

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: P545130

Luminaire Tested: **FMR-12-1-LD4-2LO-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: P545130  
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-LD4-2LO-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**

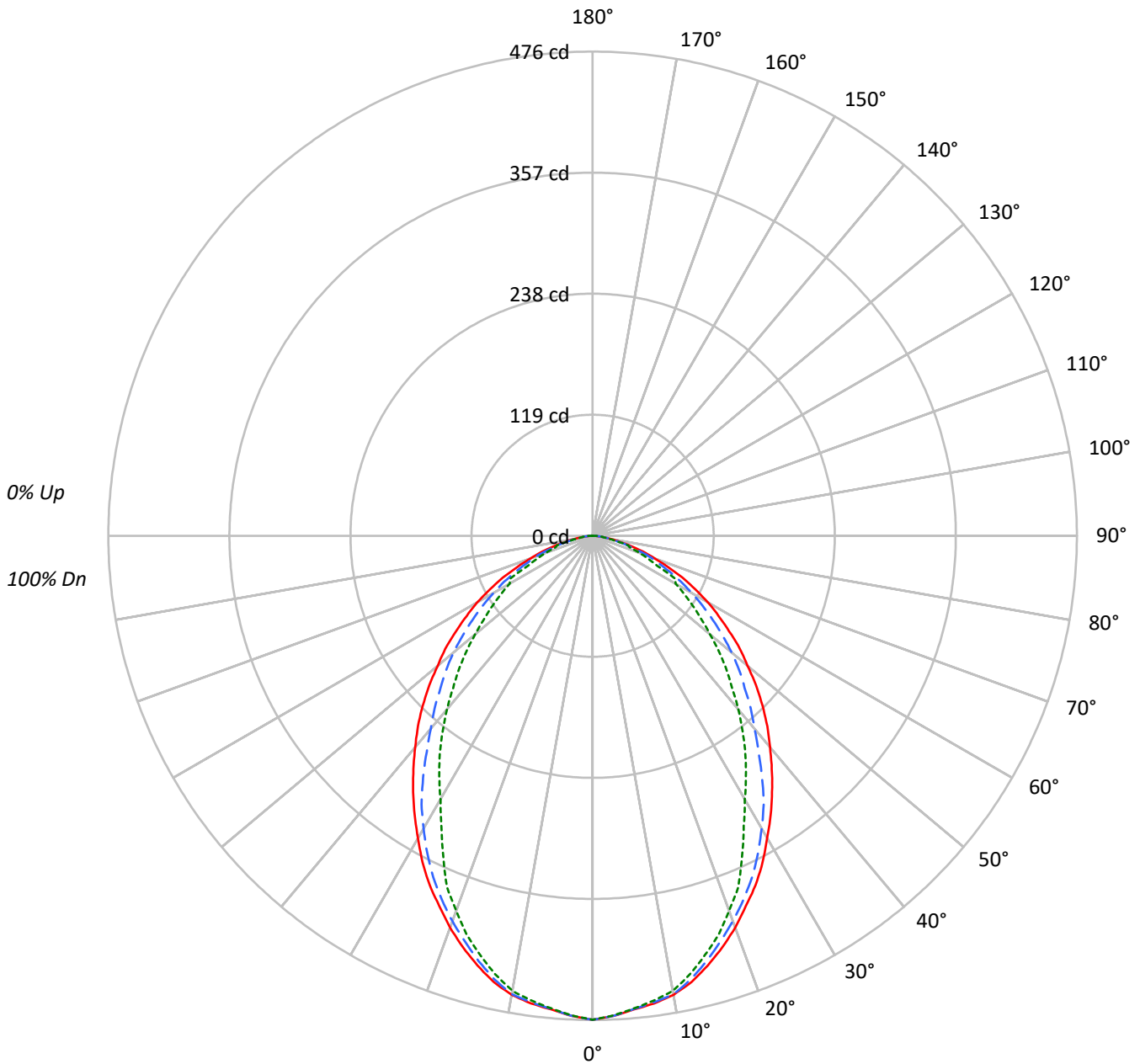
Lumens per Lamp: N/A  
Luminaire Lumens: 934.1 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

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

	0°	45°	90°
0°	5121	5121	5121
5°	5051	5046	5039
10°	5008	5002	4965
15°	4873	4824	4756
20°	4694	4619	4493
25°	4501	4403	4128
30°	4266	4129	3719
35°	4041	3816	3440
40°	3811	3478	3131
45°	3593	3215	2830
50°	3326	2984	2524
55°	3076	2704	2261
60°	2818	2415	2026
65°	2481	2117	1793
70°	2043	1854	1523
75°	1626	1418	1489
80°	1091	1023	955
85°	679	815	951



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.3	4.7
10°-20°	121.5	13.0
20°-30°	168.3	18.0
30°-40°	179.4	19.2
40°-50°	163.7	17.5
50°-60°	128.3	13.7
60°-70°	83.6	8.9
70°-80°	37.1	4.0
80°-90°	8.0	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°	334.1	35.8
0°-40°	513.5	55.0
0°-60°	805.5	86.2
0°-90°	934.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	934.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	468	467	467	466	466	44
15°	437	437	433	428	427	123
25°	379	377	371	358	348	174
35°	308	305	290	268	262	192
45°	236	231	211	194	186	182
55°	164	159	144	127	120	147
65°	97	92	83	85	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	475.8	475.8	475.8	475.8	475.8
2.5°	472.5	472.5	472.5	471.9	471.9
5°	467.5	467.0	467.0	466.4	466.4
7.5°	463.7	463.1	462.6	462.0	460.9
10°	458.2	458.2	457.6	454.9	454.3
12.5°	449.4	448.8	446.6	442.8	441.7
15°	437.3	437.3	432.9	428.5	426.8
17.5°	424.1	423.5	418.0	413.6	411.4
20°	409.8	408.7	403.2	396.0	392.2
22.5°	393.8	393.8	387.2	377.9	374.0
25°	379.0	376.8	370.7	357.5	347.6
27.5°	361.9	358.6	352.0	333.3	321.8
30°	343.2	341.6	332.2	308.0	299.2
32.5°	325.6	322.9	313.0	287.7	280.5
35°	307.5	305.3	290.4	268.4	261.8
37.5°	289.3	286.6	267.9	250.3	242.0
40°	271.2	267.9	247.5	231.6	222.8
42.5°	254.1	249.7	229.9	212.9	203.0
45°	236.0	231.0	211.2	193.6	185.9
47.5°	217.8	213.4	195.3	177.1	168.3
50°	198.6	194.7	178.2	160.1	150.7
52.5°	182.6	176.6	160.6	142.5	134.8
55°	163.9	159.0	144.1	127.1	120.5
57.5°	146.9	141.9	128.2	112.2	106.7
60°	130.9	123.8	112.2	98.5	94.1
62.5°	113.3	107.8	97.9	86.4	91.9
65°	97.4	91.9	83.1	84.7	70.4
67.5°	79.8	77.0	69.3	61.6	59.4
70°	64.9	61.6	58.9	50.6	48.4
72.5°	51.7	48.4	44.6	40.2	38.5
75°	39.1	36.3	34.1	32.5	35.8
77.5°	27.0	25.9	24.2	22.6	22.0
80°	17.6	17.1	16.5	16.0	15.4
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
87.5°	3.3	3.3	3.9	4.4	5.0
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)