

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: P544776

Luminaire Tested: **FMR-12-1-LD4-1LO-35-UNV-82-85-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: P544776  
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-35-UNV-82-85-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

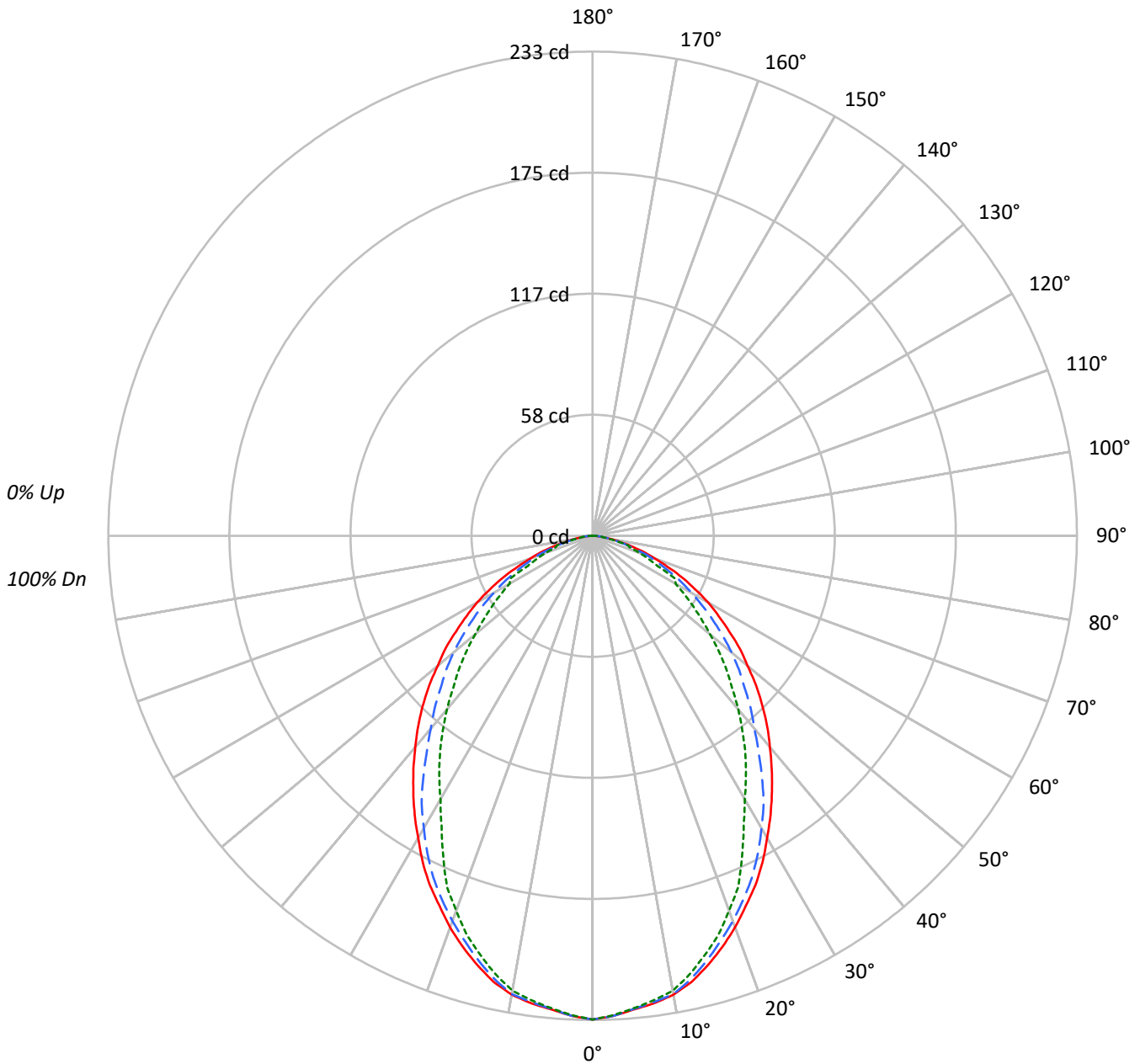
Lumens per Lamp: N/A  
Luminaire Lumens: 457.0 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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

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### Luminous Intensity Polar Plot





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**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°	2506	2506	2506
5°	2472	2469	2466
10°	2450	2447	2430
15°	2385	2360	2327
20°	2297	2260	2198
25°	2202	2154	2020
30°	2087	2020	1820
35°	1976	1867	1683
40°	1865	1702	1532
45°	1758	1572	1385
50°	1628	1460	1234
55°	1505	1323	1105
60°	1380	1182	990
65°	1212	1034	876
70°	1001	906	746
75°	794	695	728
80°	533	502	465
85°	333	395	469



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.7	4.7
10°-20°	59.5	13.0
20°-30°	82.3	18.0
30°-40°	87.8	19.2
40°-50°	80.1	17.5
50°-60°	62.7	13.7
60°-70°	40.9	8.9
70°-80°	18.1	4.0
80°-90°	3.9	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°	163.5	35.8
0°-40°	251.3	55.0
0°-60°	394.1	86.2
0°-90°	457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	457.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	233	233	233	233	233	
5°	229	228	228	228	228	22
15°	214	214	212	210	209	60
25°	185	184	181	175	170	85
35°	150	149	142	131	128	94
45°	116	113	103	95	91	89
55°	80	78	70	62	59	72
65°	48	45	41	41	34	47
75°	19	18	17	16	18	20
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°	232.8	232.8	232.8	232.8	232.8
2.5°	231.2	231.2	231.2	230.9	230.9
5°	228.8	228.5	228.5	228.2	228.2
7.5°	226.9	226.6	226.3	226.1	225.5
10°	224.2	224.2	223.9	222.6	222.3
12.5°	219.9	219.6	218.5	216.6	216.1
15°	214.0	214.0	211.8	209.6	208.8
17.5°	207.5	207.2	204.5	202.4	201.3
20°	200.5	200.0	197.3	193.8	191.9
22.5°	192.7	192.7	189.5	184.9	183.0
25°	185.4	184.3	181.4	174.9	170.1
27.5°	177.1	175.5	172.2	163.1	157.4
30°	167.9	167.1	162.5	150.7	146.4
32.5°	159.3	158.0	153.1	140.8	137.3
35°	150.4	149.4	142.1	131.3	128.1
37.5°	141.6	140.2	131.1	122.5	118.4
40°	132.7	131.1	121.1	113.3	109.0
42.5°	124.3	122.2	112.5	104.1	99.3
45°	115.5	113.0	103.3	94.7	91.0
47.5°	106.6	104.4	95.5	86.7	82.4
50°	97.2	95.3	87.2	78.3	73.7
52.5°	89.3	86.4	78.6	69.7	65.9
55°	80.2	77.8	70.5	62.2	58.9
57.5°	71.9	69.4	62.7	54.9	52.2
60°	64.1	60.6	54.9	48.2	46.0
62.5°	55.4	52.7	47.9	42.3	44.9
65°	47.6	44.9	40.6	41.4	34.4
67.5°	39.0	37.7	33.9	30.1	29.1
70°	31.8	30.1	28.8	24.8	23.7
72.5°	25.3	23.7	21.8	19.6	18.8
75°	19.1	17.8	16.7	15.9	17.5
77.5°	13.2	12.6	11.8	11.0	10.8
80°	8.6	8.3	8.1	7.8	7.5
82.5°	5.1	5.1	5.1	5.1	5.1
85°	2.7	3.0	3.2	3.5	3.8
87.5°	1.6	1.6	1.9	2.2	2.4
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)