

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: P232045

Luminaire Tested: **FVS4M-3-LD4-35-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232045
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-LD4-35-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

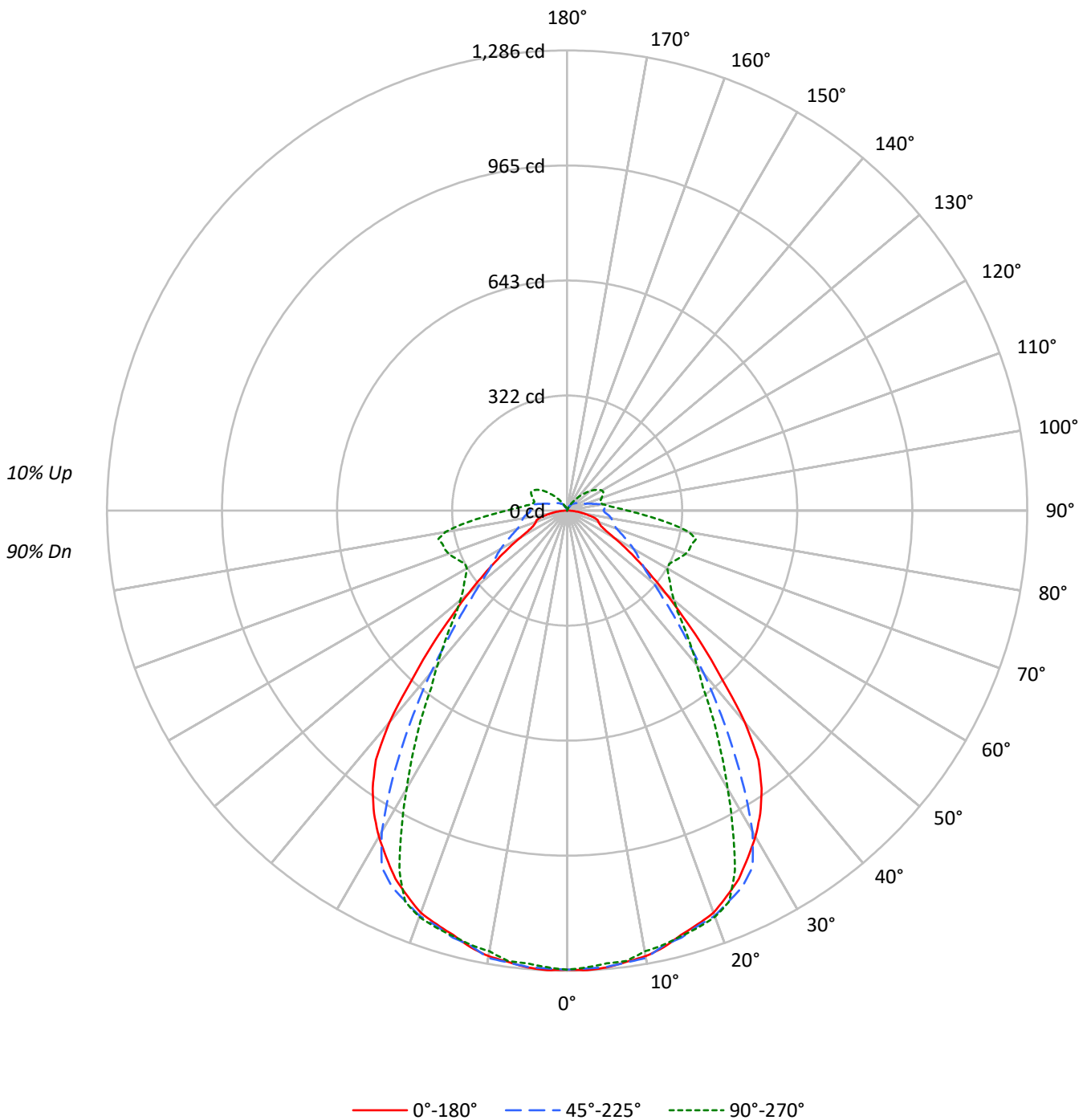
Lumens per Lamp: N/A
Luminaire Lumens: 2954.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.1 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

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	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°	15154	15154	15154
5°	15107	14574	14307
10°	14994	14057	13563
15°	14758	13413	12968
20°	14689	12935	12464
25°	14363	12395	11295
30°	13837	11115	9087
35°	13072	8710	7219
40°	11292	6560	5783
45°	8416	4876	4827
50°	6130	3714	4170
55°	4460	3104	3893
60°	3194	2805	3746
65°	2593	2454	4052
70°	2717	2217	4598
75°	2929	2223	5082
80°	2347	2322	5335
85°	1586	2385	4245



