

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: P231888

Luminaire Tested: **FVS4M-2-LD4-30-1STD-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231888  
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-LD4-30-1STD-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH PFS125 LENS  
Light Source: (42) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

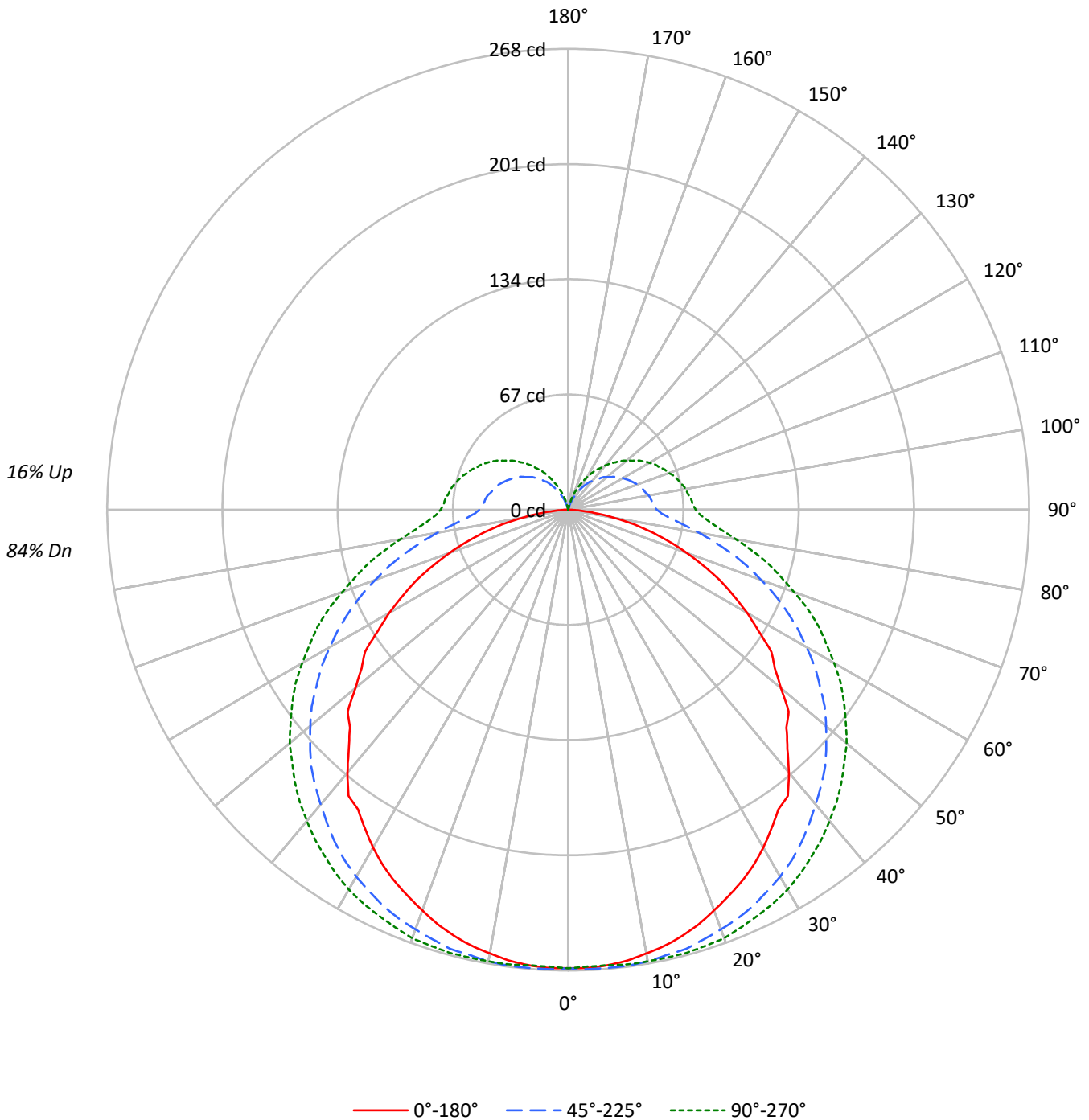
Lumens per Lamp: N/A  
Luminaire Lumens: 1155.0 lumens  
Efficiency: N/A  
Efficacy: 68.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')  
CIE Type: Semi-Direct

