

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: P545145

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-80-86-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: P545145  
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-12-1-LD4-2STD-35-UNV-80-86-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

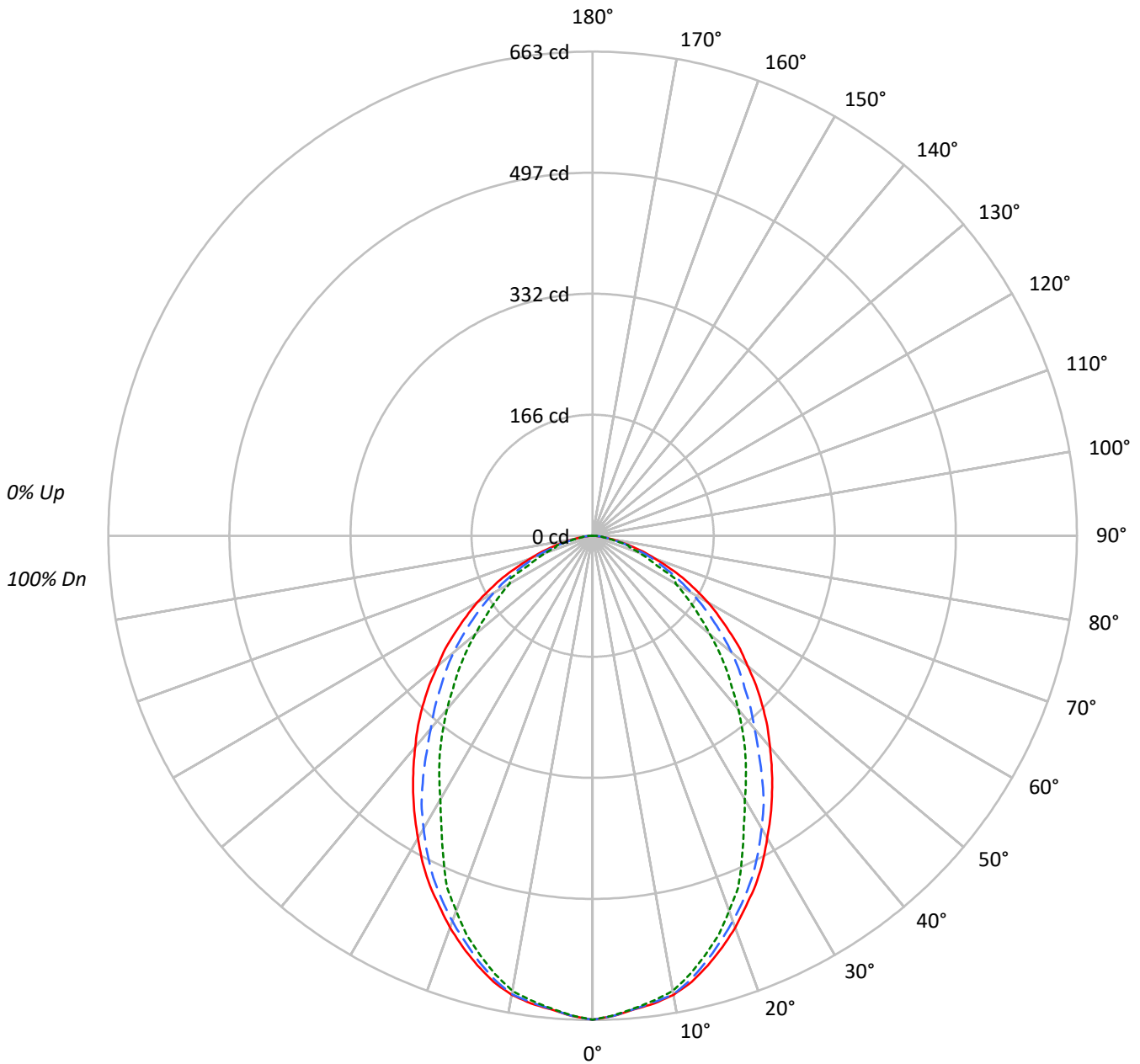
Lumens per Lamp: N/A  
Luminaire Lumens: 1301.0 lumens  
Efficiency: N/A  
Efficacy: 78.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	7133	7133	7133
5°	7036	7029	7020
10°	6976	6967	6916
15°	6788	6720	6625
20°	6538	6433	6258
25°	6270	6133	5751
30°	5942	5751	5180
35°	5628	5315	4792
40°	5307	4845	4360
45°	5004	4478	3943
50°	4632	4156	3515
55°	4284	3766	3149
60°	3925	3365	2820
65°	3454	2947	2499
70°	2845	2581	2121
75°	2262	1975	2071
80°	1519	1426	1333
85°	951	1136	1321



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.7	4.7
10°-20°	169.3	13.0
20°-30°	234.4	18.0
30°-40°	249.9	19.2
40°-50°	228.0	17.5
50°-60°	178.6	13.7
60°-70°	116.4	8.9
70°-80°	51.6	4.0
80°-90°	11.1	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°	465.4	35.8
0°-40°	715.3	55.0
0°-60°	1121.9	86.2
0°-90°	1301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1301.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	651	650	650	650	650	62
15°	609	609	603	597	594	171
25°	528	525	516	498	484	242
35°	428	425	404	374	365	268
45°	329	322	294	270	259	253
55°	228	221	201	177	168	205
65°	136	128	116	118	98	134
75°	54	51	48	45	50	58
85°	8	8	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°	662.7	662.7	662.7	662.7	662.7
2.5°	658.1	658.1	658.1	657.3	657.3
5°	651.2	650.5	650.5	649.7	649.7
7.5°	645.9	645.1	644.3	643.6	642.0
10°	638.2	638.2	637.4	633.6	632.8
12.5°	625.9	625.2	622.1	616.7	615.2
15°	609.1	609.1	603.0	596.8	594.5
17.5°	590.7	589.9	582.3	576.1	573.1
20°	570.8	569.2	561.6	551.6	546.3
22.5°	548.6	548.6	539.4	526.3	521.0
25°	527.9	524.8	516.4	498.0	484.2
27.5°	504.1	499.5	490.3	464.3	448.2
30°	478.1	475.8	462.7	429.0	416.8
32.5°	453.6	449.7	435.9	400.7	390.7
35°	428.3	425.2	404.5	373.9	364.7
37.5°	403.0	399.2	373.1	348.6	337.1
40°	377.7	373.1	344.8	322.5	310.3
42.5°	354.0	347.8	320.2	296.5	282.7
45°	328.7	321.8	294.2	269.7	259.0
47.5°	303.4	297.3	272.0	246.7	234.4
50°	276.6	271.2	248.2	222.9	209.9
52.5°	254.4	245.9	223.7	198.4	187.7
55°	228.3	221.4	200.7	177.0	167.8
57.5°	204.6	197.7	178.5	156.3	148.6
60°	182.3	172.4	156.3	137.1	131.0
62.5°	157.8	150.2	136.4	120.3	127.9
65°	135.6	127.9	115.7	118.0	98.1
67.5°	111.1	107.3	96.5	85.8	82.7
70°	90.4	85.8	82.0	70.5	67.4
72.5°	72.0	67.4	62.1	55.9	53.6
75°	54.4	50.6	47.5	45.2	49.8
77.5°	37.5	36.0	33.7	31.4	30.6
80°	24.5	23.8	23.0	22.2	21.5
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.4	9.2	10.0	10.7
87.5°	4.6	4.6	5.4	6.1	6.9
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)