

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: P231889

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231889
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-LD4-35-1STD-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

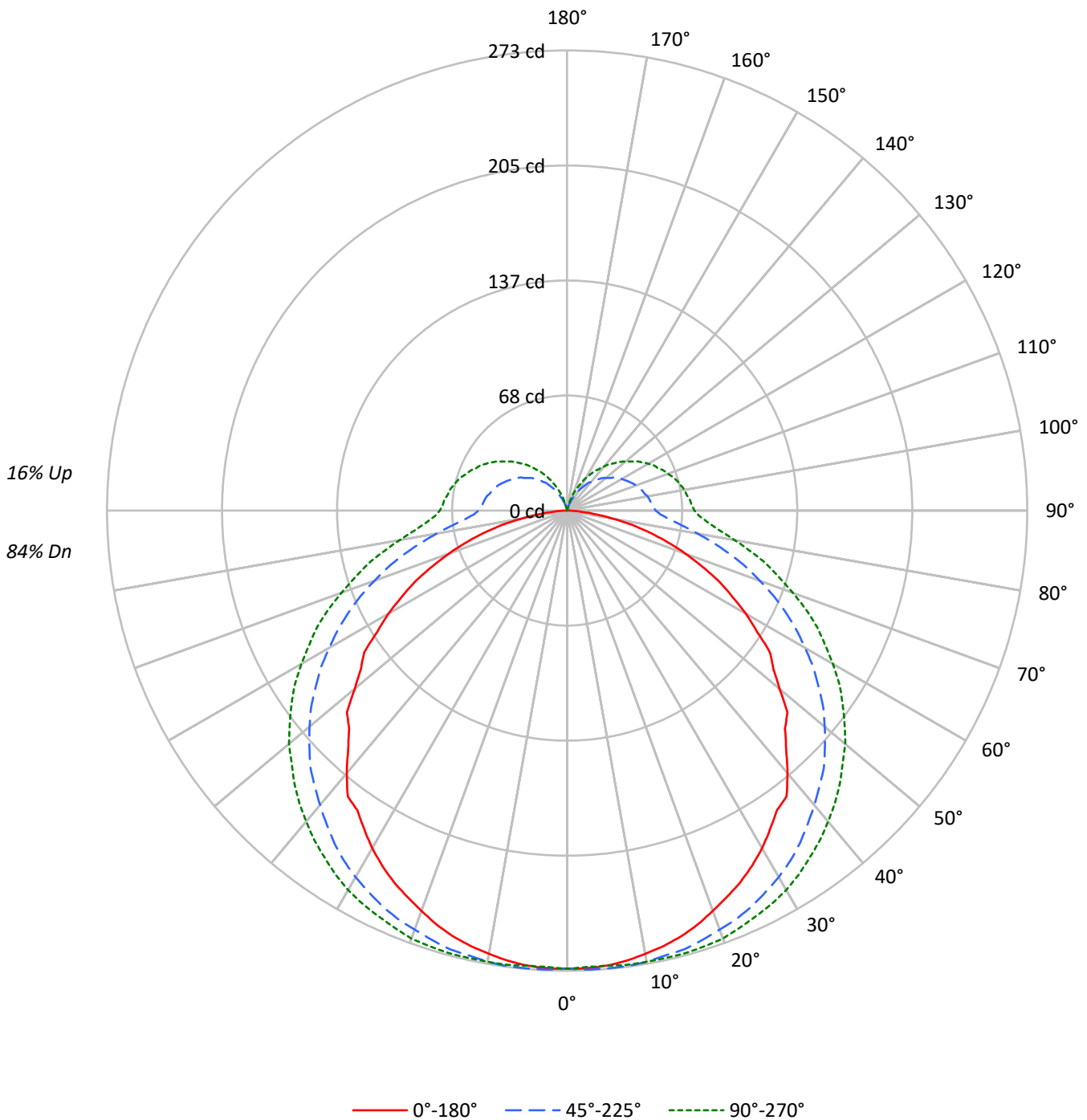
Lumens per Lamp: N/A
Luminaire Lumens: 1177.0 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 16.99
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

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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	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°	4885	4885	4885
5°	4847	4714	4645
10°	4790	4563	4485
15°	4741	4427	4356
20°	4667	4290	4241
25°	4612	4177	4112
30°	4543	4055	4006
35°	4455	3926	3879
40°	4410	3784	3757
45°	4232	3666	3636
50°	4119	3512	3511
55°	4041	3345	3366
60°	3762	3157	3208
65°	3490	2954	3044
70°	3094	2712	2823
75°	2589	2446	2624
80°	1850	2144	2372
85°	847	1900	2209



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.9	2.2
10°-20°	75.7	6.4
20°-30°	118.5	10.1
30°-40°	148.9	12.6
40°-50°	162.8	13.8
50°-60°	159.0	13.5
60°-70°	136.6	11.6
70°-80°	99.9	8.5
80°-90°	62.2	5.3
90°-100°	48.7	4.1
100°-110°	43.1	3.7
110°-120°	35.6	3.0
120°-130°	27.0	2.3
130°-140°	18.2	1.5
140°-150°	10.3	0.9
150°-160°	4.1	0.4
160°-170°	0.6	0.1
170°-180°	0.0	0.0
0°-30°	220.2	18.7
0°-40°	369.1	31.4
0°-60°	690.9	58.7
0°-90°	989.5	84.1
90°-120°	127.3	10.8
90°-150°	182.7	15.5
90°-180°	187.0	15.9
0°-180°	1177.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	272	272	272	272	272	
5°	271	272	273	273	271	26
15°	262	264	269	272	272	74
25°	243	250	259	265	265	112
35°	217	227	241	249	251	137
45°	183	197	215	226	229	142
55°	147	161	182	196	200	129
65°	99	119	143	159	164	98
75°	51	74	100	117	122	54
85°	9	34	61	79	84	11
90°	0	25	52	70	76	1
95°	0	23	50	68	73	0
105°	0	21	46	62	68	0
115°	0	18	40	56	60	0
125°	0	14	34	47	51	0
135°	0	10	26	37	40	0
145°	0	6	18	26	29	0
155°	0	2	9	15	16	0
165°	0	1	2	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8
2.5°	271.8	272.6	271.8	272.6	272.6	272.6	272.6	272.6	272.6	272.6	272.6
