

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: P231901

Luminaire Tested: **FVS4M-2-LD4-35-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231901
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-35-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

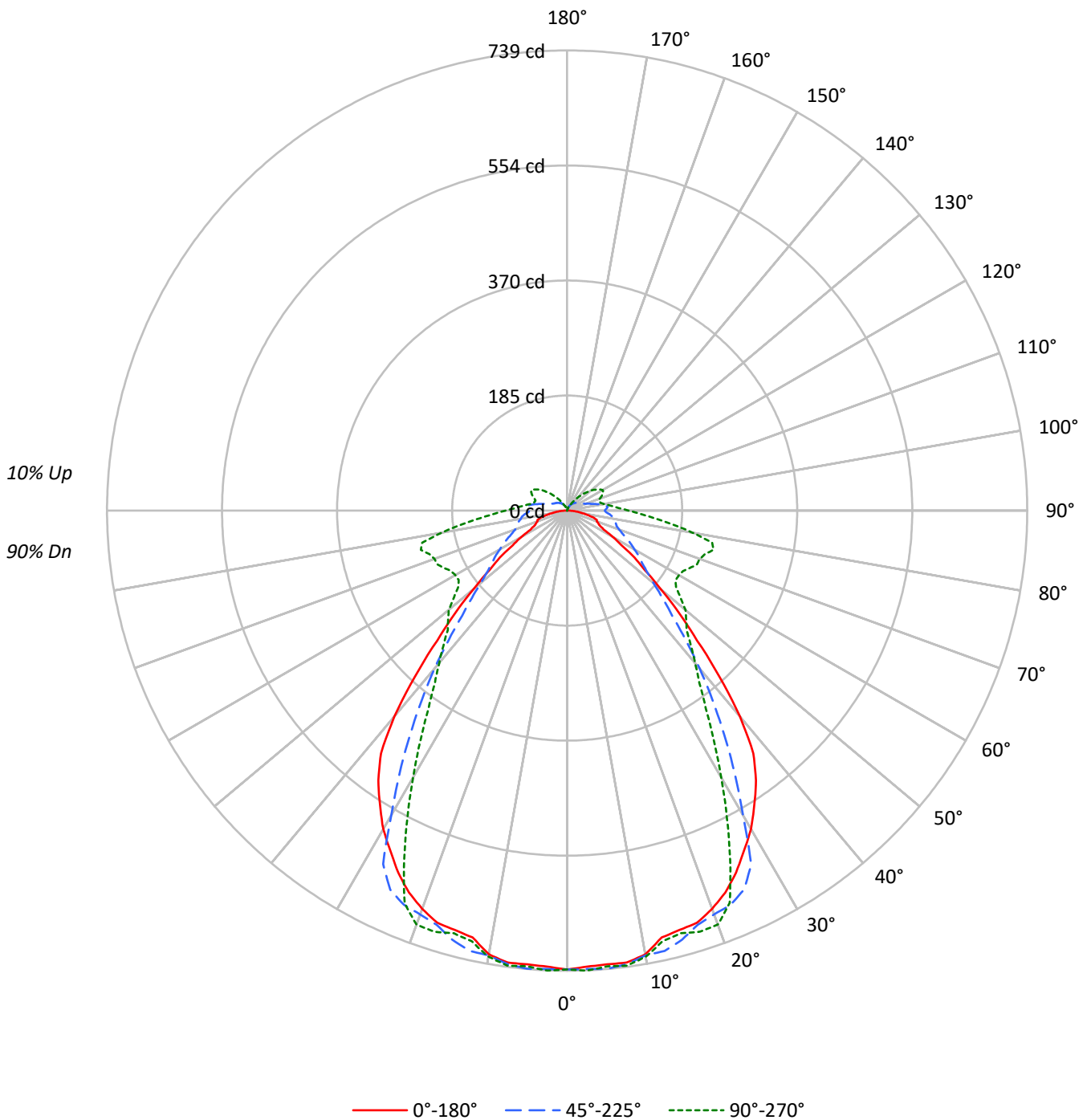
Lumens per Lamp: N/A
Luminaire Lumens: 1707.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 16.99
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	113	113	113	113	105	105	105	99	99	99	93	93	93	90
1	106	101	96	92	102	97	93	90	91	88	85	86	83	81	81	78	77	74
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	68	65	63
3	89	79	71	65	86	77	69	64	72	66	61	68	63	59	64	60	57	54
4	82	71	63	56	79	69	61	55	65	59	54	62	56	52	59	54	50	48
5	76	64	56	50	74	63	55	49	59	53	47	56	51	46	54	49	45	42
6	71	59	50	44	69	57	49	44	54	47	42	52	46	41	49	44	40	38
7	66	54	45	40	64	52	45	39	50	43	38	48	42	37	46	40	36	34
8	62	49	41	36	60	48	41	36	46	39	35	44	38	34	42	37	33	31
9	58	46	38	33	56	45	37	32	43	36	32	41	35	31	39	34	30	29
10	55	42	35	30	53	42	35	30	40	34	29	38	33	29	37	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13245	13245	13245
5°	13084	12773	12591
10°	12979	12173	12005
15°	12642	11720	11265
20°	12569	11188	11107
25°	12167	10829	9595
30°	11602	9117	7621
35°	10855	7169	5994
40°	9359	5486	4987
45°	6829	4059	4306
50°	4918	3178	4044
55°	3629	2704	3596
60°	2616	2419	3657
65°	2039	2167	4050
70°	2108	1985	4496
75°	2223	1982	5215
80°	1744	2057	4802
85°	1158	2124	3692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.8	4.1
10°-20°	200.7	11.8
20°-30°	294.2	17.2
30°-40°	282.9	16.6
40°-50°	202.8	11.9
50°-60°	146.8	8.6
60°-70°	128.2	7.5
70°-80°	120.5	7.1
80°-90°	88.3	5.2
90°-100°	53.3	3.1
100°-110°	38.0	2.2
110°-120°	32.5	1.9
120°-130°	23.9	1.4
130°-140°	14.3	0.8
140°-150°	7.4	0.4
150°-160°	2.8	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	564.7	33.1
0°-40°	847.5	49.7
0°-60°	1197.1	70.1
0°-90°	1534.2	89.9
90°-120°	123.7	7.2
90°-150°	169.4	9.9
90°-180°	173.0	10.1
0°-180°	1707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	737	737	737	737	737	
5°	732	737	739	733	735	70
15°	697	715	713	720	703	198
25°	642	650	672	639	619	295
35°	529	524	440	402	388	327
45°	295	259	238	248	271	233
55°	132	135	147	187	213	119
65°	58	84	105	189	218	61
75°	44	47	81	187	243	44
85°	12	25	68	153	141	13
90°	0	14	60	103	99	1
95°	0	14	65	80	75	0
105°	0	14	41	57	54	0
