

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: P241571

Luminaire Tested: **FVS8M-3-LD4-40-1HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241571
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-40-1HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

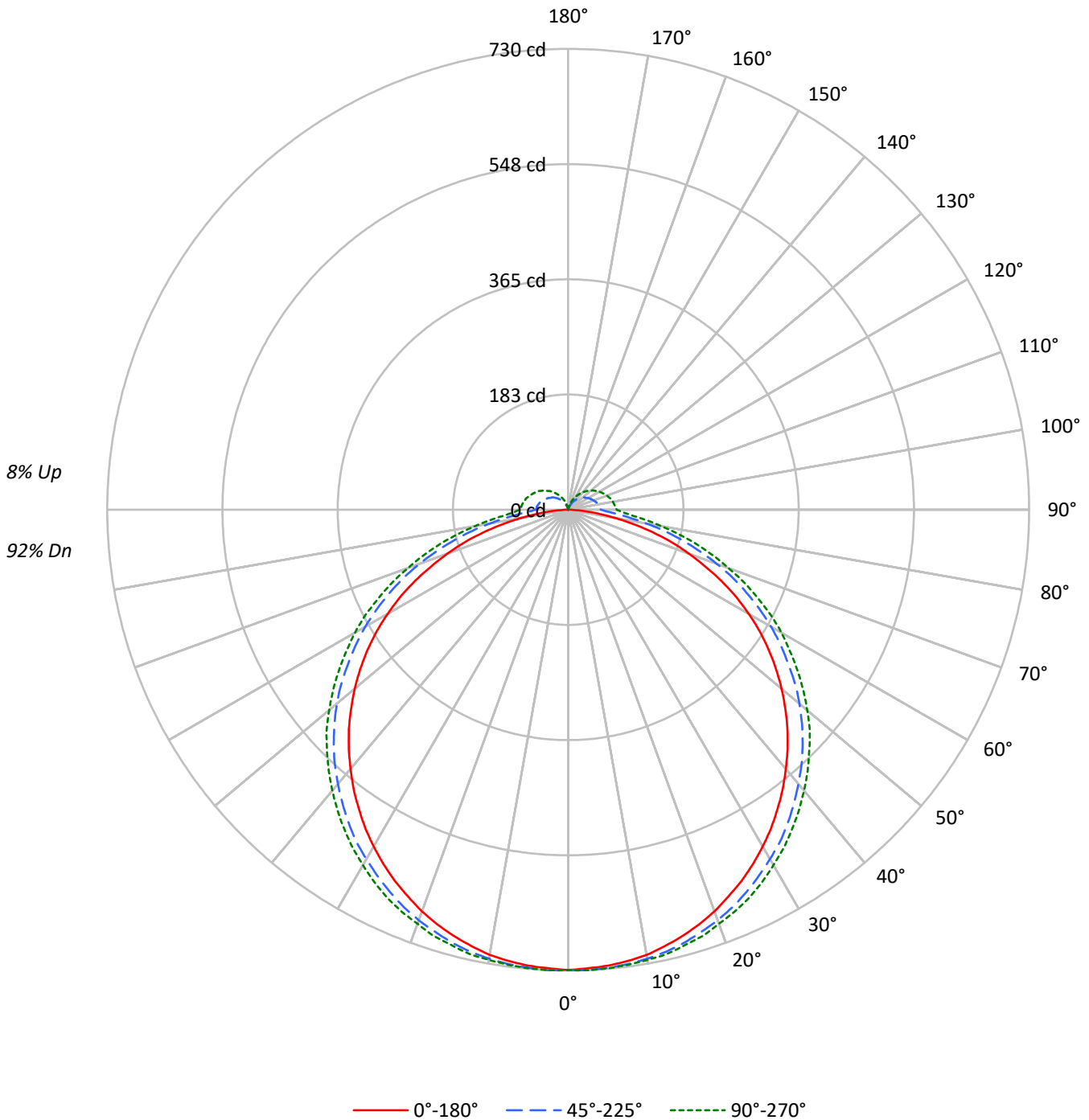
Lumens per Lamp: N/A
Luminaire Lumens: 2497.9 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 36
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	92
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	71	68	65	62
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	65	57	51	62	55	49	59	53	48	56	50	46	44
5	73	60	51	44	70	58	50	43	55	48	42	53	46	41	50	44	40	38
6	67	54	45	38	65	52	44	38	50	42	37	47	41	36	45	39	35	33
7	62	49	40	33	60	47	39	33	45	38	32	43	37	32	41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	38	32	28	25
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	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4258	4258	4258
5°	4231	4196	4191
10°	4208	4139	4129
15°	4169	4079	4071
20°	4131	4015	4009
25°	4085	3944	3953
30°	4035	3872	3878
35°	3979	3800	3805
40°	3919	3713	3724
45°	3858	3626	3639
50°	3777	3522	3537
55°	3682	3382	3411
60°	3542	3236	3275
65°	3339	3037	3082
70°	3039	2775	2846
75°	2634	2438	2571
80°	1982	2008	2212
85°	1057	1593	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	2.8
10°-20°	200.0	8.0
20°-30°	307.0	12.3
30°-40°	377.1	15.1
40°-50°	401.8	16.1
50°-60°	376.7	15.1
60°-70°	302.9	12.1
70°-80°	192.2	7.7
80°-90°	82.8	3.3
90°-100°	48.5	1.9
100°-110°	43.0	1.7
110°-120°	35.5	1.4
120°-130°	26.9	1.1
130°-140°	18.2	0.7
140°-150°	10.4	0.4
150°-160°	4.5	0.2
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	576.2	23.1
0°-40°	953.3	38.2
0°-60°	1731.8	69.3
0°-90°	2309.8	92.5
90°-120°	127.0	5.1
90°-150°	182.6	7.3
90°-180°	188.0	7.5
0°-180°	2497.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	729	729	729	729	729	
5°	725	725	728	729	729	69
15°	699	702	710	713	714	197
25°	649	656	668	676	678	299
35°	578	591	606	616	618	362
45°	491	507	525	536	540	378
55°	388	405	425	440	443	346
65°	268	287	312	327	331	265
75°	139	162	187	203	210	147
85°	25	49	77	95	100	32
90°	1	25	52	71	77	2
95°	0	23	50	68	74	0
105°	0	20	46	63	69	0
115°	0	17	40	56	61	0
125°	0	13	33	47	52	0
135°	0	10	26	37	42	0
145°	1	6	18	27	30	1
155°	1	2	9	16	18	0
165°	1	1	3	5	7	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241571

