

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: P544820

Luminaire Tested: **FMR-12-1-LD4-1LO-40-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: P544820  
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-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

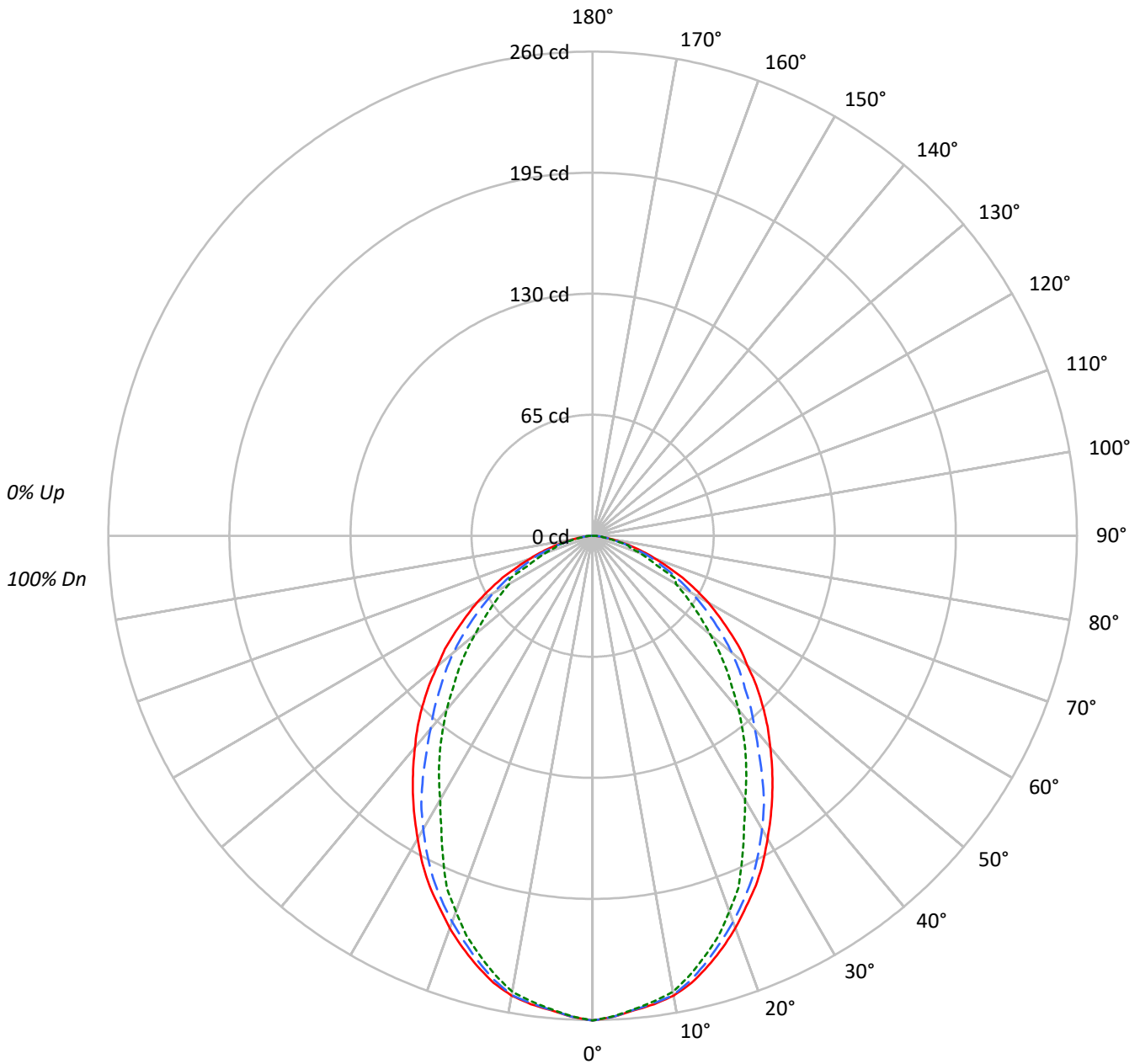
Lumens per Lamp: N/A  
Luminaire Lumens: 511.0 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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: P544820

