

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: P241531

Luminaire Tested: **FVS8M-2-LD4-40-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241531
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-4)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-40-1STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (42) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

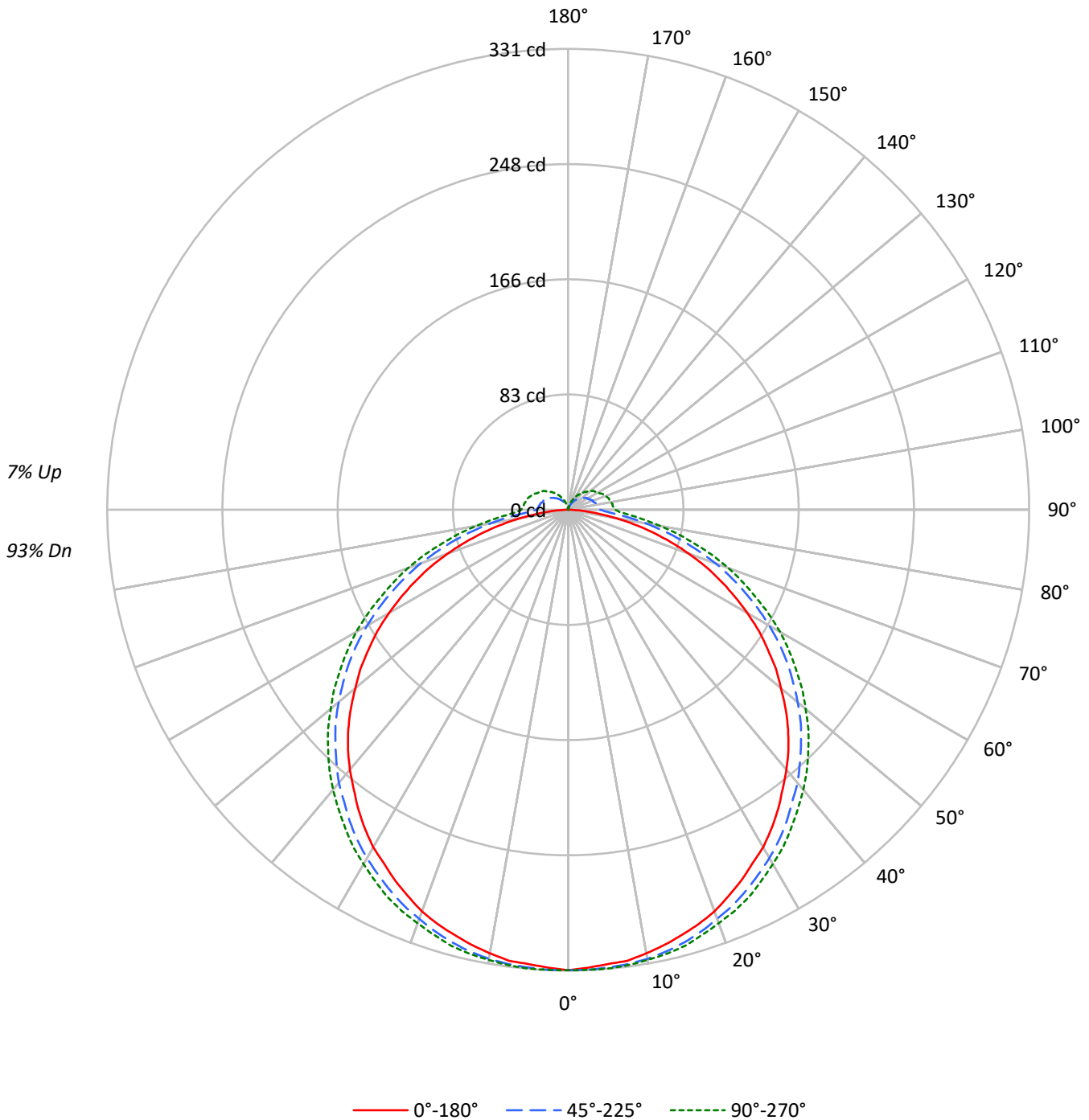
Lumens per Lamp: N/A
Luminaire Lumens: 1124.0 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 17.2
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	95	95	95	93
1	106	101	96	92	103	98	94	90	92	89	86	87	85	82	82	80	78	76
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	87	76	68	61	84	74	66	60	70	64	58	66	61	56	63	58	54	52
4	80	67	58	51	77	66	57	51	62	55	49	59	53	48	56	51	46	44
5	73	60	51	44	70	58	50	43	55	48	42	53	46	41	50	45	40	38
6	67	54	45	38	65	53	44	38	50	42	37	48	41	36	45	40	35	33
7	62	49	40	34	60	48	39	33	45	38	32	43	37	32	41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29	40	33	28	38	32	28	26
9	54	41	32	27	52	40	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2973	2973	2973
5°	2936	2923	2927
10°	2912	2881	2883
15°	2881	2831	2846
20°	2855	2775	2794
25°	2812	2723	2755
30°	2779	2668	2699
35°	2732	2607	2645
40°	2684	2545	2592
45°	2632	2473	2528
50°	2551	2394	2452
55°	2464	2303	2364
60°	2351	2183	2271
65°	2197	2031	2129
70°	1986	1858	1984
75°	1675	1612	1764
80°	1235	1319	1509
85°	625	1004	1276



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.4	2.8
10°-20°	90.6	8.1
20°-30°	138.9	12.4
30°-40°	170.4	15.2
40°-50°	181.4	16.1
50°-60°	169.8	15.1
60°-70°	136.2	12.1
70°-80°	86.2	7.7
80°-90°	36.7	3.3
90°-100°	21.2	1.9
100°-110°	18.8	1.7
110°-120°	15.5	1.4
120°-130°	11.9	1.1
130°-140°	8.1	0.7
140°-150°	4.6	0.4
150°-160°	2.0	0.2
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	260.9	23.2
0°-40°	431.3	38.4
0°-60°	782.5	69.6
0°-90°	1041.6	92.7
90°-120°	55.4	4.9
90°-150°	80.0	7.1
90°-180°	82.0	7.3
0°-180°	1124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	331	331	331	331	331	
5°	328	328	330	331	331	31
15°	316	318	322	324	324	89
25°	294	297	302	305	307	136
35°	263	267	273	278	279	164
