

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: P231896

Luminaire Tested: **FVS4M-2-LD4-30-1LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231896  
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-LD4-30-1LO-PA187-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH PA187 LENS  
Light Source: (42) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

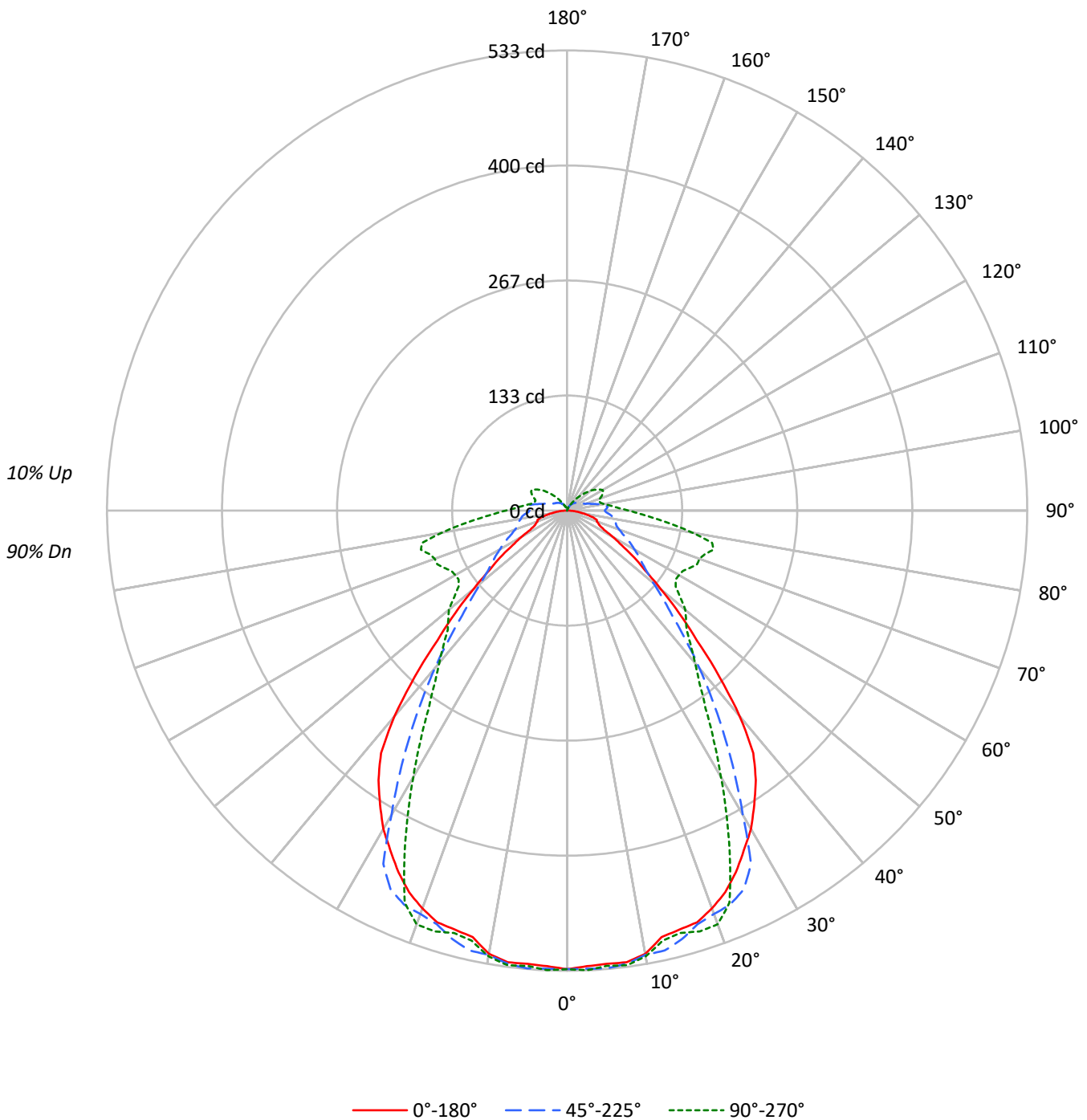
Lumens per Lamp: N/A  
Luminaire Lumens: 1230.0 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 12.3  
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	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°	9544	9544	9544
5°	9428	9203	9072
10°	9352	8772	8651
15°	9108	8445	8117
20°	9056	8063	8004
25°	8767	7804	6915
30°	8362	6570	5491
35°	7823	5165	4319
40°	6745	3953	3594
45°	4919	2925	3104
50°	3543	2289	2913
55°	2614	1948	2590
60°	1884	1742	2635
65°	1469	1562	2920
70°	1520	1432	3240
75°	1602	1427	3758
80°	1258	1482	3460
85°	837	1531	2661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.3	4.1
10°-20°	144.6	11.8
20°-30°	212.0	17.2
30°-40°	203.8	16.6
40°-50°	146.1	11.9
50°-60°	105.8	8.6
60°-70°	92.4	7.5
70°-80°	86.9	7.1
80°-90°	63.6	5.2
90°-100°	38.4	3.1
100°-110°	27.4	2.2
110°-120°	23.4	1.9
120°-130°	17.2	1.4
130°-140°	10.3	0.8
140°-150°	5.3	0.4
150°-160°	2.0	0.2
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	406.9	33.1
0°-40°	610.7	49.7
0°-60°	862.6	70.1
0°-90°	1105.5	89.9
90°-120°	89.2	7.3
90°-150°	122.1	9.9
90°-180°	125.0	10.2
0°-180°	1230.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	527	531	532	528	529	50
15°	502	515	514	518	506	142
25°	462	468	484	461	446	212
35°	381	378	317	289	280	235
45°	212	187	172	179	195	168
55°	95	97	106	135	154	86
65°	42	60	76	136	157	44
75°	32	34	58	135	175	32
85°	9	18	49	111	101	9
90°	0	10	44	74	71	0
95°	0	10	47	57	54	0
105°	0	10	30	41	39	0
115°	0	9	19	45	45	0
125°	0	7	16	32	42	0
135°	0	6	13	20	28	0
145°	0	5	10	12	14	0
155°	0	3	5	6	6	0
165°	0	1	2	2	2	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°	531.1	531.1	531.1	531.1	531.1
2.5°	528.2	529.9	531.1	531.6	532.8
5°	527.1	531.1	532.2	528.2	529.3
