

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: P231895

Luminaire Tested: **FVS4M-2-LD4-50-1HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231895
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-LD4-50-1HI-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PFS125 LENS
Light Source: (42) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

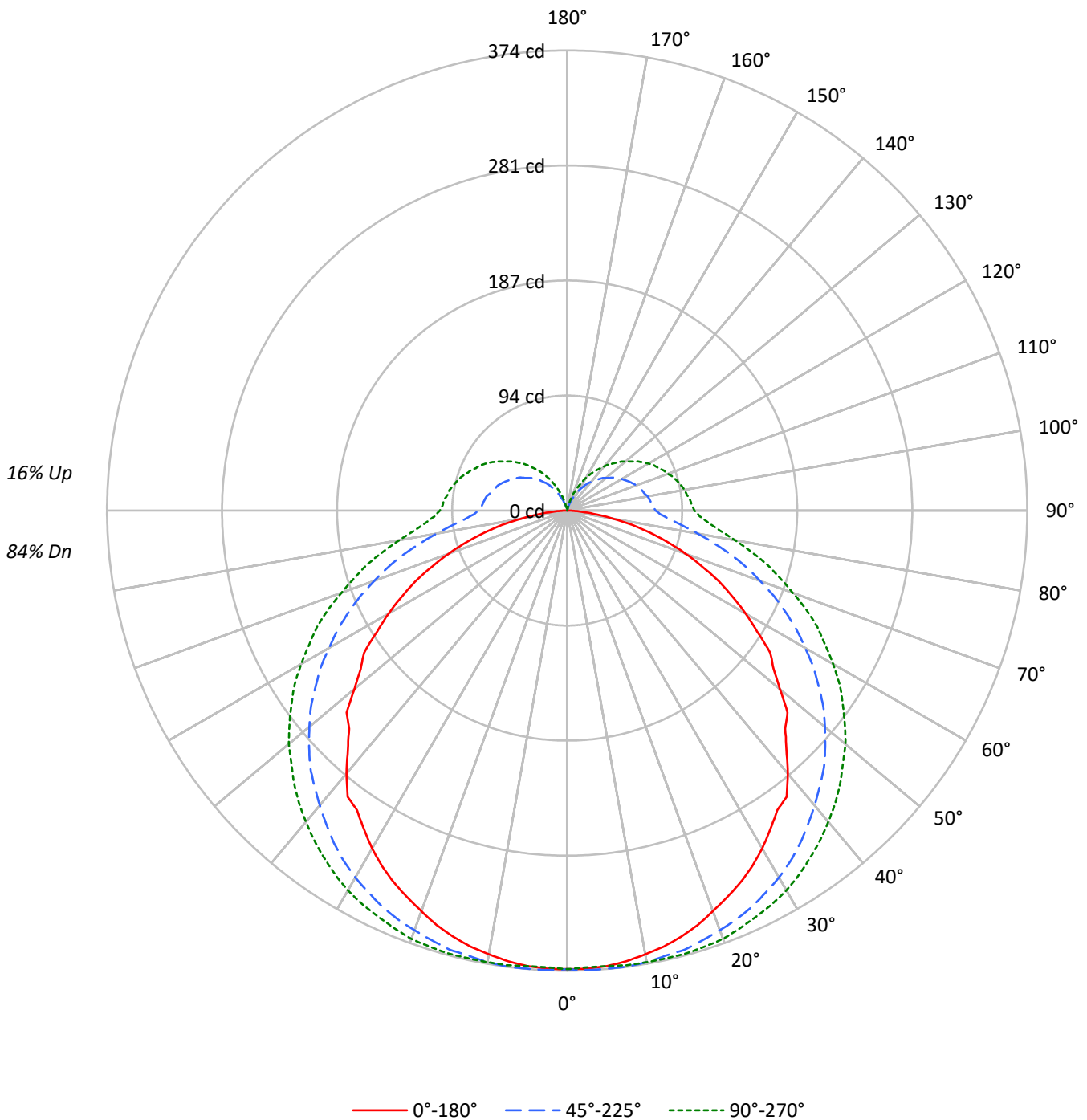
Lumens per Lamp: N/A
Luminaire Lumens: 1614.0 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

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





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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°	6698	6698	6698
5°	6647	6464	6369
10°	6569	6257	6150
15°	6500	6070	5974
20°	6399	5884	5816
25°	6324	5727	5640
30°	6228	5562	5493
35°	6108	5384	5320
40°	6049	5189	5152
45°	5801	5025	4986
50°	5649	4815	4814
55°	5542	4588	4615
60°	5157	4329	4399
65°	4787	4054	4175
70°	4241	3718	3871
75°	3545	3355	3597
80°	2536	2940	3253
85°	1168	2605	3031



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.6	2.2
10°-20°	103.9	6.4
20°-30°	162.5	10.1
30°-40°	204.1	12.6
40°-50°	223.3	13.8
50°-60°	218.0	13.5
60°-70°	187.3	11.6
70°-80°	137.0	8.5
80°-90°	85.3	5.3
90°-100°	66.7	4.1
100°-110°	59.1	3.7
110°-120°	48.8	3.0
120°-130°	37.0	2.3
130°-140°	25.0	1.5
140°-150°	14.1	0.9
150°-160°	5.7	0.4
160°-170°	0.9	0.1
170°-180°	0.0	0.0
0°-30°	302.0	18.7
0°-40°	506.1	31.4
0°-60°	947.4	58.7
0°-90°	1356.9	84.1
90°-120°	174.6	10.8
90°-150°	250.6	15.5
90°-180°	257.0	15.9
0°-180°	1614.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	373	373	373	373	373	
5°	372	373	374	374	372	35
15°	358	362	369	373	373	101
25°	334	342	355	363	364	154
35°	298	312	330	341	344	187
45°	251	270	295	310	314	195
55°	202	221	250	268	274	177
65°	136	164	196	218	224	134
75°	70	101	137	160	168	74
85°	12	47	84	108	116	16
90°	0	35	72	96	104	1
95°	0	32	69	93	100	0
105°	0	28	63	85	93	0
115°	0	24	56	76	82	0
125°	0	20	47	64	70	0
135°	0	14	36	50	54	0
145°	0	9	25	36	39	0
155°	0	3	12	21	22	0
165°	0	1	2	4	5	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°	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7
