

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: P231925

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231925
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-LD4-35-2STD-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

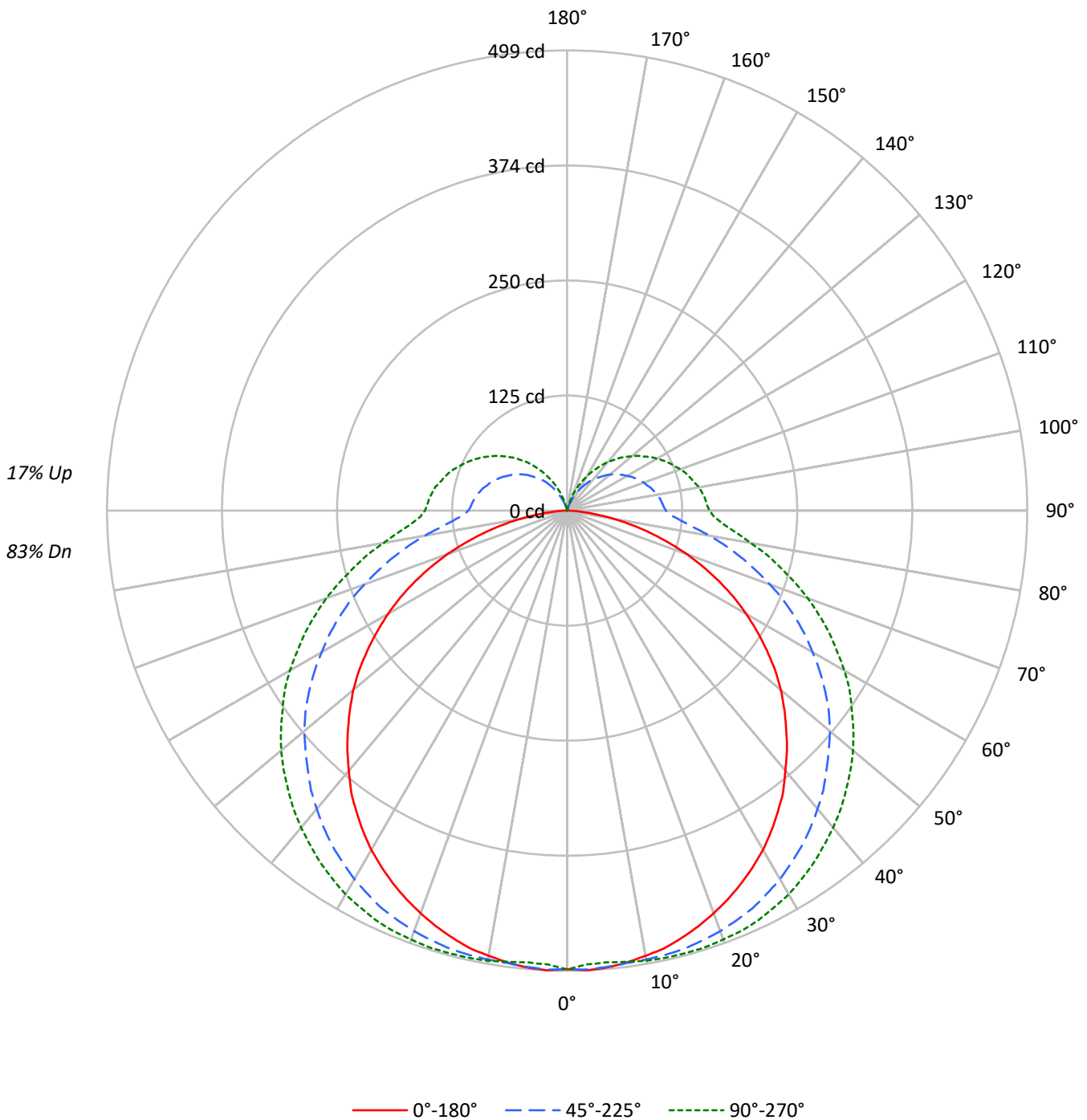
Lumens per Lamp: N/A
Luminaire Lumens: 2232.0 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 33.9
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°	8939	8939	8939
5°	8897	8588	8429
10°	8794	8296	8182
15°	8699	8081	7960
20°	8582	7870	7770
25°	8464	7670	7595
30°	8344	7453	7407
35°	8180	7238	7204
40°	7980	7008	7001
45°	7781	6766	6797
50°	7577	6551	6599
55°	7266	6280	6358
60°	6897	5957	6121
65°	6397	5626	5835
70°	5719	5217	5511
75°	4710	4760	5134
80°	3401	4264	4748
85°	1558	3844	4463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.2	2.1
10°-20°	138.4	6.2
20°-30°	217.6	9.7
30°-40°	274.4	12.3
40°-50°	302.1	13.5
50°-60°	297.2	13.3
60°-70°	258.9	11.6
70°-80°	193.4	8.7
80°-90°	124.8	5.6
90°-100°	99.7	4.5
100°-110°	88.0	3.9
110°-120°	72.1	3.2
120°-130°	54.1	2.4
130°-140°	36.0	1.6
140°-150°	19.7	0.9
150°-160°	7.5	0.3
160°-170°	0.9	0.0
170°-180°	0.0	0.0
0°-30°	403.3	18.1
0°-40°	677.6	30.4
0°-60°	1276.9	57.2
0°-90°	1854.0	83.1
90°-120°	259.8	11.6
90°-150°	369.6	16.6
90°-180°	378.0	16.9
0°-180°	2232.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	497	497	497	495	492	47
15°	480	481	492	497	497	135
25°	446	456	476	488	490	206
35°	398	416	444	462	466	249
45°	336	362	398	422	428	259
55°	264	299	342	369	377	236
65°	182	222	272	303	314	180
75°	93	140	195	229	240	99
85°	16	68	124	159	170	21
90°	0	51	107	143	154	1
95°	0	48	103	138	150	0
105°	0	42	94	128	138	0
115°	0	35	82	113	122	0
125°	0	27	68	95	102	0
135°	0	19	52	74	81	0
145°	0	10	35	52	56	0
155°	1	3	16	28	30	0
165°	0	0	2	4	6	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231925

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	497.4	497.4	497.4	497.4	497.4	497.4	497.4	497.4	497.4	497.4	497.4
