

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: P231971

Luminaire Tested: **FVS4M-4-LD4-50-1LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231971
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-50-1LO-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

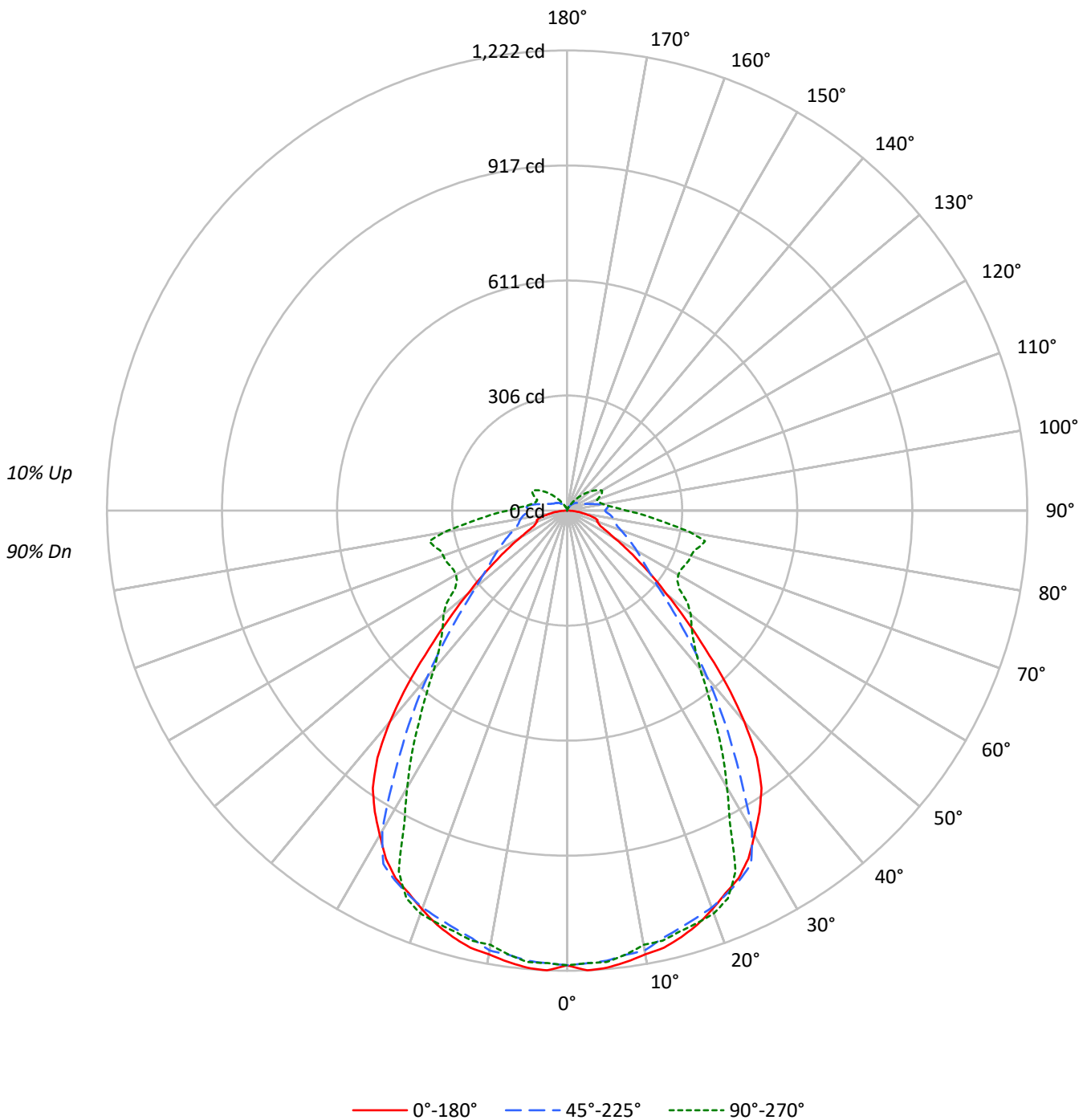
Lumens per Lamp: N/A
Luminaire Lumens: 2850.0 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 23.6
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	90
1	106	101	97	93	102	98	94	90	92	88	85	86	84	81	81	79	77	74
2	97	89	82	77	94	86	80	75	81	76	72	76	72	69	72	69	66	63
3	89	79	71	65	86	77	70	64	73	67	62	69	64	59	65	61	57	55
4	82	71	63	56	79	69	61	56	65	59	54	62	57	52	59	54	50	48
5	76	64	56	50	74	63	55	49	60	53	48	57	51	46	54	49	45	43
6	71	59	50	44	69	57	49	44	54	48	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	35	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	41	34	30	40	33	29	38	33	29	37	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10968	10968	10968
5°	11065	10521	10426
10°	10944	10122	9768
15°	10881	9624	9375
20°	10700	9294	9034
25°	10553	8941	8286
30°	10147	8140	6613
35°	9645	6407	5358
40°	8331	4955	4331
45°	6334	3739	3782
50°	4600	2883	3533
55°	3357	2424	3104
60°	2413	2155	3035
65°	1903	1949	3234
70°	1981	1779	3510
75°	2255	1728	3965
80°	1810	1814	3939
85°	1279	1876	3019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.6	4.0
10°-20°	327.8	11.5
20°-30°	488.1	17.1
30°-40°	487.9	17.1
40°-50°	355.2	12.5
50°-60°	252.5	8.9
60°-70°	211.3	7.4
70°-80°	193.2	6.8
80°-90°	142.7	5.0
90°-100°	86.3	3.0
100°-110°	61.0	2.1
110°-120°	52.5	1.8
120°-130°	38.3	1.3
130°-140°	22.7	0.8
140°-150°	11.3	0.4
150°-160°	4.1	0.1
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	930.4	32.6
0°-40°	1418.4	49.8
0°-60°	2026.0	71.1
0°-90°	2573.2	90.3
90°-120°	199.8	7.0
90°-150°	272.0	9.5
90°-180°	277.0	9.7
0°-180°	2850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1207	1207	1207	1207	1207	
5°	1219	1210	1200	1207	1203	116
15°	1172	1165	1149	1160	1157	330
25°	1077	1065	1083	1090	1058	494
35°	900	895	764	704	686	553
45°	517	456	425	439	471	404
55°	227	232	253	326	364	208
65°	98	142	180	306	344	104
75°	76	79	134	296	366	76
85°	19	42	112	245	228	22
90°	1	25	101	168	157	1
95°	0	24	108	124	119	0
105°	0	23	68	89	87	0
115°	0	20	43	102	99	0
125°	1	17	35	70	94	1
135°	1	13	28	44	61	1
145°	1	10	19	26	30	0
155°	1	5	10	12	13	0
