

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: FAIL-SAFE

Report Number: P231885

Luminaire Tested: **FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231885
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-4)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PFS125 LENS
Light Source: (42) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

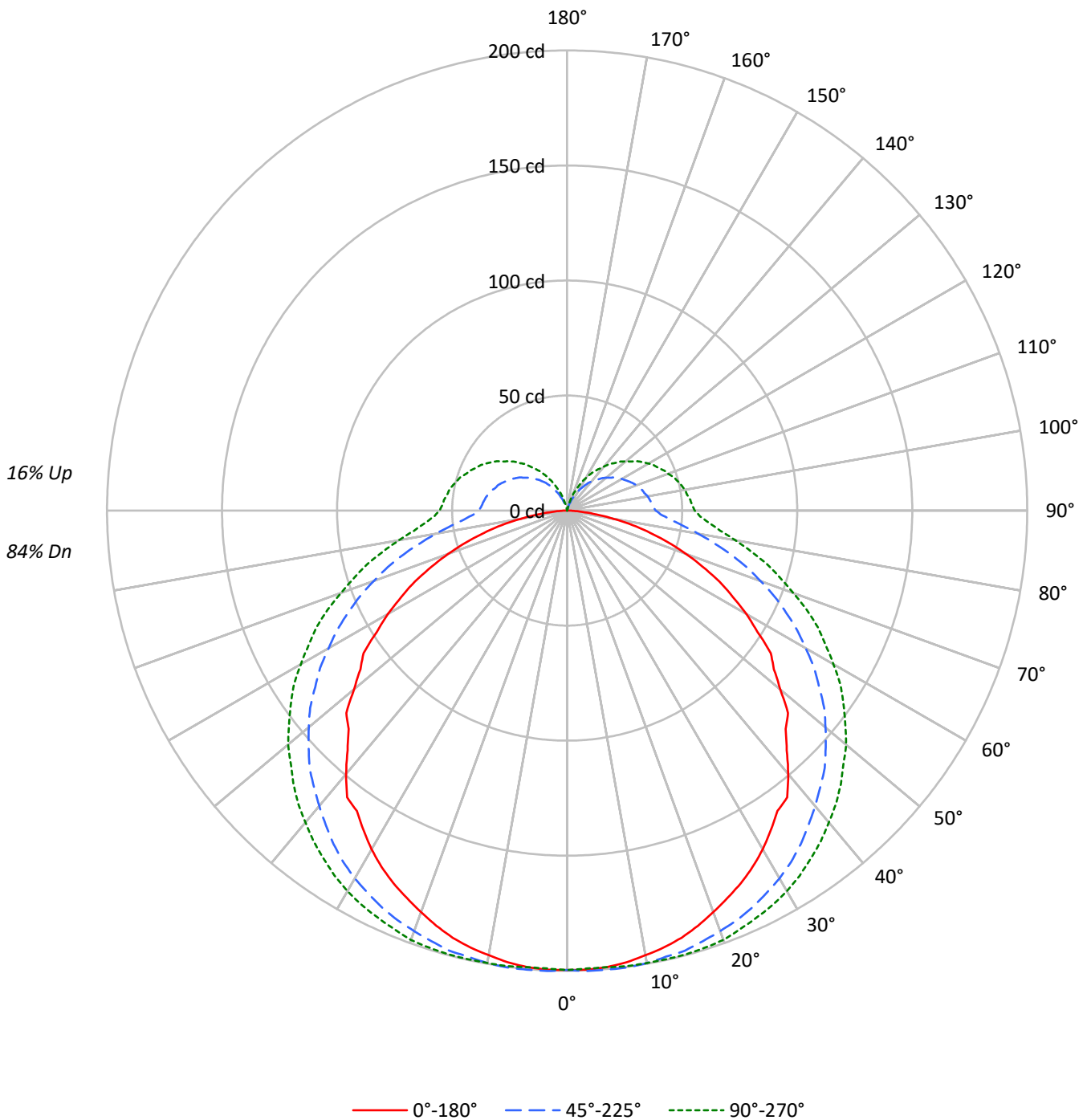
Lumens per Lamp: N/A
Luminaire Lumens: 865.0 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 12.3
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: P231885

