

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: P544933

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-81-96-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: P544933  
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-81-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

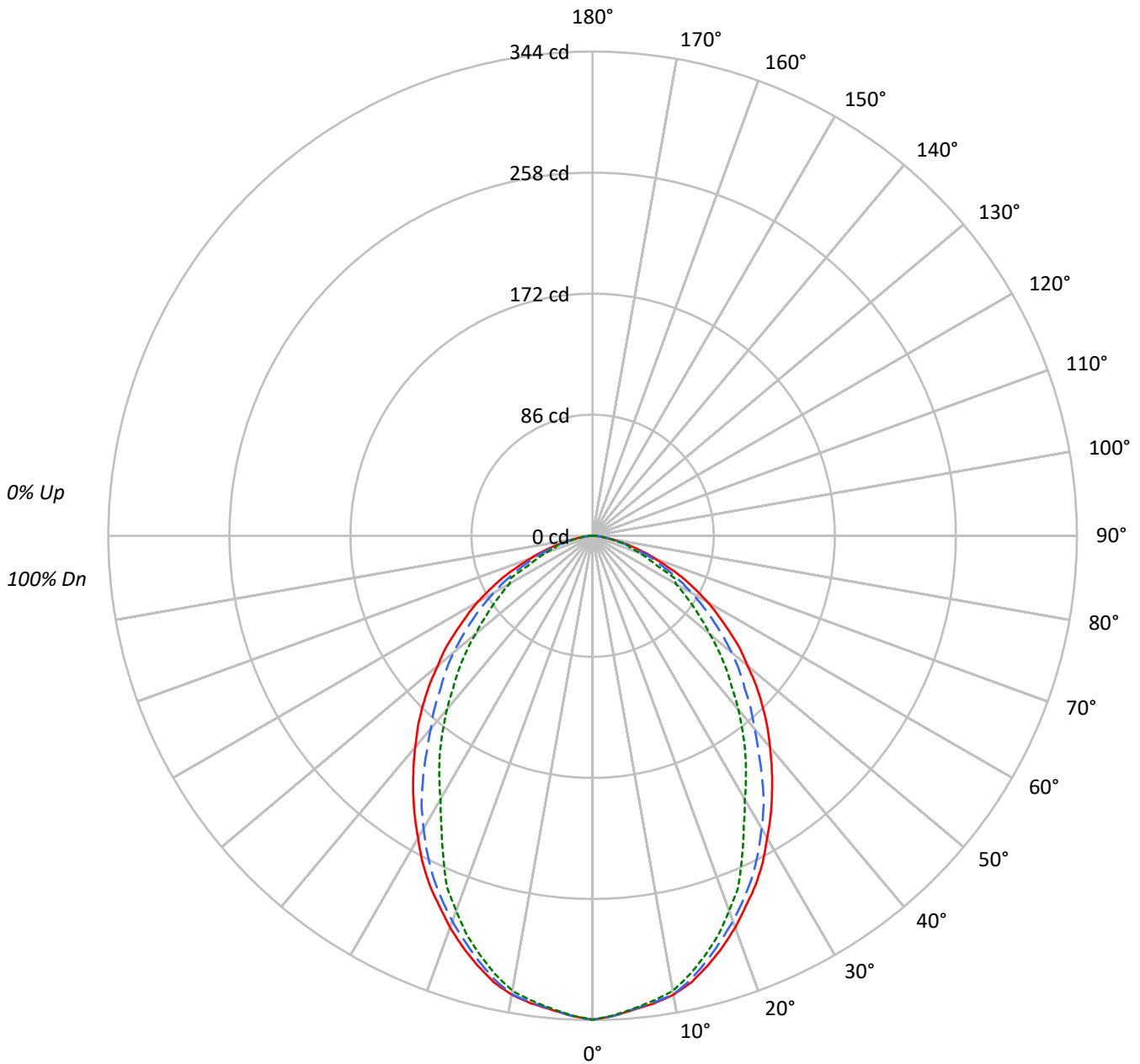
Lumens per Lamp: N/A  
Luminaire Lumens: 675.0 lumens  
Efficiency: N/A  
Efficacy: 81.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				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°	3701	3701	3701
5°	3651	3647	3642
10°	3619	3615	3588
15°	3521	3486	3438
20°	3392	3338	3246
25°	3253	3182	2983
30°	3082	2984	2687
35°	2920	2758	2486
40°	2754	2514	2262
45°	2595	2323	2046
50°	2403	2157	1824
55°	2224	1954	1635
60°	2037	1746	1464
65°	1793	1528	1296
70°	1476	1338	1102
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°	87.8	13.0
20°-30°	121.6	18.0
30°-40°	129.7	19.2
40°-50°	118.3	17.5
50°-60°	92.7	13.7
60°-70°	60.4	8.9
70°-80°	26.8	4.0
80°-90°	5.8	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°	241.5	35.8
0°-40°	371.1	55.0
0°-60°	582.1	86.2
0°-90°	675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	675.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	344	344	344	344	344	
5°	338	338	338	337	337	32
15°	316	316	313	310	308	89
25°	274	272	268	258	251	126
35°	222	221	210	194	189	139
45°	170	167	153	140	134	131
55°	118	115	104	92	87	106
65°	70	66	60	61	51	69
75°	28	26	25	24	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°	343.8	343.8	343.8	343.8	343.8
2.5°	341.5	341.5	341.5	341.1	341.1
5°	337.9	337.5	337.5	337.1	337.1
7.5°	335.1	334.7	334.3	333.9	333.1
10°	331.1	331.1	330.7	328.7	328.3
12.5°	324.8	324.4	322.8	320.0	319.2
15°	316.0	316.0	312.8	309.7	308.5
17.5°	306.5	306.1	302.1	298.9	297.3
20°	296.1	295.3	291.4	286.2	283.4
22.5°	284.6	284.6	279.8	273.1	270.3
25°	273.9	272.3	267.9	258.4	251.2
27.5°	261.6	259.2	254.4	240.9	232.5
30°	248.0	246.8	240.1	222.6	216.2
32.5°	235.3	233.3	226.2	207.9	202.7
35°	222.2	220.6	209.9	194.0	189.2
37.5°	209.1	207.1	193.6	180.9	174.9
40°	196.0	193.6	178.9	167.3	161.0
42.5°	183.6	180.5	166.2	153.8	146.7
45°	170.5	166.9	152.6	139.9	134.4
47.5°	157.4	154.2	141.1	128.0	121.6
50°	143.5	140.7	128.8	115.7	108.9
52.5°	132.0	127.6	116.1	103.0	97.4
55°	118.5	114.9	104.1	91.8	87.1
57.5°	106.1	102.6	92.6	81.1	77.1
60°	94.6	89.4	81.1	71.2	68.0
62.5°	81.9	77.9	70.8	62.4	66.4
65°	70.4	66.4	60.0	61.2	50.9
67.5°	57.6	55.6	50.1	44.5	42.9
70°	46.9	44.5	42.5	36.6	35.0
72.5°	37.4	35.0	32.2	29.0	27.8
75°	28.2	26.2	24.6	23.5	25.8
77.5°	19.5	18.7	17.5	16.3	15.9
80°	12.7	12.3	11.9	11.5	11.1
82.5°	7.6	7.6	7.6	7.6	7.6
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)