

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: P231923

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231923
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-9)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-50-2LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

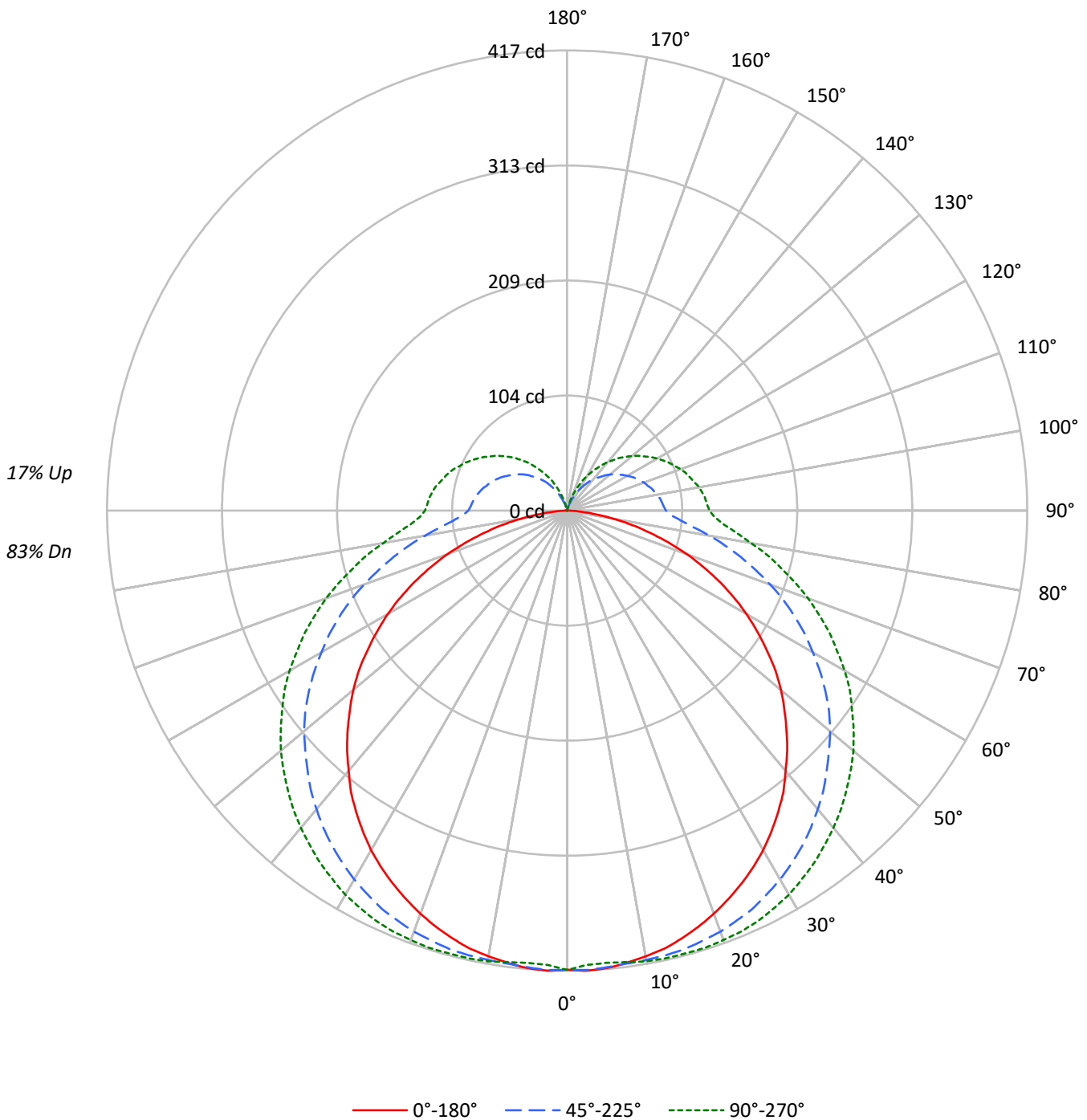
Lumens per Lamp: N/A
Luminaire Lumens: 1867.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 24.1
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	110	110	110	110	102	102	102	94	94	94	86	86	86	83
1	103	97	92	87	98	93	89	84	86	82	79	79	76	73	73	70	68	65
2	92	83	76	69	88	80	73	67	74	68	63	68	63	59	62	59	55	52
3	84	72	64	57	80	69	61	55	64	57	52	59	53	49	54	50	46	43
4	76	64	54	47	73	61	53	46	56	49	43	52	46	41	48	43	39	36
5	70	56	47	40	66	54	46	39	50	43	37	46	40	35	43	38	33	31
6	64	50	41	35	61	49	40	34	45	38	32	42	35	30	39	33	29	26
7	59	45	36	30	57	44	35	29	41	33	28	38	32	27	35	30	25	23
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	20
9	51	38	29	24	49	36	29	23	34	27	22	32	26	21	30	24	20	18
10	48	35	27	21	46	34	26	21	31	25	20	29	23	19	27	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7478	7478	7478
5°	7443	7184	7051
10°	7357	6940	6844
15°	7277	6760	6658
20°	7178	6582	6500
25°	7079	6416	6354
30°	6979	6234	6196
35°	6843	6054	6025
40°	6675	5861	5856
45°	6510	5660	5687
50°	6337	5479	5520
55°	6078	5253	5318
60°	5769	4982	5120
65°	5353	4704	4881
70°	4783	4365	4611
75°	3942	3983	4296
80°	2842	3566	3973
85°	1304	3214	3731



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.5	2.1
10°-20°	115.8	6.2
20°-30°	182.0	9.7
30°-40°	229.5	12.3
40°-50°	252.7	13.5
50°-60°	248.6	13.3
60°-70°	216.5	11.6
70°-80°	161.8	8.7
80°-90°	104.4	5.6
90°-100°	83.4	4.5
100°-110°	73.6	3.9
110°-120°	60.3	3.2
120°-130°	45.3	2.4
130°-140°	30.1	1.6
140°-150°	16.5	0.9
150°-160°	6.2	0.3
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	337.3	18.1
0°-40°	566.8	30.4
0°-60°	1068.1	57.2
0°-90°	1550.8	83.1
90°-120°	217.3	11.6
90°-150°	309.2	16.6
90°-180°	316.0	16.9
0°-180°	1867.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	416	416	416	416	416	
5°	416	415	415	414	411	40
