

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: P241529

Luminaire Tested: **FVS8M-2-LD4-30-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241529
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-LD4-30-1STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (42) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

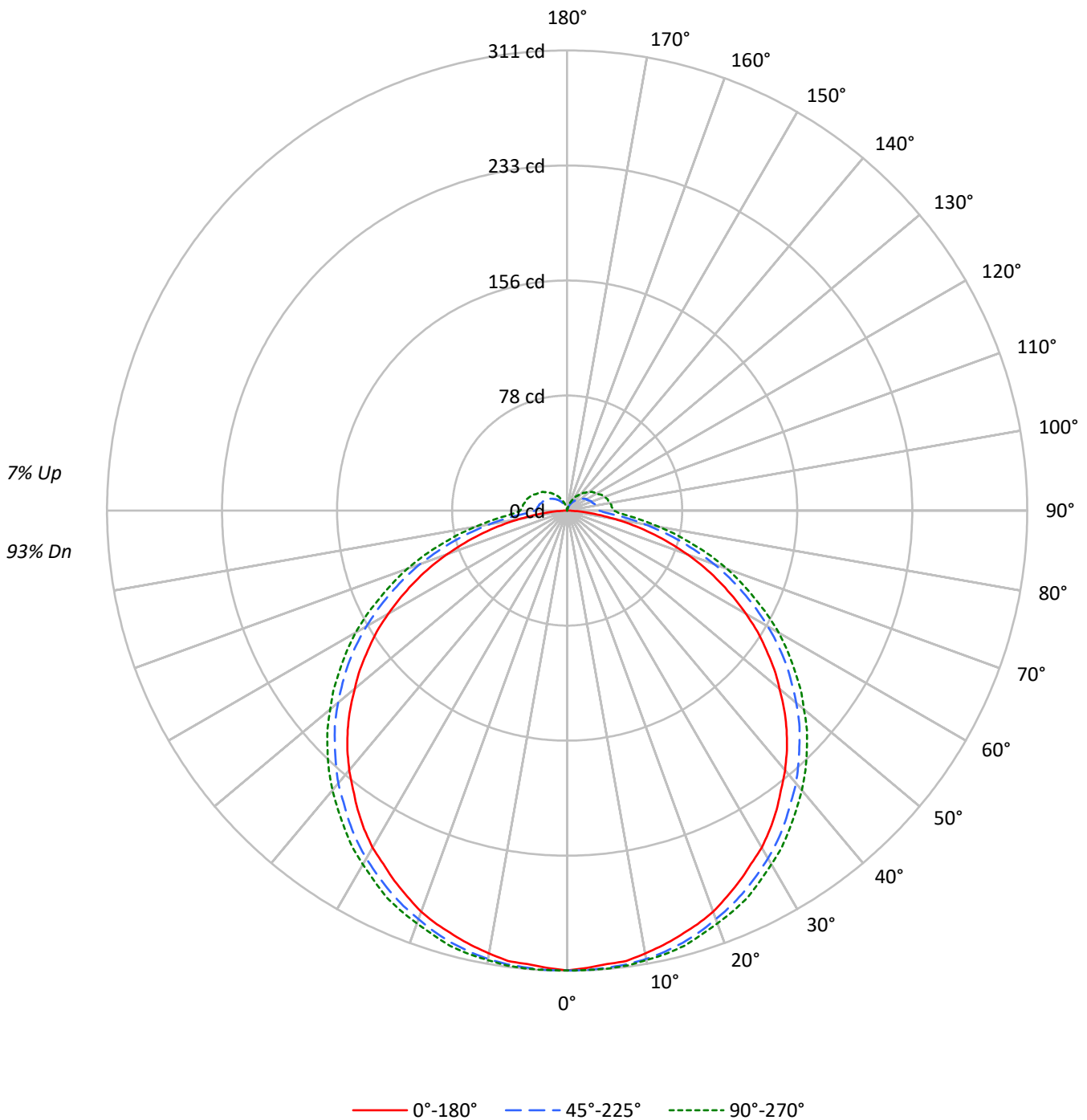
Lumens per Lamp: N/A
Luminaire Lumens: 1056.0 lumens
Efficiency: N/A
Efficacy: 61.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

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°	2794	2794	2794
5°	2757	2746	2750
10°	2736	2706	2708
15°	2706	2660	2674
20°	2683	2607	2624
25°	2641	2558	2589
30°	2611	2506	2535
35°	2567	2449	2484
40°	2522	2391	2435
45°	2473	2323	2376
50°	2396	2249	2303
55°	2315	2164	2221
60°	2209	2051	2134
65°	2064	1908	2000
70°	1867	1746	1864
75°	1573	1516	1657
80°	1160	1240	1419
85°	587	942	1198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.5	2.8
10°-20°	85.1	8.1
20°-30°	130.5	12.4
30°-40°	160.1	15.2
40°-50°	170.5	16.1
50°-60°	159.5	15.1
60°-70°	128.0	12.1
70°-80°	81.0	7.7
80°-90°	34.5	3.3
90°-100°	19.9	1.9
100°-110°	17.7	1.7
110°-120°	14.6	1.4
120°-130°	11.1	1.1
130°-140°	7.6	0.7
140°-150°	4.4	0.4
150°-160°	1.9	0.2
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	245.1	23.2
0°-40°	405.2	38.4
0°-60°	735.1	69.6
0°-90°	978.6	92.7
90°-120°	52.1	4.9
90°-150°	75.2	7.1
90°-180°	77.0	7.3
0°-180°	1056.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	311	311	311	311	311	
5°	308	308	310	311	311	29
15°	297	299	302	304	305	84
25°	276	279	284	287	288	127
35°	247	251	257	262	262	154
45°	210	214	222	228	229	162
55°	164	172	180	186	187	147
65°	113	121	131	138	140	112
75°	59	68	79	86	88	62
85°	11	21	32	39	42	14
90°	0	10	22	28	32	1
95°	0	9	20	28	30	0
105°	0	8	18	26	28	0
115°	0	7	16	23	26	0
125°	0	5	14	19	22	0
135°	0	4	11	15	17	0
145°	0	2	8	12	12	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°	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8
2.5°	309.3	309.3	309.3	309.3	309.3	310.1	310.1	310.1	310.1	310.8	310.8