CATALOG NUMBER: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1

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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	115	115	115	115	111	111	111	111	102	102	102	95	95	95	87	87	87	84								
1	103	98	93	88	99	94	89	85	86	83	80	80	77	74	74	71	69	66								
2	93	84	76	70	89	81	74	68	74	69	64	69	64	60	63	60	56	53								
3	84	73	64	57	80	70	62	56	65	58	53	60	54	50	55	51	47	44								
4	77	64	55	48	73	62	53	47	57	50	44	53	47	42	49	44	40	37								
5	70	57	47	41	67	55	46	40	51	43	38	47	41	36	44	38	34	31								
6	65	51	42	35	62	49	40	34	46	38	33	42	36	31	39	34	30	27								
7	60	46	37	31	57	44	36	30	41	34	29	39	32	27	36	30	26	24								
8	55	42	33	27	53	40	32	27	38	31	25	35	29	24	33	27	23	21								
9	52	38	30	24	49	37	29	24	35	28	23	32	26	22	30	25	21	19								
10	48	35	27	22	46	34	26	21	32	25	20	30	24	20	28	23	19	17								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3589	3589	3589
5°	3563	3464	3414
10°	3520	3352	3296
15°	3485	3254	3201
20°	3429	3153	3117
25°	3389	3069	3023
30°	3339	2981	2944
35°	3273	2886	2852
40°	3241	2781	2762
45°	3109	2694	2672
50°	3027	2581	2581
55°	2969	2457	2474
60°	2763	2320	2357
65°	2566	2171	2237
70°	2274	1994	2073
75°	1902	1798	1927
80°	1358	1575	1744
85°	623	1397	1624



TEST NUMBER: P231885

CATALOG NUMBER: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.1	2.2
10°-20°	55.7	6.4
20°-30°	87.1	10.1
30°-40°	109.4	12.6
40°-50°	119.7	13.8
50°-60°	116.8	13.5
60°-70°	100.4	11.6
70°-80°	73.4	8.5
80°-90°	45.7	5.3
90°-100°	35.8	4.1
100°-110°	31.7	3.7
110°-120°	26.1	3.0
120°-130°	19.8	2.3
130°-140°	13.4	1.5
140°-150°	7.5	0.9
150°-160°	3.0	0.4
160°-170°	0.5	0.1
170°-180°	0.0	0.0
0°-30°	161.8	18.7
0°-40°	271.2	31.4
0°-60°	507.7	58.7
0°-90°	727.2	84.1
90°-120°	93.6	10.8
90°-150°	134.3	15.5
90°-180°	138.0	16.0
0°-180°	865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	200	200	200	200	200	
5°	199	200	200	200	199	19
15°	192	194	198	200	200	54
25°	179	183	190	194	195	82
35°	159	167	177	183	185	100
45°	134	145	158	166	168	104
55°	108	119	134	144	147	95
65°	73	88	105	117	120	72
75°	37	54	74	86	90	40
85°	6	25	45	58	62	8
90°	0	19	38	51	56	0
95°	0	17	37	50	54	0
105°	0	15	34	46	50	0
115°	0	13	30	41	44	0
125°	0	10	25	34	37	0
135°	0	8	19	27	29	0
145°	0	5	13	19	21	0
155°	0	2	6	11	12	0
165°	0	1	1	2	3	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231885

