

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: P545068

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-82-94-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: P545068  
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-82-94-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

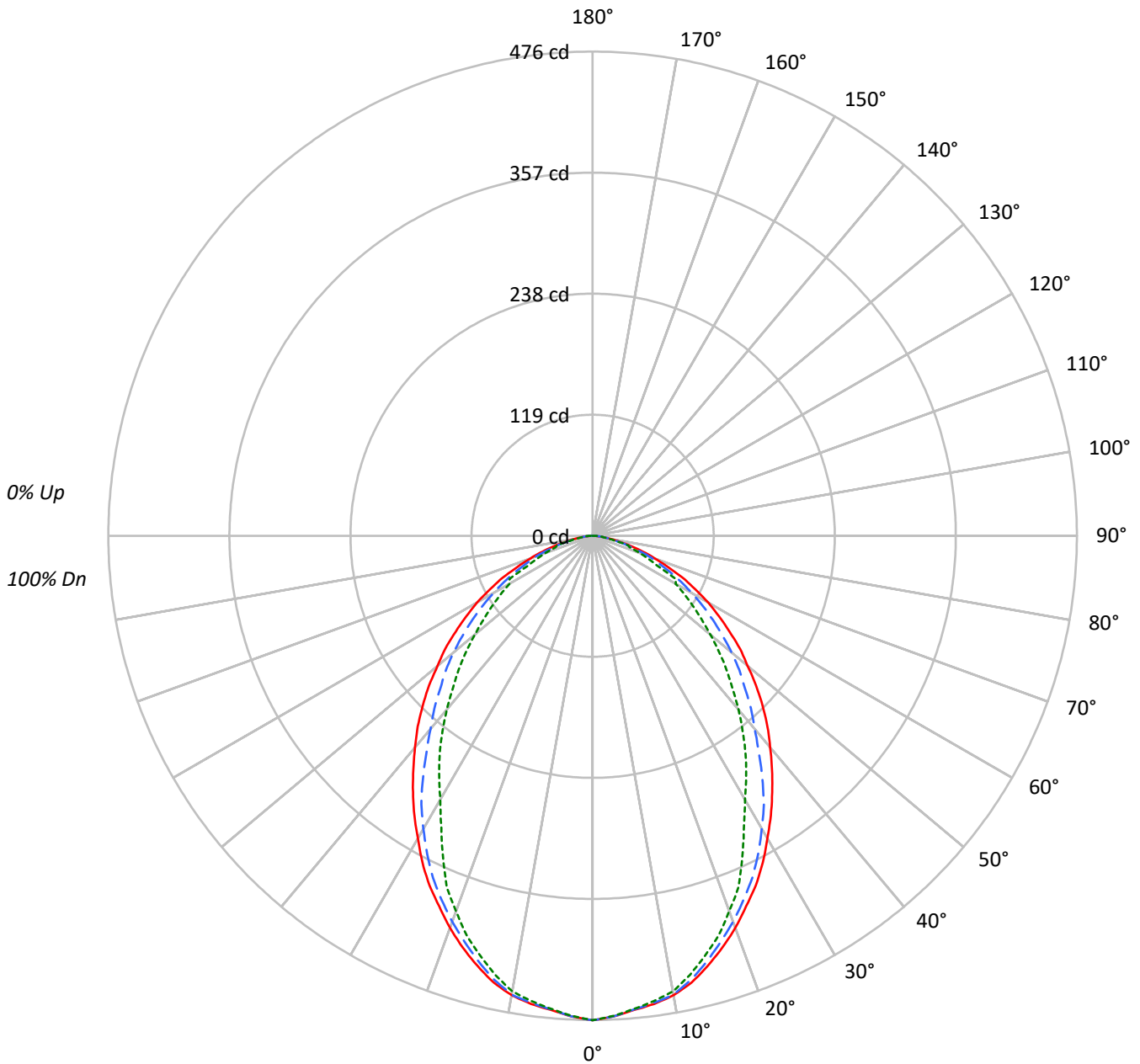
Lumens per Lamp: N/A  
Luminaire Lumens: 935.0 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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	47	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°	5127	5127	5127
5°	5057	5051	5045
10°	5014	5007	4971
15°	4878	4829	4762
20°	4699	4623	4497
25°	4506	4407	4133
30°	4271	4134	3723
35°	4045	3820	3444
40°	3815	3482	3133
45°	3596	3218	2833
50°	3329	2987	2527
55°	3080	2708	2263
60°	2820	2418	2028
65°	2483	2117	1796
70°	2046	1854	1526
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°	121.7	13.0
20°-30°	168.4	18.0
30°-40°	179.6	19.2
40°-50°	163.9	17.5
50°-60°	128.4	13.7
60°-70°	83.7	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°	334.5	35.8
0°-40°	514.1	55.0
0°-60°	806.3	86.2
0°-90°	935.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	935.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	468	468	468	467	467	44
15°	438	438	433	429	427	123
25°	379	377	371	358	348	174
35°	308	306	291	269	262	192
45°	236	231	211	194	186	182
55°	164	159	144	127	121	147
65°	98	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°	476.3	476.3	476.3	476.3	476.3
2.5°	473.0	473.0	473.0	472.4	472.4
5°	468.0	467.5	467.5	466.9	466.9
7.5°	464.2	463.6	463.1	462.5	461.4
10°	458.7	458.7	458.1	455.4	454.8
12.5°	449.8	449.3	447.1	443.2	442.1
15°	437.7	437.7	433.3	428.9	427.3
17.5°	424.5	424.0	418.5	414.1	411.9
20°	410.2	409.1	403.6	396.4	392.6
22.5°	394.2	394.2	387.6	378.3	374.4
25°	379.4	377.2	371.1	357.9	348.0
27.5°	362.3	359.0	352.4	333.7	322.1
30°	343.6	341.9	332.6	308.3	299.5
32.5°	326.0	323.2	313.3	288.0	280.8
35°	307.8	305.6	290.7	268.7	262.1
37.5°	289.6	286.9	268.1	250.5	242.3
40°	271.5	268.1	247.8	231.8	223.0
42.5°	254.4	250.0	230.2	213.1	203.2
45°	236.2	231.3	211.4	193.8	186.1
47.5°	218.0	213.6	195.5	177.3	168.5
50°	198.8	194.9	178.4	160.2	150.9
52.5°	182.8	176.7	160.8	142.6	134.9
55°	164.1	159.1	144.3	127.2	120.6
57.5°	147.0	142.1	128.3	112.3	106.8
60°	131.0	123.9	112.3	98.6	94.2
62.5°	113.4	107.9	98.0	86.4	92.0
65°	97.5	92.0	83.1	84.8	70.5
67.5°	79.8	77.1	69.4	61.7	59.5
70°	65.0	61.7	58.9	50.7	48.5
72.5°	51.8	48.5	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)