

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: P241429

Luminaire Tested: **FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241429
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-10)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

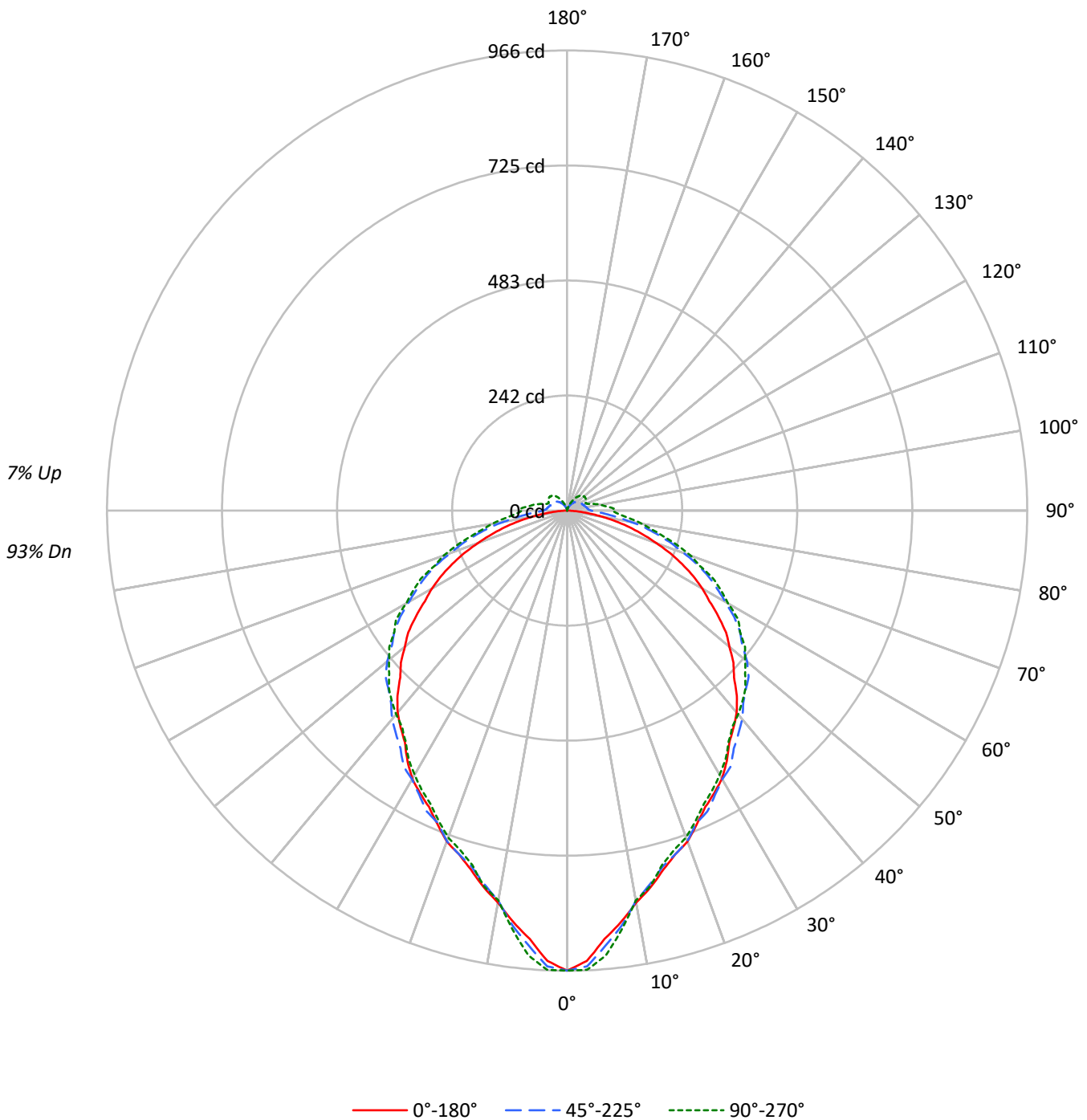
Lumens per Lamp: N/A
Luminaire Lumens: 2555.0 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 23.7
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: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	97	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	81	75	93	85	79	73	81	75	70	76	72	68	72	69	65	63
3	88	77	68	62	84	75	67	61	71	64	59	67	61	57	64	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45
5	74	60	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	45	38	51	43	37	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	28	26
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8680	8680	8680
5°	8087	8125	8290
10°	7523	7313	7294
15°	7112	6810	6756
20°	6876	6549	6454
25°	6567	6280	6093
30°	6456	6013	5880
35°	6175	5816	5604
40°	6092	5683	5511
45°	5837	5548	5488
50°	5684	5485	5375
55°	5461	5307	5247
60°	5185	5022	5045
65°	4843	4768	4852
70°	4294	4299	4473
75°	3649	3826	3950
80°	2681	3153	3607
85°	1347	2420	3301



TEST NUMBER: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	3.3
10°-20°	219.7	8.6
20°-30°	318.7	12.5
30°-40°	379.4	14.8
40°-50°	404.5	15.8
50°-60°	383.1	15.0
60°-70°	308.7	12.1
70°-80°	198.3	7.8
80°-90°	86.6	3.4
90°-100°	46.0	1.8
100°-110°	35.6	1.4
110°-120°	28.4	1.1
120°-130°	25.3	1.0
130°-140°	19.0	0.7
140°-150°	11.1	0.4
150°-160°	4.6	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	623.3	24.4
0°-40°	1002.7	39.2
0°-60°	1790.3	70.1
0°-90°	2383.9	93.3
90°-120°	109.9	4.3
90°-150°	165.4	6.5
90°-180°	171.0	6.7
0°-180°	2555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	966	966	966	966	966	
5°	902	906	917	931	937	84
15°	780	784	774	768	770	221
25°	686	690	697	691	679	318
35°	594	615	610	607	591	375
45°	495	519	530	540	529	385
55°	388	409	443	448	443	346
65°	266	288	328	333	339	263
75°	136	162	199	217	210	143
85°	25	48	81	102	115	31
90°	1	21	50	70	95	1
95°	0	19	43	64	88	0
105°	0	17	38	52	53	0
115°	0	16	34	42	43	0
125°	0	14	32	45	47	0
