

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: P544687

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-93-84-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: P544687  
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-LD4-1HI-35-UNV-93-84-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

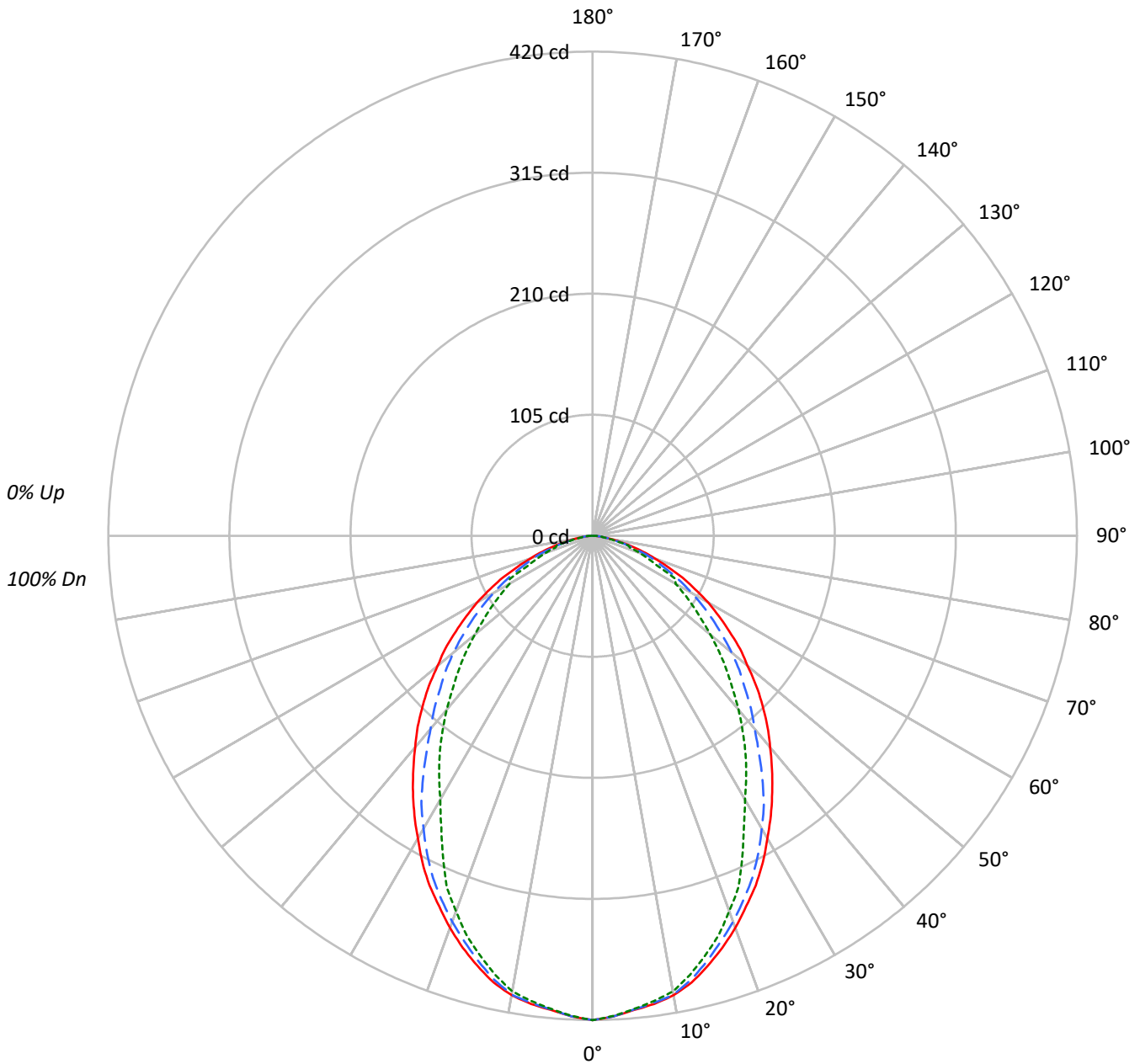
Lumens per Lamp: N/A  
Luminaire Lumens: 825.0 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
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°	4523	4523	4523
5°	4462	4457	4452
10°	4423	4418	4386
15°	4304	4260	4201
20°	4145	4079	3968
25°	3975	3890	3646
30°	3769	3647	3285
35°	3569	3370	3039
40°	3365	3072	2765
45°	3172	2841	2500
50°	2937	2636	2229
55°	2717	2389	1997
60°	2489	2133	1789
65°	2190	1869	1584
70°	1803	1637	1347
75°	1435	1252	1314
80°	961	905	843
85°	605	716	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.1	4.7
10°-20°	107.4	13.0
20°-30°	148.6	18.0
30°-40°	158.5	19.2
40°-50°	144.6	17.5
50°-60°	113.3	13.7
60°-70°	73.8	8.9
70°-80°	32.7	4.0
80°-90°	7.0	0.8
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°	295.1	35.8
0°-40°	453.6	55.0
0°-60°	711.5	86.2
0°-90°	825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	825.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	413	412	412	412	412	39
15°	386	386	382	378	377	109
25°	335	333	328	316	307	154
35°	272	270	256	237	231	170
45°	208	204	187	171	164	161
55°	145	140	127	112	106	130
65°	86	81	73	75	62	85
75°	34	32	30	29	32	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	420.2	420.2	420.2	420.2	420.2
2.5°	417.3	417.3	417.3	416.8	416.8
5°	413.0	412.5	412.5	412.0	412.0
7.5°	409.6	409.1	408.6	408.1	407.1
10°	404.7	404.7	404.2	401.8	401.3
12.5°	396.9	396.4	394.5	391.1	390.1
15°	386.2	386.2	382.3	378.5	377.0
17.5°	374.6	374.1	369.2	365.3	363.4
20°	361.9	361.0	356.1	349.8	346.4
22.5°	347.9	347.9	342.0	333.8	330.4
25°	334.7	332.8	327.5	315.8	307.0
27.5°	319.7	316.8	310.9	294.4	284.2
30°	303.2	301.7	293.4	272.1	264.3
32.5°	287.6	285.2	276.4	254.1	247.8
35°	271.6	269.6	256.5	237.1	231.3
37.5°	255.5	253.1	236.6	221.1	213.8
40°	239.5	236.6	218.6	204.5	196.8
42.5°	224.5	220.6	203.1	188.0	179.3
45°	208.4	204.0	186.6	171.0	164.2
47.5°	192.4	188.5	172.5	156.4	148.7
50°	175.4	172.0	157.4	141.4	133.1
52.5°	161.3	156.0	141.9	125.8	119.0
55°	144.8	140.4	127.3	112.2	106.4
57.5°	129.7	125.3	113.2	99.1	94.3
60°	115.6	109.3	99.1	87.0	83.1
62.5°	100.1	95.2	86.5	76.3	81.1
65°	86.0	81.1	73.4	74.8	62.2
67.5°	70.4	68.0	61.2	54.4	52.5
70°	57.3	54.4	52.0	44.7	42.8
72.5°	45.7	42.8	39.4	35.5	34.0
75°	34.5	32.1	30.1	28.7	31.6
77.5°	23.8	22.8	21.4	19.9	19.4
80°	15.5	15.1	14.6	14.1	13.6
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.9	5.3	5.8	6.3	6.8
87.5°	2.9	2.9	3.4	3.9	4.4
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)