

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: P231959

Luminaire Tested: **FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231959
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-14)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH PFS125 LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

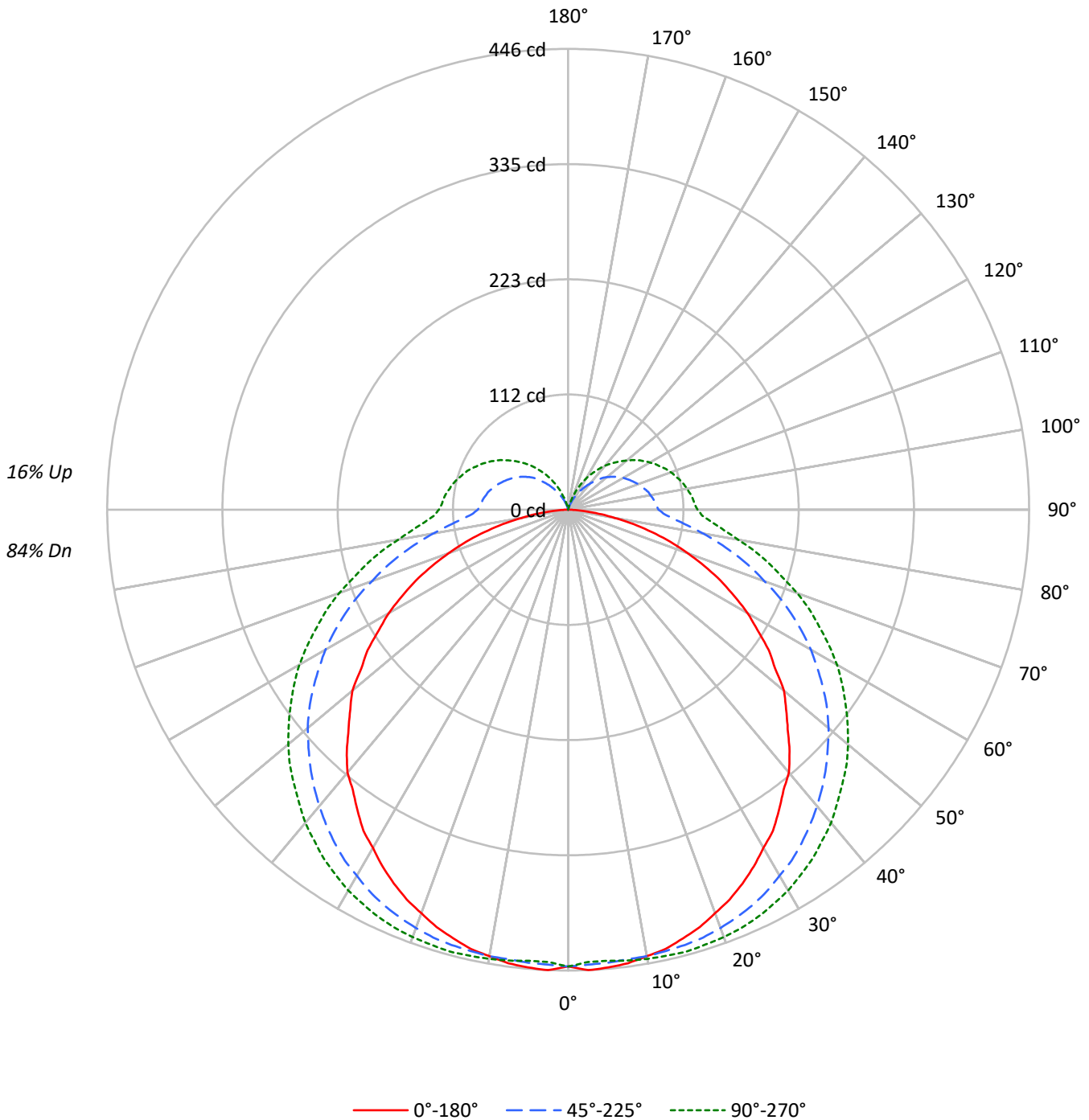
Lumens per Lamp: N/A
Luminaire Lumens: 1934.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.43 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 23.6
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

TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	0														
RCR																																						
0	115	115	115	115	111	111	111	111	102	102	102	95	95	95	88	88	88	84																				
1	103	98	93	88	99	94	89	85	86	83	79	80	77	74	74	71	69	66																				
2	93	84	76	70	89	80	74	68	74	69	64	69	64	60	63	60	56	53																				
3	84	73	64	57	80	70	62	55	65	58	52	60	54	50	55	51	47	44																				
4	77	64	55	48	73	62	53	46	57	50	44	53	47	42	49	44	40	37																				
5	70	57	47	40	67	55	46	39	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	38	32	27	36	30	26	24																				
8	55	42	33	27	53	40	32	26	38	30	25	35	29	24	33	27	23	21																				
9	52	38	30	24	49	37	29	24	34	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°	4016	4016	4016
5°	4038	3858	3796
10°	4013	3744	3682
15°	3987	3652	3587
20°	3947	3568	3492
25°	3910	3485	3405
30°	3854	3391	3315
35°	3809	3305	3220
40°	3783	3207	3121
45°	3677	3105	3013
50°	3639	3004	2912
55°	3505	2880	2794
60°	3355	2745	2676
65°	3164	2580	2519
70°	2879	2370	2363
75°	2489	2165	2180
80°	1867	1922	1982
85°	1012	1700	1852



TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.1	2.2
10°-20°	123.5	6.4
20°-30°	193.8	10.0
30°-40°	243.9	12.6
40°-50°	267.6	13.8
50°-60°	261.9	13.5
60°-70°	226.3	11.7
70°-80°	166.0	8.6
80°-90°	103.4	5.3
90°-100°	81.0	4.2
100°-110°	71.6	3.7
110°-120°	58.6	3.0
120°-130°	43.9	2.3
130°-140°	28.7	1.5
140°-150°	15.3	0.8
150°-160°	5.7	0.3
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	359.4	18.6
0°-40°	603.3	31.2
0°-60°	1132.8	58.6
0°-90°	1628.5	84.2
90°-120°	211.3	10.9
90°-150°	299.1	15.5
90°-180°	306.0	15.8
0°-180°	1934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	445	443	440	441	438	42
15°	430	431	436	443	443	121
25°	399	408	422	434	435	184
35°	355	373	394	409	412	223
45°	300	324	353	372	375	233
55°	237	267	301	322	328	211
65°	163	198	238	261	268	161
75°	84	124	167	194	201	89
85°	15	58	102	130	140	19
90°	1	42	87	116	125	1
95°	0	39	84	112	121	0
105°	0	34	77	104	112	0
115°	0	28	67	92	99	0
125°	0	22	56	77	83	0
135°	0	15	41	60	65	0
145°	0	7	25	42	45	0
155°	1	3	11	20	24	0
165°	1	0	1	3	5	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1
2.5°	446.0	445.4	444.7	444.1	444.1	444.7	444.7	444.7	444.1	442.1	440.7
5°	444.7	444.1	443.4	442.7	443.4	443.4	443.4	443.4	442.7	441.4	440.1
7.5°	442.7	442.1	441.4	440.7	440.7	441.4	441.4	441.4	441.4	440.1	438.8
10°	438.8	438.8	437.4	437.4	438.1	438.1	438.8	439.4	439.4	439.4	438.8
12.5°	435.4	434.1	433.5	434.1	434.1	434.8	435.4	437.4	437.4	438.1	437.4
15°	429.5	428.8	428.2	428.2	430.2	430.8	432.1	434.1	435.4	435.4	436.1
17.5°	423.5	422.9	422.9	422.9	424.9	426.2	428.2	430.2	431.5	432.8	434.1
20°	415.6	415.6	416.3	416.9	419.6	420.9	422.9	426.2	427.5	429.5	430.8
22.5°	408.3	407.7	407.7	409.6	412.9	414.9	416.9	420.2	422.2	424.9	426.8
25°	399.1	399.1	399.1	402.4	406.3	407.7	411.0	414.3	416.9	419.6	422.2
27.5°	389.1	389.1	389.1	393.8	397.7	400.4	403.0	407.0	410.3	412.9	416.3
30°	377.9	378.5	380.5	384.5	389.1	391.8	394.4	399.1	403.0	405.7	409.0
32.5°	368.6	366.6	369.3	373.2	379.2	382.5	385.2	389.8	394.4	398.4	402.4
35°	355.4	355.4	358.0	363.3	369.3	372.6	375.2	380.5	385.2	389.1	393.8
37.5°	342.1	341.5	345.4	351.4	358.0	361.3	364.6	369.9	373.9	378.5	384.5
40°	332.2	328.9	332.9	339.5	346.1	350.1	353.4	358.7	364.0	369.3	374.6
42.5°	317.0	314.3	319.0	325.6	333.5	337.5	340.8	347.4	352.7	358.7	364.0
45°	300.4	300.4	306.4	313.0	319.6	324.3	327.6	334.9	340.8	347.4	352.7
47.5°	285.9	285.2	290.5	299.1	306.4	311.0	315.0	321.6	328.2	335.5	340.8
50°	272.7	270.0	276.0	283.9	293.2	296.5	301.1	307.7	315.7	321.6	328.9
52.5°	252.1	254.8	259.4	268.7	277.3	281.9	286.5	293.8	301.8	308.4	315.7
55°	236.9	237.6	244.2	253.5	261.4	266.7	272.0	280.6	287.2	294.5	301.1
57.5°	217.1	219.7	227.7	236.3	245.5	251.5	255.4	263.4	271.3	279.3	285.9
60°	200.5	203.2	210.4	218.4	228.3	233.6	238.2	246.8	254.8	263.4	271.3
62.5°	181.3	184.6	192.6	201.8	211.1	215.7	220.4	231.6	239.6	247.5	254.8
65°	162.8	166.1	173.4	182.0	193.2	198.5	203.2	212.4	222.4	230.3	238.2
67.5°	142.9	146.3	154.9	164.1	174.7	180.7	185.3	195.9	203.2	212.4	221.0
70°	123.1	126.4	134.3	144.3	155.5	161.5	167.4	176.7	186.0	194.6	201.8
72.5°	103.9	107.9	115.8	125.7	137.0	142.3	147.6	158.2	167.4	177.4	185.3
75°	84.0	88.0	96.6	107.2	118.5	123.8	129.0	140.3	149.6	158.8	167.4
77.5°	64.9	68.2	78.1	89.3	99.3	103.9	110.5	121.8	131.7	141.0	149.6
80°	45.7	49.6	59.6	70.1	81.4	87.4	92.6	104.6	113.8	123.8	132.4
82.5°	29.8	33.1	43.0	53.6	65.5	70.8	76.8	88.0	97.3	108.5	116.5
85°	15.2	19.2	28.5	39.7	51.0	57.6	62.2	74.1	83.4	94.0	101.9
87.5°	4.6	9.3	17.9	29.1	40.4	47.0	52.9	63.5	74.1	83.4	92.6
90°	0.7	4.6	13.2	24.5	36.4	41.7	47.6	58.9	68.8	78.8	87.4
92.5°	0.0	4.0	12.6	23.2	34.4	40.4	46.3	56.9	67.5	76.8	85.4
95°	0.0	3.3	11.9	22.5	33.8	39.0	45.0	55.6	66.2	75.4	84.0
97.5°	0.0	3.3	11.3	21.2	32.4	38.4	43.7	54.9	64.9	74.1	82.7
100°	0.0	2.6	10.6	20.5	31.1	37.1	42.4	52.9	62.9	72.1	80.7
102.5°	0.0	2.6	9.9	19.9	30.4	35.7	41.0	51.6	61.5	70.8	79.4
105°	0.0	2.0	9.3	18.5	29.1	34.4	39.7	49.6	59.6	68.8	76.8
107.5°	0.0	2.0	8.6	17.9	27.8	33.1	37.7	48.3	57.6	66.2	74.8
110°	0.0	2.0	7.9	16.5	26.5	31.1	36.4	46.3	55.6	64.2	72.1



TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.3	7.3	15.9	25.1	29.8	35.1	44.3	53.6	62.2	69.5
115°	0.0	1.3	6.6	14.6	23.8	28.5	33.1	42.4	51.0	59.6	66.8
117.5°	0.0	0.7	6.0	13.9	22.5	27.1	31.8	40.4	49.0	56.9	64.2
120°	0.0	0.7	5.3	12.6	21.2	25.8	29.8	38.4	46.3	54.3	61.5
122.5°	0.0	0.7	4.6	11.9	19.9	23.8	27.8	36.4	44.3	51.6	58.2
125°	0.0	0.7	4.0	10.6	18.5	22.5	26.5	34.4	41.7	49.0	55.6
127.5°	0.0	0.0	3.3	9.3	16.5	19.9	23.8	31.8	39.0	45.7	52.3
130°	0.0	0.0	2.6	8.6	14.6	17.9	21.8	29.1	35.7	43.0	49.0
132.5°	0.0	0.0	2.0	7.3	13.2	16.5	19.2	25.8	32.4	39.0	45.7
135°	0.0	0.0	2.0	6.0	11.3	14.6	17.2	23.2	29.1	35.7	41.0
137.5°	0.0	0.0	1.3	4.6	9.9	12.6	15.2	20.5	25.8	31.8	37.1
140°	0.0	0.0	0.7	4.0	8.6	10.6	13.2	18.5	23.2	27.8	33.1
142.5°	0.0	0.0	0.7	3.3	6.6	9.3	11.3	15.9	20.5	24.5	29.1
145°	0.0	0.0	0.7	2.0	5.3	7.3	9.3	13.2	17.2	21.2	25.1
147.5°	0.7	0.7	0.7	2.0	4.6	6.0	7.9	11.3	14.6	18.5	21.8
150°	0.7	0.7	0.7	1.3	3.3	4.6	6.6	9.3	11.9	15.2	18.5
152.5°	0.7	0.7	0.0	0.7	2.6	3.3	4.6	7.3	9.9	11.9	14.6
155°	0.7	0.7	0.7	0.7	1.3	2.6	3.3	5.3	7.9	9.9	11.3
157.5°	0.7	0.7	0.0	0.0	0.7	1.3	2.0	4.0	6.0	7.3	8.6
160°	0.7	0.7	0.0	0.0	0.7	0.7	1.3	2.6	4.0	4.6	6.0
162.5°	0.7	0.7	0.7	0.0	0.0	0.0	0.7	1.3	2.0	2.6	4.0
165°	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.7	1.3	1.3
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



TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1	442.1
2.5°	440.7	441.4	441.4	440.7	440.7	440.7	440.1	439.4	438.8	438.1
5°	440.1	440.7	440.7	440.7	440.7	440.7	439.4	439.4	438.8	438.1
7.5°	439.4	440.7	441.4	441.4	441.4	441.4	441.4	440.7	440.1	440.1
10°	439.4	441.4	442.1	442.7	442.7	442.7	442.7	442.1	442.1	441.4
12.5°	439.4	441.4	442.1	442.7	442.7	443.4	443.4	442.7	442.7	442.1
15°	438.1	440.1	441.4	442.7	442.7	443.4	443.4	442.7	442.7	442.7
17.5°	436.1	438.8	440.1	441.4	441.4	442.1	442.7	442.1	442.1	441.4
20°	433.5	436.1	438.1	439.4	440.1	440.1	440.7	440.7	440.7	440.1
22.5°	430.2	432.8	434.8	436.1	436.8	437.4	438.8	438.8	438.1	438.1
25°	424.9	428.2	430.8	432.8	433.5	434.1	434.8	435.4	434.8	434.8
27.5°	420.2	422.9	426.2	428.2	428.8	429.5	430.2	431.5	430.8	430.2
30°	414.3	416.9	420.2	422.2	422.9	424.2	425.5	426.2	425.5	425.5
32.5°	407.0	410.3	412.9	415.6	416.9	417.6	418.9	419.6	419.6	418.9
35°	398.4	402.4	405.7	408.3	409.0	409.6	411.6	412.3	412.3	412.3
37.5°	389.8	393.1	397.1	399.7	401.0	401.7	403.0	404.3	403.7	403.7
40°	379.2	383.8	387.8	390.4	391.8	392.4	394.4	395.7	395.7	395.7
42.5°	369.3	373.2	377.2	380.5	381.8	383.8	385.2	385.2	385.8	385.2
45°	358.0	362.7	367.3	370.6	371.9	373.2	375.2	375.2	375.9	375.2
47.5°	346.8	352.7	356.0	359.3	360.0	362.0	364.0	364.6	364.6	365.3
50°	334.2	340.2	343.5	347.4	348.8	350.1	352.1	352.7	353.4	353.4
52.5°	321.0	325.6	331.5	334.9	336.2	337.5	338.8	340.2	341.5	340.8
55°	307.7	312.4	317.0	321.0	322.3	323.6	326.3	327.6	327.6	327.6
57.5°	292.5	297.8	303.1	307.1	308.4	309.7	312.4	313.0	313.7	314.3
60°	277.3	283.2	287.2	292.5	293.2	295.2	297.8	299.1	300.4	300.4
62.5°	261.4	266.7	272.7	276.6	277.9	279.9	282.6	283.9	284.6	284.6
65°	244.9	250.8	256.1	260.7	261.4	264.0	267.4	268.0	269.3	268.0
67.5°	228.3	234.3	239.6	243.5	246.2	248.2	250.2	250.8	252.8	252.8
70°	210.4	216.4	222.4	227.0	229.0	230.3	232.9	234.9	234.9	235.6
72.5°	192.6	198.5	204.5	208.5	210.4	212.4	215.7	217.1	217.7	217.1
75°	174.7	181.3	187.3	191.3	193.9	195.9	197.9	200.5	201.2	201.2
77.5°	156.8	164.8	169.4	174.7	176.7	178.7	180.7	182.6	184.0	184.6
80°	139.6	146.9	152.2	156.8	159.5	162.1	164.8	166.1	166.8	166.8
82.5°	124.4	131.0	137.0	141.6	144.3	145.6	148.9	150.2	152.2	152.2
85°	110.5	116.5	123.1	129.0	130.4	132.4	135.7	138.3	139.0	139.6
87.5°	100.6	107.9	113.8	119.1	121.1	123.1	126.4	128.4	129.0	129.7
90°	96.0	102.6	108.5	113.8	115.8	117.8	121.1	123.1	124.4	125.1
92.5°	93.3	100.6	106.5	111.8	113.8	115.8	118.5	121.1	121.8	122.4
95°	92.0	99.3	105.2	110.5	112.5	114.5	117.1	119.1	120.4	121.1
97.5°	90.7	97.3	103.9	108.5	110.5	112.5	115.8	117.8	118.5	119.1
100°	88.7	96.0	101.3	106.5	108.5	110.5	113.2	115.1	116.5	116.5
102.5°	86.7	93.3	99.3	104.6	106.5	107.9	111.2	113.2	113.8	114.5
105°	84.7	91.3	97.3	101.9	103.9	105.9	108.5	110.5	111.2	111.8
107.5°	82.1	88.7	94.6	99.3	101.3	102.6	105.9	107.2	108.5	108.5
110°	79.4	86.0	91.3	96.6	97.9	99.9	102.6	104.6	105.2	105.9



