

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: P231931

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231931
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-LD4-50-2HI-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

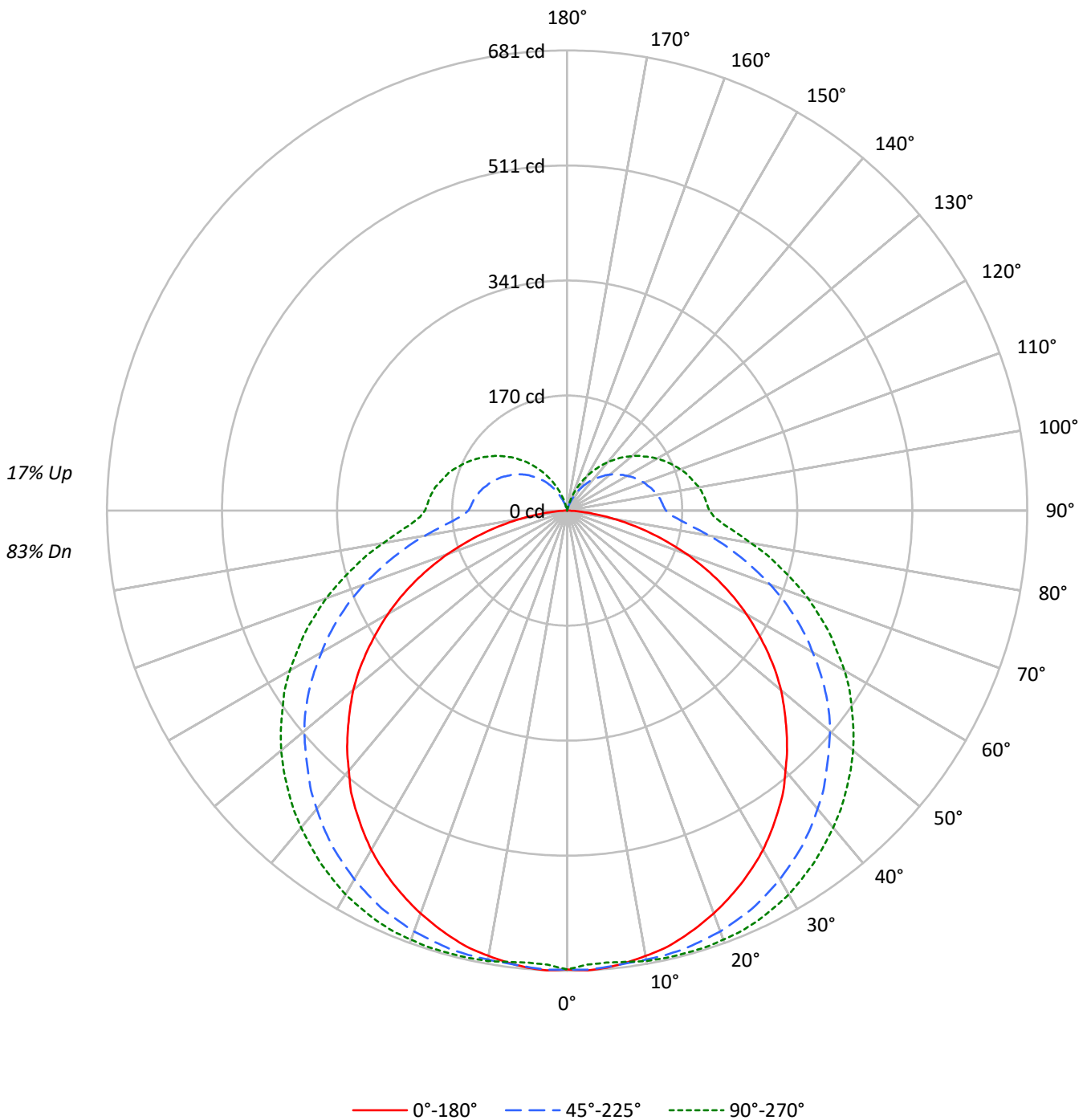
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3047.0 lumens
Efficiency: N/A
Efficacy: 68.0 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): 44.8
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: P231931
CATALOG NUMBER: FVS4M-2-LD4-50-2HI-PFS125-UNV-EDC1