135°	0	10	26	40	44	0
145°	1	6	18	29	34	0
155°	1	3	10	16	18	0
165°	1	1	3	6	7	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7
2.5°	946.2	946.2	946.7	946.7	947.9	948.5	950.2	950.2	953.1	955.4	957.7
5°	902.4	900.7	902.4	902.4	905.3	906.4	909.3	912.8	913.3	916.8	917.4
7.5°	870.7	870.1	867.8	867.8	866.7	868.4	868.4	870.7	874.8	878.2	878.8
10°	835.6	835.0	834.4	835.0	832.1	833.3	833.3	834.4	836.7	836.2	831.6
12.5°	809.7	809.1	806.8	806.8	807.4	807.4	806.8	808.0	803.9	801.6	803.3
15°	780.3	782.0	783.8	780.9	784.3	783.8	783.8	781.5	776.3	772.8	774.0
17.5°	756.1	758.4	756.7	755.5	754.4	754.4	756.1	756.1	757.9	754.4	756.1
20°	739.4	736.0	731.9	735.4	737.7	738.3	738.8	738.8	736.5	736.0	738.3
22.5°	711.8	711.2	712.9	717.0	716.4	713.5	712.4	707.7	710.1	712.4	709.5
25°	686.4	693.4	695.1	690.5	688.7	689.9	693.4	695.7	699.7	697.4	696.8
27.5°	668.6	670.3	662.3	667.4	675.5	679.5	677.2	676.7	674.9	669.2	672.6
30°	650.2	644.4	645.6	651.9	652.5	649.6	646.7	648.4	651.9	652.5	651.3
32.5°	623.7	620.8	631.7	626.6	626.6	628.9	633.5	636.3	639.8	639.2	638.1
35°	593.7	601.2	601.2	598.9	609.9	615.0	617.3	612.2	611.6	607.5	609.9
37.5°	574.1	574.7	572.4	584.5	588.5	586.8	585.1	584.5	587.4	589.7	590.3
40°	553.4	548.2	552.3	559.2	555.7	558.6	563.2	570.1	573.0	574.1	571.8
42.5°	527.5	525.8	532.1	529.2	536.1	540.2	544.8	548.8	546.5	547.7	547.1
45°	495.3	502.7	499.3	507.3	518.9	518.9	519.4	518.3	523.5	529.8	530.4
47.5°	473.4	474.5	473.9	483.7	488.3	487.2	494.7	502.2	509.1	512.5	516.6
50°	444.6	441.7	453.2	453.8	460.7	465.3	471.6	478.6	484.9	489.5	492.9
52.5°	420.4	417.5	423.3	423.3	438.2	443.4	444.0	449.2	456.1	458.4	463.0
55°	387.6	391.6	390.4	401.4	408.3	408.9	411.2	420.4	431.3	435.9	442.8
57.5°	354.2	359.9	359.3	372.0	374.9	379.5	384.7	397.4	404.3	410.6	415.8
60°	327.7	328.8	334.6	336.9	343.8	350.7	358.8	366.8	371.4	378.9	383.5
62.5°	298.9	295.4	305.2	305.8	318.5	319.6	324.2	332.9	340.3	349.6	354.7
65°	266.1	266.6	271.2	277.6	286.2	288.5	293.1	302.9	312.7	321.3	327.7
67.5°	234.4	236.7	239.6	247.1	252.2	258.0	263.8	271.8	285.1	292.0	296.0
70°	198.7	202.7	206.2	214.2	221.7	226.3	233.8	241.9	250.5	256.3	260.3
72.5°	166.4	169.3	174.5	180.8	192.3	196.9	201.6	208.5	216.0	221.7	230.3
