

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: P232044

Luminaire Tested: **FVS4M-3-LD4-30-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232044
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-25)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-3-LD4-30-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

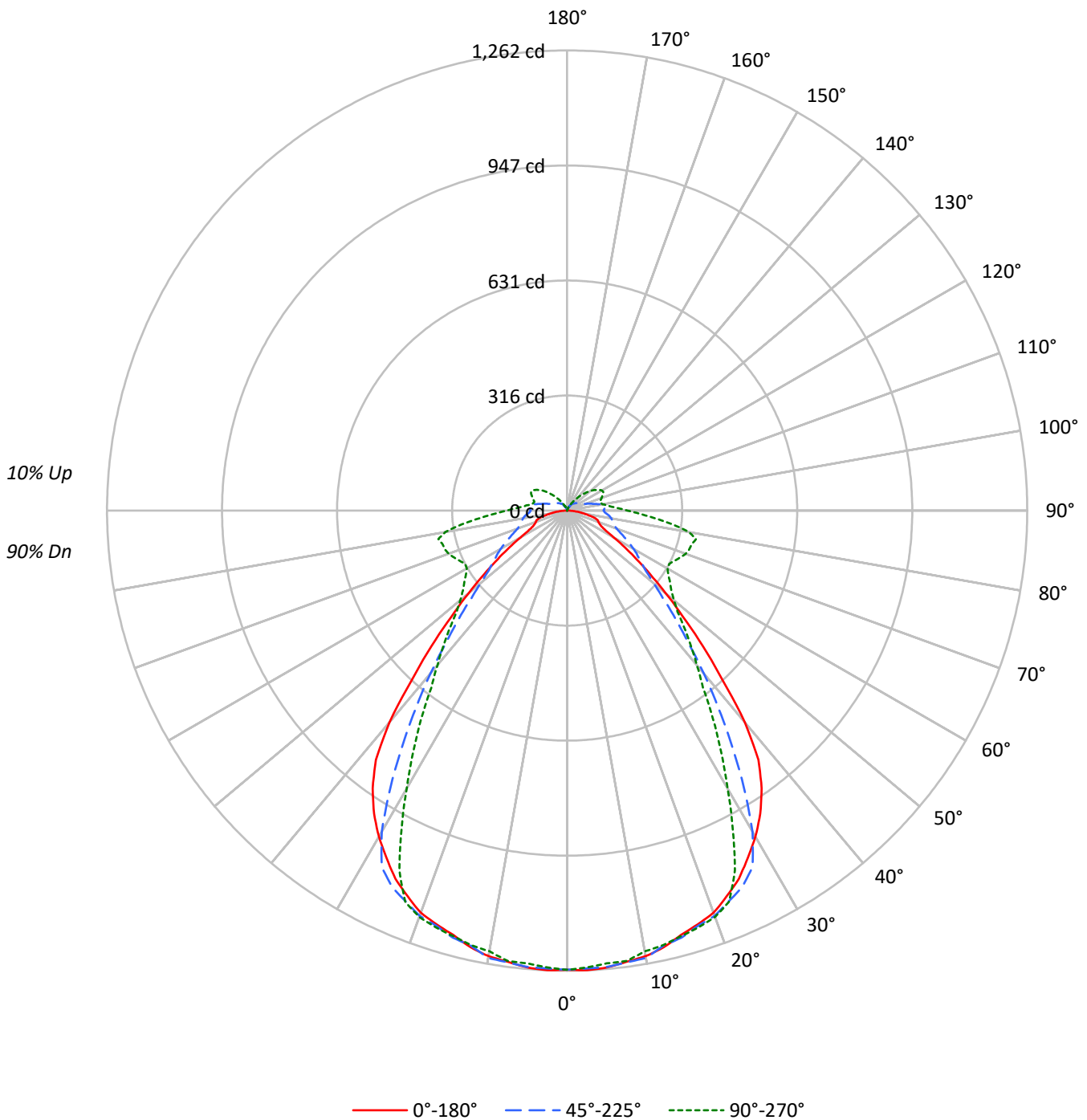
Lumens per Lamp: N/A
Luminaire Lumens: 2899.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.1 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 28.5
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	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	86	86	84	81	81	79	77	74				
2	97	89	83	77	94	86	80	75	81	76	72	77	73	69	72	69	66	63				
3	89	79	72	66	86	77	70	64	73	67	62	69	64	60	65	61	57	55				
4	83	71	63	57	80	70	62	56	66	59	54	62	57	52	59	55	51	48				
5	77	65	56	50	74	63	55	49	60	53	48	57	51	47	54	49	45	43				
6	71	59	51	45	69	58	50	44	55	48	43	52	46	42	50	45	41	39				
7	67	54	46	40	64	53	45	40	50	44	39	48	42	38	46	41	37	35				
8	62	50	42	36	60	49	41	36	47	40	35	45	39	34	43	38	34	32				
9	59	46	38	33	57	45	38	33	43	37	32	42	36	32	40	35	31	29				
10	55	43	35	30	53	42	35	30	40	34	30	39	33	29	37	32	28	27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14872	14872	14872
5°	14826	14303	14040
10°	14714	13795	13310
15°	14483	13164	12726
20°	14416	12693	12232
25°	14095	12165	11084
30°	13580	10908	8918
35°	12829	8548	7084
40°	11082	6438	5676
45°	8260	4785	4737
50°	6015	3644	4092
55°	4377	3046	3820
60°	3135	2752	3676
65°	2547	2410	3976
70°	2668	2175	4512
75°	2878	2181	4988
80°	2308	2279	5235
85°	1554	2342	4166



