

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: P545464

Luminaire Tested: **FMR-12-2-LD4-1STD-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: P545464  
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-LD4-1STD-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**

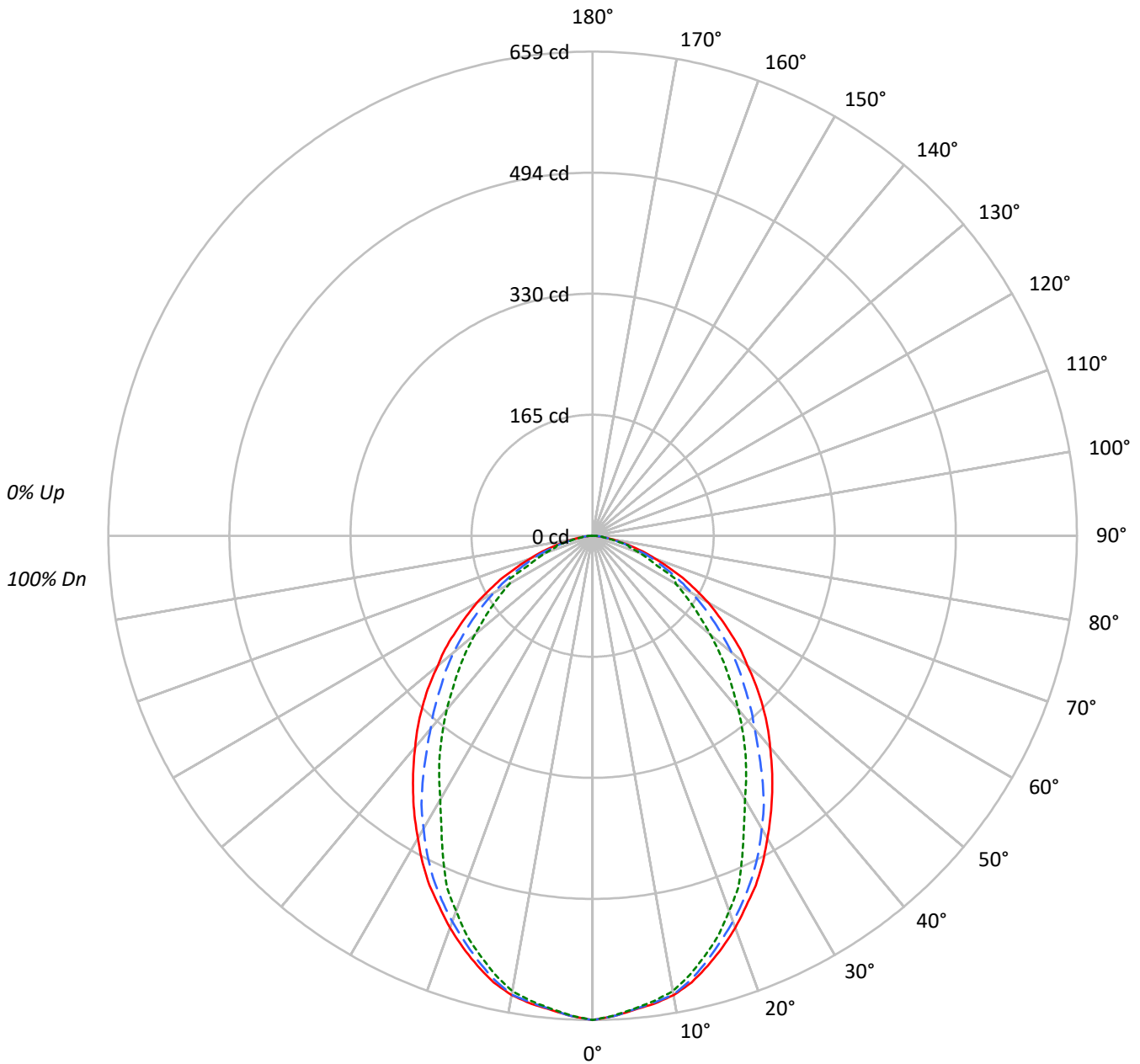
Lumens per Lamp: N/A  
Luminaire Lumens: 1294.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	3547	3547	3547
5°	3499	3495	3491
10°	3469	3465	3440
15°	3375	3341	3295
20°	3251	3199	3112
25°	3118	3050	2860
30°	2955	2861	2576
35°	2799	2643	2383
40°	2640	2409	2168
45°	2488	2227	1961
50°	2303	2067	1748
55°	2131	1873	1566
60°	1953	1674	1403
65°	1718	1466	1242
70°	1415	1282	1056
75°	1125	981	1029
80°	756	710	660
85°	469	562	661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.4	4.7
10°-20°	168.4	13.0
20°-30°	233.1	18.0
30°-40°	248.6	19.2
40°-50°	226.8	17.5
50°-60°	177.7	13.7
60°-70°	115.8	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°	462.9	35.8
0°-40°	711.5	55.0
0°-60°	1115.9	86.2
0°-90°	1294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1294.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	648	647	647	646	646	61
15°	606	606	600	594	591	170
25°	525	522	514	495	482	241
35°	426	423	402	372	363	266
45°	327	320	293	268	258	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°	659.1	659.1	659.1	659.1	659.1
2.5°	654.6	654.6	654.6	653.8	653.8
5°	647.7	647.0	647.0	646.2	646.2
7.5°	642.4	641.6	640.9	640.1	638.6
10°	634.8	634.8	634.0	630.2	629.4
12.5°	622.6	621.8	618.8	613.4	611.9
15°	605.8	605.8	599.7	593.6	591.3
17.5°	587.5	586.8	579.1	573.0	570.0
20°	567.7	566.2	558.6	548.7	543.3
22.5°	545.6	545.6	536.5	523.5	518.2
25°	525.0	522.0	513.6	495.3	481.6
27.5°	501.4	496.8	487.7	461.8	445.8
30°	475.5	473.2	460.3	426.7	414.5
32.5°	451.1	447.3	433.6	398.5	388.6
35°	426.0	422.9	402.3	371.9	362.7
37.5°	400.8	397.0	371.1	346.7	335.3
40°	375.7	371.1	342.9	320.8	308.6
42.5°	352.1	346.0	318.5	294.9	281.2
45°	326.9	320.0	292.6	268.2	257.6
47.5°	301.8	295.7	270.5	245.4	233.2
50°	275.1	269.8	246.9	221.7	208.8
52.5°	253.0	244.6	222.5	197.4	186.7
55°	227.1	220.2	199.6	176.0	166.9
57.5°	203.5	196.6	177.6	155.5	147.8
60°	181.4	171.5	155.5	136.4	130.3
62.5°	157.0	149.4	135.6	119.6	127.3
65°	134.9	127.3	115.1	117.4	97.5
67.5°	110.5	106.7	96.0	85.3	82.3
70°	89.9	85.3	81.5	70.1	67.1
72.5°	71.6	67.1	61.7	55.6	53.3
75°	54.1	50.3	47.2	45.0	49.5
77.5°	37.3	35.8	33.5	31.2	30.5
80°	24.4	23.6	22.9	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)