

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: P545366

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-93-97-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: P545366  
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-LD4-1LO-35-UNV-93-97-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

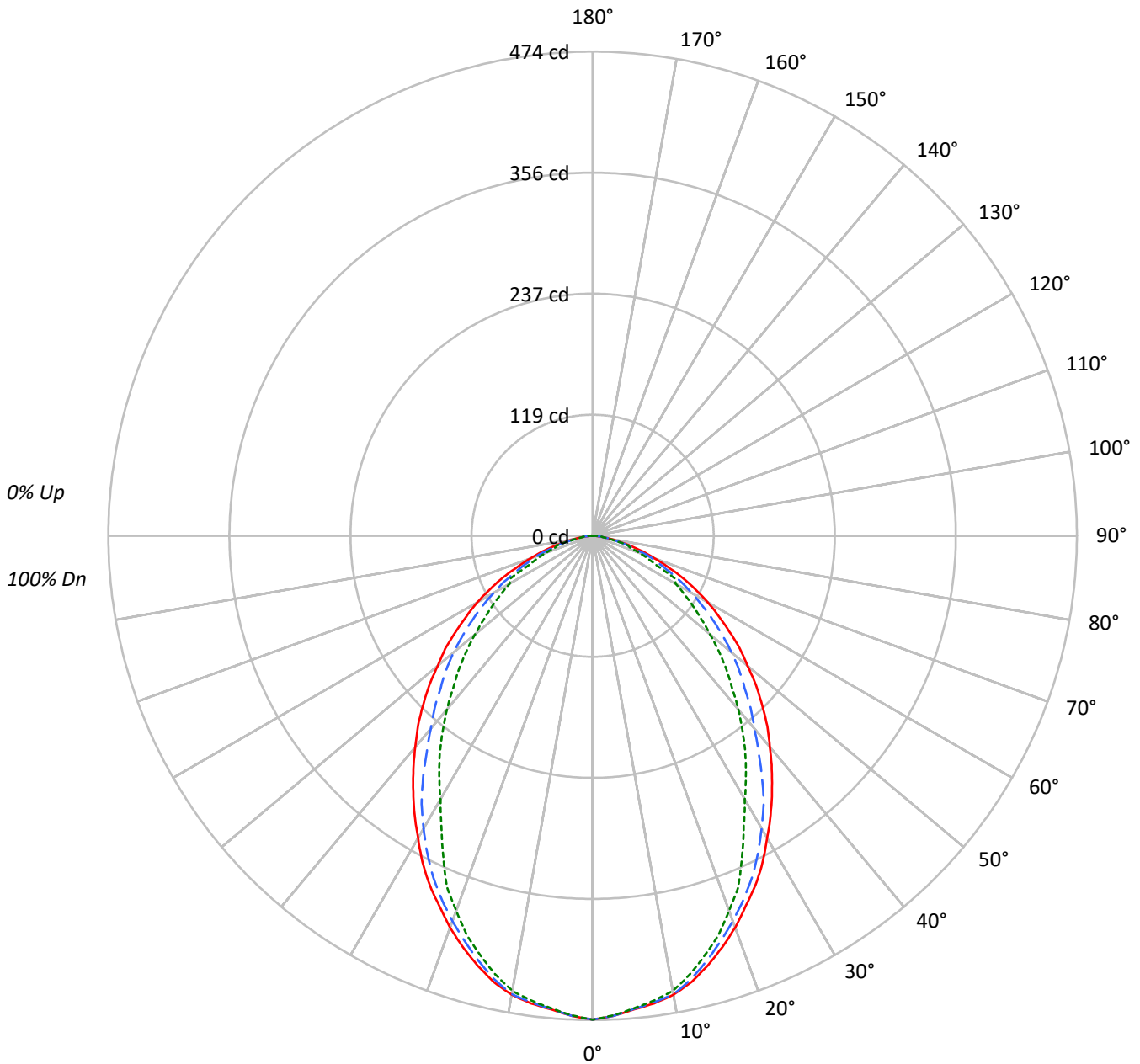
Lumens per Lamp: N/A  
Luminaire Lumens: 930.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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°	2549	2549	2549
5°	2515	2512	2509
10°	2493	2490	2472
15°	2426	2401	2368
20°	2337	2299	2237
25°	2241	2192	2055
30°	2124	2056	1851
35°	2011	1900	1713
40°	1897	1731	1558
45°	1788	1601	1409
50°	1655	1485	1257
55°	1531	1346	1125
60°	1403	1202	1009
65°	1234	1053	893
70°	1017	922	758
75°	809	707	740
80°	542	508	474
85°	340	408	475



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.1	4.7
10°-20°	121.0	13.0
20°-30°	167.5	18.0
30°-40°	178.7	19.2
40°-50°	163.0	17.5
50°-60°	127.7	13.7
60°-70°	83.2	8.9
70°-80°	36.9	4.0
80°-90°	7.9	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°	332.7	35.8
0°-40°	511.3	55.0
0°-60°	802.0	86.2
0°-90°	930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	930.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	474	474	474	474	474	
5°	466	465	465	464	464	44
15°	435	435	431	427	425	122
25°	377	375	369	356	346	173
35°	306	304	289	267	261	191
45°	235	230	210	193	185	181
55°	163	158	144	126	120	146
65°	97	92	83	84	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	473.7	473.7	473.7	473.7	473.7
2.5°	470.4	470.4	470.4	469.9	469.9
5°	465.5	465.0	465.0	464.4	464.4
7.5°	461.7	461.1	460.6	460.0	458.9
10°	456.2	456.2	455.7	452.9	452.4
12.5°	447.4	446.9	444.7	440.9	439.8
15°	435.4	435.4	431.0	426.6	425.0
17.5°	422.2	421.7	416.2	411.8	409.7
20°	408.0	406.9	401.4	394.3	390.5
22.5°	392.1	392.1	385.6	376.2	372.4
25°	377.3	375.2	369.1	356.0	346.1
27.5°	360.4	357.1	350.5	331.9	320.4
30°	341.7	340.1	330.8	306.7	297.9
32.5°	324.2	321.5	311.6	286.4	279.3
35°	306.1	304.0	289.2	267.3	260.7
37.5°	288.1	285.3	266.7	249.2	241.0
40°	270.0	266.7	246.4	230.6	221.8
42.5°	253.0	248.6	228.9	211.9	202.1
45°	234.9	230.0	210.3	192.8	185.1
47.5°	216.9	212.5	194.4	176.3	167.6
50°	197.7	193.9	177.4	159.4	150.1
52.5°	181.8	175.8	159.9	141.8	134.2
55°	163.2	158.3	143.5	126.5	119.9
57.5°	146.2	141.3	127.6	111.7	106.2
60°	130.3	123.2	111.7	98.0	93.7
62.5°	112.8	107.3	97.5	86.0	91.5
65°	96.9	91.5	82.7	84.3	70.1
67.5°	79.4	76.7	69.0	61.3	59.1
70°	64.6	61.3	58.6	50.4	48.2
72.5°	51.5	48.2	44.4	40.0	38.3
75°	38.9	36.1	34.0	32.3	35.6
77.5°	26.8	25.7	24.1	22.5	21.9
80°	17.5	17.0	16.4	15.9	15.3
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.6	7.1	7.7
87.5°	3.3	3.3	3.8	4.4	4.9
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)