

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: P231966

Luminaire Tested: **FVS4M-4-LD4-40-1HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231966
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-LD4-40-1HI-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH PFS125 LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

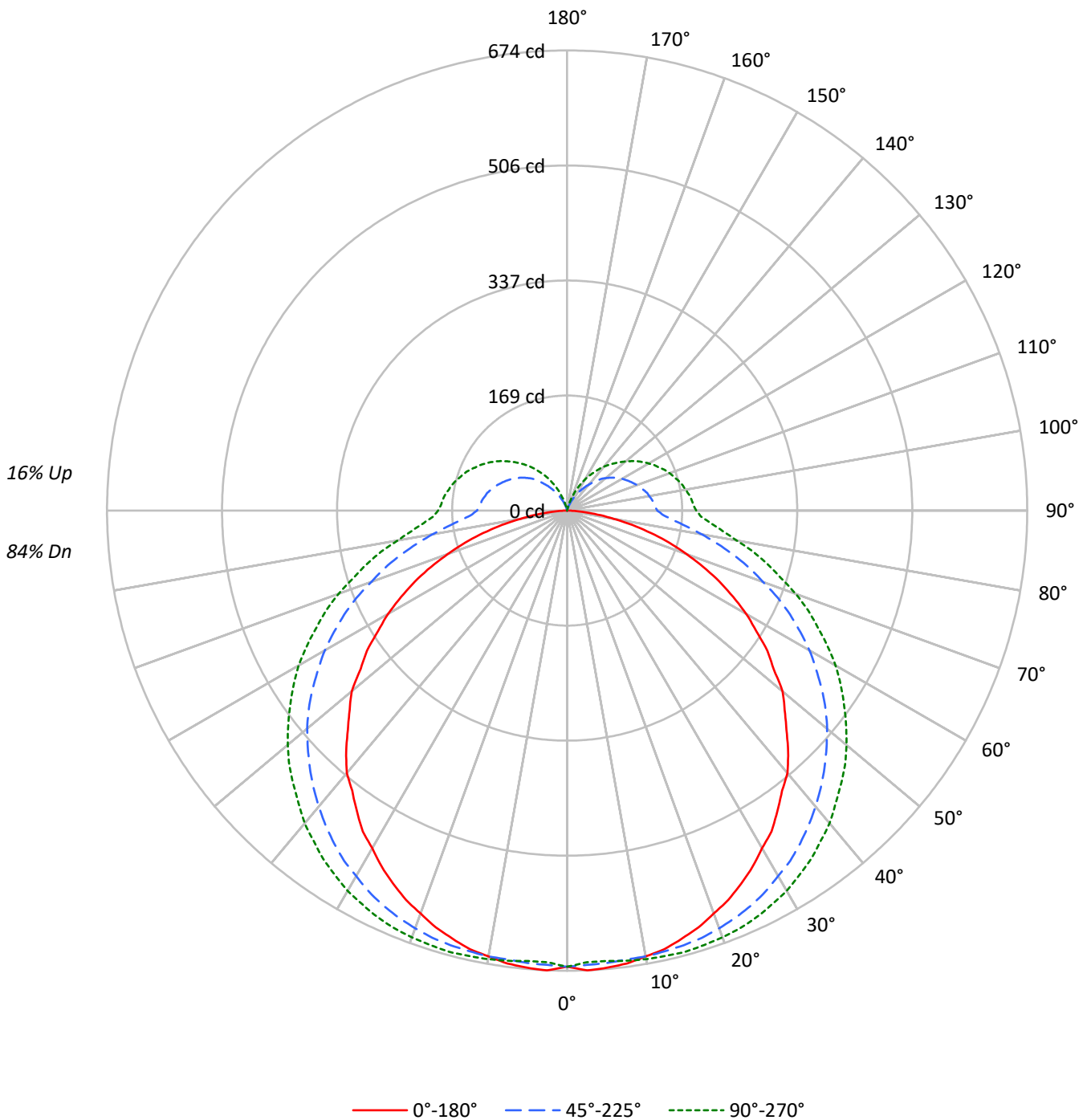
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2922.9 lumens
Efficiency: N/A
Efficacy: 65.7 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): 44.5
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





TEST NUMBER: P231966

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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	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°	6069	6069	6069
5°	6102	5831	5737
10°	6064	5659	5565
15°	6025	5519	5421
20°	5965	5393	5277
25°	5909	5268	5146
30°	5824	5125	5010
35°	5757	4994	4866
40°	5717	4846	4718
45°	5559	4693	4553
50°	5500	4540	4401
55°	5297	4353	4223
60°	5072	4150	4046
65°	4781	3900	3808
70°	4349	3583	3571
75°	3763	3272	3295
80°	2819	2903	2994
85°	1532	2569	2799



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	2.2
10°-20°	186.6	6.4
20°-30°	293.0	10.0
30°-40°	368.6	12.6
40°-50°	404.4	13.8
50°-60°	395.9	13.5
60°-70°	342.0	11.7
70°-80°	250.9	8.6
80°-90°	156.3	5.3
90°-100°	122.4	4.2
100°-110°	108.2	3.7
110°-120°	88.6	3.0
120°-130°	66.3	2.3
130°-140°	43.3	1.5
140°-150°	23.1	0.8
150°-160°	8.5	0.3
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	543.2	18.6
0°-40°	911.8	31.2
0°-60°	1712.1	58.6
0°-90°	2461.2	84.2
90°-120°	319.2	10.9
90°-150°	452.0	15.5
90°-180°	462.0	15.8
0°-180°	2922.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	668	668	668	668	668	
5°	672	670	665	666	662	64
15°	649	651	659	669	669	183
25°	603	616	638	655	657	278
35°	537	563	595	618	623	336
45°	454	490	533	562	567	352
55°	358	403	455	487	495	319
65°	246	300	360	395	405	243
75°	127	187	253	293	304	134
85°	23	87	154	197	211	29
90°	1	63	132	175	189	1
95°	0	59	127	170	183	0
105°	0	52	116	157	169	0
115°	0	43	101	139	149	0
125°	0	34	84	116	126	0
135°	0	22	62	91	98	0
145°	0	11	38	63	68	0
155°	1	4	17	30	37	0
