

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: P241542

Luminaire Tested: **FVS8M-2-LD4-35-2STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241542
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-9)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-35-2STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

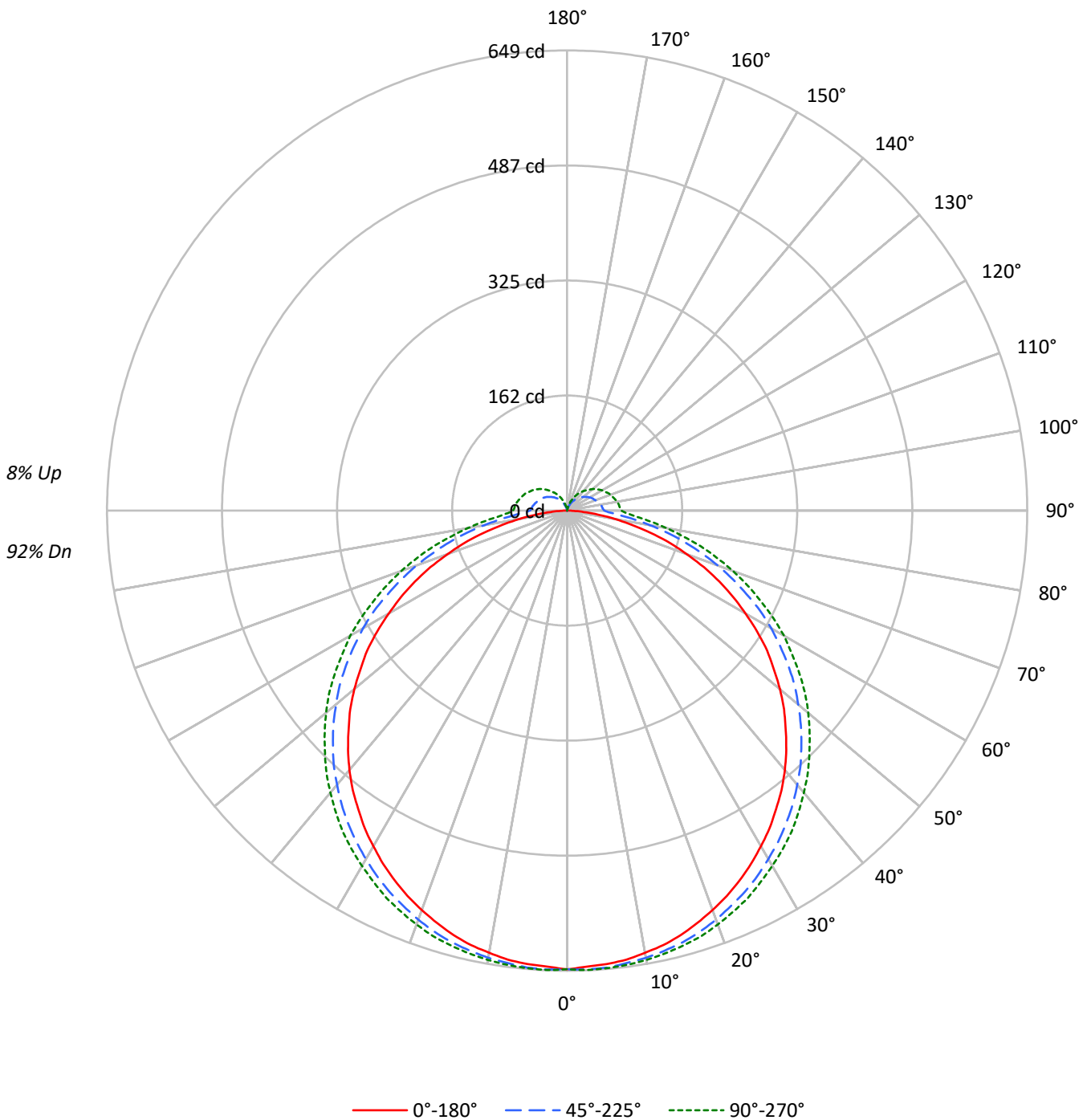
Lumens per Lamp: N/A
Luminaire Lumens: 2257.0 lumens
Efficiency: N/A
Efficacy: 67.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 33.6
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	113	113	113	113	106	106	106	100	100	100	94	94	94	92
1	106	101	96	92	102	98	93	89	92	88	85	86	84	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	57	66	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	50	46	43
5	73	60	50	44	70	58	49	43	55	47	42	52	46	41	49	44	39	37
6	67	54	44	38	65	52	44	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	31	26	36	30	25	34	29	24	22
10	50	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°	5816	5816	5816
5°	5754	5730	5732
10°	5701	5632	5650
15°	5648	5544	5571
20°	5576	5447	5492
25°	5506	5347	5409
30°	5427	5239	5314
35°	5343	5136	5232
40°	5257	5018	5123
45°	5137	4887	5011
50°	5008	4734	4891
55°	4851	4561	4736
60°	4598	4351	4564
65°	4310	4064	4313
70°	3868	3726	4035
75°	3276	3308	3677
80°	2470	2769	3225
85°	1265	2223	2820



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	2.7
10°-20°	177.5	7.9
20°-30°	272.6	12.1
30°-40°	335.4	14.9
40°-50°	358.0	15.9
50°-60°	336.7	14.9
60°-70°	272.2	12.1
70°-80°	175.6	7.8
80°-90°	79.3	3.5
90°-100°	48.3	2.1
100°-110°	42.9	1.9
110°-120°	35.5	1.6
120°-130°	27.0	1.2
130°-140°	18.4	0.8
140°-150°	10.6	0.5
150°-160°	4.6	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	511.5	22.7
0°-40°	846.9	37.5
0°-60°	1541.6	68.3
0°-90°	2068.6	91.7
90°-120°	126.6	5.6
90°-150°	182.6	8.1
90°-180°	188.0	8.3
0°-180°	2257.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	647	647	647	647	647	
5°	642	643	647	648	648	61
15°	620	623	630	634	635	175
25°	576	582	593	600	603	265
35°	514	524	539	548	552	322
45°	436	449	467	479	483	337
55°	344	360	380	395	400	307
65°	237	256	279	297	301	234
75°	122	145	172	189	195	130
85°	23	47	75	92	98	29
90°	0	25	52	70	76	1
95°	0	22	50	67	74	0
