

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: P241537

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241537
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-LD4-30-2LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

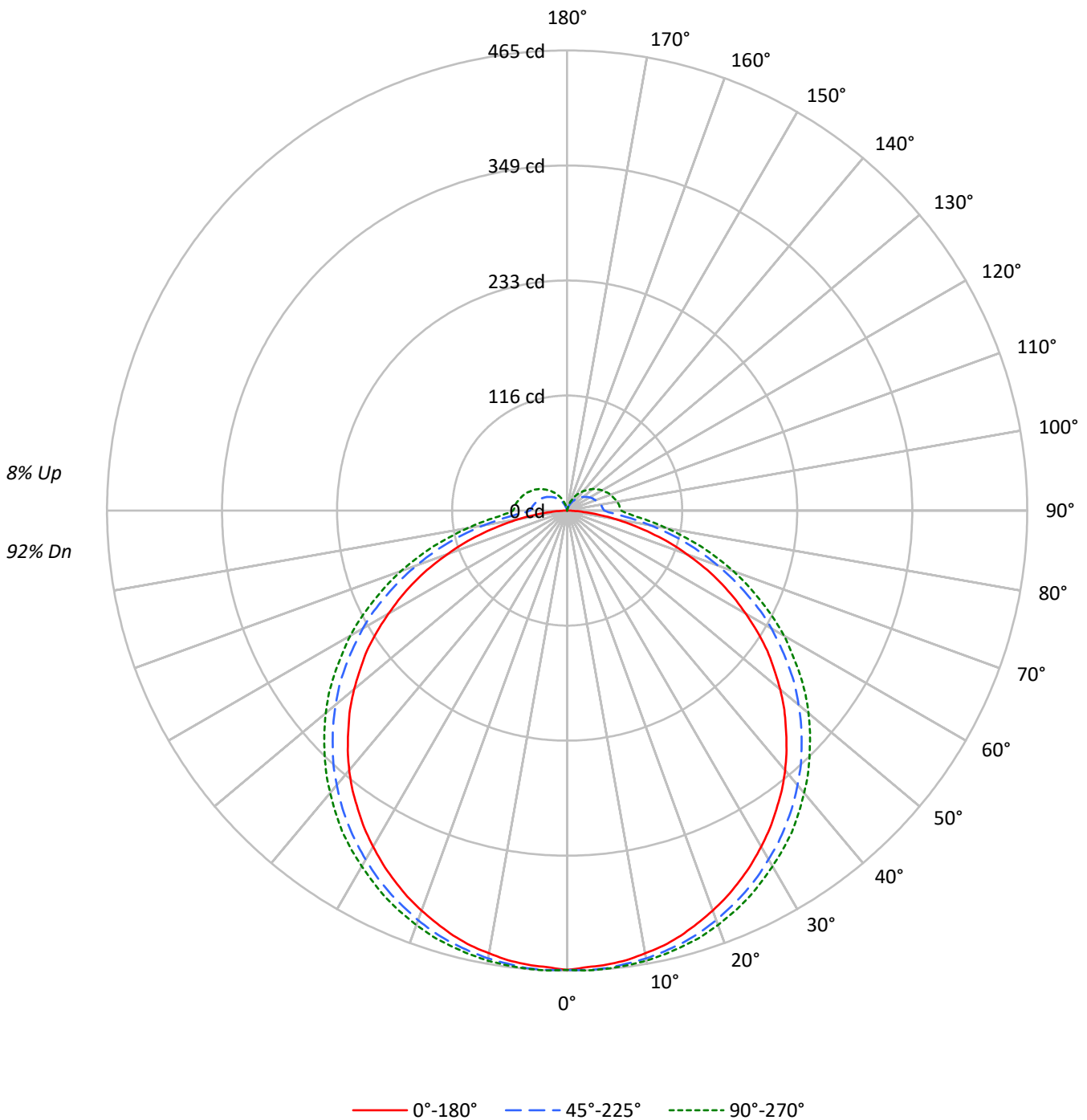
Lumens per Lamp: N/A
Luminaire Lumens: 1619.0 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 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	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°	4172	4172	4172
5°	4128	4110	4112
10°	4090	4041	4054
15°	4051	3977	3996
20°	4000	3907	3940
25°	3949	3835	3880
30°	3893	3758	3812
35°	3833	3684	3753
40°	3771	3600	3675
45°	3684	3505	3594
50°	3593	3397	3508
55°	3480	3271	3397
60°	3297	3122	3273
65°	3092	2916	3094
70°	2775	2672	2895
75°	2349	2373	2637
80°	1772	1986	2313
85°	907	1594	2022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	2.7
10°-20°	127.3	7.9
20°-30°	195.6	12.1
30°-40°	240.6	14.9
40°-50°	256.8	15.9
50°-60°	241.5	14.9
60°-70°	195.3	12.1
70°-80°	126.0	7.8
80°-90°	56.8	3.5
90°-100°	34.6	2.1
100°-110°	30.7	1.9
110°-120°	25.5	1.6
120°-130°	19.4	1.2
130°-140°	13.2	0.8
140°-150°	7.6	0.5
150°-160°	3.3	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	366.9	22.7
0°-40°	607.5	37.5
0°-60°	1105.8	68.3
0°-90°	1483.9	91.7
90°-120°	90.8	5.6
90°-150°	131.0	8.1
90°-180°	135.0	8.3
0°-180°	1619.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	461	461	464	465	465	44
15°	444	447	452	455	455	125
25°	413	417	426	430	432	190
35°	368	376	386	393	396	231
45°	313	322	335	344	347	241
55°	247	258	273	283	287	220
65°	170	184	200	213	216	168
75°	88	104	123	135	140	93
85°	17	34	54	66	70	21
90°	0	18	37	50	55	1
95°	0	16	36	48	53	0
105°	0	14	32	45	49	0
115°	0	12	29	40	44	0
125°	0	10	24	34	37	0
135°	0	8	19	27	30	0
145°	0	5	13	20	22	0
155°	1	2	8	12	13	0
165°	1	1	2	5	5	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°	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1
2.5°	461.8	461.8	461.8	461.8	462.3	462.3	462.9	463.5	463.5	464.1	464.7
5°	460.6	460.0	460.6	460.6	461.2	461.2	461.8	462.3	462.9	463.5	464.1
7.5°	458.3	457.7	458.3	458.9	458.9	459.5	459.5	460.0	460.6	461.2	461.8