5°	307.7	307.7	307.7	308.5	308.5	308.5	309.3	309.3	309.3	310.1	310.1
7.5°	307.0	306.2	307.0	307.0	307.0	307.7	307.7	307.7	308.5	308.5	309.3
10°	303.9	303.9	304.7	304.7	304.7	305.4	305.4	306.2	306.2	307.0	307.7
12.5°	300.8	300.8	301.6	301.6	302.3	302.3	303.1	303.1	303.9	304.7	305.4
15°	296.9	296.9	297.7	298.5	298.5	299.3	299.3	300.0	300.8	301.6	302.3
17.5°	293.1	293.1	293.1	293.9	294.6	294.6	295.4	296.2	296.9	297.7	298.5
20°	288.5	288.5	288.5	289.2	290.0	290.0	290.8	291.5	292.3	293.1	293.9
22.5°	282.3	283.1	283.1	283.8	284.6	284.6	285.4	286.9	287.7	288.5	289.2
25°	276.1	276.9	276.9	277.7	279.2	279.2	280.0	280.7	282.3	283.1	283.8
27.5°	269.2	270.0	270.7	271.5	272.3	273.0	273.8	274.6	275.3	276.9	277.7
30°	263.0	263.0	263.8	264.6	265.3	266.9	266.9	268.4	269.2	270.7	271.5
32.5°	255.3	255.3	256.1	256.8	257.6	259.2	259.2	260.7	262.2	263.0	264.6
35°	246.8	246.8	247.6	249.1	249.9	250.7	251.4	253.0	254.5	256.1	256.8
37.5°	237.6	238.3	239.1	239.9	242.2	242.2	243.0	244.5	246.0	246.8	248.4
40°	229.1	229.1	230.6	231.4	232.9	233.7	234.5	236.0	237.6	238.3	240.6
42.5°	219.8	219.8	221.4	222.1	223.7	224.4	225.2	226.8	228.3	230.6	231.4
45°	209.8	209.8	211.3	212.9	214.4	214.4	216.0	217.5	219.8	220.6	222.1
47.5°	199.0	199.0	201.3	202.1	203.6	205.2	205.9	207.5	209.0	210.6	212.9
50°	187.4	188.2	189.7	191.3	193.6	194.4	195.1	196.7	199.0	200.5	202.1
52.5°	176.6	177.4	178.2	180.5	182.0	183.6	183.6	185.9	187.4	189.7	191.3
55°	164.3	165.8	167.4	168.9	170.5	172.0	172.8	174.3	176.6	178.2	180.5
57.5°	152.7	153.5	155.0	156.6	158.1	159.7	160.4	162.7	164.3	165.8	168.9
60°	139.6	140.4	141.9	144.2	145.8	147.3	148.9	150.4	152.7	154.3	156.6
62.5°	126.5	127.3	128.8	131.1	133.4	134.2	135.0	137.3	139.6	142.7	144.2
65°	113.4	114.2	115.7	118.0	120.3	121.1	122.6	124.9	127.3	128.8	131.1
67.5°	100.3	101.0	102.6	104.9	107.2	108.8	109.5	111.8	114.2	116.5	118.8
70°	86.4	87.9	89.5	91.0	93.3	94.9	96.4	98.7	101.0	102.6	105.7
72.5°	72.5	73.3	74.8	77.9	80.2	81.0	82.5	84.8	87.9	89.5	91.8
75°	58.6	59.4	61.7	64.0	67.1	67.9	69.4	71.7	74.0	76.4	78.7
77.5°	45.5	46.3	49.4	50.9	53.2	54.8	55.5	58.6	61.7	64.0	65.6
