

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: P231893

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231893
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-LD4-35-1HI-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

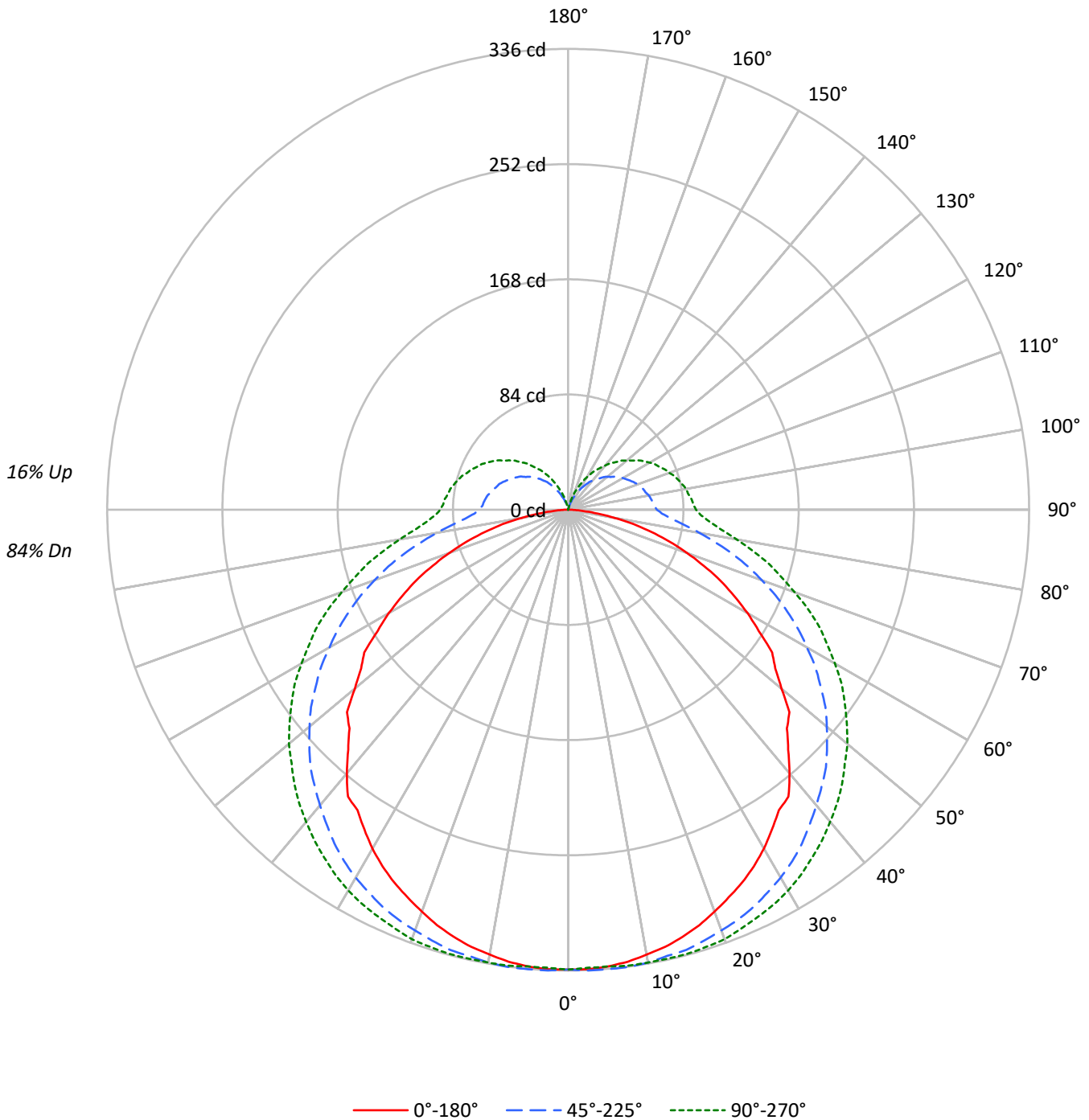
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1452.0 lumens
Efficiency: N/A
Efficacy: 65.4 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): 22.2
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





TEST NUMBER: P231893

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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°	6026	6026	6026
5°	5979	5816	5730
10°	5909	5629	5533
15°	5847	5462	5374
20°	5758	5293	5232
25°	5689	5152	5074
30°	5604	5003	4941
35°	5494	4844	4786
40°	5442	4669	4636
45°	5220	4522	4486
50°	5080	4333	4331
55°	4987	4126	4152
60°	4641	3895	3957
65°	4306	3647	3756
70°	3818	3346	3482
75°	3189	3018	3237
80°	2283	2646	2926
85°	1051	2345	2726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	2.2
10°-20°	93.4	6.4
20°-30°	146.2	10.1
30°-40°	183.7	12.6
40°-50°	200.9	13.8
50°-60°	196.1	13.5
60°-70°	168.5	11.6
70°-80°	123.2	8.5
80°-90°	76.7	5.3
90°-100°	60.0	4.1
100°-110°	53.2	3.7
110°-120°	43.9	3.0
120°-130°	33.3	2.3
130°-140°	22.4	1.5
140°-150°	12.6	0.9
150°-160°	5.1	0.4
160°-170°	0.8	0.1
170°-180°	0.0	0.0
0°-30°	271.7	18.7
0°-40°	455.3	31.4
0°-60°	852.3	58.7
0°-90°	1220.7	84.1
90°-120°	157.0	10.8
90°-150°	225.4	15.5
90°-180°	231.0	15.9
0°-180°	1452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	334	335	336	336	334	32
15°	322	326	332	335	335	91
25°	300	308	320	326	328	138
35°	268	280	297	307	310	169
45°	226	243	266	278	282	175
55°	181	199	224	241	246	160
65°	122	147	176	196	202	121
75°	63	91	124	144	151	67
85°	11	42	76	97	104	14
90°	0	31	65	86	93	1
95°	0	28	62	83	90	0
105°	0	26	57	76	83	0
115°	0	22	50	69	74	0
125°	0	18	42	58	63	0
135°	0	13	32	45	49	0
145°	0	8	22	32	35	0
155°	0	3	11	19	20	0
165°	0	1	2	4	5	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231893

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3