10°	454.3	454.3	454.9	455.4	456.0	456.0	456.6	457.2	457.7	458.9	459.5
12.5°	450.3	449.7	450.3	450.8	451.4	452.0	452.0	453.1	454.3	454.9	456.0
15°	444.5	444.5	445.1	445.7	446.2	446.8	447.4	449.1	449.7	450.8	452.0
17.5°	437.6	438.2	438.2	439.3	440.5	441.0	441.6	442.8	444.5	445.1	446.8
20°	430.1	430.7	430.7	431.8	433.0	434.1	434.7	436.4	438.2	439.3	440.5
22.5°	422.0	422.0	422.6	424.3	425.5	426.1	427.2	429.0	430.1	431.8	433.0
25°	412.8	412.8	414.0	415.1	416.9	417.4	418.6	420.3	422.0	423.8	425.5
27.5°	403.0	403.0	404.2	405.9	407.7	408.2	409.4	411.7	413.4	415.1	416.9
30°	392.1	392.7	393.8	395.6	397.3	398.4	399.6	401.3	403.0	405.3	407.1
32.5°	381.2	381.2	382.3	384.0	386.3	387.5	389.2	391.0	393.3	395.6	397.3
35°	368.5	369.1	370.2	373.1	374.3	376.0	377.1	379.4	382.3	384.0	386.3
37.5°	356.4	357.0	357.6	359.9	362.2	363.9	365.0	367.3	369.6	372.0	374.8
40°	342.6	342.6	344.3	347.2	348.9	350.6	351.8	354.7	357.0	359.9	362.2
42.5°	328.2	328.2	330.5	332.2	335.1	336.8	338.0	340.9	343.7	346.6	349.5
45°	312.6	313.8	315.5	317.8	321.3	321.9	323.6	326.5	329.9	332.8	335.1
47.5°	297.7	298.3	300.0	302.9	305.7	308.0	309.2	311.5	315.0	318.4	320.7
50°	281.0	282.1	283.9	286.7	289.6	291.9	293.6	296.5	300.0	302.9	305.2
52.5°	263.7	264.9	267.2	270.6	274.1	275.2	276.9	280.4	284.4	286.7	290.2
55°	247.0	247.6	249.9	252.8	256.8	257.9	259.7	263.1	266.6	270.0	272.9
57.5°	228.0	228.6	231.5	234.9	237.8	240.1	241.8	245.9	249.3	252.8	255.6
60°	208.4	210.2	213.0	217.1	219.9	222.3	224.0	227.4	230.9	234.3	238.4
62.5°	189.4	190.6	194.0	196.9	200.9	202.7	205.0	209.0	212.5	215.9	220.5
65°	169.9	171.0	173.3	177.3	181.9	183.7	186.0	189.4	193.5	197.5	200.4
67.5°	149.7	151.4	154.3	157.2	161.2	163.5	165.2	170.4	173.9	177.9	181.4
70°	128.4	130.1	133.6	137.6	141.6	144.5	146.2	150.3	154.9	158.3	161.8
72.5°	109.4	109.4	112.9	117.5	122.1	124.4	126.7	131.3	134.7	137.6	142.2
75°	87.5	89.2	93.3	97.3	102.5	104.2	106.5	110.5	115.7	119.2	123.2
77.5°	67.4	70.8	73.1	77.2	82.3	84.6	86.9	91.0	96.2	100.2	103.6
80°	49.5	51.2	54.1	58.2	63.9	65.1	67.9	72.5	76.6	80.6	85.2
82.5°	31.7	33.4	36.8	40.9	46.1	48.4	50.7	55.3	59.3	63.9	67.9