2.5°	372.7	373.8	372.7	373.8	373.8	373.8	373.8	373.8	373.8	373.8	373.8
5°	371.6	371.6	371.6	372.7	372.7	372.7	372.7	373.8	373.8	373.8	373.8
7.5°	369.4	370.5	370.5	370.5	371.6	371.6	371.6	372.7	372.7	372.7	373.8
10°	366.2	367.3	367.3	368.3	369.4	369.4	369.4	369.4	370.5	371.6	372.7
12.5°	362.9	362.9	364.0	364.0	365.1	365.1	366.2	367.3	368.3	369.4	370.5
15°	358.5	358.5	359.6	360.7	361.8	361.8	362.9	365.1	366.2	368.3	369.4
17.5°	353.1	353.1	354.2	355.3	356.4	357.4	358.5	360.7	362.9	365.1	366.2
20°	346.5	347.6	348.7	349.8	352.0	353.1	354.2	356.4	358.5	361.8	362.9
22.5°	340.0	341.1	343.3	344.4	346.5	347.6	348.7	352.0	354.2	356.4	359.6
25°	333.5	334.6	335.7	337.8	341.1	342.2	343.3	346.5	349.8	352.0	355.3
27.5°	325.8	326.9	328.0	330.2	333.5	335.7	336.7	340.0	343.3	346.5	349.8
30°	317.1	318.2	319.3	322.6	325.8	328.0	330.2	333.5	336.7	341.1	344.4
32.5°	307.3	309.5	310.6	314.9	318.2	320.4	322.6	325.8	330.2	334.6	337.8
35°	297.5	299.7	300.8	305.1	308.4	311.7	312.8	317.1	321.5	325.8	330.2
37.5°	293.1	287.7	291.0	295.3	298.6	301.9	304.0	308.4	312.8	318.2	321.5
40°	279.0	276.8	279.0	284.4	288.8	291.0	294.2	299.7	304.0	309.5	312.8
42.5°	263.7	264.8	268.1	273.5	277.9	281.2	284.4	288.8	294.2	299.7	304.0
45°	250.6	252.8	256.1	261.5	267.0	270.3	273.5	279.0	284.4	289.9	295.3
47.5°	243.0	239.8	244.1	249.6	255.0	258.3	261.5	267.0	273.5	279.0	284.4
50°	225.6	227.8	232.1	237.6	243.0	247.4	249.6	256.1	262.6	268.1	273.5
52.5°	211.4	213.6	218.0	224.5	229.9	234.3	237.6	244.1	250.6	256.1	262.6
55°	201.6	200.5	204.9	210.3	218.0	221.2	224.5	231.0	237.6	244.1	249.6
57.5°	183.1	185.3	190.7	197.2	203.8	207.1	211.4	218.0	224.5	231.0	237.6
60°	167.8	170.0	175.5	182.0	189.6	192.9	197.2	203.8	211.4	216.9	223.4
62.5°	151.5	153.7	160.2	166.7	174.4	178.7	183.1	189.6	197.2	203.8	210.3
65°	136.2	138.4	144.9	151.5	159.1	163.5	167.8	175.5	182.0	189.6	196.2
67.5°	118.8	122.1	127.5	136.2	143.9	148.2	151.5	160.2	168.9	174.4	182.0
70°	102.4	104.6	112.2	119.9	128.6	131.9	136.2	144.9	152.6	160.2	166.7
72.5°	86.1	89.4	94.8	103.5	112.2	116.6	121.0	129.7	137.3	144.9	152.6
75°	69.7	73.0	79.6	88.3	97.0	101.3	105.7	114.4	123.1	130.8	137.3
