

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: P544828

Luminaire Tested: **FMR-12-1-LD4-1LO-50-UNV-80-94-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: P544828  
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-LD4-1LO-50-UNV-80-94-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

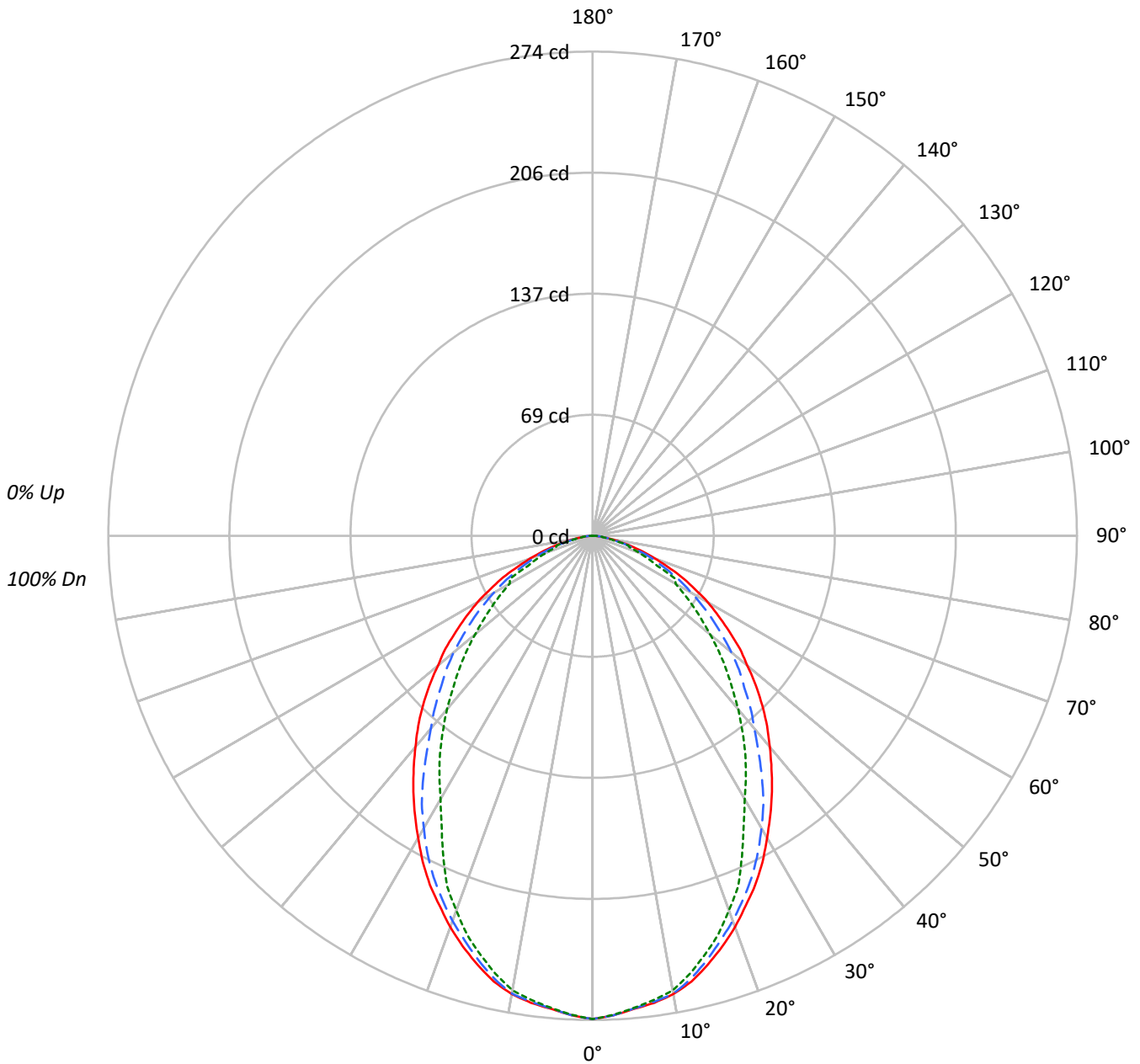
Lumens per Lamp: N/A  
Luminaire Lumens: 537.0 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
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°	2944	2944	2944
5°	2904	2901	2898
10°	2879	2876	2855
15°	2802	2774	2735
20°	2699	2655	2583
25°	2588	2531	2374
30°	2452	2374	2138
35°	2323	2194	1978
40°	2191	1999	1800
45°	2066	1848	1627
50°	1912	1716	1450
55°	1768	1556	1301
60°	1621	1389	1165
65°	1426	1217	1032
70°	1174	1064	875
75°	936	815	857
80°	626	589	552
85°	395	469	543



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.5	4.7
10°-20°	69.9	13.0
20°-30°	96.7	18.0
30°-40°	103.2	19.2
40°-50°	94.1	17.5
50°-60°	73.7	13.7
60°-70°	48.1	8.9
70°-80°	21.3	4.0
80°-90°	4.6	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°	192.1	35.8
0°-40°	295.2	55.0
0°-60°	463.1	86.2
0°-90°	537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	537.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	274	274	274	274	274	
5°	269	268	268	268	268	26
15°	251	251	249	246	245	71
25°	218	217	213	206	200	100
35°	177	176	167	154	150	111
45°	136	133	121	111	107	105
55°	94	91	83	73	69	85
65°	56	53	48	49	40	55
75°	22	21	20	19	21	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	273.5	273.5	273.5	273.5	273.5
2.5°	271.6	271.6	271.6	271.3	271.3
5°	268.8	268.5	268.5	268.2	268.2
7.5°	266.6	266.3	266.0	265.6	265.0
10°	263.4	263.4	263.1	261.5	261.2
12.5°	258.4	258.0	256.8	254.6	253.9
15°	251.4	251.4	248.9	246.3	245.4
17.5°	243.8	243.5	240.3	237.8	236.5
20°	235.6	235.0	231.8	227.7	225.5
22.5°	226.4	226.4	222.6	217.3	215.0
25°	217.9	216.6	213.1	205.6	199.9
27.5°	208.1	206.2	202.4	191.6	185.0
30°	197.3	196.4	191.0	177.1	172.0
32.5°	187.2	185.6	179.9	165.4	161.3
35°	176.8	175.5	167.0	154.3	150.5
37.5°	166.3	164.8	154.0	143.9	139.1
40°	155.9	154.0	142.3	133.1	128.1
42.5°	146.1	143.6	132.2	122.4	116.7
45°	135.7	132.8	121.4	111.3	106.9
47.5°	125.2	122.7	112.3	101.8	96.8
50°	114.2	111.9	102.5	92.0	86.6
52.5°	105.0	101.5	92.3	81.9	77.5
55°	94.2	91.4	82.9	73.0	69.3
57.5°	84.4	81.6	73.7	64.5	61.3
60°	75.3	71.2	64.5	56.6	54.1
62.5°	65.1	62.0	56.3	49.6	52.8
65°	56.0	52.8	47.8	48.7	40.5
67.5°	45.9	44.3	39.8	35.4	34.2
70°	37.3	35.4	33.8	29.1	27.8
72.5°	29.7	27.8	25.6	23.1	22.1
75°	22.5	20.9	19.6	18.7	20.6
77.5°	15.5	14.9	13.9	13.0	12.6
80°	10.1	9.8	9.5	9.2	8.9
82.5°	6.0	6.0	6.0	6.0	6.0
85°	3.2	3.5	3.8	4.1	4.4
87.5°	1.9	1.9	2.2	2.5	2.8
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)