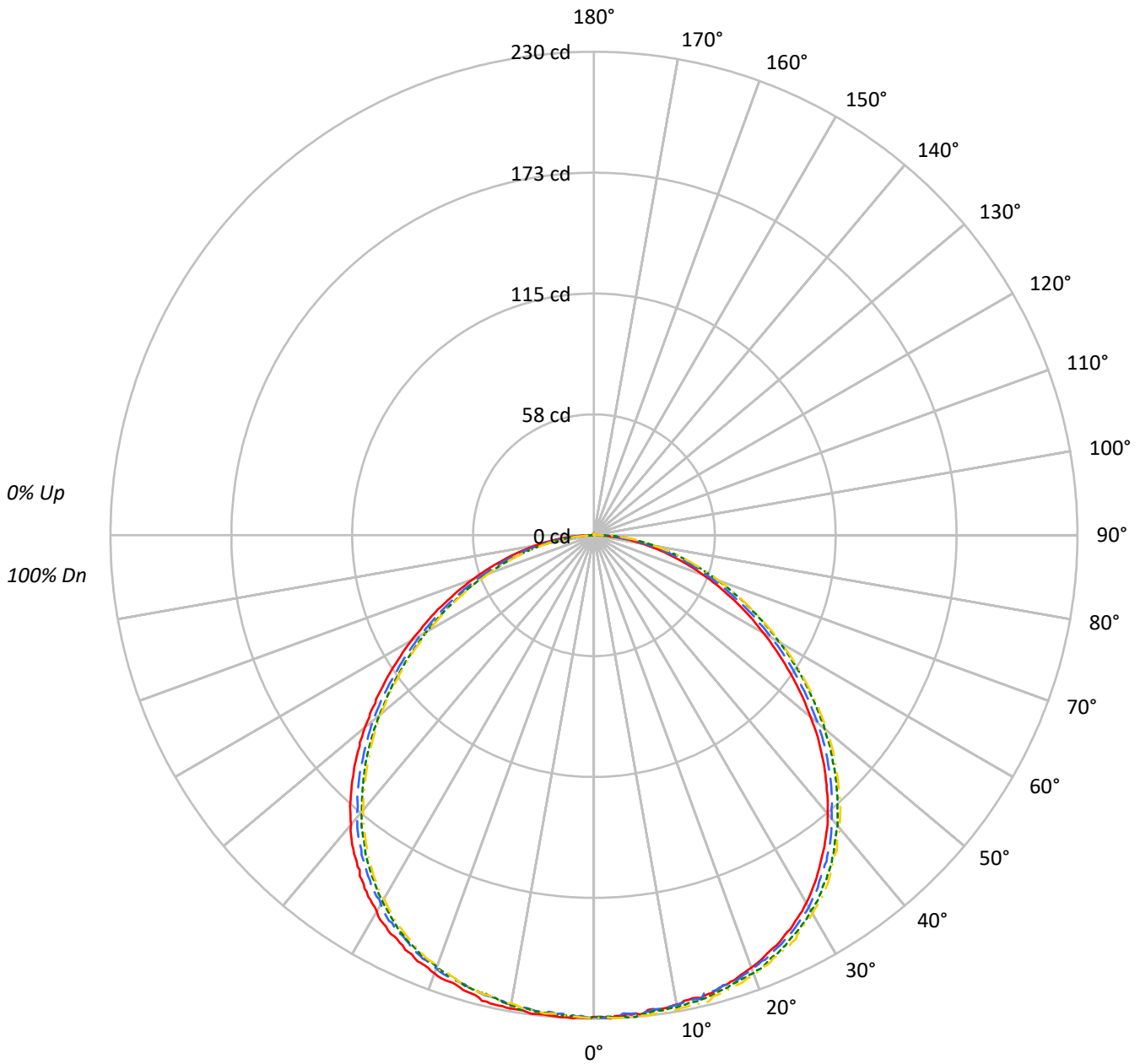
Lumens per Lamp: N/A
Luminaire Lumens: 665.1 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.31 / 1.4
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 8
Input Voltage (V): 120
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: 25 FT



TEST NUMBER: P565399
CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

Luminous Intensity Polar Plot



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



TEST NUMBER: P565399

CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	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	94	97	94	91	93	91	88	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	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	42	68	56	47	41	54	47	41	52	46	41	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	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°	2632	2632	2632	2632
5°	2631	2651	2645	2631
10°	2643	2659	2665	2649
15°	2665	2677	2682	2658
20°	2675	2709	2711	2670
25°	2683	2729	2726	2683
30°	2678	2735	2739	2668
35°	2642	2733	2722	2639
40°	2593	2702	2693	2577
45°	2514	2639	2631	2496
50°	2404	2556	2540	2379
55°	2278	2456	2428	2250
60°	2140	2342	2303	2113
65°	2008	2222	2179	1964
70°	1863	2108	2055	1813
75°	1717	2005	1939	1659
80°	1567	1957	1865	1488
85°	1357	2068	1871	1212