77.5°	54.5	57.8	64.3	73.0	81.7	86.1	90.5	99.2	107.9	115.5	122.1
80°	38.1	41.4	49.0	57.8	66.5	70.8	76.3	85.0	92.6	101.3	107.9
82.5°	24.0	28.3	34.9	43.6	53.4	57.8	63.2	70.8	79.6	88.3	94.8
85°	12.0	16.3	22.9	32.7	42.5	46.9	51.2	59.9	68.7	77.4	83.9
87.5°	5.4	8.7	15.3	24.0	33.8	38.1	43.6	52.3	61.0	68.7	76.3
90°	0.0	4.4	12.0	20.7	29.4	34.9	39.2	48.0	56.7	64.3	71.9
92.5°	0.0	3.3	10.9	19.6	28.3	32.7	38.1	46.9	55.6	63.2	69.7
95°	0.0	3.3	9.8	18.5	27.2	31.6	37.1	45.8	53.4	62.1	68.7
97.5°	0.0	3.3	9.8	17.4	27.2	31.6	36.0	44.7	52.3	61.0	67.6
100°	0.0	3.3	8.7	17.4	26.2	30.5	34.9	43.6	51.2	58.8	66.5
102.5°	0.0	2.2	8.7	16.3	25.1	29.4	33.8	42.5	50.1	57.8	64.3
105°	0.0	2.2	8.7	15.3	24.0	28.3	32.7	40.3	49.0	56.7	63.2
107.5°	0.0	2.2	7.6	15.3	22.9	27.2	31.6	39.2	46.9	54.5	61.0
110°	0.0	2.2	7.6	14.2	21.8	26.2	30.5	38.1	45.8	53.4	59.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.2	6.5	14.2	21.8	25.1	29.4	37.1	44.7	51.2	57.8
115°	0.0	1.1	6.5	13.1	20.7	24.0	28.3	34.9	42.5	49.0	55.6
117.5°	0.0	1.1	6.5	12.0	19.6	22.9	26.2	33.8	40.3	46.9	53.4
120°	0.0	1.1	5.4	12.0	18.5	21.8	25.1	32.7	39.2	44.7	51.2
122.5°	0.0	1.1	5.4	10.9	17.4	20.7	24.0	30.5	37.1	43.6	49.0
125°	0.0	1.1	4.4	9.8	16.3	19.6	22.9	29.4	34.9	41.4	46.9
127.5°	0.0	1.1	4.4	8.7	15.3	18.5	21.8	27.2	32.7	39.2	43.6
130°	0.0	1.1	3.3	8.7	14.2	16.3	19.6	25.1	31.6	37.1	41.4
132.5°	0.0	1.1	3.3	7.6	13.1	15.3	18.5	24.0	29.4	33.8	39.2
135°	0.0	1.1	3.3	6.5	12.0	14.2	16.3	21.8	27.2	31.6	36.0
137.5°	0.0	1.1	2.2	6.5	10.9	13.1	15.3	20.7	25.1	29.4	33.8
140°	0.0	0.0	2.2	5.4	9.8	12.0	14.2	18.5	22.9	27.2	30.5
142.5°	0.0	0.0	1.1	4.4	7.6	9.8	12.0	16.3	20.7	24.0	28.3
145°	0.0	0.0	1.1	3.3	6.5	8.7	10.9	14.2	18.5	21.8	25.1
147.5°	0.0	0.0	1.1	3.3	5.4	7.6	8.7	12.0	15.3	18.5	21.8
150°	0.0	0.0	1.1	2.2	4.4	5.4	7.6	9.8	13.1	16.3	18.5
152.5°	0.0	0.0	1.1	1.1	3.3	4.4	5.4	7.6	10.9	13.1	15.3
155°	0.0	0.0	1.1	1.1	2.2	3.3	4.4	6.5	8.7	10.9	12.0
157.5°	0.0	0.0	0.0	1.1	2.2	2.2	3.3	4.4	6.5	7.6	9.8
160°	0.0	0.0	0.0	1.1	1.1	1.1	2.2	3.3	4.4	5.4	6.5
162.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	2.2	2.2	3.3	4.4
165°	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	2.2	2.2
