

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: P545078

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-93-97-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: P545078  
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-LD4-2LO-35-UNV-93-97-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

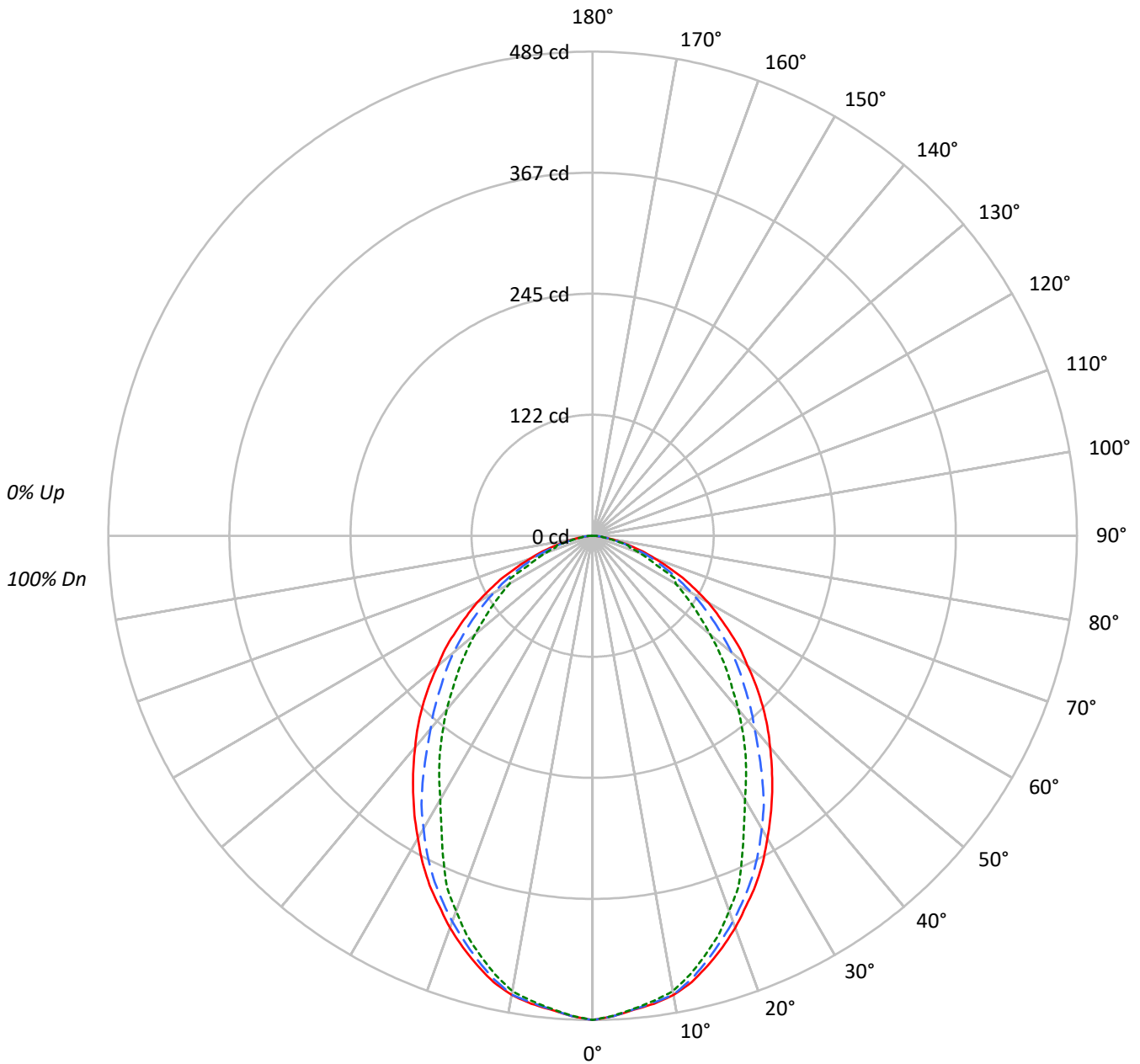
Lumens per Lamp: N/A  
Luminaire Lumens: 960.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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°	5264	5264	5264
5°	5192	5186	5180
10°	5147	5141	5104
15°	5008	4958	4889
20°	4825	4747	4617
25°	4626	4525	4244
30°	4385	4245	3822
35°	4152	3922	3536
40°	3916	3575	3218
45°	3691	3305	2909
50°	3418	3068	2594
55°	3162	2779	2323
60°	2895	2482	2082
65°	2550	2175	1844
70°	2099	1904	1564
75°	1668	1460	1526
80°	1122	1054	979
85°	704	840	976



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.5	4.7
10°-20°	124.9	13.0
20°-30°	173.0	18.0
30°-40°	184.4	19.2
40°-50°	168.2	17.5
50°-60°	131.8	13.7
60°-70°	85.9	8.9
70°-80°	38.1	4.0
80°-90°	8.2	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°	343.4	35.8
0°-40°	527.8	55.0
0°-60°	827.9	86.2
0°-90°	960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	960.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	489	489	489	489	489	
5°	480	480	480	479	479	46
15°	449	449	445	440	439	126
25°	390	387	381	368	357	179
35°	316	314	298	276	269	198
45°	242	237	217	199	191	187
55°	168	163	148	131	124	151
65°	100	94	85	87	72	99
75°	40	37	35	33	37	43
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	489.0	489.0	489.0	489.0	489.0
2.5°	485.6	485.6	485.6	485.1	485.1
5°	480.5	480.0	480.0	479.4	479.4
7.5°	476.6	476.0	475.4	474.9	473.7
10°	470.9	470.9	470.4	467.5	467.0
12.5°	461.9	461.3	459.0	455.1	454.0
15°	449.4	449.4	444.9	440.4	438.7
17.5°	435.9	435.3	429.7	425.1	422.9
20°	421.2	420.0	414.4	407.0	403.1
22.5°	404.8	404.8	398.0	388.4	384.4
25°	389.5	387.3	381.0	367.5	357.3
27.5°	372.0	368.6	361.8	342.6	330.7
30°	352.8	351.1	341.5	316.6	307.5
32.5°	334.7	331.8	321.7	295.7	288.3
35°	316.0	313.8	298.5	275.9	269.1
37.5°	297.4	294.5	275.3	257.2	248.7
40°	278.7	275.3	254.4	238.0	229.0
42.5°	261.2	256.7	236.3	218.8	208.6
45°	242.5	237.4	217.1	199.0	191.1
47.5°	223.9	219.3	200.7	182.0	173.0
50°	204.1	200.1	183.2	164.5	154.9
52.5°	187.7	181.5	165.1	146.4	138.5
55°	168.5	163.4	148.1	130.6	123.8
57.5°	150.9	145.9	131.7	115.3	109.7
60°	134.5	127.2	115.3	101.2	96.7
62.5°	116.5	110.8	100.6	88.8	94.4
65°	100.1	94.4	85.4	87.1	72.4
67.5°	82.0	79.1	71.2	63.3	61.1
70°	66.7	63.3	60.5	52.0	49.7
72.5°	53.1	49.7	45.8	41.3	39.6
75°	40.1	37.3	35.1	33.4	36.7
77.5°	27.7	26.6	24.9	23.2	22.6
80°	18.1	17.5	17.0	16.4	15.8
82.5°	10.7	10.7	10.7	10.7	10.7
85°	5.7	6.2	6.8	7.3	7.9
87.5°	3.4	3.4	4.0	4.5	5.1
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)