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.8	3.3
10°-20°	63.4	9.5
20°-30°	98.3	14.8
30°-40°	119.6	18.0
40°-50°	121.7	18.3
50°-60°	104.9	15.8
60°-70°	76.3	11.5
70°-80°	43.8	6.6
80°-90°	13.8	2.1
90°-100°	0.1	0.0
100°-110°	0.1	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	183.5	27.6
0°-40°	303.1	45.6
0°-60°	529.7	79.6
0°-90°	663.5	99.8
90°-120°	0.3	0.0
90°-150°	0.9	0.1
90°-180°	2.0	0.3
0°-180°	665.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	229	229	229	229	229	
5°	228	230	230	228	228	22
15°	224	225	226	224	224	63
25°	212	215	215	212	212	98
35°	188	195	194	188	188	118
45°	155	162	162	154	155	119
55°	114	123	121	112	114	102
65°	74	82	80	72	74	73
75°	39	45	44	37	39	41
85°	10	16	14	9	10	11
90°	0	3	2	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	1	0	0
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	229.2	229.2	229.2	229.2	229.2	229.2	229.2	229.2	229.2	229.2	229.2
0.5°	229.2	229.2	229.5	228.0	229.2	230.1	229.5	229.4	229.8	229.3	229.3
1°	229.2	229.2	229.7	228.2	229.2	230.8	229.5	229.4	229.8	229.5	229.3
1.5°	229.6	229.1	229.7	228.2	229.1	230.6	229.4	229.5	229.7	229.2	228.7
2°	230.0	229.1	229.4	228.4	229.2	230.6	229.8	229.5	229.7	229.2	229.1
2.5°	229.0	228.8	229.2	228.4	229.7	230.0	229.9	229.5	230.1	229.3	228.6
3°	229.0	228.4	229.1	228.4	229.4	230.4	230.0	229.5	229.7	229.7	229.0
3.5°	229.0	229.0	227.9	227.7	229.3	230.4	230.0	228.8	229.7	228.6	228.2
4°	228.4	228.3	228.1	228.5	229.9	230.1	230.0	229.1	229.8	228.6	228.2
4.5°	228.8	228.2	228.3	228.5	229.8	229.9	230.0	229.1	229.6	228.4	228.4
5°	228.3	228.7	228.4	228.1	230.0	229.9	229.7	229.0	229.5	228.4	227.8
5.5°	229.0	228.4	228.4	228.6	229.0	229.9	229.7	229.0	229.4	228.4	227.7
6°	228.6	227.8	228.2	228.5	229.0	229.7	229.7	229.0	229.3	228.6	228.1
6.5°	227.3	227.9	228.1	228.1	229.0	229.7	229.9	228.8	229.3	228.4	228.0
7°	227.1	227.9	227.5	228.1	228.3	230.0	229.4	228.7	229.5	227.1	228.0
7.5°	227.5	227.5	227.5	228.1	228.0	229.9	229.5	228.6	229.6	227.5	227.6
8°	227.6	227.0	227.5	227.9	228.4	229.9	229.7	228.3	229.1	227.4	227.3
8.5°	227.5	226.9	227.2	227.8	228.4	229.4	229.7	228.6	228.6	227.1	227.1
9°	227.4	226.8	227.1	226.9	228.0	229.0	229.7	228.7	228.6	227.3	227.1
9.5°	226.9	226.8	227.1	227.1	227.9	228.8	229.4	228.4	228.5	227.4	227.1
10°	226.7	226.4	226.9	227.1	228.1	228.9	229.0	228.4	228.6	227.2	226.5
10.5°	226.5	226.4	226.6	227.1	227.5	227.7	228.7	228.1	228.6	227.2	226.6
11°	225.6	225.7	226.2	226.8	227.5	228.0	228.7	228.0	228.2	226.8	225.9
11.5°	225.6	226.2	225.5	226.6	227.0	228.2	228.4	228.0	228.3	226.5	225.7
12°	225.2	225.5	225.9	226.1	227.0	227.9	228.4	228.0	228.2	226.3	225.6
12.5°	225.4	224.9	225.9	225.9	227.1	227.4	228.4	227.1	228.1	225.6	224.9
13°	226.0	224.8	226.6	225.9	226.7	227.4	228.9	227.1	227.7	225.5	224.9
13.5°	225.2	224.8	224.2	225.7	226.5	227.5	228.8	226.8	227.8	225.5	224.8
14°	224.9	224.1	224.2	224.3	226.0	226.4	228.1	226.7	226.6	225.3	224.3
14.5°	224.9	224.0	224.2	224.2	225.9	226.3	226.6	226.0	225.9	224.8	224.0
15°	224.2	223.6	224.1	224.0	225.2	226.2	226.5	226.0	225.6	225.4	223.3
15.5°	223.6	223.4	223.4	223.7	224.9	226.1	226.2	225.5	225.4	224.0	223.3
16°	222.8	223.4	223.0	223.7	224.6	225.5	226.0	225.1	225.1	224.0	222.4
16.5°	222.9	222.9	222.9	223.5	224.4	225.6	225.5	225.1	224.4	224.0	222.2
17°	222.2	222.1	222.6	223.5	223.3	225.2	224.7	224.9	223.7	223.2	221.9
17.5°	222.0	221.7	222.3	222.8	223.3	223.9	224.5	224.3	223.3	222.6	221.8
18°	221.2	221.5	222.2	221.8	223.0	223.9	224.5	224.0	223.2	221.6	221.3
18.5°	220.5	220.6	221.4	221.4	222.5	223.7	224.0	223.6	223.2	221.6	221.1
19°	220.0	220.2	220.7	221.6	222.4	223.2	223.1	222.7	222.9	221.4	220.6
19.5°	219.4	220.1	220.4	221.0	221.8	223.0	223.0	222.7	222.5	220.6	220.1
20°	218.9	219.6	219.8	221.0	221.7	222.4	222.6	222.4	221.9	220.3	219.2
20.5°	218.3	219.1	219.1	220.1	221.0	222.2	222.0	221.3	221.3	219.8	218.8
21°	217.8	218.4	218.6	219.3	221.0	221.3	221.4	221.2	220.4	218.6	218.1
21.5°	217.0	217.8	217.7	218.5	220.3	220.7	220.6	221.2	219.9	218.5	217.4
22°	216.2	217.1	217.7	218.2	219.4	220.2	220.4	220.8	219.6	217.8	217.3



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	215.4	216.3	216.9	218.1	218.4	219.8	219.8	219.9	219.4	217.1	216.4
23°	214.7	215.3	216.3	216.6	217.7	219.1	218.5	219.0	218.5	217.3	215.9
23.5°	214.0	214.8	215.3	216.6	217.5	218.4	218.4	218.4	217.4	216.3	214.7
24°	213.6	214.1	214.7	215.9	216.8	218.4	217.9	217.6	217.1	216.1	214.1
24.5°	212.8	213.0	214.1	215.9	215.8	216.9	217.1	216.7	216.6	214.9	213.0
25°	211.8	212.0	213.3	214.8	215.4	216.4	216.8	215.8	215.2	213.3	212.2
25.5°	210.7	211.4	212.4	213.8	214.5	215.8	216.2	215.5	214.7	212.7	211.2
26°	209.9	210.6	211.7	212.6	213.4	215.4	215.2	214.4	213.6	212.0	210.8
26.5°	209.4	209.7	211.0	212.2	212.7	214.4	215.0	213.6	213.1	211.4	210.0
27°	208.3	208.8	210.0	210.9	212.0	212.9	213.3	213.5	212.9	210.6	209.2
27.5°	207.2	207.7	209.1	210.5	211.3	212.7	212.3	212.1	212.0	209.7	207.9
28°	206.2	206.8	208.2	209.0	210.3	212.0	211.3	211.3	210.8	209.0	207.7
28.5°	205.2	205.9	207.2	208.1	209.5	210.5	210.3	210.6	210.2	207.9	206.6
29°	204.4	204.9	206.2	207.2	208.7	209.7	210.0	209.5	209.4	206.8	205.4
29.5°	203.1	203.8	205.4	206.4	207.5	208.7	208.8	208.4	208.3	206.0	204.0
30°	202.0	202.7	204.3	205.2	206.3	207.7	207.9	207.5	206.6	205.0	202.8
30.5°	200.9	201.7	203.2	204.0	205.7	206.4	206.6	206.4	205.4	203.1	201.1
31°	199.6	200.4	201.9	202.9	204.6	205.6	205.8	205.2	204.6	202.6	200.6
31.5°	198.4	199.1	200.7	202.0	203.8	204.4	204.9	204.4	203.5	201.6	199.4
32°	197.0	197.7	199.7	200.6	202.3	203.7	203.9	203.3	202.7	200.5	198.8
32.5°	195.8	196.5	198.4	199.5	201.3	202.7	202.8	202.1	201.1	198.9	197.3
33°	194.4	195.3	196.7	198.2	199.6	201.9	201.7	200.5	200.4	198.3	195.7
33.5°	192.9	194.0	195.3	196.8	198.5	200.0	200.4	199.5	198.7	196.5	194.6
34°	191.5	192.6	194.0	195.7	197.7	198.8	199.2	198.0	197.6	195.2	193.2
34.5°	189.9	191.3	192.9	194.4	196.2	197.6	197.7	197.0	196.7	193.7	191.8
35°	188.5	189.9	191.5	193.3	195.0	196.4	196.3	195.1	194.2	192.4	190.5
35.5°	187.0	188.4	190.5	191.8	193.8	194.6	194.9	194.0	193.7	191.7	189.2
36°	185.6	186.8	188.7	190.2	192.4	193.5	193.4	193.2	192.0	189.9	188.1
36.5°	184.4	185.4	187.3	188.9	190.7	191.8	192.2	191.3	190.7	189.0	186.0
37°	182.7	183.8	185.8	187.5	189.5	190.8	190.4	189.8	189.7	187.3	184.7
37.5°	181.1	182.4	184.5	186.0	187.8	188.9	189.6	188.5	188.0	185.5	184.0
38°	179.6	180.9	182.8	184.5	186.1	187.7	187.9	187.3	186.9	184.1	182.0
38.5°	178.2	179.3	181.2	182.9	184.4	186.5	185.9	185.4	185.1	182.1	180.4
39°	176.6	177.6	179.5	181.2	183.1	184.9	184.8	184.3	183.6	181.0	178.9
39.5°	174.9	176.1	177.7	179.7	181.5	183.2	183.4	183.1	182.1	178.7	177.0
40°	173.0	174.4	176.0	178.0	180.3	181.6	181.8	181.6	179.7	177.3	175.4
40.5°	171.2	172.5	174.2	176.4	178.4	179.6	180.2	179.6	178.3	175.8	173.6
41°	169.6	170.7	172.2	174.6	176.7	178.2	178.5	178.0	176.5	174.0	171.3
41.5°	167.9	168.8	170.9	172.9	174.8	176.7	176.7	176.4	174.9	172.5	169.8
42°	165.9	167.1	169.2	171.0	173.1	175.2	175.3	174.8	173.4	170.6	168.2
42.5°	163.9	165.2	167.5	169.0	171.6	173.4	173.4	172.8	171.4	168.3	166.5
43°	162.2	163.5	165.7	167.5	169.8	171.5	171.7	171.1	169.6	166.7	164.5
43.5°	160.3	161.6	163.9	165.6	167.8	169.4	169.7	169.3	167.7	164.9	162.6
44°	158.5	159.8	162.1	163.8	166.1	167.8	167.9	167.3	166.0	162.9	160.8
44.5°	156.7	158.0	160.3	162.0	164.5	165.7	165.8	165.4	164.1	161.1	158.9