CATALOG NUMBER: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7
2.5°	199.7	200.3	199.7	200.3	200.3	200.3	200.3	200.3	200.3	200.3	200.3
5°	199.2	199.2	199.2	199.7	199.7	199.7	199.7	200.3	200.3	200.3	200.3
7.5°	198.0	198.6	198.6	198.6	199.2	199.2	199.2	199.7	199.7	199.7	200.3
10°	196.2	196.8	196.8	197.4	198.0	198.0	198.0	198.0	198.6	199.2	199.7
12.5°	194.5	194.5	195.1	195.1	195.7	195.7	196.2	196.8	197.4	198.0	198.6
15°	192.2	192.2	192.7	193.3	193.9	193.9	194.5	195.7	196.2	197.4	198.0
17.5°	189.2	189.2	189.8	190.4	191.0	191.6	192.2	193.3	194.5	195.7	196.2
20°	185.7	186.3	186.9	187.5	188.6	189.2	189.8	191.0	192.2	193.9	194.5
22.5°	182.2	182.8	184.0	184.6	185.7	186.3	186.9	188.6	189.8	191.0	192.7
25°	178.7	179.3	179.9	181.1	182.8	183.4	184.0	185.7	187.5	188.6	190.4
27.5°	174.6	175.2	175.8	177.0	178.7	179.9	180.5	182.2	184.0	185.7	187.5
30°	170.0	170.5	171.1	172.9	174.6	175.8	177.0	178.7	180.5	182.8	184.6
32.5°	164.7	165.9	166.5	168.8	170.5	171.7	172.9	174.6	177.0	179.3	181.1
35°	159.4	160.6	161.2	163.5	165.3	167.0	167.6	170.0	172.3	174.6	177.0
37.5°	157.1	154.2	155.9	158.3	160.0	161.8	162.9	165.3	167.6	170.5	172.3
40°	149.5	148.3	149.5	152.4	154.8	155.9	157.7	160.6	162.9	165.9	167.6
42.5°	141.3	141.9	143.7	146.6	148.9	150.7	152.4	154.8	157.7	160.6	162.9
45°	134.3	135.5	137.3	140.2	143.1	144.8	146.6	149.5	152.4	155.4	158.3
47.5°	130.2	128.5	130.8	133.7	136.7	138.4	140.2	143.1	146.6	149.5	152.4
50°	120.9	122.1	124.4	127.3	130.2	132.6	133.7	137.3	140.8	143.7	146.6
52.5°	113.3	114.5	116.8	120.3	123.2	125.6	127.3	130.8	134.3	137.3	140.8
55°	108.0	107.5	109.8	112.7	116.8	118.6	120.3	123.8	127.3	130.8	133.7
57.5°	98.1	99.3	102.2	105.7	109.2	111.0	113.3	116.8	120.3	123.8	127.3
60°	89.9	91.1	94.0	97.5	101.6	103.4	105.7	109.2	113.3	116.2	119.7
62.5°	81.2	82.4	85.9	89.4	93.4	95.8	98.1	101.6	105.7	109.2	112.7
65°	73.0	74.2	77.7	81.2	85.3	87.6	89.9	94.0	97.5	101.6	105.1
67.5°	63.7	65.4	68.3	73.0	77.1	79.4	81.2	85.9	90.5	93.4	97.5
70°	54.9	56.1	60.2	64.2	68.9	70.7	73.0	77.7	81.8	85.9	89.4
72.5°	46.1	47.9	50.8	55.5	60.2	62.5	64.8	69.5	73.6	77.7	81.8
75°	37.4	39.1	42.6	47.3	52.0	54.3	56.7	61.3	66.0	70.1	73.6
77.5°	29.2	31.0	34.5	39.1	43.8	46.1	48.5	53.1	57.8	61.9	65.4
80°	20.4	22.2	26.3	31.0	35.6	38.0	40.9	45.6	49.6	54.3	57.8
82.5°	12.8	15.2	18.7	23.4	28.6	31.0	33.9	38.0	42.6	47.3	50.8
85°	6.4	8.8	12.3	17.5	22.8	25.1	27.5	32.1	36.8	41.5	45.0
87.5°	2.9	4.7	8.2	12.8	18.1	20.4	23.4	28.0	32.7	36.8	40.9
90°	0.0	2.3	6.4	11.1	15.8	18.7	21.0	25.7	30.4	34.5	38.5
92.5°	0.0	1.8	5.8	10.5	15.2	17.5	20.4	25.1	29.8	33.9	37.4
95°	0.0	1.8	5.3	9.9	14.6	16.9	19.9	24.5	28.6	33.3	36.8
97.5°	0.0	1.8	5.3	9.3	14.6	16.9	19.3	23.9	28.0	32.7	36.2
100°	0.0	1.8	4.7	9.3	14.0	16.4	18.7	23.4	27.5	31.5	35.6
102.5°	0.0	1.2	4.7	8.8	13.4	15.8	18.1	22.8	26.9	31.0	34.5
105°	0.0	1.2	4.7	8.2	12.8	15.2	17.5	21.6	26.3	30.4	33.9
107.5°	0.0	1.2	4.1	8.2	12.3	14.6	16.9	21.0	25.1	29.2	32.7
110°	0.0	1.2	4.1	7.6	11.7	14.0	16.4	20.4	24.5	28.6	32.1



