

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: P545196

Luminaire Tested: **FMR-12-1-LD4-2STD-40-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: P545196  
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-LD4-2STD-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

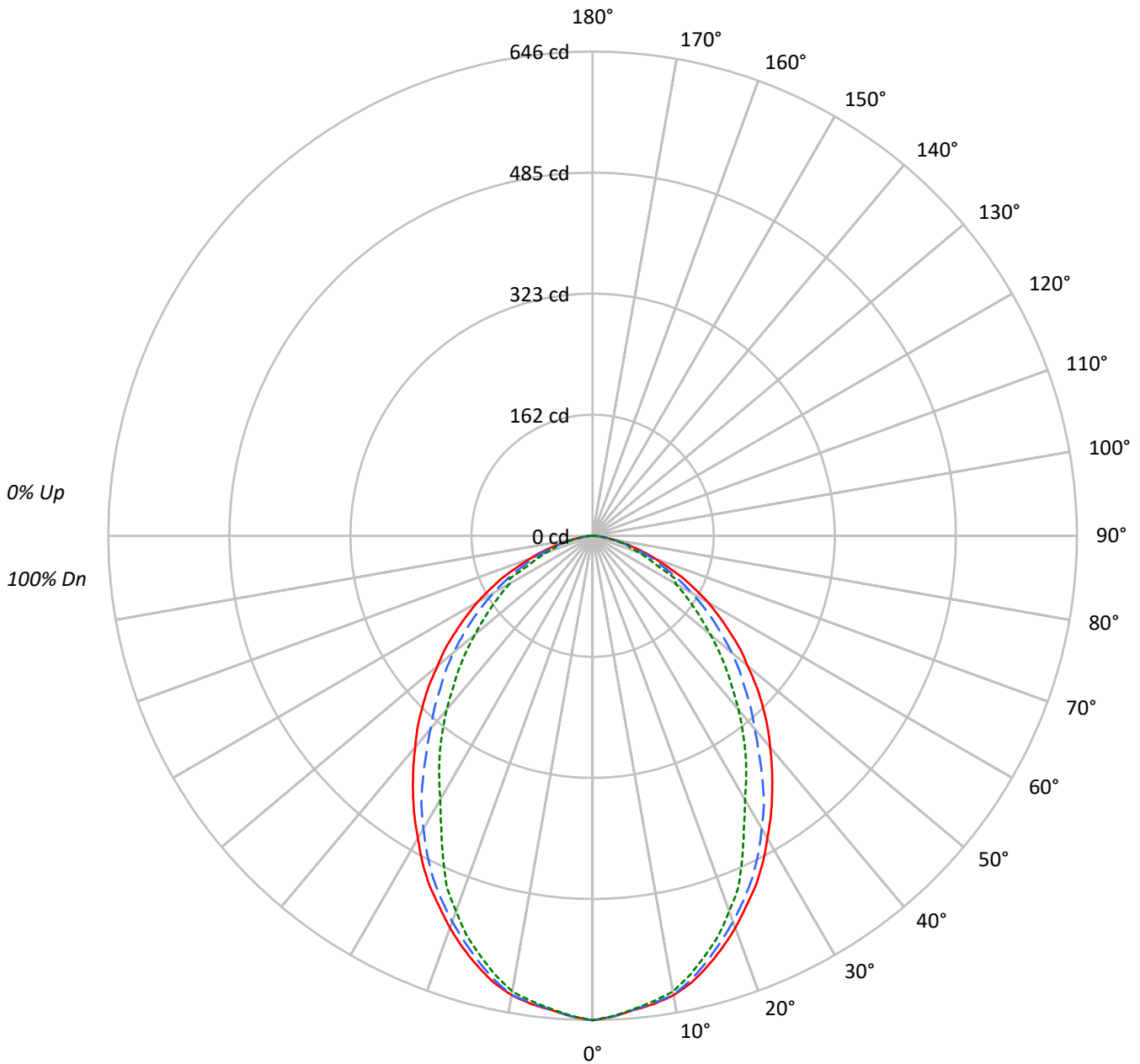
Lumens per Lamp: N/A  
Luminaire Lumens: 1269.0 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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

