

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: P545156

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-81-94-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: P545156  
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-81-94-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

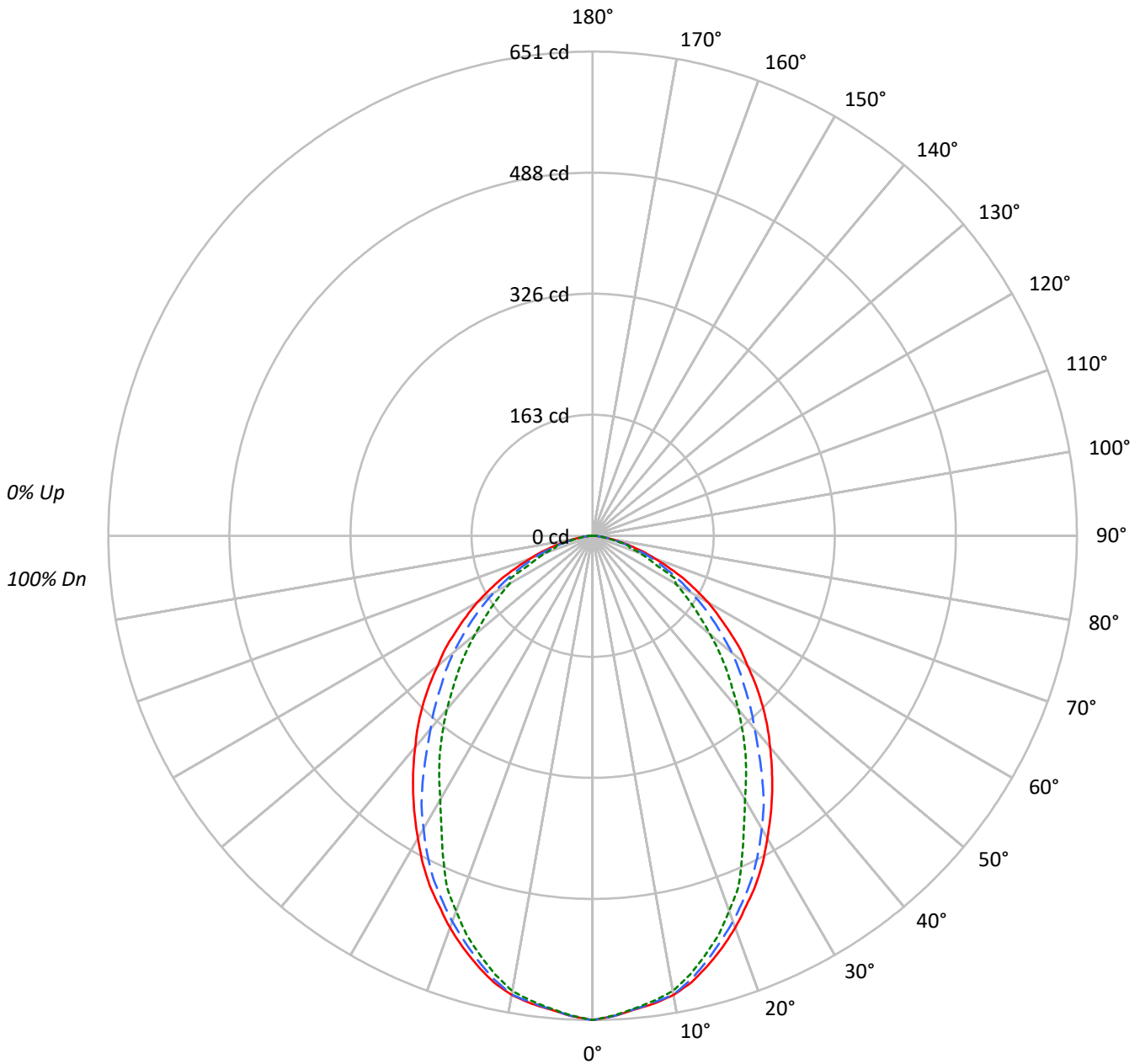
Lumens per Lamp: N/A  
Luminaire Lumens: 1278.0 lumens  
Efficiency: N/A  
Efficacy: 77.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	7007	7007	7007
5°	6912	6904	6896
10°	6852	6844	6794
15°	6667	6600	6508
20°	6423	6320	6147
25°	6158	6025	5649
30°	5837	5650	5088
35°	5528	5222	4707
40°	5213	4759	4283
45°	4915	4399	3873
50°	4550	4083	3453
55°	4209	3701	3093
60°	3856	3305	2771
65°	3393	2893	2453
70°	2795	2533	2083
75°	2221	1942	2034
80°	1494	1401	1308
85°	926	1112	1297



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.6	4.7
10°-20°	166.3	13.0
20°-30°	230.2	18.0
30°-40°	245.5	19.2
40°-50°	224.0	17.5
50°-60°	175.5	13.7
60°-70°	114.4	8.9
70°-80°	50.7	4.0
80°-90°	10.9	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°	457.2	35.8
0°-40°	702.7	55.0
0°-60°	1102.1	86.2
0°-90°	1278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1278.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	651	651	651	651	651	
5°	640	639	639	638	638	61
15°	598	598	592	586	584	168
25°	518	516	507	489	476	238
35°	421	418	397	367	358	263
45°	323	316	289	265	254	249
55°	224	218	197	174	165	201
65°	133	126	114	116	96	131
75°	53	50	47	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	651.0	651.0	651.0	651.0	651.0
2.5°	646.5	646.5	646.5	645.7	645.7
5°	639.7	639.0	639.0	638.2	638.2
7.5°	634.4	633.7	632.9	632.2	630.7
10°	626.9	626.9	626.2	622.4	621.6
12.5°	614.9	614.1	611.1	605.8	604.3
15°	598.3	598.3	592.3	586.3	584.0
17.5°	580.3	579.5	572.0	566.0	562.9
20°	560.7	559.2	551.7	541.9	536.6
22.5°	538.9	538.9	529.8	517.0	511.8
25°	518.5	515.5	507.3	489.2	475.6
27.5°	495.2	490.7	481.7	456.1	440.3
30°	469.6	467.4	454.6	421.5	409.4
32.5°	445.5	441.8	428.2	393.6	383.8
35°	420.7	417.7	397.4	367.3	358.2
37.5°	395.9	392.1	366.5	342.4	331.1
40°	371.0	366.5	338.7	316.8	304.8
42.5°	347.7	341.7	314.6	291.3	277.7
45°	322.9	316.1	289.0	264.9	254.4
47.5°	298.0	292.0	267.2	242.3	230.3
50°	271.7	266.4	243.8	219.0	206.2
52.5°	249.9	241.6	219.8	194.9	184.4
55°	224.3	217.5	197.2	173.8	164.8
57.5°	200.9	194.2	175.4	153.5	146.0
60°	179.1	169.3	153.5	134.7	128.7
62.5°	155.0	147.5	134.0	118.2	125.7
65°	133.2	125.7	113.6	115.9	96.3
67.5°	109.1	105.4	94.8	84.3	81.3
70°	88.8	84.3	80.5	69.2	66.2
72.5°	70.7	66.2	61.0	54.9	52.7
75°	53.4	49.7	46.7	44.4	48.9
77.5°	36.9	35.4	33.1	30.9	30.1
80°	24.1	23.3	22.6	21.8	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.0	9.8	10.5
87.5°	4.5	4.5	5.3	6.0	6.8
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)