

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: P544921

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-80-86-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: P544921  
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-50-UNV-80-86-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

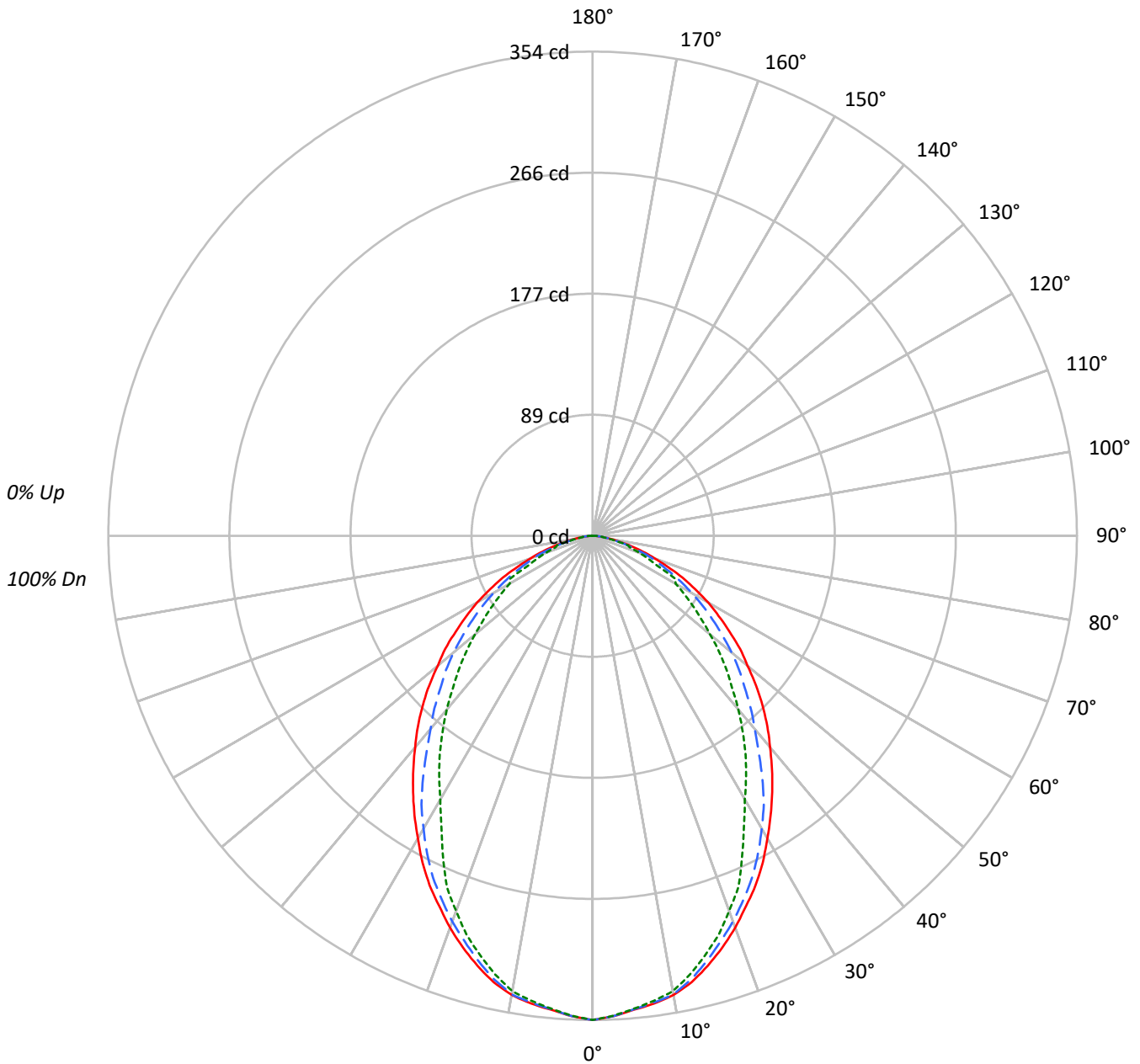
Lumens per Lamp: N/A  
Luminaire Lumens: 695.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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

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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°	3810	3810	3810
5°	3759	3755	3750
10°	3726	3722	3695
15°	3626	3589	3539
20°	3493	3436	3342
25°	3349	3277	3072
30°	3174	3072	2767
35°	3007	2840	2560
40°	2836	2588	2330
45°	2673	2393	2105
50°	2473	2220	1877
55°	2289	2012	1681
60°	2097	1798	1507
65°	1844	1574	1335
70°	1520	1378	1133
75°	1210	1056	1106
80°	812	762	713
85°	506	605	704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.0	4.7
10°-20°	90.4	13.0
20°-30°	125.2	18.0
30°-40°	133.5	19.2
40°-50°	121.8	17.5
50°-60°	95.4	13.7
60°-70°	62.2	8.9
70°-80°	27.6	4.0
80°-90°	5.9	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°	248.6	35.8
0°-40°	382.1	55.0
0°-60°	599.3	86.2
0°-90°	695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	695.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	354	354	354	354	354	
5°	348	348	348	347	347	33
15°	325	325	322	319	318	91
25°	282	280	276	266	259	129
35°	229	227	216	200	195	143
45°	176	172	157	144	138	135
55°	122	118	107	94	90	109
65°	72	68	62	63	52	71
75°	29	27	25	24	27	31
85°	4	4	5	5	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	354.0	354.0	354.0	354.0	354.0
2.5°	351.6	351.6	351.6	351.2	351.2
5°	347.9	347.5	347.5	347.1	347.1
7.5°	345.0	344.6	344.2	343.8	343.0
10°	340.9	340.9	340.5	338.5	338.1
12.5°	334.4	334.0	332.3	329.5	328.6
15°	325.4	325.4	322.1	318.8	317.6
17.5°	315.6	315.1	311.0	307.8	306.1
20°	304.9	304.1	300.0	294.7	291.8
22.5°	293.0	293.0	288.1	281.2	278.3
25°	282.0	280.4	275.9	266.0	258.7
27.5°	269.3	266.8	261.9	248.0	239.4
30°	255.4	254.2	247.2	229.2	222.6
32.5°	242.3	240.2	232.9	214.1	208.7
35°	228.8	227.1	216.1	199.7	194.8
37.5°	215.3	213.2	199.3	186.2	180.1
40°	201.8	199.3	184.2	172.3	165.8
42.5°	189.1	185.8	171.1	158.4	151.0
45°	175.6	171.9	157.2	144.1	138.3
47.5°	162.1	158.8	145.3	131.8	125.2
50°	147.7	144.9	132.6	119.1	112.1
52.5°	135.9	131.4	119.5	106.0	100.3
55°	122.0	118.3	107.2	94.5	89.6
57.5°	109.3	105.6	95.4	83.5	79.4
60°	97.4	92.1	83.5	73.3	70.0
62.5°	84.3	80.2	72.9	64.3	68.3
65°	72.4	68.3	61.8	63.0	52.4
67.5°	59.3	57.3	51.6	45.8	44.2
70°	48.3	45.8	43.8	37.7	36.0
72.5°	38.5	36.0	33.2	29.9	28.6
75°	29.1	27.0	25.4	24.1	26.6
77.5°	20.1	19.2	18.0	16.8	16.4
80°	13.1	12.7	12.3	11.9	11.5
82.5°	7.8	7.8	7.8	7.8	7.8
85°	4.1	4.5	4.9	5.3	5.7
87.5°	2.5	2.5	2.9	3.3	3.7
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)