75°	135.9	138.2	144.5	149.2	158.9	162.4	168.2	175.1	184.9	192.3	198.7
77.5°	104.8	106.5	112.9	118.6	127.3	131.3	135.3	143.4	151.5	161.8	168.2
80°	74.9	76.6	82.9	88.1	95.0	98.5	103.1	112.9	122.1	127.8	135.3
82.5°	48.4	49.5	54.1	60.5	66.8	71.4	76.0	84.1	92.1	99.1	105.4
85°	24.8	25.9	31.1	36.3	43.2	47.8	50.7	58.7	66.8	73.7	81.2
87.5°	8.1	9.8	13.8	19.6	25.9	29.9	32.8	40.3	47.2	54.7	61.6
90°	0.6	2.3	6.3	11.5	17.9	21.3	24.8	31.1	37.4	43.8	50.1
92.5°	0.0	1.7	5.2	10.4	16.1	19.6	22.5	28.8	34.6	40.3	45.5
95°	0.0	1.2	5.2	9.8	15.5	19.0	21.9	27.6	33.4	38.6	43.2
97.5°	0.0	1.2	4.6	9.8	15.0	18.4	21.3	26.5	31.7	36.9	42.0
100°	0.0	1.2	4.6	9.2	15.0	17.9	20.2	25.3	30.5	35.7	40.3
102.5°	0.0	1.2	4.6	9.2	14.4	17.3	19.6	24.8	29.9	34.6	39.2
105°	0.0	1.2	4.6	9.2	14.4	16.7	19.6	24.2	29.4	34.0	38.0
107.5°	0.0	1.2	4.0	8.6	13.8	16.7	19.0	24.2	28.8	32.8	36.9
110°	0.0	1.2	4.0	8.6	13.8	16.1	19.0	23.6	28.2	32.2	35.7



TEST NUMBER: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	4.0	8.6	13.2	16.1	18.4	23.0	27.6	31.1	34.6
115°	0.0	1.2	4.0	8.1	13.2	15.5	17.9	22.5	27.1	30.5	34.0
117.5°	0.0	0.6	4.0	8.1	12.7	15.0	17.9	22.5	26.5	29.9	33.4
120°	0.0	0.6	3.5	7.5	12.1	15.0	17.3	21.9	25.9	29.4	32.8
122.5°	0.0	0.6	3.5	7.5	12.1	14.4	16.7	21.3	25.3	29.4	32.8
125°	0.0	0.6	3.5	6.9	11.5	13.8	16.1	20.2	24.8	28.2	31.7
127.5°	0.0	0.6	2.9	6.9	10.9	13.2	15.5	19.6	23.6	27.1	30.5
130°	0.0	0.6	2.9	6.3	10.4	12.1	14.4	18.4	22.5	25.9	29.4
132.5°	0.0	0.6	2.3	5.8	9.8	11.5	13.2	17.3	21.3	24.8	27.6
135°	0.0	0.6	2.3	5.2	8.6	10.4	12.7	16.1	19.6	23.0	25.9
137.5°	0.0	0.0	1.7	4.6	8.1	9.8	11.5	15.0	18.4	21.3	24.2
140°	0.6	0.0	1.7	4.0	6.9	8.6	10.4	13.2	16.7	19.6	22.5
142.5°	0.6	0.0	1.2	3.5	6.3	7.5	9.2	12.1	15.0	17.9	20.2
145°	0.6	0.0	1.2	2.9	5.2	6.3	8.1	10.4	13.2	15.5	18.4
147.5°	0.6	0.0	0.6	2.3	4.6	5.8	6.9	9.2	11.5	13.8	16.1
150°	0.6	0.6	0.6	1.7	3.5	4.6	5.8	8.1	9.8	12.1	14.4
152.5°	0.6	0.6	0.6	1.2	2.9	3.5	4.6	6.3	8.6	10.4	12.7
155°	0.6	0.6	0.6	1.2	2.3	2.9	3.5	5.2	6.9	8.6	10.4
157.5°	0.6	0.6	0.0	0.6	1.7	2.3	2.9	4.0	5.2	6.9	8.1
160°	0.6	0.6	0.0	0.6	1.2	1.7	1.7	2.9	4.0	5.2	6.3
162.5°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	2.3	2.9	4.0	4.6
165°	0.6	0.6	0.6	0.0	0.6	0.6	0.6	1.2	1.7	2.3	2.9
167.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.7
