

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: P241604

Luminaire Tested: **FVS8M-4-LD4-50-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241604
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-34)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-4-LD4-50-1STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

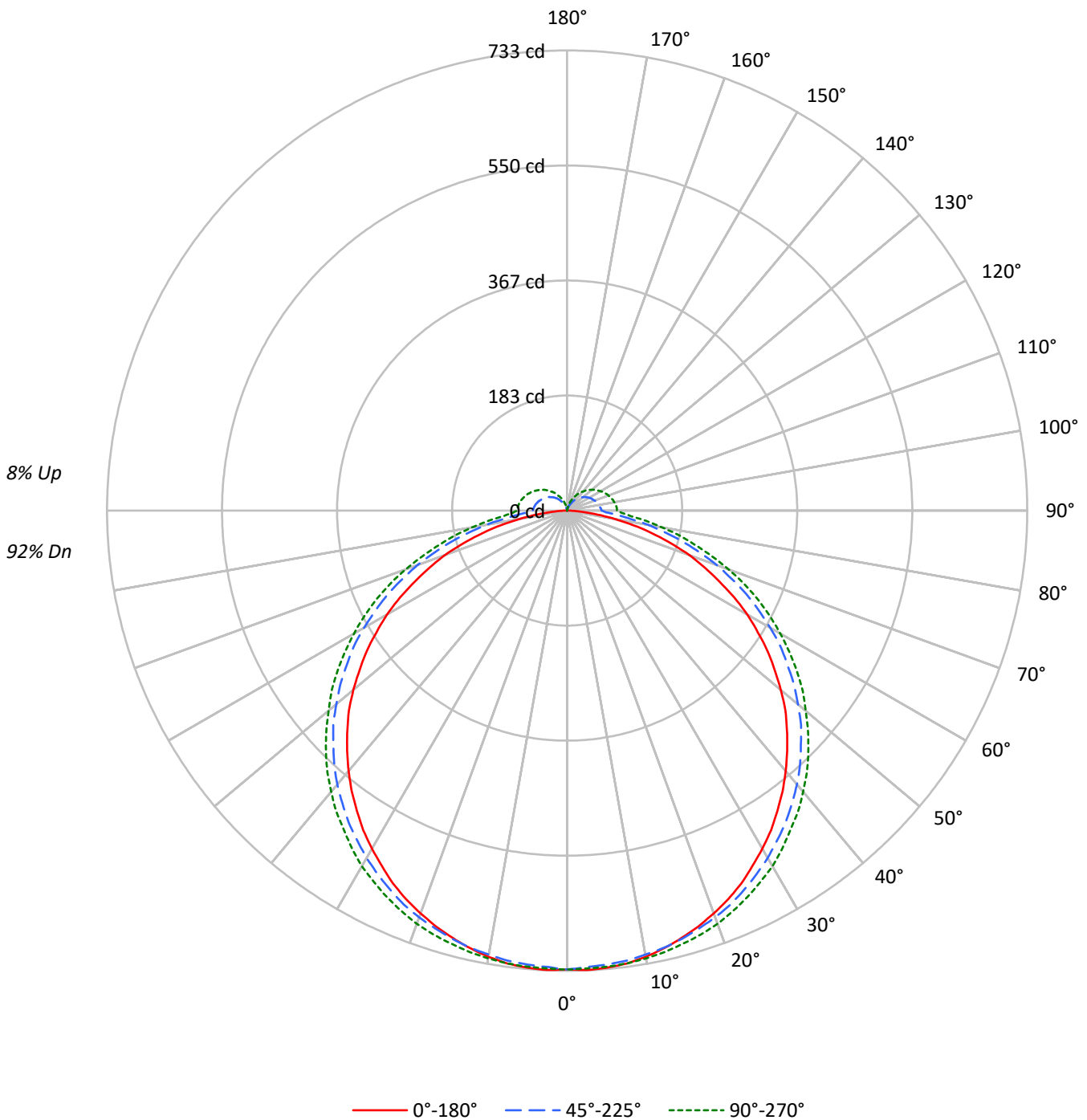
Lumens per Lamp: N/A
Luminaire Lumens: 2530.0 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')
CIE Type: Direct