45°	223	228	236	242	244	172
55°	175	183	192	198	200	156
65°	121	129	140	147	149	119
75°	62	72	84	91	94	66
85°	12	22	34	42	44	14
90°	0	11	23	30	34	1
95°	0	10	21	30	32	0
105°	0	9	20	27	30	0
115°	0	7	17	25	27	0
125°	0	6	15	20	23	0
135°	0	4	12	16	18	0
145°	0	2	8	12	13	0
155°	0	1	5	7	8	0
165°	0	0	2	2	3	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°	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8
2.5°	329.2	329.2	329.2	329.2	329.2	330.0	330.0	330.0	330.0	330.8	330.8
5°	327.6	327.6	327.6	328.4	328.4	328.4	329.2	329.2	329.2	330.0	330.0
7.5°	326.7	325.9	326.7	326.7	326.7	327.6	327.6	327.6	328.4	328.4	329.2
10°	323.5	323.5	324.3	324.3	324.3	325.1	325.1	325.9	325.9	326.7	327.6
12.5°	320.2	320.2	321.0	321.0	321.8	321.8	322.6	322.6	323.5	324.3	325.1
15°	316.1	316.1	316.9	317.7	317.7	318.5	318.5	319.4	320.2	321.0	321.8
17.5°	312.0	312.0	312.0	312.8	313.6	313.6	314.4	315.2	316.1	316.9	317.7
20°	307.0	307.0	307.0	307.9	308.7	308.7	309.5	310.3	311.1	312.0	312.8
22.5°	300.5	301.3	301.3	302.1	302.9	302.9	303.8	305.4	306.2	307.0	307.9
25°	293.9	294.7	294.7	295.5	297.2	297.2	298.0	298.8	300.5	301.3	302.1
27.5°	286.5	287.3	288.2	289.0	289.8	290.6	291.4	292.3	293.1	294.7	295.5
30°	279.9	279.9	280.8	281.6	282.4	284.0	284.0	285.7	286.5	288.2	289.0
32.5°	271.7	271.7	272.6	273.4	274.2	275.8	275.8	277.5	279.1	279.9	281.6
35°	262.7	262.7	263.5	265.2	266.0	266.8	267.6	269.3	270.9	272.6	273.4
37.5°	252.9	253.7	254.5	255.3	257.8	257.8	258.6	260.2	261.9	262.7	264.3
40°	243.8	243.8	245.5	246.3	247.9	248.7	249.6	251.2	252.9	253.7	256.1
42.5°	234.0	234.0	235.6	236.4	238.1	238.9	239.7	241.4	243.0	245.5	246.3
45°	223.3	223.3	224.9	226.6	228.2	228.2	229.9	231.5	234.0	234.8	236.4
47.5°	211.8	211.8	214.3	215.1	216.7	218.4	219.2	220.8	222.5	224.1	226.6
50°	199.5	200.3	202.0	203.6	206.1	206.9	207.7	209.3	211.8	213.4	215.1
52.5°	188.0	188.8	189.6	192.1	193.7	195.4	195.4	197.8	199.5	202.0	203.6
55°	174.9	176.5	178.1	179.8	181.4	183.1	183.9	185.5	188.0	189.6	192.1
57.5°	162.5	163.4	165.0	166.7	168.3	169.9	170.8	173.2	174.9	176.5	179.8
60°	148.6	149.4	151.1	153.5	155.2	156.8	158.4	160.1	162.5	164.2	166.7
62.5°	134.6	135.5	137.1	139.6	142.0	142.8	143.7	146.1	148.6	151.9	153.5