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	154.8	156.1	158.3	160.0	162.5	164.2	164.2	163.5	162.0	159.0	157.1
45.5°	152.8	154.4	156.3	158.2	160.8	162.3	162.2	161.5	160.2	157.3	154.8
46°	150.9	152.5	154.6	156.3	158.8	160.2	160.2	159.3	158.5	155.3	152.8
46.5°	148.8	150.7	152.8	154.4	156.7	158.5	158.6	157.7	156.2	153.7	150.9
47°	147.0	148.8	150.8	152.8	155.0	156.2	156.5	156.1	154.2	151.5	149.1
47.5°	145.1	146.8	149.0	150.9	153.1	154.6	154.8	153.8	152.4	149.8	147.0
48°	143.2	144.8	146.9	149.0	151.3	152.5	152.9	151.8	149.9	147.8	144.9
48.5°	141.1	142.7	145.0	146.9	149.3	150.7	150.9	149.6	148.8	145.8	143.1
49°	138.8	140.7	142.9	144.8	147.0	148.7	148.9	147.7	146.1	143.8	141.0
49.5°	136.6	138.7	140.9	142.8	145.1	146.8	146.8	145.8	144.3	141.8	139.2
50°	134.6	136.7	139.3	140.8	143.1	144.9	144.5	143.9	142.2	139.4	136.8
50.5°	132.4	134.6	136.8	138.8	141.6	142.1	142.7	141.8	139.9	137.4	135.1
51°	130.4	132.6	134.7	136.8	139.0	140.5	140.6	139.8	137.4	135.1	132.9
51.5°	128.4	130.6	132.6	135.5	137.1	138.4	138.5	137.4	136.1	133.4	130.8
52°	126.4	128.7	130.6	132.6	135.1	136.2	136.4	135.3	133.7	131.5	128.8
52.5°	124.3	126.6	128.5	130.6	132.9	134.1	134.7	133.2	131.1	129.3	126.6
53°	122.2	124.7	126.4	128.4	131.0	132.0	132.3	131.0	129.8	127.0	124.4
53.5°	120.1	122.4	124.4	126.5	128.8	129.7	130.3	129.1	127.6	124.9	122.3
54°	118.1	120.4	122.1	124.5	126.8	127.8	128.1	126.8	125.4	122.8	120.2
54.5°	115.9	118.4	120.3	122.4	124.8	125.5	125.8	124.8	123.2	120.9	118.0
55°	113.8	116.3	118.2	120.4	122.7	123.5	123.9	122.8	121.3	118.6	115.7
55.5°	111.6	114.1	116.0	118.3	120.7	121.2	121.7	120.7	119.1	116.7	113.7
56°	109.6	112.2	114.1	116.2	118.6	119.1	119.6	118.6	117.0	114.5	111.7
56.5°	107.6	110.1	112.1	114.2	116.6	117.0	117.7	116.5	115.0	112.4	109.6
57°	105.5	108.0	110.0	112.0	114.6	114.9	115.9	114.6	112.6	110.3	107.7
57.5°	103.3	105.8	107.8	109.8	112.2	112.9	113.7	112.3	110.5	108.3	105.6
58°	101.3	103.7	106.0	107.8	110.3	110.9	111.4	109.9	108.4	106.1	103.4
58.5°	99.3	101.7	103.9	105.8	108.2	108.7	109.4	108.1	106.5	104.2	101.5
59°	97.3	99.6	101.8	103.7	106.3	106.7	107.3	106.0	104.5	102.1	99.3
59.5°	95.2	97.6	99.6	101.7	104.0	104.6	105.2	104.2	102.3	100.0	97.2
60°	93.2	95.5	97.5	99.7	102.0	102.5	103.0	101.9	100.3	97.9	95.3
60.5°	91.2	93.4	95.5	97.7	99.7	100.4	100.9	99.9	98.3	95.8	93.3
61°	89.1	91.4	93.7	95.6	98.0	98.4	98.8	97.7	96.0	94.0	91.3
61.5°	87.4	89.4	91.6	93.4	95.6	96.3	96.8	95.5	93.8	91.9	89.2
62°	85.6	87.6	89.3	91.4	93.8	94.3	94.8	93.6	92.0	89.8	87.4
62.5°	83.5	85.7	87.7	89.4	91.7	92.3	92.5	91.3	89.8	87.9	85.4
63°	81.5	83.5	85.7	87.6	89.9	90.5	90.7	89.5	88.1	86.2	83.4
63.5°	79.6	81.5	83.7	85.6	87.7	88.4	88.5	87.7	86.3	84.0	81.4
64°	77.7	79.6	81.7	83.6	85.9	86.8	86.7	85.8	84.1	82.1	79.4
64.5°	75.8	77.7	79.8	81.6	83.7	84.8	84.6	83.7	82.4	80.1	77.5
65°	73.9	75.9	77.8	79.7	81.8	82.8	82.5	81.8	80.2	78.1	75.6
65.5°	71.9	73.8	75.8	77.8	79.8	80.8	80.6	79.6	78.0	76.1	73.6
66°	70.0	71.9	73.8	75.9	78.0	78.8	78.6	77.6	76.1	74.1	71.8
66.5°	68.2	70.0	71.9	73.9	76.0	76.7	76.6	75.6	74.2	72.2	69.8
67°	66.4	68.0	70.2	71.9	74.1	74.9	74.6	73.7	72.5	70.2	68.0



