

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: P241527

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241527
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-LD4-40-1LO-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

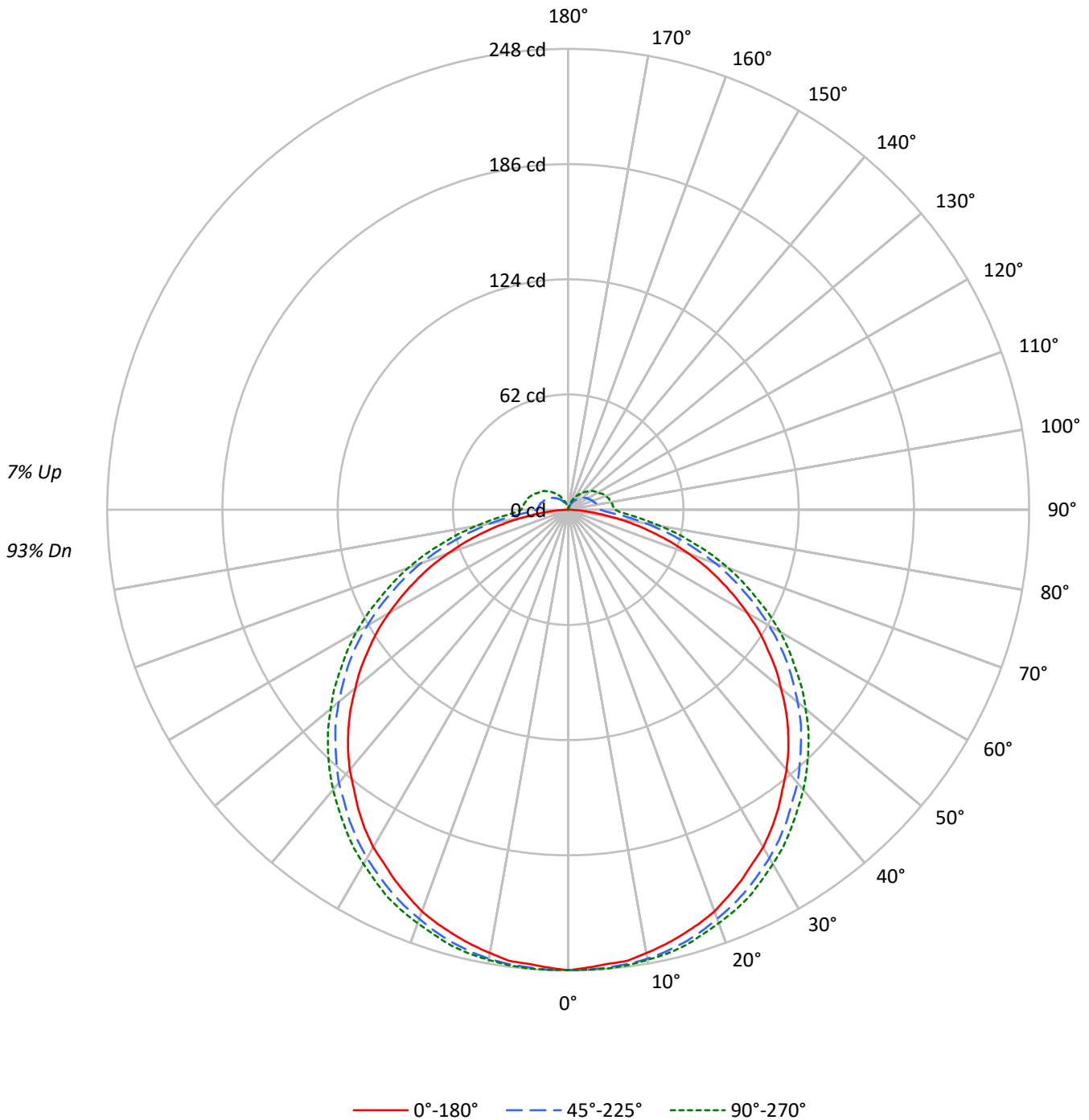
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 842.0 lumens
Efficiency: N/A
Efficacy: 67.9 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): 12.4
Input Voltage (V): 120
Input Current (A_{in}): 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°	2227	2227	2227
5°	2199	2189	2193
10°	2181	2158	2159
15°	2158	2121	2131
20°	2139	2078	2093
25°	2107	2040	2064
30°	2082	1999	2022
35°	2047	1953	1981
40°	2011	1907	1941
45°	1972	1852	1895
50°	1910	1793	1837
55°	1846	1725	1770
60°	1761	1634	1701
65°	1645	1521	1595
70°	1489	1392	1486
75°	1254	1207	1321
80°	924	988	1130
85°	467	751	956



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	2.8
10°-20°	67.9	8.1
20°-30°	104.1	12.4
30°-40°	127.6	15.2
40°-50°	135.9	16.1
50°-60°	127.2	15.1
60°-70°	102.0	12.1
70°-80°	64.6	7.7
80°-90°	27.5	3.3
90°-100°	15.9	1.9
100°-110°	14.1	1.7
110°-120°	11.6	1.4
120°-130°	8.9	1.1
130°-140°	6.0	0.7
140°-150°	3.5	0.4
150°-160°	1.5	0.2
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-30°	195.4	23.2
0°-40°	323.1	38.4
0°-60°	586.2	69.6
0°-90°	780.2	92.7
90°-120°	41.5	4.9
90°-150°	59.9	7.1
90°-180°	62.0	7.4
0°-180°	842.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	245	246	247	248	248	23
15°	237	239	241	242	243	67
25°	220	223	226	229	230	102
35°	197	200	205	208	209	123
45°	167	171	177	181	183	129
55°	131	137	144	148	149	117
65°	90	97	104	110	111	89
75°	47	54	63	68	70	50
85°	9	17	25	31	33	11
90°	0	8	17	23	25	0
95°	0	7	16	22	24	0
105°	0	7	15	20	23	0
115°	0	6	13	18	20	0
125°	0	4	11	15	17	0
135°	0	3	9	12	14	0
145°	0	2	6	9	10	0
155°	0	1	4	6	6	0
165°	0	0	1	2	2	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°	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8
2.5°	246.6	246.6	246.6	246.6	246.6	247.2	247.2	247.2	247.2	247.8	247.8
