

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: P241536

Luminaire Tested: **FVS8M-2-LD4-50-1HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241536
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-LD4-50-1HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (42) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

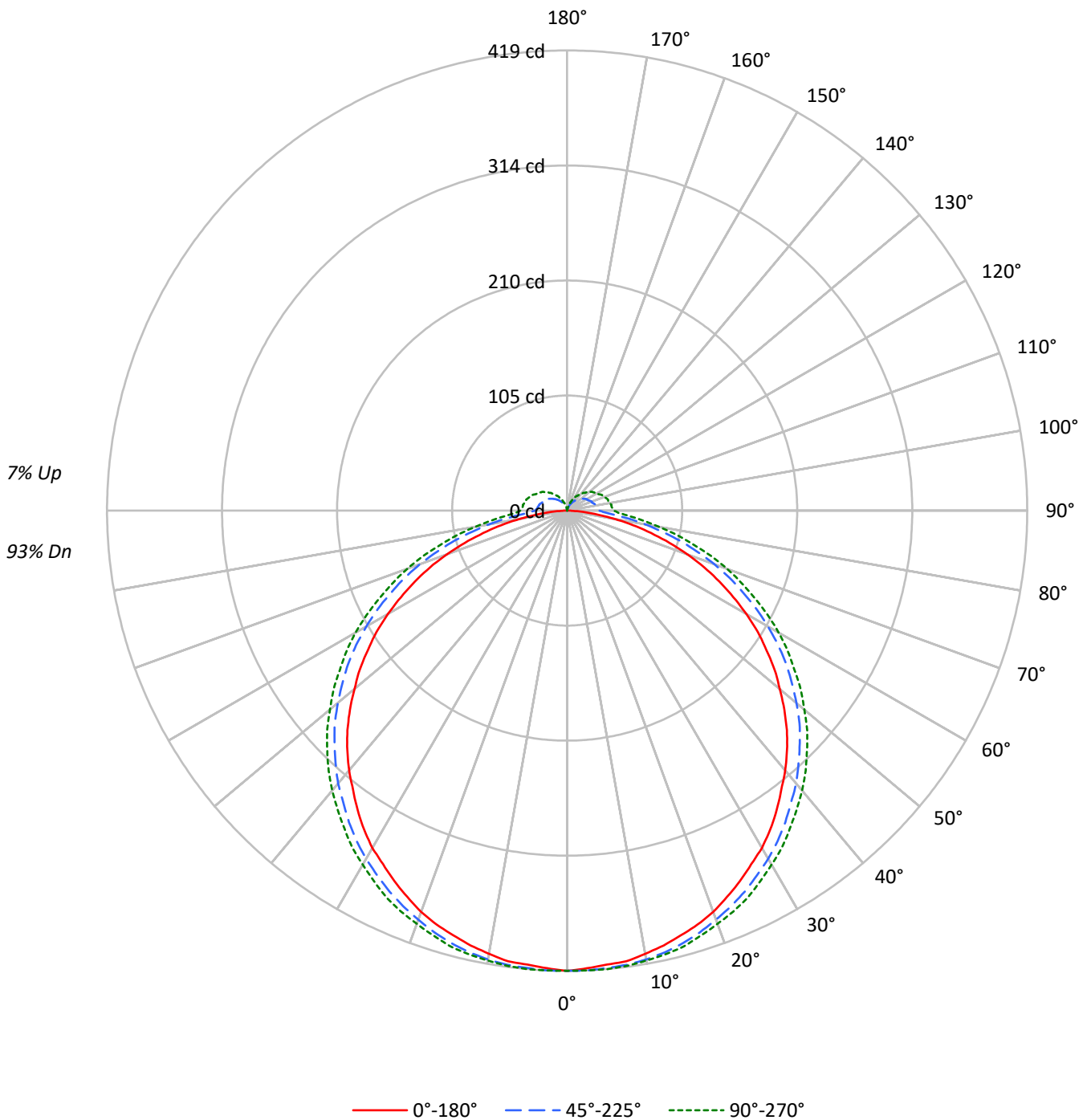
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1424.0 lumens
Efficiency: N/A
Efficacy: 63.9 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): 22.3
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°	3767	3767	3767
5°	3719	3703	3708
10°	3689	3649	3652
15°	3649	3587	3605
20°	3617	3515	3539
25°	3562	3449	3491
30°	3522	3380	3419
35°	3461	3302	3350
40°	3400	3225	3283
45°	3334	3133	3203
50°	3231	3033	3106
55°	3121	2917	2995
60°	2979	2764	2877
65°	2783	2573	2698
70°	2518	2353	2514
75°	2121	2043	2235
80°	1564	1673	1911
85°	793	1270	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	2.8
10°-20°	114.8	8.1
20°-30°	176.0	12.4
30°-40°	215.9	15.2
40°-50°	229.9	16.1
50°-60°	215.1	15.1
60°-70°	172.5	12.1
70°-80°	109.2	7.7
80°-90°	46.5	3.3
90°-100°	26.8	1.9
100°-110°	23.8	1.7
110°-120°	19.6	1.4
120°-130°	15.0	1.1
130°-140°	10.2	0.7
140°-150°	5.9	0.4
150°-160°	2.5	0.2
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	330.5	23.2
0°-40°	546.4	38.4
0°-60°	991.3	69.6
0°-90°	1319.5	92.7
90°-120°	70.2	4.9
90°-150°	101.3	7.1
90°-180°	104.0	7.3
0°-180°	1424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	419	419	419	419	419	
5°	415	416	418	419	419	40
15°	400	404	408	410	411	113
25°	372	376	383	387	389	172
35°	333	338	346	353	354	208
45°	283	289	300	307	309	218
55°	222	232	243	251	253	198
65°	153	163	177	186	188	151
75°	79	92	106	115	119	84
85°	15	28	43	53	56	18
90°	0	14	29	38	43	1
95°	0	12	27	37	41	0
105°	0	11	25	34	38	0
115°	0	9	22	31	34	0
125°	0	7	19	26	29	0
135°	0	5	15	21	23	0
145°	0	3	10	16	17	0
155°	0	1	6	9	10	0
165°	0	0	2	3	4	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°	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1
2.5°	417.1	417.1	417.1	417.1	417.1	418.1	418.1	418.1	418.1	419.1	419.1