TEST NUMBER: P231885

CATALOG NUMBER: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	3.5	7.6	11.7	13.4	15.8	19.9	23.9	27.5	31.0
115°	0.0	0.6	3.5	7.0	11.1	12.8	15.2	18.7	22.8	26.3	29.8
117.5°	0.0	0.6	3.5	6.4	10.5	12.3	14.0	18.1	21.6	25.1	28.6
120°	0.0	0.6	2.9	6.4	9.9	11.7	13.4	17.5	21.0	23.9	27.5
122.5°	0.0	0.6	2.9	5.8	9.3	11.1	12.8	16.4	19.9	23.4	26.3
125°	0.0	0.6	2.3	5.3	8.8	10.5	12.3	15.8	18.7	22.2	25.1
127.5°	0.0	0.6	2.3	4.7	8.2	9.9	11.7	14.6	17.5	21.0	23.4
130°	0.0	0.6	1.8	4.7	7.6	8.8	10.5	13.4	16.9	19.9	22.2
132.5°	0.0	0.6	1.8	4.1	7.0	8.2	9.9	12.8	15.8	18.1	21.0
135°	0.0	0.6	1.8	3.5	6.4	7.6	8.8	11.7	14.6	16.9	19.3
137.5°	0.0	0.6	1.2	3.5	5.8	7.0	8.2	11.1	13.4	15.8	18.1
140°	0.0	0.0	1.2	2.9	5.3	6.4	7.6	9.9	12.3	14.6	16.4
142.5°	0.0	0.0	0.6	2.3	4.1	5.3	6.4	8.8	11.1	12.8	15.2
145°	0.0	0.0	0.6	1.8	3.5	4.7	5.8	7.6	9.9	11.7	13.4
147.5°	0.0	0.0	0.6	1.8	2.9	4.1	4.7	6.4	8.2	9.9	11.7
150°	0.0	0.0	0.6	1.2	2.3	2.9	4.1	5.3	7.0	8.8	9.9
152.5°	0.0	0.0	0.6	0.6	1.8	2.3	2.9	4.1	5.8	7.0	8.2
155°	0.0	0.0	0.6	0.6	1.2	1.8	2.3	3.5	4.7	5.8	6.4
157.5°	0.0	0.0	0.0	0.6	1.2	1.2	1.8	2.3	3.5	4.1	5.3
160°	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.8	2.3	2.9	3.5
162.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.2	1.8	2.3
165°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P231885

CATALOG NUMBER: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7	199.7
2.5°	200.3	200.3	200.3	199.7	199.7	199.7	199.7	199.2	199.2	199.2
5°	200.3	200.3	200.3	200.3	200.3	199.7	199.7	199.2	199.2	199.2
7.5°	200.3	200.3	200.3	200.3	200.3	200.3	199.7	199.7	199.7	199.7
10°	199.7	200.3	200.3	200.3	200.3	200.3	200.3	200.3	200.3	199.7
12.5°	199.2	199.7	199.7	200.3	200.3	200.3	200.3	199.7	199.7	199.7
15°	198.6	199.2	199.7	199.7	199.7	200.3	200.3	199.7	199.7	199.7
17.5°	197.4	198.0	198.6	198.6	199.2	199.2	199.2	199.2	199.2	199.2
20°	195.7	196.2	197.4	198.0	198.0	198.0	198.0	198.6	198.6	198.6
22.5°	193.9	194.5	195.7	196.2	196.2	196.8	196.8	196.8	196.8	196.8
25°	191.6	192.7	193.3	193.9	194.5	195.1	195.1	195.1	195.7	195.1
27.5°	189.2	190.4	191.6	192.2	192.2	192.7	193.3	193.3	193.3	193.3
30°	185.7	187.5	188.1	189.2	189.8	189.8	190.4	191.0	191.0	191.0
32.5°	182.8	184.0	185.7	186.3	186.9	187.5	187.5	188.1	188.1	188.1
35°	178.7	179.9	181.6	182.8	182.8	183.4	184.0	184.6	184.6	184.6
37.5°	174.0	176.4	177.6	178.7	179.3	179.3	180.5	181.1	181.1	181.1
40°	170.0	171.7	173.5	174.6	175.2	175.2	176.4	176.4	177.0	177.0
42.5°	164.7	167.0	168.8	170.0	170.5	171.1	171.7	172.3	172.9	172.9
45°	160.6	162.4	164.1	165.3	165.9	166.5	167.6	168.2	168.2	168.2
47.5°	154.8	157.1	158.9	160.0	160.6	161.8	162.4	162.9	162.9	162.9
50°	148.9	151.3	153.6	155.4	155.4	156.5	157.1	158.3	158.3	158.3
52.5°	143.1	145.4	147.8	149.5	150.1	150.7	151.9	152.4	153.0	152.4
55°	136.7	139.0	141.3	143.1	143.7	144.3	145.4	146.0	146.6	146.6
57.5°	129.7	132.6	134.9	136.7	137.3	137.8	139.0	140.2	140.2	140.8
60°	123.2	125.6	127.9	129.7	130.8	131.4	132.6	133.2	133.7	133.7
62.5°	115.6	118.6	121.5	123.2	123.8	125.0	125.6	126.2	126.7	126.7
65°	108.0	111.0	113.9	115.6	116.8	117.4	118.6	119.1	119.7	120.3
67.5°	101.0	103.4	106.3	108.0	108.6	109.8	111.0	112.1	112.7	112.7
70°	92.9	95.8	98.1	100.5	101.6	102.2	103.4	104.0	105.1	104.5
72.5°	84.7	87.6	91.1	92.9	93.4	94.6	95.8	97.0	97.5	97.0
75°	77.1	80.0	82.9	84.7	85.9	86.4	88.2	89.4	89.4	89.9
77.5°	68.9	72.4	75.3	77.1	78.3	78.8	80.6	81.2	81.8	81.8
80°	61.3	64.8	67.2	69.5	71.3	71.3	73.0	73.6	74.2	74.2
82.5°	54.3	57.8	60.7	62.5	63.7	64.8	66.0	66.6	67.2	67.2
85°	48.5	52.0	54.3	57.2	57.8	59.0	60.2	61.3	61.9	61.9
87.5°	44.4	47.9	50.2	52.6	53.7	54.9	56.1	57.2	57.8	57.8
90°	42.1	45.6	47.9	50.2	51.4	52.6	53.7	54.9	55.5	55.5
92.5°	40.9	44.4	47.3	49.1	50.2	51.4	52.6	53.7	54.3	54.3
95°	40.3	43.8	46.1	48.5	49.6	50.2	52.0	52.6	53.1	53.7
97.5°	39.7	42.6	45.6	47.9	49.1	49.6	51.4	52.0	52.6	52.6
100°	39.1	42.1	45.0	46.7	47.9	49.1	50.2	51.4	51.4	52.0
102.5°	38.0	40.9	43.8	46.1	46.7	47.9	49.1	50.2	50.8	50.8
105°	36.8	40.3	42.6	45.0	45.6	46.7	47.9	49.1	49.6	49.6
107.5°	36.2	39.1	41.5	43.8	44.4	45.6	46.7	47.9	48.5	48.5
110°	35.0	38.0	40.3	42.6	43.2	44.4	45.6	46.1	46.7	46.7