2.5°	335.3	336.3	335.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3
5°	334.3	334.3	334.3	335.3	335.3	335.3	335.3	336.3	336.3	336.3	336.3
7.5°	332.4	333.3	333.3	333.3	334.3	334.3	334.3	335.3	335.3	335.3	336.3
10°	329.4	330.4	330.4	331.4	332.4	332.4	332.4	332.4	333.3	334.3	335.3
12.5°	326.5	326.5	327.5	327.5	328.4	328.4	329.4	330.4	331.4	332.4	333.3
15°	322.5	322.5	323.5	324.5	325.5	325.5	326.5	328.4	329.4	331.4	332.4
17.5°	317.6	317.6	318.6	319.6	320.6	321.6	322.5	324.5	326.5	328.4	329.4
20°	311.8	312.7	313.7	314.7	316.7	317.6	318.6	320.6	322.5	325.5	326.5
22.5°	305.9	306.9	308.8	309.8	311.8	312.7	313.7	316.7	318.6	320.6	323.5
25°	300.0	301.0	302.0	303.9	306.9	307.8	308.8	311.8	314.7	316.7	319.6
27.5°	293.1	294.1	295.1	297.1	300.0	302.0	302.9	305.9	308.8	311.8	314.7
30°	285.3	286.3	287.3	290.2	293.1	295.1	297.1	300.0	302.9	306.9	309.8
32.5°	276.5	278.4	279.4	283.3	286.3	288.2	290.2	293.1	297.1	301.0	303.9
35°	267.6	269.6	270.6	274.5	277.5	280.4	281.4	285.3	289.2	293.1	297.1
37.5°	263.7	258.8	261.8	265.7	268.6	271.6	273.5	277.5	281.4	286.3	289.2
40°	251.0	249.0	251.0	255.9	259.8	261.8	264.7	269.6	273.5	278.4	281.4
42.5°	237.3	238.2	241.2	246.1	250.0	252.9	255.9	259.8	264.7	269.6	273.5
45°	225.5	227.5	230.4	235.3	240.2	243.1	246.1	251.0	255.9	260.8	265.7
47.5°	218.6	215.7	219.6	224.5	229.4	232.4	235.3	240.2	246.1	251.0	255.9
50°	202.9	204.9	208.8	213.7	218.6	222.5	224.5	230.4	236.3	241.2	246.1
52.5°	190.2	192.2	196.1	202.0	206.9	210.8	213.7	219.6	225.5	230.4	236.3
55°	181.4	180.4	184.3	189.2	196.1	199.0	202.0	207.8	213.7	219.6	224.5
57.5°	164.7	166.7	171.6	177.5	183.3	186.3	190.2	196.1	202.0	207.8	213.7
60°	151.0	152.9	157.8	163.7	170.6	173.5	177.5	183.3	190.2	195.1	201.0
62.5°	136.3	138.2	144.1	150.0	156.9	160.8	164.7	170.6	177.5	183.3	189.2
65°	122.5	124.5	130.4	136.3	143.1	147.1	151.0	157.8	163.7	170.6	176.5
67.5°	106.9	109.8	114.7	122.5	129.4	133.3	136.3	144.1	152.0	156.9	163.7
70°	92.2	94.1	101.0	107.8	115.7	118.6	122.5	130.4	137.3	144.1	150.0
72.5°	77.5	80.4	85.3	93.1	101.0	104.9	108.8	116.7	123.5	130.4	137.3
75°	62.7	65.7	71.6	79.4	87.3	91.2	95.1	102.9	110.8	117.6	123.5
