

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: P544983

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-80-84-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: P544983  
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-LD4-2HI-40-UNV-80-84-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

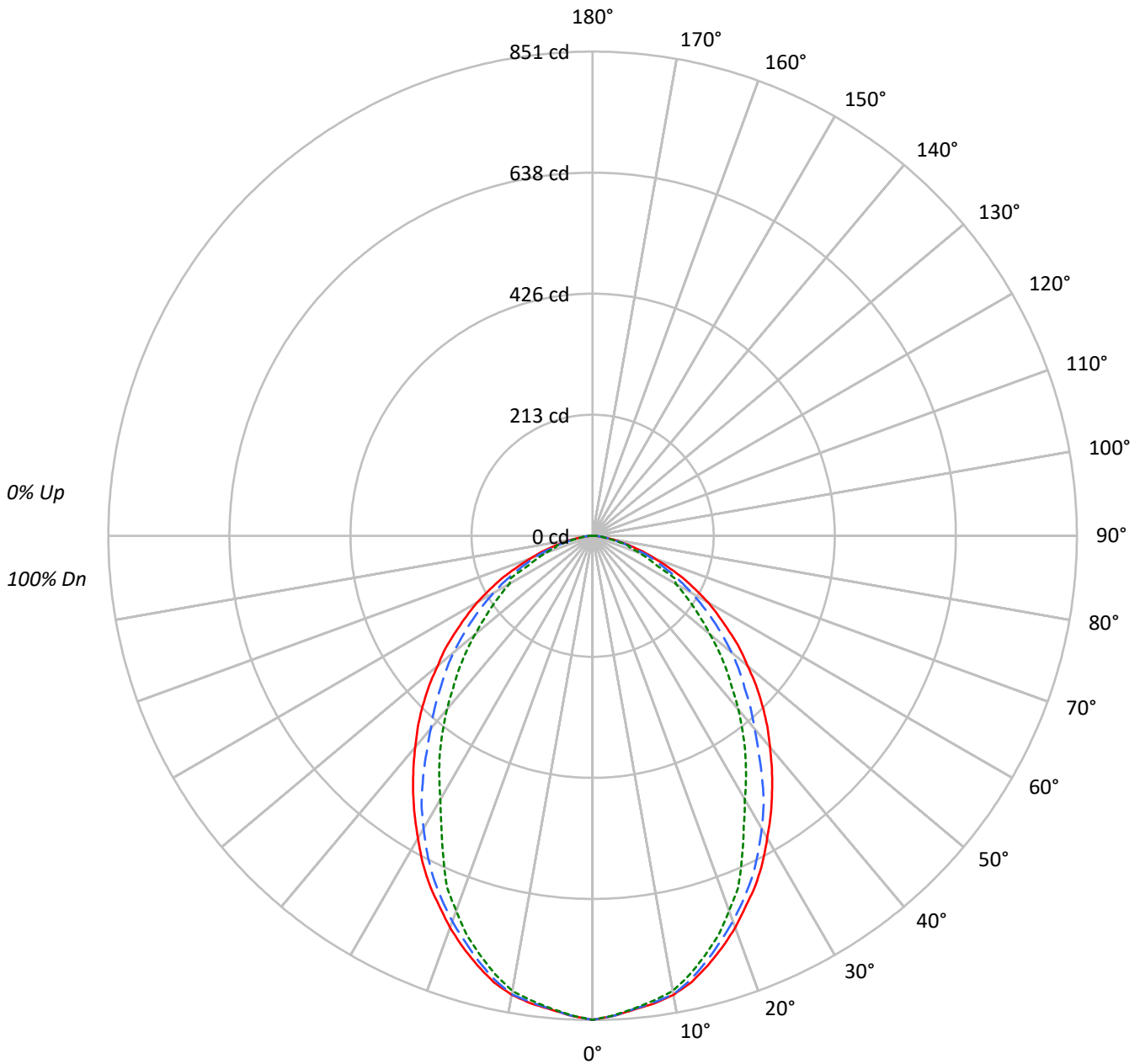
Lumens per Lamp: N/A  
Luminaire Lumens: 1670.0 lumens  
Efficiency: N/A  
Efficacy: 77.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	9157	9157	9157
5°	9032	9021	9011
10°	8954	8943	8878
15°	8712	8625	8504
20°	8393	8258	8032
25°	8048	7872	7381
30°	7628	7383	6650
35°	7223	6824	6151
40°	6812	6218	5597
45°	6422	5748	5060
50°	5945	5335	4513
55°	5500	4836	4042
60°	5040	4318	3621
65°	4434	3782	3207
70°	3651	3311	2722
75°	2903	2537	2658
80°	1953	1829	1705
85°	1210	1457	1704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.2	4.7
10°-20°	217.3	13.0
20°-30°	300.9	18.0
30°-40°	320.8	19.2
40°-50°	292.7	17.5
50°-60°	229.3	13.7
60°-70°	149.4	8.9
70°-80°	66.2	4.0
80°-90°	14.2	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°	597.4	35.8
0°-40°	918.2	55.0
0°-60°	1440.1	86.2
0°-90°	1670.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1670.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	851	851	851	851	851	
5°	836	835	835	834	834	79
15°	782	782	774	766	763	220
25°	678	674	663	639	622	311
35°	550	546	519	480	468	344
45°	422	413	378	346	332	325
55°	293	284	258	227	215	263
65°	174	164	148	151	126	172
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	850.7	850.7	850.7	850.7	850.7
2.5°	844.8	844.8	844.8	843.8	843.8
5°	835.9	834.9	834.9	834.0	834.0
7.5°	829.0	828.1	827.1	826.1	824.1
10°	819.2	819.2	818.2	813.3	812.3
12.5°	803.5	802.5	798.6	791.7	789.7
15°	781.8	781.8	774.0	766.1	763.1
17.5°	758.2	757.2	747.4	739.5	735.6
20°	732.7	730.7	720.9	708.1	701.2
22.5°	704.1	704.1	692.3	675.6	668.7
25°	677.6	673.7	662.8	639.2	621.5
27.5°	647.1	641.2	629.4	596.0	575.3
30°	613.7	610.7	594.0	550.7	535.0
32.5°	582.2	577.3	559.6	514.3	501.6
35°	549.7	545.8	519.3	479.9	468.1
37.5°	517.3	512.4	478.9	447.5	432.7
40°	484.8	478.9	442.5	414.0	398.3
42.5°	454.3	446.5	411.1	380.6	362.9
45°	421.9	413.0	377.6	346.2	332.4
47.5°	389.4	381.6	349.1	316.7	300.9
50°	355.0	348.1	318.6	286.2	269.5
52.5°	326.5	315.7	287.2	254.7	240.9
55°	293.1	284.2	257.7	227.2	215.4
57.5°	262.6	253.7	229.1	200.6	190.8
60°	234.1	221.3	200.6	176.0	168.2
62.5°	202.6	192.8	175.1	154.4	164.2
65°	174.1	164.2	148.5	151.4	125.9
67.5°	142.6	137.7	123.9	110.1	106.2
70°	116.0	110.1	105.2	90.5	86.5
72.5°	92.4	86.5	79.7	71.8	68.8
75°	69.8	64.9	61.0	58.0	63.9
77.5°	48.2	46.2	43.3	40.3	39.3
80°	31.5	30.5	29.5	28.5	27.5
82.5°	18.7	18.7	18.7	18.7	18.7
85°	9.8	10.8	11.8	12.8	13.8
87.5°	5.9	5.9	6.9	7.9	8.9
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)