

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: P545368

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-80-85-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: P545368  
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-40-UNV-80-85-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

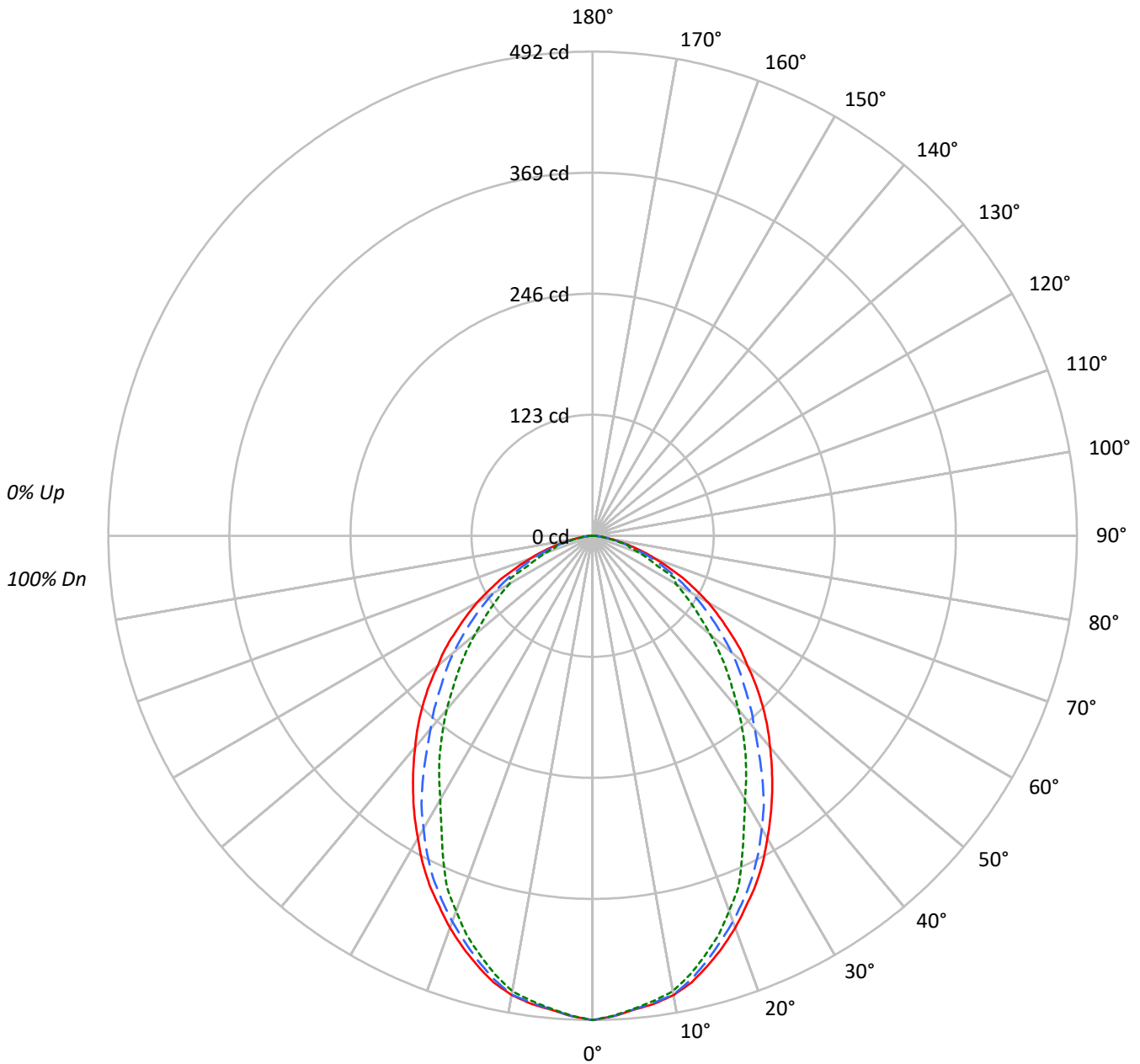
Lumens per Lamp: N/A  
Luminaire Lumens: 966.0 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	2648	2648	2648
5°	2612	2609	2606
10°	2590	2587	2568
15°	2520	2495	2459
20°	2427	2388	2323
25°	2327	2277	2135
30°	2206	2135	1923
35°	2089	1974	1779
40°	1971	1799	1619
45°	1857	1662	1464
50°	1720	1543	1305
55°	1590	1398	1169
60°	1457	1249	1047
65°	1282	1094	927
70°	1056	958	788
75°	840	734	769
80°	564	530	493
85°	352	420	494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.8	4.7
10°-20°	125.7	13.0
20°-30°	174.0	18.0
30°-40°	185.6	19.2
40°-50°	169.3	17.5
50°-60°	132.6	13.7
60°-70°	86.4	8.9
70°-80°	38.3	4.0
80°-90°	8.2	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°	345.5	35.8
0°-40°	531.1	55.0
0°-60°	833.0	86.2
0°-90°	966.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	966.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	492	492	492	492	492	
5°	484	483	483	482	482	46
15°	452	452	448	443	441	127
25°	392	390	383	370	360	180
35°	318	316	300	278	271	199
45°	244	239	218	200	192	188
55°	170	164	149	131	125	152
65°	101	95	86	88	73	99
75°	40	38	35	34	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°	492.1	492.1	492.1	492.1	492.1
2.5°	488.7	488.7	488.7	488.1	488.1
5°	483.5	483.0	483.0	482.4	482.4
7.5°	479.6	479.0	478.4	477.8	476.7
10°	473.9	473.9	473.3	470.5	469.9
12.5°	464.8	464.2	461.9	457.9	456.8
15°	452.2	452.2	447.7	443.1	441.4
17.5°	438.6	438.0	432.3	427.8	425.5
20°	423.8	422.7	417.0	409.6	405.6
22.5°	407.3	407.3	400.5	390.8	386.8
25°	391.9	389.7	383.4	369.8	359.5
27.5°	374.3	370.9	364.1	344.7	332.8
30°	355.0	353.3	343.6	318.6	309.5
32.5°	336.8	333.9	323.7	297.5	290.1
35°	318.0	315.7	300.4	277.6	270.8
37.5°	299.2	296.4	277.0	258.8	250.3
40°	280.5	277.0	256.0	239.5	230.4
42.5°	262.8	258.3	237.8	220.2	209.9
45°	244.0	238.9	218.4	200.2	192.3
47.5°	225.3	220.7	201.9	183.2	174.1
50°	205.4	201.4	184.3	165.5	155.9
52.5°	188.9	182.6	166.1	147.3	139.4
55°	169.5	164.4	149.0	131.4	124.6
57.5°	151.9	146.8	132.5	116.0	110.4
60°	135.4	128.0	116.0	101.8	97.3
62.5°	117.2	111.5	101.3	89.3	95.0
65°	100.7	95.0	85.9	87.6	72.8
67.5°	82.5	79.6	71.7	63.7	61.4
70°	67.1	63.7	60.9	52.3	50.1
72.5°	53.5	50.1	46.1	41.5	39.8
75°	40.4	37.5	35.3	33.6	37.0
77.5°	27.9	26.7	25.0	23.3	22.8
80°	18.2	17.6	17.1	16.5	15.9
82.5°	10.8	10.8	10.8	10.8	10.8
85°	5.7	6.3	6.8	7.4	8.0
87.5°	3.4	3.4	4.0	4.6	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)