

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: P545374

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-80-97-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: P545374  
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-12-2-LD4-1LO-40-UNV-80-97-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

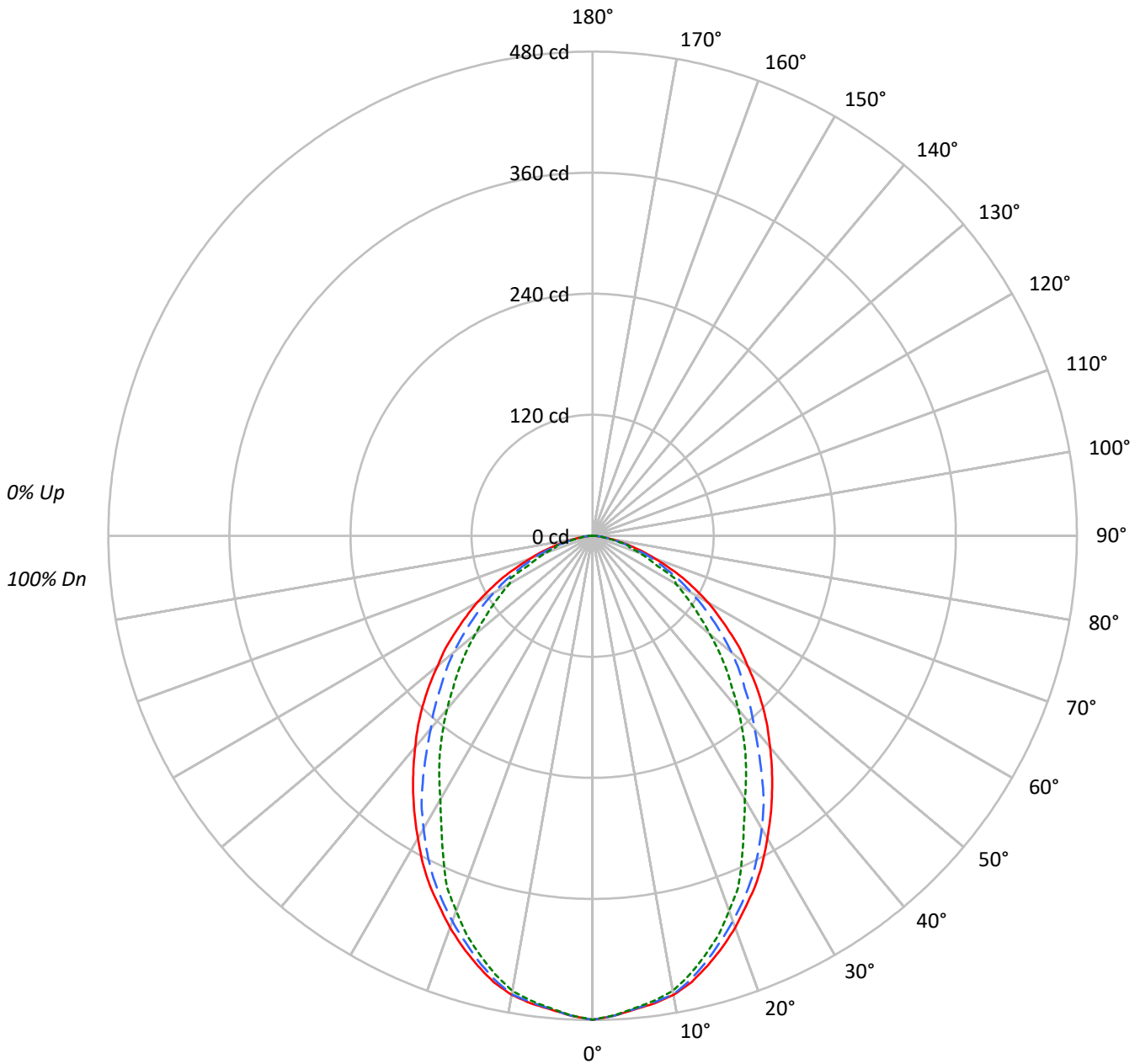
Lumens per Lamp: N/A  
Luminaire Lumens: 942.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2582	2582	2582
5°	2547	2545	2541
10°	2525	2522	2504
15°	2457	2433	2399
20°	2367	2329	2265
25°	2270	2220	2082
30°	2151	2082	1876
35°	2037	1924	1735
40°	1922	1754	1579
45°	1811	1621	1427
50°	1677	1505	1273
55°	1551	1363	1140
60°	1421	1218	1021
65°	1251	1067	904
70°	1031	935	768
75°	819	715	751
80°	552	514	480
85°	340	414	482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.7	4.7
10°-20°	122.6	13.0
20°-30°	169.7	18.0
30°-40°	181.0	19.2
40°-50°	165.1	17.5
50°-60°	129.3	13.7
60°-70°	84.3	8.9
70°-80°	37.3	4.0
80°-90°	8.0	0.8
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°	337.0	35.8
0°-40°	517.9	55.0
0°-60°	812.3	86.2
0°-90°	942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	942.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	472	471	471	470	470	45
15°	441	441	437	432	430	124
25°	382	380	374	361	351	175
35°	310	308	293	271	264	194
45°	238	233	213	195	188	183
55°	165	160	145	128	122	148
65°	98	93	84	85	71	97
75°	39	37	34	33	36	42
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°	479.8	479.8	479.8	479.8	479.8
2.5°	476.5	476.5	476.5	476.0	476.0
5°	471.5	471.0	471.0	470.4	470.4
7.5°	467.6	467.1	466.5	466.0	464.9
10°	462.1	462.1	461.5	458.8	458.2
12.5°	453.2	452.7	450.4	446.6	445.4
15°	441.0	441.0	436.6	432.1	430.5
17.5°	427.7	427.1	421.6	417.2	414.9
20°	413.3	412.2	406.6	399.4	395.5
22.5°	397.2	397.2	390.5	381.1	377.2
25°	382.2	380.0	373.9	360.6	350.6
27.5°	365.0	361.7	355.0	336.2	324.5
30°	346.2	344.5	335.1	310.6	301.8
32.5°	328.4	325.6	315.6	290.1	282.9
35°	310.1	307.9	292.9	270.7	264.1
37.5°	291.8	289.0	270.2	252.4	244.1
40°	273.5	270.2	249.6	233.5	224.7
42.5°	256.3	251.8	231.9	214.7	204.7
45°	238.0	233.0	213.0	195.3	187.5
47.5°	219.7	215.2	196.9	178.6	169.7
50°	200.3	196.4	179.7	161.4	152.0
52.5°	184.2	178.1	162.0	143.7	135.9
55°	165.3	160.3	145.3	128.1	121.5
57.5°	148.1	143.1	129.3	113.2	107.6
60°	132.0	124.8	113.2	99.3	94.9
62.5°	114.3	108.7	98.7	87.1	92.6
65°	98.2	92.6	83.8	85.4	71.0
67.5°	80.4	77.7	69.9	62.1	59.9
70°	65.5	62.1	59.4	51.0	48.8
72.5°	52.1	48.8	44.9	40.5	38.8
75°	39.4	36.6	34.4	32.7	36.1
77.5°	27.2	26.1	24.4	22.7	22.2
80°	17.8	17.2	16.6	16.1	15.5
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.4	5.0
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)