

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: P231903

Luminaire Tested: **FVS4M-2-LD4-50-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231903
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-LD4-50-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

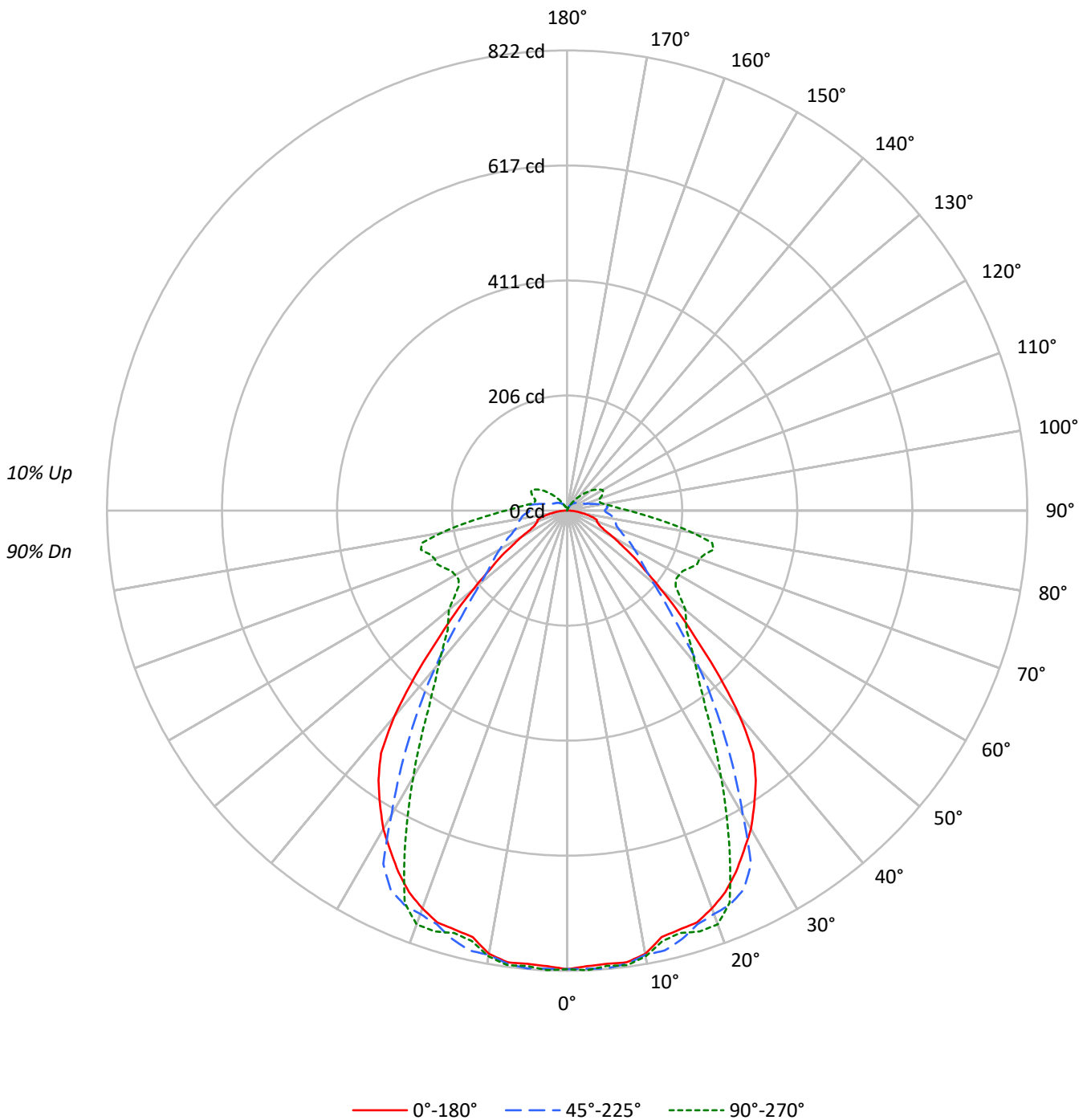
Lumens per Lamp: N/A
Luminaire Lumens: 1897.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