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	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°	4793	4793	4793
5°	4756	4626	4558
10°	4700	4477	4401
15°	4652	4345	4275
20°	4580	4210	4163
25°	4525	4098	4036
30°	4457	3979	3930
35°	4371	3853	3806
40°	4327	3713	3687
45°	4153	3596	3568
50°	4041	3445	3445
55°	3967	3283	3302
60°	3691	3099	3148
65°	3427	2901	2988
70°	3036	2661	2770
75°	2538	2402	2574
80°	1817	2103	2327
85°	837	1863	2170



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.4	2.2
10°-20°	74.3	6.4
20°-30°	116.3	10.1
30°-40°	146.1	12.6
40°-50°	159.8	13.8
50°-60°	156.0	13.5
60°-70°	134.0	11.6
70°-80°	98.0	8.5
80°-90°	61.0	5.3
90°-100°	47.7	4.1
100°-110°	42.3	3.7
110°-120°	34.9	3.0
120°-130°	26.5	2.3
130°-140°	17.9	1.5
140°-150°	10.1	0.9
150°-160°	4.0	0.4
160°-170°	0.6	0.1
170°-180°	0.0	0.0
0°-30°	216.1	18.7
0°-40°	362.2	31.4
0°-60°	678.0	58.7
0°-90°	971.0	84.1
90°-120°	124.9	10.8
90°-150°	179.3	15.5
90°-180°	184.0	15.9
0°-180°	1155.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	267	267	267	267	267	
5°	266	267	268	268	266	25
15°	257	259	264	267	267	72
25°	239	245	254	260	260	110
35°	213	223	236	244	246	134
45°	179	193	211	222	225	140
55°	144	158	179	192	196	127
65°	98	117	140	156	161	96
75°	50	72	98	115	120	53
85°	9	34	60	77	83	11
90°	0	25	52	69	74	1
95°	0	23	49	66	72	0
105°	0	20	45	61	66	0
115°	0	17	40	55	58	0
125°	0	14	34	46	50	0
135°	0	10	26	36	39	0
145°	0	6	18	26	28	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