5°	271.0	271.0	271.0	271.8	271.8	271.8	271.8	272.6	272.6	272.6	272.6
7.5°	269.4	270.2	270.2	270.2	271.0	271.0	271.0	271.8	271.8	271.8	272.6
10°	267.0	267.8	267.8	268.6	269.4	269.4	269.4	269.4	270.2	271.0	271.8
12.5°	264.6	264.6	265.4	265.4	266.2	266.2	267.0	267.8	268.6	269.4	270.2
15°	261.5	261.5	262.3	263.0	263.8	263.8	264.6	266.2	267.0	268.6	269.4
17.5°	257.5	257.5	258.3	259.1	259.9	260.7	261.5	263.0	264.6	266.2	267.0
20°	252.7	253.5	254.3	255.1	256.7	257.5	258.3	259.9	261.5	263.8	264.6
22.5°	248.0	248.7	250.3	251.1	252.7	253.5	254.3	256.7	258.3	259.9	262.3
25°	243.2	244.0	244.8	246.4	248.7	249.5	250.3	252.7	255.1	256.7	259.1
27.5°	237.6	238.4	239.2	240.8	243.2	244.8	245.6	248.0	250.3	252.7	255.1
30°	231.3	232.1	232.9	235.2	237.6	239.2	240.8	243.2	245.6	248.7	251.1
32.5°	224.1	225.7	226.5	229.7	232.1	233.6	235.2	237.6	240.8	244.0	246.4
35°	217.0	218.5	219.3	222.5	224.9	227.3	228.1	231.3	234.4	237.6	240.8
37.5°	213.8	209.8	212.2	215.4	217.8	220.1	221.7	224.9	228.1	232.1	234.4
40°	203.4	201.9	203.4	207.4	210.6	212.2	214.6	218.5	221.7	225.7	228.1
42.5°	192.3	193.1	195.5	199.5	202.7	205.0	207.4	210.6	214.6	218.5	221.7
45°	182.8	184.4	186.8	190.7	194.7	197.1	199.5	203.4	207.4	211.4	215.4
47.5°	177.2	174.8	178.0	182.0	186.0	188.3	190.7	194.7	199.5	203.4	207.4
50°	164.5	166.1	169.3	173.2	177.2	180.4	182.0	186.8	191.5	195.5	199.5
52.5°	154.2	155.8	158.9	163.7	167.7	170.9	173.2	178.0	182.8	186.8	191.5
55°	147.0	146.2	149.4	153.4	158.9	161.3	163.7	168.5	173.2	178.0	182.0
57.5°	133.5	135.1	139.1	143.8	148.6	151.0	154.2	158.9	163.7	168.5	173.2
60°	122.4	124.0	127.9	132.7	138.3	140.7	143.8	148.6	154.2	158.1	162.9
62.5°	110.5	112.1	116.8	121.6	127.2	130.3	133.5	138.3	143.8	148.6	153.4
65°	99.3	100.9	105.7	110.5	116.0	119.2	122.4	127.9	132.7	138.3	143.0
67.5°	86.6	89.0	93.0	99.3	104.9	108.1	110.5	116.8	123.2	127.2	132.7
70°	74.7	76.3	81.9	87.4	93.8	96.2	99.3	105.7	111.3	116.8	121.6
72.5°	62.8	65.2	69.1	75.5	81.9	85.0	88.2	94.6	100.1	105.7	111.3
75°	50.9	53.2	58.0	64.4	70.7	73.9	77.1	83.4	89.8	95.4	100.1