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7	372.7
2.5°	373.8	373.8	373.8	372.7	372.7	372.7	372.7	371.6	371.6	371.6
5°	373.8	373.8	373.8	373.8	373.8	372.7	372.7	371.6	371.6	371.6
7.5°	373.8	373.8	373.8	373.8	373.8	373.8	372.7	372.7	372.7	372.7
10°	372.7	373.8	373.8	373.8	373.8	373.8	373.8	373.8	373.8	372.7
12.5°	371.6	372.7	372.7	373.8	373.8	373.8	373.8	372.7	372.7	372.7
15°	370.5	371.6	372.7	372.7	372.7	373.8	373.8	372.7	372.7	372.7
17.5°	368.3	369.4	370.5	370.5	371.6	371.6	371.6	371.6	371.6	371.6
20°	365.1	366.2	368.3	369.4	369.4	369.4	369.4	370.5	370.5	370.5
22.5°	361.8	362.9	365.1	366.2	366.2	367.3	367.3	367.3	367.3	367.3
25°	357.4	359.6	360.7	361.8	362.9	364.0	364.0	364.0	365.1	364.0
27.5°	353.1	355.3	357.4	358.5	358.5	359.6	360.7	360.7	360.7	360.7
30°	346.5	349.8	350.9	353.1	354.2	354.2	355.3	356.4	356.4	356.4
32.5°	341.1	343.3	346.5	347.6	348.7	349.8	349.8	350.9	350.9	350.9
35°	333.5	335.7	338.9	341.1	341.1	342.2	343.3	344.4	344.4	344.4
37.5°	324.8	329.1	331.3	333.5	334.6	334.6	336.7	337.8	337.8	337.8
40°	317.1	320.4	323.7	325.8	326.9	326.9	329.1	329.1	330.2	330.2
42.5°	307.3	311.7	314.9	317.1	318.2	319.3	320.4	321.5	322.6	322.6
45°	299.7	303.0	306.2	308.4	309.5	310.6	312.8	313.9	313.9	313.9
47.5°	288.8	293.1	296.4	298.6	299.7	301.9	303.0	304.0	304.0	304.0
50°	277.9	282.3	286.6	289.9	289.9	292.1	293.1	295.3	295.3	295.3
52.5°	267.0	271.4	275.7	279.0	280.1	281.2	283.3	284.4	285.5	284.4
55°	255.0	259.4	263.7	267.0	268.1	269.2	271.4	272.4	273.5	273.5
57.5°	241.9	247.4	251.7	255.0	256.1	257.2	259.4	261.5	261.5	262.6
60°	229.9	234.3	238.7	241.9	244.1	245.2	247.4	248.5	249.6	249.6
62.5°	215.8	221.2	226.7	229.9	231.0	233.2	234.3	235.4	236.5	236.5
65°	201.6	207.1	212.5	215.8	218.0	219.0	221.2	222.3	223.4	224.5
67.5°	188.5	192.9	198.3	201.6	202.7	204.9	207.1	209.2	210.3	210.3
70°	173.3	178.7	183.1	187.4	189.6	190.7	192.9	194.0	196.2	195.1
72.5°	158.0	163.5	170.0	173.3	174.4	176.5	178.7	180.9	182.0	180.9
75°	143.9	149.3	154.7	158.0	160.2	161.3	164.6	166.7	166.7	167.8
77.5°	128.6	135.1	140.6	143.9	146.0	147.1	150.4	151.5	152.6	152.6
