

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: P231900

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231900
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-LD4-30-1STD-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

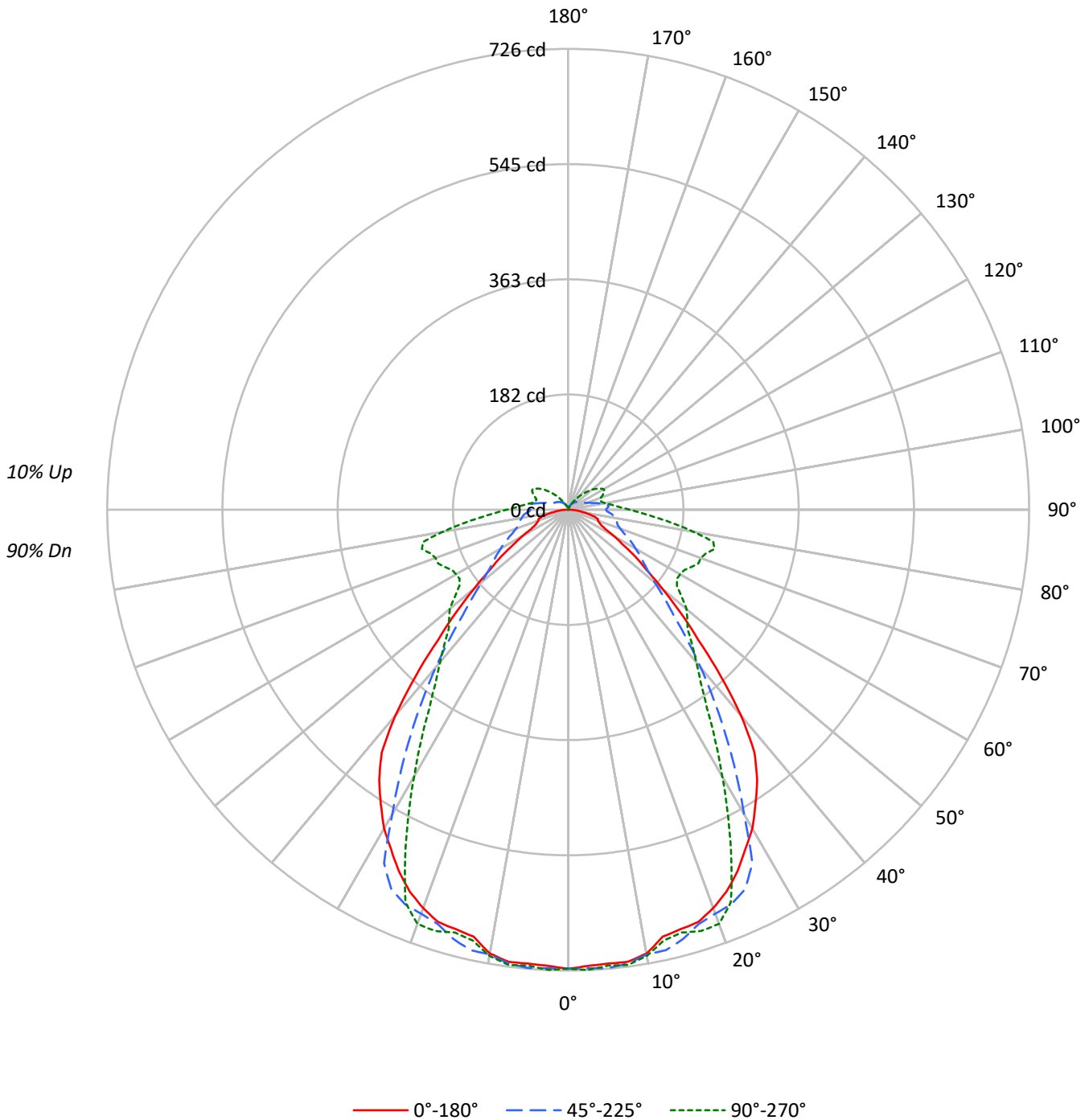
Lumens per Lamp: N/A
Luminaire Lumens: 1674.9 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

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°	12997	12997	12997
5°	12837	12534	12356
10°	12735	11944	11779
15°	12404	11499	11055
20°	12332	10979	10898
25°	11940	10626	9416
30°	11386	8946	7480
35°	10652	7034	5881
40°	9184	5384	4893
45°	6700	3982	4225
50°	4825	3118	3968
55°	3560	2652	3528
60°	2566	2374	3589
65°	2004	2128	3976
70°	2067	1949	4410
75°	2182	1945	5117
80°	1711	2019	4713
85°	1139	2084	3624



