

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: P545264

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-93-85-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: P545264  
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-93-85-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

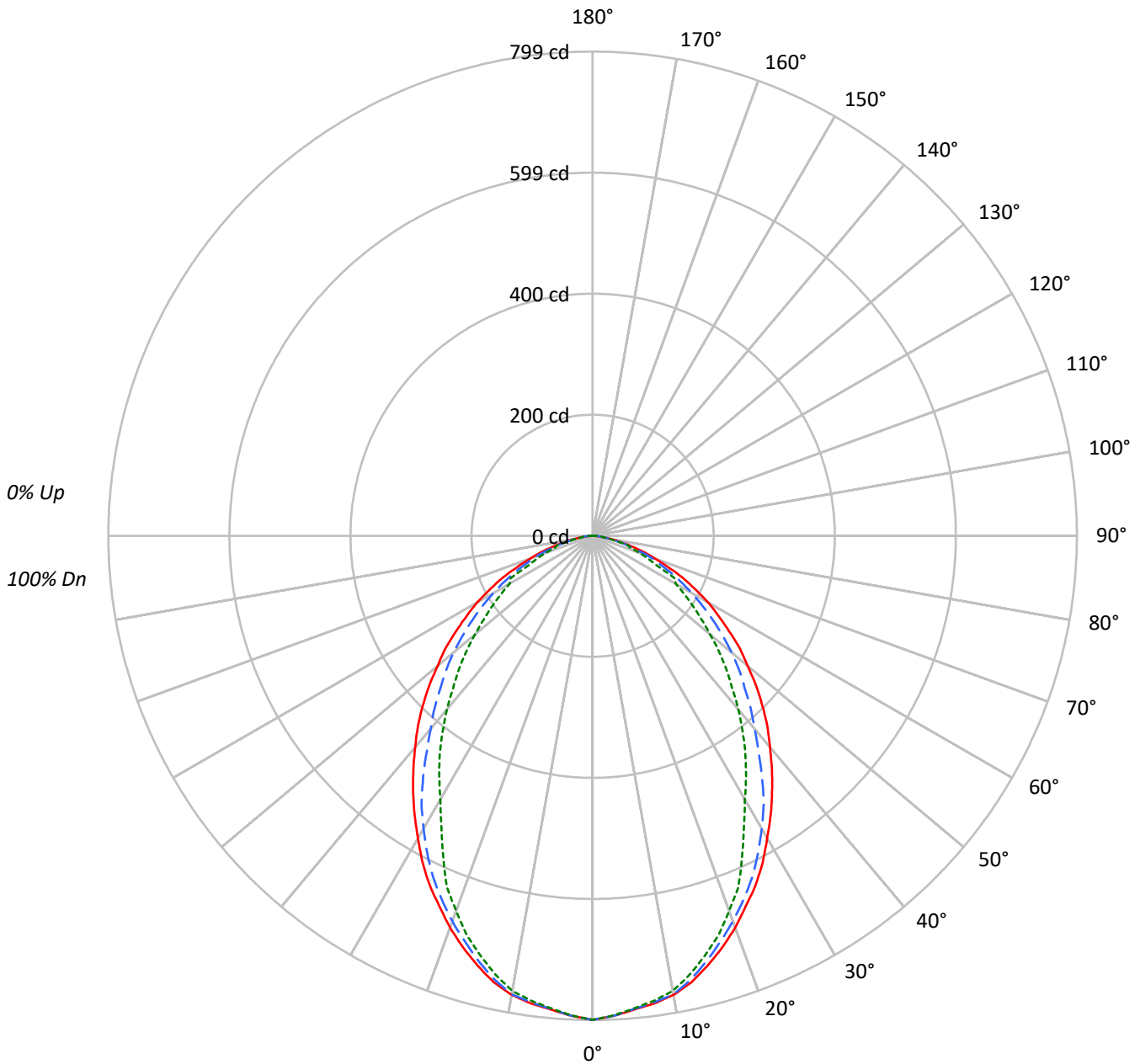
Lumens per Lamp: N/A  
Luminaire Lumens: 1568.0 lumens  
Efficiency: N/A  
Efficacy: 72.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	4299	4299	4299
5°	4240	4235	4230
10°	4204	4198	4168
15°	4090	4049	3992
20°	3940	3876	3771
25°	3778	3696	3466
30°	3581	3466	3122
35°	3392	3203	2888
40°	3198	2919	2628
45°	3015	2699	2375
50°	2791	2505	2118
55°	2582	2270	1897
60°	2366	2028	1700
65°	2081	1775	1505
70°	1715	1555	1279
75°	1364	1189	1248
80°	914	859	803
85°	568	685	797



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.3	4.7
10°-20°	204.0	13.0
20°-30°	282.5	18.0
30°-40°	301.2	19.2
40°-50°	274.8	17.5
50°-60°	215.3	13.7
60°-70°	140.3	8.9
70°-80°	62.2	4.0
80°-90°	13.3	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°	560.9	35.8
0°-40°	862.1	55.0
0°-60°	1352.2	86.2
0°-90°	1568.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1568.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	785	784	784	783	783	75
15°	734	734	727	719	716	206
25°	636	632	622	600	584	292
35°	516	512	488	451	440	323
45°	396	388	355	325	312	305
55°	275	267	242	213	202	247
65°	163	154	139	142	118	161
75°	66	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	798.7	798.7	798.7	798.7	798.7
2.5°	793.2	793.2	793.2	792.3	792.3
5°	784.9	783.9	783.9	783.0	783.0
7.5°	778.4	777.5	776.6	775.6	773.8
10°	769.2	769.2	768.2	763.6	762.7
12.5°	754.4	753.5	749.8	743.3	741.5
15°	734.1	734.1	726.7	719.3	716.5
17.5°	711.9	711.0	701.8	694.4	690.7
20°	687.9	686.1	676.8	664.8	658.4
22.5°	661.1	661.1	650.1	634.4	627.9
25°	636.2	632.5	622.4	600.2	583.6
27.5°	607.6	602.0	591.0	559.6	540.2
30°	576.2	573.4	557.7	517.1	502.3
32.5°	546.6	542.0	525.4	482.9	470.9
35°	516.2	512.5	487.5	450.6	439.5
37.5°	485.7	481.1	449.7	420.1	406.3
40°	455.2	449.7	415.5	388.7	374.0
42.5°	426.6	419.2	386.0	357.3	340.7
45°	396.1	387.8	354.6	325.0	312.1
47.5°	365.7	358.3	327.8	297.3	282.6
50°	333.3	326.9	299.2	268.7	253.0
52.5°	306.6	296.4	269.6	239.2	226.2
55°	275.2	266.9	241.9	213.3	202.2
57.5°	246.5	238.2	215.1	188.4	179.1
60°	219.8	207.8	188.4	165.3	157.9
62.5°	190.2	181.0	164.4	145.0	154.2
65°	163.4	154.2	139.4	142.2	118.2
67.5°	133.9	129.3	116.3	103.4	99.7
70°	109.0	103.4	98.8	85.0	81.3
72.5°	86.8	81.3	74.8	67.4	64.6
75°	65.6	60.9	57.2	54.5	60.0
77.5°	45.2	43.4	40.6	37.9	36.9
80°	29.5	28.6	27.7	26.8	25.9
82.5°	17.5	17.5	17.5	17.5	17.5
85°	9.2	10.2	11.1	12.0	12.9
87.5°	5.5	5.5	6.5	7.4	8.3
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)