TEST NUMBER: P231888

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7
2.5°	266.7	267.5	266.7	267.5	267.5	267.5	267.5	267.5	267.5	267.5	267.5
5°	265.9	265.9	265.9	266.7	266.7	266.7	266.7	267.5	267.5	267.5	267.5
7.5°	264.4	265.2	265.2	265.2	265.9	265.9	265.9	266.7	266.7	266.7	267.5
10°	262.0	262.8	262.8	263.6	264.4	264.4	264.4	264.4	265.2	265.9	266.7
12.5°	259.7	259.7	260.5	260.5	261.3	261.3	262.0	262.8	263.6	264.4	265.2
15°	256.6	256.6	257.4	258.1	258.9	258.9	259.7	261.3	262.0	263.6	264.4
17.5°	252.7	252.7	253.5	254.2	255.0	255.8	256.6	258.1	259.7	261.3	262.0
20°	248.0	248.8	249.6	250.3	251.9	252.7	253.5	255.0	256.6	258.9	259.7
22.5°	243.3	244.1	245.7	246.4	248.0	248.8	249.6	251.9	253.5	255.0	257.4
25°	238.6	239.4	240.2	241.8	244.1	244.9	245.7	248.0	250.3	251.9	254.2
27.5°	233.2	234.0	234.7	236.3	238.6	240.2	241.0	243.3	245.7	248.0	250.3
30°	226.9	227.7	228.5	230.8	233.2	234.7	236.3	238.6	241.0	244.1	246.4
32.5°	219.9	221.5	222.3	225.4	227.7	229.3	230.8	233.2	236.3	239.4	241.8
35°	212.9	214.5	215.2	218.4	220.7	223.0	223.8	226.9	230.1	233.2	236.3
37.5°	209.8	205.9	208.2	211.3	213.7	216.0	217.6	220.7	223.8	227.7	230.1
40°	199.6	198.1	199.6	203.5	206.7	208.2	210.6	214.5	217.6	221.5	223.8
42.5°	188.7	189.5	191.8	195.7	198.9	201.2	203.5	206.7	210.6	214.5	217.6
45°	179.4	180.9	183.3	187.2	191.1	193.4	195.7	199.6	203.5	207.4	211.3
47.5°	173.9	171.6	174.7	178.6	182.5	184.8	187.2	191.1	195.7	199.6	203.5
50°	161.4	163.0	166.1	170.0	173.9	177.0	178.6	183.3	187.9	191.8	195.7
52.5°	151.3	152.9	156.0	160.7	164.6	167.7	170.0	174.7	179.4	183.3	187.9
55°	144.3	143.5	146.6	150.5	156.0	158.3	160.7	165.3	170.0	174.7	178.6
57.5°	131.0	132.6	136.5	141.2	145.8	148.2	151.3	156.0	160.7	165.3	170.0
60°	120.1	121.7	125.6	130.2	135.7	138.0	141.2	145.8	151.3	155.2	159.9
62.5°	108.4	110.0	114.6	119.3	124.8	127.9	131.0	135.7	141.2	145.8	150.5
65°	97.5	99.0	103.7	108.4	113.9	117.0	120.1	125.6	130.2	135.7	140.4
67.5°	85.0	87.3	91.2	97.5	102.9	106.1	108.4	114.6	120.9	124.8	130.2
70°	73.3	74.9	80.3	85.8	92.0	94.4	97.5	103.7	109.2	114.6	119.3
72.5°	61.6	63.9	67.8	74.1	80.3	83.4	86.6	92.8	98.3	103.7	109.2
75°	49.9	52.3	56.9	63.2	69.4	72.5	75.6	81.9	88.1	93.6	98.3
77.5°	39.0	41.3	46.0	52.3	58.5	61.6	64.7	71.0	77.2	82.7	87.3
80°	27.3	29.6	35.1	41.3	47.6	50.7	54.6	60.8	66.3	72.5	77.2
82.5°	17.2	20.3	25.0	31.2	38.2	41.3	45.2	50.7	56.9	63.2	67.8
85°	8.6	11.7	16.4	23.4	30.4	33.5	36.7	42.9	49.1	55.4	60.0
87.5°	3.9	6.2	10.9	17.2	24.2	27.3	31.2	37.4	43.7	49.1	54.6
90°	0.0	3.1	8.6	14.8	21.1	25.0	28.1	34.3	40.6	46.0	51.5
92.5°	0.0	2.3	7.8	14.0	20.3	23.4	27.3	33.5	39.8	45.2	49.9
95°	0.0	2.3	7.0	13.3	19.5	22.6	26.5	32.8	38.2	44.5	49.1
97.5°	0.0	2.3	7.0	12.5	19.5	22.6	25.7	32.0	37.4	43.7	48.4
100°	0.0	2.3	6.2	12.5	18.7	21.8	25.0	31.2	36.7	42.1	47.6
102.5°	0.0	1.6	6.2	11.7	17.9	21.1	24.2	30.4	35.9	41.3	46.0
105°	0.0	1.6	6.2	10.9	17.2	20.3	23.4	28.9	35.1	40.6	45.2
107.5°	0.0	1.6	5.5	10.9	16.4	19.5	22.6	28.1	33.5	39.0	43.7
110°	0.0	1.6	5.5	10.1	15.6	18.7	21.8	27.3	32.8	38.2	42.9