77.5°	39.7	42.1	46.9	53.2	59.6	62.8	66.0	72.3	78.7	84.2	89.0
80°	27.8	30.2	35.8	42.1	48.5	51.7	55.6	62.0	67.6	73.9	78.7
82.5°	17.5	20.7	25.4	31.8	38.9	42.1	46.1	51.7	58.0	64.4	69.1
85°	8.7	11.9	16.7	23.8	31.0	34.2	37.4	43.7	50.1	56.4	61.2
87.5°	4.0	6.4	11.1	17.5	24.6	27.8	31.8	38.1	44.5	50.1	55.6
90°	0.0	3.2	8.7	15.1	21.5	25.4	28.6	35.0	41.3	46.9	52.5
92.5°	0.0	2.4	7.9	14.3	20.7	23.8	27.8	34.2	40.5	46.1	50.9
95°	0.0	2.4	7.2	13.5	19.9	23.0	27.0	33.4	38.9	45.3	50.1
97.5°	0.0	2.4	7.2	12.7	19.9	23.0	26.2	32.6	38.1	44.5	49.3
100°	0.0	2.4	6.4	12.7	19.1	22.3	25.4	31.8	37.4	42.9	48.5
102.5°	0.0	1.6	6.4	11.9	18.3	21.5	24.6	31.0	36.6	42.1	46.9
105°	0.0	1.6	6.4	11.1	17.5	20.7	23.8	29.4	35.8	41.3	46.1
107.5°	0.0	1.6	5.6	11.1	16.7	19.9	23.0	28.6	34.2	39.7	44.5
110°	0.0	1.6	5.6	10.3	15.9	19.1	22.3	27.8	33.4	38.9	43.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.6	4.8	10.3	15.9	18.3	21.5	27.0	32.6	37.4	42.1
115°	0.0	0.8	4.8	9.5	15.1	17.5	20.7	25.4	31.0	35.8	40.5
117.5°	0.0	0.8	4.8	8.7	14.3	16.7	19.1	24.6	29.4	34.2	38.9
120°	0.0	0.8	4.0	8.7	13.5	15.9	18.3	23.8	28.6	32.6	37.4
122.5°	0.0	0.8	4.0	7.9	12.7	15.1	17.5	22.3	27.0	31.8	35.8
125°	0.0	0.8	3.2	7.2	11.9	14.3	16.7	21.5	25.4	30.2	34.2
127.5°	0.0	0.8	3.2	6.4	11.1	13.5	15.9	19.9	23.8	28.6	31.8
130°	0.0	0.8	2.4	6.4	10.3	11.9	14.3	18.3	23.0	27.0	30.2
132.5°	0.0	0.8	2.4	5.6	9.5	11.1	13.5	17.5	21.5	24.6	28.6
135°	0.0	0.8	2.4	4.8	8.7	10.3	11.9	15.9	19.9	23.0	26.2
137.5°	0.0	0.8	1.6	4.8	7.9	9.5	11.1	15.1	18.3	21.5	24.6
140°	0.0	0.0	1.6	4.0	7.2	8.7	10.3	13.5	16.7	19.9	22.3
142.5°	0.0	0.0	0.8	3.2	5.6	7.2	8.7	11.9	15.1	17.5	20.7
145°	0.0	0.0	0.8	2.4	4.8	6.4	7.9	10.3	13.5	15.9	18.3
147.5°	0.0	0.0	0.8	2.4	4.0	5.6	6.4	8.7	11.1	13.5	15.9
150°	0.0	0.0	0.8	1.6	3.2	4.0	5.6	7.2	9.5	11.9	13.5
152.5°	0.0	0.0	0.8	0.8	2.4	3.2	4.0	5.6	7.9	9.5	11.1
155°	0.0	0.0	0.8	0.8	1.6	2.4	3.2	4.8	6.4	7.9	8.7
157.5°	0.0	0.0	0.0	0.8	1.6	1.6	2.4	3.2	4.8	5.6	7.2
160°	0.0	0.0	0.0	0.8	0.8	0.8	1.6	2.4	3.2	4.0	4.8
162.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6	2.4	3.2
165°	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8	271.8
