

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: P231937

Luminaire Tested: **FVS4M-2-LD4-35-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231937
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-LD4-35-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

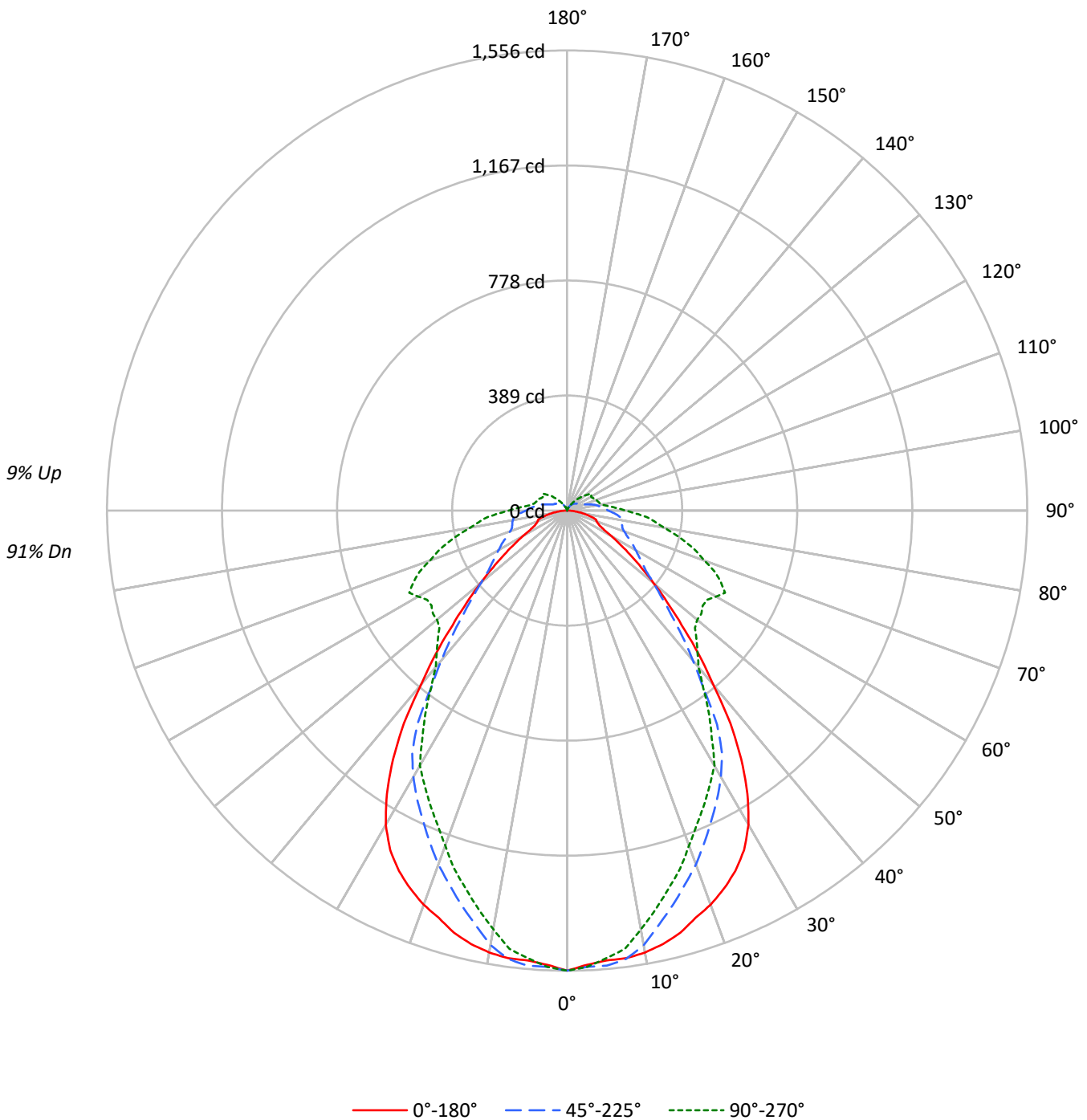
Lumens per Lamp: N/A
Luminaire Lumens: 3440.0 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.98 / 1.07
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 33.9
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°	27954	27954	27954
5°	27309	26706	26046
10°	27217	25040	23719
15°	26798	22687	21221
20°	26190	20635	18914
25°	25501	18614	16988
30°	24091	16791	15348
35°	21068	14401	12904
40°	16655	10970	10777
45°	12682	8466	9831
50°	9597	6678	9359
55°	7134	5694	9446
60°	5351	5184	10246
65°	4267	4818	10661
70°	4365	4559	9791
75°	4547	4701	8934
80°	3508	5070	7809
85°	2336	5282	7229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.9	4.2
10°-20°	391.1	11.4
20°-30°	543.1	15.8
30°-40°	556.7	16.2
40°-50°	418.6	12.2
50°-60°	328.1	9.5
60°-70°	313.5	9.1
70°-80°	252.6	7.3
80°-90°	171.1	5.0
90°-100°	105.6	3.1
100°-110°	74.0	2.2
110°-120°	55.6	1.6
120°-130°	41.9	1.2
130°-140°	25.0	0.7
140°-150°	12.8	0.4
150°-160°	4.8	0.1
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	1079.0	31.4
0°-40°	1635.8	47.6
0°-60°	2382.4	69.3
0°-90°	3119.5	90.7
90°-120°	235.2	6.8
90°-150°	314.9	9.2
90°-180°	320.0	9.3
0°-180°	3440.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1527	1538	1544	1528	1520	146
15°	1478	1450	1381	1334	1324	416
25°	1345	1236	1155	1113	1096	616
35°	1026	957	883	834	835	633
45°	548	513	498	544	619	429
55°	260	266	310	451	560	237
65°	121	169	233	523	573	127
75°	89	99	192	407	417	90
85°	24	55	170	254	276	26
90°	0	32	139	207	197	1
95°	0	30	120	155	149	0
105°	0	29	80	115	110	0
115°	0	25	50	95	98	0
125°	0	21	42	77	99	0
135°	1	17	33	46	63	0
145°	1	12	25	28	31	1
155°	1	6	12	14	13	0
165°	1	2	3	2	3	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°	1555.5	1555.5	1555.5	1555.5	1555.5
2.5°	1537.2	1540.4	1544.3	1546.7	1544.3
5°	1526.8	1538.0	1544.3	1527.6	1519.6
7.5°	1526.8	1528.4	1529.2	1505.2	1494.8