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.4	4.1
10°-20°	348.4	11.8
20°-30°	519.0	17.6
30°-40°	510.5	17.3
40°-50°	357.7	12.1
50°-60°	249.9	8.5
60°-70°	210.1	7.1
70°-80°	192.1	6.5
80°-90°	148.2	5.0
90°-100°	90.2	3.1
100°-110°	67.0	2.3
110°-120°	56.6	1.9
120°-130°	41.2	1.4
130°-140°	24.4	0.8
140°-150°	12.2	0.4
150°-160°	4.4	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	988.8	33.5
0°-40°	1499.3	50.8
0°-60°	2106.9	71.3
0°-90°	2657.3	90.0
90°-120°	213.8	7.2
90°-150°	291.5	9.9
90°-180°	297.0	10.1
0°-180°	2954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1283	1283	1283	1283	1283	
5°	1282	1283	1280	1276	1270	122
15°	1228	1231	1235	1234	1231	348
25°	1135	1138	1160	1146	1109	521
35°	948	938	803	731	711	584
45°	536	470	429	428	462	419
55°	236	245	252	309	351	217
65°	106	150	176	297	332	111
75°	80	83	134	290	361	80
85°	20	44	112	261	246	22
90°	0	25	102	183	168	1
95°	0	24	106	131	124	0
105°	0	24	73	105	95	0
115°	0	22	46	107	111	0
125°	0	18	37	79	101	0
135°	0	15	28	48	67	0
145°	0	11	21	28	33	0
155°	0	6	11	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°	1283.2	1283.2	1283.2	1283.2	1283.2
2.5°	1285.6	1280.7	1280.7	1279.9	1277.5
5°	1281.5	1283.2	1279.9	1275.9	1270.2
7.5°	1271.8	1271.8	1273.4	1268.5	1269.3
10°	1264.5	1262.0	1269.3	1250.7	1250.7
12.5°	1249.8	1249.0	1245.0	1249.8	1243.3
15°	1227.9	1231.2	1235.2	1234.4	1231.2
17.5°	1212.5	1213.3	1216.5	1220.6	1221.4
20°	1196.2	1190.5	1205.2	1215.7	1208.4
22.5°	1166.1	1171.0	1181.6	1200.3	1183.2
25°	1135.3	1138.5	1159.6	1145.8	1109.3
27.5°	1093.8	1110.9	1122.3	1045.1	1002.8
30°	1052.4	1069.4	1036.1	931.3	897.2
32.5°	1004.4	1025.6	919.9	828.9	800.5
35°	947.5	937.8	802.9	730.6	711.1
37.5°	877.7	807.8	693.2	638.7	623.3
40°	772.0	672.1	593.2	562.3	564.0
42.5°	643.6	559.1	500.6	488.4	512.0
45°	536.3	469.7	429.1	427.5	462.4
47.5°	438.8	394.1	364.1	381.9	418.5
50°	359.2	333.2	315.3	344.6	389.3
52.5°	291.7	281.2	277.1	321.8	367.3
55°	236.5	244.6	251.9	308.8	351.1
57.5°	191.0	213.7	233.2	301.5	335.6
60°	150.3	188.5	215.4	297.4	323.4
62.5°	122.7	168.2	194.2	297.4	321.8
65°	105.6	150.3	176.3	297.4	331.6
67.5°	98.3	130.8	160.1	297.4	342.1
70°	92.6	113.0	147.1	292.6	352.7
72.5°	90.2	95.1	138.1	290.9	358.4
75°	79.6	82.9	134.1	290.1	360.8
77.5°	61.8	74.0	130.0	286.1	368.9
80°	47.1	65.0	125.1	290.1	345.4
82.5°	34.1	54.4	119.5	289.3	298.2
85°	20.3	43.9	112.1	260.9	246.2
87.5°	8.1	32.5	104.8	217.8	201.5
90°	0.0	25.2	101.6	182.8	168.2
92.5°	0.0	24.4	104.0	154.4	143.8
95°	0.0	24.4	106.5	130.8	124.3
97.5°	0.0	24.4	105.6	119.5	113.0
100°	0.0	24.4	97.5	108.9	100.8
102.5°	0.0	23.6	84.5	104.8	97.5
105°	0.0	23.6	73.1	104.8	95.1
107.5°	0.0	23.6	63.4	106.5	98.3
110°	0.0	22.8	55.3	108.1	102.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	21.9	49.6	110.5	106.5
115°	0.0	21.9	45.5	107.3	111.3
117.5°	0.0	21.1	42.3	101.6	113.8
120°	0.0	20.3	39.8	95.1	112.1
122.5°	0.0	18.7	38.2	87.0	107.3
125°	0.0	17.9	36.6	78.8	100.8
127.5°	0.0	17.1	34.1	69.9	94.3
130°	0.0	16.3	32.5	61.8	86.1
132.5°	0.0	15.4	30.1	54.4	76.4
135°	0.0	14.6	28.4	47.9	66.6
137.5°	0.0	13.8	26.8	42.3	57.7
140°	0.0	13.0	25.2	36.6	48.8
142.5°	0.0	12.2	23.6	31.7	40.6
145°	0.0	11.4	21.1	27.6	33.3
147.5°	0.0	9.8	18.7	23.6	26.8
150°	0.0	8.9	15.4	19.5	21.1
152.5°	0.0	7.3	13.0	17.1	16.3
155°	0.0	5.7	10.6	13.8	13.0
157.5°	0.8	4.9	8.1	10.6	10.6
160°	0.8	4.1	6.5	7.3	8.1
162.5°	0.8	3.3	4.1	4.9	6.5
165°	0.8	2.4	2.4	2.4	4.1
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)