85°	16.7	18.4	21.9	26.5	31.7	34.0	36.3	40.3	44.9	49.5	53.5
87.5°	6.3	8.1	11.5	16.1	20.7	23.0	25.3	29.9	34.5	38.6	42.6
90°	0.0	2.3	6.3	10.4	15.5	17.8	20.2	24.8	29.4	33.4	37.4
92.5°	0.0	1.7	5.2	9.2	14.4	16.7	19.0	23.6	28.2	32.2	36.3
95°	0.0	1.7	4.6	9.2	13.8	16.1	18.4	23.0	27.6	31.7	35.7
97.5°	0.0	1.7	4.6	8.6	13.2	15.5	17.8	22.5	27.1	31.1	35.1
100°	0.0	1.2	4.6	8.6	12.7	15.0	17.3	21.9	26.5	30.5	34.0
102.5°	0.0	1.2	4.0	8.1	12.7	15.0	16.7	21.3	25.3	29.4	33.4
105°	0.0	1.2	4.0	8.1	12.1	14.4	16.7	20.7	24.8	28.8	32.2
107.5°	0.0	1.2	4.0	7.5	11.5	13.8	16.1	20.2	24.2	28.2	31.7
110°	0.0	1.2	3.5	6.9	10.9	13.2	15.5	19.6	23.6	27.1	30.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	3.5	6.9	10.9	12.7	15.0	19.0	22.5	26.5	29.4
115°	0.0	0.6	2.9	6.3	10.4	12.1	13.8	17.8	21.9	25.3	28.8
117.5°	0.0	0.6	2.9	6.3	9.8	11.5	13.2	17.3	20.7	24.2	27.6
120°	0.0	0.6	2.9	5.8	9.2	10.9	12.7	16.7	20.2	23.0	26.5
122.5°	0.0	0.6	2.3	5.2	8.6	10.4	12.1	15.5	19.0	22.5	25.3
125°	0.0	0.6	2.3	5.2	8.1	9.8	11.5	15.0	17.8	21.3	24.2
127.5°	0.0	0.6	2.3	4.6	7.5	9.2	10.9	13.8	17.3	20.2	22.5
130°	0.0	0.6	1.7	4.0	6.9	8.6	9.8	13.2	16.1	19.0	21.3
132.5°	0.0	0.6	1.7	4.0	6.3	8.1	9.2	12.1	15.0	17.8	20.2
135°	0.0	0.6	1.2	3.5	5.8	7.5	8.6	11.5	13.8	16.7	19.0
137.5°	0.0	0.0	1.2	2.9	5.2	6.3	8.1	10.4	12.7	15.5	17.3
140°	0.0	0.0	1.2	2.9	4.6	5.8	6.9	9.2	11.5	13.8	16.1
142.5°	0.0	0.0	0.6	2.3	4.0	5.2	6.3	8.6	10.9	12.7	15.0
145°	0.0	0.0	0.6	1.7	3.5	4.6	5.8	7.5	9.8	11.5	13.2
147.5°	0.0	0.0	0.6	1.7	2.9	4.0	4.6	6.9	8.6	10.4	12.1
150°	0.0	0.0	0.6	1.2	2.3	2.9	4.0	5.8	7.5	9.2	10.4
152.5°	0.6	0.0	0.6	0.6	1.7	2.3	2.9	4.6	6.3	7.5	9.2
155°	0.6	0.0	0.6	0.6	1.2	1.7	2.3	3.5	4.6	6.3	7.5
157.5°	0.6	0.6	0.0	0.6	1.2	1.2	1.7	2.9	4.0	4.6	5.8
160°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.7	2.9	3.5	4.6
162.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.7	2.3	3.5
165°	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	1.2	1.7	2.3
167.5°	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	1.2	1.2
170°	0.6	0.6	0.6	0.6	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°	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1	464.1
