

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: P241430

Luminaire Tested: **FVS8M-2-LD4-35-2LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241430
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-LD4-35-2LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

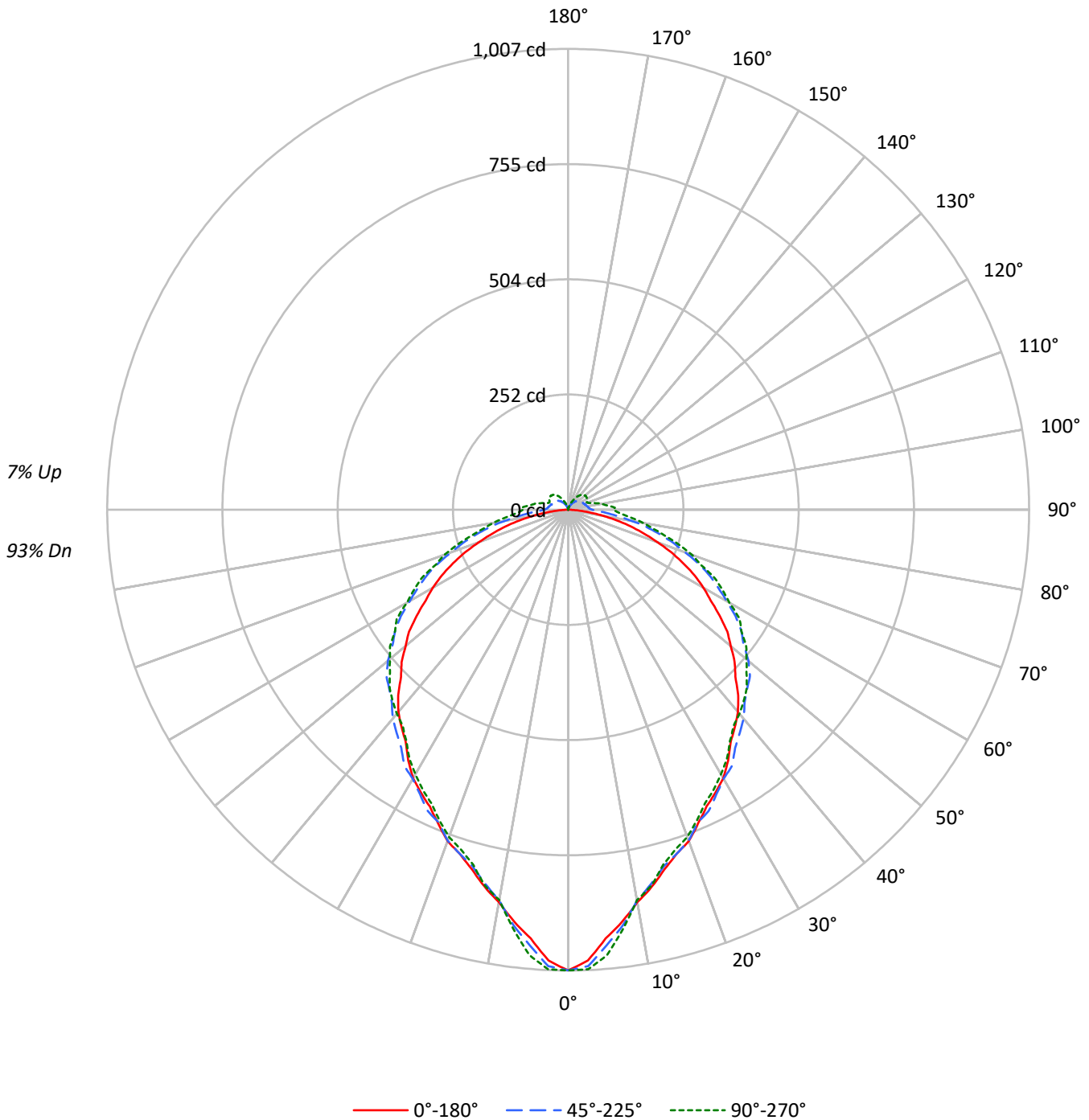
Lumens per Lamp: N/A
Luminaire Lumens: 2662.9 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

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

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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	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°	9048	9048	9048
5°	8428	8468	8641
10°	7840	7621	7603
15°	7412	7098	7042
20°	7167	6826	6728
25°	6845	6546	6350
30°	6728	6267	6128
35°	6436	6061	5840
40°	6349	5923	5743
45°	6083	5782	5720
50°	5925	5718	5602
55°	5691	5533	5470
60°	5403	5234	5258
65°	5047	4969	5057
70°	4476	4480	4663
75°	3805	3988	4118
80°	2792	3289	3761
85°	1401	2521	3439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.5	3.3
10°-20°	229.0	8.6
20°-30°	332.2	12.5
30°-40°	395.4	14.8
40°-50°	421.6	15.8
50°-60°	399.3	15.0
60°-70°	321.7	12.1
70°-80°	206.7	7.8
80°-90°	90.2	3.4
90°-100°	47.9	1.8
100°-110°	37.0	1.4
110°-120°	29.6	1.1
120°-130°	26.4	1.0
130°-140°	19.8	0.7
140°-150°	11.6	0.4
150°-160°	4.8	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	649.7	24.4
0°-40°	1045.1	39.2
0°-60°	1866.0	70.1
0°-90°	2484.6	93.3
90°-120°	114.5	4.3
90°-150°	172.3	6.5
90°-180°	178.0	6.7
0°-180°	2662.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1007	1007	1007	1007	1007	
5°	940	945	956	971	977	88
15°	813	817	807	801	802	230
25°	716	719	726	720	708	332
35°	619	641	636	633	616	390
45°	516	541	553	563	552	401
55°	404	426	462	466	462	361
65°	277	301	342	347	353	274
75°	142	169	207	226	218	149
85°	26	50	85	107	119	32
90°	1	22	52	73	99	1
95°	0	20	45	67	91	0
105°	0	17	40	54	55	0
115°	0	16	35	44	45	0
125°	0	14	33	47	49	0
135°	0	11	27	41	46	0
145°	1	7	19	30	35	0
155°	1	3	11	17	19	0
165°	1	1	3	7	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°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6