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.5	4.1
10°-20°	196.9	11.8
20°-30°	288.6	17.2
30°-40°	277.6	16.6
40°-50°	199.0	11.9
50°-60°	144.1	8.6
60°-70°	125.9	7.5
70°-80°	118.3	7.1
80°-90°	86.6	5.2
90°-100°	52.3	3.1
100°-110°	37.3	2.2
110°-120°	31.9	1.9
120°-130°	23.4	1.4
130°-140°	14.1	0.8
140°-150°	7.3	0.4
150°-160°	2.8	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	554.1	33.1
0°-40°	831.6	49.7
0°-60°	1174.7	70.1
0°-90°	1505.4	89.9
90°-120°	121.4	7.3
90°-150°	166.2	9.9
90°-180°	170.0	10.1
0°-180°	1674.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	723	723	723	723	723	
5°	718	723	725	719	721	68
15°	684	701	700	706	690	194
25°	630	637	659	627	608	289
35°	519	514	431	394	381	320
45°	289	254	234	243	266	228
55°	130	133	144	183	209	116
65°	57	82	103	186	214	60
75°	43	46	80	183	239	43
85°	12	25	67	151	138	12
90°	0	14	59	101	97	1
95°	0	14	64	78	73	0
105°	0	14	41	56	53	0
115°	0	12	26	62	62	0
125°	0	10	21	44	58	0
135°	0	9	17	27	38	0
145°	0	7	13	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°	723.2	723.2	723.2	723.2	723.2
2.5°	719.3	721.6	723.2	724.0	725.5
5°	717.7	723.2	724.8	719.3	720.9
7.5°	718.5	717.7	720.9	718.5	723.2
10°	709.9	705.3	711.5	701.4	713.8
12.5°	688.9	706.8	710.7	703.7	695.1
15°	684.2	701.4	699.8	706.0	689.7
17.5°	681.1	684.2	684.2	699.0	695.9
20°	667.8	667.8	677.2	692.0	694.3
22.5°	651.4	650.6	672.5	674.8	669.4
25°	629.6	637.4	659.2	627.2	607.7
27.5°	603.8	617.9	628.0	564.1	545.3
30°	579.7	594.5	553.9	511.0	485.3
32.5°	549.2	568.0	491.5	446.2	430.6
35°	518.8	514.1	431.4	394.0	380.7
37.5°	482.1	434.5	376.0	348.7	342.5
40°	423.6	363.6	324.5	307.4	313.6
42.5°	355.7	301.1	276.2	275.4	288.7
45°	289.4	254.3	234.0	243.4	266.0
47.5°	239.5	213.8	203.6	220.0	254.3
50°	192.7	179.4	177.1	208.3	243.4
52.5°	154.5	152.9	158.4	199.7	224.7
55°	129.5	132.6	144.3	183.3	209.1
57.5°	101.4	116.2	134.2	178.7	202.8
60°	83.5	103.8	122.5	181.0	203.6
62.5°	65.5	92.1	113.1	183.3	206.0
65°	57.0	81.9	103.0	185.7	213.8
67.5°	53.1	71.8	93.6	186.5	221.6
70°	49.9	61.6	87.4	186.5	222.3
72.5°	49.1	53.1	81.9	185.7	227.8
75°	42.9	46.0	79.6	183.3	238.7
77.5°	34.3	41.3	78.0	183.3	234.0
80°	25.7	35.9	74.1	193.5	200.5
82.5°	18.7	30.4	71.8	175.5	167.7
85°	11.7	25.0	67.1	150.6	138.1
87.5°	4.7	18.7	61.6	123.3	113.9
90°	0.0	14.0	59.3	101.4	96.7
92.5°	0.0	14.0	61.6	87.4	82.7
95°	0.0	14.0	64.0	78.0	73.3
97.5°	0.0	14.0	61.6	68.7	66.3
100°	0.0	14.0	55.4	61.6	59.3
102.5°	0.0	14.0	47.6	57.7	54.6
105°	0.0	14.0	40.6	56.2	53.1
107.5°	0.0	13.3	35.9	57.7	52.3
110°	0.0	13.3	31.2	60.1	54.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	12.5	28.1	61.6	58.5
115°	0.0	12.5	25.7	61.6	61.6
117.5°	0.0	11.7	24.2	57.7	64.0
120°	0.0	11.7	22.6	53.8	64.8
122.5°	0.0	10.9	21.8	49.1	61.6
125°	0.0	10.1	21.1	43.7	57.7
127.5°	0.0	10.1	20.3	39.0	53.8
130°	0.0	9.4	18.7	34.3	49.1
132.5°	0.0	9.4	17.9	30.4	42.9
135°	0.0	8.6	17.2	27.3	38.2
137.5°	0.0	8.6	15.6	24.2	32.8
140°	0.0	8.6	15.6	21.1	28.1
142.5°	0.0	7.8	14.0	18.7	23.4
145°	0.0	7.0	13.3	15.6	18.7
147.5°	0.0	6.2	11.7	14.0	14.8
150°	0.0	5.5	10.1	11.7	11.7
152.5°	0.0	4.7	8.6	10.1	9.4
155°	0.0	3.9	7.0	8.6	7.8
157.5°	0.0	3.1	5.5	7.0	6.2
160°	0.0	2.3	4.7	5.5	5.5
162.5°	0.0	1.6	3.1	3.9	4.7
165°	0.0	1.6	2.3	2.3	3.1
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)