165°	1	2	3	2	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°	1207.4	1207.4	1207.4	1207.4	1207.4
2.5°	1222.0	1214.7	1203.4	1206.7	1202.8
5°	1218.6	1210.0	1200.1	1206.7	1203.4
7.5°	1208.7	1208.1	1190.2	1197.5	1189.5
10°	1196.8	1200.8	1186.2	1185.6	1171.0
12.5°	1188.9	1182.9	1163.7	1176.3	1169.7
15°	1172.3	1165.1	1149.2	1159.8	1157.1
17.5°	1152.5	1145.9	1135.3	1141.9	1148.5
20°	1126.7	1121.4	1122.1	1139.3	1138.6
22.5°	1099.6	1100.9	1103.5	1122.1	1114.8
25°	1077.1	1065.2	1083.0	1089.6	1057.9
27.5°	1042.0	1038.0	1057.9	986.4	935.5
30°	995.0	1001.0	981.8	875.9	848.8
32.5°	950.0	958.6	866.7	790.6	769.4
35°	899.8	895.1	763.5	703.9	686.1
37.5°	827.6	786.0	668.9	625.2	614.0
40°	731.7	651.7	578.9	551.1	549.1
42.5°	626.5	543.2	495.5	491.6	504.8
45°	517.4	455.8	424.7	439.3	471.0
47.5°	425.4	380.4	363.9	397.6	447.2
50°	344.7	318.2	315.6	369.2	428.7
52.5°	282.5	269.9	280.5	352.6	402.9
55°	226.9	231.6	253.4	326.2	363.9
57.5°	182.6	201.8	232.2	307.6	346.7
60°	144.2	177.3	213.0	301.0	340.7
62.5°	117.1	158.8	195.8	303.7	340.1
65°	97.9	142.2	180.0	306.3	344.0
67.5°	90.6	124.4	164.7	307.0	348.7
70°	84.7	107.2	151.5	307.0	350.0
72.5°	84.7	92.0	140.3	304.3	353.3
75°	76.1	79.4	133.6	296.4	365.9
77.5°	60.9	70.1	129.7	290.4	375.1
80°	44.3	61.5	125.0	300.4	331.5
82.5°	33.7	51.6	119.7	283.8	272.6
85°	19.2	42.3	112.5	244.8	227.6
87.5°	8.6	32.4	104.5	201.8	191.2
90°	0.7	25.1	100.6	168.0	156.8
92.5°	0.0	23.8	104.5	140.9	135.6
95°	0.0	24.5	108.5	124.4	119.1
97.5°	0.0	24.5	103.2	111.1	105.9
100°	0.0	24.5	92.0	101.2	97.3
102.5°	0.0	23.8	78.7	93.3	91.3
105°	0.0	23.2	67.5	89.3	86.7
107.5°	0.0	23.2	58.9	92.0	84.7
110°	0.0	22.5	51.6	97.9	84.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	21.8	47.0	101.9	92.0
115°	0.0	20.5	43.0	101.9	99.2
117.5°	0.0	19.8	40.4	95.3	104.5
120°	0.0	19.2	38.4	87.3	106.5
122.5°	0.7	17.9	37.0	78.7	100.6
125°	0.7	17.2	35.1	70.1	93.9
127.5°	0.7	15.9	33.7	62.9	86.7
130°	0.7	15.2	31.8	55.6	78.1
132.5°	0.7	14.6	29.8	49.0	69.5
135°	0.7	13.2	27.8	43.7	60.9
137.5°	0.7	12.6	25.8	39.0	52.9
140°	0.7	11.9	23.8	34.4	44.3
142.5°	0.7	11.2	21.2	30.4	37.0
145°	0.7	9.9	19.2	26.5	30.4
147.5°	0.7	9.3	16.5	21.8	24.5
150°	0.7	7.9	14.6	18.5	19.2
152.5°	0.7	6.6	11.9	15.2	15.2
155°	0.7	5.3	9.9	11.9	12.6
157.5°	0.7	4.6	7.9	9.3	10.6
160°	0.7	4.0	6.0	6.6	8.6
162.5°	0.7	2.6	4.6	4.0	6.6
165°	0.7	2.0	3.3	2.0	4.0
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)