

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: P545225

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-82-86-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: P545225  
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-82-86-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

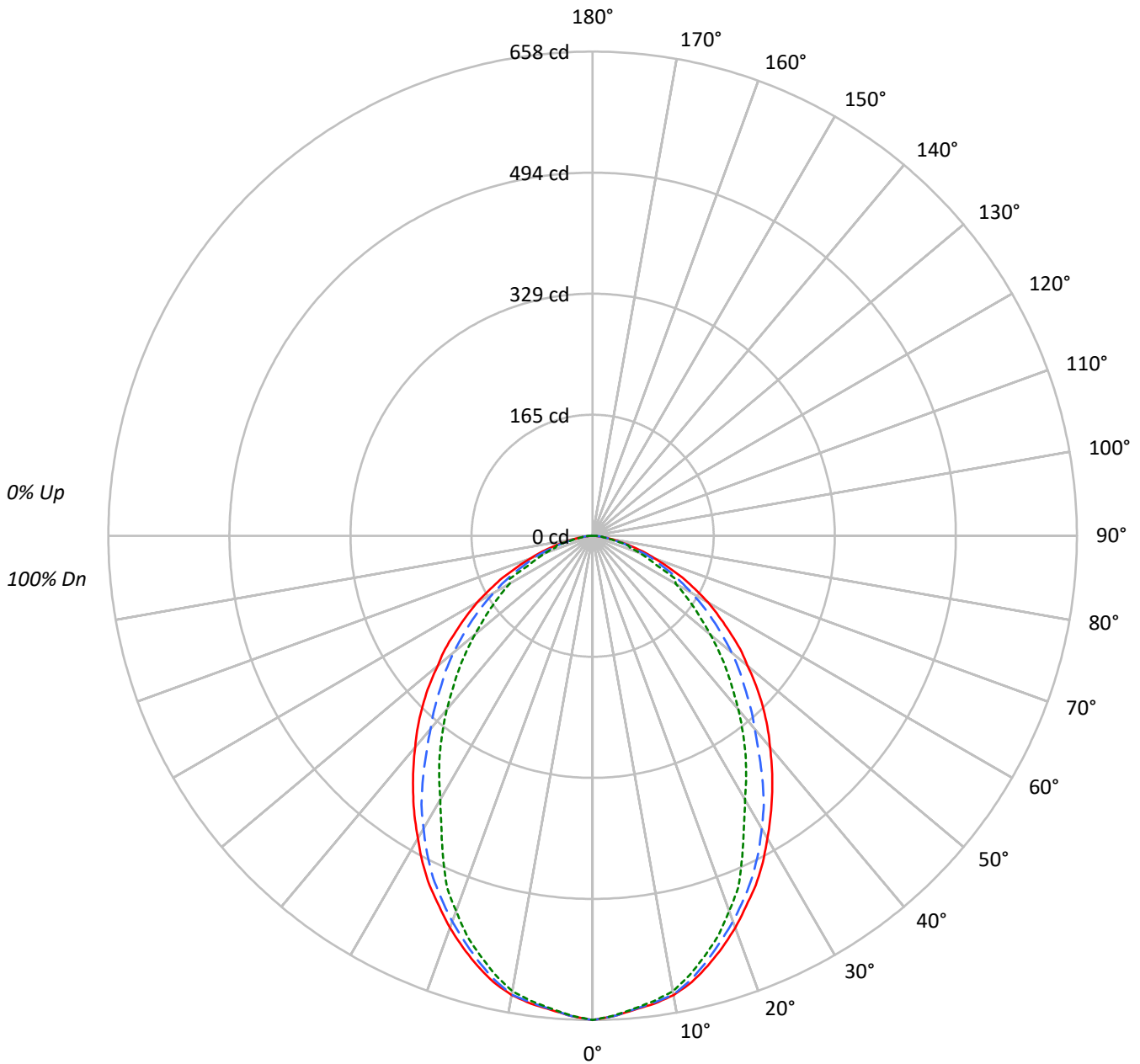
Lumens per Lamp: N/A  
Luminaire Lumens: 1292.0 lumens  
Efficiency: N/A  
Efficacy: 77.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	7084	7084	7084
5°	6988	6980	6971
10°	6927	6919	6869
15°	6741	6673	6579
20°	6493	6388	6214
25°	6226	6090	5711
30°	5901	5711	5144
35°	5589	5278	4759
40°	5271	4811	4329
45°	4969	4448	3915
50°	4600	4128	3491
55°	4254	3740	3126
60°	3899	3341	2801
65°	3431	2926	2481
70°	2826	2562	2109
75°	2246	1963	2059
80°	1506	1413	1320
85°	939	1124	1321



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.3	4.7
10°-20°	168.1	13.0
20°-30°	232.8	18.0
30°-40°	248.2	19.2
40°-50°	226.4	17.5
50°-60°	177.4	13.7
60°-70°	115.6	8.9
70°-80°	51.2	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°	462.2	35.8
0°-40°	710.4	55.0
0°-60°	1114.2	86.2
0°-90°	1292.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1292.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	658	658	658	658	658	
5°	647	646	646	645	645	61
15°	605	605	599	593	590	170
25°	524	521	513	494	481	241
35°	425	422	402	371	362	266
45°	326	320	292	268	257	251
55°	227	220	199	176	167	203
65°	135	127	115	117	97	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°	658.1	658.1	658.1	658.1	658.1
2.5°	653.6	653.6	653.6	652.8	652.8
5°	646.7	646.0	646.0	645.2	645.2
7.5°	641.4	640.6	639.9	639.1	637.6
10°	633.8	633.8	633.0	629.2	628.5
12.5°	621.6	620.8	617.8	612.5	611.0
15°	604.9	604.9	598.8	592.7	590.4
17.5°	586.6	585.8	578.2	572.2	569.1
20°	566.8	565.3	557.7	547.8	542.5
22.5°	544.8	544.8	535.6	522.7	517.4
25°	524.2	521.2	512.8	494.5	480.9
27.5°	500.6	496.1	486.9	461.1	445.1
30°	474.8	472.5	459.5	426.1	413.9
32.5°	450.4	446.6	432.9	397.9	388.0
35°	425.3	422.3	401.7	371.3	362.2
37.5°	400.2	396.4	370.5	346.2	334.8
40°	375.1	370.5	342.4	320.3	308.1
42.5°	351.5	345.4	318.0	294.4	280.8
45°	326.4	319.6	292.2	267.8	257.2
47.5°	301.3	295.2	270.1	245.0	232.8
50°	274.7	269.3	246.5	221.4	208.5
52.5°	252.6	244.2	222.2	197.1	186.4
55°	226.7	219.9	199.3	175.8	166.6
57.5°	203.1	196.3	177.3	155.2	147.6
60°	181.1	171.2	155.2	136.2	130.1
62.5°	156.7	149.1	135.4	119.5	127.1
65°	134.7	127.1	114.9	117.2	97.4
67.5°	110.3	106.5	95.9	85.2	82.2
70°	89.8	85.2	81.4	70.0	67.0
72.5°	71.5	67.0	61.6	55.5	53.3
75°	54.0	50.2	47.2	44.9	49.5
77.5°	37.3	35.8	33.5	31.2	30.4
80°	24.3	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	6.8
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)