

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: P241546

Luminaire Tested: **FVS8M-2-LD4-35-2HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241546
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-LD4-35-2HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

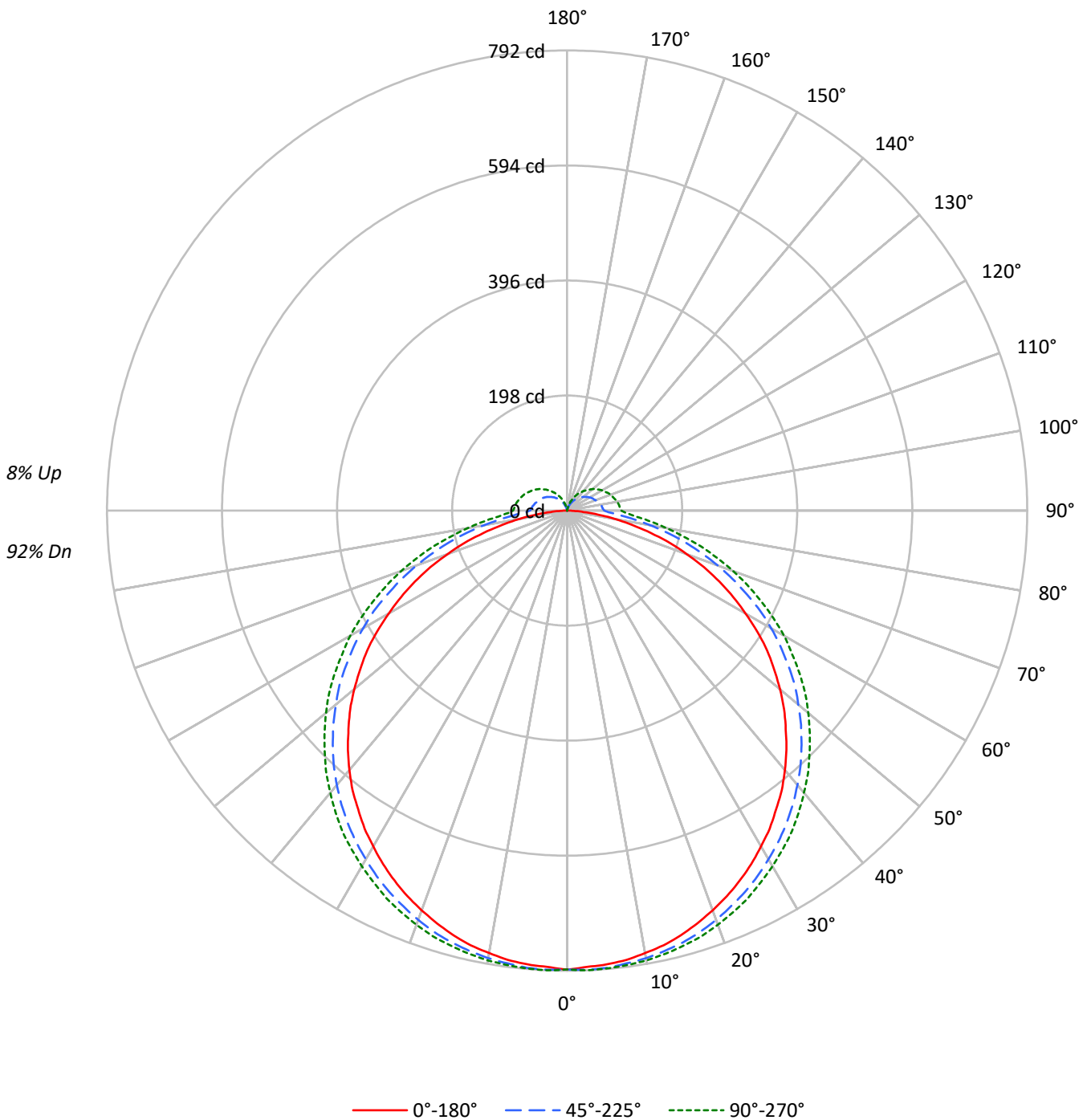
Lumens per Lamp: N/A
Luminaire Lumens: 2756.0 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

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: P241546

CATALOG NUMBER: FVS8M-2-LD4-35-2HI-O-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241546

