

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: P545626

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-80-87-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: P545626  
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-LD4-2LO-35-UNV-80-87-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

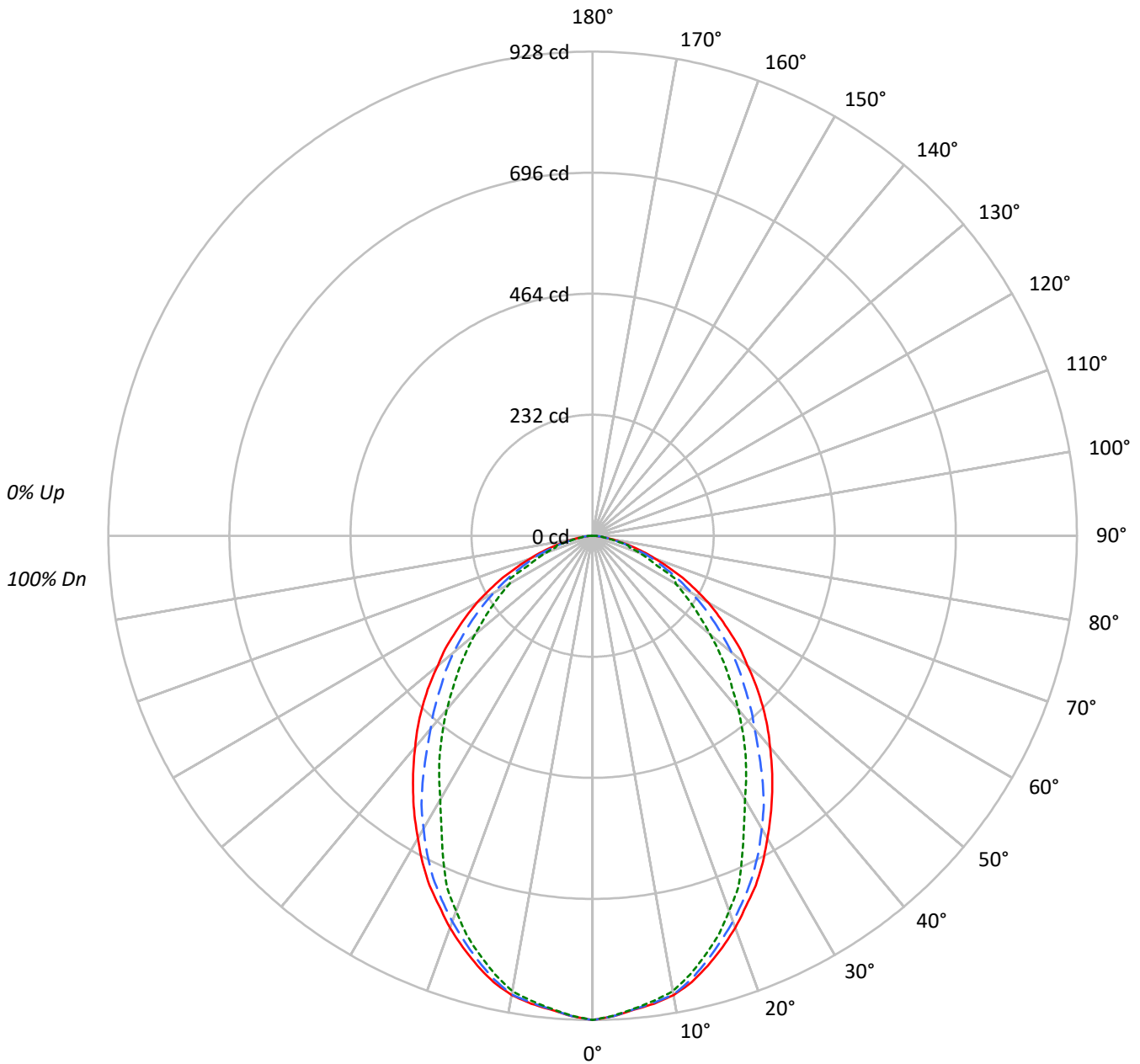
Lumens per Lamp: N/A  
Luminaire Lumens: 1822.0 lumens  
Efficiency: N/A  
Efficacy: 77.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	4995	4995	4995
5°	4927	4921	4916
10°	4885	4879	4844
15°	4753	4705	4639
20°	4578	4505	4381
25°	4390	4295	4027
30°	4161	4028	3627
35°	3941	3722	3355
40°	3717	3392	3053
45°	3503	3136	2761
50°	3243	2910	2462
55°	3000	2638	2205
60°	2749	2356	1975
65°	2418	2063	1748
70°	1992	1806	1485
75°	1585	1383	1449
80°	1063	998	930
85°	661	797	926



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.4	4.7
10°-20°	237.1	13.0
20°-30°	328.3	18.0
30°-40°	350.0	19.2
40°-50°	319.3	17.5
50°-60°	250.2	13.7
60°-70°	163.0	8.9
70°-80°	72.2	4.0
80°-90°	15.5	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°	651.7	35.8
0°-40°	1001.8	55.0
0°-60°	1571.2	86.2
0°-90°	1822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1822.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	928	928	928	928	928	
5°	912	911	911	910	910	87
15°	853	853	844	836	833	240
25°	739	735	723	697	678	339
35°	600	596	566	524	511	375
45°	460	451	412	378	363	355
55°	320	310	281	248	235	287
65°	190	179	162	165	137	187
75°	76	71	66	63	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	928.1	928.1	928.1	928.1	928.1
2.5°	921.7	921.7	921.7	920.6	920.6
5°	912.0	910.9	910.9	909.9	909.9
7.5°	904.5	903.4	902.4	901.3	899.1
10°	893.8	893.8	892.7	887.3	886.3
12.5°	876.6	875.5	871.2	863.7	861.6
15°	853.0	853.0	844.4	835.8	832.6
17.5°	827.2	826.2	815.4	806.9	802.6
20°	799.3	797.2	786.5	772.5	765.0
22.5°	768.2	768.2	755.4	737.1	729.6
25°	739.3	735.0	723.2	697.4	678.1
27.5°	706.0	699.6	686.7	650.2	627.7
30°	669.5	666.3	648.1	600.9	583.7
32.5°	635.2	629.8	610.5	561.2	547.2
35°	599.8	595.5	566.5	523.6	510.7
37.5°	564.4	559.0	522.5	488.2	472.1
40°	529.0	522.5	482.8	451.7	434.5
42.5°	495.7	487.1	448.5	415.2	395.9
45°	460.3	450.6	412.0	377.7	362.7
47.5°	424.9	416.3	380.9	345.5	328.3
50°	387.3	379.8	347.6	312.2	294.0
52.5°	356.2	344.4	313.3	277.9	262.9
55°	319.7	310.1	281.1	247.9	235.0
57.5°	286.5	276.8	250.0	218.9	208.2
60°	255.4	241.4	218.9	192.1	183.5
62.5°	221.0	210.3	191.0	168.5	179.2
65°	189.9	179.2	162.0	165.2	137.3
67.5°	155.6	150.2	135.2	120.2	115.9
70°	126.6	120.2	114.8	98.7	94.4
72.5°	100.9	94.4	86.9	78.3	75.1
75°	76.2	70.8	66.5	63.3	69.7
77.5°	52.6	50.4	47.2	44.0	42.9
80°	34.3	33.3	32.2	31.1	30.0
82.5°	20.4	20.4	20.4	20.4	20.4
85°	10.7	11.8	12.9	13.9	15.0
87.5°	6.4	6.4	7.5	8.6	9.7
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)