2.5°	499.0	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2
5°	497.4	496.6	496.6	496.6	496.6	496.6	497.4	496.6	497.4	496.6	496.6
7.5°	494.2	493.4	493.4	493.4	493.4	494.2	494.2	494.2	494.2	495.0	495.0
10°	490.2	489.4	489.4	489.4	490.2	490.2	491.0	491.8	493.4	494.2	495.0
12.5°	486.2	484.6	485.4	484.6	485.4	486.2	487.8	490.2	491.8	493.4	495.0
15°	479.8	478.2	479.0	479.0	479.8	482.2	484.6	487.0	489.4	491.8	493.4
17.5°	472.7	471.9	471.9	471.9	475.0	477.4	480.6	483.8	486.2	488.6	491.0
20°	464.7	463.9	463.9	464.7	467.9	471.9	475.0	479.0	482.2	485.4	488.6
22.5°	455.9	455.1	455.1	457.5	460.7	465.5	469.5	473.5	477.4	480.6	484.6
25°	446.3	446.3	446.3	449.5	453.5	458.3	463.1	467.1	471.9	475.8	479.8
27.5°	435.9	435.1	435.9	439.9	444.7	450.3	455.1	459.9	464.7	468.7	472.7
30°	424.8	423.2	424.8	429.5	435.1	440.7	446.3	451.9	456.7	461.5	466.3
32.5°	412.0	411.2	412.8	418.4	424.0	430.3	436.7	442.3	447.9	452.7	458.3
35°	398.4	396.8	399.2	406.4	412.8	419.2	425.5	431.9	438.3	443.9	449.5
37.5°	384.8	383.2	386.4	393.6	400.0	407.2	414.4	421.6	427.9	433.5	439.1
40°	368.1	368.1	372.1	379.2	386.4	394.4	401.6	409.6	416.8	422.4	428.7
42.5°	352.9	352.9	357.7	364.9	372.9	380.8	392.8	400.0	404.0	411.2	417.6
45°	336.1	336.1	341.7	349.7	357.7	366.5	375.2	383.2	391.2	397.6	405.6
47.5°	319.4	319.4	326.5	334.5	343.3	352.9	360.9	369.7	377.6	384.8	392.8
50°	302.6	301.8	309.0	317.8	327.3	340.1	346.5	355.3	363.3	372.1	379.2
52.5°	284.2	284.2	292.2	301.0	310.6	320.2	330.5	340.1	349.7	357.7	364.9
55°	264.3	265.1	273.1	282.6	293.8	303.4	313.8	323.4	332.1	341.7	349.7
57.5°	244.3	245.9	254.7	265.1	274.7	285.8	296.2	306.6	316.2	325.0	332.9
60°	224.4	225.9	234.7	244.3	255.5	266.7	278.6	289.0	298.6	307.4	316.2
62.5°	203.6	205.2	214.0	225.1	237.1	248.3	259.5	270.7	280.2	290.6	299.4
65°	182.0	184.4	194.0	204.4	216.4	228.3	240.3	251.5	261.9	272.3	280.2
67.5°	159.7	163.7	172.5	184.4	196.4	208.4	220.4	232.3	243.5	253.9	261.9
70°	138.1	141.3	150.1	163.7	175.6	188.4	200.4	213.2	224.4	233.9	242.7
