

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: P544947

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-93-88-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: P544947  
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-LD4-1STD-50-UNV-93-88-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

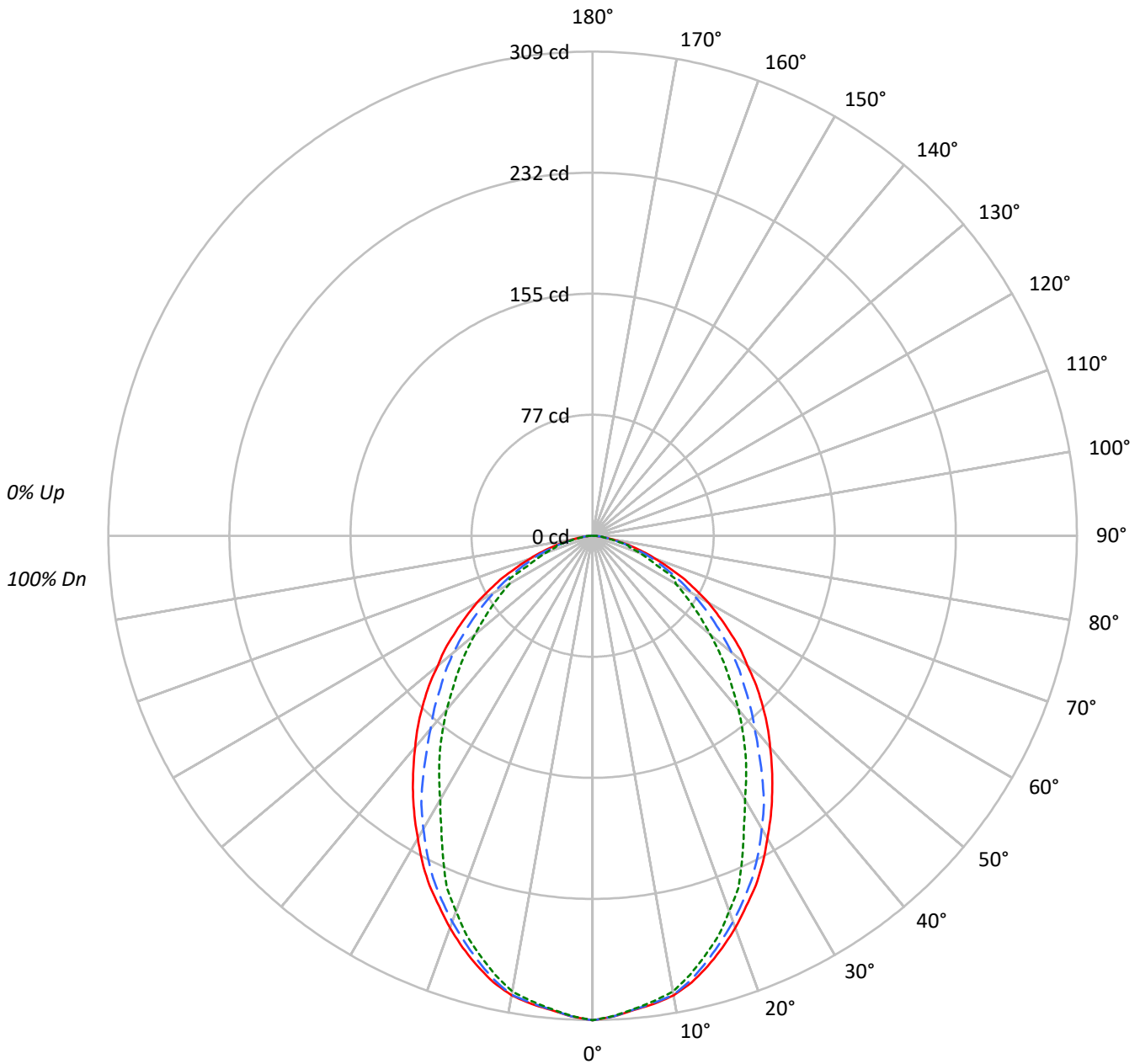
Lumens per Lamp: N/A  
Luminaire Lumens: 607.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3328	3328	3328
5°	3283	3279	3275
10°	3255	3251	3228
15°	3167	3135	3091
20°	3050	3001	2920
25°	2925	2861	2683
30°	2773	2683	2417
35°	2625	2480	2235
40°	2476	2261	2035
45°	2334	2090	1839
50°	2160	1939	1639
55°	1999	1758	1469
60°	1832	1569	1315
65°	1612	1375	1167
70°	1328	1202	991
75°	1056	923	965
80°	707	663	620
85°	445	531	618



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.8	4.7
10°-20°	79.0	13.0
20°-30°	109.4	18.0
30°-40°	116.6	19.2
40°-50°	106.4	17.5
50°-60°	83.3	13.7
60°-70°	54.3	8.9
70°-80°	24.1	4.0
80°-90°	5.2	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°	217.1	35.8
0°-40°	333.7	55.0
0°-60°	523.4	86.2
0°-90°	607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	607.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	309	309	309	309	309	
5°	304	304	304	303	303	29
15°	284	284	281	278	277	80
25°	246	245	241	232	226	113
35°	200	198	189	174	170	125
45°	153	150	137	126	121	118
55°	106	103	94	83	78	96
65°	63	60	54	55	46	62
75°	25	24	22	21	23	27
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	309.2	309.2	309.2	309.2	309.2
2.5°	307.1	307.1	307.1	306.7	306.7
5°	303.8	303.5	303.5	303.1	303.1
7.5°	301.3	301.0	300.6	300.3	299.5
10°	297.8	297.8	297.4	295.6	295.3
12.5°	292.0	291.7	290.3	287.8	287.0
15°	284.2	284.2	281.3	278.5	277.4
17.5°	275.6	275.2	271.7	268.8	267.4
20°	266.3	265.6	262.0	257.4	254.9
22.5°	255.9	255.9	251.6	245.6	243.1
25°	246.3	244.9	240.9	232.3	225.9
27.5°	235.2	233.1	228.8	216.6	209.1
30°	223.1	222.0	215.9	200.2	194.5
32.5°	211.6	209.8	203.4	186.9	182.3
35°	199.8	198.4	188.7	174.4	170.1
37.5°	188.0	186.2	174.1	162.6	157.3
40°	176.2	174.1	160.9	150.5	144.8
42.5°	165.1	162.3	149.4	138.3	131.9
45°	153.3	150.1	137.3	125.8	120.8
47.5°	141.6	138.7	126.9	115.1	109.4
50°	129.0	126.5	115.8	104.0	97.9
52.5°	118.7	114.7	104.4	92.6	87.6
55°	106.5	103.3	93.7	82.6	78.3
57.5°	95.4	92.2	83.3	72.9	69.3
60°	85.1	80.4	72.9	64.0	61.1
62.5°	73.6	70.1	63.6	56.1	59.7
65°	63.3	59.7	54.0	55.0	45.8
67.5°	51.8	50.0	45.0	40.0	38.6
70°	42.2	40.0	38.2	32.9	31.5
72.5°	33.6	31.5	29.0	26.1	25.0
75°	25.4	23.6	22.2	21.1	23.2
77.5°	17.5	16.8	15.7	14.7	14.3
80°	11.4	11.1	10.7	10.4	10.0
82.5°	6.8	6.8	6.8	6.8	6.8
85°	3.6	3.9	4.3	4.6	5.0
87.5°	2.1	2.1	2.5	2.9	3.2
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)