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	64.7	66.2	68.3	70.0	72.1	73.0	72.7	71.9	70.5	68.2	66.2
68°	62.8	64.4	66.4	68.2	70.2	71.1	70.9	70.0	68.6	66.4	64.3
68.5°	60.9	62.6	64.5	66.4	68.4	69.1	69.0	68.1	66.8	64.3	62.5
69°	59.2	60.7	62.6	64.5	66.4	67.2	67.2	66.0	64.9	62.5	60.7
69.5°	57.2	58.9	60.8	62.8	64.5	65.3	65.3	64.3	63.1	60.6	58.9
70°	55.5	57.2	59.0	60.9	62.8	63.4	63.5	62.3	61.2	58.9	57.1
70.5°	53.8	55.5	57.1	59.1	60.9	61.6	61.7	60.6	59.5	57.3	55.3
71°	52.1	53.7	55.4	57.2	59.1	59.8	59.7	58.9	57.6	55.5	53.6
71.5°	50.3	51.9	53.8	55.4	57.2	57.9	58.0	56.9	55.7	53.7	51.9
72°	48.6	50.2	52.0	53.8	55.5	56.1	56.0	55.3	54.1	51.9	50.2
72.5°	46.9	48.5	50.3	52.1	54.0	54.5	54.5	53.6	52.2	50.2	48.5
73°	45.2	46.8	48.6	50.4	52.0	52.8	52.7	51.8	50.5	48.5	46.8
73.5°	43.5	45.0	46.9	48.6	50.4	51.0	50.9	50.0	48.8	46.8	45.2
74°	41.9	43.4	45.2	47.0	48.6	49.3	49.2	48.3	47.2	45.2	43.6
74.5°	40.2	41.9	43.6	45.4	46.9	47.6	47.5	46.6	45.4	43.5	41.9
75°	38.7	40.3	42.0	43.6	45.2	45.8	45.9	45.0	43.7	41.8	40.3
75.5°	37.1	38.6	40.3	41.9	43.6	44.1	44.2	43.3	42.1	40.3	38.8
76°	35.5	37.1	38.8	40.3	41.9	42.5	42.4	41.7	40.5	38.7	37.2
76.5°	34.1	35.5	37.2	38.6	40.3	40.8	40.9	40.0	38.9	37.2	35.6
77°	32.4	34.0	35.6	37.0	38.7	39.2	39.2	38.5	37.2	35.6	34.1
77.5°	31.0	32.5	34.0	35.5	37.1	37.7	37.8	36.9	35.7	34.1	32.7
78°	29.4	30.9	32.4	34.0	35.6	36.0	36.2	35.4	34.2	32.6	31.1
78.5°	27.9	29.5	30.9	32.4	34.1	34.6	34.5	33.8	32.7	31.1	29.6
79°	26.5	28.1	29.4	30.8	32.6	33.0	32.9	32.2	31.1	29.6	28.1
79.5°	25.1	26.6	27.9	29.4	31.1	31.5	31.5	30.7	29.6	28.2	26.6
80°	23.7	25.2	26.4	27.8	29.6	30.0	29.9	29.3	28.2	26.6	25.2
80.5°	22.4	23.7	24.9	26.3	28.2	28.5	28.5	27.7	26.7	25.5	23.7
81°	21.0	22.4	23.4	24.8	26.7	27.1	27.0	26.3	25.2	24.0	22.3
81.5°	19.6	21.1	22.3	23.5	25.4	25.8	25.6	24.8	23.7	22.5	21.1
82°	18.2	19.8	20.9	22.2	23.8	24.1	24.1	23.4	22.3	21.3	19.8
82.5°	16.9	18.4	19.6	20.8	22.4	22.6	22.6	21.9	21.0	19.9	18.3
83°	15.6	17.0	18.1	19.3	21.2	21.4	21.5	20.7	19.6	18.4	17.1
83.5°	14.3	15.7	16.8	18.0	19.8	19.9	20.1	19.3	18.3	17.1	15.9
84°	12.9	14.3	15.4	16.7	18.4	18.3	18.6	18.0	17.0	15.8	14.2
84.5°	11.6	13.0	14.0	15.4	17.1	17.2	17.3	16.6	15.6	14.5	13.0
85°	10.3	11.7	12.7	14.0	15.7	15.9	15.9	15.2	14.2	13.2	11.8
85.5°	9.1	10.4	11.4	12.7	14.4	14.6	14.6	13.9	13.0	11.9	10.5
86°	7.9	9.1	10.2	11.3	13.1	13.3	13.3	12.8	11.8	10.5	9.2
86.5°	6.6	7.8	8.9	10.1	11.8	12.0	12.0	11.4	10.4	9.3	8.0
87°	5.5	6.7	7.6	8.7	10.5	10.7	10.7	10.0	9.1	8.1	6.8
87.5°	4.3	5.4	6.4	7.5	9.2	9.4	9.5	8.8	7.9	6.8	5.6
88°	3.0	4.2	5.3	6.3	7.9	8.1	8.1	7.6	6.6	5.6	4.5
88.5°	1.8	2.9	3.9	5.1	6.6	6.8	6.9	6.4	5.4	4.7	3.1
89°	0.9	1.7	2.7	3.7	5.4	5.6	5.6	5.1	4.3	3.1	1.9
89.5°	0.4	0.7	1.5	2.4	4.2	4.5	4.4	3.8	2.9	1.8	0.7



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.2	0.3	0.6	1.3	2.7	3.0	3.0	2.6	1.7	0.6	0.0
90.5°	0.1	0.2	0.2	0.6	1.5	1.6	1.7	1.3	0.6	0.0	0.0
91°	0.1	0.2	0.1	0.2	0.4	0.6	0.5	0.4	0.0	0.0	0.0
91.5°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93.5°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94.5°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.5°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.5°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0
98°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
98.5°	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0
99°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
99.5°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
100°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
100.5°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
101°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
101.5°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
102°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
102.5°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
103°	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
103.5°	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
104°	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
104.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
105°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
105.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
106°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
106.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
107°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
107.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
108°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
108.5°	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
109°	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1
109.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
110°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
110.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
111°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
111.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
112°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
113°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3
113.5°	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2
114°	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2
114.5°	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2
115°	0.0	0.1	0.0	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2
115.5°	0.0	0.1	0.0	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.3
116°	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
116.5°	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
117°	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
117.5°	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
118°	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3
118.5°	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3
119°	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.3
119.5°	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3
120°	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.3
120.5°	0.0	0.1	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3
121°	0.0	0.1	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3
121.5°	0.0	0.1	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3
122°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
122.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
123°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
123.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
124°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
124.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.4	0.3	0.3
125°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.4	0.3	0.4	0.3
125.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.4	0.3	0.4	0.3
126°	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.3
126.5°	0.0	0.1	0.0	0.1	0.3	0.4	0.3	0.3	0.3	0.3	0.3
127°	0.0	0.1	0.0	0.1	0.3	0.4	0.3	0.3	0.3	0.3	0.3
127.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
128°	0.0	0.1	0.0	0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.4
128.5°	0.0	0.1	0.0	0.1	0.4	0.3	0.3	0.3	0.3	0.4	0.3
129°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.3
129.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.4
130°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.4	0.4	0.5
130.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.4	0.5	0.4
131°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.4	0.4	0.4
131.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.4	0.4	0.4
132°	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.5	0.4	0.4	0.4
132.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.4
133°	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.4
133.5°	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.5
134°	0.0	0.1	0.0	0.1	0.3	0.5	0.4	0.4	0.4	0.4	0.4
134.5°	0.0	0.1	0.0	0.1	0.5	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P565399

CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	0.0	0.1	0.0	0.1	0.5	0.4	0.4	0.4	0.4	0.4	0.5
135.5°	0.0	0.1	0.0	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.5
136°	0.0	0.1	0.0	0.1	0.4	0.4	0.4	0.4	0.4	0.5	0.5
136.5°	0.0	0.1	0.0	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.5
137°	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.5
137.5°	0.1	0.1	0.0	0.1	0.4	0.4	0.4	0.4	0.4	0.5	0.5
138°	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.4	0.5	0.5	0.5
138.5°	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.4	0.5	0.5	0.5
139°	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.5	0.5	0.5	0.5
139.5°	0.2	0.1	0.1	0.1	0.4	0.5	0.4	0.5	0.5	0.5	0.6
140°	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.5	0.5	0.5	0.6
140.5°	0.3	0.3	0.1	0.1	0.4	0.4	0.4	0.5	0.5	0.5	0.5
141°	0.3	0.3	0.1	0.1	0.4	0.5	0.4	0.5	0.5	0.5	0.5
141.5°	0.3	0.3	0.1	0.1	0.4	0.5	0.4	0.5	0.5	0.6	0.5
142°	0.3	0.4	0.1	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.5
142.5°	0.3	0.4	0.1	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5
143°	0.4	0.5	0.1	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5
143.5°	0.4	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
144°	0.4	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
144.5°	0.4	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
145°	0.4	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
145.5°	0.4	0.5	0.1	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5
146°	0.4	0.5	0.1	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6
146.5°	0.5	0.5	0.1	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.6
147°	0.4	0.5	0.1	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6
147.5°	0.4	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
148°	0.5	0.5	0.1	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.6
148.5°	0.5	0.5	0.3	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6
149°	0.6	0.5	0.3	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.6
149.5°	0.6	0.5	0.3	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.6
150°	0.7	0.6	0.2	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
150.5°	0.7	0.6	0.2	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7
151°	0.7	0.6	0.3	0.5	0.6	0.6	0.7	0.6	0.6	0.7	0.7
151.5°	0.7	0.6	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6
152°	0.8	0.6	0.4	0.5	0.6	0.7	0.6	0.6	0.7	0.6	0.7
152.5°	0.7	0.6	0.4	0.5	0.6	0.7	0.7	0.6	0.7	0.6	0.7
153°	0.7	0.6	0.5	0.5	0.6	0.7	0.7	0.6	0.7	0.6	0.6
153.5°	0.7	0.6	0.4	0.5	0.6	0.7	0.7	0.6	0.7	0.6	0.8
154°	0.7	0.6	0.5	0.5	0.6	0.7	0.7	0.6	0.7	0.7	0.8
154.5°	0.7	0.6	0.5	0.5	0.7	0.7	0.7	0.8	0.7	0.7	0.7
155°	0.8	0.6	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7
155.5°	0.8	0.8	0.5	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.7
156°	0.8	0.8	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.7
156.5°	0.8	0.8	0.6	0.6	0.8	0.8	0.7	0.7	0.7	0.7	0.7
157°	0.8	0.8	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.7



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
157.5°	0.8	0.8	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.8
158°	0.8	0.8	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.8
158.5°	0.8	0.8	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.8
159°	0.8	0.8	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
159.5°	0.8	0.8	0.6	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8
160°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
160.5°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
161°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
161.5°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
162°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.9
162.5°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.9
163°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
163.5°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
164°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
164.5°	0.8	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
165°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
165.5°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
166°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
166.5°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
167°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
167.5°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
168°	0.8	0.8	0.6	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8
168.5°	0.8	0.9	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
169°	0.8	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
169.5°	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
170°	0.8	1.0	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
170.5°	0.8	1.0	0.8	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8
171°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
171.5°	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8
172°	0.8	0.9	0.8	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8
172.5°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
173°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
173.5°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
174°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
174.5°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
175°	0.8	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
175.5°	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.9	0.8	0.8
176°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
176.5°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
177°	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
177.5°	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
178°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
178.5°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
179°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8
179.5°	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P565399
CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P565399

CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	229.2	229.2	229.2	229.2	229.2	229.2
0.5°	229.3	229.5	229.7	229.7	229.2	229.2
1°	228.5	229.5	229.7	229.6	229.0	229.2
1.5°	228.5	229.3	229.4	229.5	229.0	229.6
2°	228.6	229.1	229.5	229.3	228.9	230.0
2.5°	228.4	228.8	228.5	229.1	228.8	229.0
3°	228.2	229.1	229.5	229.1	229.0	229.0
3.5°	228.1	228.8	229.4	228.9	228.8	229.0
4°	228.1	229.0	229.1	228.6	228.7	228.4
4.5°	228.1	228.7	229.3	228.4	227.9	228.8
5°	228.0	228.3	228.8	228.4	227.9	228.3
5.5°	227.9	228.3	228.5	228.6	227.7	229.0
6°	227.5	228.5	228.4	228.7	227.4	228.6
6.5°	227.5	228.3	228.4	228.1	227.1	227.3
7°	227.1	228.3	227.4	227.8	227.1	227.1
7.5°	226.9	228.0	228.6	227.8	227.3	227.5
8°	226.9	227.4	228.6	227.8	226.7	227.6
8.5°	226.9	228.5	227.9	227.6	226.9	227.5
9°	226.9	228.4	227.5	227.0	226.7	227.4
9.5°	226.1	227.2	226.9	226.4	226.6	226.9
10°	225.4	227.2	226.9	226.2	226.1	226.7
10.5°	225.2	226.6	226.6	226.3	225.8	226.5
11°	225.2	226.3	226.0	226.1	225.9	225.6
11.5°	225.2	225.9	225.7	226.0	225.6	225.6
12°	224.7	225.1	225.9	225.4	225.5	225.2
12.5°	224.0	225.1	225.0	225.0	225.3	225.4
13°	224.0	224.5	224.5	224.5	225.0	226.0
13.5°	223.5	223.8	224.6	224.5	223.8	225.2
14°	223.4	224.3	223.4	224.1	223.5	224.9
14.5°	223.1	223.6	224.5	224.1	223.5	224.9
15°	222.2	223.6	223.6	223.3	222.8	224.2
15.5°	222.3	223.1	222.4	222.6	222.3	223.6
16°	222.0	223.0	222.6	222.4	222.1	222.8
16.5°	221.7	222.2	222.3	222.3	221.9	222.9
17°	221.7	221.7	222.3	221.7	221.0	222.2
17.5°	221.0	220.8	221.0	220.8	220.9	222.0
18°	220.2	220.4	220.5	220.4	220.1	221.2
18.5°	219.9	220.4	220.1	219.5	219.7	220.5
19°	219.0	219.8	219.3	219.5	218.8	220.0
19.5°	218.5	219.3	218.4	219.6	218.8	219.4
20°	217.7	218.5	218.4	218.4	217.9	218.9
20.5°	217.0	217.8	217.9	217.3	217.6	218.3
21°	216.3	217.5	217.1	217.0	217.1	217.8
21.5°	215.9	216.9	216.8	216.6	216.3	217.0
22°	215.1	216.4	216.4	215.7	215.5	216.2