5°	415.0	415.0	415.0	416.0	416.0	416.0	417.1	417.1	417.1	418.1	418.1
7.5°	413.9	412.9	413.9	413.9	413.9	415.0	415.0	415.0	416.0	416.0	417.1
10°	409.8	409.8	410.8	410.8	410.8	411.9	411.9	412.9	412.9	413.9	415.0
12.5°	405.6	405.6	406.7	406.7	407.7	407.7	408.7	408.7	409.8	410.8	411.9
15°	400.4	400.4	401.5	402.5	402.5	403.5	403.5	404.6	405.6	406.7	407.7
17.5°	395.2	395.2	395.2	396.3	397.3	397.3	398.3	399.4	400.4	401.5	402.5
20°	389.0	389.0	389.0	390.0	391.1	391.1	392.1	393.1	394.2	395.2	396.3
22.5°	380.7	381.7	381.7	382.7	383.8	383.8	384.8	386.9	387.9	389.0	390.0
25°	372.3	373.4	373.4	374.4	376.5	376.5	377.5	378.6	380.7	381.7	382.7
27.5°	363.0	364.0	365.1	366.1	367.1	368.2	369.2	370.3	371.3	373.4	374.4
30°	354.7	354.7	355.7	356.7	357.8	359.9	359.9	361.9	363.0	365.1	366.1
32.5°	344.3	344.3	345.3	346.3	347.4	349.5	349.5	351.5	353.6	354.7	356.7
35°	332.8	332.8	333.9	335.9	337.0	338.0	339.1	341.1	343.2	345.3	346.3
37.5°	320.3	321.4	322.4	323.5	326.6	326.6	327.6	329.7	331.8	332.8	334.9
40°	308.9	308.9	311.0	312.0	314.1	315.1	316.2	318.3	320.3	321.4	324.5
42.5°	296.4	296.4	298.5	299.5	301.6	302.7	303.7	305.8	307.9	311.0	312.0
45°	282.9	282.9	285.0	287.1	289.1	289.1	291.2	293.3	296.4	297.5	299.5
47.5°	268.3	268.3	271.5	272.5	274.6	276.7	277.7	279.8	281.9	283.9	287.1
50°	252.7	253.8	255.9	257.9	261.1	262.1	263.1	265.2	268.3	270.4	272.5
52.5°	238.2	239.2	240.3	243.4	245.5	247.5	247.5	250.7	252.7	255.9	257.9
55°	221.5	223.6	225.7	227.8	229.9	231.9	233.0	235.1	238.2	240.3	243.4
57.5°	205.9	207.0	209.1	211.1	213.2	215.3	216.3	219.5	221.5	223.6	227.8
60°	188.3	189.3	191.4	194.5	196.6	198.7	200.7	202.8	205.9	208.0	211.1
62.5°	170.6	171.6	173.7	176.8	179.9	181.0	182.0	185.1	188.3	192.4	194.5
65°	152.9	153.9	156.0	159.1	162.3	163.3	165.4	168.5	171.6	173.7	176.8
67.5°	135.2	136.2	138.3	141.4	144.6	146.6	147.7	150.8	153.9	157.1	160.2
70°	116.5	118.6	120.6	122.7	125.8	127.9	130.0	133.1	136.2	138.3	142.5
72.5°	97.8	98.8	100.9	105.0	108.2	109.2	111.3	114.4	118.6	120.6	123.8
75°	79.0	80.1	83.2	86.3	90.5	91.5	93.6	96.7	99.8	103.0	106.1