105°	0	20	45	63	68	0
115°	0	17	40	55	61	0
125°	0	14	34	47	52	0
135°	0	10	26	38	42	0
145°	0	6	18	27	30	0
155°	1	2	10	17	18	0
165°	1	1	3	6	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°	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0
2.5°	643.7	643.7	643.7	643.7	644.5	644.5	645.4	646.2	646.2	647.0	647.8
5°	642.1	641.3	642.1	642.1	642.9	642.9	643.7	644.5	645.4	646.2	647.0
7.5°	638.9	638.1	638.9	639.7	639.7	640.5	640.5	641.3	642.1	642.9	643.7
10°	633.3	633.3	634.1	634.9	635.7	635.7	636.5	637.3	638.1	639.7	640.5
12.5°	627.7	626.9	627.7	628.5	629.3	630.1	630.1	631.7	633.3	634.1	635.7
15°	619.7	619.7	620.5	621.3	622.1	622.9	623.7	626.1	626.9	628.5	630.1
17.5°	610.0	610.8	610.8	612.4	614.0	614.8	615.7	617.3	619.7	620.5	622.9
20°	599.6	600.4	600.4	602.0	603.6	605.2	606.0	608.4	610.8	612.4	614.0
22.5°	588.4	588.4	589.2	591.6	593.2	594.0	595.6	598.0	599.6	602.0	603.6
25°	575.5	575.5	577.1	578.7	581.1	581.9	583.5	586.0	588.4	590.8	593.2
27.5°	561.9	561.9	563.5	565.9	568.3	569.1	570.7	573.9	576.3	578.7	581.1
30°	546.6	547.4	549.0	551.4	553.8	555.5	557.1	559.5	561.9	565.1	567.5
32.5°	531.4	531.4	533.0	535.4	538.6	540.2	542.6	545.0	548.2	551.4	553.8
35°	513.7	514.5	516.1	520.1	521.7	524.1	525.8	529.0	533.0	535.4	538.6
37.5°	496.9	497.7	498.5	501.7	504.9	507.3	508.9	512.1	515.3	518.5	522.5
40°	477.6	477.6	480.0	484.0	486.4	488.8	490.4	494.4	497.7	501.7	504.9
42.5°	457.5	457.5	460.7	463.1	467.2	469.6	471.2	475.2	479.2	483.2	487.2
45°	435.9	437.5	439.9	443.1	447.9	448.7	451.1	455.1	459.9	463.9	467.2
47.5°	415.0	415.8	418.2	422.2	426.2	429.4	431.0	434.2	439.1	443.9	447.1
50°	391.7	393.3	395.7	399.7	403.7	407.0	409.4	413.4	418.2	422.2	425.4
52.5°	367.6	369.2	372.4	377.3	382.1	383.7	386.1	390.9	396.5	399.7	404.5
55°	344.3	345.2	348.4	352.4	358.0	359.6	362.0	366.8	371.6	376.5	380.5
57.5°	317.9	318.7	322.7	327.5	331.5	334.7	337.1	342.7	347.6	352.4	356.4
60°	290.6	293.0	297.0	302.6	306.6	309.8	312.2	317.1	321.9	326.7	332.3
62.5°	264.1	265.7	270.5	274.5	280.1	282.5	285.8	291.4	296.2	301.0	307.4
65°	236.8	238.4	241.6	247.2	253.6	256.1	259.3	264.1	269.7	275.3	279.3
67.5°	208.7	211.1	215.1	219.1	224.7	228.0	230.4	237.6	242.4	248.0	252.8
70°	179.0	181.4	186.2	191.8	197.5	201.5	203.9	209.5	215.9	220.7	225.6
