

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: P545338

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-80-87-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: P545338  
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-80-87-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

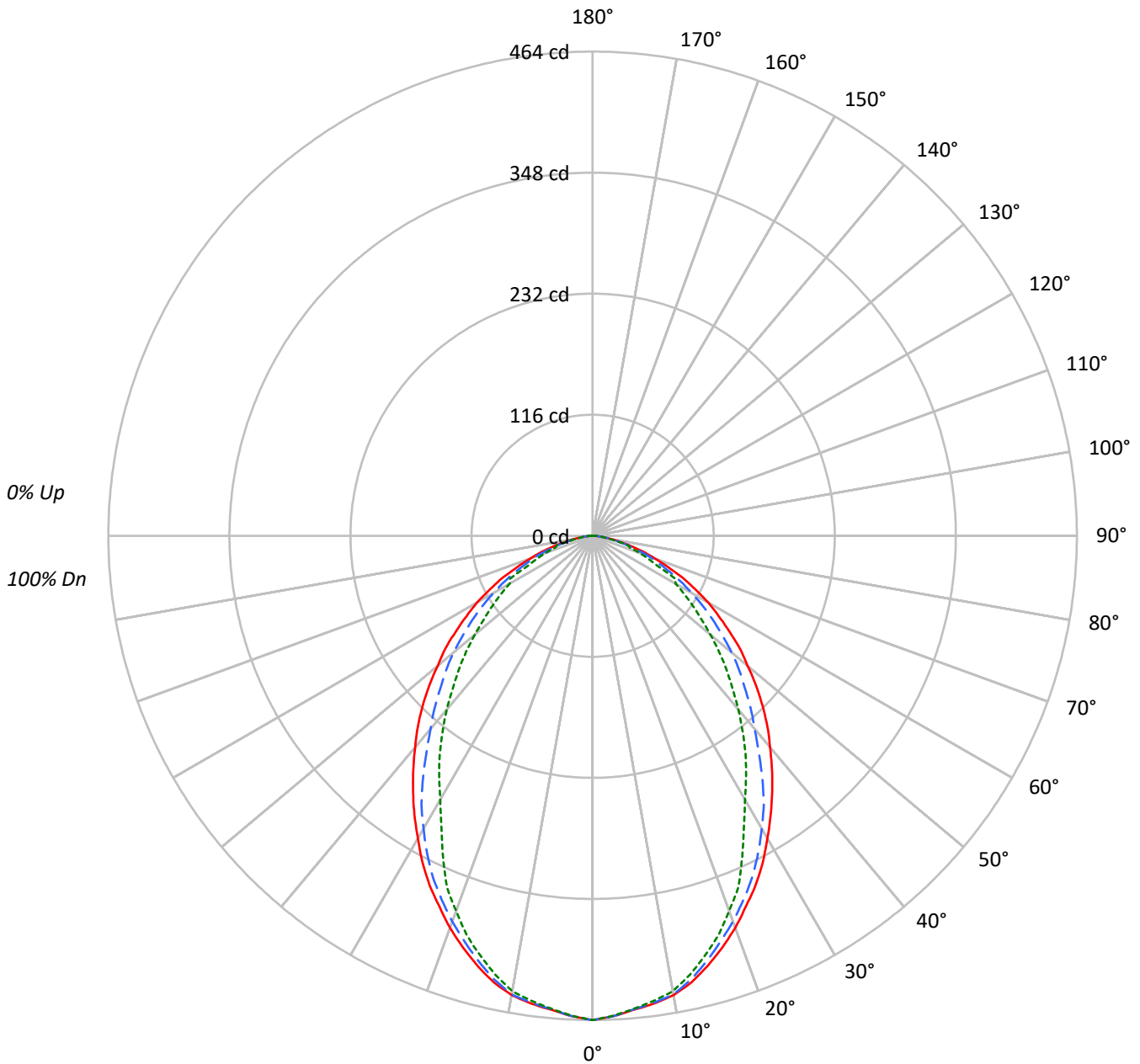
Lumens per Lamp: N/A  
Luminaire Lumens: 911.0 lumens  
Efficiency: N/A  
Efficacy: 77.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	2498	2498	2498
5°	2464	2461	2458
10°	2442	2439	2422
15°	2376	2352	2320
20°	2289	2252	2191
25°	2195	2147	2014
30°	2081	2014	1813
35°	1970	1861	1678
40°	1858	1696	1527
45°	1751	1568	1380
50°	1622	1455	1231
55°	1500	1319	1103
60°	1375	1178	987
65°	1210	1032	875
70°	996	903	743
75°	792	692	726
80°	533	499	465
85°	333	395	463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.2	4.7
10°-20°	118.6	13.0
20°-30°	164.1	18.0
30°-40°	175.0	19.2
40°-50°	159.7	17.5
50°-60°	125.1	13.7
60°-70°	81.5	8.9
70°-80°	36.1	4.0
80°-90°	7.8	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°	325.9	35.8
0°-40°	500.9	55.0
0°-60°	785.6	86.2
0°-90°	911.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	911.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	456	456	456	455	455	43
15°	426	426	422	418	416	120
25°	370	368	362	349	339	170
35°	300	298	283	262	255	187
45°	230	225	206	189	181	177
55°	160	155	141	124	118	143
65°	95	90	81	83	69	94
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	464.1	464.1	464.1	464.1	464.1
2.5°	460.8	460.8	460.8	460.3	460.3
5°	456.0	455.5	455.5	454.9	454.9
7.5°	452.2	451.7	451.2	450.6	449.6
10°	446.9	446.9	446.3	443.7	443.1
12.5°	438.3	437.8	435.6	431.9	430.8
15°	426.5	426.5	422.2	417.9	416.3
17.5°	413.6	413.1	407.7	403.4	401.3
20°	399.7	398.6	393.2	386.3	382.5
22.5°	384.1	384.1	377.7	368.6	364.8
25°	369.6	367.5	361.6	348.7	339.1
27.5°	353.0	349.8	343.3	325.1	313.8
30°	334.8	333.2	324.0	300.4	291.8
32.5°	317.6	314.9	305.3	280.6	273.6
35°	299.9	297.7	283.3	261.8	255.4
37.5°	282.2	279.5	261.3	244.1	236.0
40°	264.5	261.3	241.4	225.9	217.3
42.5°	247.9	243.6	224.2	207.6	198.0
45°	230.1	225.3	206.0	188.8	181.3
47.5°	212.4	208.2	190.4	172.7	164.2
50°	193.7	189.9	173.8	156.1	147.0
52.5°	178.1	172.2	156.7	138.9	131.4
55°	159.9	155.0	140.6	123.9	117.5
57.5°	143.2	138.4	125.0	109.4	104.1
60°	127.7	120.7	109.4	96.0	91.7
62.5°	110.5	105.1	95.5	84.2	89.6
65°	95.0	89.6	81.0	82.6	68.7
67.5°	77.8	75.1	67.6	60.1	57.9
70°	63.3	60.1	57.4	49.4	47.2
72.5°	50.4	47.2	43.5	39.2	37.6
75°	38.1	35.4	33.3	31.7	34.9
77.5°	26.3	25.2	23.6	22.0	21.5
80°	17.2	16.6	16.1	15.6	15.0
82.5°	10.2	10.2	10.2	10.2	10.2
85°	5.4	5.9	6.4	7.0	7.5
87.5°	3.2	3.2	3.8	4.3	4.8
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)