

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: P231936

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231936
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-10)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-30-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

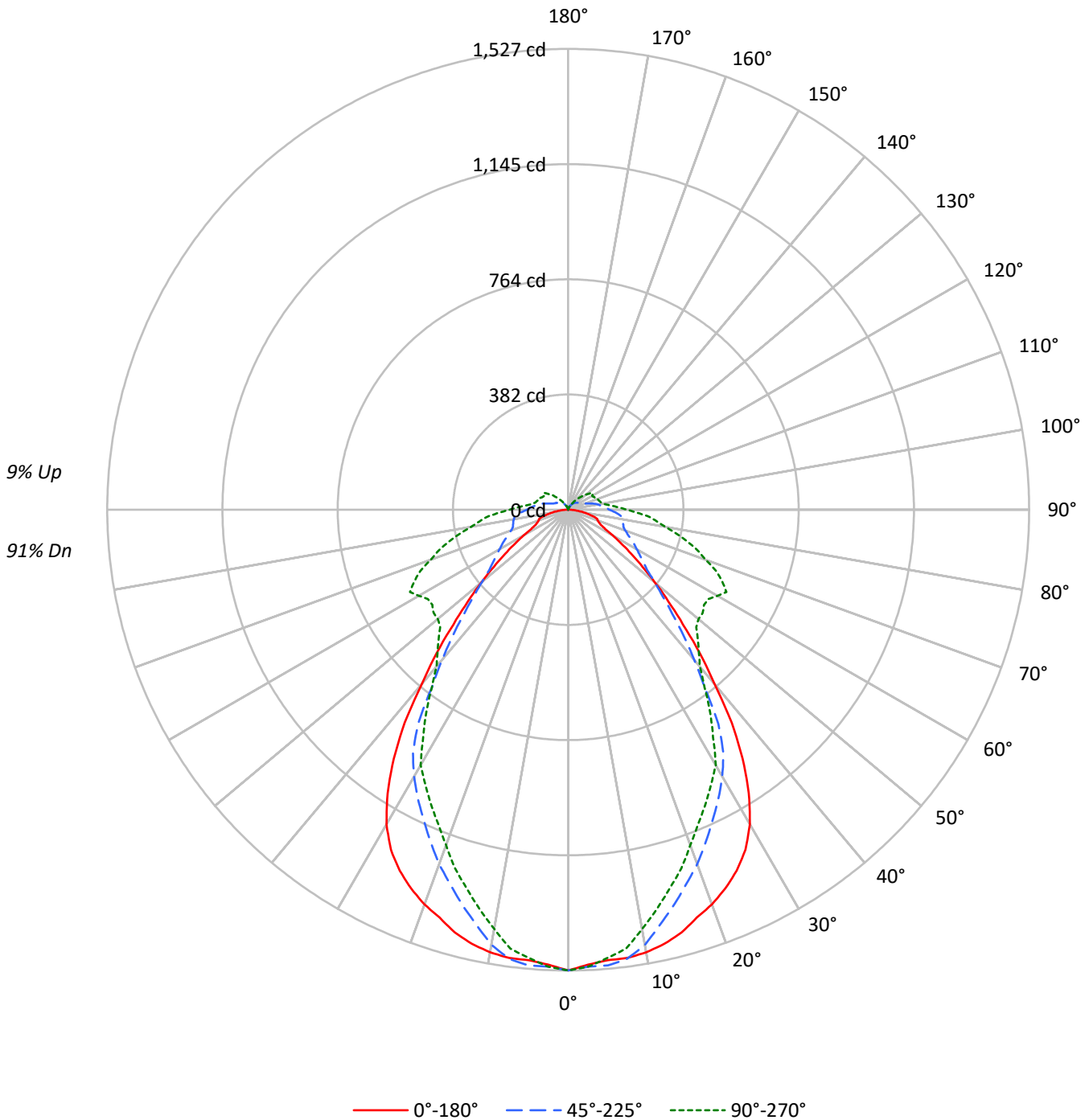
Lumens per Lamp: N/A
Luminaire Lumens: 3376.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.98 / 1.07
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 33.9
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	106	106	106	99	99	99	93	93	93	91
1	106	101	96	92	102	98	93	90	92	88	85	86	83	81	81	79	77	74
2	97	88	81	76	93	86	79	74	81	75	71	76	72	68	72	68	65	62
3	89	78	70	64	85	76	69	63	72	66	61	68	63	58	64	60	56	54
4	82	70	62	55	79	68	60	54	65	58	53	61	56	51	58	53	49	47
5	76	63	55	48	73	62	54	48	59	52	46	56	50	45	53	48	44	41
6	70	58	49	43	68	56	48	42	53	47	41	51	45	40	49	43	39	37
7	66	53	44	39	63	51	44	38	49	42	37	47	41	36	45	40	35	33
8	61	49	40	35	59	47	40	34	45	39	34	43	37	33	42	36	32	30
9	58	45	37	32	56	44	36	31	42	35	31	40	34	30	39	33	30	28
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	36	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27435	27435	27435
5°	26801	26210	25561
10°	26711	24575	23278
15°	26299	22266	20825
20°	25702	20253	18563
25°	25027	18267	16671
30°	23643	16478	15061
35°	20676	14132	12663
40°	16345	10766	10578
45°	12446	8308	9647
50°	9420	6553	9186
55°	7002	5589	9270
60°	5249	5087	10055
65°	4186	4727	10464
70°	4282	4474	9608
75°	4466	4616	8769
80°	3441	4975	7663
85°	2288	5183	7095