65°	120.7	121.5	123.1	125.6	128.1	128.9	130.5	133.0	135.5	137.1	139.6
67.5°	106.7	107.5	109.2	111.6	114.1	115.8	116.6	119.0	121.5	124.0	126.4
70°	91.9	93.6	95.2	96.9	99.3	101.0	102.6	105.1	107.5	109.2	112.5
72.5°	77.2	78.0	79.6	82.9	85.4	86.2	87.8	90.3	93.6	95.2	97.7
75°	62.4	63.2	65.7	68.1	71.4	72.2	73.9	76.3	78.8	81.3	83.7
77.5°	48.4	49.3	52.5	54.2	56.6	58.3	59.1	62.4	65.7	68.1	69.8
80°	34.5	35.3	37.8	40.2	43.5	44.3	46.0	49.3	51.7	54.2	56.6
82.5°	22.2	23.8	25.4	27.9	31.2	32.8	34.5	36.9	39.4	41.9	44.3
85°	11.5	12.3	15.6	17.2	20.5	22.2	23.8	26.3	28.7	32.0	33.7
87.5°	4.1	4.9	7.4	9.9	13.1	14.8	15.6	18.9	21.3	23.8	26.3
90°	0.0	1.6	3.3	6.6	9.0	10.7	12.3	15.6	18.1	20.5	23.0
92.5°	0.0	0.8	3.3	5.7	9.0	9.9	11.5	14.8	17.2	19.7	22.2
95°	0.0	0.8	3.3	5.7	8.2	9.9	11.5	14.0	16.4	19.7	21.3
97.5°	0.0	0.8	2.5	4.9	8.2	9.9	10.7	14.0	16.4	18.9	21.3
100°	0.0	0.8	2.5	4.9	8.2	9.0	10.7	13.1	16.4	18.9	20.5
102.5°	0.0	0.8	2.5	4.9	7.4	9.0	10.7	13.1	15.6	18.1	20.5
105°	0.0	0.8	2.5	4.9	7.4	9.0	9.9	12.3	15.6	17.2	19.7
107.5°	0.0	0.8	2.5	4.9	7.4	8.2	9.9	12.3	14.8	17.2	18.9
110°	0.0	0.8	2.5	4.1	6.6	8.2	9.0	12.3	14.0	16.4	18.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.8	1.6	4.1	6.6	7.4	9.0	11.5	14.0	16.4	18.1
115°	0.0	0.8	1.6	4.1	6.6	7.4	8.2	10.7	13.1	15.6	17.2
117.5°	0.0	0.0	1.6	3.3	5.7	7.4	8.2	10.7	13.1	14.8	16.4
120°	0.0	0.0	1.6	3.3	5.7	6.6	7.4	9.9	12.3	14.0	16.4
122.5°	0.0	0.0	1.6	3.3	4.9	6.6	7.4	9.9	11.5	14.0	15.6
125°	0.0	0.0	1.6	3.3	4.9	5.7	7.4	9.0	10.7	13.1	14.8
127.5°	0.0	0.0	1.6	2.5	4.9	5.7	6.6	8.2	10.7	12.3	14.0
130°	0.0	0.0	0.8	2.5	4.1	4.9	5.7	8.2	9.9	11.5	13.1
132.5°	0.0	0.0	0.8	2.5	4.1	4.9	5.7	7.4	9.0	10.7	12.3
135°	0.0	0.0	0.8	2.5	3.3	4.1	4.9	6.6	8.2	9.9	11.5
137.5°	0.0	0.0	0.8	1.6	3.3	4.1	4.9	6.6	8.2	9.0	10.7
140°	0.0	0.0	0.8	1.6	3.3	3.3	4.1	5.7	7.4	8.2	9.9
142.5°	0.0	0.0	0.8	1.6	2.5	3.3	4.1	4.9	6.6	8.2	9.0
145°	0.0	0.0	0.0	0.8	2.5	2.5	3.3	4.9	5.7	7.4	8.2
147.5°	0.0	0.0	0.0	0.8	1.6	2.5	2.5	4.1	4.9	6.6	7.4
150°	0.0	0.0	0.0	0.8	1.6	1.6	2.5	3.3	4.1	5.7	6.6
152.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.5	3.3	4.9	5.7
155°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	2.5	3.3	4.1	4.9
157.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	2.5	3.3	3.3
