

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: P544762

Luminaire Tested: **FMR-12-1-LD4-1LO-35-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: P544762  
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-80-87-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

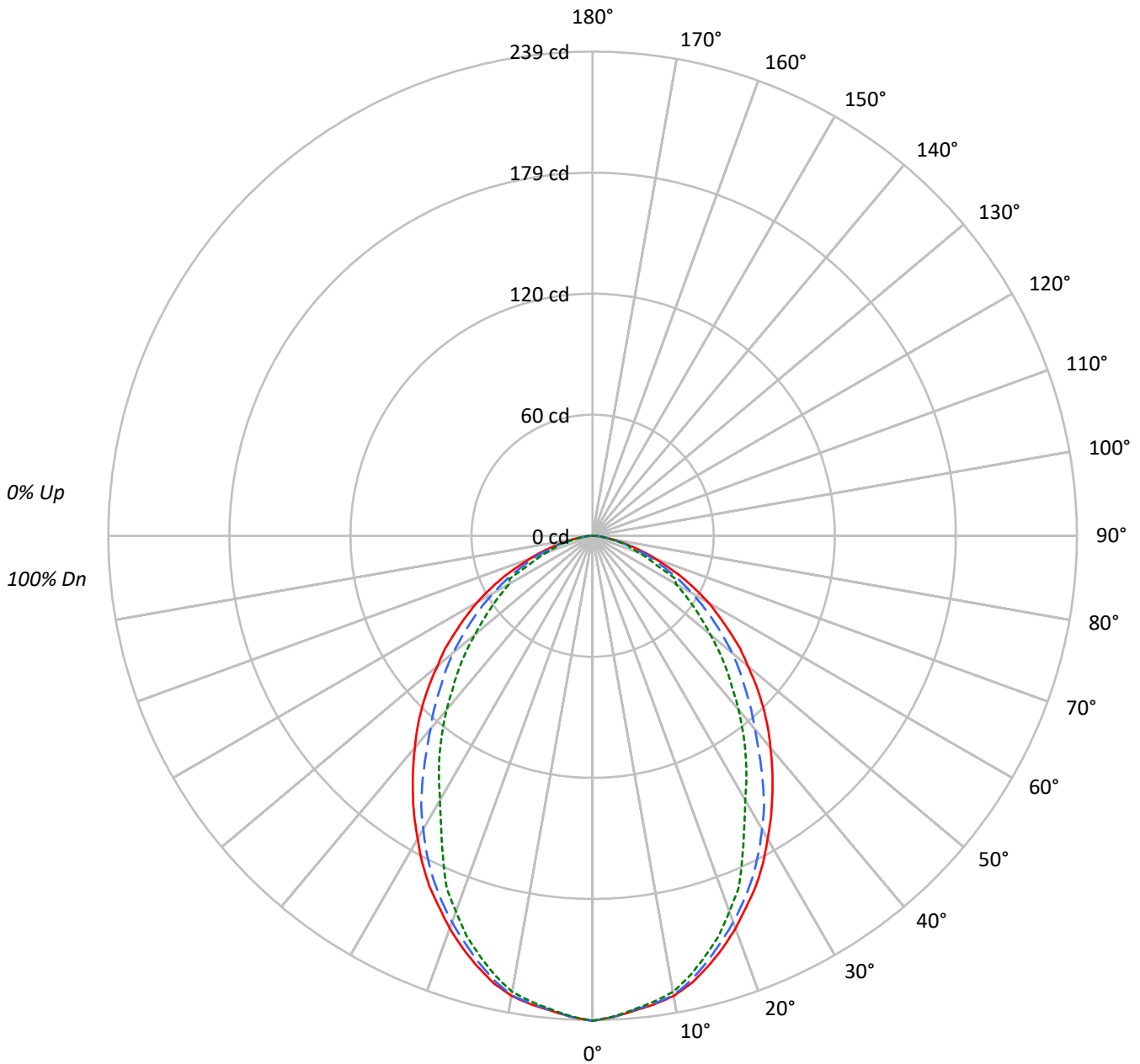
Lumens per Lamp: N/A  
Luminaire Lumens: 470.0 lumens  
Efficiency: N/A  
Efficacy: 81.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	47	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°	2577	2577	2577
5°	2542	2539	2536
10°	2520	2517	2499
15°	2452	2427	2394
20°	2362	2324	2260
25°	2265	2215	2077
30°	2147	2078	1872
35°	2033	1920	1731
40°	1918	1749	1575
45°	1807	1618	1425
50°	1673	1502	1269
55°	1548	1361	1137
60°	1419	1216	1018
65°	1248	1065	902
70°	1029	932	768
75°	819	715	749
80°	552	514	477
85°	346	408	482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.3	4.7
10°-20°	61.2	13.0
20°-30°	84.7	18.0
30°-40°	90.3	19.2
40°-50°	82.4	17.5
50°-60°	64.5	13.7
60°-70°	42.1	8.9
70°-80°	18.6	4.0
80°-90°	4.0	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°	168.1	35.8
0°-40°	258.4	55.0
0°-60°	405.3	86.2
0°-90°	470.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	470.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	239	239	239	239	239	
5°	235	235	235	235	235	22
15°	220	220	218	216	215	62
25°	191	190	186	180	175	88
35°	155	154	146	135	132	97
45°	119	116	106	97	94	91
55°	82	80	72	64	61	74
65°	49	46	42	43	35	48
75°	20	18	17	16	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°	239.4	239.4	239.4	239.4	239.4
2.5°	237.8	237.8	237.8	237.5	237.5
5°	235.3	235.0	235.0	234.7	234.7
7.5°	233.3	233.0	232.8	232.5	231.9
10°	230.6	230.6	230.3	228.9	228.6
12.5°	226.1	225.8	224.7	222.8	222.3
15°	220.0	220.0	217.8	215.6	214.8
17.5°	213.4	213.1	210.4	208.1	207.0
20°	206.2	205.6	202.9	199.3	197.3
22.5°	198.2	198.2	194.9	190.1	188.2
25°	190.7	189.6	186.5	179.9	174.9
27.5°	182.1	180.5	177.1	167.7	161.9
30°	172.7	171.9	167.2	155.0	150.6
32.5°	163.9	162.5	157.5	144.8	141.2
35°	154.7	153.6	146.1	135.1	131.7
37.5°	145.6	144.2	134.8	125.9	121.8
40°	136.5	134.8	124.5	116.5	112.1
42.5°	127.9	125.7	115.7	107.1	102.1
45°	118.7	116.2	106.3	97.4	93.6
47.5°	109.6	107.4	98.3	89.1	84.7
50°	99.9	98.0	89.7	80.5	75.8
52.5°	91.9	88.8	80.8	71.7	67.8
55°	82.5	80.0	72.5	63.9	60.6
57.5°	73.9	71.4	64.5	56.5	53.7
60°	65.9	62.3	56.5	49.5	47.3
62.5°	57.0	54.2	49.3	43.5	46.2
65°	49.0	46.2	41.8	42.6	35.4
67.5°	40.1	38.7	34.9	31.0	29.9
70°	32.7	31.0	29.6	25.5	24.4
72.5°	26.0	24.4	22.4	20.2	19.4
75°	19.7	18.3	17.2	16.3	18.0
77.5°	13.6	13.0	12.2	11.3	11.1
80°	8.9	8.6	8.3	8.0	7.7
82.5°	5.3	5.3	5.3	5.3	5.3
85°	2.8	3.0	3.3	3.6	3.9
87.5°	1.7	1.7	1.9	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)