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1
2.5°	727.1	727.1	726.1	727.1	727.1	728.1	728.1	729.1	730.1	731.1	730.1
5°	725.1	724.1	724.1	725.1	725.1	725.1	726.1	727.1	728.1	728.1	728.1
7.5°	721.1	720.1	720.1	721.1	721.1	722.1	722.1	724.1	725.1	725.1	726.1
10°	716.1	715.1	715.1	715.1	716.1	717.1	717.1	719.1	721.1	722.1	722.1
12.5°	708.1	708.1	707.1	709.1	709.1	710.1	712.1	714.1	715.1	716.1	717.1
15°	699.1	699.1	699.1	700.1	701.1	702.1	704.1	706.1	708.1	709.1	710.1
17.5°	689.1	689.1	689.1	690.1	692.1	693.1	695.1	697.1	699.1	700.1	701.1
20°	677.1	676.1	677.1	679.1	681.1	682.1	683.1	687.1	689.1	691.1	692.1
22.5°	663.1	663.1	664.1	666.1	669.1	670.1	671.1	674.1	677.1	679.1	681.1
25°	649.1	649.1	650.1	652.1	655.1	656.1	658.1	662.1	664.1	666.1	668.1
27.5°	633.1	633.1	634.1	637.1	641.1	642.1	643.1	647.1	650.1	652.1	654.1
30°	616.1	616.1	618.1	621.1	624.1	626.1	628.1	632.1	635.1	637.1	639.1
32.5°	598.1	598.1	600.1	603.1	607.1	609.1	611.1	615.1	618.1	621.1	624.1
35°	578.1	579.1	582.1	584.1	588.1	591.1	593.1	597.1	600.1	603.1	606.1
37.5°	558.1	558.1	560.1	564.1	569.1	570.1	574.1	578.1	581.1	585.1	587.1
40°	536.1	537.1	539.1	544.1	549.1	550.1	553.1	558.1	561.1	565.1	567.1
42.5°	514.1	515.1	518.1	523.1	526.1	529.1	532.1	536.1	539.1	544.1	547.1
45°	491.1	490.1	495.1	500.1	503.1	507.1	509.1	514.1	519.1	522.1	525.1
47.5°	466.1	468.1	472.1	475.1	480.1	483.1	485.1	490.1	494.1	498.1	502.1
50°	441.1	442.1	447.1	451.1	455.1	457.1	461.1	466.1	470.1	473.1	478.1
52.5°	415.1	417.1	420.1	423.1	429.1	432.1	435.1	439.1	445.1	449.1	453.1
55°	388.1	389.1	392.1	397.1	403.1	405.1	407.1	413.1	418.1	421.1	425.1
57.5°	360.1	361.1	365.1	369.1	373.1	378.1	380.1	384.1	390.1	395.1	399.1
60°	330.1	331.1	335.1	339.1	344.1	348.1	351.1	357.1	361.1	366.1	371.1
62.5°	300.1	300.1	305.1	308.1	315.1	319.1	320.1	326.1	332.1	336.1	342.1
65°	268.1	270.1	273.1	279.1	285.1	287.1	290.1	296.1	301.1	307.1	312.1
67.5°	235.0	237.0	242.0	246.0	253.1	257.1	259.1	264.1	272.1	277.1	282.1
70°	203.0	208.0	210.0	215.0	221.0	225.0	228.0	234.0	239.0	245.0	250.0
72.5°	173.0	174.0	177.0	184.0	190.0	193.0	197.0	201.0	208.0	214.0	218.0
75°	139.0	141.0	145.0	152.0	158.0	162.0	164.0	171.0	176.0	181.0	187.0
77.5°	106.0	109.0	115.0	120.0	127.0	130.0	134.0	140.0	146.0	151.0	156.0
80°	76.0	79.0	84.0	90.0	97.0	100.0	104.0	111.0	116.0	122.0	126.0
82.5°	49.0	51.0	57.0	63.0	69.0	73.0	76.0	83.0	89.0	94.0	99.0
85°	25.0	28.0	33.0	39.0	45.0	49.0	52.0	59.0	66.0	72.0	77.0
87.5°	9.0	11.0	16.0	23.0	29.0	32.0	36.0	42.0	49.0	55.0	60.0
90°	1.0	3.0	8.0	14.0	21.0	25.0	28.0	35.0	41.0	47.0	52.0
92.5°	0.0	2.0	7.0	13.0	20.0	23.0	27.0	33.0	39.0	45.0	50.0
95°	0.0	2.0	7.0	13.0	19.0	23.0	26.0	32.0	39.0	44.0	50.0
97.5°	0.0	2.0	6.0	12.0	19.0	22.0	25.0	32.0	38.0	44.0	49.0
100°	0.0	2.0	6.0	12.0	18.0	21.0	25.0	31.0	37.0	43.0	48.0
102.5°	0.0	2.0	6.0	11.0	18.0	21.0	24.0	30.0	36.0	42.0	47.0
105°	0.0	2.0	6.0	11.0	17.0	20.0	23.0	29.0	35.0	40.0	46.0
107.5°	0.0	1.0	5.0	10.0	16.0	19.0	22.0	28.0	34.0	39.0	44.0
110°	0.0	1.0	5.0	10.0	16.0	19.0	21.0	27.0	33.0	38.0	43.0