15°	401	402	411	416	415	113
25°	373	381	398	408	410	172
35°	333	348	371	386	390	209
45°	281	303	333	353	358	217
55°	221	250	286	308	315	198
65°	152	186	228	254	262	150
75°	78	118	163	192	200	82
85°	13	56	104	133	142	17
90°	0	43	90	120	129	1
95°	0	40	86	116	126	0
105°	0	35	79	107	116	0
115°	0	29	69	94	102	0
125°	0	23	57	79	86	0
135°	0	16	43	62	68	0
145°	0	8	29	43	47	0
155°	1	2	13	23	25	0
165°	0	0	1	4	5	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231923

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	416.1	416.1	416.1	416.1	416.1	416.1	416.1	416.1	416.1	416.1	416.1
2.5°	417.4	416.7	416.7	416.7	416.7	416.7	416.7	416.7	416.7	416.7	416.7
5°	416.1	415.4	415.4	415.4	415.4	415.4	416.1	415.4	416.1	415.4	415.4
7.5°	413.4	412.7	412.7	412.7	412.7	413.4	413.4	413.4	413.4	414.1	414.1
10°	410.1	409.4	409.4	409.4	410.1	410.1	410.7	411.4	412.7	413.4	414.1
12.5°	406.7	405.4	406.0	405.4	406.0	406.7	408.1	410.1	411.4	412.7	414.1
15°	401.4	400.0	400.7	400.7	401.4	403.4	405.4	407.4	409.4	411.4	412.7
17.5°	395.4	394.7	394.7	394.7	397.4	399.4	402.0	404.7	406.7	408.7	410.7
20°	388.7	388.0	388.0	388.7	391.4	394.7	397.4	400.7	403.4	406.0	408.7
22.5°	381.3	380.7	380.7	382.7	385.3	389.4	392.7	396.0	399.4	402.0	405.4
25°	373.3	373.3	373.3	376.0	379.3	383.3	387.3	390.7	394.7	398.0	401.4
27.5°	364.6	364.0	364.6	368.0	372.0	376.7	380.7	384.7	388.7	392.0	395.4
30°	355.3	354.0	355.3	359.3	364.0	368.6	373.3	378.0	382.0	386.0	390.0
32.5°	344.6	343.9	345.3	349.9	354.6	360.0	365.3	370.0	374.7	378.7	383.3
35°	333.3	331.9	333.9	339.9	345.3	350.6	356.0	361.3	366.6	371.3	376.0
37.5°	321.9	320.6	323.2	329.2	334.6	340.6	346.6	352.6	358.0	362.6	367.3
40°	307.9	307.9	311.2	317.2	323.2	329.9	335.9	342.6	348.6	353.3	358.6
42.5°	295.2	295.2	299.2	305.2	311.9	318.6	328.6	334.6	337.9	343.9	349.3
45°	281.2	281.2	285.8	292.5	299.2	306.5	313.9	320.6	327.2	332.6	339.3
47.5°	267.1	267.1	273.1	279.8	287.2	295.2	301.9	309.2	315.9	321.9	328.6
50°	253.1	252.4	258.5	265.8	273.8	284.5	289.8	297.2	303.9	311.2	317.2
52.5°	237.8	237.8	244.4	251.8	259.8	267.8	276.5	284.5	292.5	299.2	305.2
55°	221.1	221.7	228.4	236.4	245.8	253.8	262.5	270.5	277.8	285.8	292.5
