

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: P231932

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231932
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-LD4-30-2LO-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

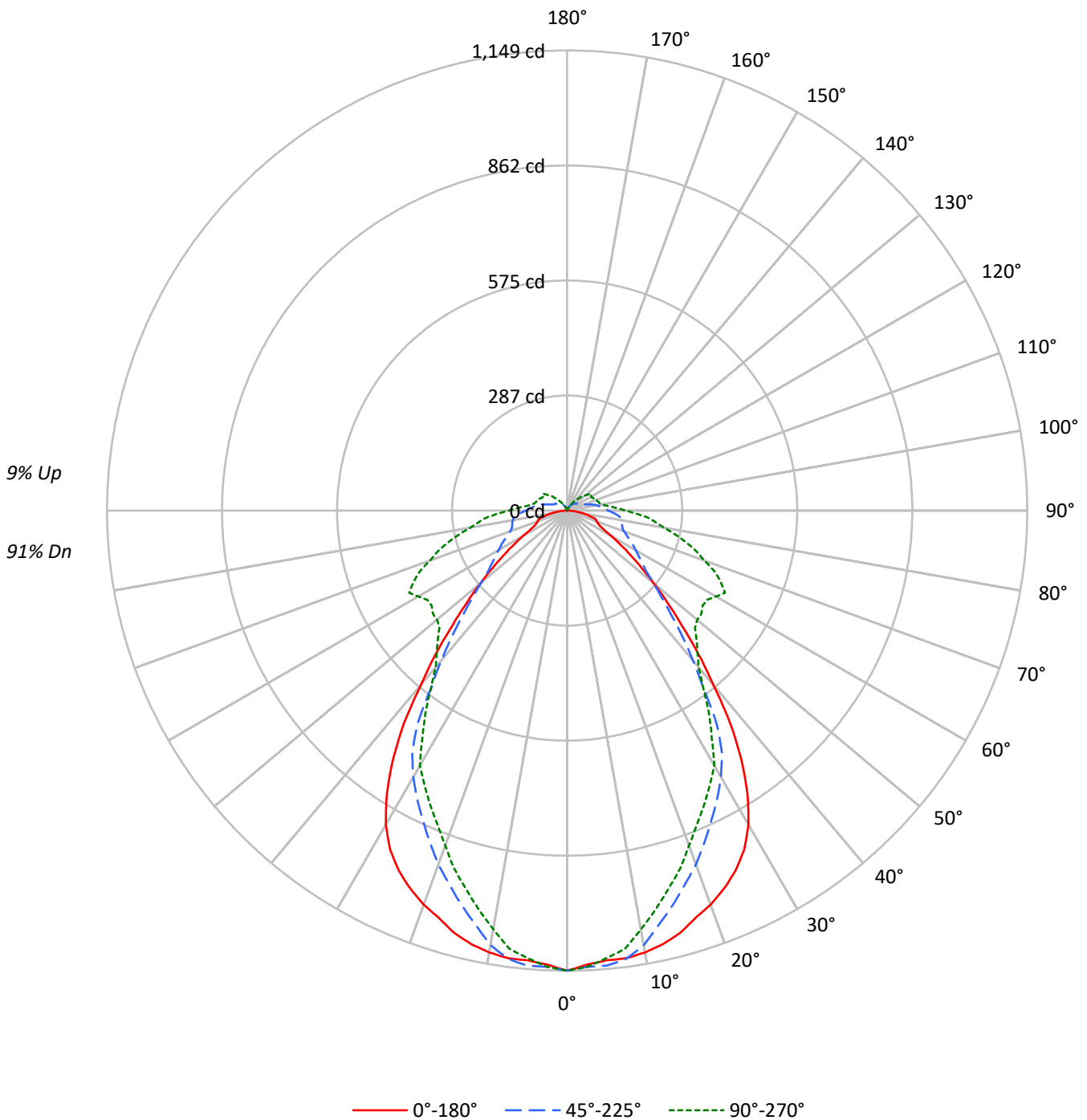
Lumens per Lamp: N/A
Luminaire Lumens: 2540.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.98 / 1.07
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 24.1
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°	20642	20642	20642
5°	20164	19719	19231
10°	20097	18490	17514
15°	19787	16751	15669
20°	19337	15237	13965
25°	18829	13744	12542
30°	17788	12399	11331
35°	15555	10633	9527
40°	12297	8099	7958
45°	9364	6251	7258
50°	7086	4931	6910
55°	5267	4205	6974
60°	3949	3827	7565
65°	3149	3558	7872
70°	3222	3366	7229
75°	3357	3472	6598
80°	2589	3744	5766
85°	1723	3900	5337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	4.2
10°-20°	288.7	11.4
20°-30°	401.0	15.8
30°-40°	411.1	16.2
40°-50°	309.1	12.2
50°-60°	242.2	9.5
60°-70°	231.4	9.1
70°-80°	186.5	7.3
80°-90°	126.3	5.0
90°-100°	78.0	3.1
100°-110°	54.7	2.2
110°-120°	41.0	1.6
120°-130°	30.9	1.2
130°-140°	18.5	0.7
140°-150°	9.5	0.4
150°-160°	3.5	0.1
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	796.7	31.4
0°-40°	1207.8	47.6
0°-60°	1759.1	69.3
0°-90°	2303.4	90.7
90°-120°	173.7	6.8
90°-150°	232.5	9.2
90°-180°	237.0	9.3
0°-180°	2540.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1149	1149	1149	1149	1149	
5°	1127	1136	1140	1128	1122	108
15°	1091	1071	1019	985	978	307
25°	993	913	853	822	810	455
35°	758	706	652	616	617	467
45°	404	378	367	402	457	317
55°	192	196	229	333	413	175
65°	90	125	172	386	423	94
75°	66	73	142	301	308	66
85°	18	41	126	188	203	19
90°	0	24	103	153	146	1
95°	0	22	88	114	110	0
105°	0	21	59	85	81	0
115°	0	18	37	70	72	0
125°	0	15	31	57	73	0
135°	1	12	24	34	47	0
145°	1	9	18	21	23	0
155°	1	5	9	11	9	0
165°	1	1	2	1	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°	1148.6	1148.6	1148.6	1148.6	1148.6
2.5°	1135.0	1137.4	1140.3	1142.1	1140.3
5°	1127.3	1135.6	1140.3	1127.9	1122.0
7.5°	1127.3	1128.5	1129.1	1111.4	1103.7
