

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: P545232

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-93-85-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: P545232  
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-93-85-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

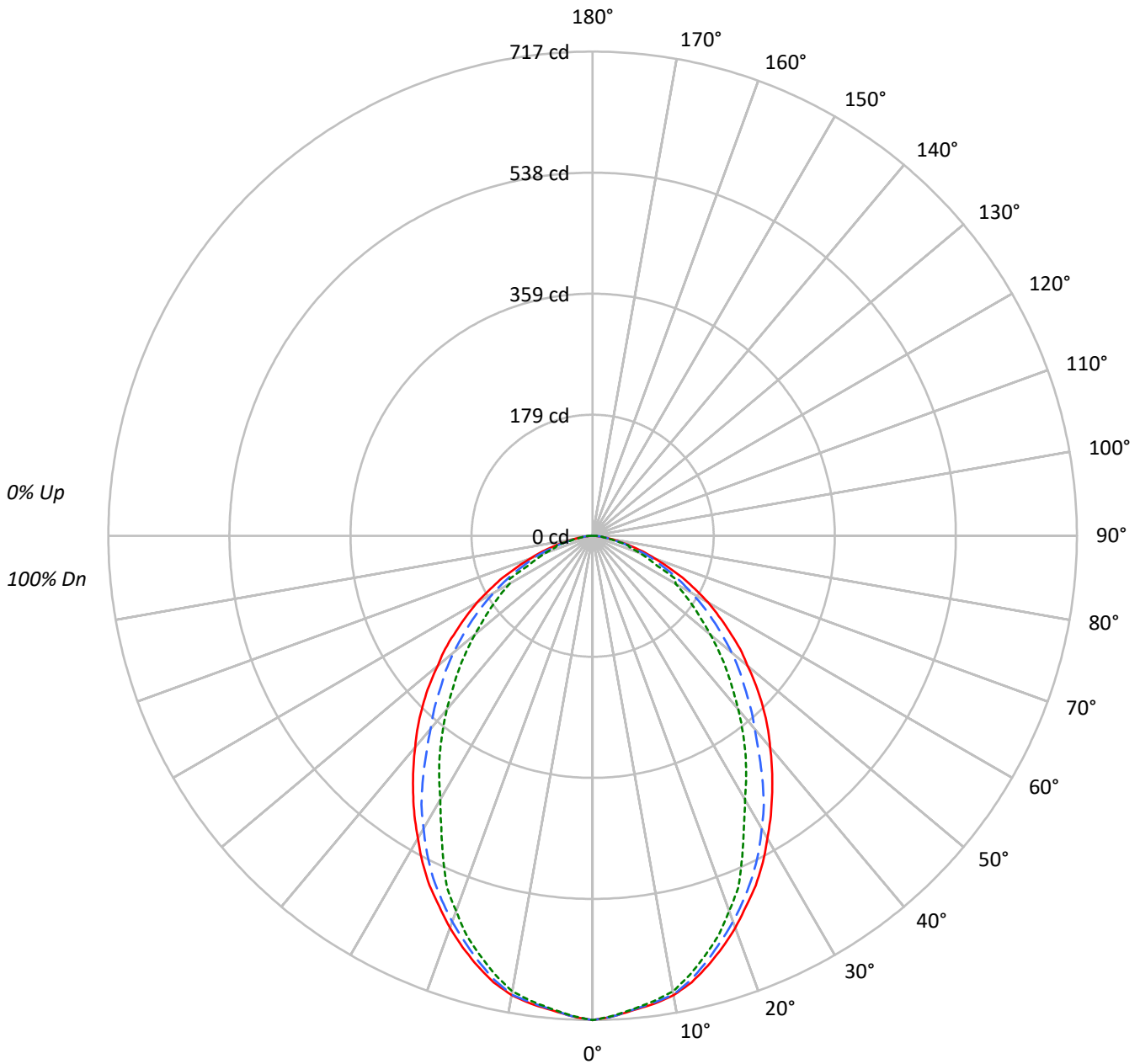
Lumens per Lamp: N/A  
Luminaire Lumens: 1408.0 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (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°	7720	7720	7720
5°	7615	7606	7597
10°	7549	7541	7486
15°	7346	7271	7170
20°	7076	6962	6772
25°	6785	6637	6223
30°	6431	6224	5607
35°	6091	5753	5186
40°	5744	5243	4718
45°	5415	4847	4267
50°	5012	4498	3805
55°	4637	4076	3408
60°	4247	3640	3053
65°	3739	3189	2702
70°	3078	2792	2297
75°	2450	2138	2242
80°	1643	1543	1438
85°	1025	1223	1433



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.8	4.7
10°-20°	183.2	13.0
20°-30°	253.7	18.0
30°-40°	270.5	19.2
40°-50°	246.8	17.5
50°-60°	193.3	13.7
60°-70°	126.0	8.9
70°-80°	55.8	4.0
80°-90°	12.0	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°	503.7	35.8
0°-40°	774.1	55.0
0°-60°	1214.2	86.2
0°-90°	1408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1408.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	705	704	704	703	703	67
15°	659	659	652	646	643	185
25°	571	568	559	539	524	262
35°	464	460	438	405	395	290
45°	356	348	318	292	280	274
55°	247	240	217	192	182	222
65°	147	138	125	128	106	145
75°	59	55	51	49	54	63
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°	717.2	717.2	717.2	717.2	717.2
2.5°	712.2	712.2	712.2	711.4	711.4
5°	704.8	703.9	703.9	703.1	703.1
7.5°	699.0	698.1	697.3	696.5	694.8
10°	690.7	690.7	689.9	685.7	684.9
12.5°	677.4	676.6	673.3	667.5	665.8
15°	659.2	659.2	652.5	645.9	643.4
17.5°	639.3	638.4	630.2	623.5	620.2
20°	617.7	616.1	607.8	597.0	591.2
22.5°	593.7	593.7	583.7	569.6	563.8
25°	571.3	568.0	558.8	538.9	524.0
27.5°	545.6	540.6	530.7	502.5	485.1
30°	517.4	514.9	500.8	464.3	451.1
32.5°	490.9	486.7	471.8	433.6	422.9
35°	463.5	460.2	437.8	404.6	394.7
37.5°	436.1	432.0	403.8	377.3	364.8
40°	408.8	403.8	373.1	349.1	335.8
42.5°	383.1	376.4	346.6	320.9	306.0
45°	355.7	348.2	318.4	291.9	280.3
47.5°	328.3	321.7	294.3	267.0	253.7
50°	299.3	293.5	268.6	241.3	227.2
52.5°	275.3	266.2	242.1	214.8	203.1
55°	247.1	239.6	217.2	191.5	181.6
57.5°	221.4	213.9	193.2	169.1	160.9
60°	197.3	186.6	169.1	148.4	141.8
62.5°	170.8	162.5	147.6	130.2	138.5
65°	146.8	138.5	125.2	127.7	106.1
67.5°	120.2	116.1	104.5	92.9	89.5
70°	97.8	92.9	88.7	76.3	73.0
72.5°	77.9	73.0	67.2	60.5	58.0
75°	58.9	54.7	51.4	48.9	53.9
77.5°	40.6	39.0	36.5	34.0	33.2
80°	26.5	25.7	24.9	24.0	23.2
82.5°	15.8	15.8	15.8	15.8	15.8
85°	8.3	9.1	9.9	10.8	11.6
87.5°	5.0	5.0	5.8	6.6	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)