

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: P544677

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-81-96-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: P544677  
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-LD4-1HI-35-UNV-81-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

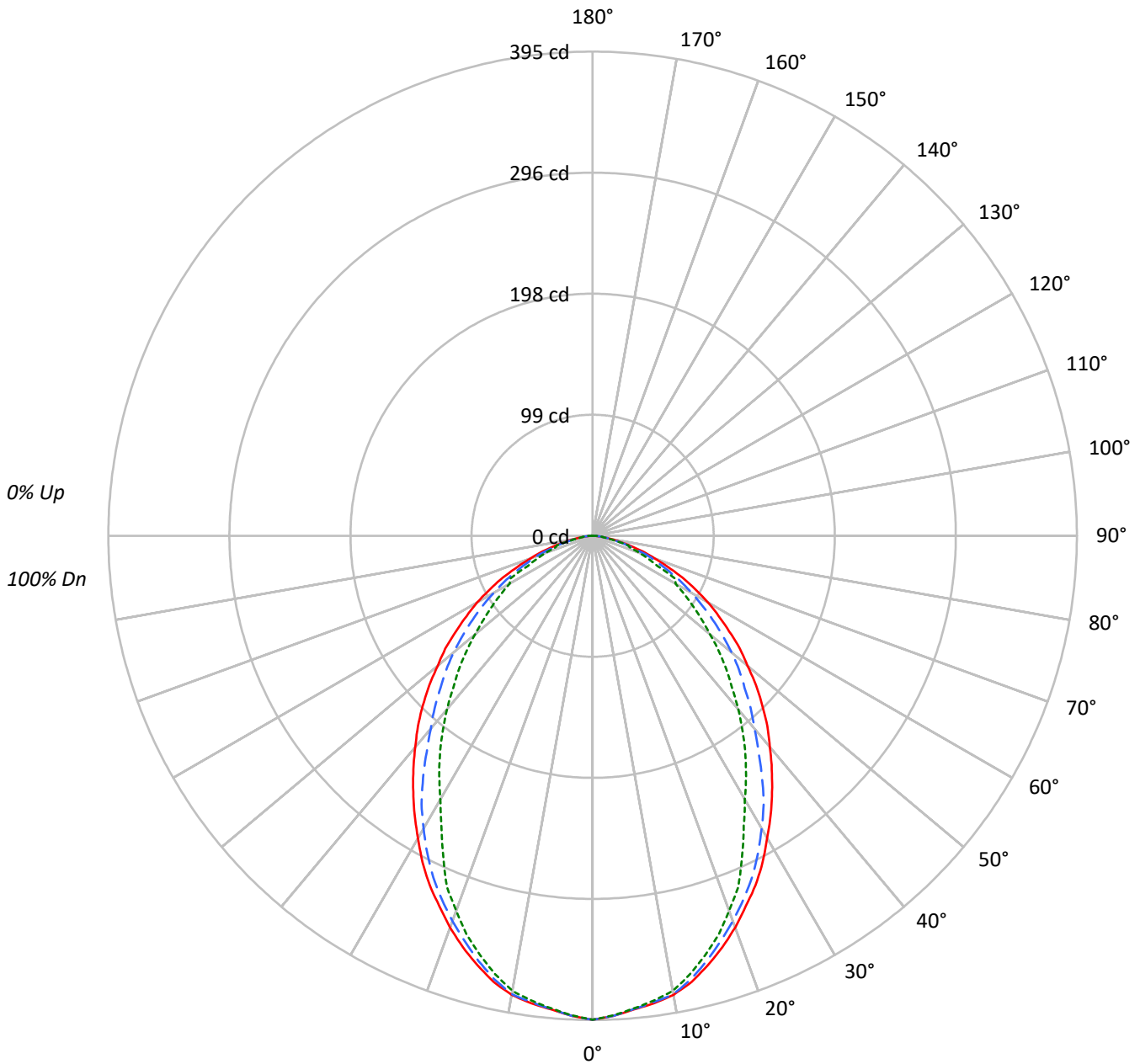
Lumens per Lamp: N/A  
Luminaire Lumens: 775.0 lumens  
Efficiency: N/A  
Efficacy: 71.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
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°	4250	4250	4250
5°	4191	4187	4182
10°	4156	4150	4121
15°	4043	4003	3947
20°	3895	3832	3727
25°	3735	3653	3425
30°	3540	3427	3086
35°	3352	3167	2854
40°	3162	2886	2597
45°	2981	2668	2349
50°	2760	2477	2095
55°	2552	2244	1875
60°	2338	2004	1679
65°	2058	1755	1487
70°	1696	1536	1265
75°	1347	1177	1235
80°	905	849	793
85°	568	679	790



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.7	4.7
10°-20°	100.9	13.0
20°-30°	139.6	18.0
30°-40°	148.9	19.2
40°-50°	135.8	17.5
50°-60°	106.4	13.7
60°-70°	69.4	8.9
70°-80°	30.7	4.0
80°-90°	6.6	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°	277.2	35.8
0°-40°	426.1	55.0
0°-60°	668.3	86.2
0°-90°	775.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	775.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	395	395	395	395	395	
5°	388	388	388	387	387	37
15°	363	363	359	356	354	102
25°	314	313	308	297	288	144
35°	255	253	241	223	217	160
45°	196	192	175	161	154	151
55°	136	132	120	105	100	122
65°	81	76	69	70	58	80
75°	32	30	28	27	30	35
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	394.8	394.8	394.8	394.8	394.8
2.5°	392.0	392.0	392.0	391.6	391.6
5°	387.9	387.5	387.5	387.0	387.0
7.5°	384.7	384.3	383.8	383.4	382.5
10°	380.2	380.2	379.7	377.4	377.0
12.5°	372.9	372.4	370.6	367.4	366.5
15°	362.8	362.8	359.2	355.5	354.2
17.5°	351.9	351.4	346.9	343.2	341.4
20°	340.0	339.1	334.5	328.6	325.4
22.5°	326.8	326.8	321.3	313.5	310.3
25°	314.5	312.6	307.6	296.7	288.4
27.5°	300.3	297.6	292.1	276.6	267.0
30°	284.8	283.4	275.7	255.6	248.3
32.5°	270.2	267.9	259.7	238.7	232.8
35°	255.1	253.3	241.0	222.7	217.2
37.5°	240.1	237.8	222.3	207.7	200.8
40°	225.0	222.3	205.4	192.1	184.8
42.5°	210.9	207.2	190.8	176.6	168.4
45°	195.8	191.7	175.3	160.6	154.3
47.5°	180.7	177.1	162.0	147.0	139.7
50°	164.8	161.6	147.9	132.8	125.1
52.5°	151.5	146.5	133.3	118.2	111.8
55°	136.0	131.9	119.6	105.4	99.9
57.5°	121.9	117.7	106.3	93.1	88.5
60°	108.6	102.7	93.1	81.7	78.0
62.5°	94.0	89.5	81.2	71.7	76.2
65°	80.8	76.2	68.9	70.3	58.4
67.5°	66.2	63.9	57.5	51.1	49.3
70°	53.9	51.1	48.8	42.0	40.2
72.5°	42.9	40.2	37.0	33.3	31.9
75°	32.4	30.1	28.3	26.9	29.7
77.5°	22.4	21.5	20.1	18.7	18.3
80°	14.6	14.1	13.7	13.2	12.8
82.5°	8.7	8.7	8.7	8.7	8.7
85°	4.6	5.0	5.5	5.9	6.4
87.5°	2.7	2.7	3.2	3.7	4.1
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)