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	214.6	215.6	214.9	214.9	214.9	215.4
23°	213.8	214.9	213.9	213.9	214.0	214.7
23.5°	212.9	213.9	213.4	213.1	213.2	214.0
24°	212.5	213.3	212.8	212.3	212.8	213.6
24.5°	211.5	212.7	212.4	211.4	212.1	212.8
25°	210.5	211.8	211.5	210.6	210.8	211.8
25.5°	209.8	210.6	210.5	209.6	209.6	210.7
26°	209.0	210.0	209.4	208.6	209.0	209.9
26.5°	208.5	209.0	208.6	207.7	207.8	209.4
27°	207.4	207.8	206.9	206.7	206.8	208.3
27.5°	206.4	206.7	206.1	205.6	205.9	207.2
28°	205.3	205.7	205.6	204.4	204.7	206.2
28.5°	204.7	204.4	204.5	203.4	204.0	205.2
29°	203.4	203.4	203.5	202.2	202.9	204.4
29.5°	202.4	202.4	202.4	200.9	201.8	203.1
30°	201.2	201.2	201.0	199.8	200.7	202.0
30.5°	200.0	200.1	199.8	198.7	199.8	200.9
31°	199.0	199.0	198.3	197.6	198.2	199.6
31.5°	197.8	197.6	197.0	196.5	196.7	198.4
32°	196.5	196.1	195.6	195.2	195.5	197.0
32.5°	195.0	194.8	194.3	193.9	194.4	195.8
33°	193.9	193.7	193.0	192.7	192.6	194.4
33.5°	192.4	192.4	191.6	191.2	191.8	192.9
34°	191.1	190.9	190.4	189.7	190.1	191.5
34.5°	190.1	189.6	189.0	188.4	188.4	189.9
35°	188.5	188.3	187.6	186.9	187.2	188.5
35.5°	187.2	187.0	186.0	185.3	185.7	187.0
36°	185.6	185.3	184.4	183.7	184.1	185.6
36.5°	184.5	183.4	182.8	182.3	182.9	184.4
37°	183.2	181.7	181.0	180.7	181.4	182.7
37.5°	181.6	180.4	179.6	179.1	179.4	181.1
38°	180.1	178.9	178.2	177.5	177.8	179.6
38.5°	177.5	177.5	176.6	175.9	176.3	178.2
39°	176.4	175.7	174.9	174.1	174.5	176.6
39.5°	174.9	173.8	173.0	172.5	172.8	174.9
40°	173.2	171.9	171.2	170.9	171.0	173.0
40.5°	171.0	170.0	169.4	169.0	169.5	171.2
41°	169.2	168.2	167.6	167.1	167.9	169.6
41.5°	167.6	166.4	165.8	165.2	165.7	167.9
42°	165.7	164.6	164.0	163.3	163.8	165.9
42.5°	163.8	162.9	162.2	161.4	162.1	163.9
43°	162.1	161.0	160.4	159.5	160.2	162.2
43.5°	160.1	159.2	158.4	157.7	158.4	160.3
44°	158.3	157.2	156.3	155.7	156.6	158.5
44.5°	156.4	155.4	154.6	153.8	154.8	156.7



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	154.2	153.7	152.5	151.9	152.9	154.8
45.5°	152.3	151.7	150.6	150.0	150.8	152.8
46°	150.4	149.8	148.6	148.1	148.8	150.9
46.5°	148.6	147.7	146.6	146.1	146.7	148.8
47°	146.8	145.7	144.4	144.2	144.7	147.0
47.5°	144.6	143.6	142.4	142.2	142.6	145.1
48°	142.7	141.5	140.3	140.2	140.6	143.2
48.5°	140.4	139.6	138.1	138.1	138.9	141.1
49°	138.2	137.3	136.0	136.0	136.9	138.8
49.5°	136.3	135.3	133.9	134.0	134.8	136.6
50°	134.5	133.2	131.9	132.1	132.9	134.6
50.5°	132.2	131.0	129.9	130.0	130.6	132.4
51°	130.2	128.9	128.0	127.9	128.5	130.4
51.5°	128.2	126.8	125.9	126.0	126.6	128.4
52°	126.3	124.9	123.7	124.0	124.5	126.4
52.5°	123.9	122.8	121.8	121.9	122.4	124.3
53°	121.9	120.9	119.6	119.6	120.3	122.2
53.5°	120.2	118.9	117.5	117.4	118.3	120.1
54°	117.6	116.6	115.4	115.2	116.0	118.1
54.5°	115.8	114.5	113.2	113.3	114.0	115.9
55°	113.7	112.4	111.2	111.2	112.1	113.8
55.5°	111.5	110.3	109.2	109.2	110.2	111.6
56°	109.3	108.3	107.0	107.0	107.9	109.6
56.5°	107.2	106.3	104.9	105.1	105.8	107.6
57°	105.3	104.1	102.9	103.0	103.8	105.5
57.5°	103.1	102.0	100.9	101.0	101.8	103.3
58°	101.3	100.0	98.7	98.8	99.6	101.3
58.5°	99.2	98.0	96.7	96.7	97.7	99.3
59°	97.0	96.0	94.7	95.0	95.7	97.3
59.5°	95.1	93.9	92.7	92.9	93.6	95.2
60°	93.2	92.0	90.6	90.6	91.7	93.2
60.5°	91.2	90.0	88.9	88.8	89.5	91.2
61°	89.1	88.0	86.8	86.8	87.8	89.1
61.5°	87.4	86.0	84.9	84.9	85.9	87.4
62°	85.3	84.1	83.2	82.9	83.9	85.6
62.5°	83.4	82.2	81.2	80.8	81.9	83.5
63°	81.3	80.1	79.2	78.8	80.0	81.5
63.5°	79.3	78.1	77.3	77.1	78.1	79.6
64°	77.3	76.1	75.4	75.2	76.2	77.7
64.5°	75.6	74.1	73.5	73.3	74.3	75.8
65°	73.4	72.3	71.7	71.3	72.4	73.9
65.5°	71.5	70.4	69.8	69.4	70.5	71.9
66°	69.7	68.6	67.9	67.5	68.5	70.0
66.5°	67.8	66.7	65.9	65.7	66.7	68.2
67°	66.0	64.8	64.1	63.8	64.8	66.4



