

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: P231934

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231934
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-LD4-40-2LO-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

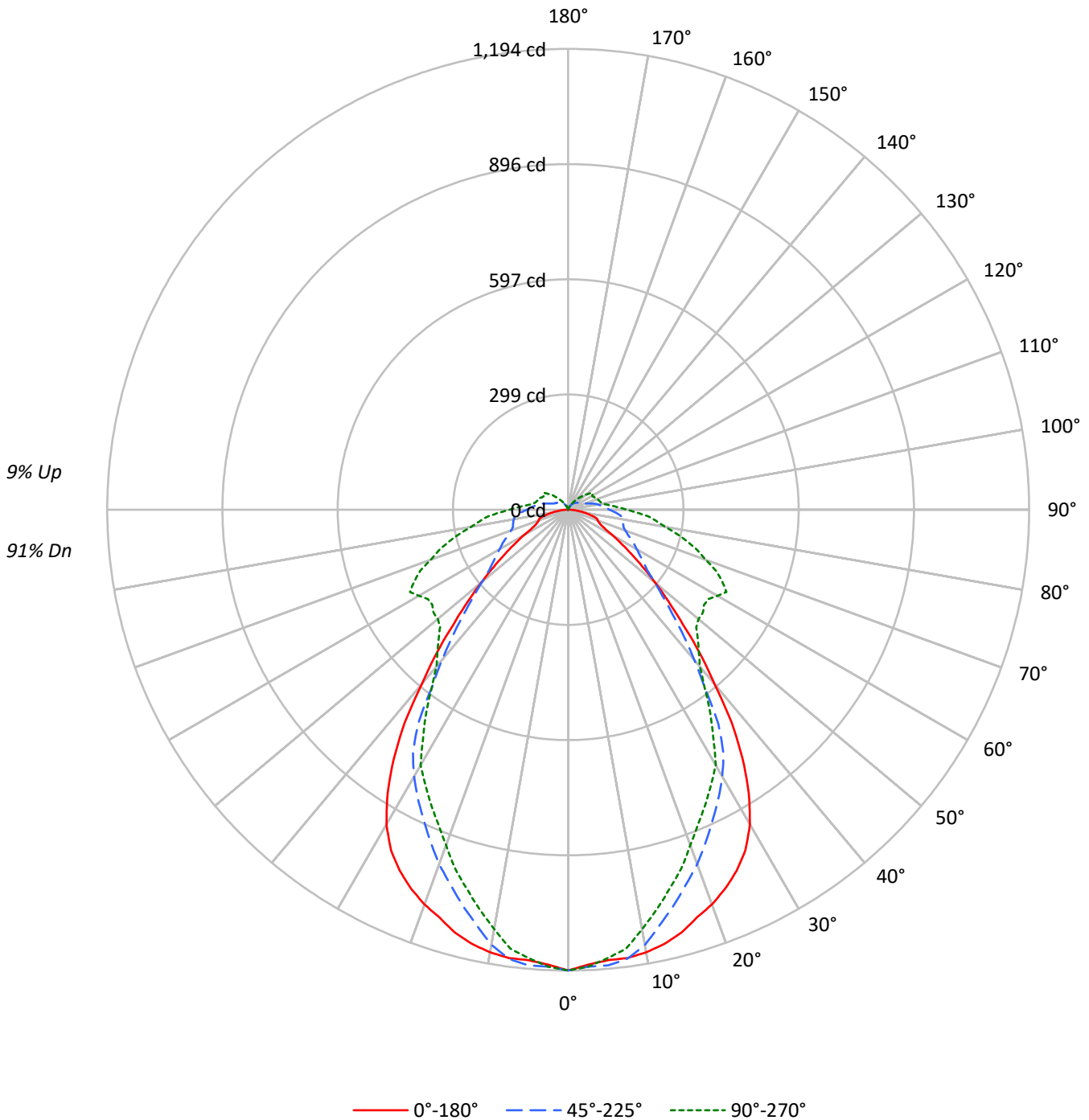
Lumens per Lamp: N/A
Luminaire Lumens: 2640.0 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.98 / 1.07
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Direct

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°	21454	21454	21454
5°	20958	20496	19989
10°	20888	19217	18204
15°	20565	17412	16286
20°	20099	15837	14515
25°	19571	14284	13037
30°	18489	12886	11778
35°	16169	11052	9902
40°	12780	8418	8272
45°	9732	6497	7543
50°	7366	5125	7182
55°	5476	4371	7249
60°	4106	3979	7863
65°	3272	3696	8182
70°	3350	3500	7513
75°	3489	3609	6857
80°	2689	3891	5992
85°	1791	4052	5547



