

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: P544939

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-82-88-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: P544939  
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-LD4-1STD-50-UNV-82-88-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

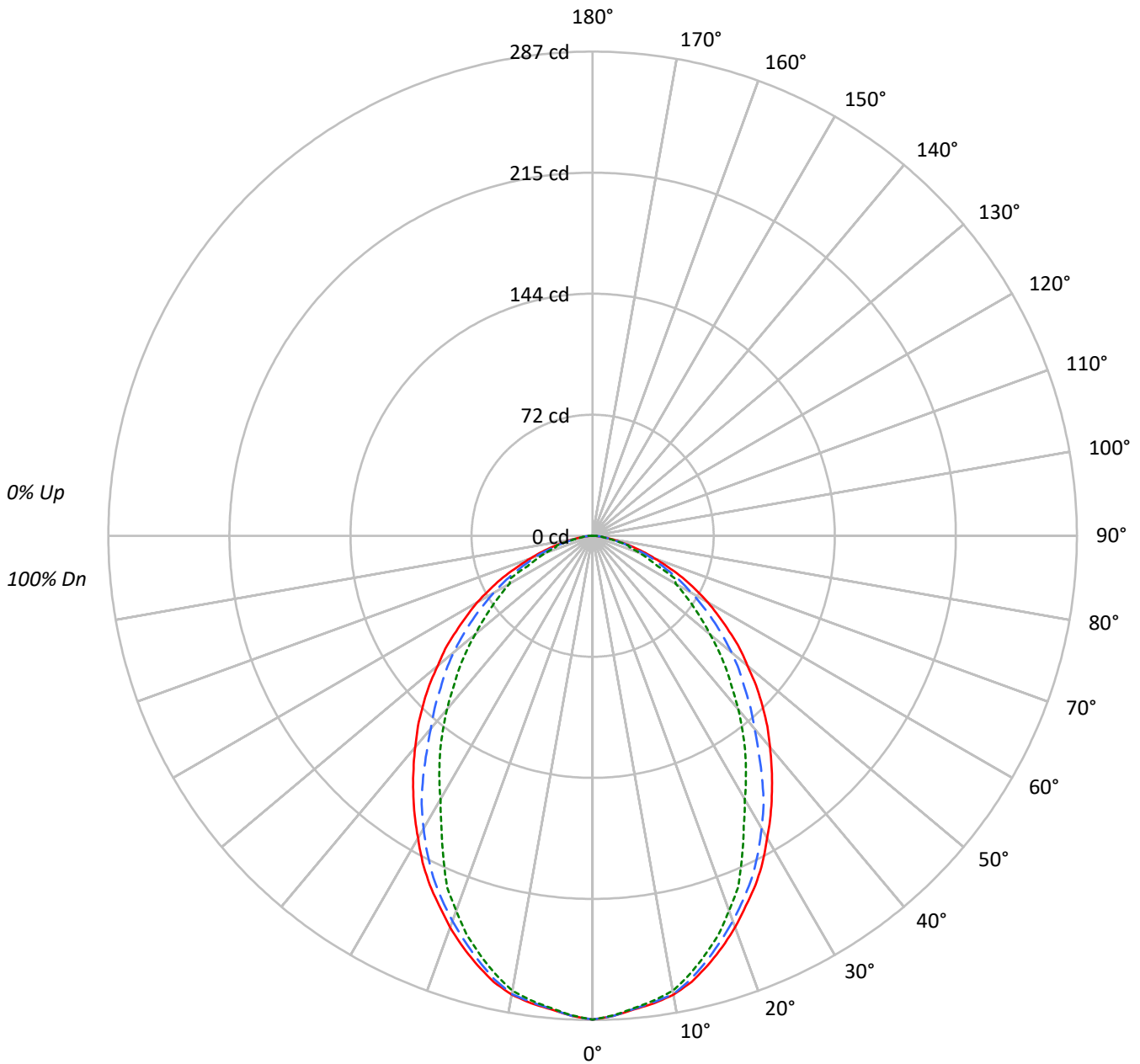
Lumens per Lamp: N/A  
Luminaire Lumens: 563.0 lumens  
Efficiency: N/A  
Efficacy: 67.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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°	3087	3087	3087
5°	3045	3042	3037
10°	3019	3014	2994
15°	2937	2907	2867
20°	2829	2783	2708
25°	2713	2654	2488
30°	2572	2490	2242
35°	2435	2301	2074
40°	2297	2096	1887
45°	2165	1938	1706
50°	2004	1798	1521
55°	1854	1631	1362
60°	1699	1455	1221
65°	1495	1276	1080
70°	1231	1117	919
75°	977	857	898
80°	657	614	576
85°	408	494	568



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.7	4.7
10°-20°	73.3	13.0
20°-30°	101.4	18.0
30°-40°	108.2	19.2
40°-50°	98.7	17.5
50°-60°	77.3	13.7
60°-70°	50.4	8.9
70°-80°	22.3	4.0
80°-90°	4.8	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°	201.4	35.8
0°-40°	309.6	55.0
0°-60°	485.5	86.2
0°-90°	563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	563.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	287	287	287	287	287	
5°	282	282	282	281	281	27
15°	264	264	261	258	257	74
25°	228	227	224	216	210	105
35°	185	184	175	162	158	116
45°	142	139	127	117	112	110
55°	99	96	87	77	73	89
65°	59	55	50	51	42	58
75°	24	22	21	20	22	25
85°	3	4	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	286.8	286.8	286.8	286.8	286.8
2.5°	284.8	284.8	284.8	284.5	284.5
5°	281.8	281.5	281.5	281.1	281.1
7.5°	279.5	279.2	278.8	278.5	277.8
10°	276.2	276.2	275.8	274.2	273.9
12.5°	270.9	270.5	269.2	266.9	266.2
15°	263.6	263.6	260.9	258.3	257.3
17.5°	255.6	255.3	252.0	249.3	248.0
20°	247.0	246.3	243.0	238.7	236.4
22.5°	237.4	237.4	233.4	227.8	225.4
25°	228.4	227.1	223.5	215.5	209.5
27.5°	218.2	216.2	212.2	200.9	194.0
30°	206.9	205.9	200.3	185.7	180.4
32.5°	196.3	194.6	188.6	173.4	169.1
35°	185.3	184.0	175.1	161.8	157.8
37.5°	174.4	172.7	161.5	150.9	145.9
40°	163.5	161.5	149.2	139.6	134.3
42.5°	153.2	150.5	138.6	128.3	122.3
45°	142.2	139.2	127.3	116.7	112.1
47.5°	131.3	128.6	117.7	106.8	101.5
50°	119.7	117.4	107.4	96.5	90.8
52.5°	110.1	106.4	96.8	85.9	81.2
55°	98.8	95.8	86.9	76.6	72.6
57.5°	88.5	85.5	77.2	67.6	64.3
60°	78.9	74.6	67.6	59.3	56.7
62.5°	68.3	65.0	59.0	52.1	55.4
65°	58.7	55.4	50.1	51.1	42.4
67.5°	48.1	46.4	41.8	37.1	35.8
70°	39.1	37.1	35.5	30.5	29.2
72.5°	31.2	29.2	26.9	24.2	23.2
75°	23.5	21.9	20.6	19.6	21.6
77.5°	16.2	15.6	14.6	13.6	13.3
80°	10.6	10.3	9.9	9.6	9.3
82.5°	6.3	6.3	6.3	6.3	6.3
85°	3.3	3.6	4.0	4.3	4.6
87.5°	2.0	2.0	2.3	2.7	3.0
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)