80°	32.4	33.2	35.5	37.8	40.9	41.6	43.2	46.3	48.6	50.9	53.2
82.5°	20.8	22.4	23.9	26.2	29.3	30.9	32.4	34.7	37.0	39.3	41.6
85°	10.8	11.6	14.7	16.2	19.3	20.8	22.4	24.7	27.0	30.1	31.6
87.5°	3.9	4.6	6.9	9.3	12.3	13.9	14.7	17.7	20.1	22.4	24.7
90°	0.0	1.5	3.1	6.2	8.5	10.0	11.6	14.7	17.0	19.3	21.6
92.5°	0.0	0.8	3.1	5.4	8.5	9.3	10.8	13.9	16.2	18.5	20.8
95°	0.0	0.8	3.1	5.4	7.7	9.3	10.8	13.1	15.4	18.5	20.1
97.5°	0.0	0.8	2.3	4.6	7.7	9.3	10.0	13.1	15.4	17.7	20.1
100°	0.0	0.8	2.3	4.6	7.7	8.5	10.0	12.3	15.4	17.7	19.3
102.5°	0.0	0.8	2.3	4.6	6.9	8.5	10.0	12.3	14.7	17.0	19.3
105°	0.0	0.8	2.3	4.6	6.9	8.5	9.3	11.6	14.7	16.2	18.5
107.5°	0.0	0.8	2.3	4.6	6.9	7.7	9.3	11.6	13.9	16.2	17.7
110°	0.0	0.8	2.3	3.9	6.2	7.7	8.5	11.6	13.1	15.4	17.7



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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	1.5	3.9	6.2	6.9	8.5	10.8	13.1	15.4	17.0
115°	0.0	0.8	1.5	3.9	6.2	6.9	7.7	10.0	12.3	14.7	16.2
117.5°	0.0	0.0	1.5	3.1	5.4	6.9	7.7	10.0	12.3	13.9	15.4
120°	0.0	0.0	1.5	3.1	5.4	6.2	6.9	9.3	11.6	13.1	15.4
122.5°	0.0	0.0	1.5	3.1	4.6	6.2	6.9	9.3	10.8	13.1	14.7
125°	0.0	0.0	1.5	3.1	4.6	5.4	6.9	8.5	10.0	12.3	13.9
127.5°	0.0	0.0	1.5	2.3	4.6	5.4	6.2	7.7	10.0	11.6	13.1
130°	0.0	0.0	0.8	2.3	3.9	4.6	5.4	7.7	9.3	10.8	12.3
132.5°	0.0	0.0	0.8	2.3	3.9	4.6	5.4	6.9	8.5	10.0	11.6
135°	0.0	0.0	0.8	2.3	3.1	3.9	4.6	6.2	7.7	9.3	10.8
137.5°	0.0	0.0	0.8	1.5	3.1	3.9	4.6	6.2	7.7	8.5	10.0
140°	0.0	0.0	0.8	1.5	3.1	3.1	3.9	5.4	6.9	7.7	9.3
142.5°	0.0	0.0	0.8	1.5	2.3	3.1	3.9	4.6	6.2	7.7	8.5
145°	0.0	0.0	0.0	0.8	2.3	2.3	3.1	4.6	5.4	6.9	7.7
147.5°	0.0	0.0	0.0	0.8	1.5	2.3	2.3	3.9	4.6	6.2	6.9
150°	0.0	0.0	0.0	0.8	1.5	1.5	2.3	3.1	3.9	5.4	6.2
152.5°	0.0	0.0	0.0	0.8	0.8	1.5	1.5	2.3	3.1	4.6	5.4
155°	0.0	0.0	0.0	0.0	0.8	0.8	1.5	2.3	3.1	3.9	4.6
157.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.5	2.3	3.1	3.1
160°	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.5	2.3	2.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.5	1.5
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.5
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°	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8