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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	4.7	10.1	15.6	17.9	21.1	26.5	32.0	36.7	41.3
115°	0.0	0.8	4.7	9.4	14.8	17.2	20.3	25.0	30.4	35.1	39.8
117.5°	0.0	0.8	4.7	8.6	14.0	16.4	18.7	24.2	28.9	33.5	38.2
120°	0.0	0.8	3.9	8.6	13.3	15.6	17.9	23.4	28.1	32.0	36.7
122.5°	0.0	0.8	3.9	7.8	12.5	14.8	17.2	21.8	26.5	31.2	35.1
125°	0.0	0.8	3.1	7.0	11.7	14.0	16.4	21.1	25.0	29.6	33.5
127.5°	0.0	0.8	3.1	6.2	10.9	13.3	15.6	19.5	23.4	28.1	31.2
130°	0.0	0.8	2.3	6.2	10.1	11.7	14.0	17.9	22.6	26.5	29.6
132.5°	0.0	0.8	2.3	5.5	9.4	10.9	13.3	17.2	21.1	24.2	28.1
135°	0.0	0.8	2.3	4.7	8.6	10.1	11.7	15.6	19.5	22.6	25.7
137.5°	0.0	0.8	1.6	4.7	7.8	9.4	10.9	14.8	17.9	21.1	24.2
140°	0.0	0.0	1.6	3.9	7.0	8.6	10.1	13.3	16.4	19.5	21.8
142.5°	0.0	0.0	0.8	3.1	5.5	7.0	8.6	11.7	14.8	17.2	20.3
145°	0.0	0.0	0.8	2.3	4.7	6.2	7.8	10.1	13.3	15.6	17.9
147.5°	0.0	0.0	0.8	2.3	3.9	5.5	6.2	8.6	10.9	13.3	15.6
150°	0.0	0.0	0.8	1.6	3.1	3.9	5.5	7.0	9.4	11.7	13.3
152.5°	0.0	0.0	0.8	0.8	2.3	3.1	3.9	5.5	7.8	9.4	10.9
155°	0.0	0.0	0.8	0.8	1.6	2.3	3.1	4.7	6.2	7.8	8.6
157.5°	0.0	0.0	0.0	0.8	1.6	1.6	2.3	3.1	4.7	5.5	7.0
160°	0.0	0.0	0.0	0.8	0.8	0.8	1.6	2.3	3.1	3.9	4.7
162.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6	2.3	3.1
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°	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7	266.7
2.5°	267.5	267.5	267.5	266.7	266.7	266.7	266.7	265.9	265.9	265.9
5°	267.5	267.5	267.5	267.5	267.5	266.7	266.7	265.9	265.9	265.9
7.5°	267.5	267.5	267.5	267.5	267.5	267.5	266.7	266.7	266.7	266.7
10°	266.7	267.5	267.5	267.5	267.5	267.5	267.5	267.5	267.5	266.7
12.5°	265.9	266.7	266.7	267.5	267.5	267.5	267.5	266.7	266.7	266.7
15°	265.2	265.9	266.7	266.7	266.7	267.5	267.5	266.7	266.7	266.7
17.5°	263.6	264.4	265.2	265.2	265.9	265.9	265.9	265.9	265.9	265.9
20°	261.3	262.0	263.6	264.4	264.4	264.4	264.4	265.2	265.2	265.2
22.5°	258.9	259.7	261.3	262.0	262.0	262.8	262.8	262.8	262.8	262.8
25°	255.8	257.4	258.1	258.9	259.7	260.5	260.5	260.5	261.3	260.5
27.5°	252.7	254.2	255.8	256.6	256.6	257.4	258.1	258.1	258.1	258.1
30°	248.0	250.3	251.1	252.7	253.5	253.5	254.2	255.0	255.0	255.0
32.5°	244.1	245.7	248.0	248.8	249.6	250.3	250.3	251.1	251.1	251.1
35°	238.6	240.2	242.5	244.1	244.1	244.9	245.7	246.4	246.4	246.4
37.5°	232.4	235.5	237.1	238.6	239.4	239.4	241.0	241.8	241.8	241.8
40°	226.9	229.3	231.6	233.2	234.0	234.0	235.5	235.5	236.3	236.3
42.5°	219.9	223.0	225.4	226.9	227.7	228.5	229.3	230.1	230.8	230.8
45°	214.5	216.8	219.1	220.7	221.5	222.3	223.8	224.6	224.6	224.6
47.5°	206.7	209.8	212.1	213.7	214.5	216.0	216.8	217.6	217.6	217.6
50°	198.9	202.0	205.1	207.4	207.4	209.0	209.8	211.3	211.3	211.3
52.5°	191.1	194.2	197.3	199.6	200.4	201.2	202.8	203.5	204.3	203.5
55°	182.5	185.6	188.7	191.1	191.8	192.6	194.2	195.0	195.7	195.7
57.5°	173.1	177.0	180.1	182.5	183.3	184.0	185.6	187.2	187.2	187.9
60°	164.6	167.7	170.8	173.1	174.7	175.5	177.0	177.8	178.6	178.6
62.5°	154.4	158.3	162.2	164.6	165.3	166.9	167.7	168.4	169.2	169.2
65°	144.3	148.2	152.1	154.4	156.0	156.8	158.3	159.1	159.9	160.7
67.5°	134.9	138.0	141.9	144.3	145.1	146.6	148.2	149.7	150.5	150.5
70°	124.0	127.9	131.0	134.1	135.7	136.5	138.0	138.8	140.4	139.6
72.5°	113.1	117.0	121.7	124.0	124.8	126.3	127.9	129.5	130.2	129.5
75°	102.9	106.8	110.7	113.1	114.6	115.4	117.8	119.3	119.3	120.1
77.5°	92.0	96.7	100.6	102.9	104.5	105.3	107.6	108.4	109.2	109.2
80°	81.9	86.6	89.7	92.8	95.1	95.1	97.5	98.3	99.0	99.0
82.5°	72.5	77.2	81.1	83.4	85.0	86.6	88.1	88.9	89.7	89.7
85°	64.7	69.4	72.5	76.4	77.2	78.8	80.3	81.9	82.7	82.7
87.5°	59.3	63.9	67.1	70.2	71.7	73.3	74.9	76.4	77.2	77.2
90°	56.1	60.8	63.9	67.1	68.6	70.2	71.7	73.3	74.1	74.1
92.5°	54.6	59.3	63.2	65.5	67.1	68.6	70.2	71.7	72.5	72.5
95°	53.8	58.5	61.6	64.7	66.3	67.1	69.4	70.2	71.0	71.7
97.5°	53.0	56.9	60.8	63.9	65.5	66.3	68.6	69.4	70.2	70.2
100°	52.3	56.1	60.0	62.4	63.9	65.5	67.1	68.6	68.6	69.4
102.5°	50.7	54.6	58.5	61.6	62.4	63.9	65.5	67.1	67.8	67.8
105°	49.1	53.8	56.9	60.0	60.8	62.4	63.9	65.5	66.3	66.3
107.5°	48.4	52.3	55.4	58.5	59.3	60.8	62.4	63.9	64.7	64.7
110°	46.8	50.7	53.8	56.9	57.7	59.3	60.8	61.6	62.4	62.4





