

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: P545522

Luminaire Tested: **FMR-12-2-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: P545522  
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-LD4-1STD-50-UNV-93-87-EDD  
Description: 1X2 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**

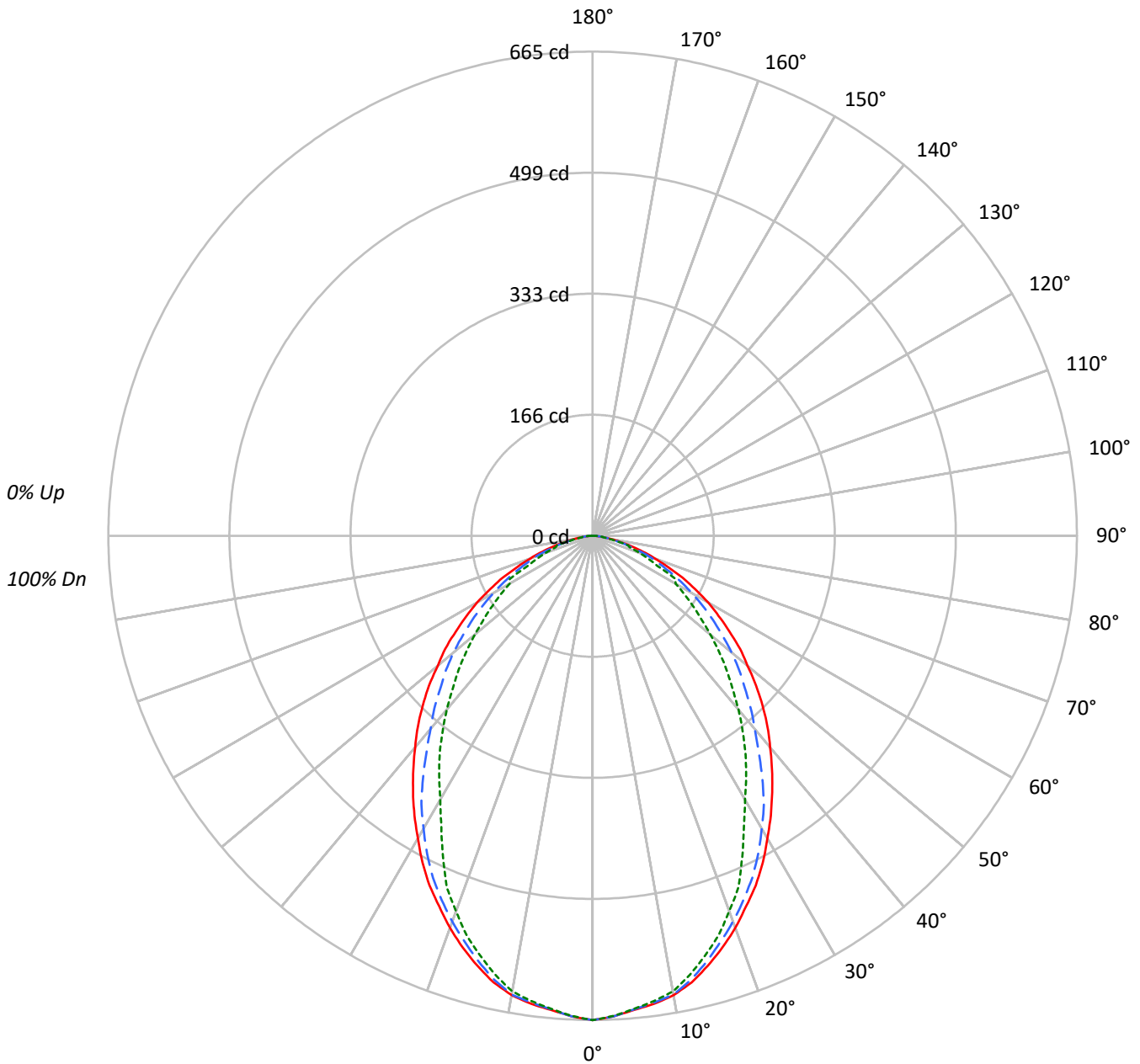
Lumens per Lamp: N/A  
Luminaire Lumens: 1306.0 lumens  
Efficiency: N/A  
Efficacy: 78.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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°	3581	3581	3581
5°	3532	3528	3524
10°	3501	3497	3472
15°	3407	3373	3325
20°	3282	3229	3141
25°	3147	3078	2887
30°	2982	2887	2600
35°	2825	2668	2405
40°	2664	2432	2188
45°	2511	2248	1979
50°	2324	2087	1764
55°	2151	1891	1580
60°	1970	1689	1415
65°	1733	1479	1253
70°	1429	1295	1065
75°	1135	992	1040
80°	762	716	666
85°	475	568	667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.9	4.7
10°-20°	170.0	13.0
20°-30°	235.3	18.0
30°-40°	250.9	19.2
40°-50°	228.9	17.5
50°-60°	179.3	13.7
60°-70°	116.8	8.9
70°-80°	51.8	4.0
80°-90°	11.1	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°	467.2	35.8
0°-40°	718.0	55.0
0°-60°	1126.2	86.2
0°-90°	1306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	665	665	665	665	665	
5°	654	653	653	652	652	62
15°	611	611	605	599	597	172
25°	530	527	518	500	486	243
35°	430	427	406	375	366	269
45°	330	323	295	271	260	254
55°	229	222	202	178	168	206
65°	136	128	116	118	98	134
75°	55	51	48	45	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	665.3	665.3	665.3	665.3	665.3
2.5°	660.6	660.6	660.6	659.9	659.9
5°	653.7	653.0	653.0	652.2	652.2
7.5°	648.3	647.6	646.8	646.0	644.5
10°	640.6	640.6	639.9	636.0	635.3
12.5°	628.3	627.6	624.5	619.1	617.6
15°	611.4	611.4	605.3	599.1	596.8
17.5°	593.0	592.2	584.5	578.4	575.3
20°	573.0	571.4	563.7	553.7	548.4
22.5°	550.7	550.7	541.4	528.4	523.0
25°	529.9	526.8	518.4	499.9	486.1
27.5°	506.1	501.4	492.2	466.1	449.9
30°	479.9	477.6	464.5	430.7	418.4
32.5°	455.3	451.5	437.6	402.2	392.2
35°	429.9	426.8	406.1	375.3	366.1
37.5°	404.5	400.7	374.5	349.9	338.4
40°	379.2	374.5	346.1	323.8	311.5
42.5°	355.3	349.2	321.5	297.6	283.8
45°	329.9	323.0	295.3	270.7	260.0
47.5°	304.6	298.4	273.0	247.6	235.3
50°	277.6	272.3	249.2	223.8	210.7
52.5°	255.3	246.9	224.6	199.2	188.4
55°	229.2	222.3	201.5	177.7	168.4
57.5°	205.3	198.4	179.2	156.9	149.2
60°	183.0	173.0	156.9	137.7	131.5
62.5°	158.4	150.7	136.9	120.7	128.4
65°	136.1	128.4	116.1	118.4	98.4
67.5°	111.5	107.7	96.9	86.1	83.1
70°	90.8	86.1	82.3	70.8	67.7
72.5°	72.3	67.7	62.3	56.1	53.8
75°	54.6	50.8	47.7	45.4	50.0
77.5°	37.7	36.1	33.8	31.5	30.8
80°	24.6	23.8	23.1	22.3	21.5
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.5	9.2	10.0	10.8
87.5°	4.6	4.6	5.4	6.2	6.9
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)