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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	5.0	9.0	15.0	18.0	21.0	26.0	32.0	37.0	41.0
115°	0.0	1.0	4.0	9.0	14.0	17.0	20.0	25.0	30.0	35.0	40.0
117.5°	0.0	1.0	4.0	8.0	13.0	16.0	19.0	24.0	29.0	34.0	38.0
120°	0.0	1.0	4.0	8.0	13.0	15.0	18.0	23.0	28.0	32.0	37.0
122.5°	0.0	1.0	3.0	7.0	12.0	14.0	17.0	22.0	26.0	31.0	35.0
125°	0.0	1.0	3.0	7.0	11.0	13.0	16.0	20.0	25.0	29.0	33.0
127.5°	0.0	1.0	3.0	6.0	10.0	13.0	15.0	19.0	24.0	28.0	32.0
130°	0.0	0.0	2.0	6.0	10.0	12.0	14.0	18.0	22.0	26.0	30.0
132.5°	0.0	0.0	2.0	5.0	9.0	11.0	13.0	17.0	21.0	24.0	28.0
135°	0.0	1.0	2.0	4.0	8.0	10.0	12.0	15.0	19.0	23.0	26.0
137.5°	0.0	1.0	1.0	4.0	7.0	9.0	11.0	14.0	18.0	21.0	24.0
140°	1.0	1.0	1.0	3.0	6.0	8.0	9.0	13.0	16.0	19.0	22.0
142.5°	1.0	1.0	1.0	3.0	5.0	7.0	8.0	11.0	14.0	17.0	20.0
145°	1.0	1.0	1.0	2.0	4.0	6.0	7.0	10.0	13.0	15.0	18.0
147.5°	1.0	1.0	1.0	2.0	4.0	5.0	6.0	8.0	11.0	13.0	16.0
150°	1.0	1.0	1.0	1.0	3.0	4.0	5.0	7.0	9.0	11.0	14.0
152.5°	1.0	1.0	1.0	1.0	2.0	3.0	4.0	6.0	8.0	10.0	11.0
155°	1.0	1.0	1.0	1.0	2.0	2.0	3.0	5.0	6.0	8.0	9.0
157.5°	1.0	1.0	1.0	1.0	1.0	2.0	2.0	4.0	5.0	6.0	7.0
160°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	4.0	5.0	6.0
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	3.0	4.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	3.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
170°	1.0	1.0	1.0	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	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



