

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: P544789

Luminaire Tested: **FMR-12-1-LD4-1LO-35-UNV-93-96-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: P544789  
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-LD4-1LO-35-UNV-93-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

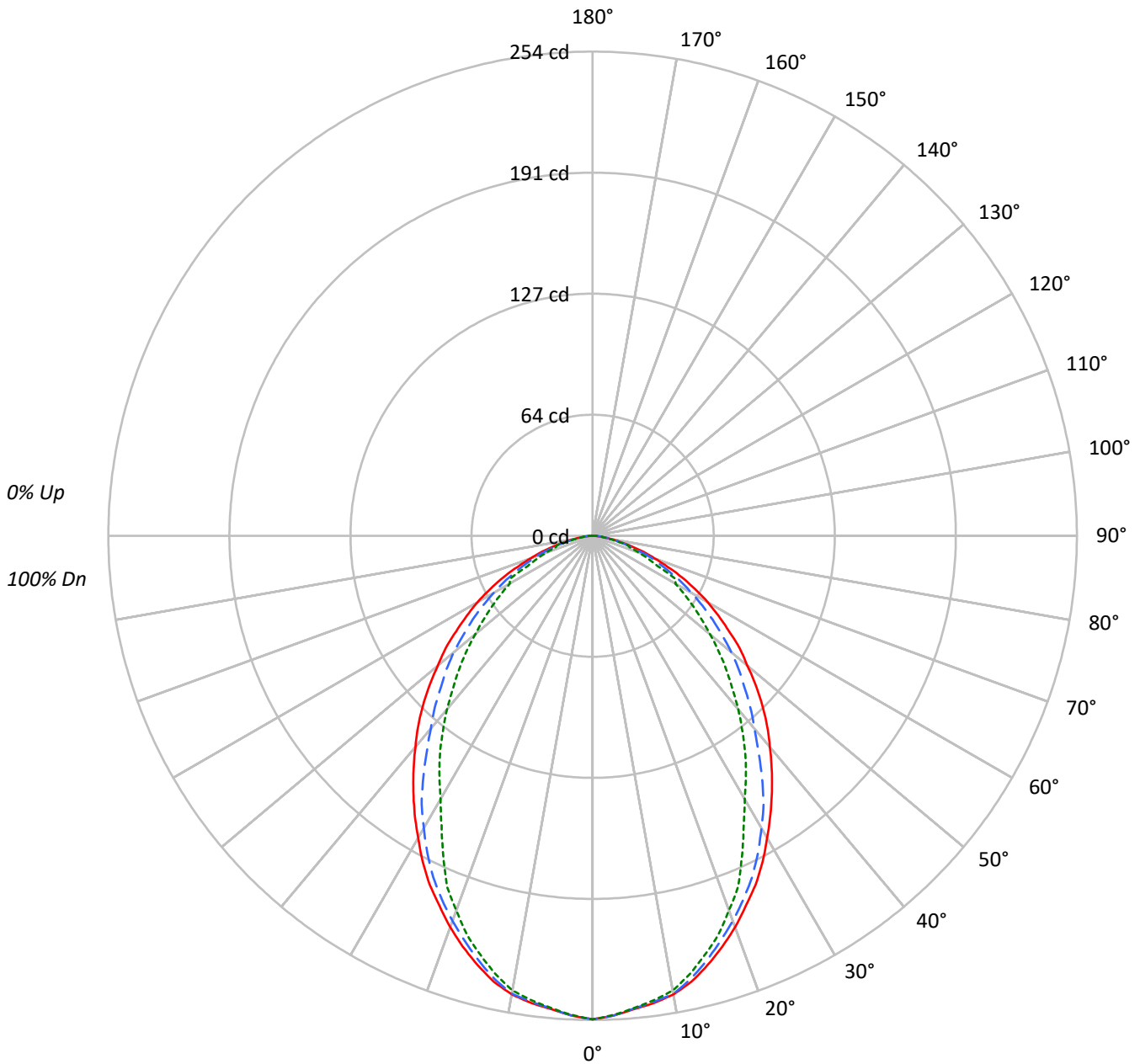
Lumens per Lamp: N/A  
Luminaire Lumens: 498.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
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									
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°	2731	2731	2731
5°	2694	2690	2687
10°	2670	2667	2647
15°	2598	2572	2536
20°	2503	2463	2395
25°	2400	2348	2201
30°	2275	2201	1982
35°	2154	2034	1834
40°	2032	1855	1669
45°	1915	1714	1509
50°	1773	1591	1346
55°	1640	1441	1205
60°	1503	1287	1079
65°	1322	1128	955
70°	1089	988	812
75°	865	757	794
80°	583	545	508
85°	358	432	506



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.6	4.7
10°-20°	64.8	13.0
20°-30°	89.7	18.0
30°-40°	95.7	19.2
40°-50°	87.3	17.5
50°-60°	68.4	13.7
60°-70°	44.6	8.9
70°-80°	19.7	4.0
80°-90°	4.2	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°	178.1	35.8
0°-40°	273.8	55.0
0°-60°	429.4	86.2
0°-90°	498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	498.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	254	254	254	254	254	
5°	249	249	249	249	249	24
15°	233	233	231	228	228	66
25°	202	201	198	191	185	93
35°	164	163	155	143	140	102
45°	126	123	113	103	99	97
55°	87	85	77	68	64	78
65°	52	49	44	45	38	51
75°	21	19	18	17	19	22
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	253.7	253.7	253.7	253.7	253.7
2.5°	251.9	251.9	251.9	251.6	251.6
5°	249.3	249.0	249.0	248.7	248.7
7.5°	247.2	246.9	246.6	246.3	245.8
10°	244.3	244.3	244.0	242.5	242.2
12.5°	239.6	239.3	238.1	236.1	235.5
15°	233.1	233.1	230.8	228.5	227.6
17.5°	226.1	225.8	222.9	220.5	219.4
20°	218.5	217.9	215.0	211.2	209.1
22.5°	210.0	210.0	206.5	201.5	199.4
25°	202.1	200.9	197.7	190.6	185.3
27.5°	193.0	191.2	187.7	177.7	171.6
30°	183.0	182.1	177.1	164.2	159.5
32.5°	173.6	172.1	166.9	153.4	149.6
35°	163.9	162.8	154.8	143.1	139.6
37.5°	154.3	152.8	142.8	133.4	129.0
40°	144.6	142.8	132.0	123.5	118.8
42.5°	135.5	133.1	122.6	113.5	108.2
45°	125.8	123.2	112.6	103.2	99.1
47.5°	116.1	113.8	104.1	94.4	89.7
50°	105.9	103.8	95.0	85.3	80.4
52.5°	97.4	94.1	85.6	76.0	71.9
55°	87.4	84.8	76.8	67.7	64.2
57.5°	78.3	75.7	68.3	59.8	56.9
60°	69.8	66.0	59.8	52.5	50.1
62.5°	60.4	57.5	52.2	46.0	49.0
65°	51.9	49.0	44.3	45.2	37.5
67.5°	42.5	41.1	37.0	32.8	31.7
70°	34.6	32.8	31.4	27.0	25.8
72.5°	27.6	25.8	23.8	21.4	20.5
75°	20.8	19.4	18.2	17.3	19.1
77.5°	14.4	13.8	12.9	12.0	11.7
80°	9.4	9.1	8.8	8.5	8.2
82.5°	5.6	5.6	5.6	5.6	5.6
85°	2.9	3.2	3.5	3.8	4.1
87.5°	1.8	1.8	2.1	2.3	2.6
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)