77.5°	49.0	52.0	57.8	65.7	73.5	77.5	81.4	89.2	97.1	103.9	109.8
80°	34.3	37.3	44.1	52.0	59.8	63.7	68.6	76.5	83.3	91.2	97.1
82.5°	21.6	25.5	31.4	39.2	48.0	52.0	56.9	63.7	71.6	79.4	85.3
85°	10.8	14.7	20.6	29.4	38.2	42.2	46.1	53.9	61.8	69.6	75.5
87.5°	4.9	7.8	13.7	21.6	30.4	34.3	39.2	47.1	54.9	61.8	68.6
90°	0.0	3.9	10.8	18.6	26.5	31.4	35.3	43.1	51.0	57.8	64.7
92.5°	0.0	2.9	9.8	17.6	25.5	29.4	34.3	42.2	50.0	56.9	62.7
95°	0.0	2.9	8.8	16.7	24.5	28.4	33.3	41.2	48.0	55.9	61.8
97.5°	0.0	2.9	8.8	15.7	24.5	28.4	32.4	40.2	47.1	54.9	60.8
100°	0.0	2.9	7.8	15.7	23.5	27.5	31.4	39.2	46.1	52.9	59.8
102.5°	0.0	2.0	7.8	14.7	22.5	26.5	30.4	38.2	45.1	52.0	57.8
105°	0.0	2.0	7.8	13.7	21.6	25.5	29.4	36.3	44.1	51.0	56.9
107.5°	0.0	2.0	6.9	13.7	20.6	24.5	28.4	35.3	42.2	49.0	54.9
110°	0.0	2.0	6.9	12.7	19.6	23.5	27.5	34.3	41.2	48.0	53.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.0	5.9	12.7	19.6	22.5	26.5	33.3	40.2	46.1	52.0
115°	0.0	1.0	5.9	11.8	18.6	21.6	25.5	31.4	38.2	44.1	50.0
117.5°	0.0	1.0	5.9	10.8	17.6	20.6	23.5	30.4	36.3	42.2	48.0
120°	0.0	1.0	4.9	10.8	16.7	19.6	22.5	29.4	35.3	40.2	46.1
122.5°	0.0	1.0	4.9	9.8	15.7	18.6	21.6	27.5	33.3	39.2	44.1
125°	0.0	1.0	3.9	8.8	14.7	17.6	20.6	26.5	31.4	37.3	42.2
127.5°	0.0	1.0	3.9	7.8	13.7	16.7	19.6	24.5	29.4	35.3	39.2
130°	0.0	1.0	2.9	7.8	12.7	14.7	17.6	22.5	28.4	33.3	37.3
132.5°	0.0	1.0	2.9	6.9	11.8	13.7	16.7	21.6	26.5	30.4	35.3
135°	0.0	1.0	2.9	5.9	10.8	12.7	14.7	19.6	24.5	28.4	32.4
137.5°	0.0	1.0	2.0	5.9	9.8	11.8	13.7	18.6	22.5	26.5	30.4
140°	0.0	0.0	2.0	4.9	8.8	10.8	12.7	16.7	20.6	24.5	27.5
142.5°	0.0	0.0	1.0	3.9	6.9	8.8	10.8	14.7	18.6	21.6	25.5
145°	0.0	0.0	1.0	2.9	5.9	7.8	9.8	12.7	16.7	19.6	22.5
147.5°	0.0	0.0	1.0	2.9	4.9	6.9	7.8	10.8	13.7	16.7	19.6
150°	0.0	0.0	1.0	2.0	3.9	4.9	6.9	8.8	11.8	14.7	16.7
152.5°	0.0	0.0	1.0	1.0	2.9	3.9	4.9	6.9	9.8	11.8	13.7
155°	0.0	0.0	1.0	1.0	2.0	2.9	3.9	5.9	7.8	9.8	10.8
157.5°	0.0	0.0	0.0	1.0	2.0	2.0	2.9	3.9	5.9	6.9	8.8
160°	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.9	3.9	4.9	5.9
162.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.0	2.9	3.9
165°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0
