

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: P544909

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-82-96-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: P544909  
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-LD4-1STD-40-UNV-82-96-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

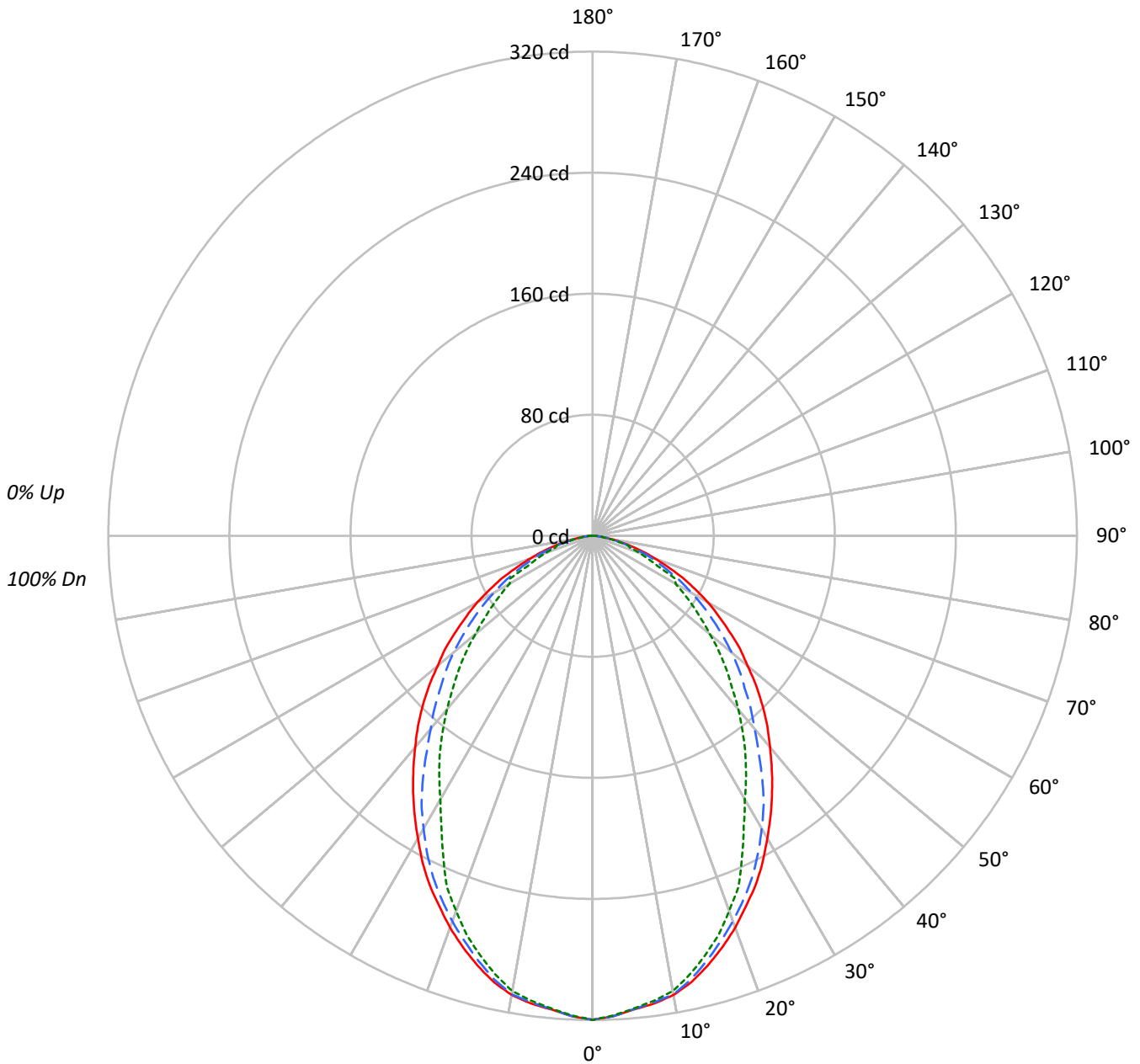
Lumens per Lamp: N/A  
Luminaire Lumens: 628.0 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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: P544909

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-96-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P544909

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-96-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°	3443	3443	3443
5°	3396	3393	3388
10°	3368	3363	3339
15°	3276	3243	3198
20°	3156	3105	3021
25°	3026	2961	2776
30°	2869	2777	2501
35°	2716	2566	2313
40°	2562	2338	2105
45°	2416	2162	1903
50°	2236	2006	1696
55°	2068	1818	1520
60°	1894	1623	1361
65°	1668	1421	1205
70°	1372	1246	1023
75°	1094	952	998
80°	731	688	645
85°	457	543	642



TEST NUMBER: P544909

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-96-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.8	4.7
10°-20°	81.7	13.0
20°-30°	113.1	18.0
30°-40°	120.6	19.2
40°-50°	110.1	17.5
50°-60°	86.2	13.7
60°-70°	56.2	8.9
70°-80°	24.9	4.0
80°-90°	5.3	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°	224.6	35.8
0°-40°	345.3	55.0
0°-60°	541.6	86.2
0°-90°	628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	628.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	320	320	320	320	320	
5°	314	314	314	314	314	30
15°	294	294	291	288	287	83
25°	255	253	249	240	234	117
35°	207	205	195	180	176	129
45°	159	155	142	130	125	122
55°	110	107	97	85	81	99
65°	66	62	56	57	47	65
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



TEST NUMBER: P544909

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-96-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	319.9	319.9	319.9	319.9	319.9
2.5°	317.7	317.7	317.7	317.3	317.3
5°	314.3	314.0	314.0	313.6	313.6
7.5°	311.8	311.4	311.0	310.6	309.9
10°	308.1	308.1	307.7	305.8	305.5
12.5°	302.1	301.8	300.3	297.7	297.0
15°	294.0	294.0	291.0	288.1	287.0
17.5°	285.1	284.8	281.1	278.1	276.6
20°	275.5	274.8	271.1	266.3	263.7
22.5°	264.8	264.8	260.4	254.1	251.5
25°	254.8	253.3	249.3	240.4	233.7
27.5°	243.3	241.1	236.7	224.1	216.3
30°	230.8	229.7	223.4	207.1	201.2
32.5°	218.9	217.1	210.4	193.4	188.6
35°	206.7	205.3	195.3	180.5	176.0
37.5°	194.5	192.7	180.1	168.3	162.7
40°	182.3	180.1	166.4	155.7	149.8
42.5°	170.9	167.9	154.6	143.1	136.5
45°	158.7	155.3	142.0	130.2	125.0
47.5°	146.4	143.5	131.3	119.1	113.2
50°	133.5	130.9	119.8	107.6	101.3
52.5°	122.8	118.7	108.0	95.8	90.6
55°	110.2	106.9	96.9	85.4	81.0
57.5°	98.7	95.4	86.2	75.4	71.7
60°	88.0	83.2	75.4	66.2	63.2
62.5°	76.2	72.5	65.8	58.1	61.8
65°	65.5	61.8	55.8	57.0	47.3
67.5°	53.6	51.8	46.6	41.4	39.9
70°	43.6	41.4	39.6	34.0	32.5
72.5°	34.8	32.5	30.0	27.0	25.9
75°	26.3	24.4	22.9	21.8	24.0
77.5°	18.1	17.4	16.3	15.2	14.8
80°	11.8	11.5	11.1	10.7	10.4
82.5°	7.0	7.0	7.0	7.0	7.0
85°	3.7	4.1	4.4	4.8	5.2
87.5°	2.2	2.2	2.6	3.0	3.3
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)