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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°	7101	7101	7101
5°	7027	6996	6999
10°	6962	6878	6900
15°	6896	6769	6803
20°	6809	6651	6705
25°	6724	6528	6605
30°	6627	6398	6489
35°	6524	6272	6389
40°	6420	6127	6255
45°	6272	5966	6119
50°	6115	5781	5972
55°	5924	5569	5784
60°	5614	5314	5574
65°	5262	4963	5268
70°	4724	4548	4927
75°	4000	4038	4489
80°	3018	3382	3938
85°	1542	2718	3445



TEST NUMBER: P241546

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.0	2.7
10°-20°	216.7	7.9
20°-30°	332.9	12.1
30°-40°	409.5	14.9
40°-50°	437.2	15.9
50°-60°	411.1	14.9
60°-70°	332.4	12.1
70°-80°	214.4	7.8
80°-90°	96.8	3.5
90°-100°	58.9	2.1
100°-110°	52.3	1.9
110°-120°	43.3	1.6
120°-130°	33.0	1.2
130°-140°	22.5	0.8
140°-150°	13.0	0.5
150°-160°	5.6	0.2
160°-170°	1.3	0.0
170°-180°	0.0	0.0
0°-30°	624.6	22.7
0°-40°	1034.2	37.5
0°-60°	1882.4	68.3
0°-90°	2526.0	91.7
90°-120°	154.6	5.6
90°-150°	223.0	8.1
90°-180°	230.0	8.3
0°-180°	2756.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	784	785	790	791	791	75
15°	757	761	769	774	775	213
25°	703	711	724	732	736	324
35°	627	640	658	669	674	393
45°	532	548	570	585	590	411
55°	420	439	465	482	488	374
65°	289	313	341	363	368	285
75°	149	177	210	230	238	159
85°	28	58	91	112	120	35
90°	0	30	64	85	93	1
95°	0	27	61	82	90	0
105°	0	24	55	76	83	0
115°	0	21	49	68	74	0
125°	0	17	41	58	64	0
135°	0	13	32	46	51	0
145°	0	8	22	33	37	0
155°	1	3	13	21	22	0
165°	1	1	4	8	9	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241546

