

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: P544882

Luminaire Tested: **FMR-12-1-LD4-1STD-35-UNV-93-87-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: P544882  
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-35-UNV-93-87-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

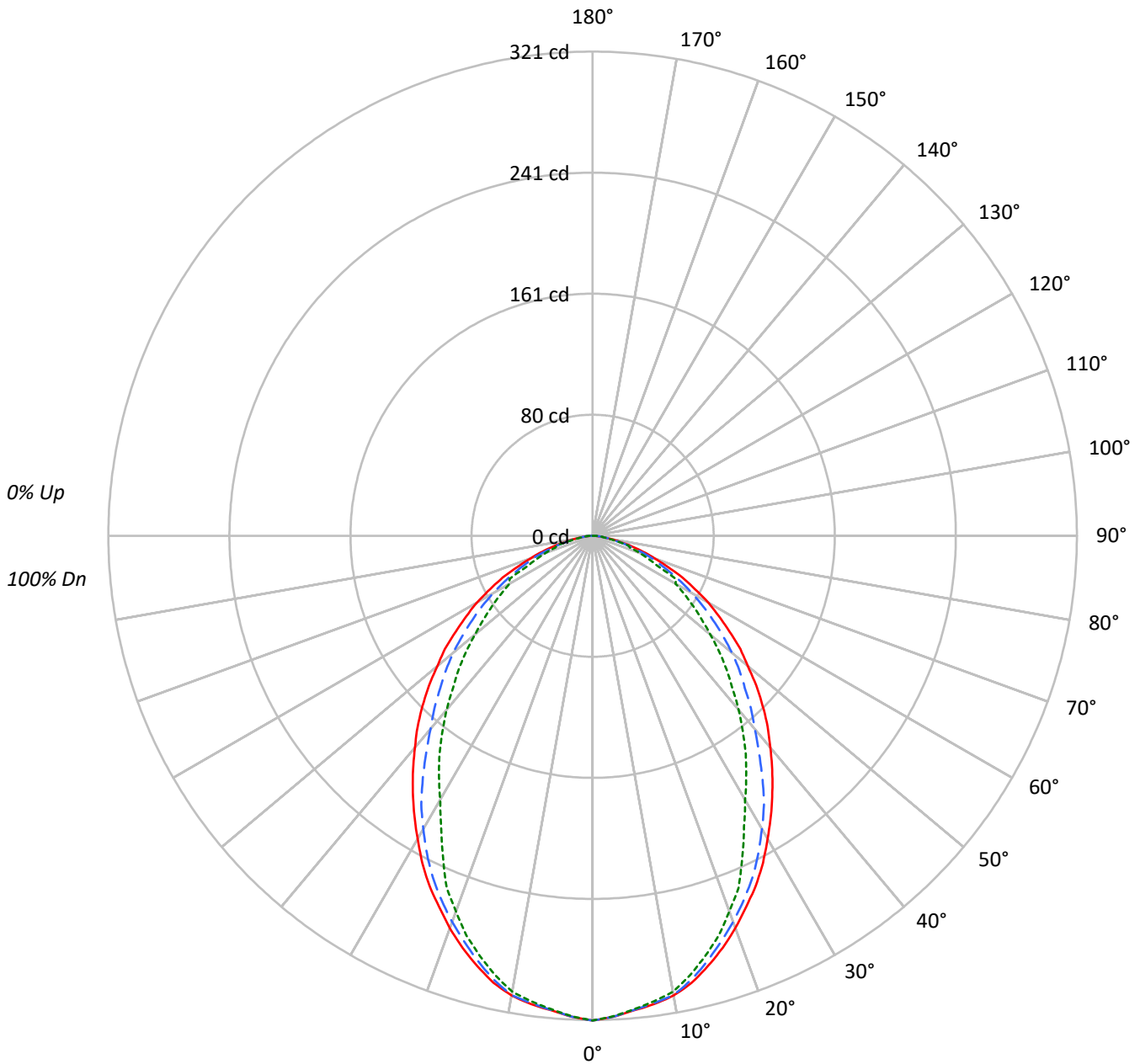
Lumens per Lamp: N/A  
Luminaire Lumens: 631.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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: P544882

