

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: P231921

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231921
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-LD4-35-2LO-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

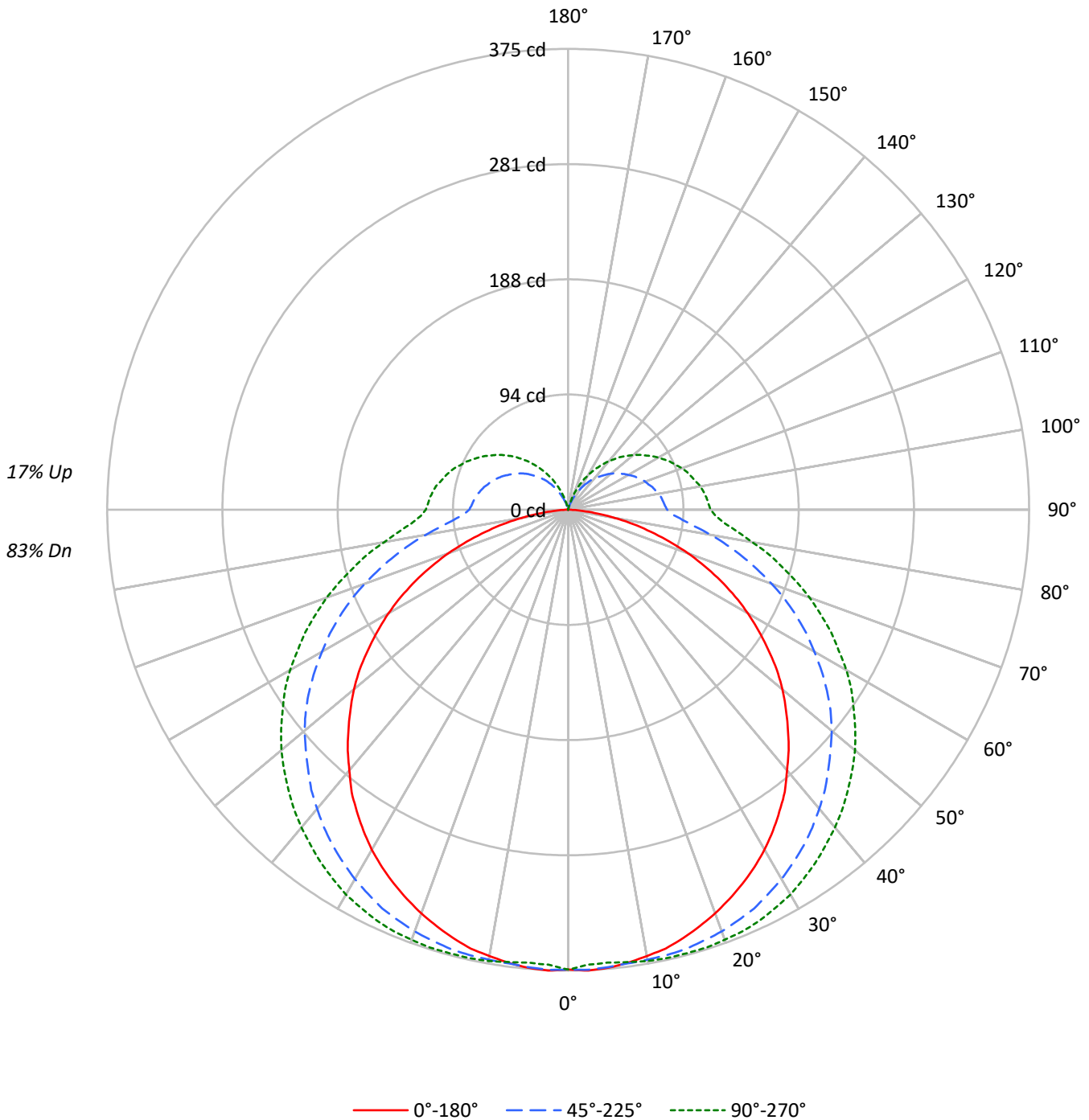
Lumens per Lamp: N/A
Luminaire Lumens: 1679.0 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

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			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°	6725	6725	6725
5°	6693	6461	6342
10°	6616	6242	6155
15°	6545	6080	5988
20°	6454	5921	5845
25°	6366	5771	5714
30°	6276	5606	5573
35°	6153	5444	5418
40°	6003	5271	5266
45°	5852	5090	5113
50°	5699	4928	4964
55°	5465	4725	4784
60°	5188	4481	4605
65°	4812	4231	4389
70°	4303	3926	4146
75°	3545	3580	3863
80°	2556	3207	3571
85°	1168	2891	3356



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.5	2.1
10°-20°	104.1	6.2
20°-30°	163.7	9.7
30°-40°	206.4	12.3
40°-50°	227.2	13.5
50°-60°	223.6	13.3
60°-70°	194.7	11.6
70°-80°	145.5	8.7
80°-90°	93.9	5.6
90°-100°	75.0	4.5
100°-110°	66.2	3.9
110°-120°	54.2	3.2
120°-130°	40.7	2.4
130°-140°	27.0	1.6
140°-150°	14.8	0.9
150°-160°	5.6	0.3
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	303.4	18.1
0°-40°	509.7	30.4
0°-60°	960.5	57.2
0°-90°	1394.7	83.1
90°-120°	195.4	11.6
90°-150°	278.0	16.6
90°-180°	284.0	16.9
0°-180°	1679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	374	374	374	374	374	
5°	374	374	374	372	370	36
15°	361	362	370	374	374	102
25°	336	343	358	367	369	155
35°	300	313	334	347	351	188
45°	253	272	299	317	322	195
55°	199	225	257	278	284	178
65°	137	167	205	228	236	135
75°	70	106	146	172	180	74
85°	12	51	93	120	128	16
90°	0	38	80	108	116	1
95°	0	36	78	104	113	0
105°	0	31	71	96	104	0
115°	0	26	62	85	92	0
125°	0	20	51	71	77	0
135°	0	14	39	56	61	0
145°	0	8	26	39	42	0
155°	1	2	12	21	23	0
165°	0	0	1	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231921