CATALOG NUMBER: FVS8M-2-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0
2.5°	786.1	786.1	786.1	786.1	787.1	787.1	788.0	789.0	789.0	790.0	791.0
5°	784.1	783.1	784.1	784.1	785.1	785.1	786.1	787.1	788.0	789.0	790.0
7.5°	780.2	779.2	780.2	781.2	781.2	782.2	782.2	783.1	784.1	785.1	786.1
10°	773.3	773.3	774.3	775.3	776.3	776.3	777.2	778.2	779.2	781.2	782.2
12.5°	766.5	765.5	766.5	767.4	768.4	769.4	769.4	771.4	773.3	774.3	776.3
15°	756.7	756.7	757.6	758.6	759.6	760.6	761.6	764.5	765.5	767.4	769.4
17.5°	744.9	745.9	745.9	747.8	749.8	750.8	751.8	753.7	756.7	757.6	760.6
20°	732.2	733.1	733.1	735.1	737.1	739.0	740.0	742.9	745.9	747.8	749.8
22.5°	718.4	718.4	719.4	722.4	724.3	725.3	727.3	730.2	732.2	735.1	737.1
25°	702.8	702.8	704.7	706.7	709.6	710.6	712.6	715.5	718.4	721.4	724.3
27.5°	686.1	686.1	688.1	691.0	693.9	694.9	696.9	700.8	703.7	706.7	709.6
30°	667.5	668.5	670.4	673.4	676.3	678.3	680.2	683.2	686.1	690.0	693.0
32.5°	648.9	648.9	650.8	653.8	657.7	659.6	662.6	665.5	669.4	673.4	676.3
35°	627.3	628.3	630.2	635.1	637.1	640.0	642.0	645.9	650.8	653.8	657.7
37.5°	606.7	607.7	608.7	612.6	616.5	619.4	621.4	625.3	629.2	633.2	638.1
40°	583.2	583.2	586.1	591.0	594.0	596.9	598.9	603.8	607.7	612.6	616.5
42.5°	558.7	558.7	562.6	565.5	570.4	573.4	575.3	580.2	585.1	590.0	594.9
45°	532.2	534.2	537.1	541.0	546.9	547.9	550.8	555.7	561.6	566.5	570.4
47.5°	506.7	507.7	510.7	515.6	520.5	524.4	526.3	530.3	536.1	542.0	545.9
50°	478.3	480.3	483.2	488.1	493.0	496.9	499.9	504.8	510.7	515.6	519.5
52.5°	448.9	450.9	454.8	460.7	466.5	468.5	471.4	477.3	484.2	488.1	494.0
55°	420.5	421.5	425.4	430.3	437.1	439.1	442.0	447.9	453.8	459.7	464.6
57.5°	388.1	389.1	394.0	399.9	404.8	408.7	411.7	418.5	424.4	430.3	435.2
60°	354.8	357.8	362.7	369.5	374.4	378.3	381.3	387.2	393.0	398.9	405.8
62.5°	322.5	324.4	330.3	335.2	342.1	345.0	348.9	355.8	361.7	367.6	375.4
65°	289.1	291.1	295.0	301.9	309.7	312.7	316.6	322.5	329.3	336.2	341.1
67.5°	254.8	257.8	262.7	267.6	274.4	278.4	281.3	290.1	296.0	302.9	308.7
70°	218.6	221.5	227.4	234.3	241.1	246.0	249.0	255.8	263.7	269.5	275.4
72.5°	186.2	186.2	192.1	199.9	207.8	211.7	215.6	223.5	229.4	234.3	242.1
75°	149.0	151.9	158.8	165.6	174.5	177.4	181.3	188.2	197.0	202.9	209.7
77.5°	114.7	120.6	124.5	131.3	140.2	144.1	148.0	154.9	163.7	170.5	176.4
80°	84.3	87.2	92.1	99.0	108.8	110.8	115.7	123.5	130.4	137.2	145.1
82.5°	53.9	56.8	62.7	69.6	78.4	82.3	86.3	94.1	101.0	108.8	115.7
85°	28.4	31.4	37.2	45.1	53.9	57.8	61.7	68.6	76.5	84.3	91.2
87.5°	10.8	13.7	19.6	27.4	35.3	39.2	43.1	51.0	58.8	65.7	72.5
90°	0.0	3.9	10.8	17.6	26.5	30.4	34.3	42.1	50.0	56.8	63.7
92.5°	0.0	2.9	8.8	15.7	24.5	28.4	32.3	40.2	48.0	54.9	61.7
95°	0.0	2.9	7.8	15.7	23.5	27.4	31.4	39.2	47.0	53.9	60.8
97.5°	0.0	2.9	7.8	14.7	22.5	26.5	30.4	38.2	46.1	52.9	59.8
100°	0.0	2.0	7.8	14.7	21.6	25.5	29.4	37.2	45.1	51.9	57.8
102.5°	0.0	2.0	6.9	13.7	21.6	25.5	28.4	36.3	43.1	50.0	56.8
105°	0.0	2.0	6.9	13.7	20.6	24.5	28.4	35.3	42.1	49.0	54.9
107.5°	0.0	2.0	6.9	12.7	19.6	23.5	27.4	34.3	41.2	48.0	53.9
110°	0.0	2.0	5.9	11.8	18.6	22.5	26.5	33.3	40.2	46.1	51.9



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CATALOG NUMBER: FVS8M-2-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.0	5.9	11.8	18.6	21.6	25.5	32.3	38.2	45.1	50.0
115°	0.0	1.0	4.9	10.8	17.6	20.6	23.5	30.4	37.2	43.1	49.0
117.5°	0.0	1.0	4.9	10.8	16.7	19.6	22.5	29.4	35.3	41.2	47.0
120°	0.0	1.0	4.9	9.8	15.7	18.6	21.6	28.4	34.3	39.2	45.1
122.5°	0.0	1.0	3.9	8.8	14.7	17.6	20.6	26.5	32.3	38.2	43.1
125°	0.0	1.0	3.9	8.8	13.7	16.7	19.6	25.5	30.4	36.3	41.2
127.5°	0.0	1.0	3.9	7.8	12.7	15.7	18.6	23.5	29.4	34.3	38.2
130°	0.0	1.0	2.9	6.9	11.8	14.7	16.7	22.5	27.4	32.3	36.3
132.5°	0.0	1.0	2.9	6.9	10.8	13.7	15.7	20.6	25.5	30.4	34.3
135°	0.0	1.0	2.0	5.9	9.8	12.7	14.7	19.6	23.5	28.4	32.3
137.5°	0.0	0.0	2.0	4.9	8.8	10.8	13.7	17.6	21.6	26.5	29.4
140°	0.0	0.0	2.0	4.9	7.8	9.8	11.8	15.7	19.6	23.5	27.4
142.5°	0.0	0.0	1.0	3.9	6.9	8.8	10.8	14.7	18.6	21.6	25.5
145°	0.0	0.0	1.0	2.9	5.9	7.8	9.8	12.7	16.7	19.6	22.5
147.5°	0.0	0.0	1.0	2.9	4.9	6.9	7.8	11.8	14.7	17.6	20.6
150°	0.0	0.0	1.0	2.0	3.9	4.9	6.9	9.8	12.7	15.7	17.6
152.5°	1.0	0.0	1.0	1.0	2.9	3.9	4.9	7.8	10.8	12.7	15.7
155°	1.0	0.0	1.0	1.0	2.0	2.9	3.9	5.9	7.8	10.8	12.7
157.5°	1.0	1.0	0.0	1.0	2.0	2.0	2.9	4.9	6.9	7.8	9.8
160°	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9	4.9	5.9	7.8
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.9	3.9	5.9
165°	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	2.0	2.9	3.9
167.5°	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0
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: P241546

