

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: P544971

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-82-88-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: P544971  
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-LD4-2HI-35-UNV-82-88-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

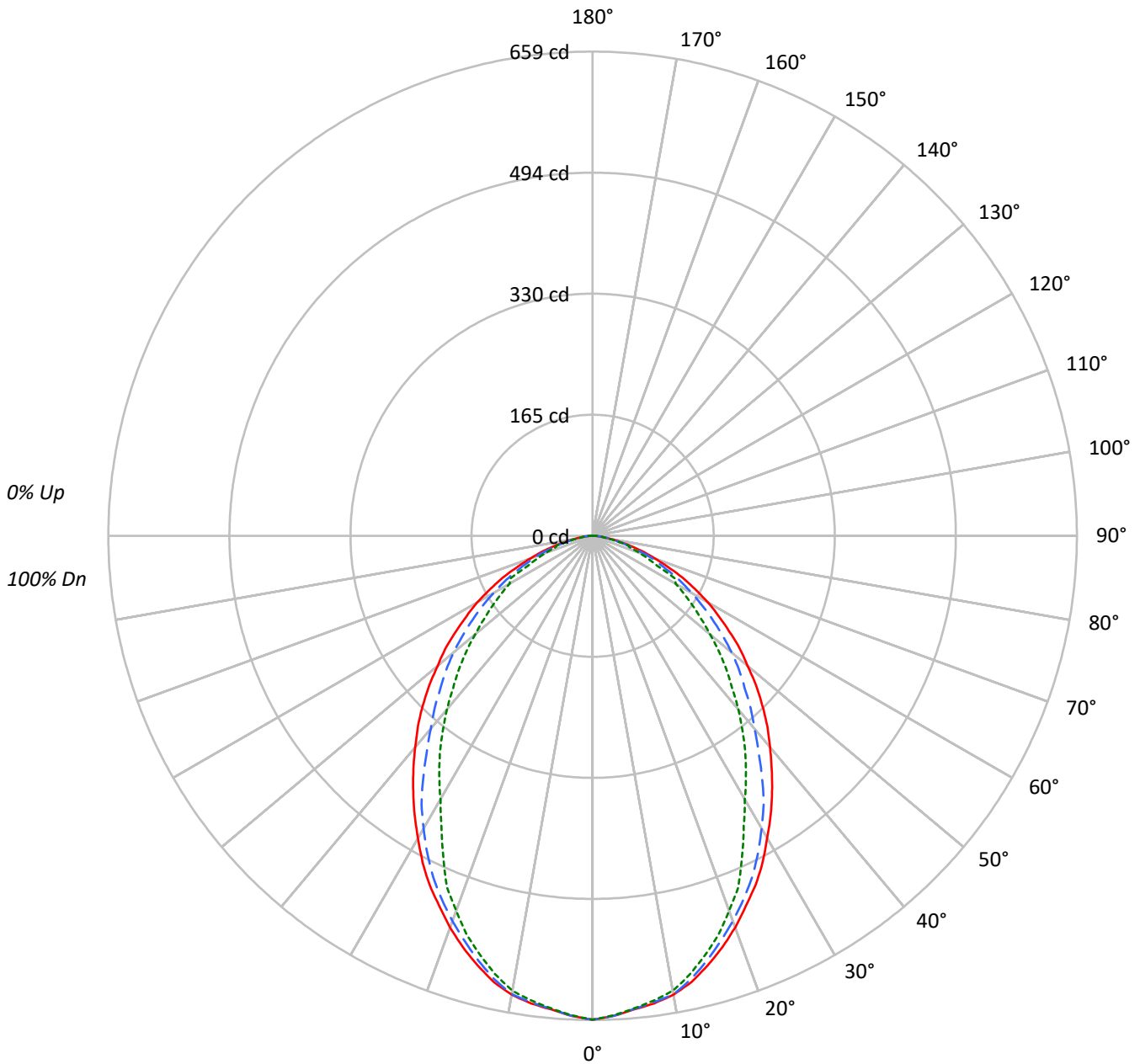
Lumens per Lamp: N/A  
Luminaire Lumens: 1293.0 lumens  
Efficiency: N/A  
Efficacy: 59.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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					20					
RC	80					70					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°	7089	7089	7089
5°	6993	6985	6977
10°	6933	6924	6874
15°	6745	6677	6585
20°	6498	6393	6219
25°	6230	6095	5715
30°	5905	5716	5148
35°	5593	5282	4762
40°	5275	4814	4333
45°	4973	4451	3918
50°	4603	4131	3493
55°	4258	3744	3130
60°	3901	3343	2803
65°	3433	2929	2483
70°	2826	2565	2109
75°	2250	1963	2059
80°	1512	1413	1320
85°	939	1124	1321



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.3	4.7
10°-20°	168.3	13.0
20°-30°	232.9	18.0
30°-40°	248.4	19.2
40°-50°	226.6	17.5
50°-60°	177.5	13.7
60°-70°	115.7	8.9
70°-80°	51.3	4.0
80°-90°	11.0	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°	462.5	35.8
0°-40°	710.9	55.0
0°-60°	1115.0	86.2
0°-90°	1293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1293.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	647	646	646	646	646	61
15°	605	605	599	593	591	170
25°	525	522	513	495	481	241
35°	426	423	402	372	362	266
45°	327	320	292	268	257	252
55°	227	220	200	176	167	204
65°	135	127	115	117	98	133
75°	54	50	47	45	50	58
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°	658.6	658.6	658.6	658.6	658.6
2.5°	654.1	654.1	654.1	653.3	653.3
5°	647.2	646.5	646.5	645.7	645.7
7.5°	641.9	641.1	640.4	639.6	638.1
10°	634.3	634.3	633.5	629.7	628.9
12.5°	622.1	621.3	618.3	613.0	611.4
15°	605.3	605.3	599.2	593.2	590.9
17.5°	587.1	586.3	578.7	572.6	569.5
20°	567.3	565.7	558.1	548.2	542.9
22.5°	545.2	545.2	536.0	523.1	517.8
25°	524.6	521.6	513.2	494.9	481.2
27.5°	501.0	496.5	487.3	461.4	445.4
30°	475.1	472.8	459.9	426.4	414.2
32.5°	450.8	447.0	433.3	398.2	388.3
35°	425.6	422.6	402.0	371.6	362.4
37.5°	400.5	396.7	370.8	346.5	335.0
40°	375.4	370.8	342.6	320.6	308.4
42.5°	351.8	345.7	318.3	294.7	281.0
45°	326.7	319.8	292.4	268.0	257.4
47.5°	301.5	295.4	270.3	245.2	233.0
50°	274.9	269.5	246.7	221.6	208.6
52.5°	252.8	244.4	222.3	197.2	186.6
55°	226.9	220.1	199.5	175.9	166.8
57.5°	203.3	196.4	177.4	155.3	147.7
60°	181.2	171.3	155.3	136.3	130.2
62.5°	156.9	149.2	135.5	119.5	127.2
65°	134.8	127.2	115.0	117.3	97.5
67.5°	110.4	106.6	95.9	85.3	82.2
70°	89.8	85.3	81.5	70.1	67.0
72.5°	71.6	67.0	61.7	55.6	53.3
75°	54.1	50.3	47.2	44.9	49.5
77.5°	37.3	35.8	33.5	31.2	30.5
80°	24.4	23.6	22.8	22.1	21.3
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.1	9.9	10.7
87.5°	4.6	4.6	5.3	6.1	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)