72.5°	115.0	119.8	130.1	141.3	154.9	167.7	180.4	192.4	204.4	214.0	223.6
75°	92.6	97.4	107.8	121.4	133.3	147.7	159.7	172.5	183.6	194.8	205.2
77.5°	71.9	76.6	87.0	99.8	113.4	126.9	139.7	152.5	165.3	175.6	184.4
80°	51.1	55.9	67.1	79.8	93.4	107.0	121.4	133.3	145.3	156.5	165.3
82.5°	31.9	37.5	48.7	62.3	75.8	89.4	103.0	115.8	127.7	138.1	148.5
85°	16.0	21.6	32.7	47.1	60.7	74.3	88.6	100.6	112.6	123.8	133.3
87.5°	5.6	11.2	21.6	35.9	49.5	63.1	76.6	89.4	102.2	112.6	122.2
90°	0.0	5.6	16.8	30.3	43.9	58.3	71.9	84.6	95.8	107.0	117.4
92.5°	0.0	4.8	15.2	27.9	42.3	55.9	69.5	82.2	94.2	104.6	115.0
95°	0.0	4.8	14.4	27.1	40.7	54.3	67.9	80.6	92.6	103.0	112.6
97.5°	0.0	4.0	13.6	26.3	39.1	53.5	66.3	79.0	90.2	101.4	111.0
100°	0.0	4.0	12.8	24.8	38.3	51.1	64.7	76.6	87.8	99.0	108.6
102.5°	0.0	3.2	12.0	24.0	36.7	49.5	62.3	74.3	86.2	96.6	106.2
105°	0.0	3.2	11.2	23.2	35.1	47.9	60.7	72.7	83.8	94.2	103.0
107.5°	0.0	2.4	11.2	21.6	33.5	46.3	58.3	70.3	80.6	91.0	100.6
110°	0.0	2.4	10.4	20.8	32.7	44.7	56.7	67.9	78.2	88.6	97.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.6	9.6	19.2	31.1	42.3	54.3	65.5	75.8	85.4	93.4
115°	0.0	1.6	8.8	18.4	29.5	40.7	51.9	62.3	72.7	82.2	90.2
117.5°	0.0	0.8	8.0	16.8	27.9	38.3	49.5	59.9	69.5	79.0	87.0
120°	0.0	0.8	7.2	16.0	26.3	36.7	47.1	56.7	66.3	75.0	83.0
122.5°	0.0	0.8	6.4	14.4	24.8	34.3	44.7	54.3	63.1	71.9	79.0
125°	0.0	0.8	5.6	13.6	22.4	31.9	41.5	51.1	59.9	67.9	75.8
127.5°	0.0	0.8	4.8	12.0	20.8	30.3	39.1	47.9	56.7	64.7	71.9
130°	0.0	0.8	4.0	11.2	19.2	27.9	36.7	44.7	52.7	60.7	67.1
132.5°	0.0	0.0	3.2	9.6	16.8	25.5	33.5	41.5	49.5	56.7	63.1
135°	0.0	0.0	2.4	8.0	15.2	23.2	31.1	38.3	45.5	51.9	58.3
137.5°	0.0	0.0	1.6	7.2	13.6	20.8	27.9	35.1	41.5	47.9	53.5
140°	0.0	0.0	0.8	5.6	12.0	18.4	24.8	31.9	38.3	43.9	49.5
142.5°	0.0	0.0	0.8	4.0	9.6	16.0	21.6	27.9	34.3	39.9	44.7
145°	0.0	0.0	0.0	3.2	7.2	12.8	18.4	24.0	30.3	35.1	39.9
147.5°	0.0	0.0	0.0	2.4	5.6	10.4	15.2	20.0	25.5	30.3	35.1
150°	0.0	0.0	0.0	0.8	4.0	8.0	12.8	16.8	21.6	25.5	29.5
