

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: P545167

Luminaire Tested: **FMR-12-1-LD4-2STD-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: P545167  
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-LD4-2STD-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**

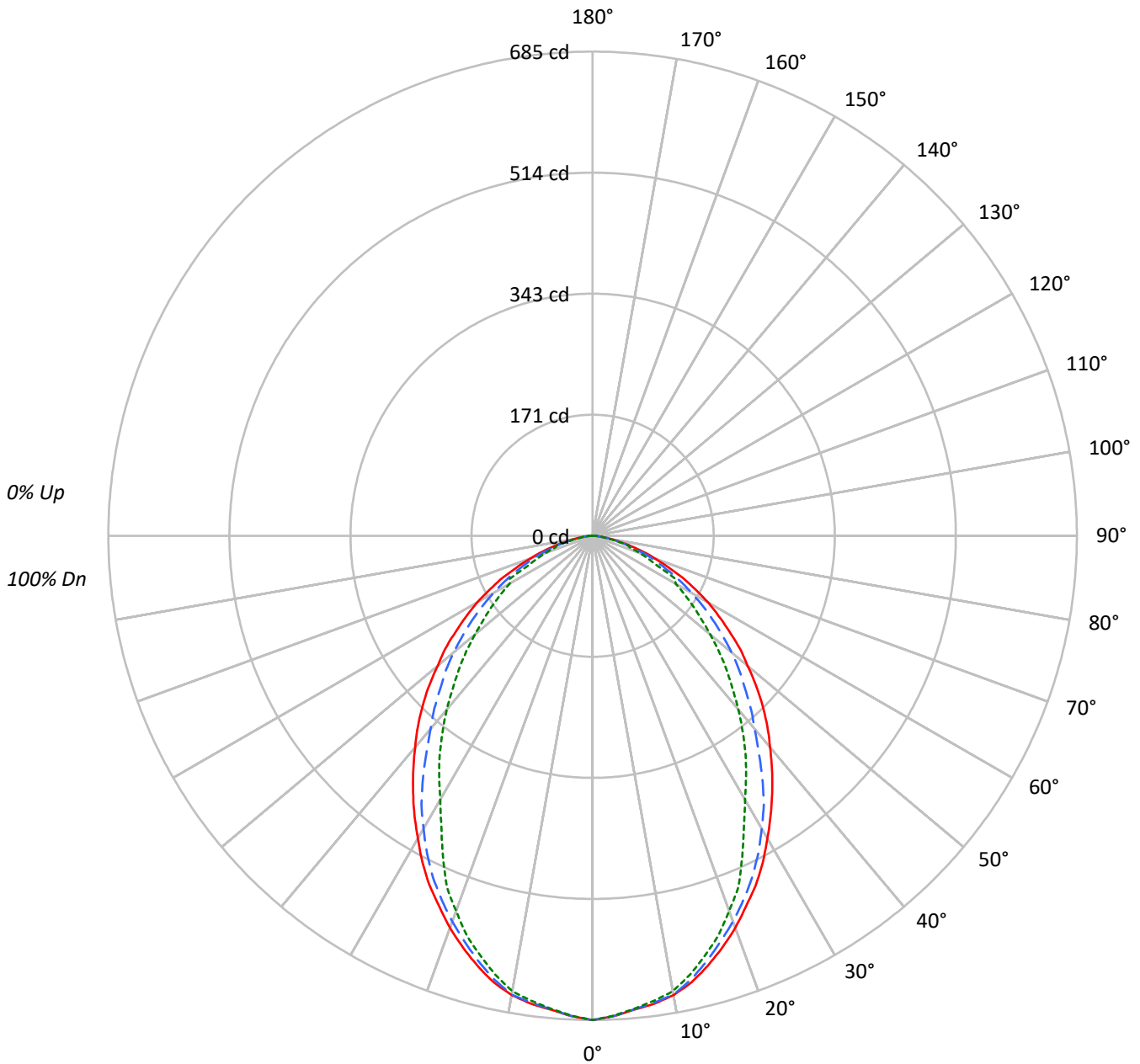
Lumens per Lamp: N/A  
Luminaire Lumens: 1345.0 lumens  
Efficiency: N/A  
Efficacy: 81.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7374	7374	7374
5°	7274	7266	7258
10°	7212	7203	7150
15°	7017	6946	6849
20°	6759	6651	6468
25°	6481	6340	5945
30°	6142	5946	5356
35°	5819	5495	4954
40°	5487	5008	4508
45°	5173	4629	4075
50°	4788	4297	3634
55°	4429	3894	3256
60°	4058	3479	2915
65°	3571	3046	2583
70°	2943	2666	2194
75°	2337	2042	2142
80°	1568	1475	1376
85°	976	1173	1371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.8	4.7
10°-20°	175.0	13.0
20°-30°	242.3	18.0
30°-40°	258.4	19.2
40°-50°	235.7	17.5
50°-60°	184.7	13.7
60°-70°	120.4	8.9
70°-80°	53.3	4.0
80°-90°	11.4	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°	481.1	35.8
0°-40°	739.5	55.0
0°-60°	1159.9	86.2
0°-90°	1345.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1345.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	673	672	672	672	672	64
15°	630	630	623	617	615	177
25°	546	543	534	515	501	251
35°	443	440	418	386	377	277
45°	340	333	304	279	268	262
55°	236	229	208	183	174	212
65°	140	132	120	122	101	138
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°	685.1	685.1	685.1	685.1	685.1
2.5°	680.4	680.4	680.4	679.6	679.6
5°	673.2	672.5	672.5	671.7	671.7
7.5°	667.7	666.9	666.1	665.3	663.7
10°	659.8	659.8	659.0	655.0	654.2
12.5°	647.1	646.3	643.1	637.6	636.0
15°	629.7	629.7	623.3	617.0	614.6
17.5°	610.7	609.9	602.0	595.6	592.5
20°	590.1	588.5	580.6	570.3	564.7
22.5°	567.1	567.1	557.6	544.1	538.6
25°	545.7	542.6	533.8	514.8	500.6
27.5°	521.2	516.4	506.9	480.0	463.4
30°	494.2	491.9	478.4	443.5	430.9
32.5°	468.9	464.9	450.7	414.2	403.9
35°	442.8	439.6	418.2	386.5	377.0
37.5°	416.6	412.7	385.7	360.4	348.5
40°	390.5	385.7	356.4	333.5	320.8
42.5°	365.9	359.6	331.1	306.5	292.3
45°	339.8	332.7	304.1	278.8	267.7
47.5°	313.7	307.3	281.2	255.0	242.4
50°	285.9	280.4	256.6	230.5	217.0
52.5°	263.0	254.2	231.3	205.1	194.1
55°	236.0	228.9	207.5	183.0	173.5
57.5°	211.5	204.3	184.5	161.6	153.7
60°	188.5	178.2	161.6	141.8	135.4
62.5°	163.2	155.2	141.0	124.4	132.3
65°	140.2	132.3	119.6	122.0	101.4
67.5°	114.8	110.9	99.8	88.7	85.5
70°	93.5	88.7	84.7	72.9	69.7
72.5°	74.5	69.7	64.2	57.8	55.4
75°	56.2	52.3	49.1	46.7	51.5
77.5°	38.8	37.2	34.9	32.5	31.7
80°	25.3	24.6	23.8	23.0	22.2
82.5°	15.0	15.0	15.0	15.0	15.0
85°	7.9	8.7	9.5	10.3	11.1
87.5°	4.8	4.8	5.5	6.3	7.1
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)