170°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
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: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7	965.7
2.5°	960.0	961.7	962.9	964.6	964.0	964.6	964.6	963.4	964.6	964.6
5°	920.2	924.3	926.6	930.0	931.2	931.2	934.1	936.4	937.5	936.9
7.5°	878.2	874.8	875.3	873.0	873.0	874.2	877.1	879.4	882.8	885.1
10°	830.4	831.6	831.6	833.9	832.7	832.7	833.3	835.0	834.4	831.0
12.5°	803.9	797.6	798.7	803.9	805.6	803.9	805.6	803.3	807.4	807.4
15°	774.6	778.6	780.9	774.0	768.2	770.5	773.4	771.1	769.9	769.9
17.5°	761.9	753.8	749.2	750.9	752.1	750.9	751.5	751.5	749.8	746.9
20°	730.2	731.4	734.2	735.4	734.8	734.2	731.4	730.8	731.4	730.2
22.5°	711.2	711.2	711.8	718.1	718.1	716.4	712.9	709.5	705.4	704.9
25°	700.8	695.7	699.7	693.9	691.0	686.4	684.7	682.4	674.9	679.0
27.5°	669.7	678.4	673.2	670.3	666.9	664.6	660.5	660.0	661.1	661.1
30°	652.5	647.3	645.6	646.1	647.3	651.9	647.3	640.4	640.4	640.4
32.5°	639.2	633.5	630.0	627.7	628.3	626.6	623.7	617.9	617.3	619.1
35°	607.0	611.0	611.6	610.4	607.0	602.9	602.4	601.2	594.3	591.4
37.5°	587.4	585.1	584.5	586.8	588.0	584.5	575.9	571.8	572.4	570.1
40°	573.6	573.6	568.4	560.9	557.4	558.0	562.1	558.6	557.4	558.6
42.5°	551.1	556.3	555.1	550.5	550.0	551.1	550.0	546.5	544.2	544.2
45°	533.8	532.7	533.8	540.2	540.2	536.7	530.4	532.7	532.7	529.2
47.5°	521.2	517.1	519.4	513.1	515.4	517.1	513.7	510.2	509.1	506.8
50°	495.8	499.3	499.9	496.4	492.9	493.5	489.5	486.0	489.5	487.8
52.5°	465.9	471.1	472.2	473.9	468.2	465.9	467.6	472.2	469.9	470.5
55°	447.5	447.5	446.9	444.6	447.5	450.9	444.6	444.0	441.1	442.8
57.5°	423.3	424.4	421.5	424.4	422.1	422.1	419.8	421.5	422.7	426.1
60°	388.7	393.3	397.4	396.2	391.6	392.2	395.0	392.7	393.3	390.4
62.5°	359.3	359.3	365.7	362.8	366.3	364.5	360.5	361.1	363.4	364.5
65°	331.1	332.3	329.4	333.4	332.9	330.6	331.7	336.9	336.3	338.6
67.5°	297.7	303.5	302.3	300.6	300.6	301.8	306.4	302.3	300.6	300.0
70°	265.5	268.4	273.5	271.2	274.1	274.7	271.2	270.1	271.2	275.8
72.5°	235.5	238.4	241.3	245.9	246.5	244.2	246.5	244.7	245.3	243.6
75°	203.9	207.9	210.8	217.7	217.1	214.8	215.4	212.5	210.2	209.6
77.5°	172.2	177.9	184.3	183.7	183.7	186.0	184.3	182.6	183.1	181.4