TEST NUMBER: P565399

CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	64.1	63.0	62.2	62.1	63.0	64.7
68°	62.4	61.2	60.4	60.2	61.2	62.8
68.5°	60.4	59.4	58.6	58.5	59.4	60.9
69°	58.8	57.4	56.7	56.6	57.6	59.2
69.5°	56.8	55.7	55.2	55.1	55.8	57.2
70°	55.1	54.0	53.3	53.2	54.2	55.5
70.5°	53.5	52.2	51.6	51.6	52.4	53.8
71°	51.9	50.6	50.0	49.9	50.7	52.1
71.5°	50.2	48.8	48.3	48.1	49.0	50.3
72°	48.4	47.1	46.6	46.4	47.3	48.6
72.5°	46.8	45.3	45.0	44.9	45.7	46.9
73°	45.1	43.6	43.3	43.3	44.0	45.2
73.5°	43.6	42.1	41.6	41.6	42.4	43.5
74°	42.0	40.5	39.9	40.0	40.7	41.9
74.5°	40.3	38.9	38.5	38.6	39.0	40.2
75°	38.8	37.4	36.8	36.7	37.6	38.7
75.5°	37.2	35.7	35.1	35.4	36.0	37.1
76°	35.6	34.3	33.6	33.7	34.4	35.5
76.5°	34.2	32.8	32.1	32.2	32.8	34.1
77°	32.6	31.2	30.6	30.7	31.4	32.4
77.5°	31.2	29.7	29.2	29.2	29.9	31.0
78°	29.6	28.3	27.6	27.7	28.4	29.4
78.5°	28.3	26.8	26.2	26.3	26.9	27.9
79°	26.7	25.3	24.7	24.9	25.4	26.5
79.5°	25.3	23.9	23.3	23.5	24.0	25.1
80°	23.8	22.5	22.1	22.2	22.6	23.7
80.5°	22.4	21.2	20.6	20.9	21.4	22.4
81°	21.2	19.9	19.2	19.4	20.0	21.0
81.5°	19.8	18.4	17.9	18.0	18.7	19.6
82°	18.5	17.1	16.6	16.7	17.3	18.2
82.5°	17.1	15.7	15.2	15.3	16.0	16.9
83°	15.8	14.3	13.8	14.1	14.6	15.6
83.5°	14.5	13.0	12.6	12.7	13.3	14.3
84°	13.2	11.7	11.3	11.4	12.1	12.9
84.5°	11.9	10.4	10.0	10.1	10.8	11.6
85°	10.7	9.2	8.8	8.9	9.6	10.3
85.5°	9.4	8.0	7.5	7.6	8.3	9.1
86°	8.2	6.7	6.3	6.4	7.1	7.9
86.5°	6.9	5.5	5.1	5.3	5.9	6.6
87°	5.7	4.3	3.8	4.0	4.6	5.5
87.5°	4.5	3.1	2.7	2.7	3.3	4.3
88°	3.2	1.8	1.5	1.6	2.2	3.0
88.5°	1.9	1.0	0.6	0.8	1.1	1.8
89°	0.7	0.4	0.2	0.3	0.5	0.9
89.5°	0.0	0.1	0.1	0.1	0.2	0.4



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.1	0.1	0.1	0.1	0.2
90.5°	0.0	0.1	0.1	0.1	0.1	0.1
91°	0.0	0.1	0.1	0.1	0.1	0.1
91.5°	0.0	0.1	0.1	0.1	0.1	0.1
92°	0.0	0.1	0.1	0.1	0.1	0.1
92.5°	0.0	0.1	0.1	0.1	0.1	0.1
93°	0.0	0.1	0.1	0.0	0.1	0.1
93.5°	0.0	0.1	0.1	0.0	0.1	0.0
94°	0.1	0.1	0.1	0.0	0.1	0.0
94.5°	0.1	0.1	0.1	0.0	0.0	0.0
95°	0.0	0.1	0.1	0.0	0.0	0.0
95.5°	0.0	0.1	0.1	0.0	0.0	0.0
96°	0.0	0.1	0.1	0.0	0.0	0.0
96.5°	0.1	0.1	0.1	0.0	0.0	0.0
97°	0.1	0.1	0.1	0.0	0.0	0.0
97.5°	0.1	0.1	0.1	0.0	0.0	0.0
98°	0.1	0.1	0.1	0.0	0.0	0.0
98.5°	0.1	0.1	0.1	0.0	0.0	0.0
99°	0.1	0.1	0.1	0.0	0.0	0.0
99.5°	0.1	0.1	0.1	0.0	0.0	0.0
100°	0.1	0.1	0.1	0.0	0.0	0.0
100.5°	0.1	0.1	0.1	0.0	0.0	0.0
101°	0.1	0.1	0.1	0.0	0.0	0.0
101.5°	0.1	0.1	0.1	0.0	0.0	0.0
102°	0.1	0.1	0.1	0.0	0.0	0.0
102.5°	0.1	0.1	0.1	0.0	0.0	0.0
103°	0.1	0.1	0.1	0.0	0.0	0.0
103.5°	0.1	0.1	0.1	0.0	0.0	0.0
104°	0.1	0.1	0.1	0.0	0.0	0.0
104.5°	0.1	0.1	0.1	0.0	0.0	0.0
105°	0.1	0.1	0.1	0.0	0.0	0.0
105.5°	0.1	0.1	0.1	0.0	0.0	0.0
106°	0.1	0.1	0.1	0.0	0.0	0.0
106.5°	0.1	0.1	0.1	0.0	0.0	0.0
107°	0.1	0.1	0.1	0.0	0.0	0.0
107.5°	0.1	0.1	0.1	0.0	0.0	0.0
108°	0.1	0.1	0.1	0.0	0.0	0.0
108.5°	0.1	0.1	0.1	0.0	0.0	0.0
109°	0.1	0.1	0.1	0.0	0.0	0.0
109.5°	0.1	0.1	0.1	0.0	0.0	0.0
110°	0.1	0.1	0.1	0.0	0.0	0.0
110.5°	0.1	0.1	0.1	0.0	0.0	0.0
111°	0.1	0.1	0.1	0.0	0.0	0.0
111.5°	0.1	0.1	0.1	0.0	0.0	0.0
112°	0.1	0.1	0.1	0.0	0.0	0.0



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	0.1	0.1	0.1	0.0	0.0	0.0
113°	0.1	0.1	0.1	0.0	0.0	0.0
113.5°	0.2	0.1	0.1	0.0	0.0	0.0
114°	0.2	0.1	0.1	0.0	0.0	0.0
114.5°	0.2	0.1	0.1	0.0	0.0	0.0
115°	0.3	0.1	0.1	0.0	0.0	0.0
115.5°	0.3	0.1	0.1	0.0	0.0	0.0
116°	0.3	0.1	0.1	0.0	0.0	0.0
116.5°	0.3	0.1	0.1	0.0	0.0	0.0
117°	0.3	0.1	0.1	0.0	0.0	0.0
117.5°	0.3	0.1	0.1	0.0	0.0	0.0
118°	0.3	0.1	0.1	0.0	0.0	0.0
118.5°	0.3	0.1	0.1	0.0	0.0	0.0
119°	0.3	0.1	0.1	0.0	0.0	0.0
119.5°	0.3	0.1	0.1	0.0	0.0	0.0
120°	0.3	0.1	0.1	0.0	0.0	0.0
120.5°	0.3	0.1	0.1	0.0	0.0	0.0
121°	0.3	0.1	0.1	0.0	0.0	0.0
121.5°	0.3	0.1	0.1	0.0	0.0	0.0
122°	0.3	0.1	0.1	0.0	0.0	0.0
122.5°	0.3	0.1	0.1	0.0	0.0	0.0
123°	0.3	0.1	0.1	0.0	0.0	0.0
123.5°	0.4	0.1	0.1	0.0	0.0	0.0
124°	0.4	0.1	0.1	0.0	0.0	0.0
124.5°	0.3	0.1	0.1	0.0	0.0	0.0
125°	0.3	0.1	0.1	0.0	0.0	0.0
125.5°	0.3	0.1	0.1	0.0	0.0	0.0
126°	0.3	0.1	0.1	0.0	0.0	0.0
126.5°	0.3	0.1	0.1	0.0	0.0	0.0
127°	0.3	0.1	0.1	0.0	0.0	0.0
127.5°	0.3	0.1	0.1	0.0	0.0	0.0
128°	0.3	0.1	0.1	0.0	0.0	0.0
128.5°	0.4	0.1	0.1	0.0	0.0	0.0
129°	0.4	0.1	0.1	0.0	0.0	0.0
129.5°	0.4	0.1	0.1	0.0	0.0	0.0
130°	0.4	0.1	0.1	0.0	0.0	0.0
130.5°	0.4	0.1	0.1	0.0	0.0	0.0
131°	0.4	0.1	0.1	0.0	0.0	0.0
131.5°	0.4	0.1	0.1	0.0	0.0	0.0
132°	0.4	0.2	0.1	0.0	0.0	0.0
132.5°	0.4	0.2	0.1	0.0	0.0	0.0
133°	0.4	0.1	0.1	0.0	0.0	0.0
133.5°	0.4	0.3	0.1	0.0	0.0	0.0
134°	0.4	0.3	0.1	0.0	0.0	0.0
134.5°	0.4	0.2	0.1	0.0	0.0	0.0