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.2	4.2
10°-20°	300.1	11.4
20°-30°	416.8	15.8
30°-40°	427.3	16.2
40°-50°	321.2	12.2
50°-60°	251.8	9.5
60°-70°	240.6	9.1
70°-80°	193.8	7.3
80°-90°	131.3	5.0
90°-100°	81.0	3.1
100°-110°	56.8	2.2
110°-120°	42.7	1.6
120°-130°	32.1	1.2
130°-140°	19.2	0.7
140°-150°	9.9	0.4
150°-160°	3.7	0.1
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	828.1	31.4
0°-40°	1255.4	47.6
0°-60°	1828.4	69.3
0°-90°	2394.0	90.7
90°-120°	180.5	6.8
90°-150°	241.7	9.2
90°-180°	246.0	9.3
0°-180°	2640.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1172	1180	1185	1172	1166	112
15°	1134	1113	1060	1023	1016	319
25°	1032	949	886	854	841	473
35°	788	734	678	640	641	486
45°	420	393	382	417	475	330
55°	199	204	238	346	430	182
65°	93	130	179	401	440	98
75°	69	76	148	312	320	69
85°	18	42	130	195	211	20
90°	0	24	107	159	151	1
95°	0	23	92	119	115	0
105°	0	22	61	88	85	0
115°	0	19	39	73	75	0
125°	0	16	32	59	76	0
135°	1	13	25	36	48	0
145°	1	9	19	21	24	0
155°	1	5	9	11	10	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°	1193.8	1193.8	1193.8	1193.8	1193.8
2.5°	1179.7	1182.1	1185.2	1187.0	1185.2
5°	1171.7	1180.3	1185.2	1172.3	1166.2
7.5°	1171.7	1172.9	1173.6	1155.2	1147.2
10°	1164.4	1160.7	1144.7	1109.8	1103.1
12.5°	1152.1	1144.1	1100.6	1066.9	1060.2
15°	1134.3	1112.9	1059.6	1023.4	1016.1
17.5°	1108.0	1075.5	1017.3	981.7	974.4
20°	1088.4	1037.5	976.8	941.9	924.7
22.5°	1062.6	994.0	931.5	897.2	880.6
25°	1032.0	948.6	886.1	854.3	841.4
27.5°	994.0	898.4	843.2	809.5	801.6
30°	941.3	853.0	797.9	769.7	764.2
32.5°	870.8	797.3	748.3	705.4	698.6
35°	787.5	734.2	677.8	640.4	641.0
37.5°	695.6	664.3	580.3	579.7	579.7
40°	589.5	558.9	507.4	514.2	530.1
42.5°	504.4	467.6	441.2	460.8	501.3
45°	420.4	393.4	381.8	417.3	474.9
47.5°	351.8	330.9	331.5	385.5	449.8
50°	294.2	280.7	291.1	362.8	440.6
52.5°	242.7	236.5	258.6	351.1	439.4
55°	199.2	204.1	237.8	346.2	429.6
57.5°	161.8	178.9	220.0	354.8	430.8
60°	133.6	159.3	205.3	365.9	446.1
62.5°	107.9	142.8	193.0	380.6	462.1
65°	93.1	129.9	178.9	401.4	440.0
67.5°	86.4	114.6	166.7	419.8	414.9
70°	80.9	99.9	156.9	394.7	378.7
72.5°	79.1	87.0	150.1	350.5	351.8
75°	68.6	76.0	147.7	312.5	319.9
77.5°	53.3	68.6	145.9	277.6	287.4
80°	40.4	60.1	142.8	247.6	254.9
82.5°	29.4	50.9	139.7	220.0	231.0
85°	18.4	42.3	130.5	194.9	211.4
87.5°	8.0	31.9	118.3	177.7	178.3
90°	0.0	24.5	106.6	158.7	151.4
92.5°	0.0	23.9	99.9	136.7	131.1
95°	0.0	23.3	91.9	118.9	114.6
97.5°	0.0	23.3	84.6	107.2	99.9
100°	0.0	22.7	78.4	98.1	91.9
102.5°	0.0	22.1	71.1	91.3	87.0
105°	0.0	22.1	61.3	88.2	84.6
107.5°	0.0	21.4	53.3	84.6	82.1
110°	0.0	20.8	46.6	79.1	80.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	20.2	42.3	75.4	79.7
115°	0.0	19.0	38.6	72.9	75.4
117.5°	0.0	18.4	36.8	74.8	72.9
120°	0.0	17.8	34.9	74.2	71.7
122.5°	0.0	17.2	33.7	66.2	74.8
125°	0.0	15.9	31.9	58.8	76.0
127.5°	0.0	15.3	30.0	52.1	68.0
130°	0.0	14.1	28.2	46.0	61.3
132.5°	0.0	13.5	26.4	40.4	55.8
135°	0.6	12.9	25.1	35.5	48.4
137.5°	0.6	12.3	23.9	31.9	41.7
140°	0.6	11.6	22.1	28.2	34.9
142.5°	0.6	10.4	20.8	24.5	29.4
145°	0.6	9.2	19.0	21.4	23.9
147.5°	0.6	8.6	16.5	18.4	19.0
150°	0.6	7.4	14.1	15.9	14.7
152.5°	0.6	6.1	11.6	13.5	11.6
155°	0.6	4.9	9.2	11.0	9.8
157.5°	0.6	3.7	7.4	9.2	8.0
160°	0.6	2.5	6.1	6.1	6.7
162.5°	0.6	1.8	4.3	3.7	4.9
165°	0.6	1.2	2.5	1.2	2.5
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)