

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: P241548

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241548
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-9)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-50-2HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

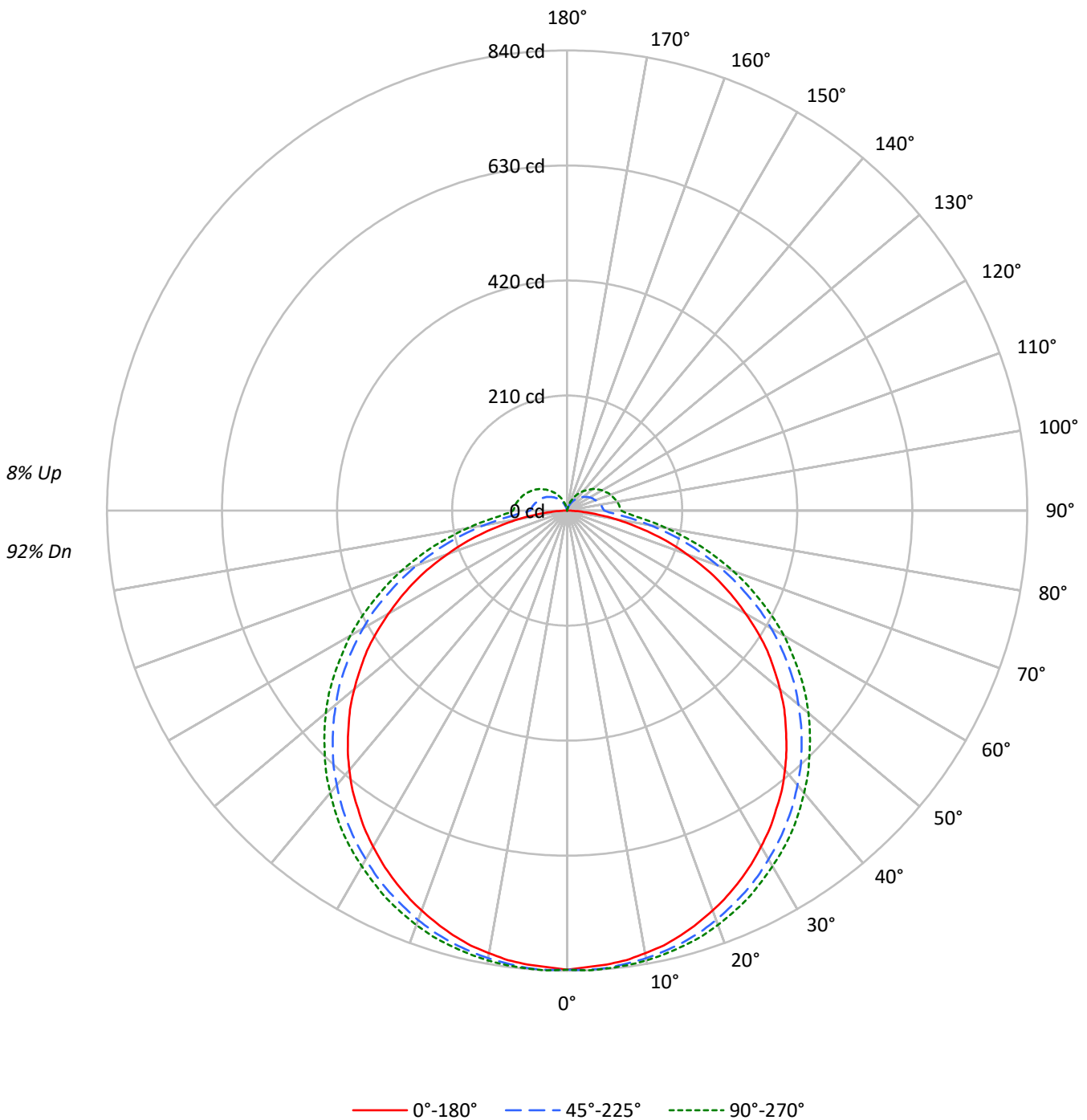
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2924.0 lumens
Efficiency: N/A
Efficacy: 66.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 44.2
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

TEST NUMBER: P241548
CATALOG NUMBER: FVS8M-2-LD4-50-2HI-O-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241548

