

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: P545063

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-82-84-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: P545063  
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-35-UNV-82-84-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

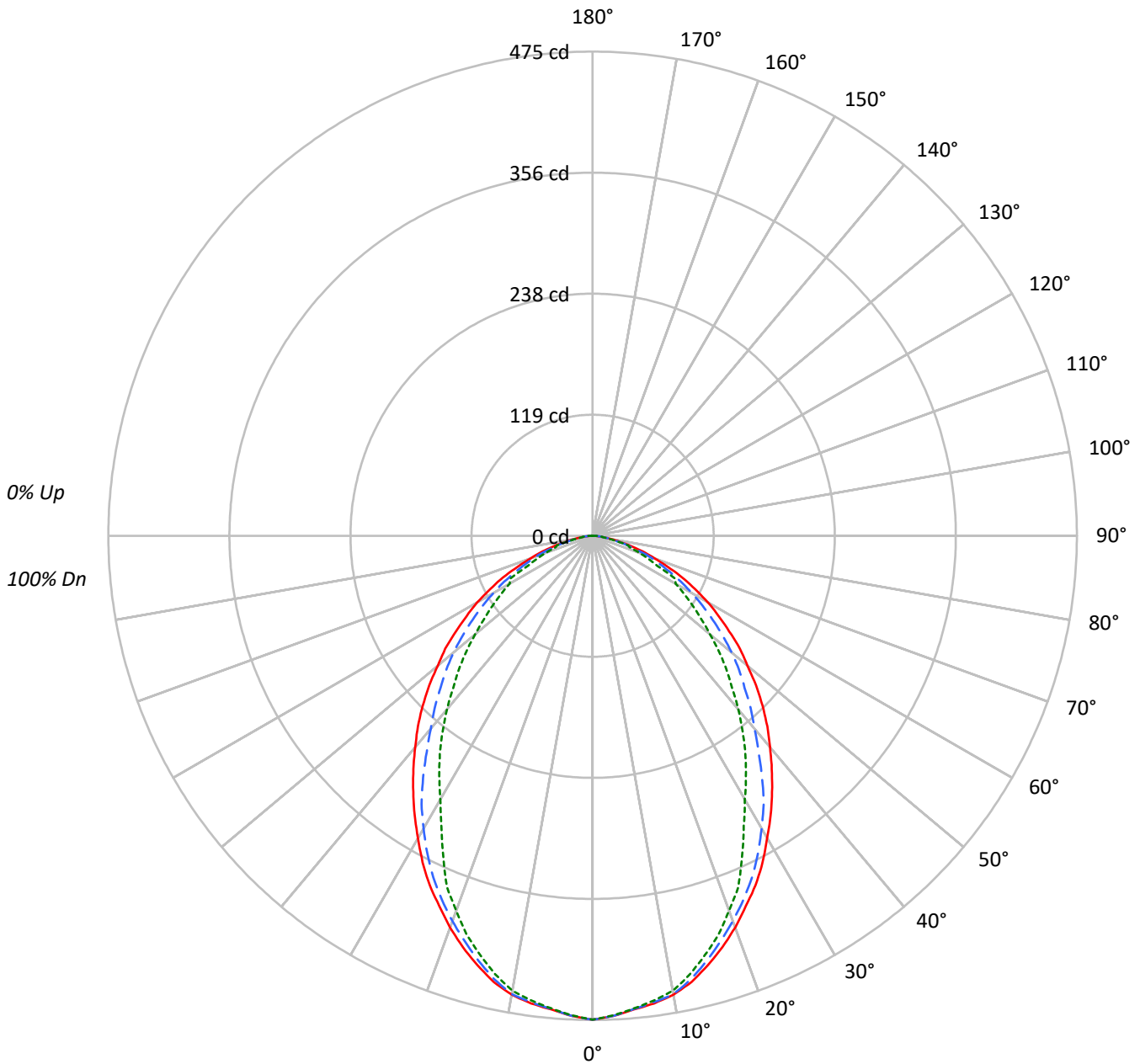
Lumens per Lamp: N/A  
Luminaire Lumens: 932.0 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	5110	5110	5110
5°	5041	5035	5029
10°	4997	4991	4955
15°	4862	4813	4746
20°	4684	4608	4482
25°	4492	4393	4120
30°	4257	4120	3711
35°	4031	3808	3432
40°	3802	3471	3124
45°	3585	3209	2824
50°	3317	2977	2519
55°	3070	2699	2256
60°	2812	2411	2021
65°	2473	2111	1791
70°	2039	1847	1520
75°	1622	1414	1485
80°	1091	1023	955
85°	679	815	951



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.2	4.7
10°-20°	121.3	13.0
20°-30°	167.9	18.0
30°-40°	179.0	19.2
40°-50°	163.3	17.5
50°-60°	128.0	13.7
60°-70°	83.4	8.9
70°-80°	37.0	4.0
80°-90°	7.9	0.8
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°	333.4	35.8
0°-40°	512.4	55.0
0°-60°	803.7	86.2
0°-90°	932.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	932.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	475	475	475	475	475	
5°	466	466	466	465	465	44
15°	436	436	432	428	426	123
25°	378	376	370	357	347	174
35°	307	305	290	268	261	192
45°	236	230	211	193	186	181
55°	164	159	144	127	120	147
65°	97	92	83	84	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°	474.7	474.7	474.7	474.7	474.7
2.5°	471.5	471.5	471.5	470.9	470.9
5°	466.5	466.0	466.0	465.4	465.4
7.5°	462.7	462.1	461.6	461.0	459.9
10°	457.2	457.2	456.6	453.9	453.3
12.5°	448.4	447.9	445.7	441.8	440.7
15°	436.3	436.3	431.9	427.5	425.9
17.5°	423.2	422.6	417.1	412.7	410.5
20°	408.9	407.8	402.3	395.2	391.3
22.5°	393.0	393.0	386.4	377.1	373.2
25°	378.2	376.0	369.9	356.7	346.9
27.5°	361.1	357.8	351.3	332.6	321.1
30°	342.5	340.8	331.5	307.4	298.6
32.5°	324.9	322.2	312.3	287.0	279.9
35°	306.8	304.6	289.8	267.8	261.2
37.5°	288.7	285.9	267.3	249.7	241.5
40°	270.6	267.3	247.0	231.1	222.3
42.5°	253.6	249.2	229.4	212.4	202.5
45°	235.5	230.5	210.8	193.2	185.5
47.5°	217.3	213.0	194.8	176.7	167.9
50°	198.1	194.3	177.8	159.7	150.4
52.5°	182.2	176.2	160.3	142.2	134.5
55°	163.6	158.6	143.8	126.8	120.2
57.5°	146.5	141.6	127.9	112.0	106.5
60°	130.6	123.5	112.0	98.2	93.9
62.5°	113.1	107.6	97.7	86.2	91.7
65°	97.1	91.7	82.9	84.5	70.3
67.5°	79.6	76.8	69.2	61.5	59.3
70°	64.8	61.5	58.7	50.5	48.3
72.5°	51.6	48.3	44.5	40.1	38.4
75°	39.0	36.2	34.0	32.4	35.7
77.5°	26.9	25.8	24.1	22.5	22.0
80°	17.6	17.0	16.5	15.9	15.4
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.6	7.1	7.7
87.5°	3.3	3.3	3.8	4.4	4.9
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)