

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: P544794

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-80-87-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: P544794  
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-80-87-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

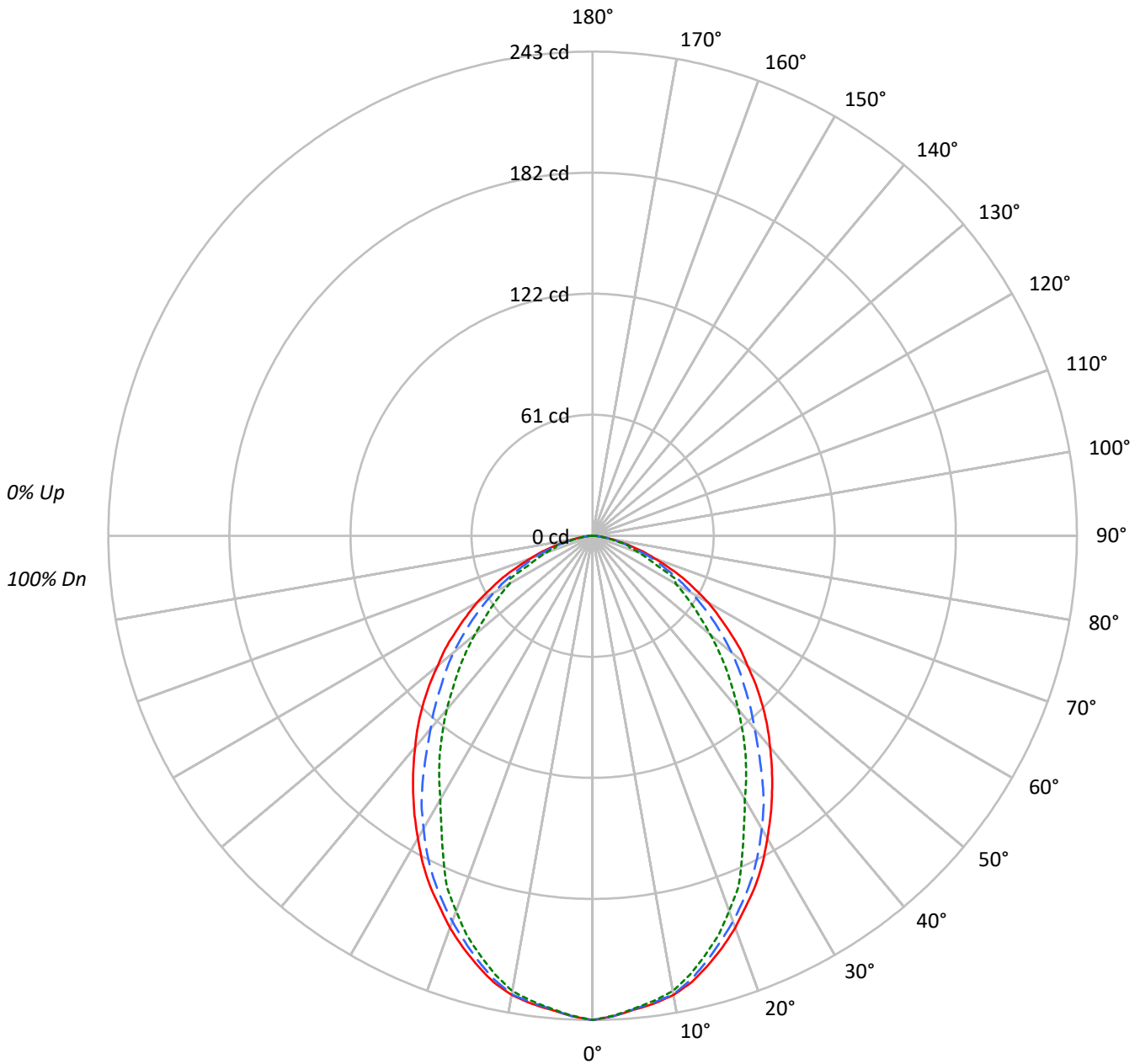
Lumens per Lamp: N/A  
Luminaire Lumens: 477.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P544794

CATALOG NUMBER: FMR-12-1-LD4-1LO-40-UNV-80-87-EDD

### 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°	2616	2616	2616
5°	2580	2577	2574
10°	2558	2554	2536
15°	2488	2464	2429
20°	2397	2359	2294
25°	2298	2248	2108
30°	2179	2109	1899
35°	2063	1949	1757
40°	1946	1776	1599
45°	1834	1643	1445
50°	1698	1524	1289
55°	1571	1381	1154
60°	1440	1234	1033
65°	1266	1080	917
70°	1042	947	777
75°	828	724	761
80°	558	521	490
85°	346	420	482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.6	4.7
10°-20°	62.1	13.0
20°-30°	85.9	18.0
30°-40°	91.6	19.2
40°-50°	83.6	17.5
50°-60°	65.5	13.7
60°-70°	42.7	8.9
70°-80°	18.9	4.0
80°-90°	4.1	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°	170.6	35.8
0°-40°	262.3	55.0
0°-60°	411.3	86.2
0°-90°	477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	477.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	243	243	243	243	243	
5°	239	238	238	238	238	23
15°	223	223	221	219	218	63
25°	194	192	189	183	178	89
35°	157	156	148	137	134	98
45°	120	118	108	99	95	93
55°	84	81	74	65	62	75
65°	50	47	42	43	36	49
75°	20	18	17	17	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	243.0	243.0	243.0	243.0	243.0
2.5°	241.3	241.3	241.3	241.0	241.0
5°	238.8	238.5	238.5	238.2	238.2
7.5°	236.8	236.5	236.2	236.0	235.4
10°	234.0	234.0	233.7	232.3	232.0
12.5°	229.5	229.2	228.1	226.1	225.6
15°	223.3	223.3	221.1	218.8	218.0
17.5°	216.6	216.3	213.5	211.2	210.1
20°	209.3	208.7	205.9	202.2	200.3
22.5°	201.1	201.1	197.8	193.0	191.0
25°	193.5	192.4	189.3	182.6	177.5
27.5°	184.8	183.1	179.8	170.2	164.3
30°	175.3	174.4	169.7	157.3	152.8
32.5°	166.3	164.9	159.8	146.9	143.3
35°	157.0	155.9	148.3	137.1	133.7
37.5°	147.8	146.3	136.8	127.8	123.6
40°	138.5	136.8	126.4	118.3	113.8
42.5°	129.8	127.5	117.4	108.7	103.7
45°	120.5	118.0	107.9	98.9	94.9
47.5°	111.2	109.0	99.7	90.4	86.0
50°	101.4	99.4	91.0	81.7	77.0
52.5°	93.3	90.2	82.0	72.8	68.8
55°	83.7	81.2	73.6	64.9	61.5
57.5°	75.0	72.5	65.4	57.3	54.5
60°	66.9	63.2	57.3	50.3	48.0
62.5°	57.9	55.1	50.0	44.1	46.9
65°	49.7	46.9	42.4	43.3	36.0
67.5°	40.7	39.3	35.4	31.5	30.3
70°	33.1	31.5	30.1	25.8	24.7
72.5°	26.4	24.7	22.8	20.5	19.7
75°	19.9	18.5	17.4	16.6	18.3
77.5°	13.8	13.2	12.4	11.5	11.2
80°	9.0	8.7	8.4	8.1	7.9
82.5°	5.3	5.3	5.3	5.3	5.3
85°	2.8	3.1	3.4	3.7	3.9
87.5°	1.7	1.7	2.0	2.2	2.5
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)