77.5°	61.4	62.4	66.6	68.6	71.8	73.8	74.9	79.0	83.2	86.3	88.4
80°	43.7	44.7	47.8	51.0	55.1	56.2	58.2	62.4	65.5	68.6	71.8
82.5°	28.1	30.2	32.2	35.4	39.5	41.6	43.7	46.8	49.9	53.0	56.2
85°	14.6	15.6	19.8	21.8	26.0	28.1	30.2	33.3	36.4	40.6	42.6
87.5°	5.2	6.2	9.4	12.5	16.6	18.7	19.8	23.9	27.0	30.2	33.3
90°	0.0	2.1	4.2	8.3	11.4	13.5	15.6	19.8	22.9	26.0	29.1
92.5°	0.0	1.0	4.2	7.3	11.4	12.5	14.6	18.7	21.8	25.0	28.1
95°	0.0	1.0	4.2	7.3	10.4	12.5	14.6	17.7	20.8	25.0	27.0
97.5°	0.0	1.0	3.1	6.2	10.4	12.5	13.5	17.7	20.8	23.9	27.0
100°	0.0	1.0	3.1	6.2	10.4	11.4	13.5	16.6	20.8	23.9	26.0
102.5°	0.0	1.0	3.1	6.2	9.4	11.4	13.5	16.6	19.8	22.9	26.0
105°	0.0	1.0	3.1	6.2	9.4	11.4	12.5	15.6	19.8	21.8	25.0
107.5°	0.0	1.0	3.1	6.2	9.4	10.4	12.5	15.6	18.7	21.8	23.9
110°	0.0	1.0	3.1	5.2	8.3	10.4	11.4	15.6	17.7	20.8	23.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.0	2.1	5.2	8.3	9.4	11.4	14.6	17.7	20.8	22.9
115°	0.0	1.0	2.1	5.2	8.3	9.4	10.4	13.5	16.6	19.8	21.8
117.5°	0.0	0.0	2.1	4.2	7.3	9.4	10.4	13.5	16.6	18.7	20.8
120°	0.0	0.0	2.1	4.2	7.3	8.3	9.4	12.5	15.6	17.7	20.8
122.5°	0.0	0.0	2.1	4.2	6.2	8.3	9.4	12.5	14.6	17.7	19.8
125°	0.0	0.0	2.1	4.2	6.2	7.3	9.4	11.4	13.5	16.6	18.7
127.5°	0.0	0.0	2.1	3.1	6.2	7.3	8.3	10.4	13.5	15.6	17.7
130°	0.0	0.0	1.0	3.1	5.2	6.2	7.3	10.4	12.5	14.6	16.6
132.5°	0.0	0.0	1.0	3.1	5.2	6.2	7.3	9.4	11.4	13.5	15.6
135°	0.0	0.0	1.0	3.1	4.2	5.2	6.2	8.3	10.4	12.5	14.6
137.5°	0.0	0.0	1.0	2.1	4.2	5.2	6.2	8.3	10.4	11.4	13.5
140°	0.0	0.0	1.0	2.1	4.2	4.2	5.2	7.3	9.4	10.4	12.5
142.5°	0.0	0.0	1.0	2.1	3.1	4.2	5.2	6.2	8.3	10.4	11.4
145°	0.0	0.0	0.0	1.0	3.1	3.1	4.2	6.2	7.3	9.4	10.4
147.5°	0.0	0.0	0.0	1.0	2.1	3.1	3.1	5.2	6.2	8.3	9.4
150°	0.0	0.0	0.0	1.0	2.1	2.1	3.1	4.2	5.2	7.3	8.3
152.5°	0.0	0.0	0.0	1.0	1.0	2.1	2.1	3.1	4.2	6.2	7.3
155°	0.0	0.0	0.0	0.0	1.0	1.0	2.1	3.1	4.2	5.2	6.2
157.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.1	3.1	4.2	4.2
160°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.1	3.1	3.1
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.1	2.1
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
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°	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1