TEST NUMBER: P231888

CATALOG NUMBER: FVS4M-2-LD4-30-1STD-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	45.2	49.1	52.3	54.6	56.1	56.9	58.5	60.0	60.8	60.8
115°	43.7	47.6	50.7	53.0	54.6	55.4	56.9	57.7	58.5	58.5
117.5°	42.1	45.2	48.4	51.5	52.3	53.0	54.6	56.1	56.1	56.9
120°	40.6	43.7	46.8	49.1	49.9	51.5	52.3	53.8	53.8	54.6
122.5°	38.2	42.1	44.5	46.8	48.4	49.1	50.7	51.5	51.5	52.3
125°	36.7	39.8	42.9	45.2	46.0	46.8	48.4	49.1	49.1	49.9
127.5°	35.1	37.4	40.6	42.9	43.7	44.5	46.0	46.8	46.8	46.8
130°	32.8	35.9	38.2	40.6	41.3	42.1	42.9	43.7	44.5	44.5
132.5°	31.2	33.5	35.9	38.2	39.0	39.8	40.6	41.3	42.1	42.1
135°	28.9	31.2	33.5	35.1	35.9	36.7	38.2	39.0	39.0	39.0
137.5°	26.5	28.9	31.2	32.8	33.5	34.3	35.1	35.9	36.7	36.7
140°	24.2	26.5	28.9	30.4	31.2	32.0	32.8	33.5	33.5	33.5
142.5°	22.6	24.2	26.5	28.1	28.9	28.9	29.6	30.4	30.4	30.4
145°	20.3	21.8	23.4	25.0	25.7	26.5	27.3	27.3	28.1	28.1
147.5°	17.9	19.5	21.1	22.6	23.4	23.4	24.2	25.0	25.0	25.0
150°	15.6	17.2	18.7	19.5	20.3	20.3	21.1	21.8	21.8	21.8
152.5°	13.3	14.8	16.4	17.2	17.2	17.9	18.7	18.7	18.7	18.7
155°	10.9	11.7	13.3	14.0	14.8	14.8	15.6	15.6	15.6	15.6
157.5°	7.8	9.4	10.1	11.7	11.7	12.5	12.5	12.5	12.5	12.5
160°	6.2	7.0	7.8	8.6	9.4	9.4	9.4	10.1	10.1	10.1
162.5°	3.9	4.7	4.7	5.5	6.2	6.2	7.0	7.0	7.0	7.0
165°	2.3	2.3	3.1	3.1	3.1	3.9	3.9	3.9	3.9	3.9
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)