

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: P544852

Luminaire Tested: **FMR-12-1-LD4-1LO-50-UNV-93-94-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: P544852  
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-93-94-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

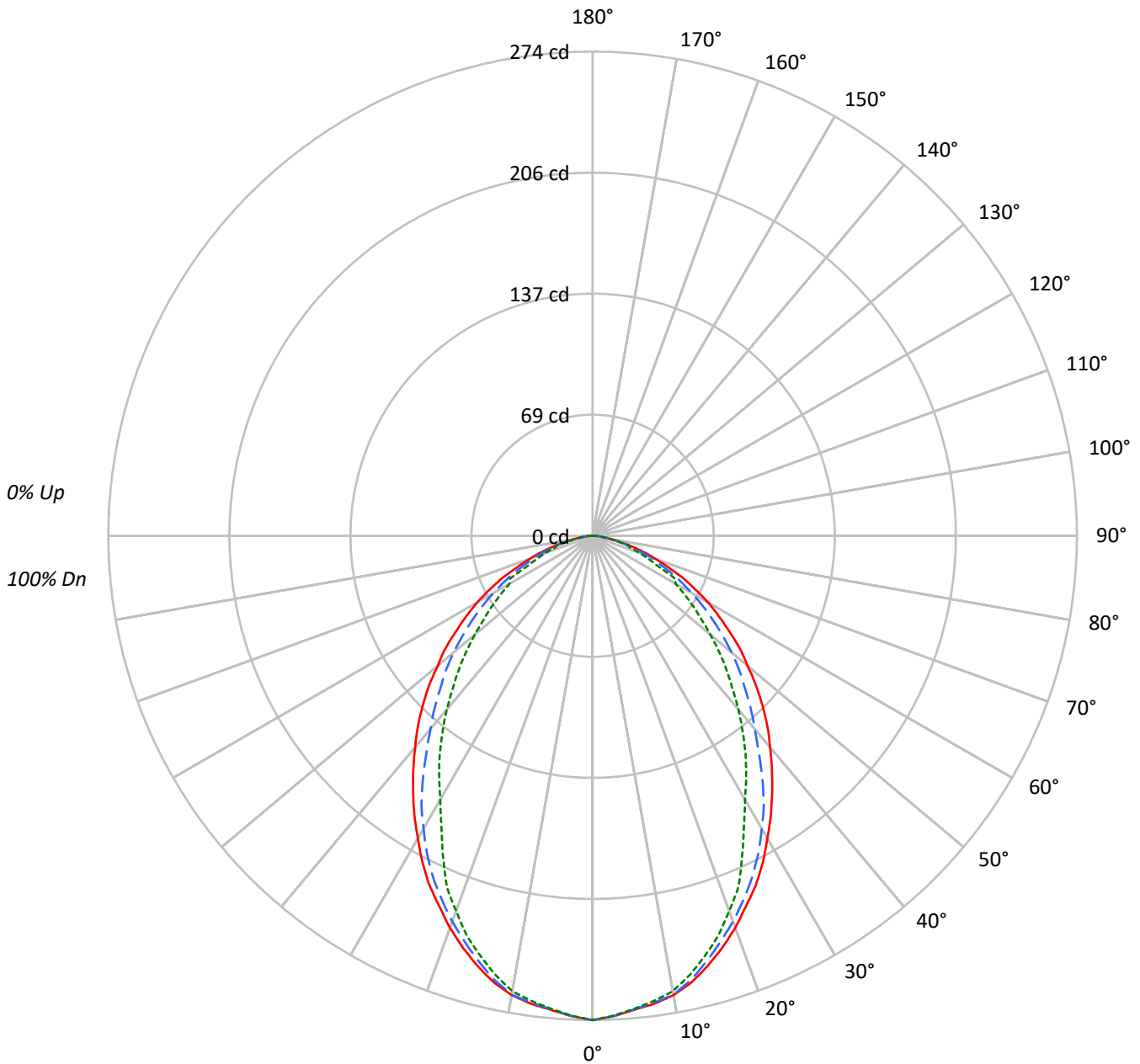
Lumens per Lamp: N/A  
Luminaire Lumens: 538.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P544852