2.5°	464.7	464.7	464.7	465.2	465.2	465.2	465.2	464.7	464.7	465.2
5°	464.1	464.1	464.7	464.7	464.7	464.7	464.7	464.7	464.7	464.7
7.5°	462.3	462.9	462.9	463.5	463.5	463.5	463.5	463.5	463.5	463.5
10°	460.0	460.6	461.2	461.2	461.2	461.8	461.8	461.8	461.8	461.8
12.5°	456.6	457.7	458.3	458.3	458.9	458.3	458.9	458.9	458.9	458.9
15°	452.6	453.7	454.3	454.3	454.9	454.9	454.9	455.4	455.4	455.4
17.5°	447.4	448.5	449.1	449.7	450.3	450.3	450.8	450.8	450.8	451.4
20°	441.6	442.8	443.3	444.5	444.5	444.5	445.1	445.1	445.7	445.7
22.5°	434.7	435.9	437.0	438.2	438.2	438.2	438.7	439.3	439.3	439.3
25°	427.2	427.8	429.0	430.1	430.1	430.7	431.8	431.8	431.8	432.4
27.5°	418.6	419.7	421.5	421.5	422.6	422.6	423.2	423.8	423.8	423.8
30°	409.4	410.5	412.3	412.8	414.0	414.0	414.6	415.1	415.1	415.1
32.5°	399.0	400.7	401.9	403.6	403.6	404.2	405.3	405.3	405.9	405.9
35°	388.7	390.4	391.5	392.7	393.3	393.8	394.4	395.0	395.6	396.1
37.5°	376.0	378.3	380.0	381.7	382.3	382.3	383.5	384.0	384.6	384.6
40°	363.9	366.2	367.3	369.1	370.2	370.2	371.4	372.0	372.5	372.5
42.5°	351.2	353.5	355.8	357.0	357.6	357.6	358.7	359.9	359.9	360.4
45°	337.4	340.3	342.6	343.7	343.7	344.3	345.5	346.6	346.6	346.6
47.5°	323.6	325.3	327.0	329.3	329.9	331.1	331.6	331.6	332.2	332.8
50°	308.6	310.3	312.6	314.4	315.5	316.1	317.3	317.3	318.4	318.4
52.5°	291.9	294.8	297.1	298.8	299.4	300.6	301.1	302.3	302.9	303.4
55°	275.8	278.1	280.4	282.1	283.3	283.9	285.6	286.2	286.7	286.7
57.5°	258.5	261.4	263.7	265.4	266.0	267.2	268.3	269.5	270.0	269.5
60°	241.3	244.1	245.9	247.6	249.3	249.9	250.5	252.2	252.8	253.3
62.5°	222.8	225.1	227.4	229.7	230.3	232.0	233.2	233.8	233.8	234.9
65°	203.8	206.7	209.6	211.3	213.0	213.6	214.8	215.3	216.5	215.9
67.5°	184.8	187.7	190.6	192.3	193.5	194.6	195.8	196.9	197.5	197.5
70°	165.2	168.7	170.4	173.3	174.5	175.0	176.2	177.3	177.3	178.5
72.5°	145.7	148.6	151.4	154.3	154.3	156.6	157.2	158.9	158.3	158.9
75°	126.7	129.0	131.9	133.6	135.3	135.9	138.2	138.8	138.8	139.9
77.5°	106.5	110.5	112.3	115.2	117.5	116.9	118.6	119.8	120.9	119.8
80°	87.5	91.5	94.4	96.2	97.3	98.5	100.2	100.2	101.9	101.9