57.5°	204.4	205.7	213.0	221.7	229.7	239.1	247.8	256.5	264.5	271.8	278.5
60°	187.7	189.0	196.3	204.4	213.7	223.1	233.1	241.8	249.8	257.1	264.5
62.5°	170.3	171.6	179.0	188.3	198.3	207.7	217.0	226.4	234.4	243.1	250.4
65°	152.3	154.3	162.3	171.0	181.0	191.0	201.0	210.4	219.1	227.7	234.4
67.5°	133.6	136.9	144.3	154.3	164.3	174.3	184.3	194.3	203.7	212.4	219.1
70°	115.5	118.2	125.6	136.9	146.9	157.6	167.6	178.3	187.7	195.7	203.0
72.5°	96.2	100.2	108.9	118.2	129.6	140.2	150.9	160.9	171.0	179.0	187.0
75°	77.5	81.5	90.2	101.5	111.5	123.6	133.6	144.3	153.6	163.0	171.6
77.5°	60.1	64.1	72.8	83.5	94.8	106.2	116.9	127.6	138.2	146.9	154.3
80°	42.7	46.7	56.1	66.8	78.1	89.5	101.5	111.5	121.5	130.9	138.2
82.5°	26.7	31.4	40.7	52.1	63.4	74.8	86.2	96.8	106.9	115.5	124.2
85°	13.4	18.0	27.4	39.4	50.8	62.1	74.1	84.1	94.2	103.5	111.5
87.5°	4.7	9.3	18.0	30.1	41.4	52.8	64.1	74.8	85.5	94.2	102.2
90°	0.0	4.7	14.0	25.4	36.7	48.8	60.1	70.8	80.1	89.5	98.2
92.5°	0.0	4.0	12.7	23.4	35.4	46.7	58.1	68.8	78.8	87.5	96.2
95°	0.0	4.0	12.0	22.7	34.1	45.4	56.8	67.5	77.5	86.2	94.2
97.5°	0.0	3.3	11.4	22.0	32.7	44.7	55.4	66.1	75.5	84.8	92.8
100°	0.0	3.3	10.7	20.7	32.1	42.7	54.1	64.1	73.5	82.8	90.8
102.5°	0.0	2.7	10.0	20.0	30.7	41.4	52.1	62.1	72.1	80.8	88.8
105°	0.0	2.7	9.3	19.4	29.4	40.1	50.8	60.8	70.1	78.8	86.2
107.5°	0.0	2.0	9.3	18.0	28.0	38.7	48.8	58.8	67.5	76.1	84.1
110°	0.0	2.0	8.7	17.4	27.4	37.4	47.4	56.8	65.4	74.1	81.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.3	8.0	16.0	26.0	35.4	45.4	54.8	63.4	71.5	78.1
115°	0.0	1.3	7.3	15.4	24.7	34.1	43.4	52.1	60.8	68.8	75.5
117.5°	0.0	0.7	6.7	14.0	23.4	32.1	41.4	50.1	58.1	66.1	72.8
120°	0.0	0.7	6.0	13.4	22.0	30.7	39.4	47.4	55.4	62.8	69.5
122.5°	0.0	0.7	5.3	12.0	20.7	28.7	37.4	45.4	52.8	60.1	66.1
125°	0.0	0.7	4.7	11.4	18.7	26.7	34.7	42.7	50.1	56.8	63.4
127.5°	0.0	0.7	4.0	10.0	17.4	25.4	32.7	40.1	47.4	54.1	60.1
130°	0.0	0.7	3.3	9.3	16.0	23.4	30.7	37.4	44.1	50.8	56.1
132.5°	0.0	0.0	2.7	8.0	14.0	21.4	28.0	34.7	41.4	47.4	52.8
135°	0.0	0.0	2.0	6.7	12.7	19.4	26.0	32.1	38.1	43.4	48.8
137.5°	0.0	0.0	1.3	6.0	11.4	17.4	23.4	29.4	34.7	40.1	44.7