Input Watts (W): 33.5
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

TEST NUMBER: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-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	113	113	113	113	107	107	107	100	100	100	95	95	95	92
1	106	101	96	92	102	98	94	90	92	89	85	87	84	81	82	80	78	75
2	96	87	80	74	92	85	78	72	80	74	70	75	71	67	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	60	56	62	58	54	51
4	79	67	58	51	77	65	57	50	62	55	49	58	52	47	55	50	46	43
5	73	60	51	44	70	58	50	43	55	48	42	52	46	41	50	44	40	37
6	67	54	45	38	65	52	44	37	50	42	37	47	41	36	45	39	35	32
7	62	48	40	33	60	47	39	33	45	38	32	43	36	31	41	35	31	28
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	37	32	27	25
9	54	40	32	27	52	39	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3267	3267	3267
5°	3268	3204	3209
10°	3253	3156	3161
15°	3227	3112	3116
20°	3202	3070	3079
25°	3176	3024	3031
30°	3139	2975	2986
35°	3101	2926	2922
40°	3060	2872	2868
45°	3012	2803	2802
50°	2953	2728	2717
55°	2875	2634	2634
60°	2773	2521	2519
65°	2614	2378	2390
70°	2443	2187	2208
75°	2114	1932	1972
80°	1603	1624	1717
85°	868	1283	1463



TEST NUMBER: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	2.7
10°-20°	200.2	7.9
20°-30°	307.8	12.2
30°-40°	378.6	15.0
40°-50°	404.1	16.0
50°-60°	379.3	15.0
60°-70°	305.8	12.1
70°-80°	194.8	7.7
80°-90°	84.4	3.3
90°-100°	51.5	2.0
100°-110°	46.5	1.8
110°-120°	38.8	1.5
120°-130°	29.9	1.2
130°-140°	20.5	0.8
140°-150°	11.9	0.5
150°-160°	5.2	0.2
160°-170°	1.4	0.1
170°-180°	0.0	0.0
0°-30°	577.3	22.8
0°-40°	956.0	37.8
0°-60°	1739.4	68.7
0°-90°	2324.4	91.9
90°-120°	136.8	5.4
90°-150°	199.0	7.9
90°-180°	206.0	8.1
0°-180°	2530.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	731	731	731	731	731	
5°	731	729	726	729	729	69
15°	705	706	706	713	714	199
25°	656	659	667	677	679	302
35°	584	593	607	618	620	365
45°	495	510	526	539	543	382
55°	390	407	428	443	447	348
65°	268	291	315	330	336	266
75°	140	163	190	207	210	149
85°	24	50	79	96	102	31
90°	0	25	55	74	79	1
95°	0	24	53	72	79	0
105°	0	22	49	68	74	0
115°	0	19	44	60	66	0
125°	0	16	37	52	57	0
135°	1	12	30	41	46	0
145°	1	8	20	30	34	1
155°	1	3	11	19	21	0
165°	1	1	4	7	9	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0
2.5°	732.6	731.8	731.8	731.8	731.8	731.8	731.8	731.8	730.1	729.3	727.6
5°	731.0	730.1	729.3	729.3	729.3	729.3	729.3	729.3	728.4	726.7	725.9
7.5°	727.6	726.7	725.9	725.9	725.9	725.9	726.7	725.9	725.0	723.3	723.3
10°	721.7	720.8	720.0	720.0	720.8	720.8	720.8	720.8	720.0	719.1	718.3
12.5°	714.1	714.1	713.2	713.2	713.2	714.1	714.1	714.9	714.1	713.2	713.2