5°	245.4	245.4	245.4	246.0	246.0	246.0	246.6	246.6	246.6	247.2	247.2
7.5°	244.8	244.1	244.8	244.8	244.8	245.4	245.4	245.4	246.0	246.0	246.6
10°	242.3	242.3	242.9	242.9	242.9	243.5	243.5	244.1	244.1	244.8	245.4
12.5°	239.8	239.8	240.5	240.5	241.1	241.1	241.7	241.7	242.3	242.9	243.5
15°	236.8	236.8	237.4	238.0	238.0	238.6	238.6	239.2	239.8	240.5	241.1
17.5°	233.7	233.7	233.7	234.3	234.9	234.9	235.5	236.2	236.8	237.4	238.0
20°	230.0	230.0	230.0	230.6	231.2	231.2	231.8	232.5	233.1	233.7	234.3
22.5°	225.1	225.7	225.7	226.3	226.9	226.9	227.5	228.8	229.4	230.0	230.6
25°	220.2	220.8	220.8	221.4	222.6	222.6	223.2	223.9	225.1	225.7	226.3
27.5°	214.6	215.2	215.9	216.5	217.1	217.7	218.3	218.9	219.5	220.8	221.4
30°	209.7	209.7	210.3	210.9	211.6	212.8	212.8	214.0	214.6	215.9	216.5
32.5°	203.6	203.6	204.2	204.8	205.4	206.6	206.6	207.9	209.1	209.7	210.9
35°	196.8	196.8	197.4	198.6	199.3	199.9	200.5	201.7	202.9	204.2	204.8
37.5°	189.4	190.0	190.6	191.3	193.1	193.1	193.7	195.0	196.2	196.8	198.0
40°	182.7	182.7	183.9	184.5	185.7	186.3	187.0	188.2	189.4	190.0	191.9
42.5°	175.3	175.3	176.5	177.1	178.3	179.0	179.6	180.8	182.0	183.9	184.5
45°	167.3	167.3	168.5	169.7	171.0	171.0	172.2	173.4	175.3	175.9	177.1
47.5°	158.7	158.7	160.5	161.1	162.4	163.6	164.2	165.4	166.7	167.9	169.7
50°	149.4	150.1	151.3	152.5	154.4	155.0	155.6	156.8	158.7	159.9	161.1
52.5°	140.8	141.4	142.1	143.9	145.1	146.4	146.4	148.2	149.4	151.3	152.5
55°	131.0	132.2	133.5	134.7	135.9	137.1	137.8	139.0	140.8	142.1	143.9
57.5°	121.8	122.4	123.6	124.8	126.1	127.3	127.9	129.8	131.0	132.2	134.7
60°	111.3	111.9	113.2	115.0	116.2	117.5	118.7	119.9	121.8	123.0	124.8
62.5°	100.9	101.5	102.7	104.5	106.4	107.0	107.6	109.5	111.3	113.8	115.0
65°	90.4	91.0	92.2	94.1	95.9	96.6	97.8	99.6	101.5	102.7	104.5
67.5°	79.9	80.6	81.8	83.6	85.5	86.7	87.3	89.2	91.0	92.9	94.7
70°	68.9	70.1	71.3	72.6	74.4	75.6	76.9	78.7	80.6	81.8	84.3
72.5°	57.8	58.4	59.7	62.1	64.0	64.6	65.8	67.6	70.1	71.3	73.2
75°	46.7	47.4	49.2	51.0	53.5	54.1	55.3	57.2	59.0	60.9	62.7
77.5°	36.3	36.9	39.4	40.6	42.4	43.7	44.3	46.7	49.2	51.0	52.3
80°	25.8	26.4	28.3	30.1	32.6	33.2	34.4	36.9	38.7	40.6	42.4
