

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: P545470

Luminaire Tested: **FMR-12-2-LD4-1STD-40-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: P545470  
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-40-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 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

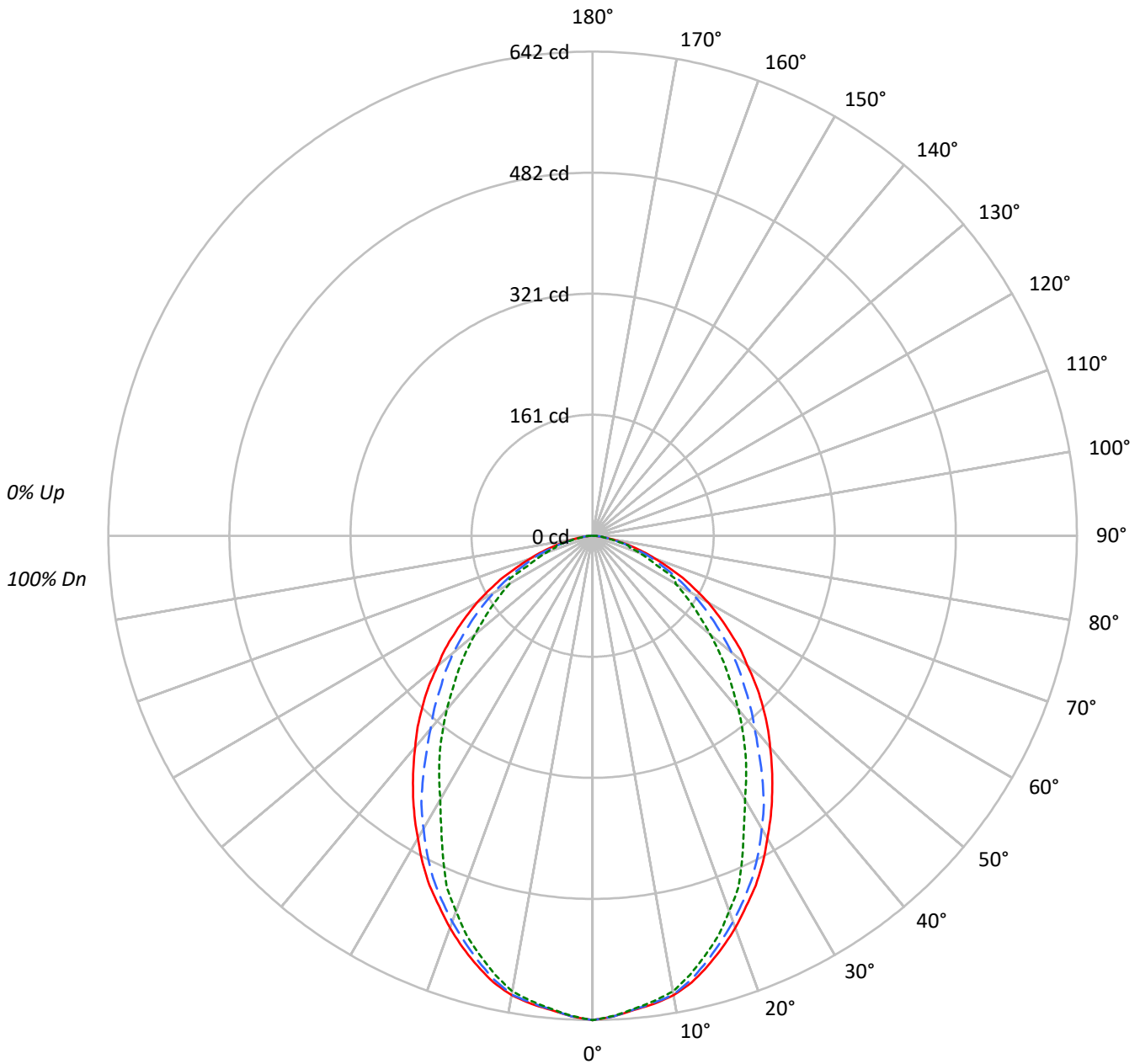
Lumens per Lamp: N/A  
Luminaire Lumens: 1261.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (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°	3457	3457	3457
5°	3410	3406	3402
10°	3381	3376	3352
15°	3290	3256	3210
20°	3168	3117	3033
25°	3038	2972	2787
30°	2880	2787	2511
35°	2727	2576	2323
40°	2572	2348	2113
45°	2425	2171	1910
50°	2245	2015	1704
55°	2076	1826	1526
60°	1902	1631	1367
65°	1673	1428	1211
70°	1378	1251	1028
75°	1096	957	1004
80°	738	691	645
85°	457	550	642



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.8	4.7
10°-20°	164.1	13.0
20°-30°	227.2	18.0
30°-40°	242.2	19.2
40°-50°	221.0	17.5
50°-60°	173.1	13.7
60°-70°	112.8	8.9
70°-80°	50.0	4.0
80°-90°	10.7	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°	451.1	35.8
0°-40°	693.3	55.0
0°-60°	1087.4	86.2
0°-90°	1261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1261.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	631	630	630	630	630	60
15°	590	590	584	578	576	166
25°	512	509	500	483	469	235
35°	415	412	392	362	354	260
45°	319	312	285	261	251	245
55°	221	215	195	172	163	198
65°	131	124	112	114	95	130
75°	53	49	46	44	48	57
85°	7	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°	642.3	642.3	642.3	642.3	642.3
2.5°	637.9	637.9	637.9	637.1	637.1
5°	631.2	630.5	630.5	629.7	629.7
7.5°	626.0	625.3	624.5	623.8	622.3
10°	618.6	618.6	617.8	614.1	613.4
12.5°	606.7	605.9	603.0	597.8	596.3
15°	590.4	590.4	584.4	578.5	576.2
17.5°	572.5	571.8	564.4	558.4	555.5
20°	553.2	551.7	544.3	534.7	529.5
22.5°	531.7	531.7	522.8	510.2	505.0
25°	511.6	508.7	500.5	482.7	469.3
27.5°	488.6	484.2	475.3	450.0	434.4
30°	463.4	461.1	448.5	415.8	404.0
32.5°	439.6	435.9	422.5	388.4	378.7
35°	415.1	412.1	392.1	362.4	353.5
37.5°	390.6	386.9	361.6	337.9	326.7
40°	366.1	361.6	334.2	312.6	300.7
42.5°	343.1	337.1	310.4	287.4	274.0
45°	318.6	311.9	285.2	261.4	251.0
47.5°	294.1	288.1	263.6	239.1	227.2
50°	268.1	262.9	240.6	216.1	203.5
52.5°	246.5	238.4	216.8	192.3	181.9
55°	221.3	214.6	194.6	171.5	162.6
57.5°	198.3	191.6	173.0	151.5	144.1
60°	176.7	167.1	151.5	132.9	127.0
62.5°	153.0	145.5	132.2	116.6	124.0
65°	131.4	124.0	112.1	114.4	95.1
67.5°	107.7	104.0	93.6	83.2	80.2
70°	87.6	83.2	79.5	68.3	65.3
72.5°	69.8	65.3	60.1	54.2	52.0
75°	52.7	49.0	46.0	43.8	48.3
77.5°	36.4	34.9	32.7	30.4	29.7
80°	23.8	23.0	22.3	21.5	20.8
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.2	8.9	9.7	10.4
87.5°	4.5	4.5	5.2	5.9	6.7
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)