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	4.2
10°-20°	383.8	11.4
20°-30°	533.0	15.8
30°-40°	546.4	16.2
40°-50°	410.8	12.2
50°-60°	322.0	9.5
60°-70°	307.6	9.1
70°-80°	247.9	7.3
80°-90°	167.9	5.0
90°-100°	103.6	3.1
100°-110°	72.6	2.2
110°-120°	54.6	1.6
120°-130°	41.1	1.2
130°-140°	24.6	0.7
140°-150°	12.6	0.4
150°-160°	4.7	0.1
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	1059.0	31.4
0°-40°	1605.4	47.6
0°-60°	2338.1	69.3
0°-90°	3061.5	90.7
90°-120°	230.8	6.8
90°-150°	309.1	9.2
90°-180°	315.0	9.3
0°-180°	3376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1498	1509	1516	1499	1491	143
15°	1451	1423	1355	1309	1299	408
25°	1320	1213	1133	1092	1076	605
35°	1007	939	867	819	820	621
45°	538	503	488	534	607	421
55°	255	261	304	443	549	233
65°	119	166	229	513	563	125
75°	88	97	189	400	409	88
85°	24	54	167	249	270	25
90°	0	31	136	203	194	1
95°	0	30	118	152	146	0
105°	0	28	78	113	108	0
115°	0	24	49	93	96	0
125°	0	20	41	75	97	0
135°	1	16	32	46	62	0
145°	1	12	24	27	31	1
155°	1	6	12	14	12	0
165°	1	2	3	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°	1526.6	1526.6	1526.6	1526.6	1526.6
2.5°	1508.6	1511.7	1515.6	1518.0	1515.6
5°	1498.4	1509.3	1515.6	1499.2	1491.3
7.5°	1498.4	1499.9	1500.7	1477.2	1467.0
10°	1489.0	1484.3	1463.9	1419.2	1410.6
12.5°	1473.3	1463.1	1407.5	1364.4	1355.7
15°	1450.6	1423.1	1355.0	1308.7	1299.3
17.5°	1416.9	1375.3	1300.9	1255.4	1246.0
20°	1391.8	1326.8	1249.2	1204.5	1182.6
22.5°	1358.9	1271.1	1191.2	1147.3	1126.1
25°	1319.7	1213.1	1133.2	1092.4	1076.0
27.5°	1271.1	1148.9	1078.3	1035.2	1025.0
30°	1203.7	1090.9	1020.3	984.3	977.2
32.5°	1113.6	1019.6	956.9	902.0	893.4
35°	1007.0	938.8	866.7	818.9	819.7
37.5°	889.5	849.5	742.1	741.3	741.3
40°	753.9	714.7	648.9	657.5	677.9
42.5°	645.0	597.9	564.2	589.3	641.0
45°	537.6	503.1	488.2	533.7	607.3
47.5°	449.8	423.2	424.0	492.9	575.2
50°	376.2	358.9	372.2	463.9	563.5
52.5°	310.3	302.5	330.7	449.0	561.9
55°	254.7	261.0	304.1	442.8	549.4
57.5°	206.9	228.8	281.3	453.7	550.9
60°	170.8	203.8	262.5	467.8	570.5
62.5°	137.9	182.6	246.9	486.7	590.9
65°	119.1	166.1	228.8	513.3	562.7
67.5°	110.5	146.5	213.2	536.8	530.5
70°	103.4	127.7	200.6	504.7	484.3
72.5°	101.1	111.3	192.0	448.3	449.8
75°	87.8	97.2	188.9	399.7	409.1
77.5°	68.2	87.8	186.5	355.0	367.5
80°	51.7	76.8	182.6	316.6	326.0
82.5°	37.6	65.0	178.7	281.3	295.4
85°	23.5	54.1	166.9	249.2	270.4
87.5°	10.2	40.8	151.2	227.3	228.0
90°	0.0	31.3	136.4	203.0	193.6
92.5°	0.0	30.6	127.7	174.8	167.7
95°	0.0	29.8	117.6	152.0	146.5
97.5°	0.0	29.8	108.1	137.1	127.7
100°	0.0	29.0	100.3	125.4	117.6
102.5°	0.0	28.2	90.9	116.8	111.3
105°	0.0	28.2	78.4	112.8	108.1
107.5°	0.0	27.4	68.2	108.1	105.0
110°	0.0	26.6	59.6	101.1	103.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	25.9	54.1	96.4	101.9
115°	0.0	24.3	49.4	93.3	96.4
117.5°	0.0	23.5	47.0	95.6	93.3
120°	0.0	22.7	44.7	94.8	91.7
122.5°	0.0	21.9	43.1	84.6	95.6
125°	0.0	20.4	40.8	75.2	97.2
127.5°	0.0	19.6	38.4	66.6	87.0
130°	0.0	18.0	36.0	58.8	78.4
132.5°	0.0	17.2	33.7	51.7	71.3
135°	0.8	16.5	32.1	45.5	61.9
137.5°	0.8	15.7	30.6	40.8	53.3
140°	0.8	14.9	28.2	36.0	44.7
142.5°	0.8	13.3	26.6	31.3	37.6
145°	0.8	11.8	24.3	27.4	30.6
147.5°	0.8	11.0	21.2	23.5	24.3
150°	0.8	9.4	18.0	20.4	18.8
152.5°	0.8	7.8	14.9	17.2	14.9
155°	0.8	6.3	11.8	14.1	12.5
157.5°	0.8	4.7	9.4	11.8	10.2
160°	0.8	3.1	7.8	7.8	8.6
162.5°	0.8	2.4	5.5	4.7	6.3
165°	0.8	1.6	3.1	1.6	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)