

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: P545235

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-93-88-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: P545235  
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-LD4-2STD-50-UNV-93-88-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

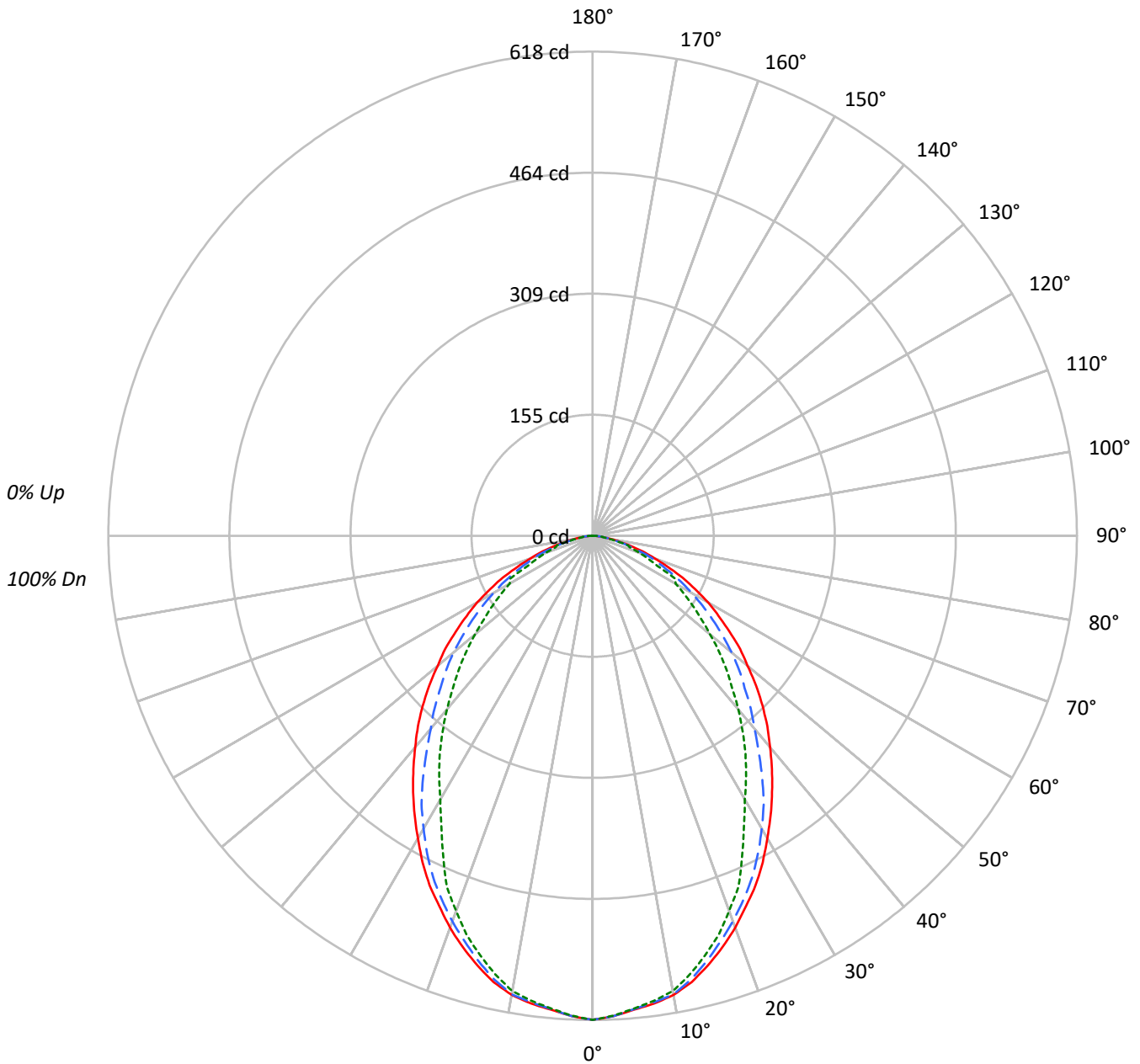
Lumens per Lamp: N/A  
Luminaire Lumens: 1213.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	6651	6651	6651
5°	6561	6553	6545
10°	6503	6496	6449
15°	6328	6265	6177
20°	6096	5998	5834
25°	5846	5719	5361
30°	5540	5362	4830
35°	5247	4957	4468
40°	4949	4516	4065
45°	4664	4176	3675
50°	4319	3875	3277
55°	3995	3513	2935
60°	3660	3137	2629
65°	3219	2748	2328
70°	2653	2404	1980
75°	2109	1842	1930
80°	1420	1327	1240
85°	877	1062	1235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	4.7
10°-20°	157.9	13.0
20°-30°	218.5	18.0
30°-40°	233.0	19.2
40°-50°	212.6	17.5
50°-60°	166.5	13.7
60°-70°	108.5	8.9
70°-80°	48.1	4.0
80°-90°	10.3	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°	433.9	35.8
0°-40°	666.9	55.0
0°-60°	1046.0	86.2
0°-90°	1213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1213.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	607	606	606	606	606	58
15°	568	568	562	556	554	160
25°	492	489	482	464	451	226
35°	399	396	377	349	340	250
45°	306	300	274	251	241	236
55°	213	206	187	165	156	191
65°	126	119	108	110	91	125
75°	51	47	44	42	46	54
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	617.9	617.9	617.9	617.9	617.9
2.5°	613.6	613.6	613.6	612.9	612.9
5°	607.2	606.5	606.5	605.7	605.7
7.5°	602.2	601.5	600.7	600.0	598.6
10°	595.0	595.0	594.3	590.7	590.0
12.5°	583.6	582.9	580.0	575.0	573.6
15°	567.9	567.9	562.2	556.5	554.3
17.5°	550.7	550.0	542.9	537.2	534.3
20°	532.2	530.7	523.6	514.3	509.3
22.5°	511.5	511.5	502.9	490.7	485.7
25°	492.2	489.3	481.5	464.3	451.4
27.5°	470.0	465.7	457.2	432.9	417.9
30°	445.7	443.6	431.4	400.0	388.6
32.5°	422.9	419.3	406.4	373.6	364.3
35°	399.3	396.4	377.2	348.6	340.0
37.5°	375.7	372.2	347.9	325.0	314.3
40°	352.2	347.9	321.4	300.7	289.3
42.5°	330.0	324.3	298.6	276.4	263.6
45°	306.4	300.0	274.3	251.4	241.4
47.5°	282.9	277.2	253.6	230.0	218.6
50°	257.9	252.9	231.4	207.9	195.7
52.5°	237.2	229.3	208.6	185.0	175.0
55°	212.9	206.4	187.2	165.0	156.4
57.5°	190.7	184.3	166.4	145.7	138.6
60°	170.0	160.7	145.7	127.9	122.1
62.5°	147.1	140.0	127.1	112.1	119.3
65°	126.4	119.3	107.9	110.0	91.4
67.5°	103.6	100.0	90.0	80.0	77.1
70°	84.3	80.0	76.4	65.7	62.9
72.5°	67.1	62.9	57.9	52.1	50.0
75°	50.7	47.1	44.3	42.1	46.4
77.5°	35.0	33.6	31.4	29.3	28.6
80°	22.9	22.1	21.4	20.7	20.0
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.1	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.4
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)