2.5°	310.8	311.6	311.6	311.6	311.6	311.6	311.6	311.6	311.6	310.8
5°	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8
7.5°	309.3	309.3	310.1	310.1	310.1	310.1	310.1	310.1	310.1	310.1
10°	307.7	307.7	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5
12.5°	305.4	306.2	306.2	306.2	306.2	306.2	307.0	307.0	307.0	307.0
15°	302.3	303.1	303.1	303.9	303.9	303.9	303.9	303.9	303.9	304.7
17.5°	299.3	300.0	300.0	300.0	300.8	300.8	300.8	300.8	300.8	300.8
20°	294.6	295.4	296.2	296.2	296.9	296.9	296.9	296.9	296.9	296.9
22.5°	290.0	290.8	291.5	291.5	292.3	292.3	292.3	293.1	293.1	293.1
25°	284.6	285.4	286.1	286.9	286.9	287.7	287.7	287.7	287.7	288.5
27.5°	279.2	279.2	280.0	280.7	281.5	281.5	281.5	281.5	282.3	282.3
30°	272.3	273.8	274.6	274.6	275.3	275.3	275.3	276.1	276.1	276.1
32.5°	265.3	266.9	267.6	267.6	268.4	269.2	269.2	269.2	269.2	270.0
35°	257.6	259.2	259.9	260.7	261.5	261.5	261.5	262.2	262.2	262.2
37.5°	249.9	250.7	252.2	252.2	253.0	253.0	253.8	254.5	254.5	254.5
40°	241.4	243.0	243.7	244.5	245.3	245.3	246.0	246.0	246.0	246.8
42.5°	232.9	233.7	235.2	236.0	236.8	236.8	237.6	238.3	238.3	238.3
45°	223.7	224.4	226.0	227.5	227.5	227.5	229.1	229.1	229.1	229.1
47.5°	213.6	215.2	216.7	217.5	217.5	218.3	218.3	219.0	219.8	219.8
50°	203.6	205.2	205.9	207.5	207.5	208.2	209.0	209.8	209.8	209.0
52.5°	192.8	194.4	195.9	196.7	197.4	197.4	198.2	198.2	199.0	199.0
55°	181.3	182.8	184.3	185.9	185.9	185.9	187.4	188.2	187.4	187.4
57.5°	169.7	171.2	172.8	173.5	174.3	175.1	175.1	176.6	176.6	176.6
60°	158.1	159.7	161.2	162.7	162.7	163.5	163.5	164.3	165.1	165.1
62.5°	146.5	147.3	148.9	150.4	150.4	150.4	151.9	151.9	152.7	152.7
65°	132.7	135.0	136.5	137.3	138.1	138.8	138.8	139.6	140.4	139.6
67.5°	119.5	121.9	122.6	124.2	124.9	125.7	126.5	127.3	127.3	127.3
70°	107.2	108.8	110.3	111.8	111.8	112.6	113.4	114.2	114.2	114.9
72.5°	94.1	95.6	97.2	98.0	98.7	99.5	100.3	101.0	101.8	101.8
75°	81.0	82.5	84.1	85.6	85.6	85.6	87.2	87.9	87.9	87.9
77.5°	67.9	69.4	71.0	72.5	72.5	73.3	74.0	74.8	75.6	75.6
80°	55.5	57.1	58.6	60.2	60.2	60.9	61.7	62.5	63.2	62.5