CATALOG NUMBER: FVS8M-2-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0
2.5°	791.0	791.0	791.0	792.0	792.0	792.0	792.0	791.0	791.0	792.0
5°	790.0	790.0	791.0	791.0	791.0	791.0	791.0	791.0	791.0	791.0
7.5°	787.1	788.0	788.0	789.0	789.0	789.0	789.0	789.0	789.0	789.0
10°	783.1	784.1	785.1	785.1	786.1	786.1	786.1	786.1	786.1	786.1
12.5°	777.2	779.2	780.2	780.2	781.2	780.2	781.2	781.2	781.2	781.2
15°	770.4	772.3	773.3	774.3	774.3	774.3	774.3	775.3	775.3	775.3
17.5°	761.6	763.5	764.5	765.5	766.5	766.5	767.4	767.4	767.4	768.4
20°	751.8	753.7	754.7	756.7	756.7	756.7	757.6	757.6	758.6	758.6
22.5°	740.0	742.0	743.9	745.9	745.9	745.9	746.9	747.8	747.8	747.8
25°	727.3	728.2	730.2	732.2	732.2	733.1	735.1	735.1	735.1	736.1
27.5°	712.6	714.5	717.5	717.5	719.4	719.4	720.4	721.4	721.4	721.4
30°	696.9	698.8	701.8	702.8	704.7	704.7	705.7	706.7	706.7	706.7
32.5°	679.2	682.2	684.1	687.1	687.1	688.1	690.0	690.0	691.0	691.0
35°	661.6	664.5	666.5	668.5	669.4	670.4	671.4	672.4	673.4	674.3
37.5°	640.0	644.0	646.9	649.8	650.8	650.8	652.8	653.8	654.7	654.7
40°	619.4	623.4	625.3	628.3	630.2	630.2	632.2	633.2	634.1	634.1
42.5°	597.9	601.8	605.7	607.7	608.7	608.7	610.6	612.6	612.6	613.6
45°	574.4	579.3	583.2	585.1	585.1	586.1	588.1	590.0	590.0	590.0
47.5°	550.8	553.8	556.7	560.6	561.6	563.6	564.6	564.6	565.5	566.5
50°	525.4	528.3	532.2	535.2	537.1	538.1	540.1	540.1	542.0	542.0
52.5°	496.9	501.8	505.8	508.7	509.7	511.6	512.6	514.6	515.6	516.5
55°	469.5	473.4	477.3	480.3	482.2	483.2	486.1	487.1	488.1	488.1
57.5°	440.1	445.0	448.9	451.8	452.8	454.8	456.7	458.7	459.7	458.7
60°	410.7	415.6	418.5	421.5	424.4	425.4	426.4	429.3	430.3	431.3
62.5°	379.3	383.2	387.2	391.1	392.1	395.0	397.0	397.9	397.9	399.9
65°	347.0	351.9	356.8	359.7	362.7	363.6	365.6	366.6	368.5	367.6
67.5°	314.6	319.5	324.4	327.4	329.3	331.3	333.2	335.2	336.2	336.2
70°	281.3	287.2	290.1	295.0	297.0	298.0	299.9	301.9	301.9	303.8
72.5°	248.0	252.9	257.8	262.7	262.7	266.6	267.6	270.5	269.5	270.5
75°	215.6	219.6	224.5	227.4	230.3	231.3	235.2	236.2	236.2	238.2
77.5°	181.3	188.2	191.1	196.0	199.9	199.0	201.9	203.9	205.8	203.9
80°	149.0	155.8	160.7	163.7	165.6	167.6	170.5	170.5	173.5	173.5
82.5°	121.5	127.4	131.3	135.3	137.2	139.2	141.1	143.1	144.1	145.1
85°	97.0	101.0	105.9	110.8	111.7	113.7	116.6	117.6	119.6	119.6
87.5°	78.4	83.3	88.2	92.1	95.1	96.1	99.0	100.0	101.0	101.9
90°	69.6	74.5	79.4	84.3	85.3	87.2	90.2	91.2	93.1	93.1
92.5°	67.6	72.5	77.4	81.4	83.3	85.3	87.2	89.2	90.2	91.2
95°	66.6	71.6	76.5	80.4	82.3	84.3	86.3	88.2	89.2	90.2
97.5°	65.7	70.6	75.5	79.4	81.4	83.3	85.3	87.2	88.2	89.2
100°	63.7	69.6	73.5	78.4	79.4	81.4	84.3	86.3	87.2	87.2
102.5°	62.7	67.6	72.5	76.5	78.4	79.4	82.3	84.3	85.3	85.3
105°	60.8	65.7	70.6	74.5	76.5	78.4	80.4	82.3	83.3	83.3
107.5°	59.8	64.7	68.6	72.5	74.5	76.5	78.4	80.4	81.4	81.4
110°	57.8	62.7	66.6	70.6	72.5	73.5	76.5	78.4	79.4	79.4