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°	12202	12202	12202
5°	12145	11723	11508
10°	12005	11327	11169
15°	11877	11033	10865
20°	11714	10744	10608
25°	11555	10471	10369
30°	11388	10175	10112
35°	11167	9881	9833
40°	10894	9566	9557
45°	10624	9237	9280
50°	10344	8942	9008
55°	9919	8574	8680
60°	9414	8132	8356
65°	8735	7680	7965
70°	7811	7124	7525
75°	6429	6497	7009
80°	4646	5820	6483
85°	2122	5245	6093



TEST NUMBER: P231931

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.5	2.1
10°-20°	189.0	6.2
20°-30°	297.1	9.7
30°-40°	374.5	12.3
40°-50°	412.4	13.5
50°-60°	405.7	13.3
60°-70°	353.4	11.6
70°-80°	264.1	8.7
80°-90°	170.4	5.6
90°-100°	136.1	4.5
100°-110°	120.1	3.9
110°-120°	98.4	3.2
120°-130°	73.9	2.4
130°-140°	49.1	1.6
140°-150°	26.9	0.9
150°-160°	10.2	0.3
160°-170°	1.3	0.0
170°-180°	0.0	0.0
0°-30°	550.5	18.1
0°-40°	925.0	30.4
0°-60°	1743.2	57.2
0°-90°	2531.0	83.1
90°-120°	354.7	11.6
90°-150°	504.6	16.6
90°-180°	516.0	16.9
0°-180°	3047.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	679	679	679	679	679	
5°	679	678	678	675	671	64
15°	655	657	671	678	678	185
25°	609	622	650	666	669	281
35°	544	568	606	630	636	340
45°	459	494	543	576	584	354
55°	361	408	466	504	514	323
65°	248	304	372	414	428	245
75°	126	192	266	313	327	135
85°	22	92	169	217	232	28
90°	0	70	146	196	210	1
95°	0	65	141	189	205	0
105°	0	57	129	174	189	0
115°	0	48	112	154	167	0
125°	0	37	93	129	140	0
135°	0	26	71	101	110	0
145°	0	14	48	70	76	0
155°	1	4	22	38	41	0
165°	0	0	2	6	8	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231931