TEST NUMBER: P231959

CATALOG NUMBER: FVS4M-4-LD4-50-1LO-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	76.8	82.7	88.7	92.6	95.3	96.6	99.3	101.3	101.9	102.6
115°	74.1	80.1	85.4	90.0	92.0	93.3	96.0	97.9	98.6	98.6
117.5°	70.8	76.8	82.1	86.7	88.0	90.0	92.0	94.0	94.6	95.3
120°	67.5	73.5	78.8	82.7	84.7	86.0	88.7	90.0	90.7	91.3
122.5°	64.9	70.1	74.8	79.4	80.7	82.7	84.7	86.0	86.7	87.4
125°	61.5	66.8	71.5	75.4	76.8	78.8	80.7	82.7	82.7	83.4
127.5°	58.2	62.9	67.5	71.5	72.8	74.1	76.8	78.1	78.8	78.8
130°	54.3	59.6	63.5	67.5	68.8	70.1	72.1	73.5	74.1	74.1
132.5°	51.0	55.6	59.6	62.9	64.2	65.5	67.5	68.8	69.5	69.5
135°	47.0	51.6	55.6	58.9	60.2	61.5	62.9	64.2	64.9	64.9
137.5°	42.4	47.6	51.0	54.3	55.6	56.9	58.2	59.6	60.2	60.2
140°	37.7	43.0	47.0	50.3	51.0	52.3	53.6	54.3	54.9	55.6
142.5°	33.8	37.7	42.4	45.0	46.3	47.0	49.0	49.6	49.6	50.3
145°	29.1	32.4	37.1	40.4	41.7	42.4	43.7	45.0	45.0	45.0
147.5°	24.5	28.5	31.1	35.1	36.4	37.7	39.0	39.7	39.7	40.4
150°	21.2	23.8	26.5	29.8	31.1	32.4	33.8	34.4	35.1	35.1
152.5°	17.2	19.9	21.8	24.5	25.1	26.5	28.5	29.1	29.1	29.8
155°	13.9	15.2	17.2	19.2	19.9	21.2	23.2	24.5	24.5	24.5
157.5°	9.9	11.9	13.2	14.6	15.2	15.9	17.9	19.2	19.2	19.2
160°	7.3	7.9	9.3	9.9	10.6	11.3	12.6	13.9	14.6	13.9
162.5°	4.6	5.3	6.0	6.6	6.6	7.3	7.3	8.6	9.3	9.3
165°	2.0	2.6	2.6	2.6	3.3	3.3	3.3	3.3	4.6	4.6
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)