

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: P231902

Luminaire Tested: **FVS4M-2-LD4-40-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231902
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-LD4-40-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

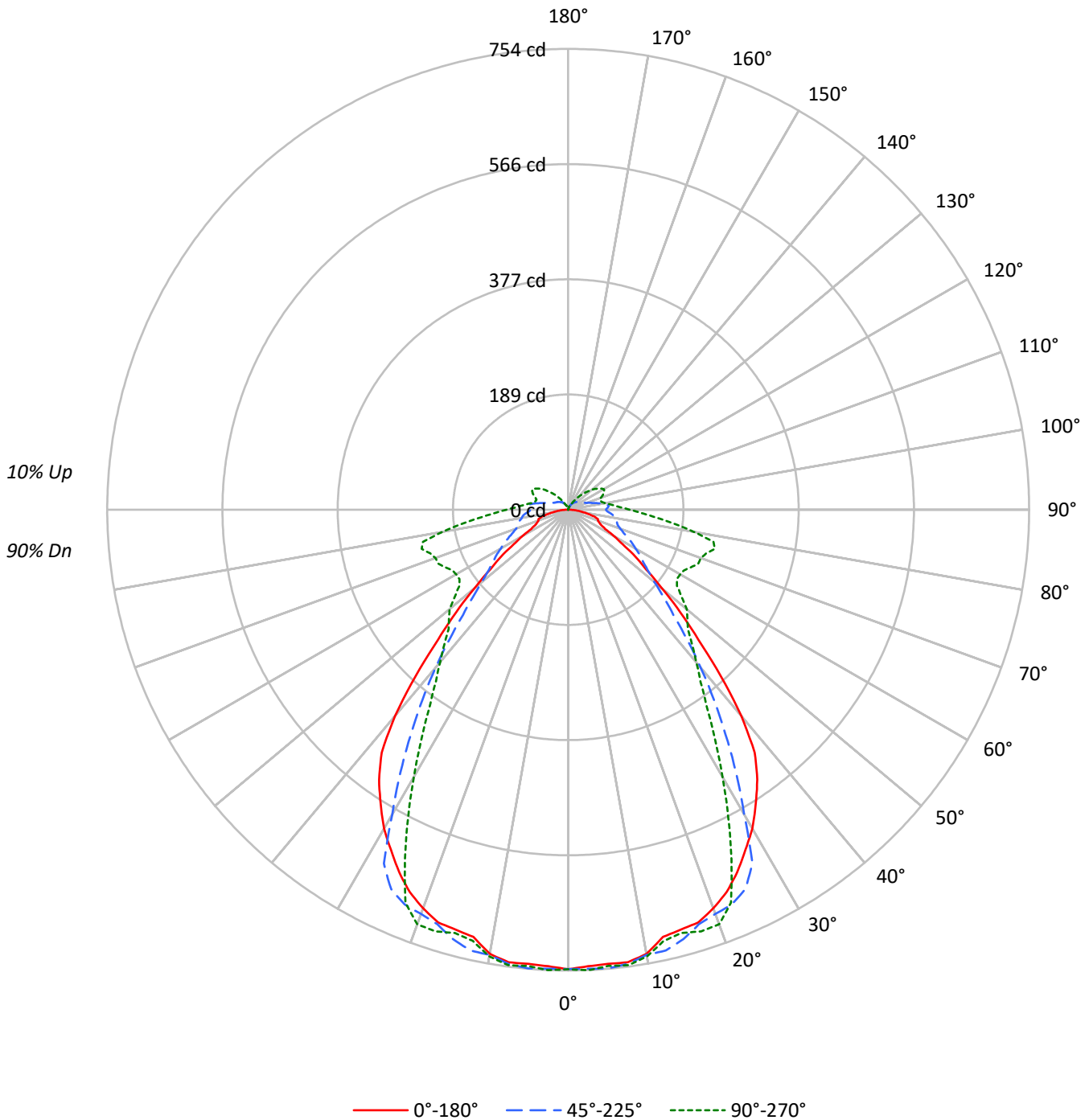
Lumens per Lamp: N/A
Luminaire Lumens: 1741.0 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

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°	13509	13509	13509
5°	13343	13027	12843
10°	13237	12414	12245
15°	12894	11953	11489
20°	12818	11412	11328
25°	12410	11045	9788
30°	11834	9298	7774
35°	11071	7311	6113
40°	9546	5596	5087
45°	6964	4140	4392
50°	5015	3241	4124
55°	3700	2757	3667
60°	2668	2467	3730
65°	2081	2211	4132
70°	2149	2025	4585
75°	2269	2021	5318
80°	1784	2098	4899
85°	1188	2164	3765