10°	1517.2	1512.4	1491.6	1446.1	1437.3
12.5°	1501.2	1490.8	1434.1	1390.2	1381.4
15°	1478.1	1450.1	1380.6	1333.5	1324.0
17.5°	1443.7	1401.4	1325.6	1279.2	1269.7
20°	1418.2	1351.9	1272.8	1227.3	1205.0
22.5°	1384.6	1295.2	1213.8	1169.0	1147.5
25°	1344.7	1236.1	1154.7	1113.1	1096.4
27.5°	1295.2	1170.6	1098.8	1054.9	1044.5
30°	1226.5	1111.5	1039.7	1002.9	995.8
32.5°	1134.7	1038.9	975.0	919.1	910.3
35°	1026.1	956.6	883.2	834.5	835.3
37.5°	906.3	865.6	756.2	755.4	755.4
40°	768.2	728.3	661.2	670.0	690.7
42.5°	657.2	609.3	574.9	600.5	653.2
45°	547.8	512.7	497.5	543.8	618.9
47.5°	458.4	431.2	432.0	502.3	586.1
50°	383.3	365.7	379.3	472.7	574.1
52.5°	316.2	308.2	337.0	457.6	572.5
55°	259.5	265.9	309.8	451.2	559.8
57.5°	210.8	233.2	286.7	462.3	561.4
60°	174.1	207.6	267.5	476.7	581.3
62.5°	140.5	186.1	251.5	495.9	602.1
65°	121.4	169.3	233.2	523.0	573.3
67.5°	112.6	149.3	217.2	547.0	540.6
70°	105.4	130.2	204.4	514.2	493.5
72.5°	103.0	113.4	195.6	456.8	458.4
75°	89.4	99.0	192.4	407.2	416.8
77.5°	69.5	89.4	190.0	361.7	374.5
80°	52.7	78.3	186.1	322.6	332.2
82.5°	38.3	66.3	182.1	286.7	301.0
85°	24.0	55.1	170.1	253.9	275.5
87.5°	10.4	41.5	154.1	231.6	232.4
90°	0.0	31.9	138.9	206.8	197.2
92.5°	0.0	31.1	130.2	178.1	170.9
95°	0.0	30.3	119.8	154.9	149.3
97.5°	0.0	30.3	110.2	139.7	130.2
100°	0.0	29.5	102.2	127.8	119.8
102.5°	0.0	28.7	92.6	119.0	113.4
105°	0.0	28.7	79.9	115.0	110.2
107.5°	0.0	27.9	69.5	110.2	107.0
110°	0.0	27.1	60.7	103.0	105.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	26.4	55.1	98.2	103.8
115°	0.0	24.8	50.3	95.0	98.2
117.5°	0.0	24.0	47.9	97.4	95.0
120°	0.0	23.2	45.5	96.6	93.4
122.5°	0.0	22.4	43.9	86.2	97.4
125°	0.0	20.8	41.5	76.7	99.0
127.5°	0.0	20.0	39.1	67.9	88.6
130°	0.0	18.4	36.7	59.9	79.9
132.5°	0.0	17.6	34.3	52.7	72.7
135°	0.8	16.8	32.7	46.3	63.1
137.5°	0.8	16.0	31.1	41.5	54.3
140°	0.8	15.2	28.7	36.7	45.5
142.5°	0.8	13.6	27.1	31.9	38.3
145°	0.8	12.0	24.8	27.9	31.1
147.5°	0.8	11.2	21.6	24.0	24.8
150°	0.8	9.6	18.4	20.8	19.2
152.5°	0.8	8.0	15.2	17.6	15.2
155°	0.8	6.4	12.0	14.4	12.8
157.5°	0.8	4.8	9.6	12.0	10.4
160°	0.8	3.2	8.0	8.0	8.8
162.5°	0.8	2.4	5.6	4.8	6.4
165°	0.8	1.6	3.2	1.6	3.2
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)