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.2	4.1
10°-20°	341.9	11.8
20°-30°	509.3	17.6
30°-40°	501.0	17.3
40°-50°	351.1	12.1
50°-60°	245.3	8.5
60°-70°	206.2	7.1
70°-80°	188.5	6.5
80°-90°	145.4	5.0
90°-100°	88.5	3.1
100°-110°	65.7	2.3
110°-120°	55.6	1.9
120°-130°	40.4	1.4
130°-140°	23.9	0.8
140°-150°	12.0	0.4
150°-160°	4.4	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	970.4	33.5
0°-40°	1471.4	50.8
0°-60°	2067.7	71.3
0°-90°	2607.8	90.0
90°-120°	209.8	7.2
90°-150°	286.1	9.9
90°-180°	291.0	10.0
0°-180°	2899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1259	1259	1259	1259	1259	
5°	1258	1259	1256	1252	1246	119
15°	1205	1208	1212	1211	1208	341
25°	1114	1117	1138	1124	1089	511
35°	930	920	788	717	698	573
45°	526	461	421	420	454	411
55°	232	240	247	303	344	213
65°	104	148	173	292	325	109
75°	78	81	132	285	354	78
85°	20	43	110	256	242	22
90°	0	25	100	179	165	1
95°	0	24	104	128	122	0
105°	0	23	72	103	93	0
115°	0	22	45	105	109	0
125°	0	18	36	77	99	0
135°	0	14	28	47	65	0
145°	0	11	21	27	33	0
155°	0	6	10	14	13	0
165°	1	2	2	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°	1259.3	1259.3	1259.3	1259.3	1259.3
2.5°	1261.7	1256.9	1256.9	1256.1	1253.7
5°	1257.7	1259.3	1256.1	1252.1	1246.5
7.5°	1248.1	1248.1	1249.7	1244.9	1245.7
10°	1240.9	1238.5	1245.7	1227.4	1227.4
12.5°	1226.6	1225.8	1221.8	1226.6	1220.2
15°	1205.0	1208.2	1212.2	1211.4	1208.2
17.5°	1189.9	1190.7	1193.9	1197.9	1198.7
20°	1173.9	1168.4	1182.7	1193.1	1185.9
22.5°	1144.4	1149.2	1159.6	1177.9	1161.2
25°	1114.1	1117.3	1138.1	1124.5	1088.6
27.5°	1073.5	1090.2	1101.4	1025.6	984.1
30°	1032.8	1049.5	1016.8	914.0	880.5
32.5°	985.7	1006.5	902.8	813.5	785.6
35°	929.9	920.3	787.9	717.0	697.8
37.5°	861.3	792.7	680.3	626.8	611.7
40°	757.6	659.5	582.2	551.9	553.5
42.5°	631.6	548.7	491.3	479.3	502.4
45°	526.4	461.0	421.1	419.5	453.8
47.5°	430.7	386.8	357.3	374.8	410.7
50°	352.5	327.0	309.4	338.1	382.0
52.5°	286.3	275.9	272.0	315.8	360.5
55°	232.1	240.1	247.2	303.1	344.5
57.5°	187.4	209.7	228.9	295.9	329.4
60°	147.5	185.0	211.3	291.9	317.4
62.5°	120.4	165.1	190.6	291.9	315.8
65°	103.7	147.5	173.1	291.9	325.4
67.5°	96.5	128.4	157.1	291.9	335.8
70°	90.9	110.9	144.3	287.1	346.1
72.5°	88.5	93.3	135.6	285.5	351.7
75°	78.2	81.3	131.6	284.7	354.1
77.5°	60.6	72.6	127.6	280.7	362.1
80°	46.3	63.8	122.8	284.7	338.9
82.5°	33.5	53.4	117.2	283.9	292.7
85°	19.9	43.1	110.1	256.0	241.6
87.5°	8.0	31.9	102.9	213.7	197.8
90°	0.0	24.7	99.7	179.4	165.1
92.5°	0.0	23.9	102.1	151.5	141.2
95°	0.0	23.9	104.5	128.4	122.0
97.5°	0.0	23.9	103.7	117.2	110.9
100°	0.0	23.9	95.7	106.9	98.9
102.5°	0.0	23.1	82.9	102.9	95.7
105°	0.0	23.1	71.8	102.9	93.3
107.5°	0.0	23.1	62.2	104.5	96.5
110°	0.0	22.3	54.2	106.1	100.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	21.5	48.6	108.5	104.5
115°	0.0	21.5	44.7	105.3	109.3
117.5°	0.0	20.7	41.5	99.7	111.7
120°	0.0	19.9	39.1	93.3	110.1
122.5°	0.0	18.3	37.5	85.3	105.3
125°	0.0	17.5	35.9	77.4	98.9
127.5°	0.0	16.7	33.5	68.6	92.5
130°	0.0	16.0	31.9	60.6	84.5
132.5°	0.0	15.2	29.5	53.4	75.0
135°	0.0	14.4	27.9	47.1	65.4
137.5°	0.0	13.6	26.3	41.5	56.6
140°	0.0	12.8	24.7	35.9	47.9
142.5°	0.0	12.0	23.1	31.1	39.9
145°	0.0	11.2	20.7	27.1	32.7
147.5°	0.0	9.6	18.3	23.1	26.3
150°	0.0	8.8	15.2	19.1	20.7
152.5°	0.0	7.2	12.8	16.7	16.0
155°	0.0	5.6	10.4	13.6	12.8
157.5°	0.8	4.8	8.0	10.4	10.4
160°	0.8	4.0	6.4	7.2	8.0
162.5°	0.8	3.2	4.0	4.8	6.4
165°	0.8	2.4	2.4	2.4	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)