165°	1	0	2	5	7	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1
2.5°	674.1	673.1	672.1	671.1	671.1	672.1	672.1	672.1	671.1	668.1	666.1
5°	672.1	671.1	670.1	669.1	670.1	670.1	670.1	670.1	669.1	667.1	665.1
7.5°	669.1	668.1	667.1	666.1	666.1	667.1	667.1	667.1	667.1	665.1	663.1
10°	663.1	663.1	661.1	661.1	662.1	662.1	663.1	664.1	664.1	664.1	663.1
12.5°	658.1	656.1	655.1	656.1	656.1	657.1	658.1	661.1	661.1	662.1	661.1
15°	649.1	648.1	647.1	647.1	650.1	651.1	653.1	656.1	658.1	658.1	659.1
17.5°	640.1	639.1	639.1	639.1	642.1	644.1	647.1	650.1	652.1	654.1	656.1
20°	628.1	628.1	629.1	630.1	634.1	636.1	639.1	644.1	646.1	649.1	651.1
22.5°	617.1	616.1	616.1	619.1	624.1	627.1	630.1	635.1	638.1	642.1	645.1
25°	603.1	603.1	603.1	608.1	614.1	616.1	621.1	626.1	630.1	634.1	638.1
27.5°	588.1	588.1	588.1	595.1	601.1	605.1	609.1	615.1	620.1	624.1	629.1
30°	571.1	572.1	575.1	581.1	588.1	592.1	596.1	603.1	609.1	613.1	618.1
32.5°	557.1	554.1	558.1	564.1	573.1	578.1	582.1	589.1	596.1	602.1	608.1
35°	537.1	537.1	541.1	549.1	558.1	563.1	567.1	575.1	582.1	588.1	595.1
37.5°	517.1	516.1	522.1	531.1	541.1	546.1	551.1	559.1	565.1	572.1	581.1
40°	502.1	497.1	503.1	513.1	523.1	529.1	534.1	542.1	550.1	558.1	566.1
42.5°	479.1	475.1	482.1	492.1	504.1	510.1	515.1	525.1	533.1	542.1	550.1
45°	454.1	454.1	463.1	473.1	483.1	490.1	495.1	506.1	515.1	525.1	533.1
47.5°	432.1	431.1	439.1	452.1	463.1	470.1	476.1	486.1	496.1	507.1	515.1
50°	412.1	408.1	417.1	429.1	443.1	448.1	455.1	465.1	477.1	486.1	497.1
52.5°	381.1	385.1	392.1	406.1	419.1	426.1	433.1	444.1	456.1	466.1	477.1
55°	358.1	359.1	369.1	383.1	395.1	403.1	411.1	424.1	434.1	445.1	455.1
57.5°	328.1	332.1	344.1	357.1	371.1	380.1	386.1	398.1	410.1	422.1	432.1
60°	303.1	307.1	318.1	330.1	345.1	353.1	360.1	373.1	385.1	398.1	410.1
62.5°	274.1	279.1	291.1	305.1	319.1	326.1	333.1	350.1	362.1	374.1	385.1
65°	246.0	251.0	262.0	275.1	292.1	300.1	307.1	321.1	336.1	348.1	360.1
67.5°	216.0	221.0	234.0	248.0	264.1	273.1	280.1	296.1	307.1	321.1	334.1
70°	186.0	191.0	203.0	218.0	235.0	244.0	253.0	267.1	281.1	294.1	305.1
72.5°	157.0	163.0	175.0	190.0	207.0	215.0	223.0	239.0	253.0	268.1	280.1
75°	127.0	133.0	146.0	162.0	179.0	187.0	195.0	212.0	226.0	240.0	253.0