TEST NUMBER: P545196

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-82-94-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P545196

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-82-94-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6958	6958	6958
5°	6863	6856	6847
10°	6804	6796	6747
15°	6620	6554	6462
20°	6377	6275	6103
25°	6115	5982	5609
30°	5796	5610	5052
35°	5489	5185	4674
40°	5176	4725	4253
45°	4880	4369	3845
50°	4518	4054	3430
55°	4179	3674	3072
60°	3830	3281	2751
65°	3370	2873	2437
70°	2776	2518	2071
75°	2208	1926	2021
80°	1481	1389	1296
85°	926	1112	1297



TEST NUMBER: P545196

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-82-94-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.2	4.7
10°-20°	165.1	13.0
20°-30°	228.6	18.0
30°-40°	243.8	19.2
40°-50°	222.4	17.5
50°-60°	174.2	13.7
60°-70°	113.6	8.9
70°-80°	50.3	4.0
80°-90°	10.8	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°	453.9	35.8
0°-40°	697.7	55.0
0°-60°	1094.3	86.2
0°-90°	1269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1269.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	646	646	646	646	646	
5°	635	634	634	634	634	60
15°	594	594	588	582	580	167
25°	515	512	504	486	472	236
35°	418	415	395	365	356	261
45°	321	314	287	263	253	247
55°	223	216	196	173	164	200
65°	132	125	113	115	96	130
75°	53	49	46	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



TEST NUMBER: P545196

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-82-94-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	646.4	646.4	646.4	646.4	646.4
2.5°	641.9	641.9	641.9	641.2	641.2
5°	635.2	634.5	634.5	633.7	633.7
7.5°	630.0	629.2	628.5	627.7	626.2
10°	622.5	622.5	621.8	618.0	617.3
12.5°	610.5	609.8	606.8	601.6	600.1
15°	594.1	594.1	588.1	582.1	579.9
17.5°	576.2	575.4	567.9	562.0	559.0
20°	556.7	555.2	547.8	538.1	532.8
22.5°	535.1	535.1	526.1	513.4	508.2
25°	514.9	511.9	503.7	485.7	472.3
27.5°	491.7	487.2	478.3	452.9	437.2
30°	466.3	464.1	451.4	418.5	406.5
32.5°	442.4	438.7	425.2	390.8	381.1
35°	417.7	414.7	394.6	364.7	355.7
37.5°	393.1	389.3	363.9	340.0	328.8
40°	368.4	363.9	336.3	314.6	302.7
42.5°	345.3	339.3	312.4	289.2	275.8
45°	320.6	313.9	287.0	263.0	252.6
47.5°	295.9	290.0	265.3	240.6	228.7
50°	269.8	264.5	242.1	217.5	204.8
52.5°	248.1	239.9	218.2	193.5	183.1
55°	222.7	216.0	195.8	172.6	163.7
57.5°	199.5	192.8	174.1	152.4	145.0
60°	177.9	168.1	152.4	133.8	127.8
62.5°	153.9	146.5	133.0	117.3	124.8
65°	132.3	124.8	112.8	115.1	95.7
67.5°	108.4	104.6	94.2	83.7	80.7
70°	88.2	83.7	80.0	68.8	65.8
72.5°	70.2	65.8	60.5	54.6	52.3
75°	53.1	49.3	46.3	44.1	48.6
77.5°	36.6	35.1	32.9	30.6	29.9
80°	23.9	23.2	22.4	21.7	20.9
82.5°	14.2	14.2	14.2	14.2	14.2
85°	7.5	8.2	9.0	9.7	10.5
87.5°	4.5	4.5	5.2	6.0	6.7
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)