2.5°	272.6	272.6	272.6	271.8	271.8	271.8	271.8	271.0	271.0	271.0
5°	272.6	272.6	272.6	272.6	272.6	271.8	271.8	271.0	271.0	271.0
7.5°	272.6	272.6	272.6	272.6	272.6	272.6	271.8	271.8	271.8	271.8
10°	271.8	272.6	272.6	272.6	272.6	272.6	272.6	272.6	272.6	271.8
12.5°	271.0	271.8	271.8	272.6	272.6	272.6	272.6	271.8	271.8	271.8
15°	270.2	271.0	271.8	271.8	271.8	272.6	272.6	271.8	271.8	271.8
17.5°	268.6	269.4	270.2	270.2	271.0	271.0	271.0	271.0	271.0	271.0
20°	266.2	267.0	268.6	269.4	269.4	269.4	269.4	270.2	270.2	270.2
22.5°	263.8	264.6	266.2	267.0	267.0	267.8	267.8	267.8	267.8	267.8
25°	260.7	262.3	263.0	263.8	264.6	265.4	265.4	265.4	266.2	265.4
27.5°	257.5	259.1	260.7	261.5	261.5	262.3	263.0	263.0	263.0	263.0
30°	252.7	255.1	255.9	257.5	258.3	258.3	259.1	259.9	259.9	259.9
32.5°	248.7	250.3	252.7	253.5	254.3	255.1	255.1	255.9	255.9	255.9
35°	243.2	244.8	247.2	248.7	248.7	249.5	250.3	251.1	251.1	251.1
37.5°	236.8	240.0	241.6	243.2	244.0	244.0	245.6	246.4	246.4	246.4
40°	231.3	233.6	236.0	237.6	238.4	238.4	240.0	240.0	240.8	240.8
42.5°	224.1	227.3	229.7	231.3	232.1	232.9	233.6	234.4	235.2	235.2
45°	218.5	220.9	223.3	224.9	225.7	226.5	228.1	228.9	228.9	228.9
47.5°	210.6	213.8	216.2	217.8	218.5	220.1	220.9	221.7	221.7	221.7
50°	202.7	205.8	209.0	211.4	211.4	213.0	213.8	215.4	215.4	215.4
52.5°	194.7	197.9	201.1	203.4	204.2	205.0	206.6	207.4	208.2	207.4
55°	186.0	189.1	192.3	194.7	195.5	196.3	197.9	198.7	199.5	199.5
57.5°	176.4	180.4	183.6	186.0	186.8	187.6	189.1	190.7	190.7	191.5
60°	167.7	170.9	174.0	176.4	178.0	178.8	180.4	181.2	182.0	182.0
62.5°	157.4	161.3	165.3	167.7	168.5	170.1	170.9	171.7	172.5	172.5
65°	147.0	151.0	155.0	157.4	158.9	159.7	161.3	162.1	162.9	163.7
67.5°	137.5	140.7	144.6	147.0	147.8	149.4	151.0	152.6	153.4	153.4
70°	126.4	130.3	133.5	136.7	138.3	139.1	140.7	141.5	143.0	142.3
72.5°	115.2	119.2	124.0	126.4	127.2	128.7	130.3	131.9	132.7	131.9
75°	104.9	108.9	112.8	115.2	116.8	117.6	120.0	121.6	121.6	122.4
77.5°	93.8	98.5	102.5	104.9	106.5	107.3	109.7	110.5	111.3	111.3
