

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: P545059

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-81-88-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: P545059  
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-81-88-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

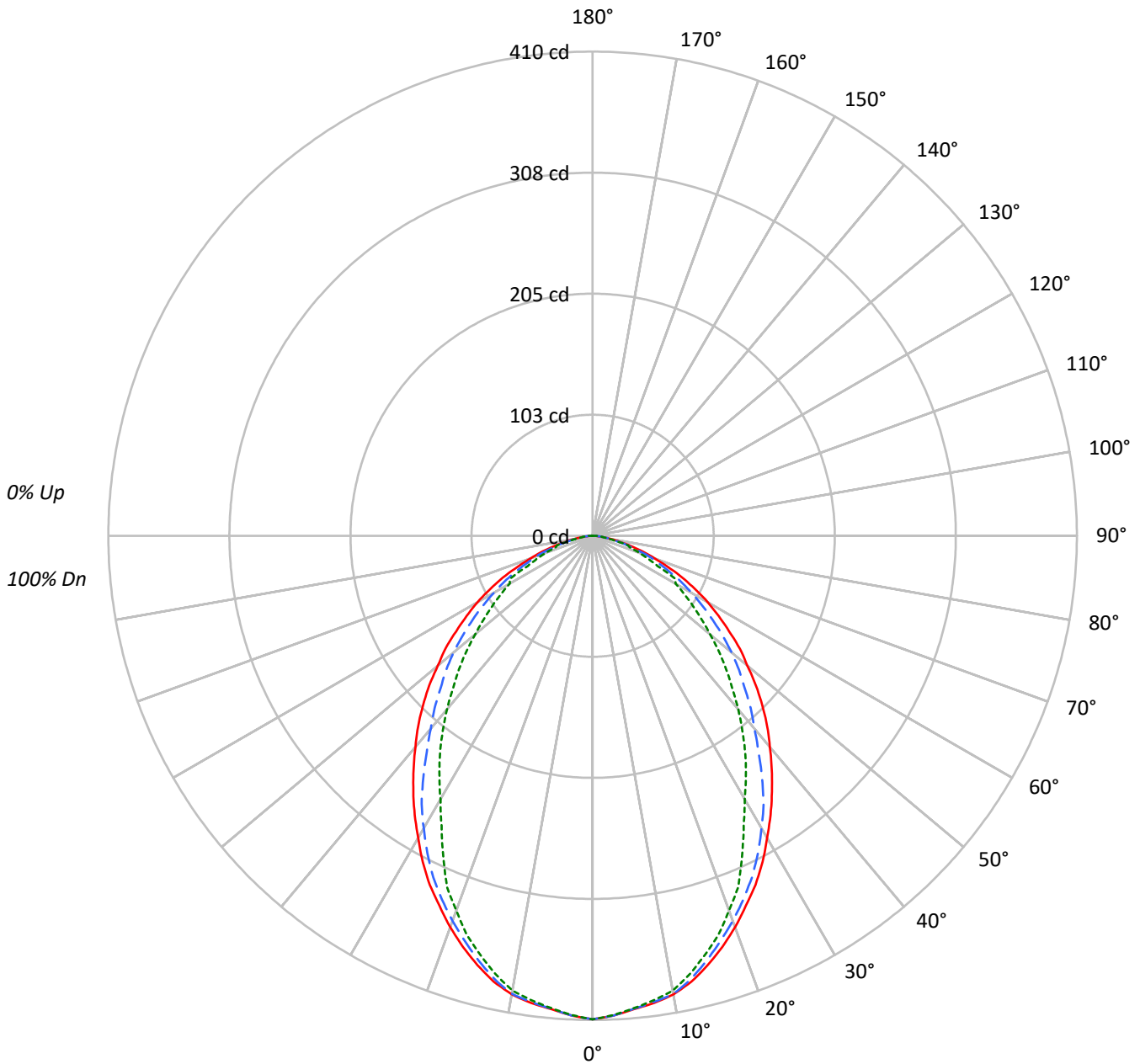
Lumens per Lamp: N/A  
Luminaire Lumens: 804.0 lumens  
Efficiency: N/A  
Efficacy: 68.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				
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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4408	4408	4408
5°	4348	4344	4338
10°	4311	4305	4275
15°	4194	4152	4094
20°	4040	3975	3867
25°	3874	3790	3553
30°	3672	3555	3202
35°	3478	3285	2962
40°	3280	2994	2695
45°	3092	2767	2436
50°	2862	2569	2172
55°	2648	2327	1946
60°	2426	2080	1744
65°	2134	1821	1543
70°	1759	1596	1312
75°	1397	1223	1281
80°	942	880	824
85°	580	704	815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.1	4.7
10°-20°	104.6	13.0
20°-30°	144.8	18.0
30°-40°	154.5	19.2
40°-50°	140.9	17.5
50°-60°	110.4	13.7
60°-70°	72.0	8.9
70°-80°	31.9	4.0
80°-90°	6.8	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°	287.6	35.8
0°-40°	442.0	55.0
0°-60°	693.3	86.2
0°-90°	804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	804.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	410	410	410	410	410	
5°	402	402	402	402	402	38
15°	376	376	373	369	367	106
25°	326	324	319	308	299	150
35°	265	263	250	231	225	165
45°	203	199	182	167	160	156
55°	141	137	124	109	104	127
65°	84	79	72	73	61	83
75°	34	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	409.5	409.5	409.5	409.5	409.5
2.5°	406.7	406.7	406.7	406.2	406.2
5°	402.4	402.0	402.0	401.5	401.5
7.5°	399.1	398.7	398.2	397.7	396.8
10°	394.4	394.4	393.9	391.6	391.1
12.5°	386.8	386.3	384.5	381.1	380.2
15°	376.4	376.4	372.6	368.8	367.4
17.5°	365.0	364.6	359.8	356.0	354.2
20°	352.7	351.8	347.0	340.9	337.6
22.5°	339.0	339.0	333.3	325.3	322.0
25°	326.2	324.3	319.1	307.8	299.2
27.5°	311.5	308.7	303.0	286.9	277.0
30°	295.4	294.0	286.0	265.1	257.6
32.5°	280.3	277.9	269.4	247.6	241.5
35°	264.7	262.8	250.0	231.1	225.4
37.5°	249.0	246.7	230.6	215.4	208.3
40°	233.4	230.6	213.1	199.3	191.8
42.5°	218.7	215.0	197.9	183.2	174.7
45°	203.1	198.9	181.8	166.7	160.0
47.5°	187.5	183.7	168.1	152.5	144.9
50°	170.9	167.6	153.4	137.8	129.7
52.5°	157.2	152.0	138.3	122.6	116.0
55°	141.1	136.8	124.0	109.4	103.7
57.5°	126.4	122.2	110.3	96.6	91.9
60°	112.7	106.5	96.6	84.8	81.0
62.5°	97.5	92.8	84.3	74.3	79.1
65°	83.8	79.1	71.5	72.9	60.6
67.5°	68.7	66.3	59.7	53.0	51.1
70°	55.9	53.0	50.7	43.6	41.7
72.5°	44.5	41.7	38.4	34.6	33.1
75°	33.6	31.2	29.4	27.9	30.8
77.5°	23.2	22.3	20.8	19.4	18.9
80°	15.2	14.7	14.2	13.7	13.3
82.5°	9.0	9.0	9.0	9.0	9.0
85°	4.7	5.2	5.7	6.2	6.6
87.5°	2.8	2.8	3.3	3.8	4.3
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)