

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: P545267

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-93-88-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: P545267  
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-LD4-1HI-35-UNV-93-88-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

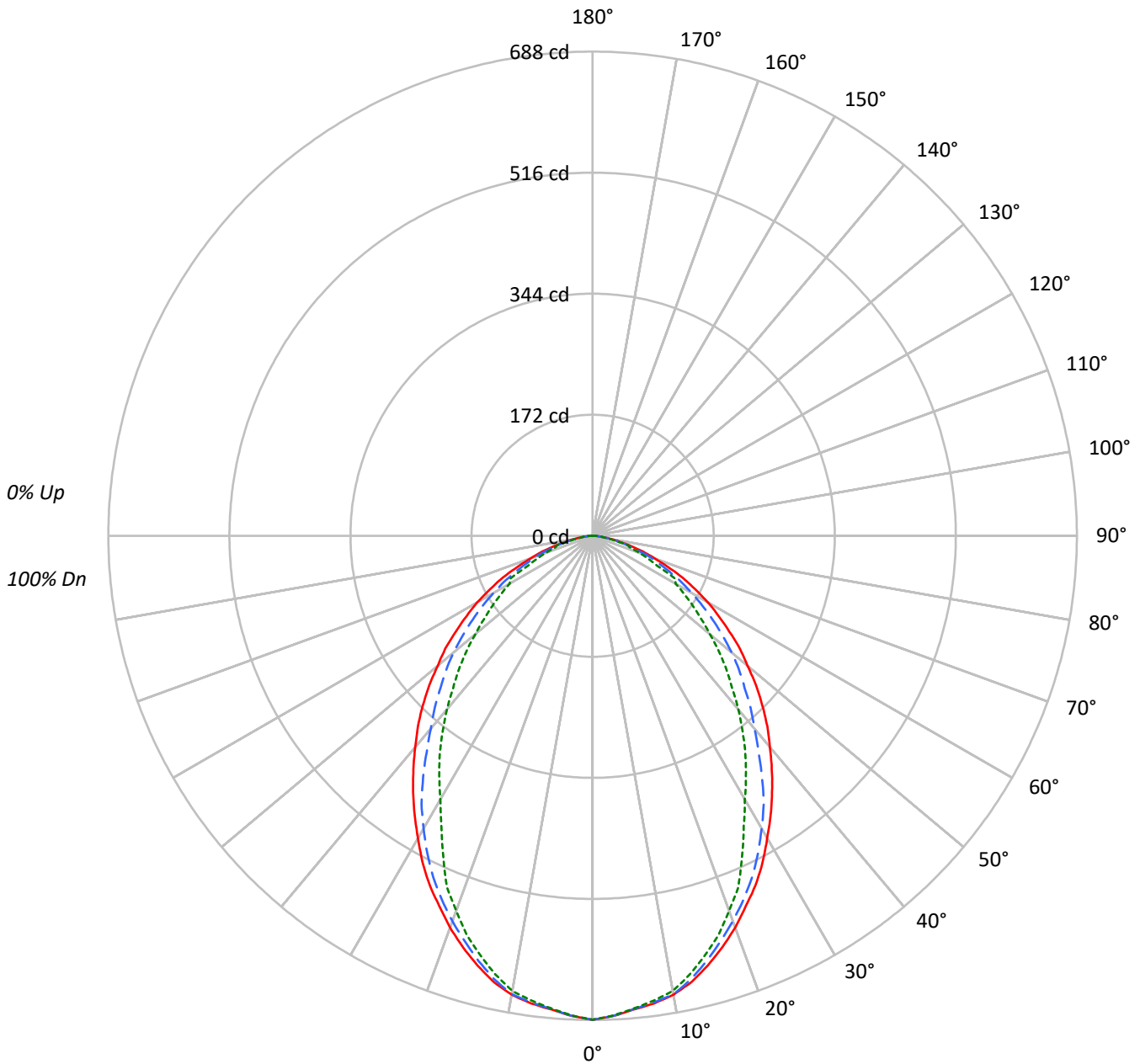
Lumens per Lamp: N/A  
Luminaire Lumens: 1350.0 lumens  
Efficiency: N/A  
Efficacy: 62.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	3701	3701	3701
5°	3650	3647	3642
10°	3619	3615	3589
15°	3521	3486	3437
20°	3392	3337	3246
25°	3253	3182	2983
30°	3083	2984	2688
35°	2920	2758	2486
40°	2753	2513	2262
45°	2596	2324	2045
50°	2403	2157	1824
55°	2223	1955	1634
60°	2037	1746	1463
65°	1792	1528	1296
70°	1476	1339	1102
75°	1173	1025	1075
80°	787	738	691
85°	488	587	685



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.0	4.7
10°-20°	175.7	13.0
20°-30°	243.2	18.0
30°-40°	259.3	19.2
40°-50°	236.6	17.5
50°-60°	185.3	13.7
60°-70°	120.8	8.9
70°-80°	53.5	4.0
80°-90°	11.5	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°	482.9	35.8
0°-40°	742.2	55.0
0°-60°	1164.2	86.2
0°-90°	1350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1350.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	676	675	675	674	674	64
15°	632	632	626	619	617	178
25°	548	545	536	517	502	251
35°	444	441	420	388	378	278
45°	341	334	305	280	269	263
55°	237	230	208	184	174	212
65°	141	133	120	122	102	139
75°	56	52	49	47	52	60
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	687.7	687.7	687.7	687.7	687.7
2.5°	682.9	682.9	682.9	682.1	682.1
5°	675.7	675.0	675.0	674.2	674.2
7.5°	670.2	669.4	668.6	667.8	666.2
10°	662.2	662.2	661.4	657.5	656.7
12.5°	649.5	648.7	645.5	640.0	638.4
15°	632.0	632.0	625.7	619.3	616.9
17.5°	612.9	612.1	604.2	597.8	594.7
20°	592.3	590.7	582.7	572.4	566.8
22.5°	569.2	569.2	559.7	546.2	540.6
25°	547.8	544.6	535.8	516.7	502.4
27.5°	523.1	518.3	508.8	481.8	465.1
30°	496.1	493.7	480.2	445.2	432.5
32.5°	470.6	466.7	452.4	415.8	405.4
35°	444.4	441.2	419.8	388.0	378.4
37.5°	418.2	414.2	387.2	361.7	349.8
40°	391.9	387.2	357.7	334.7	322.0
42.5°	367.3	360.9	332.3	307.7	293.4
45°	341.1	333.9	305.3	279.8	268.7
47.5°	314.8	308.5	282.2	256.0	243.3
50°	287.0	281.4	257.6	231.3	217.8
52.5°	263.9	255.2	232.1	205.9	194.8
55°	236.9	229.8	208.3	183.6	174.1
57.5°	212.3	205.1	185.2	162.2	154.2
60°	189.2	178.9	162.2	142.3	135.9
62.5°	163.8	155.8	141.5	124.8	132.8
65°	140.7	132.8	120.0	122.4	101.8
67.5°	115.3	111.3	100.2	89.0	85.9
70°	93.8	89.0	85.1	73.1	70.0
72.5°	74.7	70.0	64.4	58.0	55.6
75°	56.4	52.5	49.3	46.9	51.7
77.5°	39.0	37.4	35.0	32.6	31.8
80°	25.4	24.6	23.8	23.1	22.3
82.5°	15.1	15.1	15.1	15.1	15.1
85°	7.9	8.7	9.5	10.3	11.1
87.5°	4.8	4.8	5.6	6.4	7.2
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)