2.5°	986.2	986.2	986.8	986.8	988.0	988.6	990.4	990.4	993.4	995.8	998.2
5°	940.5	938.7	940.5	940.5	943.5	944.7	947.7	951.3	951.9	955.5	956.1
7.5°	907.5	906.9	904.5	904.5	903.3	905.1	905.1	907.5	911.7	915.3	915.9
10°	870.9	870.3	869.7	870.3	867.3	868.5	868.5	869.7	872.1	871.5	866.7
12.5°	843.9	843.3	840.9	840.9	841.5	841.5	840.9	842.1	837.9	835.5	837.3
15°	813.3	815.1	816.9	813.9	817.5	816.9	816.9	814.5	809.1	805.5	806.7
17.5°	788.1	790.5	788.7	787.5	786.3	786.3	788.1	788.1	789.9	786.3	788.1
20°	770.7	767.1	762.9	766.5	768.9	769.5	770.1	770.1	767.7	767.1	769.5
22.5°	741.9	741.3	743.1	747.3	746.7	743.7	742.5	737.7	740.1	742.5	739.5
25°	715.5	722.7	724.5	719.7	717.9	719.1	722.7	725.1	729.3	726.9	726.3
27.5°	696.9	698.7	690.2	695.7	704.1	708.3	705.9	705.3	703.5	697.5	701.1
30°	677.6	671.6	672.8	679.4	680.0	677.0	674.0	675.8	679.4	680.0	678.8
32.5°	650.0	647.0	658.4	653.0	653.0	655.4	660.2	663.2	666.8	666.2	665.0
35°	618.8	626.6	626.6	624.2	635.6	641.0	643.4	638.0	637.4	633.2	635.6
37.5°	598.4	599.0	596.6	609.2	613.4	611.6	609.8	609.2	612.2	614.6	615.2
40°	576.8	571.4	575.6	582.8	579.2	582.2	587.0	594.2	597.2	598.4	596.0
42.5°	549.8	548.0	554.6	551.6	558.8	563.0	567.8	572.0	569.6	570.8	570.2
45°	516.2	524.0	520.4	528.8	540.8	540.8	541.4	540.2	545.6	552.2	552.8
47.5°	493.4	494.6	494.0	504.2	509.0	507.8	515.6	523.4	530.6	534.2	538.4
50°	463.4	460.4	472.4	473.0	480.2	485.0	491.6	498.8	505.4	510.2	513.8
52.5°	438.2	435.2	441.2	441.2	456.8	462.2	462.8	468.2	475.4	477.8	482.6
55°	403.9	408.1	406.9	418.4	425.6	426.2	428.6	438.2	449.6	454.4	461.6
57.5°	369.1	375.1	374.5	387.7	390.7	395.5	400.9	414.1	421.4	428.0	433.4
60°	341.5	342.7	348.7	351.1	358.3	365.5	373.9	382.3	387.1	394.9	399.7
62.5°	311.5	307.9	318.1	318.7	331.9	333.1	337.9	346.9	354.7	364.3	369.7
65°	277.3	277.9	282.7	289.3	298.3	300.7	305.5	315.7	325.9	334.9	341.5
67.5°	244.3	246.7	249.7	257.5	262.9	268.9	274.9	283.3	297.1	304.3	308.5
70°	207.1	211.3	214.9	223.3	231.1	235.9	243.7	252.1	261.1	267.1	271.3
72.5°	173.5	176.5	181.9	188.5	200.5	205.3	210.1	217.3	225.1	231.1	240.1
75°	141.7	144.1	150.7	155.5	165.7	169.3	175.3	182.5	192.7	200.5	207.1
