

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: P545687

Luminaire Tested: **FMR-12-2-LD4-2LO-50-UNV-80-84-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: P545687  
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-LD4-2LO-50-UNV-80-84-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

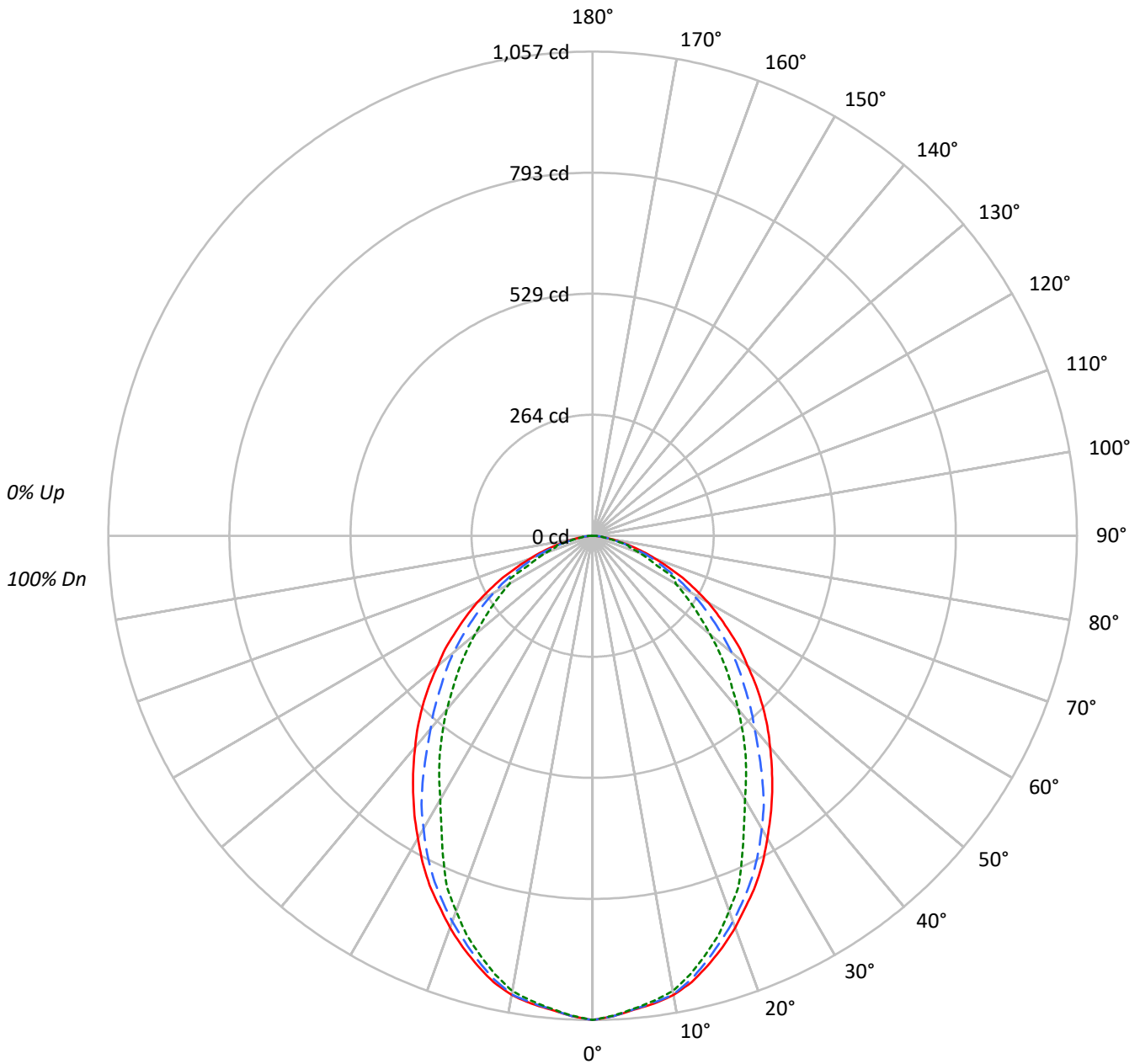
Lumens per Lamp: N/A  
Luminaire Lumens: 2075.0 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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				
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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5689	5689	5689
5°	5611	5605	5598
10°	5563	5556	5516
15°	5412	5358	5283
20°	5214	5130	4990
25°	4999	4891	4586
30°	4739	4587	4131
35°	4488	4239	3821
40°	4232	3863	3477
45°	3990	3571	3143
50°	3693	3315	2803
55°	3416	3004	2511
60°	3130	2683	2250
65°	2755	2350	1992
70°	2269	2057	1692
75°	1805	1576	1651
80°	1212	1137	1060
85°	753	908	1056



