

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: P544670

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-80-97-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: P544670  
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-80-97-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

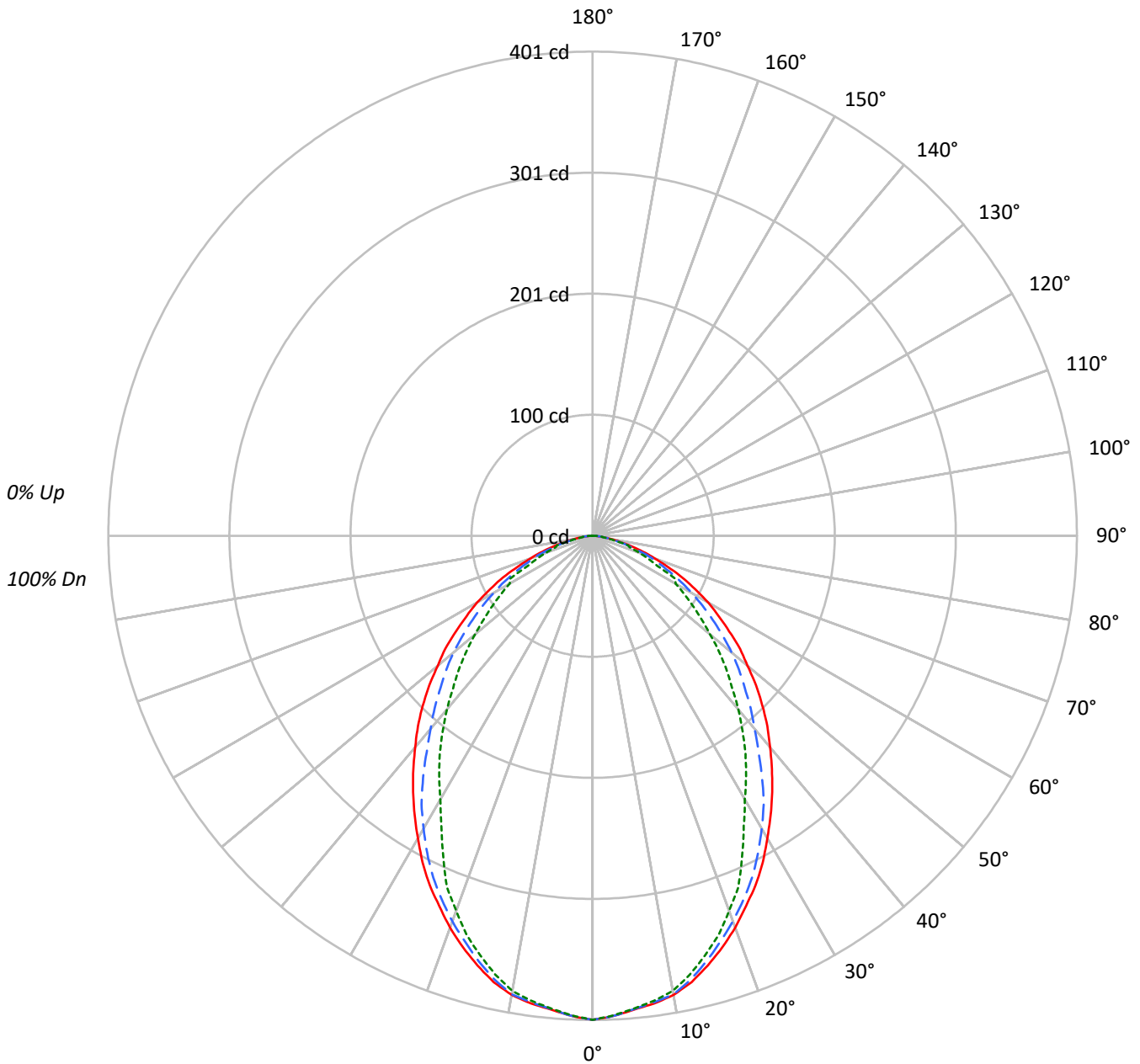
Lumens per Lamp: N/A  
Luminaire Lumens: 787.0 lumens  
Efficiency: N/A  
Efficacy: 72.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4315	4315	4315
5°	4256	4252	4246
10°	4220	4215	4184
15°	4105	4064	4007
20°	3955	3891	3785
25°	3792	3710	3479
30°	3594	3479	3133
35°	3405	3215	2899
40°	3211	2931	2637
45°	3026	2710	2384
50°	2802	2515	2127
55°	2592	2278	1905
60°	2375	2034	1707
65°	2089	1783	1510
70°	1721	1561	1284
75°	1368	1194	1252
80°	917	862	806
85°	568	692	803



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.3	4.7
10°-20°	102.4	13.0
20°-30°	141.8	18.0
30°-40°	151.2	19.2
40°-50°	137.9	17.5
50°-60°	108.1	13.7
60°-70°	70.4	8.9
70°-80°	31.2	4.0
80°-90°	6.7	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°	281.5	35.8
0°-40°	432.7	55.0
0°-60°	678.7	86.2
0°-90°	787.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	787.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	401	401	401	401	401	
5°	394	394	394	393	393	37
15°	368	368	365	361	360	104
25°	319	318	312	301	293	147
35°	259	257	245	226	221	162
45°	199	195	178	163	157	153
55°	138	134	121	107	102	124
65°	82	77	70	71	59	81
75°	33	31	29	27	30	35
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	400.9	400.9	400.9	400.9	400.9
2.5°	398.1	398.1	398.1	397.6	397.6
5°	393.9	393.5	393.5	393.0	393.0
7.5°	390.7	390.2	389.8	389.3	388.4
10°	386.1	386.1	385.6	383.3	382.8
12.5°	378.6	378.2	376.3	373.1	372.2
15°	368.4	368.4	364.7	361.0	359.6
17.5°	357.3	356.9	352.2	348.5	346.7
20°	345.3	344.3	339.7	333.7	330.4
22.5°	331.8	331.8	326.3	318.4	315.1
25°	319.3	317.5	312.4	301.2	292.9
27.5°	305.0	302.2	296.6	280.9	271.1
30°	289.2	287.8	279.9	259.5	252.1
32.5°	274.4	272.0	263.7	242.4	236.4
35°	259.1	257.2	244.7	226.2	220.6
37.5°	243.8	241.5	225.7	210.9	203.9
40°	228.5	225.7	208.6	195.1	187.7
42.5°	214.1	210.4	193.7	179.4	171.0
45°	198.8	194.7	178.0	163.1	156.6
47.5°	183.5	179.8	164.5	149.2	141.8
50°	167.3	164.1	150.2	134.9	127.0
52.5°	153.9	148.8	135.3	120.0	113.5
55°	138.1	133.9	121.4	107.1	101.5
57.5°	123.7	119.6	108.0	94.5	89.9
60°	110.3	104.3	94.5	83.0	79.3
62.5°	95.5	90.8	82.5	72.8	77.4
65°	82.0	77.4	70.0	71.4	59.3
67.5°	67.2	64.9	58.4	51.9	50.1
70°	54.7	51.9	49.6	42.6	40.8
72.5°	43.6	40.8	37.5	33.8	32.4
75°	32.9	30.6	28.7	27.3	30.1
77.5°	22.7	21.8	20.4	19.0	18.5
80°	14.8	14.4	13.9	13.4	13.0
82.5°	8.8	8.8	8.8	8.8	8.8
85°	4.6	5.1	5.6	6.0	6.5
87.5°	2.8	2.8	3.2	3.7	4.2
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)