72.5°	152.5	152.5	157.3	163.7	170.2	173.4	176.6	183.0	187.8	191.8	198.3
75°	122.0	124.4	130.0	135.7	142.9	145.3	148.5	154.1	161.3	166.2	171.8
77.5°	93.9	98.7	101.9	107.6	114.8	118.0	121.2	126.8	134.0	139.7	144.5
80°	69.0	71.4	75.5	81.1	89.1	90.7	94.7	101.1	106.8	112.4	118.8
82.5°	44.1	46.6	51.4	57.0	64.2	67.4	70.6	77.1	82.7	89.1	94.7
85°	23.3	25.7	30.5	36.9	44.1	47.4	50.6	56.2	62.6	69.0	74.6
87.5°	8.8	11.2	16.1	22.5	28.9	32.1	35.3	41.7	48.2	53.8	59.4
90°	0.0	3.2	8.8	14.4	21.7	24.9	28.1	34.5	40.9	46.6	52.2
92.5°	0.0	2.4	7.2	12.8	20.1	23.3	26.5	32.9	39.3	44.9	50.6
95°	0.0	2.4	6.4	12.8	19.3	22.5	25.7	32.1	38.5	44.1	49.8
97.5°	0.0	2.4	6.4	12.0	18.5	21.7	24.9	31.3	37.7	43.3	49.0
100°	0.0	1.6	6.4	12.0	17.7	20.9	24.1	30.5	36.9	42.5	47.4
102.5°	0.0	1.6	5.6	11.2	17.7	20.9	23.3	29.7	35.3	40.9	46.6
105°	0.0	1.6	5.6	11.2	16.9	20.1	23.3	28.9	34.5	40.1	44.9
107.5°	0.0	1.6	5.6	10.4	16.1	19.3	22.5	28.1	33.7	39.3	44.1
110°	0.0	1.6	4.8	9.6	15.3	18.5	21.7	27.3	32.9	37.7	42.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.6	4.8	9.6	15.3	17.7	20.9	26.5	31.3	36.9	40.9
115°	0.0	0.8	4.0	8.8	14.4	16.9	19.3	24.9	30.5	35.3	40.1
117.5°	0.0	0.8	4.0	8.8	13.6	16.1	18.5	24.1	28.9	33.7	38.5
120°	0.0	0.8	4.0	8.0	12.8	15.3	17.7	23.3	28.1	32.1	36.9
122.5°	0.0	0.8	3.2	7.2	12.0	14.4	16.9	21.7	26.5	31.3	35.3
125°	0.0	0.8	3.2	7.2	11.2	13.6	16.1	20.9	24.9	29.7	33.7
127.5°	0.0	0.8	3.2	6.4	10.4	12.8	15.3	19.3	24.1	28.1	31.3
130°	0.0	0.8	2.4	5.6	9.6	12.0	13.6	18.5	22.5	26.5	29.7
132.5°	0.0	0.8	2.4	5.6	8.8	11.2	12.8	16.9	20.9	24.9	28.1
135°	0.0	0.8	1.6	4.8	8.0	10.4	12.0	16.1	19.3	23.3	26.5
137.5°	0.0	0.0	1.6	4.0	7.2	8.8	11.2	14.4	17.7	21.7	24.1
140°	0.0	0.0	1.6	4.0	6.4	8.0	9.6	12.8	16.1	19.3	22.5
142.5°	0.0	0.0	0.8	3.2	5.6	7.2	8.8	12.0	15.3	17.7	20.9
145°	0.0	0.0	0.8	2.4	4.8	6.4	8.0	10.4	13.6	16.1	18.5
147.5°	0.0	0.0	0.8	2.4	4.0	5.6	6.4	9.6	12.0	14.4	16.9
150°	0.0	0.0	0.8	1.6	3.2	4.0	5.6	8.0	10.4	12.8	14.4
152.5°	0.8	0.0	0.8	0.8	2.4	3.2	4.0	6.4	8.8	10.4	12.8
155°	0.8	0.0	0.8	0.8	1.6	2.4	3.2	4.8	6.4	8.8	10.4
157.5°	0.8	0.8	0.0	0.8	1.6	1.6	2.4	4.0	5.6	6.4	8.0
160°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	2.4	4.0	4.8	6.4
162.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2	4.8
165°	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	1.6	2.4	3.2