7.5°	527.6	527.1	529.3	527.6	531.1
10°	521.3	517.9	522.5	515.0	524.2
12.5°	505.9	519.0	521.9	516.7	510.4
15°	502.4	515.0	513.9	518.5	506.4
17.5°	500.1	502.4	502.4	513.3	511.0
20°	490.4	490.4	497.3	508.2	509.9
22.5°	478.4	477.8	493.8	495.5	491.5
25°	462.3	468.0	484.1	460.6	446.3
27.5°	443.4	453.7	461.2	414.2	400.4
30°	425.7	436.5	406.8	375.2	356.3
32.5°	403.3	417.1	360.9	327.7	316.2
35°	381.0	377.5	316.8	289.3	279.6
37.5°	354.0	319.1	276.1	256.1	251.5
40°	311.1	267.0	238.3	225.7	230.3
42.5°	261.2	221.1	202.8	202.2	212.0
45°	212.5	186.8	171.9	178.7	195.4
47.5°	175.9	157.0	149.5	161.6	186.8
50°	141.5	131.8	130.0	153.0	178.7
52.5°	113.4	112.3	116.3	146.7	165.0
55°	95.1	97.4	106.0	134.6	153.5
57.5°	74.5	85.4	98.5	131.2	149.0
60°	61.3	76.2	89.9	132.9	149.5
62.5°	48.1	67.6	83.1	134.6	151.2
65°	41.8	60.2	75.6	136.3	157.0
67.5°	39.0	52.7	68.7	136.9	162.7
70°	36.7	45.3	64.2	136.9	163.3
72.5°	36.1	39.0	60.2	136.3	167.3
75°	31.5	33.8	58.4	134.6	175.3
77.5°	25.2	30.4	57.3	134.6	171.9
80°	18.9	26.4	54.4	142.1	147.2
82.5°	13.7	22.3	52.7	128.9	123.2
85°	8.6	18.3	49.3	110.6	101.4
87.5°	3.4	13.7	45.3	90.5	83.6
90°	0.0	10.3	43.5	74.5	71.0
92.5°	0.0	10.3	45.3	64.2	60.7
95°	0.0	10.3	47.0	57.3	53.9
97.5°	0.0	10.3	45.3	50.4	48.7
100°	0.0	10.3	40.7	45.3	43.5
102.5°	0.0	10.3	34.9	42.4	40.1
105°	0.0	10.3	29.8	41.2	39.0
107.5°	0.0	9.7	26.4	42.4	38.4
110°	0.0	9.7	22.9	44.1	40.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	9.2	20.6	45.3	43.0
115°	0.0	9.2	18.9	45.3	45.3
117.5°	0.0	8.6	17.8	42.4	47.0
120°	0.0	8.6	16.6	39.5	47.5
122.5°	0.0	8.0	16.0	36.1	45.3
125°	0.0	7.4	15.5	32.1	42.4
127.5°	0.0	7.4	14.9	28.6	39.5
130°	0.0	6.9	13.7	25.2	36.1
132.5°	0.0	6.9	13.2	22.3	31.5
135°	0.0	6.3	12.6	20.1	28.1
137.5°	0.0	6.3	11.5	17.8	24.1
140°	0.0	6.3	11.5	15.5	20.6
142.5°	0.0	5.7	10.3	13.7	17.2
145°	0.0	5.2	9.7	11.5	13.7
147.5°	0.0	4.6	8.6	10.3	10.9
150°	0.0	4.0	7.4	8.6	8.6
152.5°	0.0	3.4	6.3	7.4	6.9
155°	0.0	2.9	5.2	6.3	5.7
157.5°	0.0	2.3	4.0	5.2	4.6
160°	0.0	1.7	3.4	4.0	4.0
162.5°	0.0	1.1	2.3	2.9	3.4
165°	0.0	1.1	1.7	1.7	2.3
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)