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2
2.5°	375.4	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8
5°	374.2	373.6	373.6	373.6	373.6	373.6	374.2	373.6	374.2	373.6	373.6
7.5°	371.8	371.2	371.2	371.2	371.2	371.8	371.8	371.8	371.8	372.4	372.4
10°	368.8	368.2	368.2	368.2	368.8	368.8	369.4	370.0	371.2	371.8	372.4
12.5°	365.8	364.6	365.2	364.6	365.2	365.8	367.0	368.8	370.0	371.2	372.4
15°	361.0	359.8	360.4	360.4	361.0	362.8	364.6	366.4	368.2	370.0	371.2
17.5°	355.5	354.9	354.9	354.9	357.4	359.2	361.6	364.0	365.8	367.6	369.4
20°	349.5	348.9	348.9	349.5	351.9	354.9	357.4	360.4	362.8	365.2	367.6
22.5°	342.9	342.3	342.3	344.1	346.5	350.1	353.1	356.2	359.2	361.6	364.6
25°	335.7	335.7	335.7	338.1	341.1	344.7	348.3	351.3	354.9	358.0	361.0
27.5°	327.9	327.3	327.9	330.9	334.5	338.7	342.3	345.9	349.5	352.5	355.5
30°	319.5	318.3	319.5	323.1	327.3	331.5	335.7	339.9	343.5	347.1	350.7
32.5°	309.9	309.3	310.5	314.7	318.9	323.7	328.5	332.7	336.9	340.5	344.7
35°	299.7	298.5	300.3	305.7	310.5	315.3	320.1	324.9	329.7	333.9	338.1
37.5°	289.5	288.3	290.7	296.1	300.9	306.3	311.7	317.1	321.9	326.1	330.3
40°	276.9	276.9	279.9	285.3	290.7	296.7	302.1	308.1	313.5	317.7	322.5
42.5°	265.5	265.5	269.1	274.5	280.5	286.5	295.5	300.9	303.9	309.3	314.1
45°	252.8	252.8	257.1	263.1	269.1	275.7	282.3	288.3	294.3	299.1	305.1
47.5°	240.2	240.2	245.6	251.6	258.3	265.5	271.5	278.1	284.1	289.5	295.5
50°	227.6	227.0	232.4	239.0	246.2	255.9	260.7	267.3	273.3	279.9	285.3
52.5°	213.8	213.8	219.8	226.4	233.6	240.8	248.6	255.9	263.1	269.1	274.5
55°	198.8	199.4	205.4	212.6	221.0	228.2	236.0	243.2	249.8	257.1	263.1
57.5°	183.8	185.0	191.6	199.4	206.6	215.0	222.8	230.6	237.8	244.4	250.4
60°	168.8	170.0	176.6	183.8	192.2	200.6	209.6	217.4	224.6	231.2	237.8
62.5°	153.2	154.4	161.0	169.4	178.4	186.8	195.2	203.6	210.8	218.6	225.2
65°	136.9	138.7	145.9	153.8	162.8	171.8	180.8	189.2	197.0	204.8	210.8
67.5°	120.1	123.1	129.7	138.7	147.7	156.8	165.8	174.8	183.2	191.0	197.0