167.5°	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	1.6	1.6
170°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8
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°	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0	647.0
2.5°	647.8	647.8	647.8	648.6	648.6	648.6	648.6	647.8	647.8	648.6
5°	647.0	647.0	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8
7.5°	644.5	645.4	645.4	646.2	646.2	646.2	646.2	646.2	646.2	646.2
10°	641.3	642.1	642.9	642.9	642.9	643.7	643.7	643.7	643.7	643.7
12.5°	636.5	638.1	638.9	638.9	639.7	638.9	639.7	639.7	639.7	639.7
15°	630.9	632.5	633.3	633.3	634.1	634.1	634.1	634.9	634.9	634.9
17.5°	623.7	625.3	626.1	626.9	627.7	627.7	628.5	628.5	628.5	629.3
20°	615.7	617.3	618.1	619.7	619.7	619.7	620.5	620.5	621.3	621.3
22.5°	606.0	607.6	609.2	610.8	610.8	610.8	611.6	612.4	612.4	612.4
25°	595.6	596.4	598.0	599.6	599.6	600.4	602.0	602.0	602.0	602.8
27.5°	583.5	585.2	587.6	587.6	589.2	589.2	590.0	590.8	590.8	590.8
30°	570.7	572.3	574.7	575.5	577.1	577.1	577.9	578.7	578.7	578.7
32.5°	556.3	558.7	560.3	562.7	562.7	563.5	565.1	565.1	565.9	565.9
35°	541.8	544.2	545.8	547.4	548.2	549.0	549.8	550.6	551.4	552.2
37.5°	524.1	527.4	529.8	532.2	533.0	533.0	534.6	535.4	536.2	536.2
40°	507.3	510.5	512.1	514.5	516.1	516.1	517.7	518.5	519.3	519.3
42.5°	489.6	492.8	496.1	497.7	498.5	498.5	500.1	501.7	501.7	502.5
45°	470.4	474.4	477.6	479.2	479.2	480.0	481.6	483.2	483.2	483.2
47.5°	451.1	453.5	455.9	459.1	459.9	461.5	462.3	462.3	463.1	463.9
50°	430.2	432.6	435.9	438.3	439.9	440.7	442.3	442.3	443.9	443.9
52.5°	407.0	411.0	414.2	416.6	417.4	419.0	419.8	421.4	422.2	423.0
55°	384.5	387.7	390.9	393.3	394.9	395.7	398.1	398.9	399.7	399.7
57.5°	360.4	364.4	367.6	370.0	370.8	372.4	374.0	375.7	376.5	375.7
60°	336.3	340.3	342.7	345.2	347.6	348.4	349.2	351.6	352.4	353.2
62.5°	310.6	313.8	317.1	320.3	321.1	323.5	325.1	325.9	325.9	327.5
65°	284.1	288.2	292.2	294.6	297.0	297.8	299.4	300.2	301.8	301.0
67.5°	257.7	261.7	265.7	268.1	269.7	271.3	272.9	274.5	275.3	275.3
70°	230.4	235.2	237.6	241.6	243.2	244.0	245.6	247.2	247.2	248.8
72.5°	203.1	207.1	211.1	215.1	215.1	218.3	219.1	221.5	220.7	221.5
75°	176.6	179.8	183.8	186.2	188.6	189.4	192.6	193.4	193.4	195.1