TEST NUMBER: P241571

CATALOG NUMBER: FVS8M-3-LD4-40-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1	729.1
2.5°	730.1	730.1	731.1	731.1	730.1	731.1	731.1	730.1	730.1	730.1
5°	728.1	728.1	729.1	729.1	729.1	729.1	729.1	729.1	728.1	729.1
7.5°	726.1	726.1	726.1	727.1	727.1	727.1	727.1	727.1	727.1	727.1
10°	722.1	723.1	723.1	724.1	724.1	724.1	725.1	724.1	724.1	724.1
12.5°	717.1	718.1	719.1	720.1	719.1	720.1	720.1	720.1	720.1	721.1
15°	711.1	712.1	712.1	713.1	713.1	714.1	714.1	714.1	714.1	714.1
17.5°	703.1	704.1	705.1	706.1	707.1	706.1	707.1	707.1	708.1	708.1
20°	693.1	695.1	696.1	697.1	698.1	697.1	698.1	698.1	699.1	698.1
22.5°	682.1	684.1	685.1	687.1	687.1	688.1	688.1	689.1	688.1	689.1
25°	670.1	672.1	673.1	675.1	676.1	676.1	677.1	677.1	677.1	678.1
27.5°	656.1	658.1	659.1	661.1	661.1	662.1	663.1	663.1	664.1	665.1
30°	642.1	643.1	646.1	647.1	648.1	648.1	649.1	650.1	650.1	650.1
32.5°	626.1	627.1	630.1	631.1	632.1	633.1	634.1	634.1	634.1	635.1
35°	608.1	611.1	612.1	615.1	616.1	617.1	617.1	618.1	617.1	618.1
37.5°	590.1	593.1	594.1	596.1	597.1	598.1	599.1	599.1	600.1	600.1
40°	570.1	573.1	575.1	577.1	578.1	579.1	579.1	580.1	582.1	581.1
42.5°	550.1	551.1	555.1	557.1	557.1	559.1	560.1	560.1	561.1	561.1
45°	528.1	531.1	533.1	535.1	536.1	537.1	538.1	539.1	539.1	540.1
47.5°	505.1	509.1	511.1	514.1	514.1	515.1	517.1	517.1	517.1	519.1
50°	481.1	484.1	488.1	489.1	490.1	491.1	492.1	493.1	494.1	494.1
52.5°	456.1	460.1	462.1	465.1	466.1	466.1	468.1	469.1	469.1	469.1
55°	430.1	434.1	436.1	438.1	440.1	441.1	441.1	443.1	444.1	443.1
57.5°	402.1	405.1	408.1	412.1	413.1	414.1	414.1	415.1	418.1	416.1
60°	373.1	377.1	380.1	384.1	385.1	385.1	386.1	388.1	389.1	390.1
62.5°	345.1	350.1	352.1	355.1	355.1	358.1	359.1	360.1	361.1	362.1
65°	315.1	319.1	322.1	325.1	327.1	327.1	330.1	332.1	332.1	331.1
67.5°	285.1	289.1	293.1	295.1	297.1	297.1	299.1	301.1	301.1	302.1
70°	255.1	258.1	262.1	265.1	267.1	267.1	269.1	271.1	271.1	270.1
72.5°	223.0	226.0	231.0	233.0	235.0	236.0	238.0	239.0	240.0	240.0
75°	192.0	196.0	199.0	202.0	203.0	205.0	207.0	208.0	209.0	210.0
77.5°	160.0	166.0	169.0	173.0	173.0	175.0	179.0	178.0	179.0	179.0
80°	131.0	136.0	139.0	143.0	144.0	145.0	147.0	149.0	150.0	150.0
82.5°	105.0	109.0	113.0	115.0	118.0	118.0	120.0	122.0	123.0	124.0
85°	82.0	86.0	90.0	94.0	95.0	96.0	99.0	100.0	100.0	100.0
87.5°	66.0	70.0	74.0	77.0	79.0	80.0	82.0	83.0	85.0	85.0
90°	57.0	62.0	66.0	69.0	71.0	72.0	74.0	76.0	76.0	77.0
92.5°	56.0	60.0	64.0	67.0	68.0	70.0	72.0	73.0	74.0	75.0
95°	55.0	59.0	63.0	66.0	68.0	69.0	71.0	73.0	73.0	74.0
97.5°	54.0	58.0	62.0	65.0	67.0	68.0	70.0	72.0	73.0	73.0
100°	53.0	57.0	61.0	64.0	66.0	67.0	69.0	70.0	71.0	72.0
102.5°	52.0	56.0	60.0	63.0	64.0	65.0	68.0	69.0	70.0	70.0
105°	50.0	54.0	58.0	61.0	63.0	64.0	66.0	68.0	68.0	69.0
107.5°	49.0	53.0	57.0	60.0	61.0	62.0	64.0	66.0	67.0	67.0
110°	47.0	51.0	55.0	58.0	60.0	61.0	63.0	64.0	65.0	65.0