160°	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	2.5	2.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8
2.5°	330.8	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	330.8
5°	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8	330.8
7.5°	329.2	329.2	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
10°	327.6	327.6	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4
12.5°	325.1	325.9	325.9	325.9	325.9	325.9	326.7	326.7	326.7	326.7
15°	321.8	322.6	322.6	323.5	323.5	323.5	323.5	323.5	323.5	324.3
17.5°	318.5	319.4	319.4	319.4	320.2	320.2	320.2	320.2	320.2	320.2
20°	313.6	314.4	315.2	315.2	316.1	316.1	316.1	316.1	316.1	316.1
22.5°	308.7	309.5	310.3	310.3	311.1	311.1	311.1	312.0	312.0	312.0
25°	302.9	303.8	304.6	305.4	305.4	306.2	306.2	306.2	306.2	307.0
27.5°	297.2	297.2	298.0	298.8	299.6	299.6	299.6	299.6	300.5	300.5
30°	289.8	291.4	292.3	292.3	293.1	293.1	293.1	293.9	293.9	293.9
32.5°	282.4	284.0	284.9	284.9	285.7	286.5	286.5	286.5	286.5	287.3
35°	274.2	275.8	276.7	277.5	278.3	278.3	278.3	279.1	279.1	279.1
37.5°	266.0	266.8	268.5	268.5	269.3	269.3	270.1	270.9	270.9	270.9
40°	257.0	258.6	259.4	260.2	261.1	261.1	261.9	261.9	261.9	262.7
42.5°	247.9	248.7	250.4	251.2	252.0	252.0	252.9	253.7	253.7	253.7
45°	238.1	238.9	240.5	242.2	242.2	242.2	243.8	243.8	243.8	243.8
47.5°	227.4	229.0	230.7	231.5	231.5	232.3	232.3	233.2	234.0	234.0
50°	216.7	218.4	219.2	220.8	220.8	221.7	222.5	223.3	223.3	222.5
52.5°	205.2	206.9	208.5	209.3	210.2	210.2	211.0	211.0	211.8	211.8
55°	192.9	194.6	196.2	197.8	197.8	197.8	199.5	200.3	199.5	199.5
57.5°	180.6	182.3	183.9	184.7	185.5	186.4	186.4	188.0	188.0	188.0
60°	168.3	169.9	171.6	173.2	173.2	174.0	174.0	174.9	175.7	175.7
62.5°	156.0	156.8	158.4	160.1	160.1	160.1	161.7	161.7	162.5	162.5
65°	141.2	143.7	145.3	146.1	147.0	147.8	147.8	148.6	149.4	148.6
67.5°	127.2	129.7	130.5	132.2	133.0	133.8	134.6	135.5	135.5	135.5
70°	114.1	115.8	117.4	119.0	119.0	119.9	120.7	121.5	121.5	122.3
72.5°	100.2	101.8	103.4	104.3	105.1	105.9	106.7	107.5	108.4	108.4
75°	86.2	87.8	89.5	91.1	91.1	91.1	92.8	93.6	93.6	93.6
77.5°	72.2	73.9	75.5	77.2	77.2	78.0	78.8	79.6	80.5	80.5
80°	59.1	60.8	62.4	64.0	64.0	64.9	65.7	66.5	67.3	66.5