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	679.0	679.0	679.0	679.0	679.0	679.0	679.0	679.0	679.0	679.0	679.0
2.5°	681.2	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1
5°	679.0	677.9	677.9	677.9	677.9	677.9	679.0	677.9	679.0	677.9	677.9
7.5°	674.7	673.6	673.6	673.6	673.6	674.7	674.7	674.7	674.7	675.8	675.8
10°	669.2	668.1	668.1	668.1	669.2	669.2	670.3	671.4	673.6	674.7	675.8
12.5°	663.8	661.6	662.7	661.6	662.7	663.8	666.0	669.2	671.4	673.6	675.8
15°	655.1	652.9	654.0	654.0	655.1	658.3	661.6	664.9	668.1	671.4	673.6
17.5°	645.2	644.2	644.2	644.2	648.5	651.8	656.1	660.5	663.8	667.0	670.3
20°	634.3	633.3	633.3	634.3	638.7	644.2	648.5	654.0	658.3	662.7	667.0
22.5°	622.4	621.3	621.3	624.5	628.9	635.4	640.9	646.3	651.8	656.1	661.6
25°	609.3	609.3	609.3	613.6	619.1	625.6	632.2	637.6	644.2	649.6	655.1
27.5°	595.1	594.0	595.1	600.6	607.1	614.7	621.3	627.8	634.3	639.8	645.2
30°	579.8	577.7	579.8	586.4	594.0	601.6	609.3	616.9	623.4	630.0	636.5
32.5°	562.4	561.3	563.5	571.1	578.8	587.5	596.2	603.8	611.5	618.0	625.6
35°	543.9	541.7	545.0	554.8	563.5	572.2	580.9	589.7	598.4	606.0	613.6
37.5°	525.3	523.2	527.5	537.3	546.1	555.9	565.7	575.5	584.2	591.8	599.5
40°	502.5	502.5	507.9	517.7	527.5	538.4	548.2	559.1	568.9	576.6	585.3
42.5°	481.8	481.8	488.3	498.1	509.0	519.9	536.2	546.1	551.5	561.3	570.0
45°	458.9	458.9	466.5	477.4	488.3	500.3	512.3	523.2	534.1	542.8	553.7
47.5°	436.0	436.0	445.8	456.7	468.7	481.8	492.7	504.6	515.5	525.3	536.2
50°	413.1	412.0	421.8	433.8	446.9	464.3	473.0	485.0	495.9	507.9	517.7
52.5°	388.0	388.0	398.9	410.9	424.0	437.1	451.2	464.3	477.4	488.3	498.1
55°	360.8	361.9	372.8	385.8	401.1	414.2	428.3	441.4	453.4	466.5	477.4
57.5°	333.5	335.7	347.7	361.9	374.9	390.2	404.4	418.5	431.6	443.6	454.5
60°	306.3	308.5	320.4	333.5	348.8	364.0	380.4	394.6	407.6	419.6	431.6
62.5°	277.9	280.1	292.1	307.4	323.7	339.0	354.2	369.5	382.6	396.7	408.7
65°	248.5	251.8	264.9	279.0	295.4	311.7	328.1	343.3	357.5	371.7	382.6
67.5°	218.0	223.4	235.4	251.8	268.1	284.5	300.8	317.2	332.4	346.6	357.5
70°	188.6	192.9	204.9	223.4	239.8	257.2	273.6	291.0	306.3	319.4	331.3
72.5°	157.0	163.5	177.7	192.9	211.4	228.9	246.3	262.7	279.0	292.1	305.2
75°	126.4	133.0	147.1	165.7	182.0	201.6	218.0	235.4	250.7	265.9	280.1
77.5°	98.1	104.6	118.8	136.2	154.8	173.3	190.7	208.2	225.6	239.8	251.8
80°	69.8	76.3	91.6	109.0	127.5	146.1	165.7	182.0	198.4	213.6	225.6
82.5°	43.6	51.2	66.5	85.0	103.5	122.1	140.6	158.0	174.4	188.6	202.7
85°	21.8	29.4	44.7	64.3	82.8	101.4	121.0	137.3	153.7	168.9	182.0
87.5°	7.6	15.3	29.4	49.0	67.6	86.1	104.6	122.1	139.5	153.7	166.8
90°	0.0	7.6	22.9	41.4	59.9	79.6	98.1	115.5	130.8	146.1	160.2
92.5°	0.0	6.5	20.7	38.1	57.8	76.3	94.8	112.3	128.6	142.8	157.0
95°	0.0	6.5	19.6	37.1	55.6	74.1	92.6	110.1	126.4	140.6	153.7
97.5°	0.0	5.4	18.5	36.0	53.4	73.0	90.5	107.9	123.2	138.4	151.5
100°	0.0	5.4	17.4	33.8	52.3	69.8	88.3	104.6	119.9	135.2	148.2
102.5°	0.0	4.4	16.3	32.7	50.1	67.6	85.0	101.4	117.7	131.9	145.0
105°	0.0	4.4	15.3	31.6	48.0	65.4	82.8	99.2	114.4	128.6	140.6
107.5°	0.0	3.3	15.3	29.4	45.8	63.2	79.6	95.9	110.1	124.3	137.3
110°	0.0	3.3	14.2	28.3	44.7	61.0	77.4	92.6	106.8	121.0	133.0