82.5°	16.6	17.8	19.1	20.9	23.4	24.6	25.8	27.7	29.5	31.4	33.2
85°	8.6	9.2	11.7	12.9	15.4	16.6	17.8	19.7	21.5	24.0	25.2
87.5°	3.1	3.7	5.5	7.4	9.8	11.1	11.7	14.1	16.0	17.8	19.7
90°	0.0	1.2	2.5	4.9	6.8	8.0	9.2	11.7	13.5	15.4	17.2
92.5°	0.0	0.6	2.5	4.3	6.8	7.4	8.6	11.1	12.9	14.8	16.6
95°	0.0	0.6	2.5	4.3	6.1	7.4	8.6	10.5	12.3	14.8	16.0
97.5°	0.0	0.6	1.8	3.7	6.1	7.4	8.0	10.5	12.3	14.1	16.0
100°	0.0	0.6	1.8	3.7	6.1	6.8	8.0	9.8	12.3	14.1	15.4
102.5°	0.0	0.6	1.8	3.7	5.5	6.8	8.0	9.8	11.7	13.5	15.4
105°	0.0	0.6	1.8	3.7	5.5	6.8	7.4	9.2	11.7	12.9	14.8
107.5°	0.0	0.6	1.8	3.7	5.5	6.1	7.4	9.2	11.1	12.9	14.1
110°	0.0	0.6	1.8	3.1	4.9	6.1	6.8	9.2	10.5	12.3	14.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.6	1.2	3.1	4.9	5.5	6.8	8.6	10.5	12.3	13.5
115°	0.0	0.6	1.2	3.1	4.9	5.5	6.1	8.0	9.8	11.7	12.9
117.5°	0.0	0.0	1.2	2.5	4.3	5.5	6.1	8.0	9.8	11.1	12.3
120°	0.0	0.0	1.2	2.5	4.3	4.9	5.5	7.4	9.2	10.5	12.3
122.5°	0.0	0.0	1.2	2.5	3.7	4.9	5.5	7.4	8.6	10.5	11.7
125°	0.0	0.0	1.2	2.5	3.7	4.3	5.5	6.8	8.0	9.8	11.1
127.5°	0.0	0.0	1.2	1.8	3.7	4.3	4.9	6.1	8.0	9.2	10.5
130°	0.0	0.0	0.6	1.8	3.1	3.7	4.3	6.1	7.4	8.6	9.8
132.5°	0.0	0.0	0.6	1.8	3.1	3.7	4.3	5.5	6.8	8.0	9.2
135°	0.0	0.0	0.6	1.8	2.5	3.1	3.7	4.9	6.1	7.4	8.6
137.5°	0.0	0.0	0.6	1.2	2.5	3.1	3.7	4.9	6.1	6.8	8.0
140°	0.0	0.0	0.6	1.2	2.5	2.5	3.1	4.3	5.5	6.1	7.4
142.5°	0.0	0.0	0.6	1.2	1.8	2.5	3.1	3.7	4.9	6.1	6.8
145°	0.0	0.0	0.0	0.6	1.8	1.8	2.5	3.7	4.3	5.5	6.1
147.5°	0.0	0.0	0.0	0.6	1.2	1.8	1.8	3.1	3.7	4.9	5.5
150°	0.0	0.0	0.0	0.6	1.2	1.2	1.8	2.5	3.1	4.3	4.9
152.5°	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8	2.5	3.7	4.3
155°	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.8	2.5	3.1	3.7
157.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.8	2.5	2.5
160°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.8	1.8
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.2
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
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°	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8
2.5°	247.8	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	247.8