140°	0.0	0.0	0.7	4.7	10.0	15.4	20.7	26.7	32.1	36.7	41.4
142.5°	0.0	0.0	0.7	3.3	8.0	13.4	18.0	23.4	28.7	33.4	37.4
145°	0.0	0.0	0.0	2.7	6.0	10.7	15.4	20.0	25.4	29.4	33.4
147.5°	0.0	0.0	0.0	2.0	4.7	8.7	12.7	16.7	21.4	25.4	29.4
150°	0.0	0.0	0.0	0.7	3.3	6.7	10.7	14.0	18.0	21.4	24.7
152.5°	0.0	0.0	0.0	0.7	2.7	5.3	8.0	11.4	14.0	17.4	20.7
155°	0.7	0.0	0.0	0.0	1.3	3.3	6.0	8.0	10.7	13.4	16.0
157.5°	0.0	0.0	0.0	0.0	0.7	2.0	4.0	6.0	8.0	10.0	12.0
160°	0.7	0.0	0.0	0.0	0.0	0.7	2.0	3.3	5.3	6.7	8.0
162.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.7	1.3	2.7	4.0	4.7
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.3	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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	416.1	416.1	416.1	416.1	416.1	416.1	416.1	416.1
2.5°	416.1	415.4	414.7	414.1	413.4	412.7	412.1	412.1
5°	414.7	414.7	414.1	413.4	412.7	412.1	411.4	411.4
7.5°	414.7	414.7	414.7	414.1	414.1	413.4	412.7	412.7
10°	414.7	415.4	415.4	415.4	415.4	414.7	414.7	414.7
12.5°	414.7	416.1	416.1	416.1	416.1	416.1	416.1	415.4
15°	414.1	414.7	415.4	416.1	416.1	416.1	415.4	415.4
17.5°	412.7	414.1	414.7	415.4	415.4	415.4	415.4	415.4
20°	410.1	412.1	412.7	414.1	414.1	414.7	414.1	414.1
22.5°	407.4	409.4	410.7	411.4	412.1	412.7	412.7	412.7
25°	403.4	406.0	407.4	408.7	409.4	410.1	410.1	410.1
27.5°	398.7	401.4	403.4	404.7	405.4	406.0	406.0	406.0
30°	393.4	395.4	398.0	400.0	400.7	401.4	401.4	402.0
32.5°	386.7	389.4	392.0	394.0	394.7	395.4	396.0	396.0
35°	379.3	382.7	384.7	387.3	388.7	389.4	389.4	390.0
37.5°	372.0	375.3	377.3	380.0	381.3	382.0	382.7	382.7
40°	362.6	366.6	369.3	372.0	373.3	374.7	374.7	375.3
42.5°	354.0	358.0	360.6	363.3	365.3	366.6	367.3	367.3
45°	343.9	347.9	351.3	354.0	356.0	357.3	358.0	358.0
47.5°	333.3	337.9	341.9	344.6	346.6	347.9	348.6	348.6
50°	321.9	327.2	330.6	333.9	335.9	337.3	337.9	338.6
52.5°	310.5	315.2	319.2	322.6	325.2	326.6	327.2	327.2
55°	297.9	303.2	306.5	310.5	313.2	313.9	315.2	315.2
57.5°	285.2	289.8	293.8	297.9	299.9	301.9	303.2	303.9
60°	271.1	275.8	280.5	284.5	287.2	289.2	289.8	290.5
62.5°	257.1	262.5	267.1	270.5	273.1	275.1	276.5	275.8
65°	241.8	247.1	251.8	255.8	259.1	261.1	261.8	262.5