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°	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3	335.3
2.5°	336.3	336.3	336.3	335.3	335.3	335.3	335.3	334.3	334.3	334.3
5°	336.3	336.3	336.3	336.3	336.3	335.3	335.3	334.3	334.3	334.3
7.5°	336.3	336.3	336.3	336.3	336.3	336.3	335.3	335.3	335.3	335.3
10°	335.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3	335.3
12.5°	334.3	335.3	335.3	336.3	336.3	336.3	336.3	335.3	335.3	335.3
15°	333.3	334.3	335.3	335.3	335.3	336.3	336.3	335.3	335.3	335.3
17.5°	331.4	332.4	333.3	333.3	334.3	334.3	334.3	334.3	334.3	334.3
20°	328.4	329.4	331.4	332.4	332.4	332.4	332.4	333.3	333.3	333.3
22.5°	325.5	326.5	328.4	329.4	329.4	330.4	330.4	330.4	330.4	330.4
25°	321.6	323.5	324.5	325.5	326.5	327.5	327.5	327.5	328.4	327.5
27.5°	317.6	319.6	321.6	322.5	322.5	323.5	324.5	324.5	324.5	324.5
30°	311.8	314.7	315.7	317.6	318.6	318.6	319.6	320.6	320.6	320.6
32.5°	306.9	308.8	311.8	312.7	313.7	314.7	314.7	315.7	315.7	315.7
35°	300.0	302.0	304.9	306.9	306.9	307.8	308.8	309.8	309.8	309.8
37.5°	292.2	296.1	298.0	300.0	301.0	301.0	302.9	303.9	303.9	303.9
40°	285.3	288.2	291.2	293.1	294.1	294.1	296.1	296.1	297.1	297.1
42.5°	276.5	280.4	283.3	285.3	286.3	287.3	288.2	289.2	290.2	290.2
45°	269.6	272.5	275.5	277.5	278.4	279.4	281.4	282.4	282.4	282.4
47.5°	259.8	263.7	266.7	268.6	269.6	271.6	272.5	273.5	273.5	273.5
50°	250.0	253.9	257.8	260.8	260.8	262.7	263.7	265.7	265.7	265.7
52.5°	240.2	244.1	248.0	251.0	252.0	252.9	254.9	255.9	256.9	255.9
55°	229.4	233.3	237.3	240.2	241.2	242.2	244.1	245.1	246.1	246.1
57.5°	217.6	222.5	226.5	229.4	230.4	231.4	233.3	235.3	235.3	236.3
60°	206.9	210.8	214.7	217.6	219.6	220.6	222.5	223.5	224.5	224.5
62.5°	194.1	199.0	203.9	206.9	207.8	209.8	210.8	211.8	212.7	212.7
65°	181.4	186.3	191.2	194.1	196.1	197.1	199.0	200.0	201.0	202.0
67.5°	169.6	173.5	178.4	181.4	182.4	184.3	186.3	188.2	189.2	189.2
70°	155.9	160.8	164.7	168.6	170.6	171.6	173.5	174.5	176.5	175.5
72.5°	142.2	147.1	152.9	155.9	156.9	158.8	160.8	162.7	163.7	162.7
75°	129.4	134.3	139.2	142.2	144.1	145.1	148.0	150.0	150.0	151.0
77.5°	115.7	121.6	126.5	129.4	131.4	132.4	135.3	136.3	137.3	137.3
