

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: P545706

Luminaire Tested: **FMR-12-2-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: P545706  
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-12-2-LD4-2LO-50-UNV-82-87-EDD  
Description: 1X2 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**

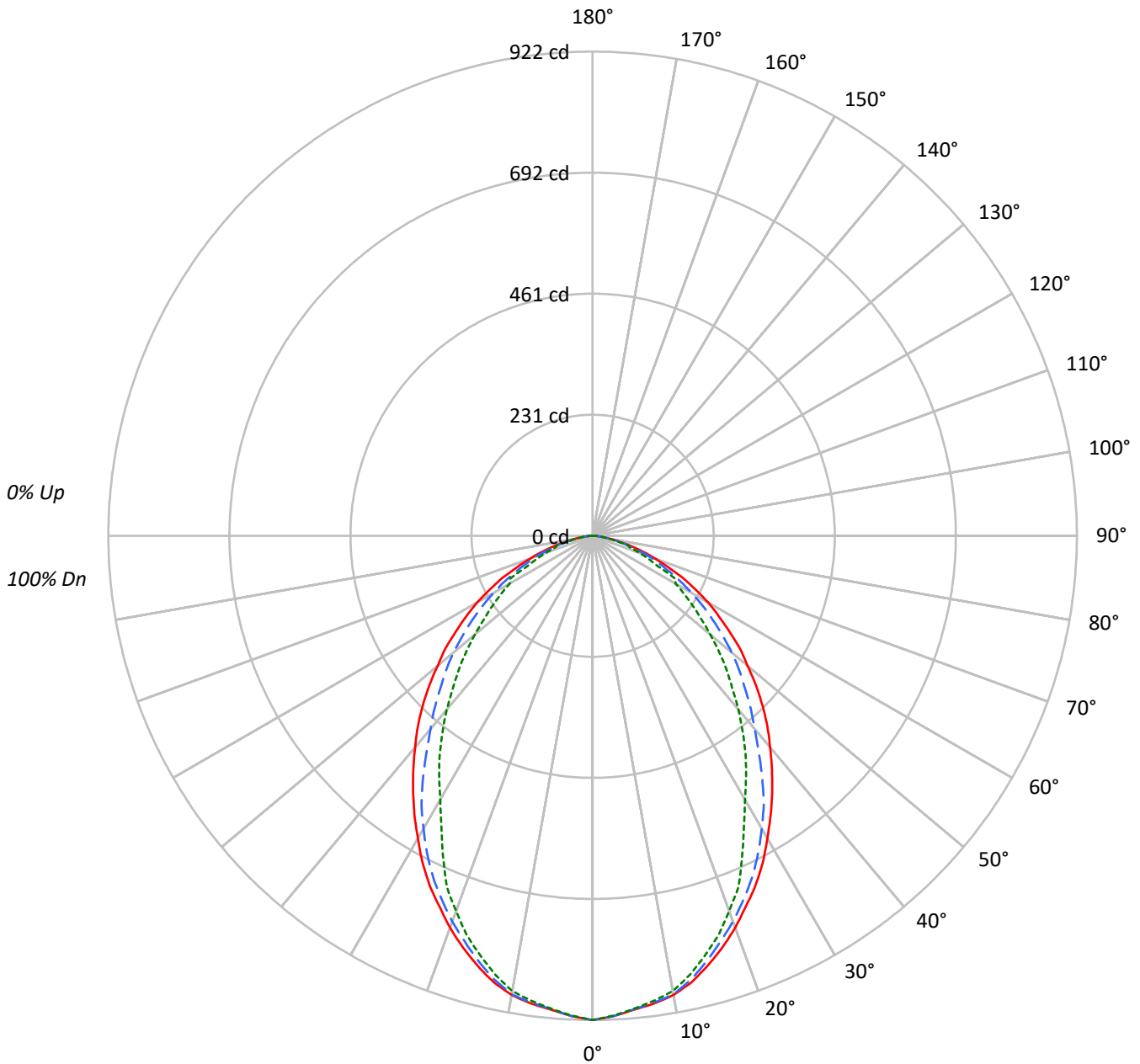
Lumens per Lamp: N/A  
Luminaire Lumens: 1810.0 lumens  
Efficiency: N/A  
Efficacy: 77.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

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

	0°	45°	90°
0°	4962	4962	4962
5°	4895	4889	4883
10°	4852	4846	4811
15°	4722	4674	4608
20°	4548	4475	4353
25°	4361	4266	4000
30°	4133	4001	3603
35°	3914	3698	3334
40°	3692	3370	3033
45°	3481	3115	2742
50°	3222	2891	2446
55°	2980	2621	2190
60°	2731	2340	1962
65°	2403	2049	1737
70°	1980	1794	1476
75°	1574	1375	1441
80°	1057	992	924
85°	661	790	920



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.8	4.7
10°-20°	235.5	13.0
20°-30°	326.1	18.0
30°-40°	347.7	19.2
40°-50°	317.2	17.5
50°-60°	248.5	13.7
60°-70°	162.0	8.9
70°-80°	71.8	4.0
80°-90°	15.4	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°	647.5	35.8
0°-40°	995.2	55.0
0°-60°	1560.9	86.2
0°-90°	1810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1810.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	922	922	922	922	922	
5°	906	905	905	904	904	86
15°	847	847	839	830	827	238
25°	734	730	718	693	674	337
35°	596	592	563	520	507	373
45°	457	448	409	375	360	352
55°	318	308	279	246	233	285
65°	189	178	161	164	136	186
75°	76	70	66	63	69	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	922.0	922.0	922.0	922.0	922.0
2.5°	915.6	915.6	915.6	914.5	914.5
5°	906.0	904.9	904.9	903.9	903.9
7.5°	898.5	897.5	896.4	895.3	893.2
10°	887.9	887.9	886.8	881.5	880.4
12.5°	870.8	869.8	865.5	858.0	855.9
15°	847.4	847.4	838.9	830.3	827.1
17.5°	821.8	820.7	810.1	801.5	797.3
20°	794.1	792.0	781.3	767.4	760.0
22.5°	763.2	763.2	750.4	732.3	724.8
25°	734.4	730.1	718.4	692.8	673.6
27.5°	701.4	695.0	682.2	645.9	623.5
30°	665.1	661.9	643.8	596.9	579.8
32.5°	631.0	625.7	606.5	557.5	543.6
35°	595.8	591.6	562.8	520.2	507.4
37.5°	560.7	555.3	519.1	485.0	469.0
40°	525.5	519.1	479.6	448.7	431.7
42.5°	492.4	483.9	445.5	412.5	393.3
45°	457.3	447.7	409.3	375.2	360.3
47.5°	422.1	413.6	378.4	343.2	326.2
50°	384.8	377.3	345.3	310.2	292.1
52.5°	353.9	342.1	311.2	276.1	261.1
55°	317.6	308.0	279.3	246.2	233.4
57.5°	284.6	275.0	248.4	217.4	206.8
60°	253.7	239.8	217.4	190.8	182.3
62.5°	219.6	208.9	189.7	167.3	178.0
65°	188.7	178.0	160.9	164.1	136.4
67.5°	154.6	149.2	134.3	119.4	115.1
70°	125.8	119.4	114.0	98.1	93.8
72.5°	100.2	93.8	86.3	77.8	74.6
75°	75.7	70.3	66.1	62.9	69.3
77.5°	52.2	50.1	46.9	43.7	42.6
80°	34.1	33.0	32.0	30.9	29.8
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.7	12.8	13.9	14.9
87.5°	6.4	6.4	7.5	8.5	9.6
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)