

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: P545126

Luminaire Tested: **FMR-12-1-LD4-2LO-50-UNV-81-97-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: P545126  
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-81-97-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

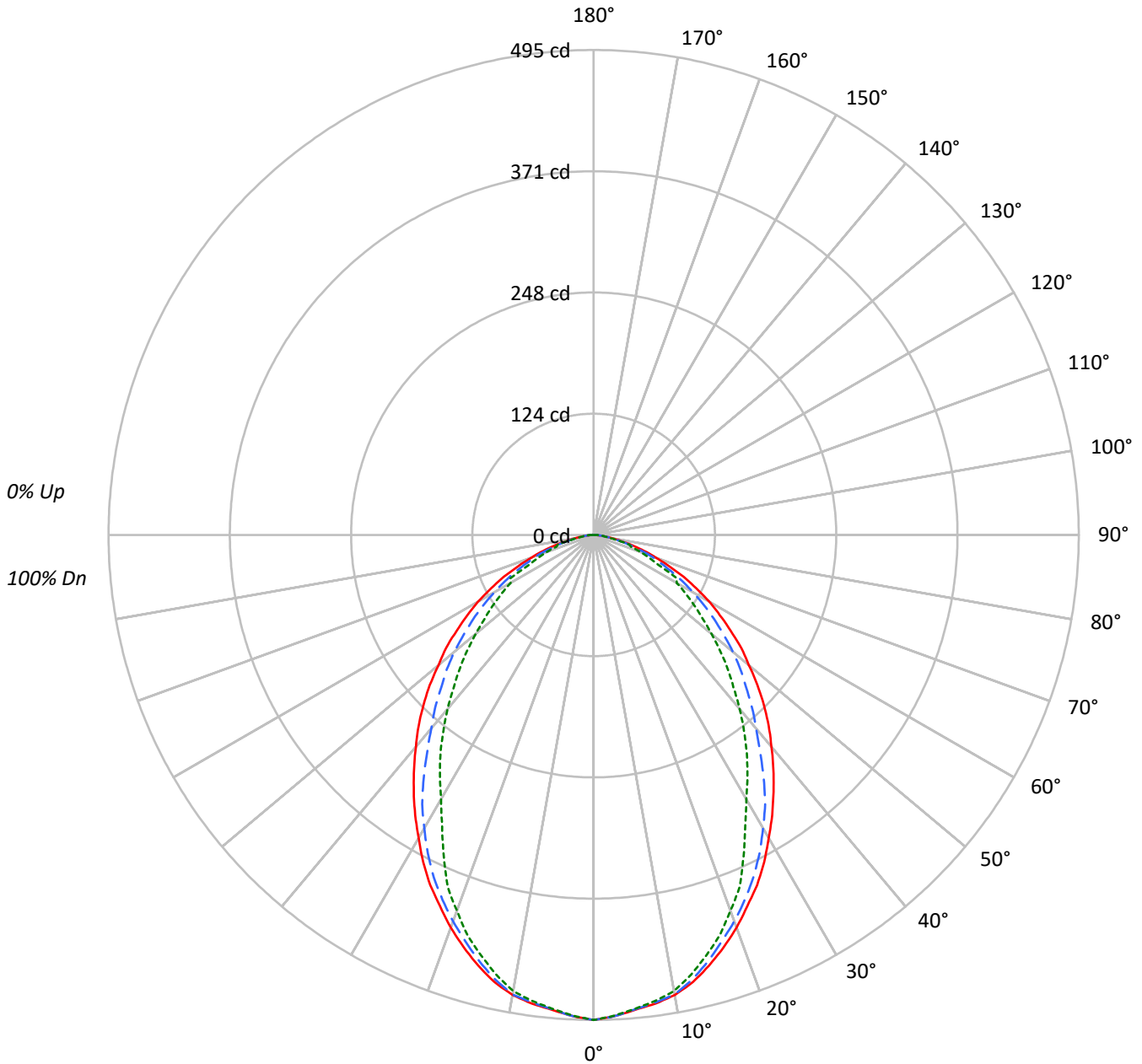
Lumens per Lamp: N/A  
Luminaire Lumens: 972.0 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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									
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°	5329	5329	5329
5°	5257	5251	5245
10°	5211	5205	5168
15°	5071	5020	4950
20°	4884	4806	4675
25°	4684	4582	4297
30°	4440	4297	3870
35°	4205	3971	3581
40°	3965	3620	3257
45°	3739	3346	2946
50°	3460	3106	2626
55°	3202	2815	2353
60°	2932	2514	2108
65°	2580	2201	1867
70°	2124	1926	1586
75°	1688	1476	1547
80°	1134	1066	992
85°	704	852	988



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.1	4.7
10°-20°	126.5	13.0
20°-30°	175.1	18.0
30°-40°	186.7	19.2
40°-50°	170.4	17.5
50°-60°	133.5	13.7
60°-70°	87.0	8.9
70°-80°	38.5	4.0
80°-90°	8.3	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°	347.7	35.8
0°-40°	534.4	55.0
0°-60°	838.2	86.2
0°-90°	972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	972.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	486	486	486	485	485	46
15°	455	455	450	446	444	128
25°	394	392	386	372	362	181
35°	320	318	302	279	272	200
45°	246	240	220	202	194	189
55°	171	165	150	132	125	153
65°	101	96	86	88	73	100
75°	41	38	36	34	37	44
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°	495.1	495.1	495.1	495.1	495.1
2.5°	491.7	491.7	491.7	491.1	491.1
5°	486.5	486.0	486.0	485.4	485.4
7.5°	482.5	482.0	481.4	480.8	479.7
10°	476.8	476.8	476.2	473.4	472.8
12.5°	467.6	467.1	464.8	460.8	459.6
15°	455.1	455.1	450.5	445.9	444.2
17.5°	441.3	440.7	435.0	430.4	428.2
20°	426.4	425.3	419.6	412.1	408.1
22.5°	409.8	409.8	403.0	393.2	389.2
25°	394.4	392.1	385.8	372.1	361.8
27.5°	376.6	373.2	366.3	346.9	334.9
30°	357.2	355.5	345.7	320.5	311.4
32.5°	338.9	336.0	325.7	299.4	291.9
35°	320.0	317.7	302.2	279.3	272.5
37.5°	301.1	298.2	278.8	260.4	251.9
40°	282.2	278.8	257.6	241.0	231.8
42.5°	264.4	259.9	239.3	221.5	211.2
45°	245.6	240.4	219.8	201.5	193.5
47.5°	226.7	222.1	203.2	184.3	175.2
50°	206.6	202.6	185.5	166.6	156.8
52.5°	190.0	183.7	167.1	148.3	140.2
55°	170.6	165.4	150.0	132.2	125.4
57.5°	152.8	147.7	133.4	116.8	111.0
60°	136.2	128.8	116.8	102.5	97.9
62.5°	117.9	112.2	101.9	89.9	95.6
65°	101.3	95.6	86.4	88.1	73.3
67.5°	83.0	80.1	72.1	64.1	61.8
70°	67.5	64.1	61.2	52.7	50.4
72.5°	53.8	50.4	46.4	41.8	40.1
75°	40.6	37.8	35.5	33.8	37.2
77.5°	28.0	26.9	25.2	23.5	22.9
80°	18.3	17.7	17.2	16.6	16.0
82.5°	10.9	10.9	10.9	10.9	10.9
85°	5.7	6.3	6.9	7.4	8.0
87.5°	3.4	3.4	4.0	4.6	5.2
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)