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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	113	113	113	113	106	106	106	100	100	100	94	94	94	92
1	106	101	96	92	102	98	93	89	92	88	85	86	84	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	57	66	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	50	46	43
5	73	60	50	44	70	58	49	43	55	47	42	52	46	41	49	44	39	37
6	67	54	44	38	65	52	44	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	31	26	36	30	25	34	29	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7534	7534	7534
5°	7455	7422	7426
10°	7387	7297	7321
15°	7317	7182	7217
20°	7224	7057	7115
25°	7133	6927	7008
30°	7031	6787	6885
35°	6922	6654	6779
40°	6810	6501	6637
45°	6655	6330	6492
50°	6489	6133	6337
55°	6285	5908	6137
60°	5955	5637	5912
65°	5584	5266	5589
70°	5012	4825	5229
75°	4245	4285	4763
80°	3200	3587	4179
85°	1640	2882	3655



TEST NUMBER: P241548

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	2.7
10°-20°	229.9	7.9
20°-30°	353.2	12.1
30°-40°	434.5	14.9
40°-50°	463.8	15.9
50°-60°	436.1	14.9
60°-70°	352.6	12.1
70°-80°	227.5	7.8
80°-90°	102.7	3.5
90°-100°	62.5	2.1
100°-110°	55.5	1.9
110°-120°	46.0	1.6
120°-130°	35.0	1.2
130°-140°	23.8	0.8
140°-150°	13.8	0.5
150°-160°	6.0	0.2
160°-170°	1.4	0.0
170°-180°	0.0	0.0
0°-30°	662.7	22.7
0°-40°	1097.2	37.5
0°-60°	1997.2	68.3
0°-90°	2680.0	91.7
90°-120°	164.0	5.6
90°-150°	236.6	8.1
90°-180°	244.0	8.3
0°-180°	2924.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	832	833	838	839	839	79
15°	803	807	816	822	822	226
25°	746	754	768	777	781	344
35°	666	679	698	710	715	417
45°	565	581	605	621	626	436
55°	446	466	493	512	518	397
65°	307	332	362	385	390	303
75°	158	188	222	244	253	168
85°	30	61	97	118	127	37
90°	0	32	68	90	99	2
95°	0	29	64	87	96	0
105°	0	26	58	81	88	0
115°	0	22	52	72	79	0
125°	0	18	44	61	68	0
135°	0	14	34	49	54	0
145°	0	8	24	35	40	0
155°	1	3	14	22	24	0
165°	1	1	4	8	9	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241548