2.5°	419.1	420.2	420.2	420.2	420.2	420.2	420.2	420.2	420.2	419.1
5°	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1	419.1
7.5°	417.1	417.1	418.1	418.1	418.1	418.1	418.1	418.1	418.1	418.1
10°	415.0	415.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0
12.5°	411.9	412.9	412.9	412.9	412.9	412.9	413.9	413.9	413.9	413.9
15°	407.7	408.7	408.7	409.8	409.8	409.8	409.8	409.8	409.8	410.8
17.5°	403.5	404.6	404.6	404.6	405.6	405.6	405.6	405.6	405.6	405.6
20°	397.3	398.3	399.4	399.4	400.4	400.4	400.4	400.4	400.4	400.4
22.5°	391.1	392.1	393.1	393.1	394.2	394.2	394.2	395.2	395.2	395.2
25°	383.8	384.8	385.9	386.9	386.9	387.9	387.9	387.9	387.9	389.0
27.5°	376.5	376.5	377.5	378.6	379.6	379.6	379.6	379.6	380.7	380.7
30°	367.1	369.2	370.3	370.3	371.3	371.3	371.3	372.3	372.3	372.3
32.5°	357.8	359.9	360.9	360.9	361.9	363.0	363.0	363.0	363.0	364.0
35°	347.4	349.5	350.5	351.5	352.6	352.6	352.6	353.6	353.6	353.6
37.5°	337.0	338.0	340.1	340.1	341.1	341.1	342.2	343.2	343.2	343.2
40°	325.5	327.6	328.7	329.7	330.7	330.7	331.8	331.8	331.8	332.8
42.5°	314.1	315.1	317.2	318.3	319.3	319.3	320.3	321.4	321.4	321.4
45°	301.6	302.7	304.7	306.8	306.8	306.8	308.9	308.9	308.9	308.9
47.5°	288.1	290.2	292.3	293.3	293.3	294.3	294.3	295.4	296.4	296.4
50°	274.6	276.7	277.7	279.8	279.8	280.8	281.9	282.9	282.9	281.9
52.5°	260.0	262.1	264.2	265.2	266.3	266.3	267.3	267.3	268.3	268.3
55°	244.4	246.5	248.6	250.7	250.7	250.7	252.7	253.8	252.7	252.7
57.5°	228.8	230.9	233.0	234.0	235.1	236.1	236.1	238.2	238.2	238.2
60°	213.2	215.3	217.4	219.5	219.5	220.5	220.5	221.5	222.6	222.6
62.5°	197.6	198.7	200.7	202.8	202.8	202.8	204.9	204.9	205.9	205.9
65°	178.9	182.0	184.1	185.1	186.2	187.2	187.2	188.3	189.3	188.3
67.5°	161.2	164.3	165.4	167.5	168.5	169.5	170.6	171.6	171.6	171.6
70°	144.6	146.6	148.7	150.8	150.8	151.9	152.9	153.9	153.9	155.0
72.5°	126.9	129.0	131.0	132.1	133.1	134.2	135.2	136.2	137.3	137.3
75°	109.2	111.3	113.4	115.4	115.4	115.4	117.5	118.6	118.6	118.6
77.5°	91.5	93.6	95.7	97.8	97.8	98.8	99.8	100.9	101.9	101.9
80°	74.9	77.0	79.0	81.1	81.1	82.2	83.2	84.2	85.3	84.2