80°	142.2	148.6	153.8	154.3	155.5	158.9	156.6	157.8	157.2	158.9
82.5°	112.9	119.2	123.8	126.7	128.4	129.0	130.7	132.5	134.8	135.9
85°	88.1	93.9	97.3	100.8	102.5	103.7	107.1	110.0	112.9	114.6
87.5°	67.4	71.4	76.0	80.6	82.4	84.7	88.1	92.1	97.3	101.9
90°	54.1	58.7	63.3	68.0	69.7	72.0	76.0	81.2	88.7	95.0
92.5°	49.5	54.1	58.2	62.8	65.1	68.0	73.1	80.0	90.4	97.9
95°	47.8	52.4	57.0	61.6	63.9	66.2	72.6	79.5	85.8	87.5
97.5°	46.1	50.7	54.7	59.3	61.6	64.5	69.7	73.1	75.4	77.2
100°	44.9	48.9	53.0	57.6	59.3	61.0	64.5	67.4	69.7	71.4
102.5°	43.2	47.2	51.3	54.1	55.9	57.0	59.9	62.8	62.8	62.8
105°	42.0	45.5	48.4	50.7	51.8	53.0	54.7	54.1	53.6	53.0
107.5°	40.3	43.2	45.5	47.8	47.8	48.4	48.4	47.2	46.6	46.1
110°	38.6	41.5	43.2	43.8	44.3	44.3	44.3	43.8	43.2	43.2



TEST NUMBER: P241429

CATALOG NUMBER: FVS8M-2-LD4-30-2LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	37.4	39.7	41.5	42.0	42.6	42.6	42.6	42.6	42.0	42.0
115°	36.3	38.6	40.3	41.5	42.0	42.6	43.2	43.2	43.2	43.2
117.5°	36.3	38.6	40.9	42.0	43.2	43.8	44.9	44.9	44.3	44.9
120°	35.7	38.6	40.9	43.2	44.3	44.9	46.1	46.1	45.5	45.5
122.5°	35.7	38.6	41.5	43.8	44.9	45.5	46.6	47.2	46.6	46.1
125°	35.1	38.0	40.9	43.8	44.9	46.1	47.2	47.2	46.6	46.6
127.5°	34.0	37.4	40.3	43.2	44.3	45.5	46.6	47.2	46.6	46.6
130°	32.8	36.3	39.2	42.0	43.2	44.3	45.5	46.1	46.1	46.1
132.5°	31.1	34.6	37.4	40.3	41.5	42.6	44.3	44.9	45.5	45.5
135°	29.4	32.8	35.7	38.6	39.7	40.9	42.6	43.8	43.8	44.3
137.5°	27.6	30.5	33.4	36.3	37.4	38.6	40.9	41.5	42.0	42.6
140°	25.3	28.2	30.5	33.4	35.1	36.3	38.0	39.2	40.3	40.3
142.5°	23.0	25.3	28.2	30.5	31.7	32.8	35.1	36.3	37.4	37.4
145°	20.7	23.0	25.3	27.6	28.8	29.9	31.7	32.8	33.4	34.0
147.5°	18.4	20.7	22.5	24.8	25.3	26.5	27.6	28.8	29.4	29.9
150°	16.1	18.4	19.6	21.3	21.9	23.0	24.2	24.8	25.3	25.9
152.5°	13.8	15.5	17.3	18.4	19.0	19.6	20.7	21.3	21.9	21.9
155°	12.1	13.2	14.4	15.5	16.1	16.7	17.3	17.9	18.4	18.4
157.5°	9.8	10.9	12.1	13.2	13.2	13.8	14.4	15.0	15.5	15.5
160°	7.5	8.6	9.8	10.4	10.9	10.9	11.5	12.1	12.1	12.7
162.5°	5.8	6.3	7.5	8.1	8.6	8.6	9.2	9.8	9.8	9.8
165°	4.0	4.6	5.2	5.8	6.3	6.3	6.9	6.9	6.9	6.9
167.5°	2.3	2.9	2.9	3.5	4.0	4.0	4.6	4.6	4.6	4.6
170°	1.2	1.2	1.7	1.7	1.7	1.7	2.3	2.3	2.3	2.3
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)