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°	14720	14720	14720
5°	14540	14194	13993
10°	14423	13527	13342
15°	14049	13023	12520
20°	13966	12433	12344
25°	13521	12035	10664
30°	12895	10131	8471
35°	12065	7967	6661
40°	10402	6099	5542
45°	7589	4511	4786
50°	5463	3532	4494
55°	4033	3005	3996
60°	2904	2688	4064
65°	2267	2409	4502
70°	2340	2208	4996
75°	2472	2202	5796
80°	1944	2286	5338
85°	1295	2360	4104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.6	4.1
10°-20°	223.0	11.8
20°-30°	326.9	17.2
30°-40°	314.3	16.6
40°-50°	225.3	11.9
50°-60°	163.2	8.6
60°-70°	142.5	7.5
70°-80°	134.0	7.1
80°-90°	98.1	5.2
90°-100°	59.2	3.1
100°-110°	42.2	2.2
110°-120°	36.1	1.9
120°-130°	26.5	1.4
130°-140°	15.9	0.8
140°-150°	8.2	0.4
150°-160°	3.2	0.2
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	627.5	33.1
0°-40°	941.9	49.6
0°-60°	1330.4	70.1
0°-90°	1705.0	89.9
90°-120°	137.6	7.3
90°-150°	188.3	9.9
90°-180°	192.0	10.1
0°-180°	1897.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	819	819	819	819	819	
5°	813	819	821	815	816	77
15°	775	794	792	800	781	220
25°	713	722	747	710	688	327
35°	588	582	489	446	431	363
45°	328	288	265	276	301	259
55°	147	150	164	208	237	132
65°	64	93	117	210	242	68
75°	49	52	90	208	270	49
85°	13	28	76	170	156	14
90°	0	16	67	115	110	1
95°	0	16	72	88	83	0
105°	0	16	46	64	60	0
115°	0	14	29	70	70	0
125°	0	12	24	50	65	0
135°	0	10	19	31	43	0
145°	0	8	15	18	21	0
155°	0	4	8	10	9	0
165°	0	2	3	3	4	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°	819.1	819.1	819.1	819.1	819.1
2.5°	814.6	817.3	819.1	819.9	821.7
5°	812.9	819.1	820.8	814.6	816.4
7.5°	813.8	812.9	816.4	813.8	819.1
10°	804.0	798.7	805.8	794.3	808.5
12.5°	780.2	800.5	804.9	797.0	787.2
15°	774.9	794.3	792.5	799.6	781.1
17.5°	771.3	774.9	774.9	791.7	788.1
20°	756.3	756.3	766.9	783.7	786.4
22.5°	737.8	736.9	761.6	764.3	758.1
25°	713.0	721.9	746.6	710.4	688.3
27.5°	683.9	699.8	711.3	638.8	617.6
30°	656.5	673.3	627.3	578.7	549.6
32.5°	622.0	643.2	556.6	505.4	487.7
35°	587.6	582.3	488.6	446.2	431.2
37.5°	546.0	492.1	425.9	394.9	387.9
40°	479.8	411.7	367.6	348.1	355.2
42.5°	402.9	341.1	312.8	311.9	326.9
45°	327.8	288.0	265.1	275.7	301.3
47.5°	271.3	242.1	230.6	249.2	288.0
50°	218.2	203.2	200.6	235.9	275.7
52.5°	174.9	173.2	179.4	226.2	254.5
55°	146.7	150.2	163.5	207.6	236.8
57.5°	114.9	131.6	152.0	202.3	229.7
60°	94.5	117.5	138.7	205.0	230.6
62.5°	74.2	104.3	128.1	207.6	233.3
65°	64.5	92.8	116.6	210.3	242.1
67.5°	60.1	81.3	106.0	211.2	250.9
70°	56.5	69.8	99.0	211.2	251.8
72.5°	55.7	60.1	92.8	210.3	258.0
75°	48.6	52.1	90.1	207.6	270.4
77.5°	38.9	46.8	88.4	207.6	265.1
80°	29.2	40.6	83.9	219.1	227.1
82.5°	21.2	34.5	81.3	198.8	190.0
85°	13.3	28.3	76.0	170.5	156.4
87.5°	5.3	21.2	69.8	139.6	129.0
90°	0.0	15.9	67.1	114.9	109.6
92.5°	0.0	15.9	69.8	99.0	93.7
95°	0.0	15.9	72.5	88.4	83.1
97.5°	0.0	15.9	69.8	77.8	75.1
100°	0.0	15.9	62.7	69.8	67.1
102.5°	0.0	15.9	53.9	65.4	61.8
105°	0.0	15.9	45.9	63.6	60.1
107.5°	0.0	15.0	40.6	65.4	59.2
110°	0.0	15.0	35.3	68.0	61.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	14.1	31.8	69.8	66.3
115°	0.0	14.1	29.2	69.8	69.8
117.5°	0.0	13.3	27.4	65.4	72.5
120°	0.0	13.3	25.6	61.0	73.3
122.5°	0.0	12.4	24.7	55.7	69.8
125°	0.0	11.5	23.9	49.5	65.4
127.5°	0.0	11.5	23.0	44.2	61.0
130°	0.0	10.6	21.2	38.9	55.7
132.5°	0.0	10.6	20.3	34.5	48.6
135°	0.0	9.7	19.4	30.9	43.3
137.5°	0.0	9.7	17.7	27.4	37.1
140°	0.0	9.7	17.7	23.9	31.8
142.5°	0.0	8.8	15.9	21.2	26.5
145°	0.0	8.0	15.0	17.7	21.2
147.5°	0.0	7.1	13.3	15.9	16.8
150°	0.0	6.2	11.5	13.3	13.3
152.5°	0.0	5.3	9.7	11.5	10.6
155°	0.0	4.4	8.0	9.7	8.8
157.5°	0.0	3.5	6.2	8.0	7.1
160°	0.0	2.7	5.3	6.2	6.2
162.5°	0.0	1.8	3.5	4.4	5.3
165°	0.0	1.8	2.7	2.7	3.5
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)