77.5°	109.2	111.0	117.6	123.6	132.6	136.8	141.1	149.5	157.9	168.7	175.3
80°	78.0	79.8	86.4	91.8	99.0	102.6	107.4	117.6	127.2	133.2	141.1
82.5°	50.4	51.6	56.4	63.0	69.6	74.4	79.2	87.6	96.0	103.2	109.8
85°	25.8	27.0	32.4	37.8	45.0	49.8	52.8	61.2	69.6	76.8	84.6
87.5°	8.4	10.2	14.4	20.4	27.0	31.2	34.2	42.0	49.2	57.0	64.2
90°	0.6	2.4	6.6	12.0	18.6	22.2	25.8	32.4	39.0	45.6	52.2
92.5°	0.0	1.8	5.4	10.8	16.8	20.4	23.4	30.0	36.0	42.0	47.4
95°	0.0	1.2	5.4	10.2	16.2	19.8	22.8	28.8	34.8	40.2	45.0
97.5°	0.0	1.2	4.8	10.2	15.6	19.2	22.2	27.6	33.0	38.4	43.8
100°	0.0	1.2	4.8	9.6	15.6	18.6	21.0	26.4	31.8	37.2	42.0
102.5°	0.0	1.2	4.8	9.6	15.0	18.0	20.4	25.8	31.2	36.0	40.8
105°	0.0	1.2	4.8	9.6	15.0	17.4	20.4	25.2	30.6	35.4	39.6
107.5°	0.0	1.2	4.2	9.0	14.4	17.4	19.8	25.2	30.0	34.2	38.4
110°	0.0	1.2	4.2	9.0	14.4	16.8	19.8	24.6	29.4	33.6	37.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	4.2	9.0	13.8	16.8	19.2	24.0	28.8	32.4	36.0
115°	0.0	1.2	4.2	8.4	13.8	16.2	18.6	23.4	28.2	31.8	35.4
117.5°	0.0	0.6	4.2	8.4	13.2	15.6	18.6	23.4	27.6	31.2	34.8
120°	0.0	0.6	3.6	7.8	12.6	15.6	18.0	22.8	27.0	30.6	34.2
122.5°	0.0	0.6	3.6	7.8	12.6	15.0	17.4	22.2	26.4	30.6	34.2
125°	0.0	0.6	3.6	7.2	12.0	14.4	16.8	21.0	25.8	29.4	33.0
127.5°	0.0	0.6	3.0	7.2	11.4	13.8	16.2	20.4	24.6	28.2	31.8
130°	0.0	0.6	3.0	6.6	10.8	12.6	15.0	19.2	23.4	27.0	30.6
132.5°	0.0	0.6	2.4	6.0	10.2	12.0	13.8	18.0	22.2	25.8	28.8
135°	0.0	0.6	2.4	5.4	9.0	10.8	13.2	16.8	20.4	24.0	27.0
137.5°	0.0	0.0	1.8	4.8	8.4	10.2	12.0	15.6	19.2	22.2	25.2
140°	0.6	0.0	1.8	4.2	7.2	9.0	10.8	13.8	17.4	20.4	23.4
142.5°	0.6	0.0	1.2	3.6	6.6	7.8	9.6	12.6	15.6	18.6	21.0
145°	0.6	0.0	1.2	3.0	5.4	6.6	8.4	10.8	13.8	16.2	19.2
147.5°	0.6	0.0	0.6	2.4	4.8	6.0	7.2	9.6	12.0	14.4	16.8
150°	0.6	0.6	0.6	1.8	3.6	4.8	6.0	8.4	10.2	12.6	15.0
152.5°	0.6	0.6	0.6	1.2	3.0	3.6	4.8	6.6	9.0	10.8	13.2
155°	0.6	0.6	0.6	1.2	2.4	3.0	3.6	5.4	7.2	9.0	10.8
157.5°	0.6	0.6	0.0	0.6	1.8	2.4	3.0	4.2	5.4	7.2	8.4
160°	0.6	0.6	0.0	0.6	1.2	1.8	1.8	3.0	4.2	5.4	6.6
162.5°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	2.4	3.0	4.2	4.8
165°	0.6	0.6	0.6	0.0	0.6	0.6	0.6	1.2	1.8	2.4	3.0
167.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6