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1
2.5°	834.0	834.0	834.0	834.0	835.0	835.0	836.1	837.1	837.1	838.1	839.2
5°	831.9	830.9	831.9	831.9	832.9	832.9	834.0	835.0	836.1	837.1	838.1
7.5°	827.7	826.7	827.7	828.8	828.8	829.8	829.8	830.9	831.9	832.9	834.0
10°	820.5	820.5	821.5	822.5	823.6	823.6	824.6	825.7	826.7	828.8	829.8
12.5°	813.2	812.2	813.2	814.2	815.3	816.3	816.3	818.4	820.5	821.5	823.6
15°	802.8	802.8	803.8	804.9	805.9	807.0	808.0	811.1	812.2	814.2	816.3
17.5°	790.3	791.4	791.4	793.4	795.5	796.6	797.6	799.7	802.8	803.8	807.0
20°	776.8	777.8	777.8	779.9	782.0	784.1	785.1	788.2	791.4	793.4	795.5
22.5°	762.2	762.2	763.3	766.4	768.5	769.5	771.6	774.7	776.8	779.9	782.0
25°	745.6	745.6	747.7	749.8	752.9	753.9	756.0	759.1	762.2	765.4	768.5
27.5°	727.9	727.9	730.0	733.1	736.2	737.3	739.4	743.5	746.6	749.8	752.9
30°	708.2	709.2	711.3	714.4	717.5	719.6	721.7	724.8	727.9	732.1	735.2
32.5°	688.4	688.4	690.5	693.6	697.8	699.8	703.0	706.1	710.2	714.4	717.5
35°	665.5	666.6	668.6	673.8	675.9	679.0	681.1	685.3	690.5	693.6	697.8
37.5°	643.7	644.7	645.8	649.9	654.1	657.2	659.3	663.4	667.6	671.8	677.0
40°	618.7	618.7	621.9	627.1	630.2	633.3	635.4	640.6	644.7	649.9	654.1
42.5°	592.7	592.7	596.9	600.0	605.2	608.3	610.4	615.6	620.8	626.0	631.2
45°	564.7	566.7	569.9	574.0	580.3	581.3	584.4	589.6	595.9	601.1	605.2
47.5°	537.6	538.7	541.8	547.0	552.2	556.3	558.4	562.6	568.8	575.1	579.2
50°	507.5	509.5	512.7	517.9	523.1	527.2	530.3	535.5	541.8	547.0	551.1
52.5°	476.3	478.3	482.5	488.7	495.0	497.1	500.2	506.4	513.7	517.9	524.1
55°	446.1	447.2	451.3	456.5	463.8	465.9	469.0	475.2	481.5	487.7	492.9
57.5°	411.8	412.8	418.0	424.3	429.5	433.6	436.8	444.0	450.3	456.5	461.7
60°	376.4	379.6	384.8	392.0	397.2	401.4	404.5	410.8	417.0	423.2	430.5
62.5°	342.1	344.2	350.4	355.6	362.9	366.0	370.2	377.5	383.7	390.0	398.3
65°	306.8	308.8	313.0	320.3	328.6	331.7	335.9	342.1	349.4	356.7	361.9
67.5°	270.4	273.5	278.7	283.9	291.2	295.3	298.4	307.8	314.0	321.3	327.6
70°	231.9	235.0	241.3	248.5	255.8	261.0	264.1	271.4	279.7	286.0	292.2
72.5°	197.6	197.6	203.8	212.1	220.5	224.6	228.8	237.1	243.3	248.5	256.9
75°	158.1	161.2	168.5	175.7	185.1	188.2	192.4	199.7	209.0	215.3	222.5
77.5°	121.7	127.9	132.1	139.3	148.7	152.9	157.0	164.3	173.7	180.9	187.2
80°	89.4	92.5	97.7	105.0	115.4	117.5	122.7	131.0	138.3	145.6	153.9
82.5°	57.2	60.3	66.6	73.8	83.2	87.4	91.5	99.8	107.1	115.4	122.7
85°	30.2	33.3	39.5	47.8	57.2	61.4	65.5	72.8	81.1	89.4	96.7
87.5°	11.4	14.6	20.8	29.1	37.4	41.6	45.8	54.1	62.4	69.7	77.0
90°	0.0	4.2	11.4	18.7	28.1	32.2	36.4	44.7	53.0	60.3	67.6
92.5°	0.0	3.1	9.4	16.6	26.0	30.2	34.3	42.6	51.0	58.2	65.5
95°	0.0	3.1	8.3	16.6	25.0	29.1	33.3	41.6	49.9	57.2	64.5
97.5°	0.0	3.1	8.3	15.6	23.9	28.1	32.2	40.6	48.9	56.2	63.4
100°	0.0	2.1	8.3	15.6	22.9	27.0	31.2	39.5	47.8	55.1	61.4
102.5°	0.0	2.1	7.3	14.6	22.9	27.0	30.2	38.5	45.8	53.0	60.3
105°	0.0	2.1	7.3	14.6	21.8	26.0	30.2	37.4	44.7	52.0	58.2
107.5°	0.0	2.1	7.3	13.5	20.8	25.0	29.1	36.4	43.7	51.0	57.2
110°	0.0	2.1	6.2	12.5	19.8	23.9	28.1	35.4	42.6	48.9	55.1