82.5°	46.8	48.4	50.1	50.9	51.7	53.4	54.2	54.2	55.0	55.0
85°	36.1	37.8	39.4	41.0	41.9	42.7	42.7	43.5	44.3	44.3
87.5°	28.7	30.4	32.0	33.7	33.7	34.5	35.3	36.1	36.9	36.9
90°	24.6	27.1	28.7	30.4	30.4	31.2	32.0	32.8	33.7	33.7
92.5°	24.6	26.3	27.9	29.6	29.6	30.4	31.2	32.0	32.8	32.8
95°	23.8	25.4	27.1	28.7	29.6	30.4	31.2	32.0	32.0	32.0
97.5°	23.8	25.4	27.1	28.7	28.7	29.6	30.4	31.2	32.0	32.0
100°	23.0	24.6	26.3	27.9	28.7	29.6	30.4	31.2	31.2	31.2
102.5°	22.2	24.6	26.3	27.1	27.9	28.7	29.6	30.4	30.4	30.4
105°	22.2	23.8	25.4	27.1	27.1	27.9	28.7	29.6	29.6	30.4
107.5°	21.3	23.0	24.6	26.3	27.1	27.1	27.9	28.7	29.6	29.6
110°	20.5	22.2	23.8	25.4	26.3	26.3	27.1	27.9	28.7	28.7



TEST NUMBER: P241531

CATALOG NUMBER: FVS8M-2-LD4-40-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	19.7	21.3	23.0	24.6	25.4	25.4	26.3	27.1	27.9	27.9
115°	19.7	21.3	22.2	23.8	24.6	24.6	25.4	26.3	26.3	27.1
117.5°	18.9	20.5	21.3	23.0	23.8	23.8	24.6	25.4	25.4	25.4
120°	18.1	19.7	20.5	22.2	22.2	23.0	23.8	24.6	24.6	24.6
122.5°	17.2	18.9	19.7	21.3	21.3	22.2	23.0	23.8	23.8	23.8
125°	16.4	18.1	18.9	20.5	20.5	21.3	22.2	22.2	23.0	23.0
127.5°	15.6	17.2	18.1	18.9	19.7	20.5	20.5	21.3	21.3	22.2
130°	14.8	16.4	17.2	18.1	18.9	18.9	19.7	20.5	20.5	20.5
132.5°	14.0	14.8	16.4	17.2	17.2	18.1	18.9	18.9	19.7	19.7
135°	13.1	14.0	15.6	16.4	16.4	17.2	17.2	18.1	18.1	18.1
137.5°	12.3	13.1	14.0	14.8	15.6	15.6	16.4	16.4	17.2	17.2
140°	10.7	12.3	13.1	14.0	14.0	14.8	14.8	15.6	15.6	15.6
142.5°	9.9	11.5	12.3	13.1	13.1	13.1	14.0	14.0	14.8	14.8
145°	9.0	9.9	10.7	11.5	12.3	12.3	12.3	13.1	13.1	13.1
147.5°	8.2	9.0	9.9	10.7	10.7	10.7	11.5	11.5	11.5	12.3
150°	7.4	8.2	9.0	9.0	9.9	9.9	9.9	10.7	10.7	10.7
152.5°	6.6	6.6	7.4	8.2	8.2	8.2	9.0	9.0	9.0	9.0
155°	4.9	5.7	6.6	6.6	7.4	7.4	7.4	8.2	8.2	8.2
157.5°	4.1	4.9	5.7	5.7	5.7	6.6	6.6	6.6	6.6	6.6
160°	3.3	4.1	4.1	4.9	4.9	4.9	4.9	4.9	5.7	5.7
162.5°	2.5	2.5	3.3	3.3	4.1	4.1	4.1	4.1	4.1	4.1
165°	1.6	1.6	2.5	2.5	2.5	2.5	2.5	3.3	3.3	3.3
167.5°	0.8	0.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
170°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	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
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)