15°	704.8	704.8	703.9	703.9	704.8	705.6	705.6	707.3	706.4	706.4	706.4
17.5°	694.6	693.8	693.8	693.8	695.5	696.3	696.3	697.1	698.0	698.0	698.0
20°	682.8	682.8	681.9	683.6	684.5	685.3	686.2	687.0	687.9	687.9	689.5
22.5°	670.1	669.3	669.3	670.1	671.8	672.6	674.3	676.0	676.0	676.9	679.4
25°	655.7	654.9	654.1	655.7	657.4	659.1	660.8	662.5	663.3	665.0	666.7
27.5°	638.8	638.8	639.7	640.5	643.1	644.8	646.4	648.1	649.8	651.5	653.2
30°	621.9	621.9	621.9	623.6	627.0	629.5	630.4	632.9	633.8	636.3	638.8
32.5°	604.2	602.5	604.2	606.7	610.1	611.8	613.5	616.0	617.7	620.3	622.8
35°	583.9	583.9	584.8	587.3	591.5	593.2	594.9	599.1	600.8	603.4	606.7
37.5°	563.6	562.8	564.5	567.9	572.1	573.8	576.3	578.8	581.4	584.8	588.1
40°	541.7	541.7	543.4	547.6	551.0	553.5	555.2	559.4	561.9	565.3	569.6
42.5°	518.8	519.7	521.4	524.8	529.8	532.4	534.9	538.3	541.7	545.0	549.3
45°	495.2	494.3	497.7	501.9	507.0	509.6	512.1	516.3	519.7	523.9	526.5
47.5°	471.5	469.0	473.2	476.6	482.5	486.7	487.6	492.7	496.9	501.1	505.3
50°	444.5	444.5	448.7	452.1	458.9	460.5	463.1	468.1	472.4	477.4	480.0
52.5°	416.6	416.6	420.8	426.7	432.7	435.2	437.7	443.6	447.9	451.2	455.5
55°	389.6	390.4	393.8	398.9	405.6	407.3	411.5	415.8	420.8	425.1	428.4
57.5°	360.0	361.7	365.1	370.1	377.7	379.4	383.6	389.6	392.9	398.0	403.1
60°	331.3	332.1	336.3	343.9	349.0	350.7	354.1	360.0	365.1	368.4	373.5
62.5°	300.0	302.5	305.9	312.7	317.7	322.0	323.6	329.6	335.5	339.7	343.9
65°	267.9	271.3	274.6	280.6	287.3	290.7	294.1	299.1	305.9	310.1	315.2
67.5°	236.6	239.1	243.4	250.1	255.2	259.4	261.1	268.7	272.9	278.9	283.1
70°	207.0	208.7	212.1	218.0	223.9	227.3	231.5	236.6	243.4	249.3	253.5
72.5°	173.2	174.1	178.3	184.2	191.8	195.2	197.7	206.2	211.3	217.2	220.6
75°	140.3	142.0	146.2	152.1	159.7	163.1	166.5	174.1	180.0	185.1	190.1
77.5°	109.0	109.0	114.1	121.7	128.4	131.8	134.4	142.8	147.9	153.8	158.9
80°	76.1	78.6	84.5	90.4	98.0	102.2	105.6	110.7	117.5	124.2	130.1
82.5°	49.0	50.7	55.8	63.4	70.1	73.5	77.7	83.7	90.4	97.2	102.2
85°	24.5	27.9	32.1	38.9	46.5	49.9	53.2	60.0	66.8	72.7	78.6
87.5°	7.6	10.1	15.2	22.0	29.6	33.0	36.3	43.1	49.9	55.8	61.7
90°	0.0	2.5	8.5	14.4	22.0	25.4	28.7	36.3	43.1	49.0	54.9
92.5°	0.0	2.5	7.6	14.4	21.1	25.4	28.7	35.5	42.3	48.2	54.1
95°	0.0	2.5	7.6	13.5	21.1	24.5	27.9	34.6	41.4	47.3	53.2
97.5°	0.0	2.5	6.8	13.5	20.3	23.7	27.0	34.6	40.6	46.5	52.4
100°	0.0	1.7	6.8	13.5	20.3	23.7	27.0	33.8	39.7	45.6	51.5
102.5°	0.0	1.7	6.8	12.7	19.4	22.8	26.2	33.0	38.9	44.8	50.7
105°	0.0	1.7	6.8	12.7	18.6	22.0	25.4	32.1	38.0	43.9	49.0
107.5°	0.0	1.7	5.9	11.8	18.6	21.1	24.5	31.3	37.2	42.3	48.2
110°	0.0	1.7	5.9	11.8	17.7	21.1	23.7	29.6	35.5	41.4	46.5