TEST NUMBER: P231931

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	2.2	13.1	26.2	42.5	57.8	74.1	89.4	103.5	116.6	127.5
115°	0.0	2.2	12.0	25.1	40.3	55.6	70.8	85.0	99.2	112.3	123.2
117.5°	0.0	1.1	10.9	22.9	38.1	52.3	67.6	81.7	94.8	107.9	118.8
120°	0.0	1.1	9.8	21.8	36.0	50.1	64.3	77.4	90.5	102.5	113.4
122.5°	0.0	1.1	8.7	19.6	33.8	46.9	61.0	74.1	86.1	98.1	107.9
125°	0.0	1.1	7.6	18.5	30.5	43.6	56.7	69.8	81.7	92.6	103.5
127.5°	0.0	1.1	6.5	16.3	28.3	41.4	53.4	65.4	77.4	88.3	98.1
130°	0.0	1.1	5.4	15.3	26.2	38.1	50.1	61.0	71.9	82.8	91.6
132.5°	0.0	0.0	4.4	13.1	22.9	34.9	45.8	56.7	67.6	77.4	86.1
135°	0.0	0.0	3.3	10.9	20.7	31.6	42.5	52.3	62.1	70.8	79.6
137.5°	0.0	0.0	2.2	9.8	18.5	28.3	38.1	48.0	56.7	65.4	73.0
140°	0.0	0.0	1.1	7.6	16.3	25.1	33.8	43.6	52.3	59.9	67.6
142.5°	0.0	0.0	1.1	5.4	13.1	21.8	29.4	38.1	46.9	54.5	61.0
145°	0.0	0.0	0.0	4.4	9.8	17.4	25.1	32.7	41.4	48.0	54.5
147.5°	0.0	0.0	0.0	3.3	7.6	14.2	20.7	27.2	34.9	41.4	48.0
150°	0.0	0.0	0.0	1.1	5.4	10.9	17.4	22.9	29.4	34.9	40.3
152.5°	0.0	0.0	0.0	1.1	4.4	8.7	13.1	18.5	22.9	28.3	33.8
155°	1.1	0.0	0.0	0.0	2.2	5.4	9.8	13.1	17.4	21.8	26.2
157.5°	0.0	0.0	0.0	0.0	1.1	3.3	6.5	9.8	13.1	16.3	19.6
160°	1.1	0.0	0.0	0.0	0.0	1.1	3.3	5.4	8.7	10.9	13.1
162.5°	1.1	0.0	0.0	0.0	0.0	0.0	1.1	2.2	4.4	6.5	7.6
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.2	3.3
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: P231931