TEST NUMBER: P241546

CATALOG NUMBER: FVS8M-2-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	55.9	60.8	64.7	68.6	70.6	71.6	74.5	75.5	76.5	77.4
115°	53.9	58.8	62.7	66.6	67.6	69.6	71.6	73.5	74.5	74.5
117.5°	51.9	55.9	60.8	63.7	65.7	66.6	68.6	70.6	71.6	71.6
120°	50.0	53.9	57.8	61.7	62.7	64.7	66.6	67.6	68.6	69.6
122.5°	48.0	51.9	55.9	58.8	60.8	61.7	63.7	65.7	66.6	66.6
125°	45.1	49.0	52.9	55.9	57.8	58.8	60.8	62.7	62.7	63.7
127.5°	43.1	47.0	51.0	53.9	54.9	55.9	57.8	59.8	60.8	60.8
130°	41.2	44.1	48.0	51.0	51.9	52.9	54.9	55.9	56.8	57.8
132.5°	38.2	42.1	45.1	48.0	49.0	50.0	51.9	52.9	53.9	53.9
135°	36.3	39.2	42.1	45.1	46.1	47.0	49.0	50.0	51.0	51.0
137.5°	33.3	36.3	39.2	42.1	43.1	44.1	45.1	47.0	47.0	47.0
140°	30.4	33.3	36.3	38.2	40.2	40.2	42.1	43.1	44.1	44.1
142.5°	28.4	30.4	33.3	35.3	36.3	37.2	38.2	40.2	40.2	40.2
145°	25.5	28.4	30.4	32.3	33.3	34.3	35.3	36.3	37.2	37.2
147.5°	22.5	25.5	27.4	29.4	30.4	30.4	32.3	32.3	33.3	33.3
150°	20.6	22.5	24.5	26.5	26.5	27.4	28.4	29.4	29.4	29.4
152.5°	17.6	19.6	21.6	22.5	23.5	23.5	25.5	25.5	26.5	26.5
155°	14.7	16.7	18.6	19.6	20.6	20.6	21.6	21.6	22.5	22.5
157.5°	11.8	13.7	15.7	16.7	16.7	17.6	17.6	18.6	18.6	18.6
160°	8.8	10.8	11.8	12.7	13.7	13.7	14.7	14.7	15.7	15.7
162.5°	6.9	7.8	8.8	9.8	10.8	10.8	11.8	11.8	11.8	11.8
165°	4.9	4.9	5.9	6.9	7.8	7.8	7.8	7.8	8.8	8.8
167.5°	2.9	2.9	3.9	3.9	4.9	4.9	4.9	4.9	4.9	4.9
170°	1.0	1.0	2.0	2.0	2.0	2.0	2.9	2.9	2.9	2.9
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)