77.5°	98.0	103.0	118.0	135.0	150.0	157.0	167.0	184.0	199.0	213.0	226.0
80°	69.0	75.0	90.0	106.0	123.0	132.0	140.0	158.0	172.0	187.0	200.0
82.5°	45.0	50.0	65.0	81.0	99.0	107.0	116.0	133.0	147.0	164.0	176.0
85°	23.0	29.0	43.0	60.0	77.0	87.0	94.0	112.0	126.0	142.0	154.0
87.5°	7.0	14.0	27.0	44.0	61.0	71.0	80.0	96.0	112.0	126.0	140.0
90°	1.0	7.0	20.0	37.0	55.0	63.0	72.0	89.0	104.0	119.0	132.0
92.5°	0.0	6.0	19.0	35.0	52.0	61.0	70.0	86.0	102.0	116.0	129.0
95°	0.0	5.0	18.0	34.0	51.0	59.0	68.0	84.0	100.0	114.0	127.0
97.5°	0.0	5.0	17.0	32.0	49.0	58.0	66.0	83.0	98.0	112.0	125.0
100°	0.0	4.0	16.0	31.0	47.0	56.0	64.0	80.0	95.0	109.0	122.0
102.5°	0.0	4.0	15.0	30.0	46.0	54.0	62.0	78.0	93.0	107.0	120.0
105°	0.0	3.0	14.0	28.0	44.0	52.0	60.0	75.0	90.0	104.0	116.0
107.5°	0.0	3.0	13.0	27.0	42.0	50.0	57.0	73.0	87.0	100.0	113.0
110°	0.0	3.0	12.0	25.0	40.0	47.0	55.0	70.0	84.0	97.0	109.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.0	11.0	24.0	38.0	45.0	53.0	67.0	81.0	94.0	105.0
115°	0.0	2.0	10.0	22.0	36.0	43.0	50.0	64.0	77.0	90.0	101.0
117.5°	0.0	1.0	9.0	21.0	34.0	41.0	48.0	61.0	74.0	86.0	97.0
120°	0.0	1.0	8.0	19.0	32.0	39.0	45.0	58.0	70.0	82.0	93.0
122.5°	0.0	1.0	7.0	18.0	30.0	36.0	42.0	55.0	67.0	78.0	88.0
125°	0.0	1.0	6.0	16.0	28.0	34.0	40.0	52.0	63.0	74.0	84.0
127.5°	0.0	0.0	5.0	14.0	25.0	30.0	36.0	48.0	59.0	69.0	79.0
130°	0.0	0.0	4.0	13.0	22.0	27.0	33.0	44.0	54.0	65.0	74.0
132.5°	0.0	0.0	3.0	11.0	20.0	25.0	29.0	39.0	49.0	59.0	69.0
135°	0.0	0.0	3.0	9.0	17.0	22.0	26.0	35.0	44.0	54.0	62.0
137.5°	0.0	0.0	2.0	7.0	15.0	19.0	23.0	31.0	39.0	48.0	56.0
140°	0.0	0.0	1.0	6.0	13.0	16.0	20.0	28.0	35.0	42.0	50.0
142.5°	0.0	0.0	1.0	5.0	10.0	14.0	17.0	24.0	31.0	37.0	44.0
145°	0.0	0.0	1.0	3.0	8.0	11.0	14.0	20.0	26.0	32.0	38.0
147.5°	1.0	1.0	1.0	3.0	7.0	9.0	12.0	17.0	22.0	28.0	33.0
150°	1.0	1.0	1.0	2.0	5.0	7.0	10.0	14.0	18.0	23.0	28.0
152.5°	1.0	1.0	0.0	1.0	4.0	5.0	7.0	11.0	15.0	18.0	22.0
155°	1.0	1.0	1.0	1.0	2.0	4.0	5.0	8.0	12.0	15.0	17.0
157.5°	1.0	1.0	0.0	0.0	1.0	2.0	3.0	6.0	9.0	11.0	13.0
160°	1.0	1.0	0.0	0.0	1.0	1.0	2.0	4.0	6.0	7.0	9.0
162.5°	1.0	1.0	1.0	0.0	0.0	0.0	1.0	2.0	3.0	4.0	6.0
165°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1	668.1
