

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: P544694

Luminaire Tested: **FMR-12-1-LD4-1HI-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: P544694  
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-93-97-EDD  
Description: 1X1 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**

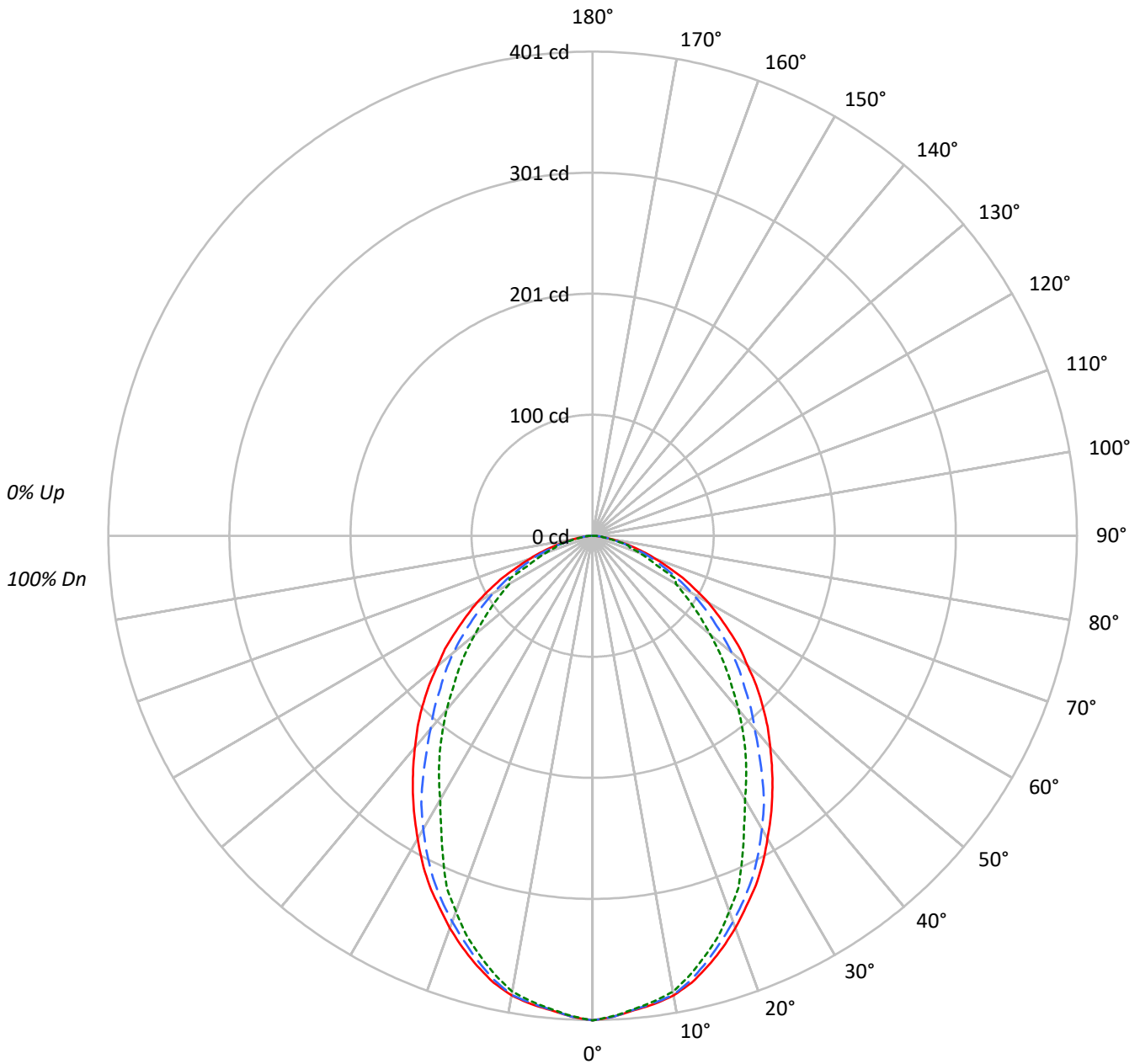
Lumens per Lamp: N/A  
Luminaire Lumens: 788.0 lumens  
Efficiency: N/A  
Efficacy: 73.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	4321	4321	4321
5°	4262	4257	4252
10°	4224	4220	4189
15°	4111	4070	4013
20°	3960	3896	3790
25°	3797	3715	3483
30°	3599	3484	3137
35°	3409	3219	2903
40°	3215	2934	2640
45°	3031	2713	2387
50°	2805	2517	2128
55°	2595	2282	1907
60°	2377	2039	1709
65°	2091	1785	1513
70°	1725	1564	1284
75°	1368	1198	1256
80°	917	862	806
85°	568	692	803



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.4	4.7
10°-20°	102.5	13.0
20°-30°	142.0	18.0
30°-40°	151.4	19.2
40°-50°	138.1	17.5
50°-60°	108.2	13.7
60°-70°	70.5	9.0
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°	281.9	35.8
0°-40°	433.3	55.0
0°-60°	679.5	86.2
0°-90°	788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	788.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	401	401	401	401	401	
5°	394	394	394	394	394	37
15°	369	369	365	362	360	104
25°	320	318	313	302	293	147
35°	259	258	245	226	221	162
45°	199	195	178	163	157	153
55°	138	134	122	107	102	124
65°	82	78	70	72	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°	401.4	401.4	401.4	401.4	401.4
2.5°	398.6	398.6	398.6	398.1	398.1
5°	394.4	394.0	394.0	393.5	393.5
7.5°	391.2	390.7	390.3	389.8	388.9
10°	386.5	386.5	386.1	383.8	383.3
12.5°	379.1	378.7	376.8	373.6	372.6
15°	368.9	368.9	365.2	361.5	360.1
17.5°	357.8	357.3	352.7	349.0	347.1
20°	345.7	344.8	340.1	334.1	330.9
22.5°	332.3	332.3	326.7	318.8	315.5
25°	319.7	317.9	312.8	301.6	293.3
27.5°	305.3	302.6	297.0	281.2	271.5
30°	289.6	288.2	280.3	259.9	252.4
32.5°	274.7	272.4	264.0	242.7	236.7
35°	259.4	257.5	245.0	226.5	220.9
37.5°	244.1	241.8	226.0	211.1	204.2
40°	228.8	226.0	208.8	195.4	187.9
42.5°	214.4	210.7	194.0	179.6	171.2
45°	199.1	194.9	178.2	163.3	156.8
47.5°	183.8	180.0	164.7	149.4	142.0
50°	167.5	164.3	150.3	135.0	127.1
52.5°	154.1	149.0	135.5	120.2	113.7
55°	138.3	134.1	121.6	107.2	101.6
57.5°	123.9	119.7	108.1	94.7	90.0
60°	110.4	104.4	94.7	83.1	79.4
62.5°	95.6	91.0	82.6	72.9	77.5
65°	82.1	77.5	70.1	71.5	59.4
67.5°	67.3	65.0	58.5	52.0	50.1
70°	54.8	52.0	49.7	42.7	40.8
72.5°	43.6	40.8	37.6	33.9	32.5
75°	32.9	30.6	28.8	27.4	30.2
77.5°	22.7	21.8	20.4	19.0	18.6
80°	14.8	14.4	13.9	13.5	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)