

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: P545502

Luminaire Tested: **FMR-12-2-LD4-1STD-50-UNV-80-97-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: P545502  
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-80-97-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

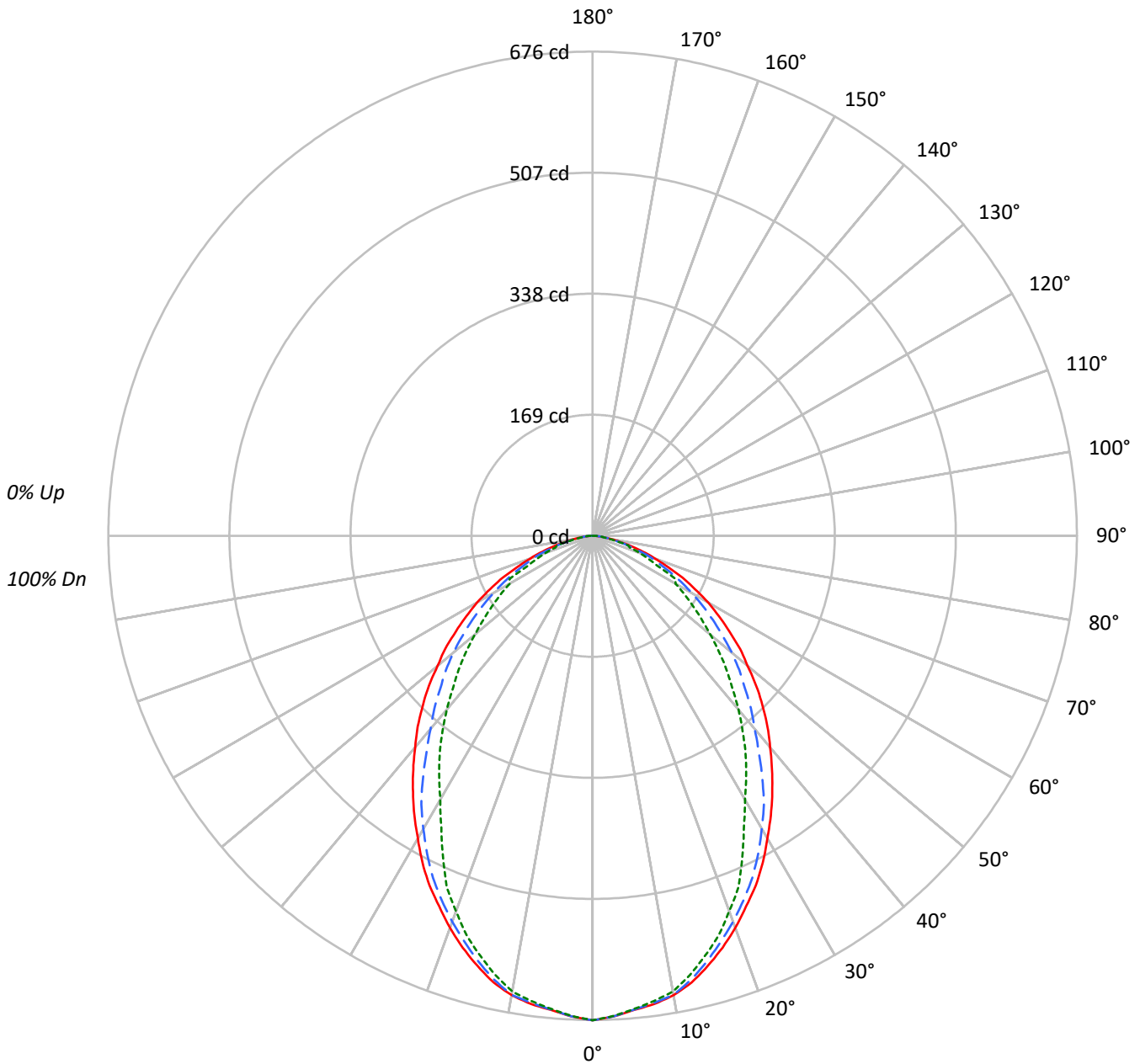
Lumens per Lamp: N/A  
Luminaire Lumens: 1328.0 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3641	3641	3641
5°	3591	3587	3583
10°	3560	3556	3530
15°	3464	3429	3382
20°	3337	3283	3194
25°	3200	3130	2935
30°	3033	2936	2644
35°	2872	2713	2446
40°	2708	2472	2225
45°	2554	2286	2012
50°	2364	2122	1794
55°	2186	1923	1607
60°	2003	1717	1439
65°	1762	1504	1275
70°	1452	1317	1083
75°	1154	1009	1056
80°	775	728	679
85°	482	580	673



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.0	4.7
10°-20°	172.8	13.0
20°-30°	239.2	18.0
30°-40°	255.1	19.2
40°-50°	232.7	17.5
50°-60°	182.3	13.7
60°-70°	118.8	8.9
70°-80°	52.6	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°	475.0	35.8
0°-40°	730.1	55.0
0°-60°	1145.2	86.2
0°-90°	1328.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1328.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	665	664	664	663	663	63
15°	622	622	616	609	607	175
25°	539	536	527	508	494	247
35°	437	434	413	382	372	273
45°	336	328	300	275	264	258
55°	233	226	205	181	171	209
65°	138	131	118	120	100	136
75°	56	52	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°	676.5	676.5	676.5	676.5	676.5
2.5°	671.8	671.8	671.8	671.0	671.0
5°	664.7	664.0	664.0	663.2	663.2
7.5°	659.3	658.5	657.7	656.9	655.4
10°	651.4	651.4	650.7	646.7	646.0
12.5°	638.9	638.1	635.0	629.5	628.0
15°	621.7	621.7	615.5	609.2	606.9
17.5°	603.0	602.2	594.4	588.1	585.0
20°	582.6	581.1	573.2	563.1	557.6
22.5°	559.9	559.9	550.6	537.3	531.8
25°	538.8	535.7	527.1	508.3	494.2
27.5°	514.6	509.9	500.5	473.9	457.5
30°	488.0	485.6	472.4	437.9	425.4
32.5°	463.0	459.1	445.0	409.0	398.8
35°	437.2	434.0	412.9	381.6	372.3
37.5°	411.4	407.4	380.9	355.8	344.1
40°	385.5	380.9	351.9	329.2	316.7
42.5°	361.3	355.0	326.9	302.6	288.6
45°	335.5	328.5	300.3	275.3	264.3
47.5°	309.7	303.4	277.6	251.8	239.3
50°	282.3	276.8	253.4	227.6	214.3
52.5°	259.6	251.0	228.4	202.5	191.6
55°	233.0	226.0	204.9	180.7	171.3
57.5°	208.8	201.8	182.2	159.5	151.7
60°	186.1	176.0	159.5	140.0	133.7
62.5°	161.1	153.3	139.2	122.8	130.6
65°	138.4	130.6	118.1	120.4	100.1
67.5°	113.4	109.5	98.5	87.6	84.5
70°	92.3	87.6	83.7	71.9	68.8
72.5°	73.5	68.8	63.3	57.1	54.7
75°	55.5	51.6	48.5	46.1	50.8
77.5°	38.3	36.8	34.4	32.1	31.3
80°	25.0	24.2	23.5	22.7	21.9
82.5°	14.9	14.9	14.9	14.9	14.9
85°	7.8	8.6	9.4	10.2	10.9
87.5°	4.7	4.7	5.5	6.3	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)