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	4.1
10°-20°	204.7	11.8
20°-30°	300.0	17.2
30°-40°	288.5	16.6
40°-50°	206.8	11.9
50°-60°	149.7	8.6
60°-70°	130.8	7.5
70°-80°	123.0	7.1
80°-90°	90.0	5.2
90°-100°	54.4	3.1
100°-110°	38.7	2.2
110°-120°	33.2	1.9
120°-130°	24.4	1.4
130°-140°	14.6	0.8
140°-150°	7.6	0.4
150°-160°	2.9	0.2
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	575.9	33.1
0°-40°	864.4	49.7
0°-60°	1221.0	70.1
0°-90°	1564.8	89.9
90°-120°	126.3	7.3
90°-150°	172.8	9.9
90°-180°	176.0	10.1
0°-180°	1741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	746	752	753	748	749	71
15°	711	729	727	734	717	202
25°	654	662	685	652	632	300
35°	539	534	448	410	396	333
45°	301	264	243	253	276	237
55°	135	138	150	191	217	121
65°	59	85	107	193	222	62
75°	45	48	83	191	248	45
85°	12	26	70	156	144	13
90°	0	15	62	105	101	1
95°	0	15	66	81	76	0
105°	0	15	42	58	55	0
115°	0	13	27	64	64	0
125°	0	10	22	45	60	0
135°	0	9	18	28	40	0
145°	0	7	14	16	20	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°	751.7	751.7	751.7	751.7	751.7
2.5°	747.6	750.1	751.7	752.5	754.1
5°	746.0	751.7	753.3	747.6	749.3
7.5°	746.8	746.0	749.3	746.8	751.7
10°	737.9	733.0	739.5	729.0	742.0
12.5°	716.0	734.7	738.7	731.4	722.5
15°	711.2	729.0	727.4	733.9	716.8
17.5°	707.9	711.2	711.2	726.6	723.3
20°	694.1	694.1	703.9	719.3	721.7
22.5°	677.1	676.3	699.0	701.4	695.7
25°	654.4	662.5	685.2	652.0	631.7
27.5°	627.6	642.2	652.8	586.3	566.8
30°	602.5	617.9	575.7	531.1	504.4
32.5°	570.9	590.3	510.9	463.8	447.6
35°	539.2	534.4	448.4	409.5	395.7
37.5°	501.1	451.7	390.9	362.5	356.0
40°	440.3	377.9	337.3	319.5	326.0
42.5°	369.8	313.0	287.1	286.2	300.0
45°	300.8	264.4	243.3	253.0	276.5
47.5°	248.9	222.2	211.6	228.7	264.4
50°	200.3	186.5	184.1	216.5	253.0
52.5°	160.6	158.9	164.6	207.6	233.5
55°	134.6	137.9	150.0	190.6	217.3
57.5°	105.4	120.8	139.5	185.7	210.8
60°	86.8	107.8	127.3	188.1	211.6
62.5°	68.1	95.7	117.6	190.6	214.1
65°	59.2	85.1	107.0	193.0	222.2
67.5°	55.1	74.6	97.3	193.8	230.3
70°	51.9	64.1	90.8	193.8	231.1
72.5°	51.1	55.1	85.1	193.0	236.8
75°	44.6	47.8	82.7	190.6	248.1
77.5°	35.7	43.0	81.1	190.6	243.3
80°	26.8	37.3	77.0	201.1	208.4
82.5°	19.5	31.6	74.6	182.5	174.3
85°	12.2	25.9	69.7	156.5	143.5
87.5°	4.9	19.5	64.1	128.1	118.4
90°	0.0	14.6	61.6	105.4	100.6
92.5°	0.0	14.6	64.1	90.8	86.0
95°	0.0	14.6	66.5	81.1	76.2
97.5°	0.0	14.6	64.1	71.4	68.9
100°	0.0	14.6	57.6	64.1	61.6
102.5°	0.0	14.6	49.5	60.0	56.8
105°	0.0	14.6	42.2	58.4	55.1
107.5°	0.0	13.8	37.3	60.0	54.3
110°	0.0	13.8	32.4	62.4	56.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	13.0	29.2	64.1	60.8
115°	0.0	13.0	26.8	64.1	64.1
117.5°	0.0	12.2	25.1	60.0	66.5
120°	0.0	12.2	23.5	56.0	67.3
122.5°	0.0	11.4	22.7	51.1	64.1
125°	0.0	10.5	21.9	45.4	60.0
127.5°	0.0	10.5	21.1	40.5	56.0
130°	0.0	9.7	19.5	35.7	51.1
132.5°	0.0	9.7	18.7	31.6	44.6
135°	0.0	8.9	17.8	28.4	39.7
137.5°	0.0	8.9	16.2	25.1	34.1
140°	0.0	8.9	16.2	21.9	29.2
142.5°	0.0	8.1	14.6	19.5	24.3
145°	0.0	7.3	13.8	16.2	19.5
147.5°	0.0	6.5	12.2	14.6	15.4
150°	0.0	5.7	10.5	12.2	12.2
152.5°	0.0	4.9	8.9	10.5	9.7
155°	0.0	4.1	7.3	8.9	8.1
157.5°	0.0	3.2	5.7	7.3	6.5
160°	0.0	2.4	4.9	5.7	5.7
162.5°	0.0	1.6	3.2	4.1	4.9
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)