82.5°	44.0	45.5	47.0	47.8	48.6	50.1	50.9	50.9	51.7	51.7
85°	33.9	35.5	37.0	38.6	39.3	40.1	40.1	40.9	41.6	41.6
87.5°	27.0	28.5	30.1	31.6	31.6	32.4	33.2	33.9	34.7	34.7
90°	23.1	25.5	27.0	28.5	28.5	29.3	30.1	30.9	31.6	31.6
92.5°	23.1	24.7	26.2	27.8	27.8	28.5	29.3	30.1	30.9	30.9
95°	22.4	23.9	25.5	27.0	27.8	28.5	29.3	30.1	30.1	30.1
97.5°	22.4	23.9	25.5	27.0	27.0	27.8	28.5	29.3	30.1	30.1
100°	21.6	23.1	24.7	26.2	27.0	27.8	28.5	29.3	29.3	29.3
102.5°	20.8	23.1	24.7	25.5	26.2	27.0	27.8	28.5	28.5	28.5
105°	20.8	22.4	23.9	25.5	25.5	26.2	27.0	27.8	27.8	28.5
107.5°	20.1	21.6	23.1	24.7	25.5	25.5	26.2	27.0	27.8	27.8
110°	19.3	20.8	22.4	23.9	24.7	24.7	25.5	26.2	27.0	27.0



TEST NUMBER: P241529

CATALOG NUMBER: FVS8M-2-LD4-30-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	18.5	20.1	21.6	23.1	23.9	23.9	24.7	25.5	26.2	26.2
115°	18.5	20.1	20.8	22.4	23.1	23.1	23.9	24.7	24.7	25.5
117.5°	17.7	19.3	20.1	21.6	22.4	22.4	23.1	23.9	23.9	23.9
120°	17.0	18.5	19.3	20.8	20.8	21.6	22.4	23.1	23.1	23.1
122.5°	16.2	17.7	18.5	20.1	20.1	20.8	21.6	22.4	22.4	22.4
125°	15.4	17.0	17.7	19.3	19.3	20.1	20.8	20.8	21.6	21.6
127.5°	14.7	16.2	17.0	17.7	18.5	19.3	19.3	20.1	20.1	20.8
130°	13.9	15.4	16.2	17.0	17.7	17.7	18.5	19.3	19.3	19.3
132.5°	13.1	13.9	15.4	16.2	16.2	17.0	17.7	17.7	18.5	18.5
135°	12.3	13.1	14.7	15.4	15.4	16.2	16.2	17.0	17.0	17.0
137.5°	11.6	12.3	13.1	13.9	14.7	14.7	15.4	15.4	16.2	16.2
140°	10.0	11.6	12.3	13.1	13.1	13.9	13.9	14.7	14.7	14.7
142.5°	9.3	10.8	11.6	12.3	12.3	12.3	13.1	13.1	13.9	13.9
145°	8.5	9.3	10.0	10.8	11.6	11.6	11.6	12.3	12.3	12.3
147.5°	7.7	8.5	9.3	10.0	10.0	10.0	10.8	10.8	10.8	11.6
150°	6.9	7.7	8.5	8.5	9.3	9.3	9.3	10.0	10.0	10.0
152.5°	6.2	6.2	6.9	7.7	7.7	7.7	8.5	8.5	8.5	8.5
155°	4.6	5.4	6.2	6.2	6.9	6.9	6.9	7.7	7.7	7.7
157.5°	3.9	4.6	5.4	5.4	5.4	6.2	6.2	6.2	6.2	6.2
160°	3.1	3.9	3.9	4.6	4.6	4.6	4.6	4.6	5.4	5.4
162.5°	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.9	3.9	3.9
165°	1.5	1.5	2.3	2.3	2.3	2.3	2.3	3.1	3.1	3.1
167.5°	0.8	0.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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)