TEST NUMBER: P231885

CATALOG NUMBER: FVS4M-2-LD4-35-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	33.9	36.8	39.1	40.9	42.1	42.6	43.8	45.0	45.6	45.6
115°	32.7	35.6	38.0	39.7	40.9	41.5	42.6	43.2	43.8	43.8
117.5°	31.5	33.9	36.2	38.5	39.1	39.7	40.9	42.1	42.1	42.6
120°	30.4	32.7	35.0	36.8	37.4	38.5	39.1	40.3	40.3	40.9
122.5°	28.6	31.5	33.3	35.0	36.2	36.8	38.0	38.5	38.5	39.1
125°	27.5	29.8	32.1	33.9	34.5	35.0	36.2	36.8	36.8	37.4
127.5°	26.3	28.0	30.4	32.1	32.7	33.3	34.5	35.0	35.0	35.0
130°	24.5	26.9	28.6	30.4	31.0	31.5	32.1	32.7	33.3	33.3
132.5°	23.4	25.1	26.9	28.6	29.2	29.8	30.4	31.0	31.5	31.5
135°	21.6	23.4	25.1	26.3	26.9	27.5	28.6	29.2	29.2	29.2
137.5°	19.9	21.6	23.4	24.5	25.1	25.7	26.3	26.9	27.5	27.5
140°	18.1	19.9	21.6	22.8	23.4	23.9	24.5	25.1	25.1	25.1
142.5°	16.9	18.1	19.9	21.0	21.6	21.6	22.2	22.8	22.8	22.8
145°	15.2	16.4	17.5	18.7	19.3	19.9	20.4	20.4	21.0	21.0
147.5°	13.4	14.6	15.8	16.9	17.5	17.5	18.1	18.7	18.7	18.7
150°	11.7	12.8	14.0	14.6	15.2	15.2	15.8	16.4	16.4	16.4
152.5°	9.9	11.1	12.3	12.8	12.8	13.4	14.0	14.0	14.0	14.0
155°	8.2	8.8	9.9	10.5	11.1	11.1	11.7	11.7	11.7	11.7
157.5°	5.8	7.0	7.6	8.8	8.8	9.3	9.3	9.3	9.3	9.3
160°	4.7	5.3	5.8	6.4	7.0	7.0	7.0	7.6	7.6	7.6
162.5°	2.9	3.5	3.5	4.1	4.7	4.7	5.3	5.3	5.3	5.3
165°	1.8	1.8	2.3	2.3	2.3	2.9	2.9	2.9	2.9	2.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)