70°	103.9	106.3	112.9	123.1	132.1	141.7	150.7	160.4	168.8	176.0	182.6
72.5°	86.5	90.1	97.9	106.3	116.5	126.1	135.7	144.7	153.8	161.0	168.2
75°	69.7	73.3	81.1	91.3	100.3	111.1	120.1	129.7	138.1	146.5	154.4
77.5°	54.1	57.7	65.5	75.1	85.3	95.5	105.1	114.7	124.3	132.1	138.7
80°	38.4	42.0	50.4	60.1	70.3	80.5	91.3	100.3	109.3	117.7	124.3
82.5°	24.0	28.2	36.6	46.8	57.1	67.3	77.5	87.1	96.1	103.9	111.7
85°	12.0	16.2	24.6	35.4	45.6	55.9	66.7	75.7	84.7	93.1	100.3
87.5°	4.2	8.4	16.2	27.0	37.2	47.4	57.7	67.3	76.9	84.7	91.9
90°	0.0	4.2	12.6	22.8	33.0	43.8	54.1	63.7	72.1	80.5	88.3
92.5°	0.0	3.6	11.4	21.0	31.8	42.0	52.3	61.9	70.9	78.7	86.5
95°	0.0	3.6	10.8	20.4	30.6	40.8	51.1	60.7	69.7	77.5	84.7
97.5°	0.0	3.0	10.2	19.8	29.4	40.2	49.8	59.5	67.9	76.3	83.5
100°	0.0	3.0	9.6	18.6	28.8	38.4	48.6	57.7	66.1	74.5	81.7
102.5°	0.0	2.4	9.0	18.0	27.6	37.2	46.8	55.9	64.9	72.7	79.9
105°	0.0	2.4	8.4	17.4	26.4	36.0	45.6	54.7	63.1	70.9	77.5
107.5°	0.0	1.8	8.4	16.2	25.2	34.8	43.8	52.9	60.7	68.5	75.7
110°	0.0	1.8	7.8	15.6	24.6	33.6	42.6	51.1	58.9	66.7	73.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.2	7.2	14.4	23.4	31.8	40.8	49.2	57.1	64.3	70.3
115°	0.0	1.2	6.6	13.8	22.2	30.6	39.0	46.8	54.7	61.9	67.9
117.5°	0.0	0.6	6.0	12.6	21.0	28.8	37.2	45.0	52.3	59.5	65.5
120°	0.0	0.6	5.4	12.0	19.8	27.6	35.4	42.6	49.8	56.5	62.5
122.5°	0.0	0.6	4.8	10.8	18.6	25.8	33.6	40.8	47.4	54.1	59.5
125°	0.0	0.6	4.2	10.2	16.8	24.0	31.2	38.4	45.0	51.1	57.1
127.5°	0.0	0.6	3.6	9.0	15.6	22.8	29.4	36.0	42.6	48.6	54.1
130°	0.0	0.6	3.0	8.4	14.4	21.0	27.6	33.6	39.6	45.6	50.4
132.5°	0.0	0.0	2.4	7.2	12.6	19.2	25.2	31.2	37.2	42.6	47.4
135°	0.0	0.0	1.8	6.0	11.4	17.4	23.4	28.8	34.2	39.0	43.8
137.5°	0.0	0.0	1.2	5.4	10.2	15.6	21.0	26.4	31.2	36.0	40.2
140°	0.0	0.0	0.6	4.2	9.0	13.8	18.6	24.0	28.8	33.0	37.2
142.5°	0.0	0.0	0.6	3.0	7.2	12.0	16.2	21.0	25.8	30.0	33.6
145°	0.0	0.0	0.0	2.4	5.4	9.6	13.8	18.0	22.8	26.4	30.0
147.5°	0.0	0.0	0.0	1.8	4.2	7.8	11.4	15.0	19.2	22.8	26.4
150°	0.0	0.0	0.0	0.6	3.0	6.0	9.6	12.6	16.2	19.2	22.2
