

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: P545213

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-80-96-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: P545213  
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-80-96-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

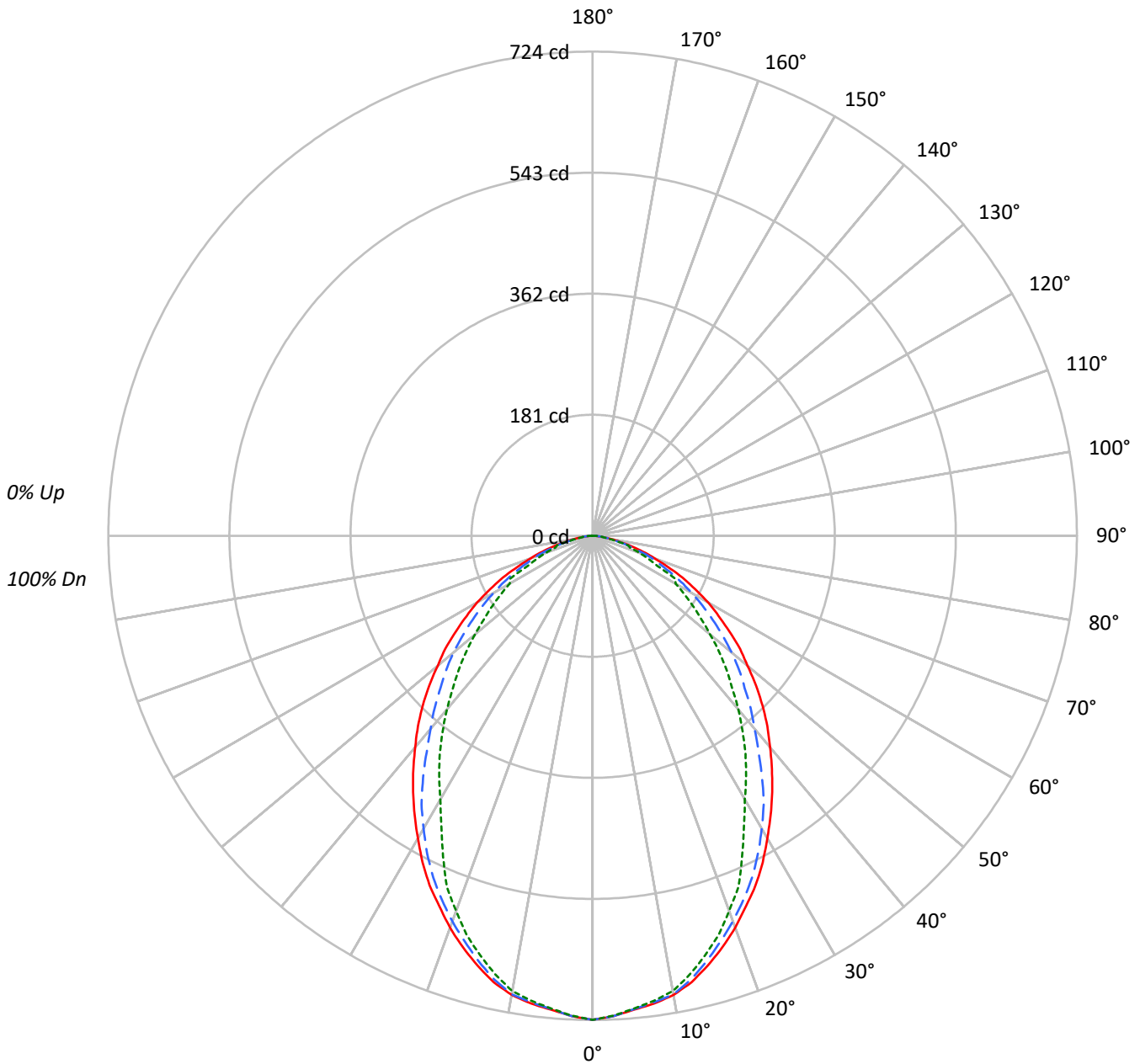
Lumens per Lamp: N/A  
Luminaire Lumens: 1421.0 lumens  
Efficiency: N/A  
Efficacy: 85.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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					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°	7791	7791	7791
5°	7686	7676	7667
10°	7619	7609	7555
15°	7414	7339	7237
20°	7141	7026	6834
25°	6848	6698	6282
30°	6490	6282	5658
35°	6147	5805	5234
40°	5796	5292	4762
45°	5465	4891	4305
50°	5059	4540	3840
55°	4680	4114	3440
60°	4288	3675	3081
65°	3772	3219	2728
70°	3106	2817	2316
75°	2470	2158	2262
80°	1661	1556	1450
85°	1037	1235	1445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	4.7
10°-20°	184.9	13.0
20°-30°	256.0	18.0
30°-40°	273.0	19.2
40°-50°	249.0	17.5
50°-60°	195.1	13.7
60°-70°	127.2	8.9
70°-80°	56.3	4.0
80°-90°	12.1	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°	508.3	35.8
0°-40°	781.3	55.0
0°-60°	1225.4	86.2
0°-90°	1421.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1421.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	724	724	724	724	724	
5°	711	710	710	710	710	68
15°	665	665	659	652	649	187
25°	577	573	564	544	529	265
35°	468	464	442	408	398	292
45°	359	352	321	295	283	277
55°	249	242	219	193	183	224
65°	148	140	126	129	107	146
75°	59	55	52	49	54	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	723.8	723.8	723.8	723.8	723.8
2.5°	718.8	718.8	718.8	718.0	718.0
5°	711.3	710.4	710.4	709.6	709.6
7.5°	705.4	704.6	703.8	702.9	701.2
10°	697.1	697.1	696.2	692.0	691.2
12.5°	683.7	682.8	679.5	673.6	672.0
15°	665.3	665.3	658.6	651.9	649.4
17.5°	645.2	644.3	636.0	629.3	625.9
20°	623.4	621.7	613.4	602.5	596.6
22.5°	599.2	599.2	589.1	574.9	569.0
25°	576.6	573.2	564.0	543.9	528.9
27.5°	550.6	545.6	535.6	507.1	489.5
30°	522.2	519.7	505.4	468.6	455.2
32.5°	495.4	491.2	476.1	437.7	426.8
35°	467.8	464.4	441.8	408.4	398.3
37.5°	440.2	436.0	407.5	380.7	368.2
40°	412.5	407.5	376.6	352.3	338.9
42.5°	386.6	379.9	349.8	323.8	308.8
45°	359.0	351.5	321.3	294.6	282.8
47.5°	331.4	324.7	297.1	269.5	256.1
50°	302.1	296.2	271.1	243.5	229.3
52.5°	277.8	268.6	244.3	216.7	205.0
55°	249.4	241.8	219.2	193.3	183.3
57.5°	223.4	215.9	195.0	170.7	162.3
60°	199.2	188.3	170.7	149.8	143.1
62.5°	172.4	164.0	149.0	131.4	139.7
65°	148.1	139.7	126.4	128.9	107.1
67.5°	121.3	117.2	105.4	93.7	90.4
70°	98.7	93.7	89.5	77.0	73.6
72.5°	78.7	73.6	67.8	61.1	58.6
75°	59.4	55.2	51.9	49.4	54.4
77.5°	41.0	39.3	36.8	34.3	33.5
80°	26.8	25.9	25.1	24.3	23.4
82.5°	15.9	15.9	15.9	15.9	15.9
85°	8.4	9.2	10.0	10.9	11.7
87.5°	5.0	5.0	5.9	6.7	7.5
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)