

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: P545062

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-81-97-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: P545062  
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-LD4-2LO-35-UNV-81-97-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC 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**

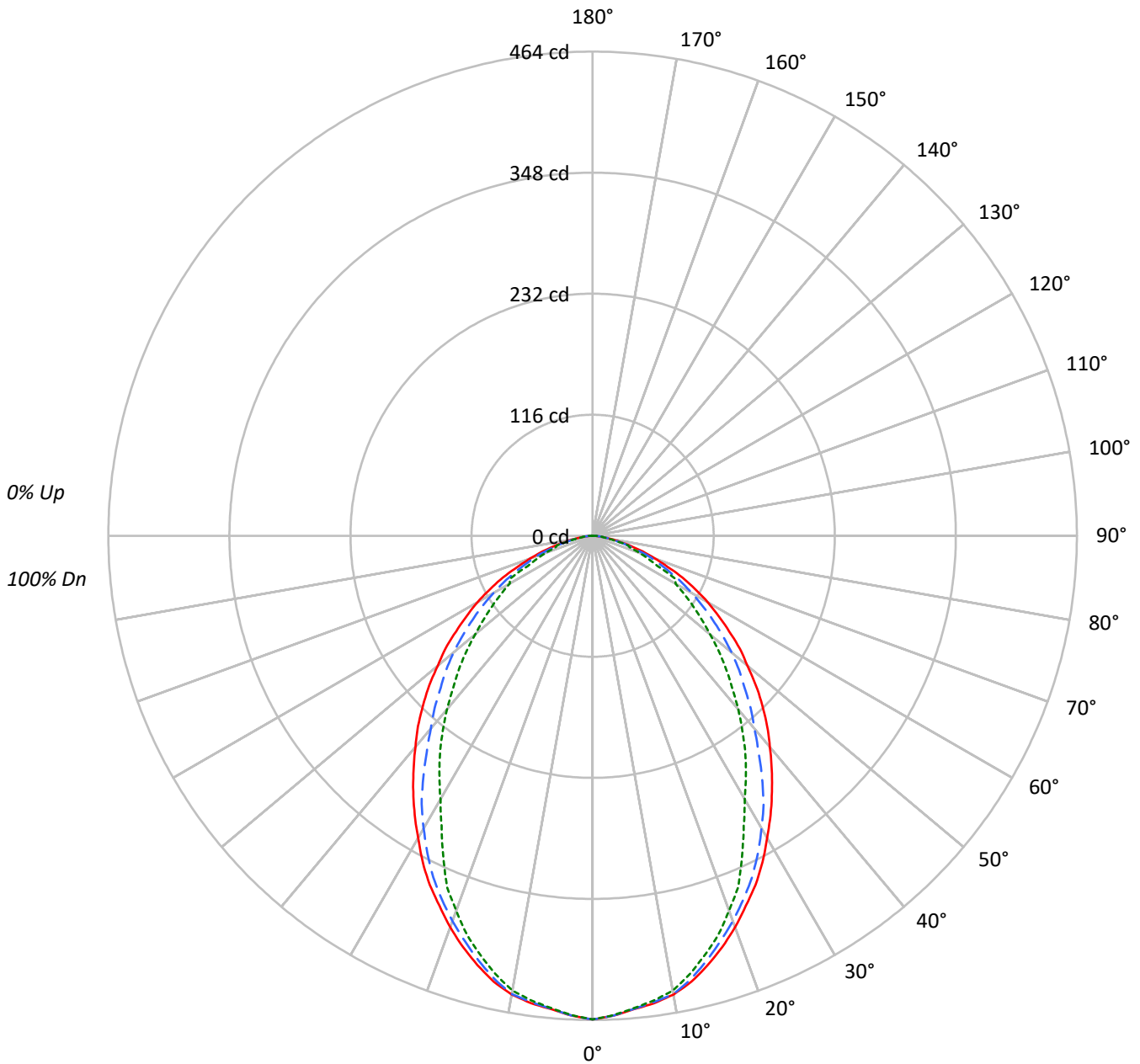
Lumens per Lamp: N/A  
Luminaire Lumens: 910.0 lumens  
Efficiency: N/A  
Efficacy: 77.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4989	4989	4989
5°	4922	4916	4910
10°	4879	4874	4838
15°	4747	4699	4634
20°	4573	4499	4377
25°	4385	4290	4023
30°	4156	4023	3623
35°	3937	3717	3352
40°	3712	3388	3049
45°	3500	3133	2757
50°	3240	2907	2458
55°	2997	2635	2203
60°	2745	2353	1972
65°	2417	2060	1747
70°	1989	1803	1485
75°	1580	1381	1447
80°	1060	998	930
85°	667	790	926



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	4.7
10°-20°	118.4	13.0
20°-30°	163.9	18.0
30°-40°	174.8	19.2
40°-50°	159.5	17.5
50°-60°	124.9	13.7
60°-70°	81.4	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°	325.5	35.8
0°-40°	500.3	55.0
0°-60°	784.7	86.2
0°-90°	910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	910.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	456	455	455	454	454	43
15°	426	426	422	418	416	120
25°	369	367	361	348	339	170
35°	300	297	283	262	255	187
45°	230	225	206	189	181	177
55°	160	155	140	124	117	143
65°	95	90	81	82	69	93
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°	463.5	463.5	463.5	463.5	463.5
2.5°	460.3	460.3	460.3	459.8	459.8
5°	455.5	455.0	455.0	454.4	454.4
7.5°	451.8	451.2	450.7	450.1	449.1
10°	446.4	446.4	445.9	443.2	442.6
12.5°	437.8	437.3	435.1	431.4	430.3
15°	426.0	426.0	421.7	417.5	415.8
17.5°	413.2	412.6	407.3	403.0	400.8
20°	399.2	398.2	392.8	385.8	382.1
22.5°	383.7	383.7	377.3	368.2	364.4
25°	369.2	367.1	361.2	348.3	338.7
27.5°	352.6	349.4	343.0	324.7	313.5
30°	334.4	332.8	323.7	300.1	291.5
32.5°	317.2	314.6	304.9	280.3	273.3
35°	299.6	297.4	282.9	261.5	255.1
37.5°	281.9	279.2	261.0	243.8	235.8
40°	264.2	261.0	241.1	225.6	217.0
42.5°	247.6	243.3	224.0	207.4	197.7
45°	229.9	225.1	205.8	188.6	181.1
47.5°	212.2	207.9	190.2	172.6	164.0
50°	193.5	189.7	173.6	155.9	146.8
52.5°	177.9	172.0	156.5	138.8	131.3
55°	159.7	154.9	140.4	123.8	117.4
57.5°	143.1	138.3	124.9	109.3	104.0
60°	127.5	120.6	109.3	95.9	91.6
62.5°	110.4	105.0	95.4	84.1	89.5
65°	94.9	89.5	80.9	82.5	68.6
67.5°	77.7	75.0	67.5	60.0	57.9
70°	63.2	60.0	57.3	49.3	47.2
72.5°	50.4	47.2	43.4	39.1	37.5
75°	38.0	35.4	33.2	31.6	34.8
77.5°	26.3	25.2	23.6	22.0	21.4
80°	17.1	16.6	16.1	15.5	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)