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.4	4.7
10°-20°	270.0	13.0
20°-30°	373.8	18.0
30°-40°	398.6	19.2
40°-50°	363.7	17.5
50°-60°	284.9	13.7
60°-70°	185.7	8.9
70°-80°	82.3	4.0
80°-90°	17.7	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°	742.2	35.8
0°-40°	1140.9	55.0
0°-60°	1789.4	86.2
0°-90°	2075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2075.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1039	1037	1037	1036	1036	99
15°	971	971	962	952	948	273
25°	842	837	824	794	772	387
35°	683	678	645	596	582	427
45°	524	513	469	430	413	404
55°	364	353	320	282	268	327
65°	216	204	184	188	156	213
75°	87	81	76	72	79	93
85°	12	13	15	16	17	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1057.0	1057.0	1057.0	1057.0	1057.0
2.5°	1049.6	1049.6	1049.6	1048.4	1048.4
5°	1038.6	1037.4	1037.4	1036.2	1036.2
7.5°	1030.1	1028.9	1027.7	1026.4	1024.0
10°	1017.9	1017.9	1016.7	1010.5	1009.3
12.5°	998.3	997.1	992.2	983.7	981.2
15°	971.4	971.4	961.7	951.9	948.2
17.5°	942.1	940.9	928.7	918.9	914.0
20°	910.3	907.9	895.7	879.8	871.2
22.5°	874.9	874.9	860.2	839.5	830.9
25°	841.9	837.0	823.6	794.3	772.3
27.5°	804.0	796.7	782.0	740.5	714.8
30°	762.5	758.8	738.1	684.3	664.7
32.5°	723.4	717.3	695.3	639.1	623.2
35°	683.1	678.2	645.2	596.3	581.6
37.5°	642.7	636.6	595.1	556.0	537.7
40°	602.4	595.1	549.9	514.4	494.9
42.5°	564.5	554.8	510.8	472.9	450.9
45°	524.2	513.2	469.2	430.1	413.0
47.5°	483.9	474.1	433.8	393.5	373.9
50°	441.1	432.6	395.9	355.6	334.8
52.5°	405.7	392.2	356.8	316.5	299.4
55°	364.1	353.1	320.1	282.3	267.6
57.5°	326.3	315.3	284.7	249.3	237.1
60°	290.8	274.9	249.3	218.7	209.0
62.5°	251.7	239.5	217.5	191.8	204.1
65°	216.3	204.1	184.5	188.2	156.4
67.5°	177.2	171.1	154.0	136.9	132.0
70°	144.2	136.9	130.7	112.4	107.5
72.5°	114.9	107.5	99.0	89.2	85.5
75°	86.8	80.6	75.8	72.1	79.4
77.5°	59.9	57.4	53.8	50.1	48.9
80°	39.1	37.9	36.7	35.4	34.2
82.5°	23.2	23.2	23.2	23.2	23.2
85°	12.2	13.4	14.7	15.9	17.1
87.5°	7.3	7.3	8.6	9.8	11.0
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)