5°	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8	247.8
7.5°	246.6	246.6	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2
10°	245.4	245.4	246.0	246.0	246.0	246.0	246.0	246.0	246.0	246.0
12.5°	243.5	244.1	244.1	244.1	244.1	244.1	244.8	244.8	244.8	244.8
15°	241.1	241.7	241.7	242.3	242.3	242.3	242.3	242.3	242.3	242.9
17.5°	238.6	239.2	239.2	239.2	239.8	239.8	239.8	239.8	239.8	239.8
20°	234.9	235.5	236.2	236.2	236.8	236.8	236.8	236.8	236.8	236.8
22.5°	231.2	231.8	232.5	232.5	233.1	233.1	233.1	233.7	233.7	233.7
25°	226.9	227.5	228.2	228.8	228.8	229.4	229.4	229.4	229.4	230.0
27.5°	222.6	222.6	223.2	223.9	224.5	224.5	224.5	224.5	225.1	225.1
30°	217.1	218.3	218.9	218.9	219.5	219.5	219.5	220.2	220.2	220.2
32.5°	211.6	212.8	213.4	213.4	214.0	214.6	214.6	214.6	214.6	215.2
35°	205.4	206.6	207.2	207.9	208.5	208.5	208.5	209.1	209.1	209.1
37.5°	199.3	199.9	201.1	201.1	201.7	201.7	202.3	202.9	202.9	202.9
40°	192.5	193.7	194.3	195.0	195.6	195.6	196.2	196.2	196.2	196.8
42.5°	185.7	186.3	187.6	188.2	188.8	188.8	189.4	190.0	190.0	190.0
45°	178.3	179.0	180.2	181.4	181.4	181.4	182.7	182.7	182.7	182.7
47.5°	170.4	171.6	172.8	173.4	173.4	174.0	174.0	174.7	175.3	175.3
50°	162.4	163.6	164.2	165.4	165.4	166.0	166.7	167.3	167.3	166.7
52.5°	153.7	155.0	156.2	156.8	157.4	157.4	158.1	158.1	158.7	158.7
55°	144.5	145.8	147.0	148.2	148.2	148.2	149.4	150.1	149.4	149.4
57.5°	135.3	136.5	137.8	138.4	139.0	139.6	139.6	140.8	140.8	140.8
60°	126.1	127.3	128.5	129.8	129.8	130.4	130.4	131.0	131.6	131.6
62.5°	116.8	117.5	118.7	119.9	119.9	119.9	121.2	121.2	121.8	121.8
65°	105.8	107.6	108.9	109.5	110.1	110.7	110.7	111.3	111.9	111.3
67.5°	95.3	97.2	97.8	99.0	99.6	100.2	100.9	101.5	101.5	101.5
70°	85.5	86.7	87.9	89.2	89.2	89.8	90.4	91.0	91.0	91.6
72.5°	75.0	76.3	77.5	78.1	78.7	79.3	79.9	80.6	81.2	81.2
75°	64.6	65.8	67.0	68.3	68.3	68.3	69.5	70.1	70.1	70.1
77.5°	54.1	55.3	56.6	57.8	57.8	58.4	59.0	59.7	60.3	60.3
80°	44.3	45.5	46.7	48.0	48.0	48.6	49.2	49.8	50.4	49.8
82.5°	35.1	36.3	37.5	38.1	38.7	40.0	40.6	40.6	41.2	41.2
