

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: P545745

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-93-86-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: P545745  
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-LD4-2STD-35-UNV-93-86-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

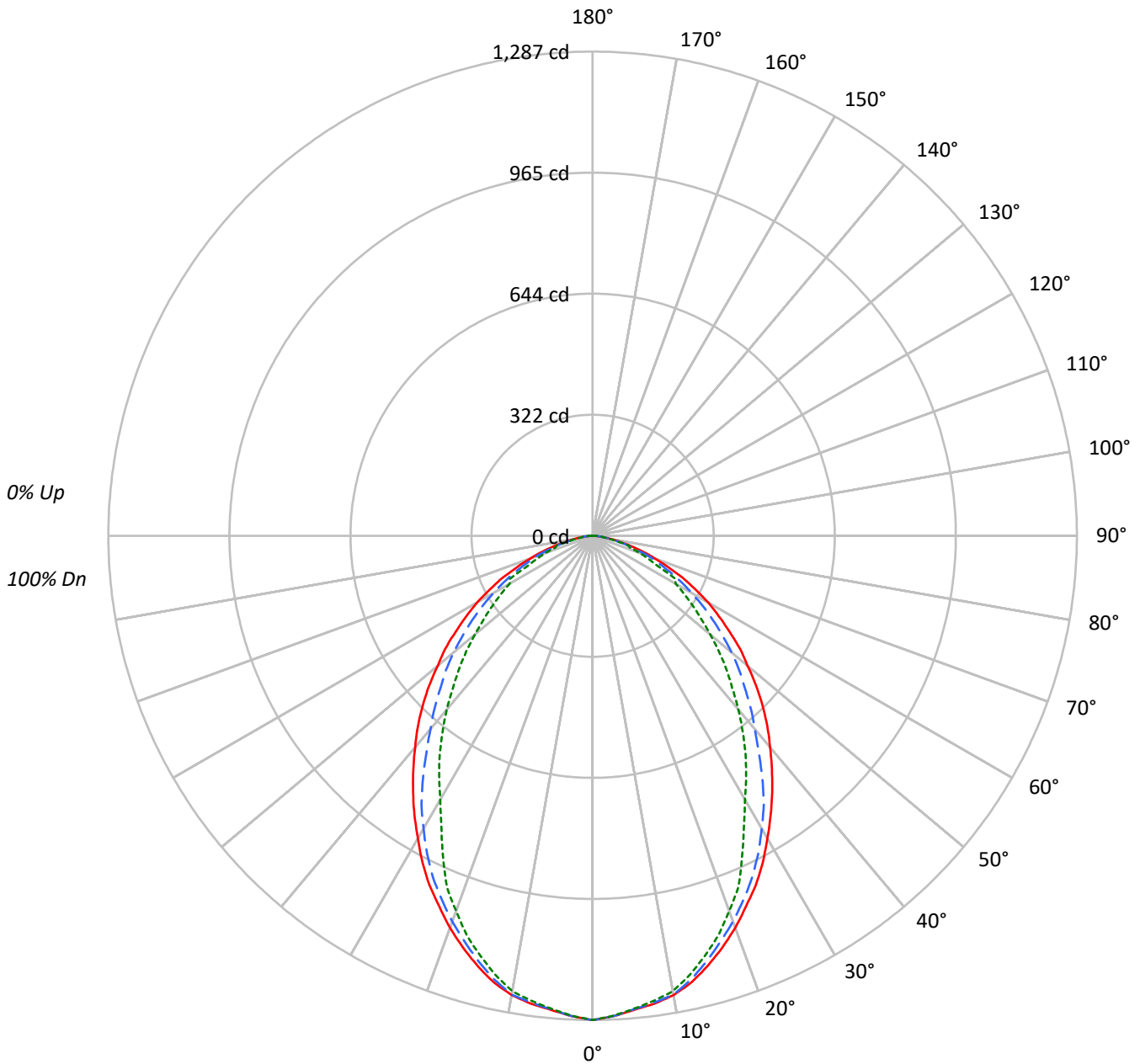
Lumens per Lamp: N/A  
Luminaire Lumens: 2527.0 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	6928	6928	6928
5°	6834	6826	6817
10°	6774	6766	6718
15°	6592	6525	6434
20°	6349	6247	6077
25°	6089	5956	5585
30°	5771	5586	5031
35°	5466	5162	4654
40°	5154	4705	4234
45°	4859	4349	3828
50°	4498	4037	3414
55°	4161	3658	3058
60°	3813	3268	2739
65°	3354	2862	2426
70°	2763	2505	2061
75°	2198	1919	2011
80°	1475	1382	1292
85°	920	1105	1284



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.8	4.7
10°-20°	328.8	13.0
20°-30°	455.3	18.0
30°-40°	485.4	19.2
40°-50°	442.9	17.5
50°-60°	347.0	13.7
60°-70°	226.1	8.9
70°-80°	100.2	4.0
80°-90°	21.5	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°	903.9	35.8
0°-40°	1389.4	55.0
0°-60°	2179.2	86.2
0°-90°	2527.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2527.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1265	1263	1263	1262	1262	120
15°	1183	1183	1171	1159	1155	333
25°	1025	1019	1003	967	940	471
35°	832	826	786	726	708	520
45°	638	625	571	524	503	492
55°	444	430	390	344	326	398
65°	263	248	225	229	190	260
75°	106	98	92	88	97	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1287.2	1287.2	1287.2	1287.2	1287.2
2.5°	1278.3	1278.3	1278.3	1276.8	1276.8
5°	1264.9	1263.4	1263.4	1261.9	1261.9
7.5°	1254.5	1253.0	1251.5	1250.0	1247.0
10°	1239.6	1239.6	1238.1	1230.7	1229.2
12.5°	1215.8	1214.3	1208.3	1197.9	1195.0
15°	1183.1	1183.1	1171.1	1159.2	1154.8
17.5°	1147.3	1145.8	1131.0	1119.1	1113.1
20°	1108.6	1105.7	1090.8	1071.4	1061.0
22.5°	1065.5	1065.5	1047.6	1022.3	1011.9
25°	1025.3	1019.4	1003.0	967.3	940.5
27.5°	979.2	970.3	952.4	901.8	870.5
30°	928.6	924.1	898.8	833.3	809.5
32.5°	881.0	873.5	846.7	778.3	758.9
35°	831.9	825.9	785.7	726.2	708.3
37.5°	782.7	775.3	724.7	677.1	654.8
40°	733.6	724.7	669.7	626.5	602.7
42.5°	687.5	675.6	622.0	575.9	549.1
45°	638.4	625.0	571.4	523.8	503.0
47.5°	589.3	577.4	528.3	479.2	455.4
50°	537.2	526.8	482.1	433.0	407.7
52.5°	494.1	477.7	434.5	385.4	364.6
55°	443.5	430.1	389.9	343.8	325.9
57.5°	397.3	383.9	346.7	303.6	288.7
60°	354.2	334.8	303.6	266.4	254.5
62.5°	306.6	291.7	264.9	233.6	248.5
65°	263.4	248.5	224.7	229.2	190.5
67.5°	215.8	208.3	187.5	166.7	160.7
70°	175.6	166.7	159.2	136.9	131.0
72.5°	139.9	131.0	120.5	108.6	104.2
75°	105.7	98.2	92.3	87.8	96.7
77.5°	72.9	69.9	65.5	61.0	59.5
80°	47.6	46.1	44.6	43.2	41.7
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.9	19.3	20.8
87.5°	8.9	8.9	10.4	11.9	13.4
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)