TEST NUMBER: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.7	5.9	11.0	16.9	20.3	22.8	28.7	34.6	39.7	44.8
115°	0.0	1.7	5.1	10.1	16.1	19.4	22.0	27.9	33.8	38.9	43.9
117.5°	0.0	0.8	5.1	10.1	15.2	18.6	21.1	27.0	32.1	37.2	42.3
120°	0.0	0.8	5.1	9.3	15.2	17.7	20.3	25.4	31.3	36.3	40.6
122.5°	0.0	0.8	4.2	9.3	13.5	16.9	19.4	24.5	29.6	34.6	38.9
125°	0.0	0.8	4.2	8.5	13.5	16.1	18.6	23.7	27.9	33.0	37.2
127.5°	0.0	0.8	4.2	7.6	12.7	15.2	16.9	22.0	27.0	31.3	35.5
130°	0.0	0.8	3.4	7.6	11.8	13.5	16.1	21.1	25.4	29.6	33.0
132.5°	0.0	0.8	2.5	6.8	11.0	12.7	15.2	19.4	23.7	27.9	31.3
135°	0.8	0.8	2.5	5.9	9.3	11.8	13.5	17.7	22.0	26.2	29.6
137.5°	0.8	0.8	2.5	5.1	8.5	10.1	12.7	16.1	20.3	23.7	27.0
140°	0.8	0.8	1.7	4.2	7.6	9.3	11.0	14.4	17.7	21.1	25.4
142.5°	0.8	0.8	1.7	4.2	6.8	8.5	10.1	12.7	16.1	19.4	22.8
145°	0.8	0.8	1.7	3.4	5.9	7.6	8.5	11.8	14.4	16.9	20.3
147.5°	0.8	0.8	0.8	2.5	5.1	5.9	7.6	10.1	12.7	15.2	17.7
150°	0.8	0.8	0.8	2.5	4.2	5.1	6.8	8.5	11.0	13.5	15.2
152.5°	0.8	0.8	0.8	1.7	3.4	4.2	5.1	7.6	9.3	11.0	13.5
155°	0.8	0.8	0.8	1.7	3.4	3.4	4.2	5.9	7.6	9.3	11.0
157.5°	0.8	0.8	0.8	1.7	2.5	3.4	3.4	5.1	6.8	7.6	9.3
160°	0.8	0.8	0.8	0.8	1.7	2.5	2.5	4.2	5.1	5.9	7.6
162.5°	0.8	0.8	0.8	0.8	1.7	1.7	1.7	3.4	4.2	5.1	5.9
165°	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7	2.5	3.4	4.2
167.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7	2.5	2.5
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7
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: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0
2.5°	727.6	729.3	730.1	731.0	731.0	731.0	731.0	731.0	731.0	730.1
5°	725.9	727.6	728.4	729.3	729.3	729.3	729.3	729.3	729.3	729.3
7.5°	723.3	725.0	725.9	726.7	726.7	727.6	727.6	727.6	727.6	727.6
10°	719.1	720.8	722.5	723.3	723.3	724.2	724.2	724.2	724.2	724.2
12.5°	714.9	716.6	717.4	719.1	719.1	719.1	720.0	720.0	720.0	720.0
15°	708.1	710.7	711.5	713.2	713.2	713.2	714.1	714.1	714.9	714.1
17.5°	700.5	702.2	704.8	704.8	706.4	706.4	706.4	707.3	707.3	708.1
20°	691.2	693.8	695.5	697.1	697.1	698.8	698.8	699.7	699.7	700.5
22.5°	681.1	683.6	686.2	687.9	687.9	688.7	689.5	690.4	690.4	690.4
25°	669.3	671.8	674.3	676.0	676.9	677.7	678.6	678.6	679.4	679.4
27.5°	655.7	659.1	661.7	663.3	664.2	664.2	665.9	666.7	666.7	666.7
30°	642.2	644.8	647.3	649.8	649.8	650.7	652.4	653.2	652.4	654.1
32.5°	627.0	629.5	632.1	633.8	634.6	635.5	636.3	638.0	638.0	638.0
35°	609.3	612.6	615.2	617.7	617.7	618.6	620.3	621.1	621.1	620.3
37.5°	591.5	594.9	597.4	600.0	600.8	600.8	602.5	602.5	603.4	604.2
40°	572.9	576.3	578.8	579.7	581.4	582.2	583.9	584.8	583.9	584.8
42.5°	553.5	555.2	557.7	561.1	561.1	562.8	563.6	564.5	565.3	565.3
45°	530.7	533.2	536.6	539.1	539.1	540.8	541.7	542.5	544.2	543.4
47.5°	508.7	511.2	513.8	516.3	516.3	518.0	520.5	520.5	520.5	520.5
50°	484.2	487.6	489.3	492.7	493.5	494.3	495.2	496.9	496.9	496.0
52.5°	458.9	463.1	466.5	468.1	469.0	469.8	470.7	472.4	472.4	473.2
55°	432.7	436.9	439.4	442.8	442.8	443.6	446.2	447.0	446.2	447.0
57.5°	405.6	409.0	412.4	414.9	416.6	416.6	418.3	420.0	420.0	420.0
60°	377.7	380.3	384.5	387.0	389.6	388.7	392.1	392.1	392.1	392.1
62.5°	347.3	352.4	354.9	359.1	360.0	360.8	362.5	363.4	363.4	364.2
65°	318.6	322.8	326.2	328.7	330.4	330.4	332.9	333.8	334.6	335.5
67.5°	288.2	292.4	295.8	300.0	300.8	300.8	301.7	305.1	304.2	305.1
70°	256.9	261.1	264.5	267.9	268.7	269.6	271.3	273.8	273.8	273.8
72.5°	225.6	230.7	234.1	236.6	236.6	238.3	241.7	240.8	243.4	241.7
75°	195.2	198.6	203.7	205.3	207.0	208.7	210.4	211.3	212.1	210.4
77.5°	164.8	169.0	172.4	174.9	176.6	178.3	180.0	181.7	180.8	183.4
80°	135.2	137.7	141.1	145.3	147.0	148.7	151.3	152.1	151.3	152.1
82.5°	107.3	111.5	114.9	119.1	120.0	121.7	123.4	125.9	125.9	126.8
85°	83.7	87.9	93.0	95.5	96.3	98.0	100.6	101.4	103.1	102.2
87.5°	66.8	71.8	76.1	78.6	80.3	82.0	83.7	85.3	86.2	87.0
90°	60.0	64.2	68.4	71.8	73.5	74.4	76.9	78.6	79.4	79.4
92.5°	59.2	63.4	67.6	71.0	72.7	74.4	76.1	77.7	78.6	79.4
95°	58.3	62.5	66.8	70.1	71.8	73.5	75.2	76.9	77.7	78.6
97.5°	57.5	62.5	65.9	69.3	71.0	72.7	74.4	76.1	76.9	77.7
100°	56.6	60.8	65.1	68.4	70.1	71.0	73.5	75.2	76.1	76.1
102.5°	55.8	60.0	64.2	67.6	68.4	70.1	71.8	73.5	74.4	75.2
105°	54.1	58.3	62.5	65.9	67.6	68.4	71.0	72.7	73.5	73.5
107.5°	53.2	57.5	60.8	64.2	65.9	67.6	69.3	71.0	71.8	71.8
110°	51.5	55.8	59.2	62.5	64.2	65.1	67.6	69.3	70.1	70.1