2.5°	1000.6	1002.4	1003.6	1005.4	1004.8	1005.4	1005.4	1004.2	1005.4	1005.4
5°	959.1	963.3	965.7	969.3	970.6	970.6	973.6	976.0	977.2	976.6
7.5°	915.3	911.7	912.3	909.9	909.9	911.1	914.1	916.5	920.1	922.5
10°	865.5	866.7	866.7	869.1	867.9	867.9	868.5	870.3	869.7	866.1
12.5°	837.9	831.3	832.5	837.9	839.7	837.9	839.7	837.3	841.5	841.5
15°	807.3	811.5	813.9	806.7	800.7	803.1	806.1	803.7	802.5	802.5
17.5°	794.1	785.7	780.9	782.7	783.9	782.7	783.3	783.3	781.5	778.5
20°	761.1	762.3	765.3	766.5	765.9	765.3	762.3	761.7	762.3	761.1
22.5°	741.3	741.3	741.9	748.5	748.5	746.7	743.1	739.5	735.3	734.7
25°	730.5	725.1	729.3	723.3	720.3	715.5	713.7	711.3	703.5	707.7
27.5°	698.1	707.1	701.7	698.7	695.1	692.6	688.4	687.8	689.0	689.0
30°	680.0	674.6	672.8	673.4	674.6	679.4	674.6	667.4	667.4	667.4
32.5°	666.2	660.2	656.6	654.2	654.8	653.0	650.0	644.0	643.4	645.2
35°	632.6	636.8	637.4	636.2	632.6	628.4	627.8	626.6	619.4	616.4
37.5°	612.2	609.8	609.2	611.6	612.8	609.2	600.2	596.0	596.6	594.2
40°	597.8	597.8	592.4	584.6	581.0	581.6	585.8	582.2	581.0	582.2
42.5°	574.4	579.8	578.6	573.8	573.2	574.4	573.2	569.6	567.2	567.2
45°	556.4	555.2	556.4	563.0	563.0	559.4	552.8	555.2	555.2	551.6
47.5°	543.2	539.0	541.4	534.8	537.2	539.0	535.4	531.8	530.6	528.2
50°	516.8	520.4	521.0	517.4	513.8	514.4	510.2	506.6	510.2	508.4
52.5°	485.6	491.0	492.2	494.0	488.0	485.6	487.4	492.2	489.8	490.4
55°	466.4	466.4	465.8	463.4	466.4	470.0	463.4	462.8	459.8	461.6
57.5°	441.2	442.4	439.4	442.4	440.0	440.0	437.6	439.4	440.6	444.2
60°	405.1	409.9	414.1	412.9	408.1	408.7	411.7	409.3	409.9	406.9
62.5°	374.5	374.5	381.1	378.1	381.7	379.9	375.7	376.3	378.7	379.9
65°	345.1	346.3	343.3	347.5	346.9	344.5	345.7	351.1	350.5	352.9
67.5°	310.3	316.3	315.1	313.3	313.3	314.5	319.3	315.1	313.3	312.7
70°	276.7	279.7	285.1	282.7	285.7	286.3	282.7	281.5	282.7	287.5
72.5°	245.5	248.5	251.5	256.3	256.9	254.5	256.9	255.1	255.7	253.9
75°	212.5	216.7	219.7	226.9	226.3	223.9	224.5	221.5	219.1	218.5
77.5°	179.5	185.5	192.1	191.5	191.5	193.9	192.1	190.3	190.9	189.1
80°	148.3	154.9	160.3	160.9	162.1	165.7	163.3	164.5	163.9	165.7