67.5°	226.4	233.1	237.1	241.1	243.8	246.4	247.1	247.1
70°	210.4	217.0	222.4	225.1	228.4	230.4	232.4	232.4
72.5°	194.3	200.4	205.7	209.7	212.4	215.0	216.4	216.4
75°	177.6	183.7	189.7	193.7	197.0	199.0	199.7	200.4
77.5°	161.6	168.3	173.6	177.6	181.0	183.0	184.3	185.7
80°	145.6	152.3	157.6	162.3	165.0	167.6	169.0	169.0
82.5°	131.6	138.2	143.6	148.3	150.9	153.6	154.3	154.9
85°	118.9	126.2	130.9	135.6	138.9	140.9	142.2	142.2
87.5°	110.2	116.9	122.2	126.9	130.2	132.2	133.6	133.6
90°	105.5	112.2	117.5	122.2	125.6	127.6	128.9	128.9
92.5°	103.5	110.2	115.5	120.2	122.9	125.6	126.9	126.9
95°	102.2	108.2	113.5	118.2	121.5	124.2	124.9	125.6
97.5°	100.2	106.9	112.2	116.9	119.5	122.2	123.6	123.6
100°	98.2	104.2	109.5	114.2	117.5	119.5	120.9	121.5
102.5°	95.5	102.2	107.5	111.5	114.9	116.9	118.2	118.2
105°	93.5	99.5	104.9	108.9	112.2	114.2	115.5	115.5
107.5°	90.8	96.8	102.2	106.2	108.9	111.5	112.2	112.9
110°	88.2	94.2	98.8	102.8	106.2	108.2	108.9	109.5



TEST NUMBER: P231923

CATALOG NUMBER: FVS4M-2-LD4-50-2LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	84.8	90.8	95.5	99.5	102.2	104.2	105.5	105.5
115°	82.1	87.5	92.2	96.2	98.8	100.8	102.2	102.2
117.5°	78.8	84.1	88.8	92.2	94.8	96.8	98.2	98.2
120°	75.5	80.8	85.5	88.8	91.5	93.5	94.2	94.2
122.5°	72.1	77.5	81.5	84.8	87.5	88.8	90.2	90.2
125°	68.8	73.5	77.5	80.8	83.5	84.8	85.5	85.5
127.5°	64.8	69.5	73.5	76.8	78.8	80.8	80.8	81.5
130°	61.4	65.4	69.5	72.1	74.1	76.1	76.8	76.8
132.5°	57.4	61.4	64.8	67.5	70.1	71.5	71.5	72.1
135°	53.4	57.4	60.8	63.4	65.4	66.1	67.5	67.5
137.5°	49.4	52.8	56.1	58.8	60.8	61.4	62.1	62.1
140°	45.4	48.8	51.4	54.1	55.4	56.8	57.4	57.4
142.5°	40.7	44.1	46.7	48.8	50.8	51.4	52.1	52.1
145°	36.7	39.4	42.1	44.1	45.4	46.7	46.7	46.7
147.5°	32.7	35.4	37.4	39.4	40.7	41.4	41.4	41.4
150°	28.0	30.7	32.7	34.1	35.4	36.1	36.1	36.1
152.5°	23.4	26.0	27.4	28.7	30.1	30.7	30.7	31.4
155°	18.7	20.7	22.7	24.0	24.7	25.4	25.4	25.4
157.5°	14.0	16.0	17.4	18.7	19.4	20.0	20.0	20.0
160°	9.3	11.4	12.7	14.0	14.7	14.7	14.7	14.7
162.5°	6.0	6.7	7.3	8.7	9.3	9.3	9.3	9.3
165°	2.7	2.7	3.3	4.0	4.0	4.7	4.7	4.7
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)