10°	1120.3	1116.7	1101.4	1067.8	1061.3
12.5°	1108.5	1100.8	1058.9	1026.5	1020.0
15°	1091.4	1070.7	1019.4	984.6	977.6
17.5°	1066.0	1034.8	978.7	944.6	937.5
20°	1047.1	998.2	939.8	906.2	889.7
22.5°	1022.4	956.3	896.2	863.2	847.3
25°	992.9	912.7	852.6	821.9	809.5
27.5°	956.3	864.4	811.3	778.9	771.2
30°	905.6	820.7	767.7	740.5	735.2
32.5°	837.8	767.1	719.9	678.6	672.2
35°	757.6	706.4	652.1	616.1	616.7
37.5°	669.2	639.1	558.4	557.8	557.8
40°	567.2	537.7	488.2	494.7	510.0
42.5°	485.2	449.9	424.5	443.4	482.3
45°	404.5	378.5	367.3	401.5	456.9
47.5°	338.4	318.4	319.0	370.9	432.8
50°	283.0	270.0	280.1	349.0	423.9
52.5°	233.5	227.6	248.8	337.8	422.7
55°	191.6	196.3	228.8	333.1	413.3
57.5°	155.7	172.2	211.7	341.4	414.5
60°	128.5	153.3	197.5	352.0	429.2
62.5°	103.8	137.4	185.7	366.1	444.6
65°	89.6	125.0	172.2	386.2	423.3
67.5°	83.1	110.3	160.4	403.9	399.2
70°	77.8	96.1	150.9	379.7	364.4
72.5°	76.1	83.7	144.5	337.3	338.4
75°	66.0	73.1	142.1	300.7	307.8
77.5°	51.3	66.0	140.3	267.1	276.5
80°	38.9	57.8	137.4	238.2	245.3
82.5°	28.3	48.9	134.4	211.7	222.3
85°	17.7	40.7	125.6	187.5	203.4
87.5°	7.7	30.7	113.8	171.0	171.6
90°	0.0	23.6	102.6	152.7	145.6
92.5°	0.0	23.0	96.1	131.5	126.2
95°	0.0	22.4	88.4	114.4	110.3
97.5°	0.0	22.4	81.4	103.2	96.1
100°	0.0	21.8	75.5	94.3	88.4
102.5°	0.0	21.2	68.4	87.9	83.7
105°	0.0	21.2	59.0	84.9	81.4
107.5°	0.0	20.6	51.3	81.4	79.0
110°	0.0	20.0	44.8	76.1	77.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	19.5	40.7	72.5	76.6
115°	0.0	18.3	37.1	70.2	72.5
117.5°	0.0	17.7	35.4	71.9	70.2
120°	0.0	17.1	33.6	71.3	69.0
122.5°	0.0	16.5	32.4	63.7	71.9
125°	0.0	15.3	30.7	56.6	73.1
127.5°	0.0	14.7	28.9	50.1	65.4
130°	0.0	13.6	27.1	44.2	59.0
132.5°	0.0	13.0	25.4	38.9	53.7
135°	0.6	12.4	24.2	34.2	46.6
137.5°	0.6	11.8	23.0	30.7	40.1
140°	0.6	11.2	21.2	27.1	33.6
142.5°	0.6	10.0	20.0	23.6	28.3
145°	0.6	8.8	18.3	20.6	23.0
147.5°	0.6	8.3	15.9	17.7	18.3
150°	0.6	7.1	13.6	15.3	14.2
152.5°	0.6	5.9	11.2	13.0	11.2
155°	0.6	4.7	8.8	10.6	9.4
157.5°	0.6	3.5	7.1	8.8	7.7
160°	0.6	2.4	5.9	5.9	6.5
162.5°	0.6	1.8	4.1	3.5	4.7
165°	0.6	1.2	2.4	1.2	2.4
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)