82.5°	59.3	61.4	63.4	64.5	65.5	67.6	68.6	68.6	69.7	69.7
85°	45.8	47.8	49.9	52.0	53.0	54.1	54.1	55.1	56.2	56.2
87.5°	36.4	38.5	40.6	42.6	42.6	43.7	44.7	45.8	46.8	46.8
90°	31.2	34.3	36.4	38.5	38.5	39.5	40.6	41.6	42.6	42.6
92.5°	31.2	33.3	35.4	37.4	37.4	38.5	39.5	40.6	41.6	41.6
95°	30.2	32.2	34.3	36.4	37.4	38.5	39.5	40.6	40.6	40.6
97.5°	30.2	32.2	34.3	36.4	36.4	37.4	38.5	39.5	40.6	40.6
100°	29.1	31.2	33.3	35.4	36.4	37.4	38.5	39.5	39.5	39.5
102.5°	28.1	31.2	33.3	34.3	35.4	36.4	37.4	38.5	38.5	38.5
105°	28.1	30.2	32.2	34.3	34.3	35.4	36.4	37.4	37.4	38.5
107.5°	27.0	29.1	31.2	33.3	34.3	34.3	35.4	36.4	37.4	37.4
110°	26.0	28.1	30.2	32.2	33.3	33.3	34.3	35.4	36.4	36.4



TEST NUMBER: P241536

CATALOG NUMBER: FVS8M-2-LD4-50-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	25.0	27.0	29.1	31.2	32.2	32.2	33.3	34.3	35.4	35.4
115°	25.0	27.0	28.1	30.2	31.2	31.2	32.2	33.3	33.3	34.3
117.5°	23.9	26.0	27.0	29.1	30.2	30.2	31.2	32.2	32.2	32.2
120°	22.9	25.0	26.0	28.1	28.1	29.1	30.2	31.2	31.2	31.2
122.5°	21.8	23.9	25.0	27.0	27.0	28.1	29.1	30.2	30.2	30.2
125°	20.8	22.9	23.9	26.0	26.0	27.0	28.1	28.1	29.1	29.1
127.5°	19.8	21.8	22.9	23.9	25.0	26.0	26.0	27.0	27.0	28.1
130°	18.7	20.8	21.8	22.9	23.9	23.9	25.0	26.0	26.0	26.0
132.5°	17.7	18.7	20.8	21.8	21.8	22.9	23.9	23.9	25.0	25.0
135°	16.6	17.7	19.8	20.8	20.8	21.8	21.8	22.9	22.9	22.9
137.5°	15.6	16.6	17.7	18.7	19.8	19.8	20.8	20.8	21.8	21.8
140°	13.5	15.6	16.6	17.7	17.7	18.7	18.7	19.8	19.8	19.8
142.5°	12.5	14.6	15.6	16.6	16.6	16.6	17.7	17.7	18.7	18.7
145°	11.4	12.5	13.5	14.6	15.6	15.6	15.6	16.6	16.6	16.6
147.5°	10.4	11.4	12.5	13.5	13.5	13.5	14.6	14.6	14.6	15.6
150°	9.4	10.4	11.4	11.4	12.5	12.5	12.5	13.5	13.5	13.5
152.5°	8.3	8.3	9.4	10.4	10.4	10.4	11.4	11.4	11.4	11.4
155°	6.2	7.3	8.3	8.3	9.4	9.4	9.4	10.4	10.4	10.4
157.5°	5.2	6.2	7.3	7.3	7.3	8.3	8.3	8.3	8.3	8.3
160°	4.2	5.2	5.2	6.2	6.2	6.2	6.2	6.2	7.3	7.3
162.5°	3.1	3.1	4.2	4.2	5.2	5.2	5.2	5.2	5.2	5.2
165°	2.1	2.1	3.1	3.1	3.1	3.1	3.1	4.2	4.2	4.2
167.5°	1.0	1.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
170°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)