

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: P544842

Luminaire Tested: **FMR-12-1-LD4-1LO-50-UNV-82-87-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P544842  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-1-LD4-1LO-50-UNV-82-87-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

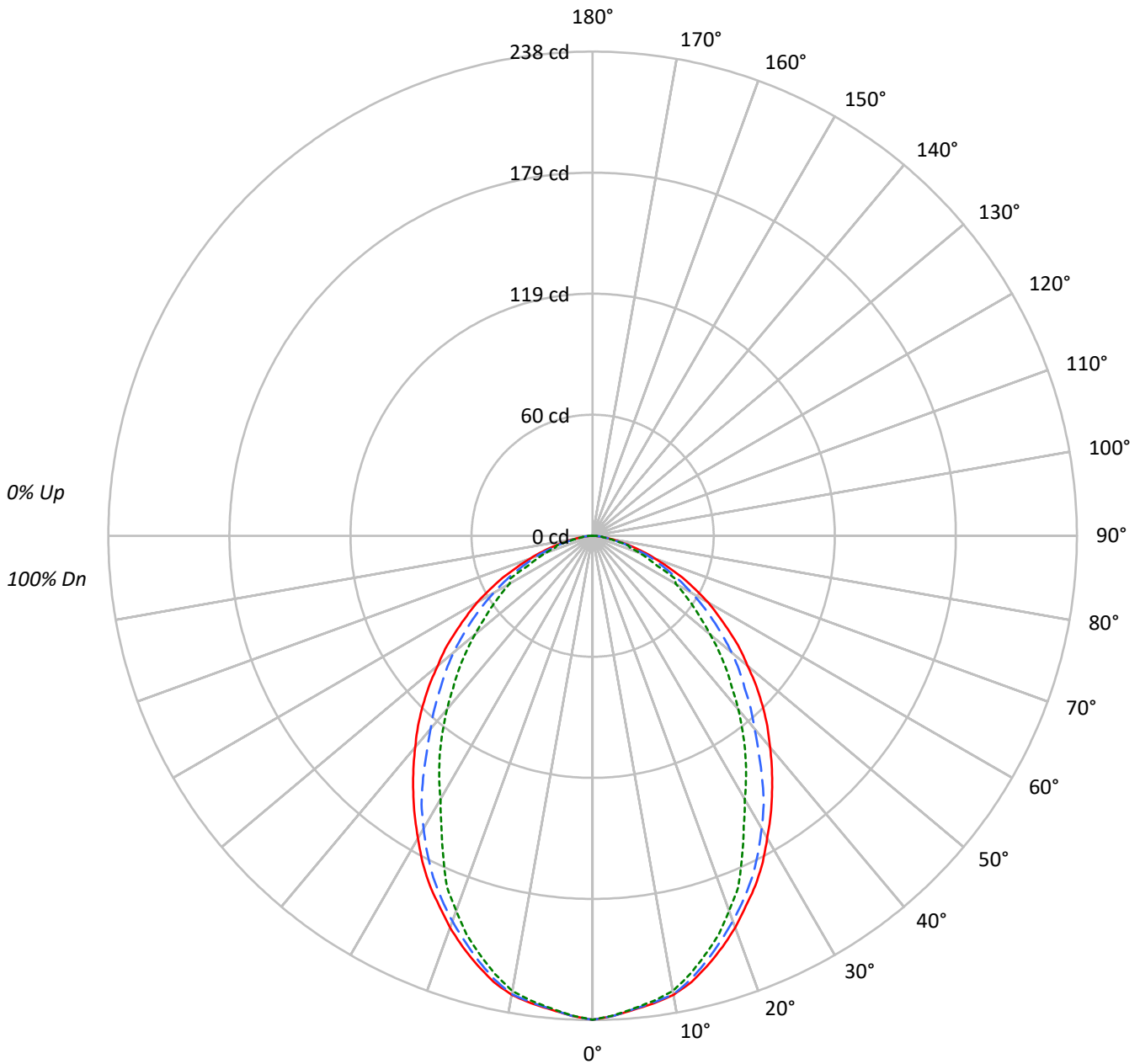
Lumens per Lamp: N/A  
Luminaire Lumens: 467.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
Input Voltage (V): NR  
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				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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2561	2561	2561
5°	2526	2523	2520
10°	2504	2501	2483
15°	2436	2411	2378
20°	2347	2309	2246
25°	2251	2202	2064
30°	2133	2064	1859
35°	2020	1908	1720
40°	1905	1740	1565
45°	1796	1607	1416
50°	1663	1492	1263
55°	1539	1353	1130
60°	1410	1208	1012
65°	1240	1057	897
70°	1023	925	762
75°	811	711	744
80°	545	514	477
85°	346	408	482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.1	4.7
10°-20°	60.8	13.0
20°-30°	84.1	18.0
30°-40°	89.7	19.2
40°-50°	81.9	17.5
50°-60°	64.1	13.7
60°-70°	41.8	8.9
70°-80°	18.5	4.0
80°-90°	4.0	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	167.1	35.8
0°-40°	256.8	55.0
0°-60°	402.7	86.2
0°-90°	467.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	467.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	238	238	238	238	238	
5°	234	234	234	233	233	22
15°	219	219	216	214	213	61
25°	190	188	185	179	174	87
35°	154	153	145	134	131	96
45°	118	116	106	97	93	91
55°	82	80	72	64	60	74
65°	49	46	42	42	35	48
75°	20	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	237.9	237.9	237.9	237.9	237.9
2.5°	236.2	236.2	236.2	236.0	236.0
5°	233.8	233.5	233.5	233.2	233.2
7.5°	231.8	231.6	231.3	231.0	230.5
10°	229.1	229.1	228.8	227.4	227.2
12.5°	224.7	224.4	223.3	221.4	220.8
15°	218.6	218.6	216.4	214.2	213.4
17.5°	212.0	211.8	209.0	206.8	205.7
20°	204.9	204.3	201.6	198.0	196.1
22.5°	196.9	196.9	193.6	188.9	187.0
25°	189.5	188.4	185.4	178.8	173.8
27.5°	181.0	179.3	176.0	166.7	160.9
30°	171.6	170.8	166.1	154.0	149.6
32.5°	162.8	161.4	156.5	143.8	140.3
35°	153.7	152.6	145.2	134.2	130.9
37.5°	144.7	143.3	133.9	125.1	121.0
40°	135.6	133.9	123.8	115.8	111.4
42.5°	127.1	124.9	115.0	106.4	101.5
45°	118.0	115.5	105.6	96.8	93.0
47.5°	108.9	106.7	97.6	88.6	84.2
50°	99.3	97.4	89.1	80.0	75.4
52.5°	91.3	88.3	80.3	71.2	67.4
55°	82.0	79.5	72.1	63.5	60.2
57.5°	73.4	71.0	64.1	56.1	53.4
60°	65.5	61.9	56.1	49.2	47.0
62.5°	56.7	53.9	49.0	43.2	45.9
65°	48.7	45.9	41.5	42.4	35.2
67.5°	39.9	38.5	34.7	30.8	29.7
70°	32.5	30.8	29.4	25.3	24.2
72.5°	25.9	24.2	22.3	20.1	19.3
75°	19.5	18.2	17.1	16.2	17.9
77.5°	13.5	12.9	12.1	11.3	11.0
80°	8.8	8.5	8.3	8.0	7.7
82.5°	5.2	5.2	5.2	5.2	5.2
85°	2.8	3.0	3.3	3.6	3.9
87.5°	1.7	1.7	1.9	2.2	2.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)