152.5°	0.0	0.0	0.0	0.8	3.2	6.4	9.6	13.6	16.8	20.8	24.8
155°	0.8	0.0	0.0	0.0	1.6	4.0	7.2	9.6	12.8	16.0	19.2
157.5°	0.0	0.0	0.0	0.0	0.8	2.4	4.8	7.2	9.6	12.0	14.4
160°	0.8	0.0	0.0	0.0	0.0	0.8	2.4	4.0	6.4	8.0	9.6
162.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.8	1.6	3.2	4.8	5.6
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	2.4
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°	497.4	497.4	497.4	497.4	497.4	497.4	497.4	497.4
2.5°	497.4	496.6	495.8	495.0	494.2	493.4	492.6	492.6
5°	495.8	495.8	495.0	494.2	493.4	492.6	491.8	491.8
7.5°	495.8	495.8	495.8	495.0	495.0	494.2	493.4	493.4
10°	495.8	496.6	496.6	496.6	496.6	495.8	495.8	495.8
12.5°	495.8	497.4	497.4	497.4	497.4	497.4	497.4	496.6
15°	495.0	495.8	496.6	497.4	497.4	497.4	496.6	496.6
17.5°	493.4	495.0	495.8	496.6	496.6	496.6	496.6	496.6
20°	490.2	492.6	493.4	495.0	495.0	495.8	495.0	495.0
22.5°	487.0	489.4	491.0	491.8	492.6	493.4	493.4	493.4
25°	482.2	485.4	487.0	488.6	489.4	490.2	490.2	490.2
27.5°	476.6	479.8	482.2	483.8	484.6	485.4	485.4	485.4
30°	470.3	472.7	475.8	478.2	479.0	479.8	479.8	480.6
32.5°	462.3	465.5	468.7	471.1	471.9	472.7	473.5	473.5
35°	453.5	457.5	459.9	463.1	464.7	465.5	465.5	466.3
37.5°	444.7	448.7	451.1	454.3	455.9	456.7	457.5	457.5
40°	433.5	438.3	441.5	444.7	446.3	447.9	447.9	448.7
42.5°	423.2	427.9	431.1	434.3	436.7	438.3	439.1	439.1
45°	411.2	416.0	420.0	423.2	425.5	427.1	427.9	427.9
47.5°	398.4	404.0	408.8	412.0	414.4	416.0	416.8	416.8
50°	384.8	391.2	395.2	399.2	401.6	403.2	404.0	404.8
52.5°	371.3	376.8	381.6	385.6	388.8	390.4	391.2	391.2
55°	356.1	362.5	366.5	371.3	374.5	375.2	376.8	376.8
57.5°	340.9	346.5	351.3	356.1	358.5	360.9	362.5	363.3
60°	324.2	329.7	335.3	340.1	343.3	345.7	346.5	347.3
62.5°	307.4	313.8	319.4	323.4	326.5	328.9	330.5	329.7
65°	289.0	295.4	301.0	305.8	309.8	312.2	313.0	313.8
67.5°	270.7	278.6	283.4	288.2	291.4	294.6	295.4	295.4
70°	251.5	259.5	265.9	269.1	273.1	275.4	277.8	277.8
72.5°	232.3	239.5	245.9	250.7	253.9	257.1	258.7	258.7