80°	114.4	121.0	125.3	129.7	133.0	133.0	136.2	137.3	138.4	138.4
82.5°	101.3	107.9	113.3	116.6	118.8	121.0	123.1	124.2	125.3	125.3
85°	90.5	97.0	101.3	106.8	107.9	110.1	112.2	114.4	115.5	115.5
87.5°	82.8	89.4	93.7	98.1	100.3	102.4	104.6	106.8	107.9	107.9
90°	78.5	85.0	89.4	93.7	95.9	98.1	100.3	102.4	103.5	103.5
92.5°	76.3	82.8	88.3	91.5	93.7	95.9	98.1	100.3	101.3	101.3
95°	75.2	81.7	86.1	90.5	92.6	93.7	97.0	98.1	99.2	100.3
97.5°	74.1	79.6	85.0	89.4	91.5	92.6	95.9	97.0	98.1	98.1
100°	73.0	78.5	83.9	87.2	89.4	91.5	93.7	95.9	95.9	97.0
102.5°	70.8	76.3	81.7	86.1	87.2	89.4	91.5	93.7	94.8	94.8
105°	68.7	75.2	79.6	83.9	85.0	87.2	89.4	91.5	92.6	92.6
107.5°	67.6	73.0	77.4	81.7	82.8	85.0	87.2	89.4	90.5	90.5
110°	65.4	70.8	75.2	79.6	80.6	82.8	85.0	86.1	87.2	87.2



TEST NUMBER: P231895

CATALOG NUMBER: FVS4M-2-LD4-50-1HI-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	63.2	68.7	73.0	76.3	78.5	79.6	81.7	83.9	85.0	85.0
115°	61.0	66.5	70.8	74.1	76.3	77.4	79.6	80.6	81.7	81.7
117.5°	58.8	63.2	67.6	71.9	73.0	74.1	76.3	78.5	78.5	79.6
120°	56.7	61.0	65.4	68.7	69.7	71.9	73.0	75.2	75.2	76.3
122.5°	53.4	58.8	62.1	65.4	67.6	68.7	70.8	71.9	71.9	73.0
125°	51.2	55.6	59.9	63.2	64.3	65.4	67.6	68.7	68.7	69.7
127.5°	49.0	52.3	56.7	59.9	61.0	62.1	64.3	65.4	65.4	65.4
130°	45.8	50.1	53.4	56.7	57.8	58.8	59.9	61.0	62.1	62.1
132.5°	43.6	46.9	50.1	53.4	54.5	55.6	56.7	57.8	58.8	58.8
135°	40.3	43.6	46.9	49.0	50.1	51.2	53.4	54.5	54.5	54.5
137.5°	37.1	40.3	43.6	45.8	46.9	48.0	49.0	50.1	51.2	51.2
140°	33.8	37.1	40.3	42.5	43.6	44.7	45.8	46.9	46.9	46.9
142.5°	31.6	33.8	37.1	39.2	40.3	40.3	41.4	42.5	42.5	42.5
145°	28.3	30.5	32.7	34.9	36.0	37.1	38.1	38.1	39.2	39.2
147.5°	25.1	27.2	29.4	31.6	32.7	32.7	33.8	34.9	34.9	34.9
150°	21.8	24.0	26.2	27.2	28.3	28.3	29.4	30.5	30.5	30.5
152.5°	18.5	20.7	22.9	24.0	24.0	25.1	26.2	26.2	26.2	26.2
155°	15.3	16.3	18.5	19.6	20.7	20.7	21.8	21.8	21.8	21.8
157.5°	10.9	13.1	14.2	16.3	16.3	17.4	17.4	17.4	17.4	17.4
160°	8.7	9.8	10.9	12.0	13.1	13.1	13.1	14.2	14.2	14.2
162.5°	5.4	6.5	6.5	7.6	8.7	8.7	9.8	9.8	9.8	9.8
165°	3.3	3.3	4.4	4.4	4.4	5.4	5.4	5.4	5.4	5.4
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)