TEST NUMBER: P241571

CATALOG NUMBER: FVS8M-3-LD4-40-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	46.0	50.0	53.0	56.0	58.0	59.0	61.0	62.0	63.0	63.0
115°	44.0	48.0	51.0	54.0	56.0	57.0	59.0	60.0	61.0	61.0
117.5°	42.0	46.0	50.0	52.0	54.0	55.0	57.0	58.0	59.0	59.0
120°	41.0	44.0	48.0	50.0	52.0	53.0	54.0	56.0	57.0	57.0
122.5°	39.0	43.0	46.0	48.0	49.0	50.0	52.0	53.0	54.0	55.0
125°	37.0	41.0	43.0	46.0	47.0	48.0	50.0	51.0	52.0	52.0
127.5°	35.0	38.0	41.0	44.0	45.0	46.0	48.0	49.0	49.0	50.0
130°	33.0	36.0	39.0	41.0	42.0	43.0	45.0	46.0	47.0	47.0
132.5°	31.0	34.0	37.0	39.0	40.0	41.0	42.0	43.0	44.0	44.0
135°	29.0	32.0	34.0	36.0	37.0	38.0	40.0	41.0	41.0	42.0
137.5°	27.0	30.0	32.0	34.0	35.0	36.0	37.0	38.0	39.0	39.0
140°	25.0	27.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	36.0
142.5°	23.0	25.0	27.0	29.0	30.0	30.0	31.0	32.0	33.0	33.0
145°	21.0	23.0	25.0	26.0	27.0	28.0	29.0	30.0	30.0	30.0
147.5°	18.0	20.0	22.0	24.0	24.0	25.0	26.0	27.0	27.0	27.0
150°	16.0	18.0	20.0	21.0	22.0	22.0	23.0	24.0	24.0	24.0
152.5°	13.0	15.0	17.0	18.0	19.0	19.0	20.0	21.0	21.0	21.0
155°	11.0	13.0	14.0	16.0	16.0	17.0	17.0	18.0	18.0	18.0
157.5°	9.0	10.0	12.0	13.0	14.0	14.0	14.0	15.0	15.0	15.0
160°	7.0	8.0	9.0	10.0	11.0	11.0	12.0	12.0	12.0	12.0
162.5°	5.0	6.0	7.0	7.0	8.0	8.0	9.0	9.0	9.0	9.0
165°	3.0	4.0	4.0	5.0	5.0	6.0	6.0	6.0	7.0	7.0
167.5°	2.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
170°	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0
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)