

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: P544811

Luminaire Tested: **FMR-12-1-LD4-1LO-40-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: P544811  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

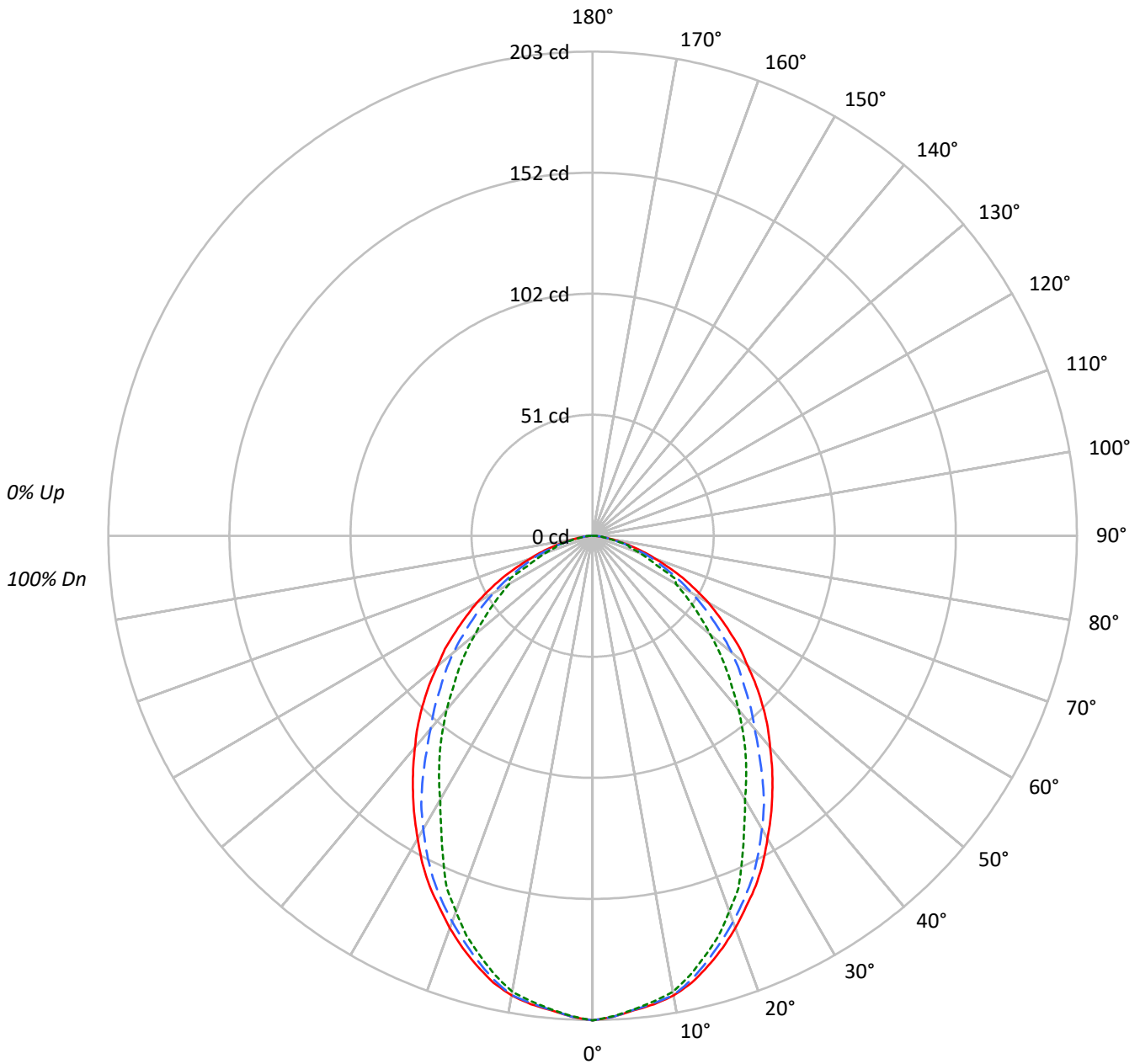
Lumens per Lamp: N/A  
Luminaire Lumens: 399.0 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	2187	2187	2187
5°	2158	2156	2153
10°	2139	2137	2122
15°	2082	2060	2031
20°	2005	1973	1919
25°	1923	1881	1764
30°	1822	1764	1588
35°	1725	1631	1469
40°	1627	1485	1338
45°	1534	1373	1209
50°	1420	1274	1078
55°	1314	1156	966
60°	1203	1031	865
65°	1060	904	767
70°	872	790	651
75°	695	607	636
80°	465	434	409
85°	284	346	408



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.9	4.7
10°-20°	51.9	13.0
20°-30°	71.9	18.0
30°-40°	76.6	19.2
40°-50°	69.9	17.5
50°-60°	54.8	13.7
60°-70°	35.7	8.9
70°-80°	15.8	4.0
80°-90°	3.4	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°	142.7	35.8
0°-40°	219.4	55.0
0°-60°	344.1	86.2
0°-90°	399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	399.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	203	203	203	203	203	
5°	200	200	200	199	199	19
15°	187	187	185	183	182	53
25°	162	161	158	153	148	74
35°	131	130	124	115	112	82
45°	101	99	90	83	79	78
55°	70	68	62	54	52	63
65°	42	39	36	36	30	41
75°	17	16	15	14	15	18
85°	2	3	3	3	3	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	203.2	203.2	203.2	203.2	203.2
2.5°	201.8	201.8	201.8	201.6	201.6
5°	199.7	199.5	199.5	199.3	199.3
7.5°	198.1	197.8	197.6	197.4	196.9
10°	195.7	195.7	195.5	194.3	194.1
12.5°	192.0	191.7	190.8	189.1	188.7
15°	186.8	186.8	184.9	183.0	182.3
17.5°	181.2	180.9	178.6	176.7	175.8
20°	175.0	174.6	172.2	169.2	167.5
22.5°	168.2	168.2	165.4	161.4	159.8
25°	161.9	161.0	158.4	152.7	148.5
27.5°	154.6	153.2	150.4	142.4	137.5
30°	146.6	145.9	141.9	131.6	127.8
32.5°	139.1	137.9	133.7	122.9	119.8
35°	131.3	130.4	124.1	114.7	111.8
37.5°	123.6	122.4	114.4	106.9	103.4
40°	115.8	114.4	105.7	98.9	95.2
42.5°	108.6	106.7	98.2	90.9	86.7
45°	100.8	98.7	90.2	82.7	79.4
47.5°	93.0	91.2	83.4	75.7	71.9
50°	84.8	83.2	76.1	68.4	64.4
52.5°	78.0	75.4	68.6	60.9	57.6
55°	70.0	67.9	61.6	54.3	51.5
57.5°	62.7	60.6	54.7	47.9	45.6
60°	55.9	52.9	47.9	42.1	40.2
62.5°	48.4	46.1	41.8	36.9	39.2
65°	41.6	39.2	35.5	36.2	30.1
67.5°	34.1	32.9	29.6	26.3	25.4
70°	27.7	26.3	25.1	21.6	20.7
72.5°	22.1	20.7	19.0	17.2	16.4
75°	16.7	15.5	14.6	13.9	15.3
77.5°	11.5	11.0	10.3	9.6	9.4
80°	7.5	7.3	7.0	6.8	6.6
82.5°	4.5	4.5	4.5	4.5	4.5
85°	2.3	2.6	2.8	3.1	3.3
87.5°	1.4	1.4	1.6	1.9	2.1
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)