80°	102.9	108.8	112.7	116.7	119.6	119.6	122.5	123.5	124.5	124.5
82.5°	91.2	97.1	102.0	104.9	106.9	108.8	110.8	111.8	112.7	112.7
85°	81.4	87.3	91.2	96.1	97.1	99.0	101.0	102.9	103.9	103.9
87.5°	74.5	80.4	84.3	88.2	90.2	92.2	94.1	96.1	97.1	97.1
90°	70.6	76.5	80.4	84.3	86.3	88.2	90.2	92.2	93.1	93.1
92.5°	68.6	74.5	79.4	82.4	84.3	86.3	88.2	90.2	91.2	91.2
95°	67.6	73.5	77.5	81.4	83.3	84.3	87.3	88.2	89.2	90.2
97.5°	66.7	71.6	76.5	80.4	82.4	83.3	86.3	87.3	88.2	88.2
100°	65.7	70.6	75.5	78.4	80.4	82.4	84.3	86.3	86.3	87.3
102.5°	63.7	68.6	73.5	77.5	78.4	80.4	82.4	84.3	85.3	85.3
105°	61.8	67.6	71.6	75.5	76.5	78.4	80.4	82.4	83.3	83.3
107.5°	60.8	65.7	69.6	73.5	74.5	76.5	78.4	80.4	81.4	81.4
110°	58.8	63.7	67.6	71.6	72.5	74.5	76.5	77.5	78.4	78.4



TEST NUMBER: P231893

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	56.9	61.8	65.7	68.6	70.6	71.6	73.5	75.5	76.5	76.5
115°	54.9	59.8	63.7	66.7	68.6	69.6	71.6	72.5	73.5	73.5
117.5°	52.9	56.9	60.8	64.7	65.7	66.7	68.6	70.6	70.6	71.6
120°	51.0	54.9	58.8	61.8	62.7	64.7	65.7	67.6	67.6	68.6
122.5°	48.0	52.9	55.9	58.8	60.8	61.8	63.7	64.7	64.7	65.7
125°	46.1	50.0	53.9	56.9	57.8	58.8	60.8	61.8	61.8	62.7
127.5°	44.1	47.1	51.0	53.9	54.9	55.9	57.8	58.8	58.8	58.8
130°	41.2	45.1	48.0	51.0	52.0	52.9	53.9	54.9	55.9	55.9
132.5°	39.2	42.2	45.1	48.0	49.0	50.0	51.0	52.0	52.9	52.9
135°	36.3	39.2	42.2	44.1	45.1	46.1	48.0	49.0	49.0	49.0
137.5°	33.3	36.3	39.2	41.2	42.2	43.1	44.1	45.1	46.1	46.1
140°	30.4	33.3	36.3	38.2	39.2	40.2	41.2	42.2	42.2	42.2
142.5°	28.4	30.4	33.3	35.3	36.3	36.3	37.3	38.2	38.2	38.2
145°	25.5	27.5	29.4	31.4	32.4	33.3	34.3	34.3	35.3	35.3
147.5°	22.5	24.5	26.5	28.4	29.4	29.4	30.4	31.4	31.4	31.4
150°	19.6	21.6	23.5	24.5	25.5	25.5	26.5	27.5	27.5	27.5
152.5°	16.7	18.6	20.6	21.6	21.6	22.5	23.5	23.5	23.5	23.5
155°	13.7	14.7	16.7	17.6	18.6	18.6	19.6	19.6	19.6	19.6
157.5°	9.8	11.8	12.7	14.7	14.7	15.7	15.7	15.7	15.7	15.7
160°	7.8	8.8	9.8	10.8	11.8	11.8	11.8	12.7	12.7	12.7
162.5°	4.9	5.9	5.9	6.9	7.8	7.8	8.8	8.8	8.8	8.8
165°	2.9	2.9	3.9	3.9	3.9	4.9	4.9	4.9	4.9	4.9
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)