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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.1	6.2	12.5	19.8	22.9	27.0	34.3	40.6	47.8	53.0
115°	0.0	1.0	5.2	11.4	18.7	21.8	25.0	32.2	39.5	45.8	52.0
117.5°	0.0	1.0	5.2	11.4	17.7	20.8	23.9	31.2	37.4	43.7	49.9
120°	0.0	1.0	5.2	10.4	16.6	19.8	22.9	30.2	36.4	41.6	47.8
122.5°	0.0	1.0	4.2	9.4	15.6	18.7	21.8	28.1	34.3	40.6	45.8
125°	0.0	1.0	4.2	9.4	14.6	17.7	20.8	27.0	32.2	38.5	43.7
127.5°	0.0	1.0	4.2	8.3	13.5	16.6	19.8	25.0	31.2	36.4	40.6
130°	0.0	1.0	3.1	7.3	12.5	15.6	17.7	23.9	29.1	34.3	38.5
132.5°	0.0	1.0	3.1	7.3	11.4	14.6	16.6	21.8	27.0	32.2	36.4
135°	0.0	1.0	2.1	6.2	10.4	13.5	15.6	20.8	25.0	30.2	34.3
137.5°	0.0	0.0	2.1	5.2	9.4	11.4	14.6	18.7	22.9	28.1	31.2
140°	0.0	0.0	2.1	5.2	8.3	10.4	12.5	16.6	20.8	25.0	29.1
142.5°	0.0	0.0	1.0	4.2	7.3	9.4	11.4	15.6	19.8	22.9	27.0
145°	0.0	0.0	1.0	3.1	6.2	8.3	10.4	13.5	17.7	20.8	23.9
147.5°	0.0	0.0	1.0	3.1	5.2	7.3	8.3	12.5	15.6	18.7	21.8
150°	0.0	0.0	1.0	2.1	4.2	5.2	7.3	10.4	13.5	16.6	18.7
152.5°	1.0	0.0	1.0	1.0	3.1	4.2	5.2	8.3	11.4	13.5	16.6
155°	1.0	0.0	1.0	1.0	2.1	3.1	4.2	6.2	8.3	11.4	13.5
157.5°	1.0	1.0	0.0	1.0	2.1	2.1	3.1	5.2	7.3	8.3	10.4
160°	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	5.2	6.2	8.3
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.2	6.2
165°	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	2.1	3.1	4.2
167.5°	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	2.1	2.1
170°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	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: P241548

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1	838.1
2.5°	839.2	839.2	839.2	840.2	840.2	840.2	840.2	839.2	839.2	840.2
5°	838.1	838.1	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
7.5°	835.0	836.1	836.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1
10°	830.9	831.9	832.9	832.9	834.0	834.0	834.0	834.0	834.0	834.0
12.5°	824.6	826.7	827.7	827.7	828.8	827.7	828.8	828.8	828.8	828.8
15°	817.4	819.4	820.5	820.5	821.5	821.5	821.5	822.5	822.5	822.5
17.5°	808.0	810.1	811.1	812.2	813.2	813.2	814.2	814.2	814.2	815.3
20°	797.6	799.7	800.7	802.8	802.8	802.8	803.8	803.8	804.9	804.9
22.5°	785.1	787.2	789.3	791.4	791.4	791.4	792.4	793.4	793.4	793.4
25°	771.6	772.6	774.7	776.8	776.8	777.8	779.9	779.9	779.9	781.0
27.5°	756.0	758.1	761.2	761.2	763.3	763.3	764.3	765.4	765.4	765.4
30°	739.4	741.4	744.6	745.6	747.7	747.7	748.7	749.8	749.8	749.8
32.5°	720.6	723.8	725.8	729.0	729.0	730.0	732.1	732.1	733.1	733.1
35°	701.9	705.0	707.1	709.2	710.2	711.3	712.3	713.4	714.4	715.4
37.5°	679.0	683.2	686.3	689.4	690.5	690.5	692.6	693.6	694.6	694.6
40°	657.2	661.4	663.4	666.6	668.6	668.6	670.7	671.8	672.8	672.8
42.5°	634.3	638.5	642.6	644.7	645.8	645.8	647.8	649.9	649.9	651.0
45°	609.4	614.6	618.7	620.8	620.8	621.9	623.9	626.0	626.0	626.0
47.5°	584.4	587.5	590.7	594.8	595.9	597.9	599.0	599.0	600.0	601.1
50°	557.4	560.5	564.7	567.8	569.9	570.9	573.0	573.0	575.1	575.1
52.5°	527.2	532.4	536.6	539.7	540.7	542.8	543.9	545.9	547.0	548.0
55°	498.1	502.3	506.4	509.5	511.6	512.7	515.8	516.8	517.9	517.9
57.5°	466.9	472.1	476.3	479.4	480.4	482.5	484.6	486.7	487.7	486.7
60°	435.7	440.9	444.0	447.2	450.3	451.3	452.4	455.5	456.5	457.5
62.5°	402.4	406.6	410.8	414.9	416.0	419.1	421.2	422.2	422.2	424.3
65°	368.1	373.3	378.5	381.6	384.8	385.8	387.9	388.9	391.0	390.0
67.5°	333.8	339.0	344.2	347.3	349.4	351.5	353.6	355.6	356.7	356.7
70°	298.4	304.7	307.8	313.0	315.1	316.1	318.2	320.3	320.3	322.4
72.5°	263.1	268.3	273.5	278.7	278.7	282.8	283.9	287.0	286.0	287.0
75°	228.8	232.9	238.1	241.3	244.4	245.4	249.6	250.6	250.6	252.7
77.5°	192.4	199.7	202.8	208.0	212.1	211.1	214.2	216.3	218.4	216.3
80°	158.1	165.3	170.5	173.7	175.7	177.8	180.9	180.9	184.1	184.1
82.5°	128.9	135.2	139.3	143.5	145.6	147.7	149.7	151.8	152.9	153.9
85°	102.9	107.1	112.3	117.5	118.5	120.6	123.7	124.8	126.9	126.9
87.5°	83.2	88.4	93.6	97.7	100.9	101.9	105.0	106.1	107.1	108.1
90°	73.8	79.0	84.2	89.4	90.5	92.5	95.7	96.7	98.8	98.8
92.5°	71.8	77.0	82.2	86.3	88.4	90.5	92.5	94.6	95.7	96.7
95°	70.7	75.9	81.1	85.3	87.4	89.4	91.5	93.6	94.6	95.7
97.5°	69.7	74.9	80.1	84.2	86.3	88.4	90.5	92.5	93.6	94.6
100°	67.6	73.8	78.0	83.2	84.2	86.3	89.4	91.5	92.5	92.5
102.5°	66.6	71.8	77.0	81.1	83.2	84.2	87.4	89.4	90.5	90.5
105°	64.5	69.7	74.9	79.0	81.1	83.2	85.3	87.4	88.4	88.4
107.5°	63.4	68.6	72.8	77.0	79.0	81.1	83.2	85.3	86.3	86.3
110°	61.4	66.6	70.7	74.9	77.0	78.0	81.1	83.2	84.2	84.2



