

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: P545629

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-80-96-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: P545629  
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-35-UNV-80-96-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

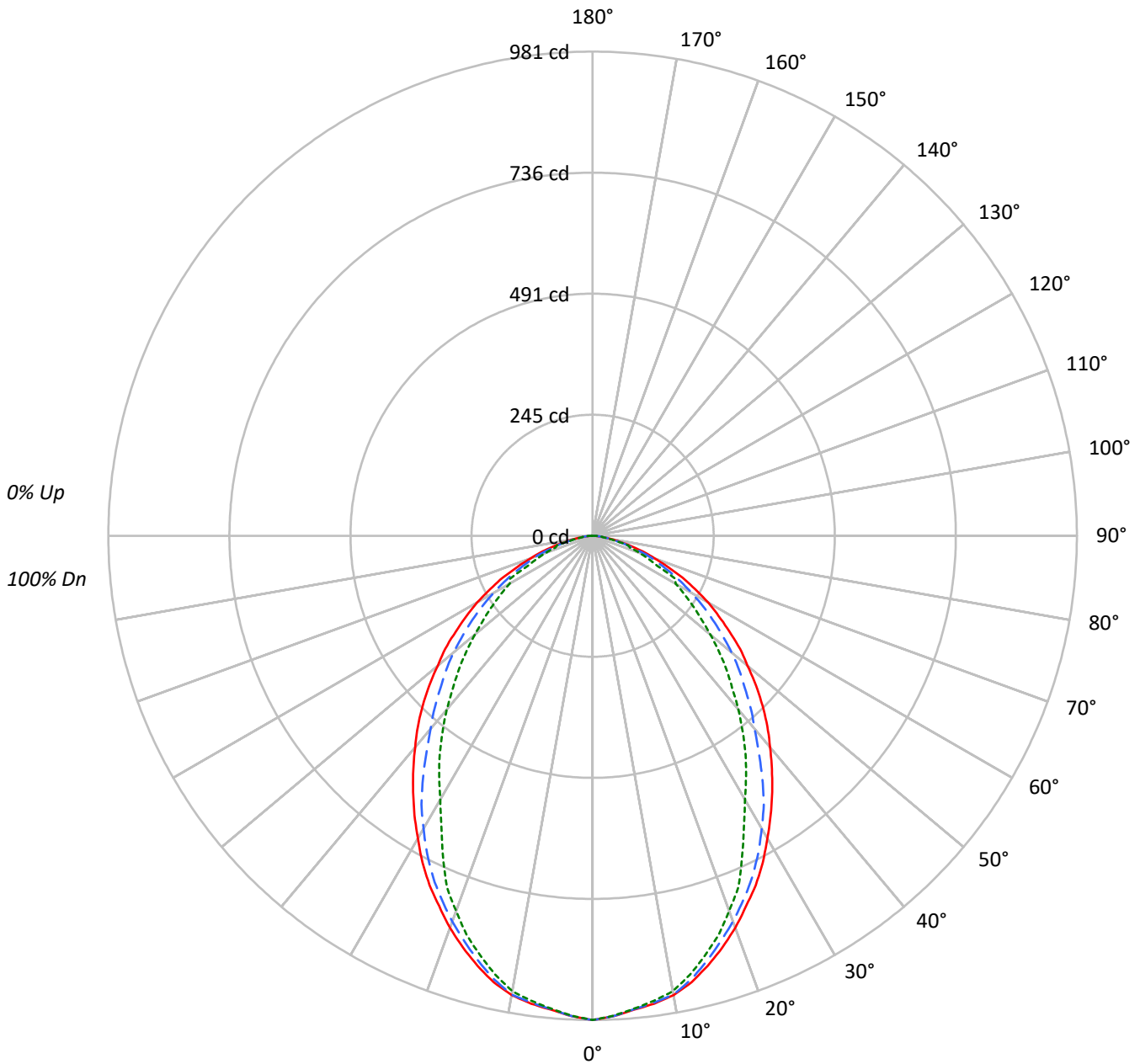
Lumens per Lamp: N/A  
Luminaire Lumens: 1926.0 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (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°	5280	5280	5280
5°	5209	5202	5196
10°	5163	5157	5120
15°	5024	4973	4904
20°	4840	4762	4632
25°	4641	4539	4257
30°	4398	4258	3834
35°	4165	3935	3547
40°	3929	3586	3227
45°	3704	3315	2918
50°	3428	3077	2602
55°	3172	2789	2331
60°	2905	2491	2087
65°	2557	2181	1849
70°	2105	1910	1570
75°	1674	1462	1533
80°	1125	1054	986
85°	698	840	982



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.3	4.7
10°-20°	250.6	13.0
20°-30°	347.0	18.0
30°-40°	370.0	19.2
40°-50°	337.5	17.5
50°-60°	264.4	13.7
60°-70°	172.3	8.9
70°-80°	76.4	4.0
80°-90°	16.4	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°	688.9	35.8
0°-40°	1058.9	55.0
0°-60°	1660.9	86.2
0°-90°	1926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1926.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	964	963	963	962	962	92
15°	902	902	893	884	880	253
25°	782	777	764	737	717	359
35°	634	630	599	554	540	396
45°	487	476	436	399	383	375
55°	338	328	297	262	248	303
65°	201	189	171	175	145	198
75°	80	75	70	67	74	86
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	981.1	981.1	981.1	981.1	981.1
2.5°	974.3	974.3	974.3	973.1	973.1
5°	964.1	962.9	962.9	961.8	961.8
7.5°	956.1	955.0	953.9	952.7	950.5
10°	944.8	944.8	943.7	938.0	936.8
12.5°	926.6	925.5	921.0	913.0	910.8
15°	901.7	901.7	892.6	883.5	880.1
17.5°	874.5	873.3	862.0	852.9	848.4
20°	845.0	842.7	831.4	816.6	808.7
22.5°	812.1	812.1	798.5	779.2	771.3
25°	781.5	776.9	764.4	737.2	716.8
27.5°	746.3	739.5	725.9	687.3	663.5
30°	707.7	704.3	685.1	635.1	617.0
32.5°	671.4	665.8	645.4	593.2	578.4
35°	634.0	629.5	598.9	553.5	539.9
37.5°	596.6	590.9	552.4	516.1	499.0
40°	559.2	552.4	510.4	477.5	459.3
42.5°	524.0	514.9	474.1	438.9	418.5
45°	486.6	476.4	435.5	399.2	383.4
47.5°	449.1	440.1	402.6	365.2	347.1
50°	409.4	401.5	367.5	330.1	310.8
52.5°	376.6	364.1	331.2	293.8	277.9
55°	338.0	327.8	297.2	262.0	248.4
57.5°	302.8	292.6	264.3	231.4	220.0
60°	269.9	255.2	231.4	203.0	193.9
62.5°	233.6	222.3	201.9	178.1	189.4
65°	200.8	189.4	171.3	174.7	145.2
67.5°	164.5	158.8	142.9	127.0	122.5
70°	133.8	127.0	121.4	104.3	99.8
72.5°	106.6	99.8	91.9	82.8	79.4
75°	80.5	74.9	70.3	66.9	73.7
77.5°	55.6	53.3	49.9	46.5	45.4
80°	36.3	35.2	34.0	32.9	31.8
82.5°	21.5	21.5	21.5	21.5	21.5
85°	11.3	12.5	13.6	14.7	15.9
87.5°	6.8	6.8	7.9	9.1	10.2
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)