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	679.0	679.0	679.0	679.0	679.0	679.0	679.0	679.0
2.5°	679.0	677.9	676.8	675.8	674.7	673.6	672.5	672.5
5°	676.8	676.8	675.8	674.7	673.6	672.5	671.4	671.4
7.5°	676.8	676.8	676.8	675.8	675.8	674.7	673.6	673.6
10°	676.8	677.9	677.9	677.9	677.9	676.8	676.8	676.8
12.5°	676.8	679.0	679.0	679.0	679.0	679.0	679.0	677.9
15°	675.8	676.8	677.9	679.0	679.0	679.0	677.9	677.9
17.5°	673.6	675.8	676.8	677.9	677.9	677.9	677.9	677.9
20°	669.2	672.5	673.6	675.8	675.8	676.8	675.8	675.8
22.5°	664.9	668.1	670.3	671.4	672.5	673.6	673.6	673.6
25°	658.3	662.7	664.9	667.0	668.1	669.2	669.2	669.2
27.5°	650.7	655.1	658.3	660.5	661.6	662.7	662.7	662.7
30°	642.0	645.2	649.6	652.9	654.0	655.1	655.1	656.1
32.5°	631.1	635.4	639.8	643.1	644.2	645.2	646.3	646.3
35°	619.1	624.5	627.8	632.2	634.3	635.4	635.4	636.5
37.5°	607.1	612.5	615.8	620.2	622.4	623.4	624.5	624.5
40°	591.8	598.4	602.7	607.1	609.3	611.5	611.5	612.5
42.5°	577.7	584.2	588.6	592.9	596.2	598.4	599.5	599.5
45°	561.3	567.9	573.3	577.7	580.9	583.1	584.2	584.2
47.5°	543.9	551.5	558.0	562.4	565.7	567.9	568.9	568.9
50°	525.3	534.1	539.5	545.0	548.2	550.4	551.5	552.6
52.5°	506.8	514.4	521.0	526.4	530.8	533.0	534.1	534.1
55°	486.1	494.8	500.3	506.8	511.2	512.3	514.4	514.4
57.5°	465.4	473.0	479.6	486.1	489.4	492.7	494.8	495.9
60°	442.5	450.1	457.8	464.3	468.7	471.9	473.0	474.1
62.5°	419.6	428.3	436.0	441.4	445.8	449.1	451.2	450.1
65°	394.6	403.3	410.9	417.4	422.9	426.2	427.3	428.3
67.5°	369.5	380.4	386.9	393.5	397.8	402.2	403.3	403.3
70°	343.3	354.2	362.9	367.3	372.8	376.0	379.3	379.3
72.5°	317.2	327.0	335.7	342.2	346.6	351.0	353.1	353.1
75°	289.9	299.7	309.5	316.1	321.5	324.8	325.9	327.0
77.5°	263.8	274.7	283.4	289.9	295.4	298.6	300.8	303.0
80°	237.6	248.5	257.2	264.9	269.2	273.6	275.8	275.8
82.5°	214.7	225.6	234.3	242.0	246.3	250.7	251.8	252.9
85°	194.0	206.0	213.6	221.3	226.7	230.0	232.2	232.2
87.5°	179.8	190.7	199.5	207.1	212.5	215.8	218.0	218.0
90°	172.2	183.1	191.8	199.5	204.9	208.2	210.4	210.4
92.5°	168.9	179.8	188.6	196.2	200.5	204.9	207.1	207.1
95°	166.8	176.6	185.3	192.9	198.4	202.7	203.8	204.9
97.5°	163.5	174.4	183.1	190.7	195.1	199.5	201.6	201.6
100°	160.2	170.0	178.7	186.4	191.8	195.1	197.3	198.4
102.5°	155.9	166.8	175.5	182.0	187.5	190.7	192.9	192.9
105°	152.6	162.4	171.1	177.7	183.1	186.4	188.6	188.6
107.5°	148.2	158.0	166.8	173.3	177.7	182.0	183.1	184.2
110°	143.9	153.7	161.3	167.8	173.3	176.6	177.7	178.7



TEST NUMBER: P231931

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	138.4	148.2	155.9	162.4	166.8	170.0	172.2	172.2
115°	134.1	142.8	150.4	157.0	161.3	164.6	166.8	166.8
117.5°	128.6	137.3	145.0	150.4	154.8	158.0	160.2	160.2
120°	123.2	131.9	139.5	145.0	149.3	152.6	153.7	153.7
122.5°	117.7	126.4	133.0	138.4	142.8	145.0	147.1	147.1
125°	112.3	119.9	126.4	131.9	136.2	138.4	139.5	139.5
127.5°	105.7	113.4	119.9	125.3	128.6	131.9	131.9	133.0
130°	100.3	106.8	113.4	117.7	121.0	124.3	125.3	125.3
132.5°	93.7	100.3	105.7	110.1	114.4	116.6	116.6	117.7
135°	87.2	93.7	99.2	103.5	106.8	107.9	110.1	110.1
137.5°	80.7	86.1	91.6	95.9	99.2	100.3	101.4	101.4
140°	74.1	79.6	83.9	88.3	90.5	92.6	93.7	93.7
142.5°	66.5	71.9	76.3	79.6	82.8	83.9	85.0	85.0
145°	59.9	64.3	68.7	71.9	74.1	76.3	76.3	76.3
147.5°	53.4	57.8	61.0	64.3	66.5	67.6	67.6	67.6
150°	45.8	50.1	53.4	55.6	57.8	58.9	58.9	58.9
152.5°	38.1	42.5	44.7	46.9	49.0	50.1	50.1	51.2
155°	30.5	33.8	37.1	39.2	40.3	41.4	41.4	41.4
157.5°	22.9	26.2	28.3	30.5	31.6	32.7	32.7	32.7
160°	15.3	18.5	20.7	22.9	24.0	24.0	24.0	24.0
162.5°	9.8	10.9	12.0	14.2	15.3	15.3	15.3	15.3
165°	4.4	4.4	5.4	6.5	6.5	7.6	7.6	7.6
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)