CATALOG NUMBER: FMR-12-1-LD4-1LO-40-UNV-93-94-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P544820

CATALOG NUMBER: FMR-12-1-LD4-1LO-40-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°	2802	2802	2802
5°	2764	2761	2757
10°	2740	2737	2717
15°	2666	2639	2602
20°	2568	2527	2458
25°	2462	2409	2259
30°	2334	2260	2035
35°	2210	2088	1882
40°	2085	1903	1713
45°	1965	1760	1548
50°	1819	1633	1382
55°	1683	1479	1237
60°	1541	1322	1109
65°	1358	1156	981
70°	1117	1013	834
75°	890	778	815
80°	595	558	521
85°	371	445	519



TEST NUMBER: P544820

CATALOG NUMBER: FMR-12-1-LD4-1LO-40-UNV-93-94-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.2	4.7
10°-20°	66.5	13.0
20°-30°	92.1	18.0
30°-40°	98.2	19.2
40°-50°	89.6	17.5
50°-60°	70.2	13.7
60°-70°	45.7	8.9
70°-80°	20.3	4.0
80°-90°	4.3	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°	182.8	35.8
0°-40°	281.0	55.0
0°-60°	440.7	86.2
0°-90°	511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	511.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	260	260	260	260	260	
5°	256	256	256	255	255	24
15°	239	239	237	234	234	67
25°	207	206	203	196	190	95
35°	168	167	159	147	143	105
45°	129	126	116	106	102	99
55°	90	87	79	70	66	80
65°	53	50	45	46	38	52
75°	21	20	19	18	20	23
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P544820

CATALOG NUMBER: FMR-12-1-LD4-1LO-40-UNV-93-94-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	260.3	260.3	260.3	260.3	260.3
2.5°	258.5	258.5	258.5	258.2	258.2
5°	255.8	255.5	255.5	255.2	255.2
7.5°	253.7	253.4	253.1	252.8	252.2
10°	250.7	250.7	250.4	248.9	248.6
12.5°	245.9	245.6	244.3	242.2	241.6
15°	239.2	239.2	236.8	234.4	233.5
17.5°	232.0	231.7	228.7	226.3	225.1
20°	224.2	223.6	220.6	216.7	214.6
22.5°	215.5	215.5	211.8	206.7	204.6
25°	207.3	206.1	202.8	195.6	190.2
27.5°	198.0	196.2	192.6	182.4	176.0
30°	187.8	186.9	181.8	168.5	163.7
32.5°	178.1	176.6	171.2	157.4	153.5
35°	168.2	167.0	158.9	146.8	143.2
37.5°	158.3	156.8	146.5	136.9	132.4
40°	148.4	146.5	135.4	126.7	121.9
42.5°	139.0	136.6	125.8	116.5	111.0
45°	129.1	126.4	115.6	105.9	101.7
47.5°	119.2	116.8	106.8	96.9	92.1
50°	108.6	106.5	97.5	87.6	82.5
52.5°	99.9	96.6	87.9	77.9	73.7
55°	89.7	87.0	78.8	69.5	65.9
57.5°	80.3	77.6	70.1	61.4	58.4
60°	71.6	67.7	61.4	53.9	51.5
62.5°	62.0	59.0	53.6	47.2	50.3
65°	53.3	50.3	45.4	46.3	38.5
67.5°	43.6	42.1	37.9	33.7	32.5
70°	35.5	33.7	32.2	27.7	26.5
72.5°	28.3	26.5	24.4	22.0	21.1
75°	21.4	19.9	18.7	17.8	19.6
77.5°	14.7	14.1	13.2	12.3	12.0
80°	9.6	9.3	9.0	8.7	8.4
82.5°	5.7	5.7	5.7	5.7	5.7
85°	3.0	3.3	3.6	3.9	4.2
87.5°	1.8	1.8	2.1	2.4	2.7
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)