77.5°	148.5	154.1	156.5	160.5	163.7	162.9	165.4	167.0	168.6	167.0
80°	122.0	127.6	131.6	134.0	135.7	137.3	139.7	139.7	142.1	142.1
82.5°	99.5	104.3	107.6	110.8	112.4	114.0	115.6	117.2	118.0	118.8
85°	79.5	82.7	86.7	90.7	91.5	93.1	95.5	96.3	97.9	97.9
87.5°	64.2	68.2	72.2	75.5	77.9	78.7	81.1	81.9	82.7	83.5
90°	57.0	61.0	65.0	69.0	69.8	71.4	73.8	74.6	76.3	76.3
92.5°	55.4	59.4	63.4	66.6	68.2	69.8	71.4	73.0	73.8	74.6
95°	54.6	58.6	62.6	65.8	67.4	69.0	70.6	72.2	73.0	73.8
97.5°	53.8	57.8	61.8	65.0	66.6	68.2	69.8	71.4	72.2	73.0
100°	52.2	57.0	60.2	64.2	65.0	66.6	69.0	70.6	71.4	71.4
102.5°	51.4	55.4	59.4	62.6	64.2	65.0	67.4	69.0	69.8	69.8
105°	49.8	53.8	57.8	61.0	62.6	64.2	65.8	67.4	68.2	68.2
107.5°	49.0	53.0	56.2	59.4	61.0	62.6	64.2	65.8	66.6	66.6
110°	47.4	51.4	54.6	57.8	59.4	60.2	62.6	64.2	65.0	65.0



TEST NUMBER: P241542

CATALOG NUMBER: FVS8M-2-LD4-35-2STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	45.8	49.8	53.0	56.2	57.8	58.6	61.0	61.8	62.6	63.4
115°	44.1	48.2	51.4	54.6	55.4	57.0	58.6	60.2	61.0	61.0
117.5°	42.5	45.8	49.8	52.2	53.8	54.6	56.2	57.8	58.6	58.6
120°	40.9	44.1	47.4	50.6	51.4	53.0	54.6	55.4	56.2	57.0
122.5°	39.3	42.5	45.8	48.2	49.8	50.6	52.2	53.8	54.6	54.6
125°	36.9	40.1	43.3	45.8	47.4	48.2	49.8	51.4	51.4	52.2
127.5°	35.3	38.5	41.7	44.1	44.9	45.8	47.4	49.0	49.8	49.8
130°	33.7	36.1	39.3	41.7	42.5	43.3	44.9	45.8	46.6	47.4
132.5°	31.3	34.5	36.9	39.3	40.1	40.9	42.5	43.3	44.1	44.1
135°	29.7	32.1	34.5	36.9	37.7	38.5	40.1	40.9	41.7	41.7
137.5°	27.3	29.7	32.1	34.5	35.3	36.1	36.9	38.5	38.5	38.5
140°	24.9	27.3	29.7	31.3	32.9	32.9	34.5	35.3	36.1	36.1
142.5°	23.3	24.9	27.3	28.9	29.7	30.5	31.3	32.9	32.9	32.9
145°	20.9	23.3	24.9	26.5	27.3	28.1	28.9	29.7	30.5	30.5
147.5°	18.5	20.9	22.5	24.1	24.9	24.9	26.5	26.5	27.3	27.3
150°	16.9	18.5	20.1	21.7	21.7	22.5	23.3	24.1	24.1	24.1
152.5°	14.4	16.1	17.7	18.5	19.3	19.3	20.9	20.9	21.7	21.7
155°	12.0	13.6	15.3	16.1	16.9	16.9	17.7	17.7	18.5	18.5
157.5°	9.6	11.2	12.8	13.6	13.6	14.4	14.4	15.3	15.3	15.3
160°	7.2	8.8	9.6	10.4	11.2	11.2	12.0	12.0	12.8	12.8
162.5°	5.6	6.4	7.2	8.0	8.8	8.8	9.6	9.6	9.6	9.6
165°	4.0	4.0	4.8	5.6	6.4	6.4	6.4	6.4	7.2	7.2
167.5°	2.4	2.4	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0
170°	0.8	0.8	1.6	1.6	1.6	1.6	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)