CATALOG NUMBER: FMR-12-1-LD4-1STD-35-UNV-93-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P544882

CATALOG NUMBER: FMR-12-1-LD4-1STD-35-UNV-93-87-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°	3460	3460	3460
5°	3412	3409	3405
10°	3383	3380	3354
15°	3292	3258	3214
20°	3171	3120	3034
25°	3040	2974	2789
30°	2882	2789	2512
35°	2729	2578	2325
40°	2574	2349	2115
45°	2426	2172	1912
50°	2246	2016	1705
55°	2077	1828	1528
60°	1903	1632	1367
65°	1676	1429	1212
70°	1378	1253	1029
75°	1098	957	1006
80°	738	688	645
85°	457	556	642



TEST NUMBER: P544882

CATALOG NUMBER: FMR-12-1-LD4-1STD-35-UNV-93-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.9	4.7
10°-20°	82.1	13.0
20°-30°	113.7	18.0
30°-40°	121.2	19.2
40°-50°	110.6	17.5
50°-60°	86.6	13.7
60°-70°	56.5	8.9
70°-80°	25.0	4.0
80°-90°	5.4	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°	225.7	35.8
0°-40°	346.9	55.0
0°-60°	544.1	86.2
0°-90°	631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	631.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	321	321	321	321	321	
5°	316	316	316	315	315	30
15°	295	295	292	290	288	83
25°	256	254	250	242	235	118
35°	208	206	196	181	177	130
45°	159	156	143	131	126	123
55°	111	107	97	86	81	99
65°	66	62	56	57	48	65
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



TEST NUMBER: P544882

CATALOG NUMBER: FMR-12-1-LD4-1STD-35-UNV-93-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	321.4	321.4	321.4	321.4	321.4
2.5°	319.2	319.2	319.2	318.8	318.8
5°	315.8	315.5	315.5	315.1	315.1
7.5°	313.2	312.9	312.5	312.1	311.4
10°	309.5	309.5	309.2	307.3	306.9
12.5°	303.6	303.2	301.7	299.1	298.4
15°	295.4	295.4	292.4	289.5	288.4
17.5°	286.5	286.1	282.4	279.4	277.9
20°	276.8	276.1	272.4	267.5	264.9
22.5°	266.1	266.1	261.6	255.3	252.7
25°	256.0	254.5	250.4	241.5	234.8
27.5°	244.5	242.3	237.8	225.2	217.4
30°	231.9	230.8	224.4	208.1	202.1
32.5°	220.0	218.1	211.4	194.3	189.5
35°	207.7	206.2	196.2	181.3	176.9
37.5°	195.5	193.6	181.0	169.1	163.5
40°	183.2	181.0	167.2	156.4	150.5
42.5°	171.7	168.7	155.3	143.8	137.1
45°	159.4	156.1	142.7	130.8	125.6
47.5°	147.1	144.2	131.9	119.7	113.7
50°	134.1	131.5	120.4	108.1	101.8
52.5°	123.4	119.3	108.5	96.2	91.0
55°	110.7	107.4	97.4	85.8	81.4
57.5°	99.2	95.9	86.6	75.8	72.1
60°	88.4	83.6	75.8	66.5	63.5
62.5°	76.5	72.8	66.1	58.3	62.1
65°	65.8	62.1	56.1	57.2	47.6
67.5°	53.9	52.0	46.8	41.6	40.1
70°	43.8	41.6	39.8	34.2	32.7
72.5°	34.9	32.7	30.1	27.1	26.0
75°	26.4	24.5	23.0	21.9	24.2
77.5°	18.2	17.5	16.3	15.2	14.9
80°	11.9	11.5	11.1	10.8	10.4
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.7	4.1	4.5	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)