82.5°	117.6	124.2	129.0	132.0	133.8	134.4	136.2	138.0	140.5	141.7
85°	91.8	97.8	101.4	105.0	106.8	108.0	111.6	114.6	117.6	119.4
87.5°	70.2	74.4	79.2	84.0	85.8	88.2	91.8	96.0	101.4	106.2
90°	56.4	61.2	66.0	70.8	72.6	75.0	79.2	84.6	92.4	99.0
92.5°	51.6	56.4	60.6	65.4	67.8	70.8	76.2	83.4	94.2	102.0
95°	49.8	54.6	59.4	64.2	66.6	69.0	75.6	82.8	89.4	91.2
97.5°	48.0	52.8	57.0	61.8	64.2	67.2	72.6	76.2	78.6	80.4
100°	46.8	51.0	55.2	60.0	61.8	63.6	67.2	70.2	72.6	74.4
102.5°	45.0	49.2	53.4	56.4	58.2	59.4	62.4	65.4	65.4	65.4
105°	43.8	47.4	50.4	52.8	54.0	55.2	57.0	56.4	55.8	55.2
107.5°	42.0	45.0	47.4	49.8	49.8	50.4	50.4	49.2	48.6	48.0
110°	40.2	43.2	45.0	45.6	46.2	46.2	46.2	45.6	45.0	45.0



TEST NUMBER: P241430

CATALOG NUMBER: FVS8M-2-LD4-35-2LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	39.0	41.4	43.2	43.8	44.4	44.4	44.4	44.4	43.8	43.8
115°	37.8	40.2	42.0	43.2	43.8	44.4	45.0	45.0	45.0	45.0
117.5°	37.8	40.2	42.6	43.8	45.0	45.6	46.8	46.8	46.2	46.8
120°	37.2	40.2	42.6	45.0	46.2	46.8	48.0	48.0	47.4	47.4
122.5°	37.2	40.2	43.2	45.6	46.8	47.4	48.6	49.2	48.6	48.0
125°	36.6	39.6	42.6	45.6	46.8	48.0	49.2	49.2	48.6	48.6
127.5°	35.4	39.0	42.0	45.0	46.2	47.4	48.6	49.2	48.6	48.6
130°	34.2	37.8	40.8	43.8	45.0	46.2	47.4	48.0	48.0	48.0
132.5°	32.4	36.0	39.0	42.0	43.2	44.4	46.2	46.8	47.4	47.4
135°	30.6	34.2	37.2	40.2	41.4	42.6	44.4	45.6	45.6	46.2
137.5°	28.8	31.8	34.8	37.8	39.0	40.2	42.6	43.2	43.8	44.4
140°	26.4	29.4	31.8	34.8	36.6	37.8	39.6	40.8	42.0	42.0
142.5°	24.0	26.4	29.4	31.8	33.0	34.2	36.6	37.8	39.0	39.0
145°	21.6	24.0	26.4	28.8	30.0	31.2	33.0	34.2	34.8	35.4
147.5°	19.2	21.6	23.4	25.8	26.4	27.6	28.8	30.0	30.6	31.2
150°	16.8	19.2	20.4	22.2	22.8	24.0	25.2	25.8	26.4	27.0
152.5°	14.4	16.2	18.0	19.2	19.8	20.4	21.6	22.2	22.8	22.8
155°	12.6	13.8	15.0	16.2	16.8	17.4	18.0	18.6	19.2	19.2
157.5°	10.2	11.4	12.6	13.8	13.8	14.4	15.0	15.6	16.2	16.2
160°	7.8	9.0	10.2	10.8	11.4	11.4	12.0	12.6	12.6	13.2
162.5°	6.0	6.6	7.8	8.4	9.0	9.0	9.6	10.2	10.2	10.2
165°	4.2	4.8	5.4	6.0	6.6	6.6	7.2	7.2	7.2	7.2
167.5°	2.4	3.0	3.0	3.6	4.2	4.2	4.8	4.8	4.8	4.8
170°	1.2	1.2	1.8	1.8	1.8	1.8	2.4	2.4	2.4	2.4
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)