152.5°	0.0	0.0	0.0	0.6	2.4	4.8	7.2	10.2	12.6	15.6	18.6
155°	0.6	0.0	0.0	0.0	1.2	3.0	5.4	7.2	9.6	12.0	14.4
157.5°	0.0	0.0	0.0	0.0	0.6	1.8	3.6	5.4	7.2	9.0	10.8
160°	0.6	0.0	0.0	0.0	0.0	0.6	1.8	3.0	4.8	6.0	7.2
162.5°	0.6	0.0	0.0	0.0	0.0	0.0	0.6	1.2	2.4	3.6	4.2
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.8
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°	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2
2.5°	374.2	373.6	373.0	372.4	371.8	371.2	370.6	370.6
5°	373.0	373.0	372.4	371.8	371.2	370.6	370.0	370.0
7.5°	373.0	373.0	373.0	372.4	372.4	371.8	371.2	371.2
10°	373.0	373.6	373.6	373.6	373.6	373.0	373.0	373.0
12.5°	373.0	374.2	374.2	374.2	374.2	374.2	374.2	373.6
15°	372.4	373.0	373.6	374.2	374.2	374.2	373.6	373.6
17.5°	371.2	372.4	373.0	373.6	373.6	373.6	373.6	373.6
20°	368.8	370.6	371.2	372.4	372.4	373.0	372.4	372.4
22.5°	366.4	368.2	369.4	370.0	370.6	371.2	371.2	371.2
25°	362.8	365.2	366.4	367.6	368.2	368.8	368.8	368.8
27.5°	358.6	361.0	362.8	364.0	364.6	365.2	365.2	365.2
30°	353.7	355.5	358.0	359.8	360.4	361.0	361.0	361.6
32.5°	347.7	350.1	352.5	354.3	354.9	355.5	356.2	356.2
35°	341.1	344.1	345.9	348.3	349.5	350.1	350.1	350.7
37.5°	334.5	337.5	339.3	341.7	342.9	343.5	344.1	344.1
40°	326.1	329.7	332.1	334.5	335.7	336.9	336.9	337.5
42.5°	318.3	321.9	324.3	326.7	328.5	329.7	330.3	330.3
45°	309.3	312.9	315.9	318.3	320.1	321.3	321.9	321.9
47.5°	299.7	303.9	307.5	309.9	311.7	312.9	313.5	313.5
50°	289.5	294.3	297.3	300.3	302.1	303.3	303.9	304.5
52.5°	279.3	283.5	287.1	290.1	292.5	293.7	294.3	294.3
55°	267.9	272.7	275.7	279.3	281.7	282.3	283.5	283.5
57.5°	256.5	260.7	264.3	267.9	269.7	271.5	272.7	273.3
60°	243.8	248.0	252.2	255.9	258.3	260.1	260.7	261.3
62.5°	231.2	236.0	240.2	243.2	245.6	247.4	248.6	248.0
65°	217.4	222.2	226.4	230.0	233.0	234.8	235.4	236.0
67.5°	203.6	209.6	213.2	216.8	219.2	221.6	222.2	222.2
70°	189.2	195.2	200.0	202.4	205.4	207.2	209.0	209.0
