

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: P545234

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-93-87-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: P545234  
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-LD4-2STD-50-UNV-93-87-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

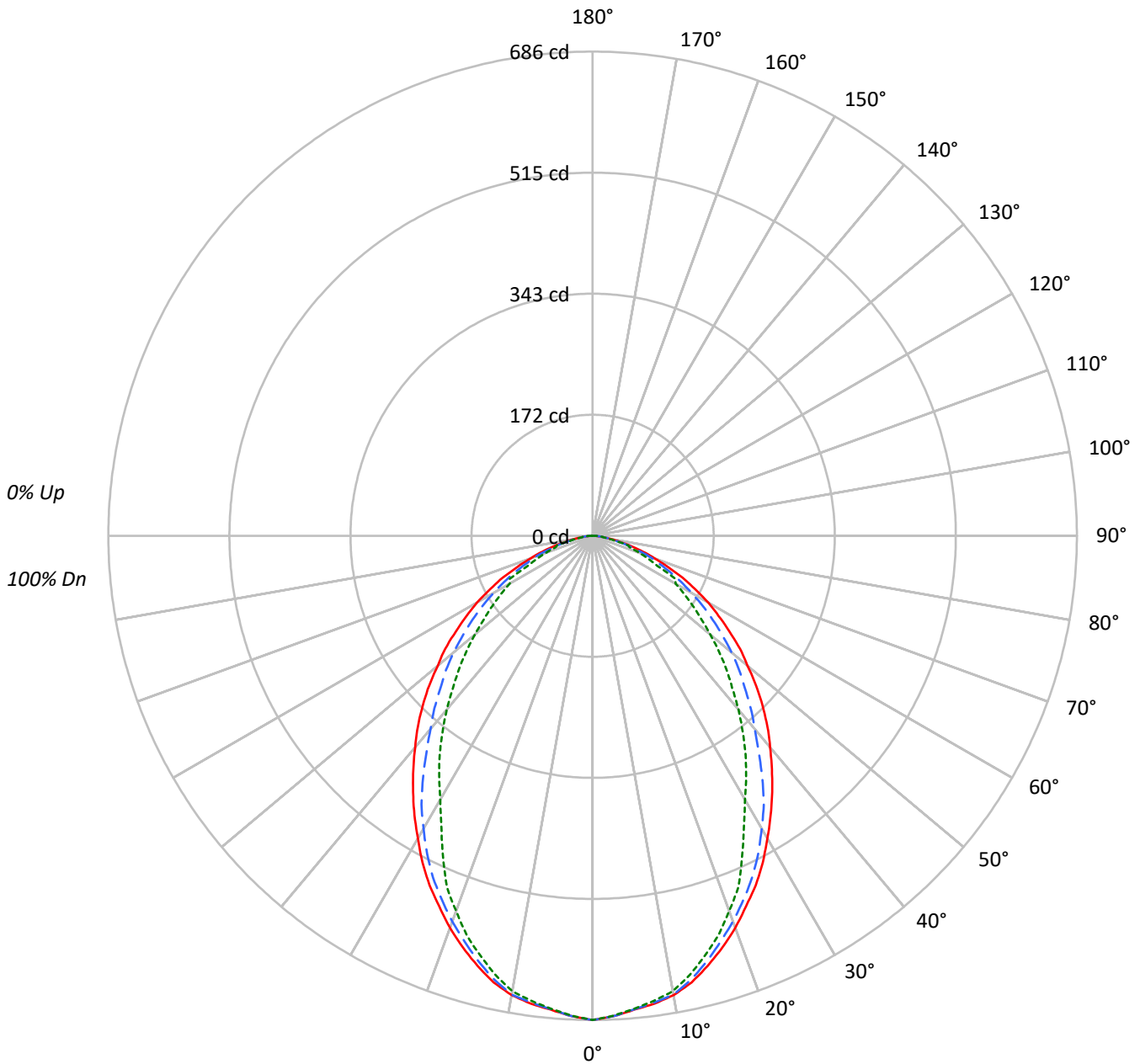
Lumens per Lamp: N/A  
Luminaire Lumens: 1347.0 lumens  
Efficiency: N/A  
Efficacy: 81.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

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

	0°	45°	90°
0°	7385	7385	7385
5°	7285	7277	7269
10°	7223	7214	7161
15°	7027	6957	6859
20°	6770	6660	6479
25°	6491	6349	5954
30°	6152	5955	5363
35°	5826	5503	4962
40°	5495	5016	4515
45°	5180	4637	4081
50°	4796	4304	3639
55°	4436	3900	3260
60°	4064	3483	2919
65°	3576	3051	2585
70°	2946	2672	2197
75°	2341	2046	2146
80°	1574	1475	1376
85°	976	1173	1371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.9	4.7
10°-20°	175.3	13.0
20°-30°	242.7	18.0
30°-40°	258.8	19.2
40°-50°	236.1	17.5
50°-60°	184.9	13.7
60°-70°	120.5	8.9
70°-80°	53.4	4.0
80°-90°	11.5	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°	481.8	35.8
0°-40°	740.6	55.0
0°-60°	1161.6	86.2
0°-90°	1347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1347.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	674	674	674	673	673	64
15°	631	631	624	618	616	177
25°	546	543	535	516	501	251
35°	443	440	419	387	378	277
45°	340	333	305	279	268	262
55°	236	229	208	183	174	212
65°	140	132	120	122	102	138
75°	56	52	49	47	52	60
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	686.1	686.1	686.1	686.1	686.1
2.5°	681.4	681.4	681.4	680.6	680.6
5°	674.2	673.5	673.5	672.7	672.7
7.5°	668.7	667.9	667.1	666.3	664.7
10°	660.8	660.8	660.0	656.0	655.2
12.5°	648.1	647.3	644.1	638.6	637.0
15°	630.6	630.6	624.3	617.9	615.5
17.5°	611.6	610.8	602.9	596.5	593.3
20°	591.0	589.4	581.4	571.1	565.6
22.5°	568.0	568.0	558.4	544.9	539.4
25°	546.5	543.4	534.6	515.6	501.3
27.5°	521.9	517.2	507.7	480.7	464.0
30°	495.0	492.6	479.1	444.2	431.5
32.5°	469.6	465.6	451.3	414.9	404.5
35°	443.4	440.2	418.8	387.1	377.6
37.5°	417.2	413.3	386.3	360.9	349.0
40°	391.1	386.3	357.0	333.9	321.3
42.5°	366.5	360.1	331.6	307.0	292.7
45°	340.3	333.2	304.6	279.2	268.1
47.5°	314.1	307.8	281.6	255.4	242.7
50°	286.4	280.8	257.0	230.8	217.3
52.5°	263.4	254.6	231.6	205.4	194.3
55°	236.4	229.2	207.8	183.2	173.7
57.5°	211.8	204.7	184.8	161.8	153.9
60°	188.8	178.5	161.8	142.0	135.6
62.5°	163.4	155.5	141.2	124.5	132.5
65°	140.4	132.5	119.8	122.2	101.5
67.5°	115.0	111.1	99.9	88.8	85.7
70°	93.6	88.8	84.9	73.0	69.8
72.5°	74.6	69.8	64.3	57.9	55.5
75°	56.3	52.4	49.2	46.8	51.6
77.5°	38.9	37.3	34.9	32.5	31.7
80°	25.4	24.6	23.8	23.0	22.2
82.5°	15.1	15.1	15.1	15.1	15.1
85°	7.9	8.7	9.5	10.3	11.1
87.5°	4.8	4.8	5.6	6.3	7.1
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)