

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: P545399

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-80-84-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: P545399  
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-LD4-1LO-50-UNV-80-84-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

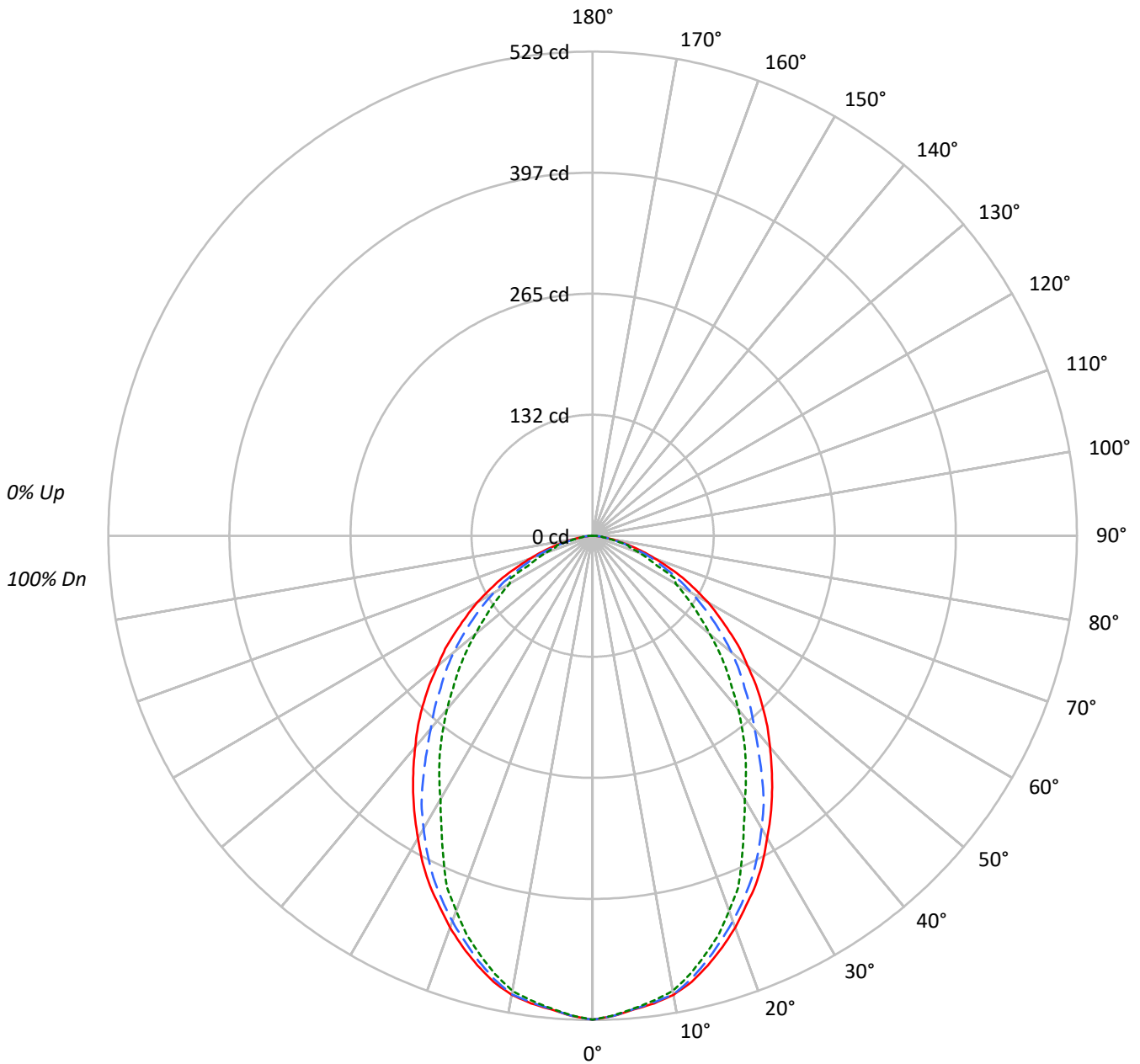
Lumens per Lamp: N/A  
Luminaire Lumens: 1038.0 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	2845	2845	2845
5°	2807	2804	2801
10°	2783	2779	2759
15°	2708	2681	2643
20°	2608	2566	2496
25°	2501	2447	2294
30°	2370	2294	2066
35°	2245	2120	1912
40°	2118	1933	1740
45°	1996	1786	1572
50°	1848	1658	1402
55°	1710	1503	1256
60°	1566	1342	1125
65°	1378	1175	996
70°	1135	1029	847
75°	902	788	826
80°	607	567	530
85°	377	451	531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.2	4.7
10°-20°	135.1	13.0
20°-30°	187.0	18.0
30°-40°	199.4	19.2
40°-50°	181.9	17.5
50°-60°	142.5	13.7
60°-70°	92.9	8.9
70°-80°	41.2	4.0
80°-90°	8.8	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°	371.3	35.8
0°-40°	570.7	55.0
0°-60°	895.1	86.2
0°-90°	1038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1038.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	529	529	529	529	529	
5°	520	519	519	518	518	49
15°	486	486	481	476	474	137
25°	421	419	412	397	386	193
35°	342	339	323	298	291	214
45°	262	257	235	215	207	202
55°	182	177	160	141	134	163
65°	108	102	92	94	78	107
75°	43	40	38	36	40	47
85°	6	7	7	8	9	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	528.7	528.7	528.7	528.7	528.7
2.5°	525.1	525.1	525.1	524.5	524.5
5°	519.6	519.0	519.0	518.4	518.4
7.5°	515.3	514.7	514.1	513.5	512.2
10°	509.2	509.2	508.6	505.5	504.9
12.5°	499.4	498.8	496.3	492.1	490.8
15°	486.0	486.0	481.1	476.2	474.3
17.5°	471.3	470.7	464.6	459.7	457.2
20°	455.4	454.2	448.1	440.1	435.8
22.5°	437.7	437.7	430.3	419.9	415.7
25°	421.2	418.7	412.0	397.3	386.3
27.5°	402.2	398.5	391.2	370.4	357.6
30°	381.4	379.6	369.2	342.3	332.5
32.5°	361.9	358.8	347.8	319.7	311.7
35°	341.7	339.3	322.7	298.3	291.0
37.5°	321.5	318.5	297.7	278.1	269.0
40°	301.4	297.7	275.1	257.3	247.6
42.5°	282.4	277.5	255.5	236.6	225.6
45°	262.2	256.7	234.7	215.2	206.6
47.5°	242.1	237.2	217.0	196.8	187.0
50°	220.7	216.4	198.0	177.9	167.5
52.5°	202.9	196.2	178.5	158.3	149.8
55°	182.2	176.7	160.2	141.2	133.9
57.5°	163.2	157.7	142.4	124.7	118.6
60°	145.5	137.5	124.7	109.4	104.5
62.5°	125.9	119.8	108.8	96.0	102.1
65°	108.2	102.1	92.3	94.1	78.2
67.5°	88.6	85.6	77.0	68.5	66.0
70°	72.1	68.5	65.4	56.2	53.8
72.5°	57.5	53.8	49.5	44.6	42.8
75°	43.4	40.3	37.9	36.1	39.7
77.5°	30.0	28.7	26.9	25.1	24.5
80°	19.6	18.9	18.3	17.7	17.1
82.5°	11.6	11.6	11.6	11.6	11.6
85°	6.1	6.7	7.3	7.9	8.6
87.5°	3.7	3.7	4.3	4.9	5.5
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)