

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: P544946

Luminaire Tested: **FMR-12-1-LD4-1STD-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: P544946  
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-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**

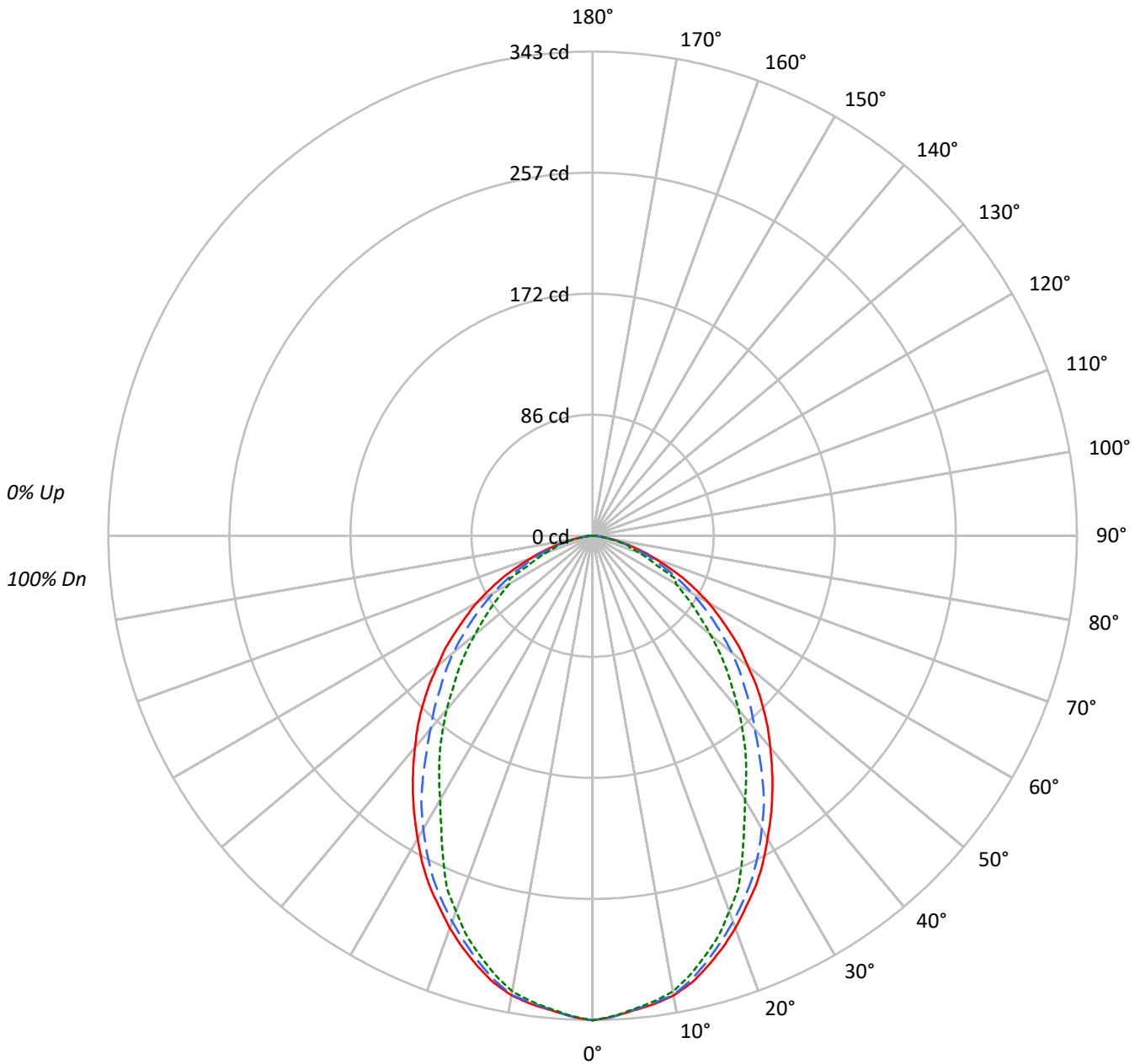
Lumens per Lamp: N/A  
Luminaire Lumens: 674.0 lumens  
Efficiency: N/A  
Efficacy: 81.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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									
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°	3695	3695	3695
5°	3646	3641	3637
10°	3613	3609	3583
15°	3516	3481	3432
20°	3387	3332	3242
25°	3248	3177	2979
30°	3079	2979	2683
35°	2916	2754	2482
40°	2750	2510	2258
45°	2592	2320	2043
50°	2400	2153	1822
55°	2220	1952	1631
60°	2034	1744	1462
65°	1791	1526	1294
70°	1473	1338	1098
75°	1173	1023	1073
80°	787	738	688
85°	494	593	692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.0	4.7
10°-20°	87.7	13.0
20°-30°	121.4	18.0
30°-40°	129.5	19.2
40°-50°	118.1	17.5
50°-60°	92.5	13.7
60°-70°	60.3	8.9
70°-80°	26.7	4.0
80°-90°	5.7	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°	241.1	35.8
0°-40°	370.6	55.0
0°-60°	581.2	86.2
0°-90°	674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	674.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	343	343	343	343	343	
5°	337	337	337	337	337	32
15°	316	316	312	309	308	89
25°	274	272	268	258	251	126
35°	222	220	210	194	189	139
45°	170	167	152	140	134	131
55°	118	115	104	92	87	106
65°	70	66	60	61	51	69
75°	28	26	25	23	26	30
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°	343.3	343.3	343.3	343.3	343.3
2.5°	340.9	340.9	340.9	340.5	340.5
5°	337.4	337.0	337.0	336.6	336.6
7.5°	334.6	334.2	333.8	333.4	332.6
10°	330.6	330.6	330.2	328.2	327.8
12.5°	324.3	323.9	322.3	319.5	318.7
15°	315.5	315.5	312.4	309.2	308.0
17.5°	306.0	305.6	301.7	298.5	296.9
20°	295.7	294.9	290.9	285.8	283.0
22.5°	284.2	284.2	279.4	272.7	269.9
25°	273.5	271.9	267.5	258.0	250.8
27.5°	261.2	258.8	254.0	240.5	232.2
30°	247.7	246.5	239.7	222.3	215.9
32.5°	235.0	233.0	225.8	207.6	202.4
35°	221.9	220.3	209.6	193.7	188.9
37.5°	208.8	206.8	193.3	180.6	174.6
40°	195.7	193.3	178.6	167.1	160.7
42.5°	183.4	180.2	165.9	153.6	146.5
45°	170.3	166.7	152.4	139.7	134.2
47.5°	157.2	154.0	140.9	127.8	121.5
50°	143.3	140.5	128.6	115.5	108.8
52.5°	131.8	127.4	115.9	102.8	97.2
55°	118.3	114.7	104.0	91.7	86.9
57.5°	106.0	102.4	92.5	81.0	77.0
60°	94.5	89.3	81.0	71.0	67.9
62.5°	81.8	77.8	70.6	62.3	66.3
65°	70.3	66.3	59.9	61.1	50.8
67.5°	57.6	55.6	50.0	44.5	42.9
70°	46.8	44.5	42.5	36.5	34.9
72.5°	37.3	34.9	32.1	29.0	27.8
75°	28.2	26.2	24.6	23.4	25.8
77.5°	19.4	18.7	17.5	16.3	15.9
80°	12.7	12.3	11.9	11.5	11.1
82.5°	7.5	7.5	7.5	7.5	7.5
85°	4.0	4.4	4.8	5.2	5.6
87.5°	2.4	2.4	2.8	3.2	3.6
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)