80°	83.4	88.2	91.4	94.6	97.0	97.0	99.3	100.1	100.9	100.9
82.5°	73.9	78.7	82.7	85.0	86.6	88.2	89.8	90.6	91.4	91.4
85°	66.0	70.7	73.9	77.9	78.7	80.3	81.9	83.4	84.2	84.2
87.5°	60.4	65.2	68.3	71.5	73.1	74.7	76.3	77.9	78.7	78.7
90°	57.2	62.0	65.2	68.3	69.9	71.5	73.1	74.7	75.5	75.5
92.5°	55.6	60.4	64.4	66.8	68.3	69.9	71.5	73.1	73.9	73.9
95°	54.8	59.6	62.8	66.0	67.6	68.3	70.7	71.5	72.3	73.1
97.5°	54.0	58.0	62.0	65.2	66.8	67.6	69.9	70.7	71.5	71.5
100°	53.2	57.2	61.2	63.6	65.2	66.8	68.3	69.9	69.9	70.7
102.5°	51.7	55.6	59.6	62.8	63.6	65.2	66.8	68.3	69.1	69.1
105°	50.1	54.8	58.0	61.2	62.0	63.6	65.2	66.8	67.6	67.6
107.5°	49.3	53.2	56.4	59.6	60.4	62.0	63.6	65.2	66.0	66.0
110°	47.7	51.7	54.8	58.0	58.8	60.4	62.0	62.8	63.6	63.6



TEST NUMBER: P231889

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	46.1	50.1	53.2	55.6	57.2	58.0	59.6	61.2	62.0	62.0
115°	44.5	48.5	51.7	54.0	55.6	56.4	58.0	58.8	59.6	59.6
117.5°	42.9	46.1	49.3	52.5	53.2	54.0	55.6	57.2	57.2	58.0
120°	41.3	44.5	47.7	50.1	50.9	52.5	53.2	54.8	54.8	55.6
122.5°	38.9	42.9	45.3	47.7	49.3	50.1	51.7	52.5	52.5	53.2
125°	37.4	40.5	43.7	46.1	46.9	47.7	49.3	50.1	50.1	50.9
127.5°	35.8	38.1	41.3	43.7	44.5	45.3	46.9	47.7	47.7	47.7
130°	33.4	36.6	38.9	41.3	42.1	42.9	43.7	44.5	45.3	45.3
132.5°	31.8	34.2	36.6	38.9	39.7	40.5	41.3	42.1	42.9	42.9
135°	29.4	31.8	34.2	35.8	36.6	37.4	38.9	39.7	39.7	39.7
137.5°	27.0	29.4	31.8	33.4	34.2	35.0	35.8	36.6	37.4	37.4
140°	24.6	27.0	29.4	31.0	31.8	32.6	33.4	34.2	34.2	34.2
142.5°	23.0	24.6	27.0	28.6	29.4	29.4	30.2	31.0	31.0	31.0
145°	20.7	22.3	23.8	25.4	26.2	27.0	27.8	27.8	28.6	28.6
147.5°	18.3	19.9	21.5	23.0	23.8	23.8	24.6	25.4	25.4	25.4
150°	15.9	17.5	19.1	19.9	20.7	20.7	21.5	22.3	22.3	22.3
152.5°	13.5	15.1	16.7	17.5	17.5	18.3	19.1	19.1	19.1	19.1
155°	11.1	11.9	13.5	14.3	15.1	15.1	15.9	15.9	15.9	15.9
157.5°	7.9	9.5	10.3	11.9	11.9	12.7	12.7	12.7	12.7	12.7
160°	6.4	7.2	7.9	8.7	9.5	9.5	9.5	10.3	10.3	10.3
162.5°	4.0	4.8	4.8	5.6	6.4	6.4	7.2	7.2	7.2	7.2
165°	2.4	2.4	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0
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)