TEST NUMBER: P241604

CATALOG NUMBER: FVS8M-4-LD4-50-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	49.9	54.1	57.5	60.8	62.5	63.4	65.9	66.8	67.6	68.4
115°	48.2	52.4	55.8	59.2	60.0	61.7	63.4	65.1	65.9	65.9
117.5°	46.5	50.7	54.1	56.6	58.3	59.2	61.7	62.5	63.4	64.2
120°	44.8	49.0	52.4	54.9	56.6	57.5	59.2	60.8	61.7	61.7
122.5°	43.1	46.5	49.9	52.4	54.1	54.9	56.6	58.3	59.2	59.2
125°	41.4	44.8	47.3	50.7	51.5	52.4	54.9	55.8	56.6	56.6
127.5°	38.9	42.3	45.6	48.2	49.0	50.7	51.5	53.2	54.1	54.1
130°	37.2	40.6	43.1	45.6	46.5	48.2	49.0	50.7	51.5	51.5
132.5°	34.6	38.0	40.6	43.1	43.9	44.8	46.5	48.2	48.2	49.0
135°	33.0	35.5	38.0	40.6	41.4	42.3	43.9	44.8	45.6	45.6
137.5°	30.4	33.0	35.5	38.0	38.9	39.7	41.4	42.3	43.1	43.1
140°	27.9	31.3	33.0	35.5	36.3	37.2	38.0	38.9	39.7	39.7
142.5°	26.2	28.7	30.4	32.1	33.0	33.8	35.5	36.3	36.3	37.2
145°	22.8	26.2	27.9	29.6	30.4	31.3	32.1	33.0	33.8	33.8
147.5°	20.3	22.8	25.4	27.0	27.9	27.9	29.6	29.6	30.4	30.4
150°	17.7	20.3	22.8	24.5	24.5	25.4	26.2	27.0	27.0	27.0
152.5°	15.2	16.9	19.4	21.1	22.0	22.0	22.8	23.7	24.5	24.5
155°	12.7	14.4	16.1	17.7	18.6	19.4	20.3	21.1	21.1	21.1
157.5°	11.0	11.8	13.5	15.2	16.1	16.9	16.9	17.7	17.7	17.7
160°	8.5	9.3	11.0	11.8	12.7	13.5	14.4	14.4	15.2	15.2
162.5°	6.8	7.6	8.5	9.3	10.1	10.1	11.0	11.8	11.8	11.8
165°	5.1	5.1	5.9	6.8	6.8	7.6	8.5	9.3	9.3	9.3
167.5°	3.4	3.4	4.2	4.2	5.1	5.1	5.1	5.9	5.9	5.9
170°	1.7	1.7	2.5	2.5	2.5	2.5	3.4	3.4	3.4	3.4
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)