

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: P545508

Luminaire Tested: **FMR-12-2-LD4-1STD-50-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: P545508  
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-LD4-1STD-50-UNV-81-94-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

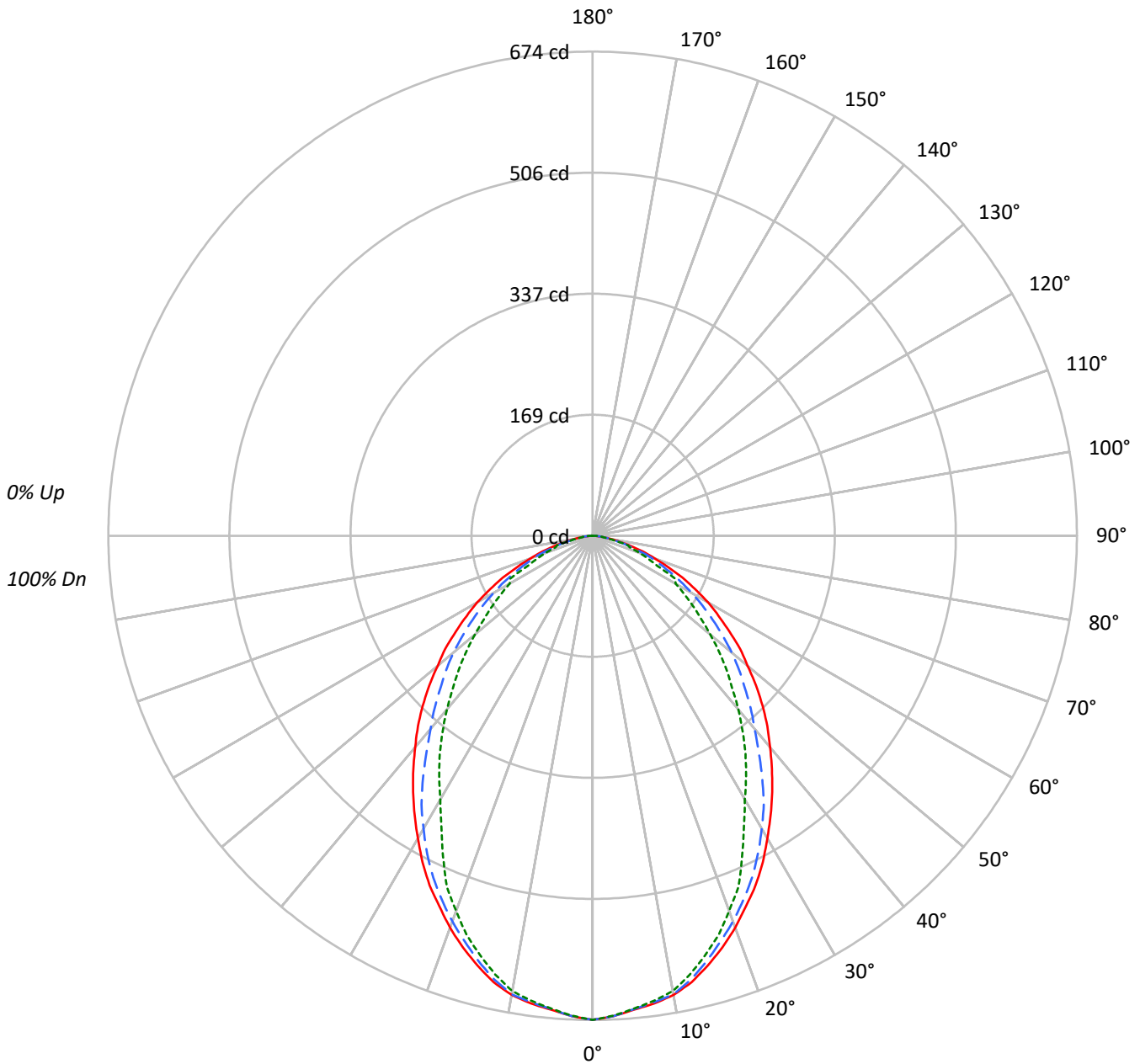
Lumens per Lamp: N/A  
Luminaire Lumens: 1323.0 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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°	3627	3627	3627
5°	3578	3574	3569
10°	3547	3542	3517
15°	3451	3416	3369
20°	3324	3271	3182
25°	3188	3118	2924
30°	3022	2925	2634
35°	2861	2703	2436
40°	2699	2463	2217
45°	2544	2277	2004
50°	2355	2113	1788
55°	2179	1915	1601
60°	1996	1710	1434
65°	1756	1498	1270
70°	1446	1312	1079
75°	1150	1004	1052
80°	772	725	676
85°	482	574	673



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.7	4.7
10°-20°	172.2	13.0
20°-30°	238.3	18.0
30°-40°	254.1	19.2
40°-50°	231.9	17.5
50°-60°	181.6	13.7
60°-70°	118.4	8.9
70°-80°	52.5	4.0
80°-90°	11.3	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°	473.2	35.8
0°-40°	727.4	55.0
0°-60°	1140.9	86.2
0°-90°	1323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1323.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	674	674	674	674	674	
5°	662	662	662	661	661	63
15°	619	619	613	607	605	174
25°	537	534	525	506	492	246
35°	436	432	411	380	371	272
45°	334	327	299	274	263	257
55°	232	225	204	180	171	208
65°	138	130	118	120	100	136
75°	55	51	48	46	51	59
85°	8	9	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	673.9	673.9	673.9	673.9	673.9
2.5°	669.2	669.2	669.2	668.5	668.5
5°	662.2	661.5	661.5	660.7	660.7
7.5°	656.8	656.0	655.2	654.4	652.9
10°	649.0	649.0	648.2	644.3	643.5
12.5°	636.5	635.7	632.6	627.2	625.6
15°	619.4	619.4	613.1	606.9	604.6
17.5°	600.7	599.9	592.1	585.9	582.8
20°	580.4	578.9	571.1	560.9	555.5
22.5°	557.8	557.8	548.5	535.2	529.8
25°	536.8	533.7	525.1	506.4	492.4
27.5°	512.6	508.0	498.6	472.1	455.8
30°	486.2	483.8	470.6	436.3	423.8
32.5°	461.2	457.3	443.3	407.5	397.3
35°	435.5	432.4	411.4	380.2	370.8
37.5°	409.8	405.9	379.4	354.5	342.8
40°	384.1	379.4	350.6	328.0	315.5
42.5°	359.9	353.7	325.7	301.5	287.5
45°	334.2	327.2	299.2	274.2	263.3
47.5°	308.5	302.3	276.6	250.9	238.4
50°	281.3	275.8	252.4	226.7	213.5
52.5°	258.7	250.1	227.5	201.8	190.9
55°	232.2	225.2	204.1	180.0	170.6
57.5°	208.0	201.0	181.5	158.9	151.1
60°	185.4	175.3	158.9	139.5	133.2
62.5°	160.5	152.7	138.7	122.3	130.1
65°	137.9	130.1	117.6	120.0	99.7
67.5°	113.0	109.1	98.2	87.3	84.1
70°	91.9	87.3	83.4	71.7	68.6
72.5°	73.2	68.6	63.1	56.9	54.5
75°	55.3	51.4	48.3	46.0	50.6
77.5°	38.2	36.6	34.3	31.9	31.2
80°	24.9	24.2	23.4	22.6	21.8
82.5°	14.8	14.8	14.8	14.8	14.8
85°	7.8	8.6	9.3	10.1	10.9
87.5°	4.7	4.7	5.5	6.2	7.0
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)