115°	0	13	26	63	63	0
125°	0	10	22	44	59	0
135°	0	9	18	28	39	0
145°	0	7	14	16	19	0
155°	0	4	7	9	8	0
165°	0	2	2	2	3	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	737.0	737.0	737.0	737.0	737.0
2.5°	733.0	735.4	737.0	737.8	739.4
5°	731.5	737.0	738.6	733.0	734.6
7.5°	732.2	731.5	734.6	732.2	737.0
10°	723.5	718.7	725.1	714.8	727.5
12.5°	702.0	720.3	724.3	717.1	708.4
15°	697.3	714.8	713.2	719.5	702.8
17.5°	694.1	697.3	697.3	712.4	709.2
20°	680.6	680.6	690.1	705.2	707.6
22.5°	663.9	663.1	685.3	687.7	682.2
25°	641.6	649.6	671.8	639.2	619.3
27.5°	615.4	629.7	640.0	574.8	555.7
30°	590.7	605.8	564.5	520.8	494.5
32.5°	559.7	578.8	500.9	454.8	438.9
35°	528.7	523.9	439.7	401.5	388.0
37.5°	491.3	442.8	383.2	355.4	349.0
40°	431.7	370.5	330.7	313.3	319.6
42.5°	362.5	306.9	281.5	280.7	294.2
45°	295.0	259.2	238.5	248.1	271.1
47.5°	244.1	217.8	207.5	224.2	259.2
50°	196.4	182.9	180.5	212.3	248.1
52.5°	157.4	155.8	161.4	203.5	229.0
55°	132.0	135.2	147.1	186.8	213.1
57.5°	103.4	118.5	136.7	182.1	206.7
60°	85.1	105.7	124.8	184.5	207.5
62.5°	66.8	93.8	115.3	186.8	209.9
65°	58.0	83.5	104.9	189.2	217.8
67.5°	54.1	73.1	95.4	190.0	225.8
70°	50.9	62.8	89.0	190.0	226.6
72.5°	50.1	54.1	83.5	189.2	232.2
75°	43.7	46.9	81.1	186.8	243.3
77.5°	35.0	42.1	79.5	186.8	238.5
80°	26.2	36.6	75.5	197.2	204.3
82.5°	19.1	31.0	73.1	178.9	170.9
85°	11.9	25.4	68.4	153.4	140.7
87.5°	4.8	19.1	62.8	125.6	116.1
90°	0.0	14.3	60.4	103.4	98.6
92.5°	0.0	14.3	62.8	89.0	84.3
95°	0.0	14.3	65.2	79.5	74.7
97.5°	0.0	14.3	62.8	70.0	67.6
100°	0.0	14.3	56.4	62.8	60.4
102.5°	0.0	14.3	48.5	58.8	55.7
105°	0.0	14.3	41.3	57.2	54.1
107.5°	0.0	13.5	36.6	58.8	53.3
110°	0.0	13.5	31.8	61.2	55.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	12.7	28.6	62.8	59.6
115°	0.0	12.7	26.2	62.8	62.8
117.5°	0.0	11.9	24.6	58.8	65.2
120°	0.0	11.9	23.1	54.9	66.0
122.5°	0.0	11.1	22.3	50.1	62.8
125°	0.0	10.3	21.5	44.5	58.8
127.5°	0.0	10.3	20.7	39.8	54.9
130°	0.0	9.5	19.1	35.0	50.1
132.5°	0.0	9.5	18.3	31.0	43.7
135°	0.0	8.7	17.5	27.8	39.0
137.5°	0.0	8.7	15.9	24.6	33.4
140°	0.0	8.7	15.9	21.5	28.6
142.5°	0.0	8.0	14.3	19.1	23.9
145°	0.0	7.2	13.5	15.9	19.1
147.5°	0.0	6.4	11.9	14.3	15.1
150°	0.0	5.6	10.3	11.9	11.9
152.5°	0.0	4.8	8.7	10.3	9.5
155°	0.0	4.0	7.2	8.7	8.0
157.5°	0.0	3.2	5.6	7.2	6.4
160°	0.0	2.4	4.8	5.6	5.6
162.5°	0.0	1.6	3.2	4.0	4.8
165°	0.0	1.6	2.4	2.4	3.2
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)