75°	212.4	219.6	226.7	231.5	235.5	237.9	238.7	239.5
77.5°	193.2	201.2	207.6	212.4	216.4	218.8	220.4	222.0
80°	174.1	182.0	188.4	194.0	197.2	200.4	202.0	202.0
82.5°	157.3	165.3	171.7	177.2	180.4	183.6	184.4	185.2
85°	142.1	150.9	156.5	162.1	166.1	168.5	170.1	170.1
87.5°	131.7	139.7	146.1	151.7	155.7	158.1	159.7	159.7
90°	126.1	134.1	140.5	146.1	150.1	152.5	154.1	154.1
92.5°	123.8	131.7	138.1	143.7	146.9	150.1	151.7	151.7
95°	122.2	129.3	135.7	141.3	145.3	148.5	149.3	150.1
97.5°	119.8	127.7	134.1	139.7	142.9	146.1	147.7	147.7
100°	117.4	124.6	130.9	136.5	140.5	142.9	144.5	145.3
102.5°	114.2	122.2	128.5	133.3	137.3	139.7	141.3	141.3
105°	111.8	119.0	125.3	130.1	134.1	136.5	138.1	138.1
107.5°	108.6	115.8	122.2	126.9	130.1	133.3	134.1	134.9
110°	105.4	112.6	118.2	123.0	126.9	129.3	130.1	130.9



TEST NUMBER: P231925

CATALOG NUMBER: FVS4M-2-LD4-35-2STD-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	101.4	108.6	114.2	119.0	122.2	124.6	126.1	126.1
115°	98.2	104.6	110.2	115.0	118.2	120.6	122.2	122.2
117.5°	94.2	100.6	106.2	110.2	113.4	115.8	117.4	117.4
120°	90.2	96.6	102.2	106.2	109.4	111.8	112.6	112.6
122.5°	86.2	92.6	97.4	101.4	104.6	106.2	107.8	107.8
125°	82.2	87.8	92.6	96.6	99.8	101.4	102.2	102.2
127.5°	77.4	83.0	87.8	91.8	94.2	96.6	96.6	97.4
130°	73.5	78.2	83.0	86.2	88.6	91.0	91.8	91.8
132.5°	68.7	73.5	77.4	80.6	83.8	85.4	85.4	86.2
135°	63.9	68.7	72.7	75.8	78.2	79.0	80.6	80.6
137.5°	59.1	63.1	67.1	70.3	72.7	73.5	74.3	74.3
140°	54.3	58.3	61.5	64.7	66.3	67.9	68.7	68.7
142.5°	48.7	52.7	55.9	58.3	60.7	61.5	62.3	62.3
145°	43.9	47.1	50.3	52.7	54.3	55.9	55.9	55.9
147.5°	39.1	42.3	44.7	47.1	48.7	49.5	49.5	49.5
150°	33.5	36.7	39.1	40.7	42.3	43.1	43.1	43.1
152.5°	27.9	31.1	32.7	34.3	35.9	36.7	36.7	37.5
155°	22.4	24.8	27.1	28.7	29.5	30.3	30.3	30.3
157.5°	16.8	19.2	20.8	22.4	23.2	24.0	24.0	24.0
160°	11.2	13.6	15.2	16.8	17.6	17.6	17.6	17.6
162.5°	7.2	8.0	8.8	10.4	11.2	11.2	11.2	11.2
165°	3.2	3.2	4.0	4.8	4.8	5.6	5.6	5.6
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)