2.5°	666.1	667.1	667.1	666.1	666.1	666.1	665.1	664.1	663.1	662.1
5°	665.1	666.1	666.1	666.1	666.1	666.1	664.1	664.1	663.1	662.1
7.5°	664.1	666.1	667.1	667.1	667.1	667.1	667.1	666.1	665.1	665.1
10°	664.1	667.1	668.1	669.1	669.1	669.1	669.1	668.1	668.1	667.1
12.5°	664.1	667.1	668.1	669.1	669.1	670.1	670.1	669.1	669.1	668.1
15°	662.1	665.1	667.1	669.1	669.1	670.1	670.1	669.1	669.1	669.1
17.5°	659.1	663.1	665.1	667.1	667.1	668.1	669.1	668.1	668.1	667.1
20°	655.1	659.1	662.1	664.1	665.1	665.1	666.1	666.1	666.1	665.1
22.5°	650.1	654.1	657.1	659.1	660.1	661.1	663.1	663.1	662.1	662.1
25°	642.1	647.1	651.1	654.1	655.1	656.1	657.1	658.1	657.1	657.1
27.5°	635.1	639.1	644.1	647.1	648.1	649.1	650.1	652.1	651.1	650.1
30°	626.1	630.1	635.1	638.1	639.1	641.1	643.1	644.1	643.1	643.1
32.5°	615.1	620.1	624.1	628.1	630.1	631.1	633.1	634.1	634.1	633.1
35°	602.1	608.1	613.1	617.1	618.1	619.1	622.1	623.1	623.1	623.1
37.5°	589.1	594.1	600.1	604.1	606.1	607.1	609.1	611.1	610.1	610.1
40°	573.1	580.1	586.1	590.1	592.1	593.1	596.1	598.1	598.1	598.1
42.5°	558.1	564.1	570.1	575.1	577.1	580.1	582.1	582.1	583.1	582.1
45°	541.1	548.1	555.1	560.1	562.1	564.1	567.1	567.1	568.1	567.1
47.5°	524.1	533.1	538.1	543.1	544.1	547.1	550.1	551.1	551.1	552.1
50°	505.1	514.1	519.1	525.1	527.1	529.1	532.1	533.1	534.1	534.1
52.5°	485.1	492.1	501.1	506.1	508.1	510.1	512.1	514.1	516.1	515.1
55°	465.1	472.1	479.1	485.1	487.1	489.1	493.1	495.1	495.1	495.1
57.5°	442.1	450.1	458.1	464.1	466.1	468.1	472.1	473.1	474.1	475.1
60°	419.1	428.1	434.1	442.1	443.1	446.1	450.1	452.1	454.1	454.1
62.5°	395.1	403.1	412.1	418.1	420.1	423.1	427.1	429.1	430.1	430.1
65°	370.1	379.1	387.1	394.1	395.1	399.1	404.1	405.1	407.1	405.1
67.5°	345.1	354.1	362.1	368.1	372.1	375.1	378.1	379.1	382.1	382.1
70°	318.1	327.1	336.1	343.1	346.1	348.1	352.1	355.1	355.1	356.1
72.5°	291.1	300.1	309.1	315.1	318.1	321.1	326.1	328.1	329.1	328.1
75°	264.1	274.1	283.1	289.1	293.1	296.1	299.1	303.1	304.1	304.1
77.5°	237.0	249.0	256.0	264.1	267.1	270.1	273.1	276.1	278.1	279.1
80°	211.0	222.0	230.0	237.0	241.0	245.0	249.0	251.0	252.0	252.0
82.5°	188.0	198.0	207.0	214.0	218.0	220.0	225.0	227.0	230.0	230.0