TEST NUMBER: P241548

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	59.3	64.5	68.6	72.8	74.9	75.9	79.0	80.1	81.1	82.2
115°	57.2	62.4	66.6	70.7	71.8	73.8	75.9	78.0	79.0	79.0
117.5°	55.1	59.3	64.5	67.6	69.7	70.7	72.8	74.9	75.9	75.9
120°	53.0	57.2	61.4	65.5	66.6	68.6	70.7	71.8	72.8	73.8
122.5°	51.0	55.1	59.3	62.4	64.5	65.5	67.6	69.7	70.7	70.7
125°	47.8	52.0	56.2	59.3	61.4	62.4	64.5	66.6	66.6	67.6
127.5°	45.8	49.9	54.1	57.2	58.2	59.3	61.4	63.4	64.5	64.5
130°	43.7	46.8	51.0	54.1	55.1	56.2	58.2	59.3	60.3	61.4
132.5°	40.6	44.7	47.8	51.0	52.0	53.0	55.1	56.2	57.2	57.2
135°	38.5	41.6	44.7	47.8	48.9	49.9	52.0	53.0	54.1	54.1
137.5°	35.4	38.5	41.6	44.7	45.8	46.8	47.8	49.9	49.9	49.9
140°	32.2	35.4	38.5	40.6	42.6	42.6	44.7	45.8	46.8	46.8
142.5°	30.2	32.2	35.4	37.4	38.5	39.5	40.6	42.6	42.6	42.6
145°	27.0	30.2	32.2	34.3	35.4	36.4	37.4	38.5	39.5	39.5
147.5°	23.9	27.0	29.1	31.2	32.2	32.2	34.3	34.3	35.4	35.4
150°	21.8	23.9	26.0	28.1	28.1	29.1	30.2	31.2	31.2	31.2
152.5°	18.7	20.8	22.9	23.9	25.0	25.0	27.0	27.0	28.1	28.1
155°	15.6	17.7	19.8	20.8	21.8	21.8	22.9	22.9	23.9	23.9
157.5°	12.5	14.6	16.6	17.7	17.7	18.7	18.7	19.8	19.8	19.8
160°	9.4	11.4	12.5	13.5	14.6	14.6	15.6	15.6	16.6	16.6
162.5°	7.3	8.3	9.4	10.4	11.4	11.4	12.5	12.5	12.5	12.5
165°	5.2	5.2	6.2	7.3	8.3	8.3	8.3	8.3	9.4	9.4
167.5°	3.1	3.1	4.2	4.2	5.2	5.2	5.2	5.2	5.2	5.2
170°	1.0	1.0	2.1	2.1	2.1	2.1	3.1	3.1	3.1	3.1
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)