82.5°	71.4	74.9	77.2	79.5	80.6	81.8	82.9	84.1	84.6	85.2
85°	57.0	59.3	62.2	65.1	65.6	66.8	68.5	69.1	70.2	70.2
87.5°	46.1	48.9	51.8	54.1	55.9	56.4	58.2	58.7	59.3	59.9
90°	40.9	43.8	46.6	49.5	50.1	51.2	53.0	53.5	54.7	54.7
92.5°	39.7	42.6	45.5	47.8	48.9	50.1	51.2	52.4	53.0	53.5
95°	39.2	42.0	44.9	47.2	48.4	49.5	50.7	51.8	52.4	53.0
97.5°	38.6	41.5	44.3	46.6	47.8	48.9	50.1	51.2	51.8	52.4
100°	37.4	40.9	43.2	46.1	46.6	47.8	49.5	50.7	51.2	51.2
102.5°	36.8	39.7	42.6	44.9	46.1	46.6	48.4	49.5	50.1	50.1
105°	35.7	38.6	41.5	43.8	44.9	46.1	47.2	48.4	48.9	48.9
107.5°	35.1	38.0	40.3	42.6	43.8	44.9	46.1	47.2	47.8	47.8
110°	34.0	36.8	39.2	41.5	42.6	43.2	44.9	46.1	46.6	46.6



TEST NUMBER: P241537

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	32.8	35.7	38.0	40.3	41.5	42.0	43.8	44.3	44.9	45.5
115°	31.7	34.5	36.8	39.2	39.7	40.9	42.0	43.2	43.8	43.8
117.5°	30.5	32.8	35.7	37.4	38.6	39.2	40.3	41.5	42.0	42.0
120°	29.4	31.7	34.0	36.3	36.8	38.0	39.2	39.7	40.3	40.9
122.5°	28.2	30.5	32.8	34.5	35.7	36.3	37.4	38.6	39.2	39.2
125°	26.5	28.8	31.1	32.8	34.0	34.5	35.7	36.8	36.8	37.4
127.5°	25.3	27.6	29.9	31.7	32.2	32.8	34.0	35.1	35.7	35.7
130°	24.2	25.9	28.2	29.9	30.5	31.1	32.2	32.8	33.4	34.0
132.5°	22.5	24.8	26.5	28.2	28.8	29.4	30.5	31.1	31.7	31.7
135°	21.3	23.0	24.8	26.5	27.1	27.6	28.8	29.4	29.9	29.9
137.5°	19.6	21.3	23.0	24.8	25.3	25.9	26.5	27.6	27.6	27.6
140°	17.8	19.6	21.3	22.5	23.6	23.6	24.8	25.3	25.9	25.9
142.5°	16.7	17.8	19.6	20.7	21.3	21.9	22.5	23.6	23.6	23.6
145°	15.0	16.7	17.8	19.0	19.6	20.2	20.7	21.3	21.9	21.9
147.5°	13.2	15.0	16.1	17.3	17.8	17.8	19.0	19.0	19.6	19.6
150°	12.1	13.2	14.4	15.5	15.5	16.1	16.7	17.3	17.3	17.3
152.5°	10.4	11.5	12.7	13.2	13.8	13.8	15.0	15.0	15.5	15.5
155°	8.6	9.8	10.9	11.5	12.1	12.1	12.7	12.7	13.2	13.2
157.5°	6.9	8.1	9.2	9.8	9.8	10.4	10.4	10.9	10.9	10.9
160°	5.2	6.3	6.9	7.5	8.1	8.1	8.6	8.6	9.2	9.2
162.5°	4.0	4.6	5.2	5.8	6.3	6.3	6.9	6.9	6.9	6.9
165°	2.9	2.9	3.5	4.0	4.6	4.6	4.6	4.6	5.2	5.2
167.5°	1.7	1.7	2.3	2.3	2.9	2.9	2.9	2.9	2.9	2.9
170°	0.6	0.6	1.2	1.2	1.2	1.2	1.7	1.7	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
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)