85°	167.0	176.0	186.0	195.0	197.0	200.0	205.0	209.0	210.0	211.0
87.5°	152.0	163.0	172.0	180.0	183.0	186.0	191.0	194.0	195.0	196.0
90°	145.0	155.0	164.0	172.0	175.0	178.0	183.0	186.0	188.0	189.0
92.5°	141.0	152.0	161.0	169.0	172.0	175.0	179.0	183.0	184.0	185.0
95°	139.0	150.0	159.0	167.0	170.0	173.0	177.0	180.0	182.0	183.0
97.5°	137.0	147.0	157.0	164.0	167.0	170.0	175.0	178.0	179.0	180.0
100°	134.0	145.0	153.0	161.0	164.0	167.0	171.0	174.0	176.0	176.0
102.5°	131.0	141.0	150.0	158.0	161.0	163.0	168.0	171.0	172.0	173.0
105°	128.0	138.0	147.0	154.0	157.0	160.0	164.0	167.0	168.0	169.0
107.5°	124.0	134.0	143.0	150.0	153.0	155.0	160.0	162.0	164.0	164.0
110°	120.0	130.0	138.0	146.0	148.0	151.0	155.0	158.0	159.0	160.0



TEST NUMBER: P231966

CATALOG NUMBER: FVS4M-4-LD4-40-1HI-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	116.0	125.0	134.0	140.0	144.0	146.0	150.0	153.0	154.0	155.0
115°	112.0	121.0	129.0	136.0	139.0	141.0	145.0	148.0	149.0	149.0
117.5°	107.0	116.0	124.0	131.0	133.0	136.0	139.0	142.0	143.0	144.0
120°	102.0	111.0	119.0	125.0	128.0	130.0	134.0	136.0	137.0	138.0
122.5°	98.0	106.0	113.0	120.0	122.0	125.0	128.0	130.0	131.0	132.0
125°	93.0	101.0	108.0	114.0	116.0	119.0	122.0	125.0	125.0	126.0
127.5°	88.0	95.0	102.0	108.0	110.0	112.0	116.0	118.0	119.0	119.0
130°	82.0	90.0	96.0	102.0	104.0	106.0	109.0	111.0	112.0	112.0
132.5°	77.0	84.0	90.0	95.0	97.0	99.0	102.0	104.0	105.0	105.0
135°	71.0	78.0	84.0	89.0	91.0	93.0	95.0	97.0	98.0	98.0
137.5°	64.0	72.0	77.0	82.0	84.0	86.0	88.0	90.0	91.0	91.0
140°	57.0	65.0	71.0	76.0	77.0	79.0	81.0	82.0	83.0	84.0
142.5°	51.0	57.0	64.0	68.0	70.0	71.0	74.0	75.0	75.0	76.0
145°	44.0	49.0	56.0	61.0	63.0	64.0	66.0	68.0	68.0	68.0
147.5°	37.0	43.0	47.0	53.0	55.0	57.0	59.0	60.0	60.0	61.0
150°	32.0	36.0	40.0	45.0	47.0	49.0	51.0	52.0	53.0	53.0
152.5°	26.0	30.0	33.0	37.0	38.0	40.0	43.0	44.0	44.0	45.0
155°	21.0	23.0	26.0	29.0	30.0	32.0	35.0	37.0	37.0	37.0
157.5°	15.0	18.0	20.0	22.0	23.0	24.0	27.0	29.0	29.0	29.0
160°	11.0	12.0	14.0	15.0	16.0	17.0	19.0	21.0	22.0	21.0
162.5°	7.0	8.0	9.0	10.0	10.0	11.0	11.0	13.0	14.0	14.0
165°	3.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	7.0	7.0
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)