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
135°	0.4	0.2	0.1	0.0	0.0	0.0
135.5°	0.5	0.2	0.1	0.0	0.0	0.0
136°	0.5	0.3	0.1	0.0	0.0	0.0
136.5°	0.5	0.2	0.1	0.0	0.0	0.0
137°	0.5	0.2	0.1	0.0	0.0	0.1
137.5°	0.5	0.3	0.1	0.0	0.0	0.1
138°	0.5	0.3	0.1	0.0	0.1	0.1
138.5°	0.5	0.3	0.1	0.0	0.4	0.1
139°	0.5	0.3	0.1	0.0	0.4	0.1
139.5°	0.5	0.3	0.1	0.0	0.3	0.2
140°	0.5	0.3	0.1	0.0	0.3	0.1
140.5°	0.5	0.4	0.1	0.0	0.3	0.3
141°	0.5	0.5	0.1	0.0	0.5	0.3
141.5°	0.5	0.5	0.3	0.1	0.5	0.3
142°	0.5	0.6	0.3	0.1	0.5	0.3
142.5°	0.5	0.6	0.3	0.4	0.5	0.3
143°	0.5	0.6	0.3	0.3	0.5	0.4
143.5°	0.5	0.6	0.5	0.3	0.5	0.4
144°	0.5	0.6	0.5	0.3	0.5	0.4
144.5°	0.5	0.6	0.5	0.4	0.5	0.4
145°	0.5	0.6	0.5	0.4	0.5	0.4
145.5°	0.5	0.6	0.5	0.4	0.5	0.4
146°	0.5	0.6	0.5	0.5	0.5	0.4
146.5°	0.5	0.6	0.5	0.4	0.5	0.5
147°	0.5	0.6	0.5	0.5	0.6	0.4
147.5°	0.6	0.6	0.5	0.5	0.6	0.4
148°	0.6	0.6	0.5	0.5	0.6	0.5
148.5°	0.6	0.6	0.5	0.7	0.7	0.5
149°	0.6	0.6	0.5	0.7	0.7	0.6
149.5°	0.6	0.6	0.7	0.7	0.7	0.6
150°	0.6	0.6	0.7	0.7	0.6	0.7
150.5°	0.6	0.6	0.6	0.7	0.6	0.7
151°	0.6	0.6	0.6	0.7	0.6	0.7
151.5°	0.6	0.6	0.6	0.8	0.7	0.7
152°	0.6	0.6	0.7	0.8	0.7	0.8
152.5°	0.6	0.6	0.7	0.8	0.7	0.7
153°	0.6	0.6	0.7	0.8	0.7	0.7
153.5°	0.6	0.6	0.7	0.8	0.7	0.7
154°	0.7	0.6	0.7	0.8	0.8	0.7
154.5°	0.7	0.7	0.7	0.8	0.8	0.7
155°	0.7	0.7	0.7	0.8	0.8	0.8
155.5°	0.7	0.7	0.7	0.8	0.8	0.8
156°	0.7	0.7	0.7	0.8	0.8	0.8
156.5°	0.7	0.7	0.7	0.8	0.8	0.8
157°	0.7	0.7	0.7	0.8	0.8	0.8



TEST NUMBER: P565399
 CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
157.5°	0.7	0.7	0.8	0.8	0.8	0.8
158°	0.8	0.7	0.8	0.8	0.8	0.8
158.5°	0.8	0.7	0.8	0.8	0.8	0.8
159°	0.8	0.7	0.8	0.8	0.8	0.8
159.5°	0.8	0.7	0.8	0.8	0.8	0.8
160°	0.8	0.7	0.8	0.8	0.8	0.8
160.5°	0.8	0.7	0.8	0.8	0.8	0.8
161°	0.8	0.7	0.8	0.8	0.8	0.8
161.5°	0.9	0.7	0.8	0.8	0.8	0.8
162°	0.8	0.7	0.8	0.8	0.8	0.8
162.5°	0.9	0.7	0.8	0.8	0.8	0.8
163°	0.9	0.7	0.8	0.8	0.8	0.8
163.5°	0.8	0.7	0.8	0.8	0.8	0.8
164°	0.8	0.7	0.8	0.8	0.8	0.8
164.5°	0.8	0.7	0.8	0.8	0.8	0.8
165°	0.8	0.7	0.8	0.8	0.8	0.8
165.5°	0.8	0.7	0.8	0.8	0.8	0.8
166°	0.8	0.7	0.8	0.8	0.8	0.8
166.5°	0.8	0.7	0.8	0.8	0.8	0.8
167°	0.8	0.7	0.8	0.8	0.8	0.8
167.5°	1.0	0.7	0.8	0.8	0.8	0.8
168°	0.9	0.7	0.8	0.8	0.8	0.8
168.5°	0.9	0.7	0.8	0.8	0.8	0.8
169°	0.9	0.7	0.8	0.8	0.8	0.8
169.5°	0.9	0.7	0.8	0.8	0.8	0.8
170°	0.9	0.7	0.8	0.8	0.8	0.8
170.5°	0.9	0.7	0.8	0.8	0.8	0.8
171°	0.9	0.7	0.8	0.8	0.8	0.8
171.5°	0.9	0.7	0.8	0.8	0.8	0.8
172°	0.9	0.7	0.8	0.8	0.8	0.8
172.5°	0.9	0.7	0.8	0.8	0.8	0.8
173°	1.0	0.7	0.8	0.8	0.8	0.8
173.5°	0.9	0.7	0.8	0.8	0.8	0.8
174°	0.9	0.7	0.8	0.8	0.8	0.8
174.5°	0.9	0.7	0.8	0.8	0.8	0.8
175°	0.8	0.7	0.8	0.8	0.8	0.8
175.5°	0.8	0.7	0.8	0.8	0.8	0.8
176°	0.8	0.7	0.8	0.8	0.8	0.8
176.5°	0.8	0.7	0.8	0.8	0.8	0.8
177°	0.8	0.7	0.8	0.8	0.9	0.9
177.5°	0.9	0.7	0.8	0.8	0.9	0.9
178°	0.9	0.7	0.8	0.8	0.8	0.8
178.5°	0.8	0.7	0.8	0.8	0.8	0.8
179°	0.8	0.7	0.8	0.8	0.8	0.8
179.5°	0.8	0.7	0.8	0.8	0.8	0.8



TEST NUMBER: P565399
CATALOG NUMBER: HLBQL4069FS1E-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
180°	0.8	0.8	0.8	0.8	0.8	0.8

(END OF REPORT)