CATALOG NUMBER: FMR-12-1-LD4-1LO-50-UNV-93-94-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P544852

CATALOG NUMBER: FMR-12-1-LD4-1LO-50-UNV-93-94-EDD

**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°	2950	2950	2950
5°	2910	2907	2903
10°	2884	2881	2860
15°	2807	2778	2740
20°	2703	2660	2588
25°	2593	2536	2378
30°	2457	2379	2143
35°	2327	2198	1982
40°	2195	2004	1803
45°	2069	1853	1630
50°	1916	1718	1454
55°	1772	1558	1302
60°	1623	1391	1167
65°	1429	1217	1034
70°	1177	1067	878
75°	936	815	857
80°	626	589	552
85°	395	469	543



TEST NUMBER: P544852

CATALOG NUMBER: FMR-12-1-LD4-1LO-50-UNV-93-94-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.5	4.7
10°-20°	70.0	13.0
20°-30°	96.9	18.0
30°-40°	103.4	19.2
40°-50°	94.3	17.5
50°-60°	73.9	13.7
60°-70°	48.1	8.9
70°-80°	21.3	4.0
80°-90°	4.6	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°	192.4	35.8
0°-40°	295.8	55.0
0°-60°	464.0	86.2
0°-90°	538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	538.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	274	274	274	274	274	
5°	269	269	269	269	269	26
15°	252	252	249	247	246	71
25°	218	217	214	206	200	100
35°	177	176	167	155	151	111
45°	136	133	122	112	107	105
55°	94	92	83	73	69	85
65°	56	53	48	49	41	55
75°	22	21	20	19	21	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P544852

CATALOG NUMBER: FMR-12-1-LD4-1LO-50-UNV-93-94-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	274.1	274.1	274.1	274.1	274.1
2.5°	272.1	272.1	272.1	271.8	271.8
5°	269.3	269.0	269.0	268.7	268.7
7.5°	267.1	266.8	266.4	266.1	265.5
10°	263.9	263.9	263.6	262.0	261.7
12.5°	258.8	258.5	257.3	255.0	254.4
15°	251.9	251.9	249.3	246.8	245.9
17.5°	244.3	244.0	240.8	238.2	237.0
20°	236.0	235.4	232.2	228.1	225.9
22.5°	226.8	226.8	223.0	217.7	215.4
25°	218.3	217.0	213.5	205.9	200.2
27.5°	208.5	206.6	202.8	192.0	185.3
30°	197.7	196.7	191.4	177.4	172.4
32.5°	187.6	186.0	180.3	165.7	161.6
35°	177.1	175.8	167.3	154.6	150.8
37.5°	166.6	165.1	154.3	144.2	139.4
40°	156.2	154.3	142.6	133.4	128.3
42.5°	146.4	143.8	132.4	122.6	116.9
45°	135.9	133.1	121.7	111.5	107.1
47.5°	125.5	122.9	112.5	102.0	96.9
50°	114.4	112.2	102.6	92.2	86.8
52.5°	105.2	101.7	92.5	82.1	77.6
55°	94.4	91.6	83.0	73.2	69.4
57.5°	84.6	81.7	73.8	64.6	61.5
60°	75.4	71.3	64.6	56.7	54.2
62.5°	65.3	62.1	56.4	49.7	52.9
65°	56.1	52.9	47.8	48.8	40.6
67.5°	45.9	44.4	39.9	35.5	34.2
70°	37.4	35.5	33.9	29.1	27.9
72.5°	29.8	27.9	25.7	23.1	22.2
75°	22.5	20.9	19.6	18.7	20.6
77.5°	15.5	14.9	13.9	13.0	12.7
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	2.9
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)