

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: P545060

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-81-94-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: P545060  
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-LD4-2LO-35-UNV-81-94-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

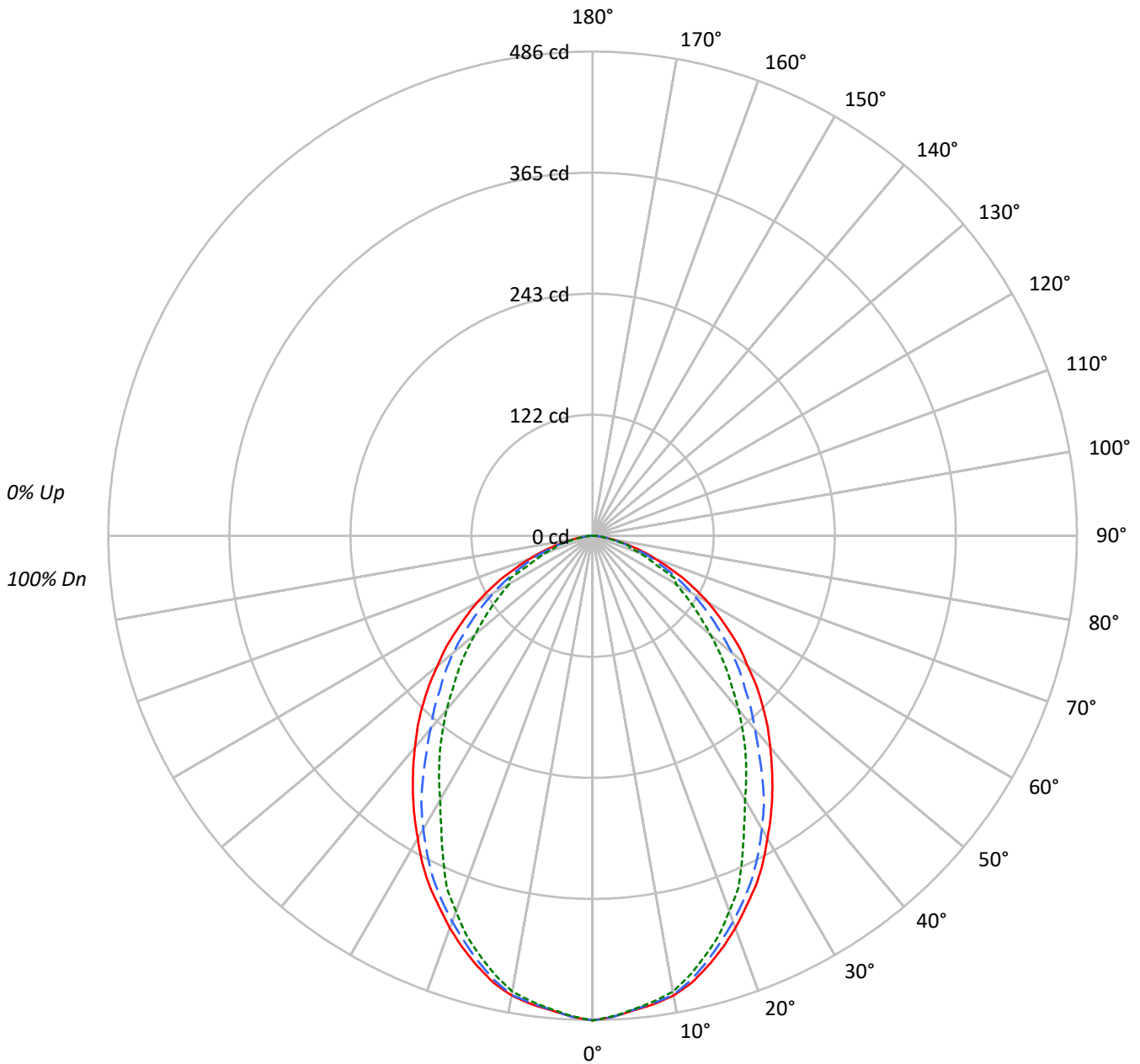
Lumens per Lamp: N/A  
Luminaire Lumens: 955.0 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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°	5237	5237	5237
5°	5165	5159	5153
10°	5121	5114	5077
15°	4982	4932	4863
20°	4800	4722	4593
25°	4602	4501	4221
30°	4361	4222	3802
35°	4131	3901	3518
40°	3896	3556	3201
45°	3673	3288	2894
50°	3399	3051	2581
55°	3145	2764	2312
60°	2880	2469	2071
65°	2534	2162	1834
70°	2090	1895	1558
75°	1659	1451	1522
80°	1116	1048	973
85°	692	827	976



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.3	4.7
10°-20°	124.3	13.0
20°-30°	172.1	18.0
30°-40°	183.5	19.2
40°-50°	167.4	17.5
50°-60°	131.1	13.7
60°-70°	85.5	8.9
70°-80°	37.9	4.0
80°-90°	8.1	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°	341.6	35.8
0°-40°	525.1	55.0
0°-60°	823.5	86.2
0°-90°	955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	955.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	478	478	478	477	477	45
15°	447	447	443	438	436	126
25°	388	385	379	366	355	178
35°	314	312	297	274	268	197
45°	241	236	216	198	190	186
55°	168	162	147	130	123	150
65°	100	94	85	87	72	98
75°	40	37	35	33	37	43
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°	486.5	486.5	486.5	486.5	486.5
2.5°	483.1	483.1	483.1	482.5	482.5
5°	478.0	477.5	477.5	476.9	476.9
7.5°	474.1	473.5	473.0	472.4	471.3
10°	468.5	468.5	467.9	465.1	464.5
12.5°	459.5	458.9	456.7	452.7	451.6
15°	447.1	447.1	442.6	438.1	436.4
17.5°	433.6	433.0	427.4	422.9	420.7
20°	419.0	417.9	412.2	404.9	401.0
22.5°	402.7	402.7	395.9	386.4	382.4
25°	387.5	385.2	379.0	365.6	355.4
27.5°	370.1	366.7	359.9	340.8	329.0
30°	350.9	349.2	339.7	314.9	305.9
32.5°	332.9	330.1	320.0	294.1	286.8
35°	314.4	312.1	296.9	274.4	267.7
37.5°	295.8	293.0	273.9	255.9	247.5
40°	277.3	273.9	253.1	236.8	227.8
42.5°	259.8	255.3	235.1	217.6	207.5
45°	241.3	236.2	216.0	198.0	190.1
47.5°	222.7	218.2	199.6	181.1	172.1
50°	203.0	199.1	182.2	163.7	154.1
52.5°	186.7	180.5	164.2	145.7	137.8
55°	167.6	162.5	147.3	129.9	123.2
57.5°	150.2	145.1	131.0	114.7	109.1
60°	133.8	126.5	114.7	100.7	96.2
62.5°	115.9	110.2	100.1	88.3	93.9
65°	99.5	93.9	84.9	86.6	72.0
67.5°	81.5	78.7	70.9	63.0	60.7
70°	66.4	63.0	60.2	51.7	49.5
72.5°	52.9	49.5	45.6	41.1	39.4
75°	39.9	37.1	34.9	33.2	36.6
77.5°	27.6	26.4	24.7	23.1	22.5
80°	18.0	17.4	16.9	16.3	15.7
82.5°	10.7	10.7	10.7	10.7	10.7
85°	5.6	6.2	6.7	7.3	7.9
87.5°	3.4	3.4	3.9	4.5	5.1
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)