72.5°	174.8	180.2	185.0	188.6	191.0	193.4	194.6	194.6
75°	159.8	165.2	170.6	174.2	177.2	179.0	179.6	180.2
77.5°	145.3	151.3	156.2	159.8	162.8	164.6	165.8	167.0
80°	130.9	136.9	141.7	145.9	148.3	150.7	151.9	151.9
82.5°	118.3	124.3	129.1	133.3	135.7	138.1	138.7	139.3
85°	106.9	113.5	117.7	121.9	124.9	126.7	127.9	127.9
87.5°	99.1	105.1	109.9	114.1	117.1	118.9	120.1	120.1
90°	94.9	100.9	105.7	109.9	112.9	114.7	115.9	115.9
92.5°	93.1	99.1	103.9	108.1	110.5	112.9	114.1	114.1
95°	91.9	97.3	102.1	106.3	109.3	111.7	112.3	112.9
97.5°	90.1	96.1	100.9	105.1	107.5	109.9	111.1	111.1
100°	88.3	93.7	98.5	102.7	105.7	107.5	108.7	109.3
102.5°	85.9	91.9	96.7	100.3	103.3	105.1	106.3	106.3
105°	84.1	89.5	94.3	97.9	100.9	102.7	103.9	103.9
107.5°	81.7	87.1	91.9	95.5	97.9	100.3	100.9	101.5
110°	79.3	84.7	88.9	92.5	95.5	97.3	97.9	98.5



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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	76.3	81.7	85.9	89.5	91.9	93.7	94.9	94.9
115°	73.9	78.7	82.9	86.5	88.9	90.7	91.9	91.9
117.5°	70.9	75.7	79.9	82.9	85.3	87.1	88.3	88.3
120°	67.9	72.7	76.9	79.9	82.3	84.1	84.7	84.7
122.5°	64.9	69.7	73.3	76.3	78.7	79.9	81.1	81.1
125°	61.9	66.1	69.7	72.7	75.1	76.3	76.9	76.9
127.5°	58.3	62.5	66.1	69.1	70.9	72.7	72.7	73.3
130°	55.3	58.9	62.5	64.9	66.7	68.5	69.1	69.1
132.5°	51.7	55.3	58.3	60.7	63.1	64.3	64.3	64.9
135°	48.0	51.7	54.7	57.1	58.9	59.5	60.7	60.7
137.5°	44.4	47.4	50.4	52.9	54.7	55.3	55.9	55.9
140°	40.8	43.8	46.2	48.6	49.8	51.1	51.7	51.7
142.5°	36.6	39.6	42.0	43.8	45.6	46.2	46.8	46.8
145°	33.0	35.4	37.8	39.6	40.8	42.0	42.0	42.0
147.5°	29.4	31.8	33.6	35.4	36.6	37.2	37.2	37.2
150°	25.2	27.6	29.4	30.6	31.8	32.4	32.4	32.4
152.5°	21.0	23.4	24.6	25.8	27.0	27.6	27.6	28.2
155°	16.8	18.6	20.4	21.6	22.2	22.8	22.8	22.8
157.5°	12.6	14.4	15.6	16.8	17.4	18.0	18.0	18.0
160°	8.4	10.2	11.4	12.6	13.2	13.2	13.2	13.2
162.5°	5.4	6.0	6.6	7.8	8.4	8.4	8.4	8.4
165°	2.4	2.4	3.0	3.6	3.6	4.2	4.2	4.2
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)