85°	27.1	28.3	29.5	30.7	31.4	32.0	32.0	32.6	33.2	33.2
87.5°	21.5	22.8	24.0	25.2	25.2	25.8	26.4	27.1	27.7	27.7
90°	18.4	20.3	21.5	22.8	22.8	23.4	24.0	24.6	25.2	25.2
92.5°	18.4	19.7	20.9	22.1	22.1	22.8	23.4	24.0	24.6	24.6
95°	17.8	19.1	20.3	21.5	22.1	22.8	23.4	24.0	24.0	24.0
97.5°	17.8	19.1	20.3	21.5	21.5	22.1	22.8	23.4	24.0	24.0
100°	17.2	18.4	19.7	20.9	21.5	22.1	22.8	23.4	23.4	23.4
102.5°	16.6	18.4	19.7	20.3	20.9	21.5	22.1	22.8	22.8	22.8
105°	16.6	17.8	19.1	20.3	20.3	20.9	21.5	22.1	22.1	22.8
107.5°	16.0	17.2	18.4	19.7	20.3	20.3	20.9	21.5	22.1	22.1
110°	15.4	16.6	17.8	19.1	19.7	19.7	20.3	20.9	21.5	21.5



TEST NUMBER: P241527

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	14.8	16.0	17.2	18.4	19.1	19.1	19.7	20.3	20.9	20.9
115°	14.8	16.0	16.6	17.8	18.4	18.4	19.1	19.7	19.7	20.3
117.5°	14.1	15.4	16.0	17.2	17.8	17.8	18.4	19.1	19.1	19.1
120°	13.5	14.8	15.4	16.6	16.6	17.2	17.8	18.4	18.4	18.4
122.5°	12.9	14.1	14.8	16.0	16.0	16.6	17.2	17.8	17.8	17.8
125°	12.3	13.5	14.1	15.4	15.4	16.0	16.6	16.6	17.2	17.2
127.5°	11.7	12.9	13.5	14.1	14.8	15.4	15.4	16.0	16.0	16.6
130°	11.1	12.3	12.9	13.5	14.1	14.1	14.8	15.4	15.4	15.4
132.5°	10.5	11.1	12.3	12.9	12.9	13.5	14.1	14.1	14.8	14.8
135°	9.8	10.5	11.7	12.3	12.3	12.9	12.9	13.5	13.5	13.5
137.5°	9.2	9.8	10.5	11.1	11.7	11.7	12.3	12.3	12.9	12.9
140°	8.0	9.2	9.8	10.5	10.5	11.1	11.1	11.7	11.7	11.7
142.5°	7.4	8.6	9.2	9.8	9.8	9.8	10.5	10.5	11.1	11.1
145°	6.8	7.4	8.0	8.6	9.2	9.2	9.2	9.8	9.8	9.8
147.5°	6.1	6.8	7.4	8.0	8.0	8.0	8.6	8.6	8.6	9.2
150°	5.5	6.1	6.8	6.8	7.4	7.4	7.4	8.0	8.0	8.0
152.5°	4.9	4.9	5.5	6.1	6.1	6.1	6.8	6.8	6.8	6.8
155°	3.7	4.3	4.9	4.9	5.5	5.5	5.5	6.1	6.1	6.1
157.5°	3.1	3.7	4.3	4.3	4.3	4.9	4.9	4.9	4.9	4.9
160°	2.5	3.1	3.1	3.7	3.7	3.7	3.7	3.7	4.3	4.3
162.5°	1.8	1.8	2.5	2.5	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.2	1.2	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5
167.5°	0.6	0.6	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
170°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	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
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)