

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: P544689

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-93-86-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: P544689  
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-LD4-1HI-35-UNV-93-86-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

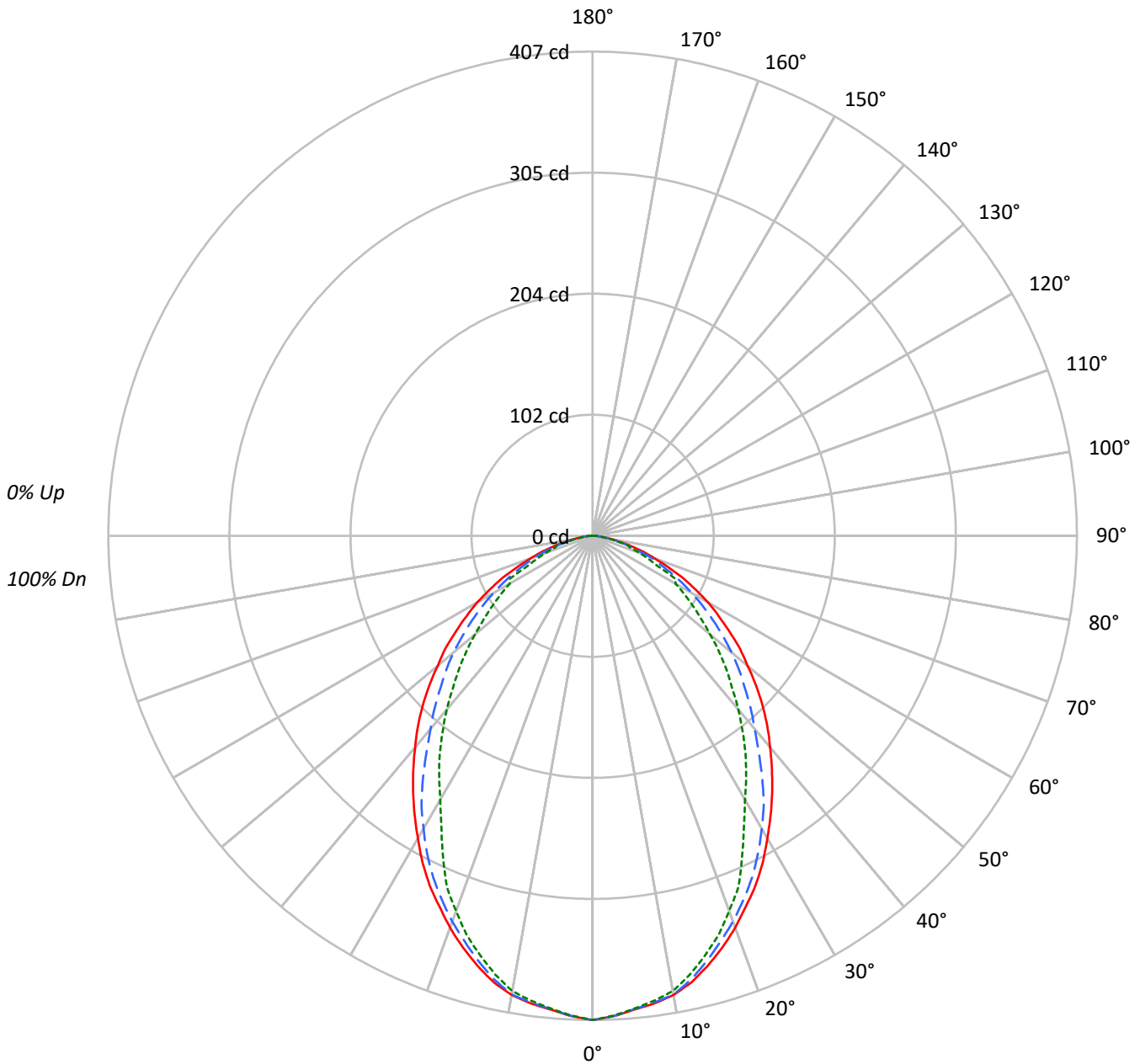
Lumens per Lamp: N/A  
Luminaire Lumens: 799.0 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
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°	4381	4381	4381
5°	4321	4317	4311
10°	4283	4279	4247
15°	4169	4126	4069
20°	4015	3951	3843
25°	3850	3766	3532
30°	3649	3532	3182
35°	3456	3264	2943
40°	3260	2975	2678
45°	3073	2751	2420
50°	2845	2552	2159
55°	2631	2314	1933
60°	2411	2067	1733
65°	2122	1808	1533
70°	1747	1583	1303
75°	1389	1214	1273
80°	936	874	818
85°	580	692	815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.9	4.7
10°-20°	104.0	13.0
20°-30°	143.9	18.0
30°-40°	153.5	19.2
40°-50°	140.0	17.5
50°-60°	109.7	13.7
60°-70°	71.5	8.9
70°-80°	31.7	4.0
80°-90°	6.8	0.8
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°	285.8	35.8
0°-40°	439.3	55.0
0°-60°	689.0	86.2
0°-90°	799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	799.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	407	407	407	407	407	
5°	400	400	400	399	399	38
15°	374	374	370	366	365	105
25°	324	322	317	306	297	149
35°	263	261	248	230	224	164
45°	202	198	181	166	159	156
55°	140	136	123	109	103	126
65°	83	79	71	72	60	82
75°	33	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	407.0	407.0	407.0	407.0	407.0
2.5°	404.2	404.2	404.2	403.7	403.7
5°	399.9	399.5	399.5	399.0	399.0
7.5°	396.6	396.2	395.7	395.2	394.3
10°	391.9	391.9	391.5	389.1	388.6
12.5°	384.4	383.9	382.1	378.8	377.8
15°	374.1	374.1	370.3	366.5	365.1
17.5°	362.8	362.3	357.6	353.8	351.9
20°	350.5	349.6	344.9	338.8	335.5
22.5°	336.9	336.9	331.2	323.2	320.0
25°	324.2	322.3	317.1	305.8	297.4
27.5°	309.6	306.8	301.1	285.1	275.3
30°	293.6	292.2	284.2	263.5	256.0
32.5°	278.5	276.2	267.7	246.1	240.0
35°	263.0	261.1	248.4	229.6	224.0
37.5°	247.5	245.1	229.1	214.1	207.0
40°	232.0	229.1	211.7	198.1	190.6
42.5°	217.4	213.6	196.7	182.1	173.6
45°	201.9	197.6	180.7	165.6	159.0
47.5°	186.3	182.6	167.0	151.5	144.0
50°	169.9	166.6	152.4	136.9	128.9
52.5°	156.2	151.0	137.4	121.9	115.3
55°	140.2	136.0	123.3	108.7	103.0
57.5°	125.6	121.4	109.6	96.0	91.3
60°	112.0	105.9	96.0	84.2	80.5
62.5°	96.9	92.2	83.8	73.9	78.6
65°	83.3	78.6	71.0	72.5	60.2
67.5°	68.2	65.9	59.3	52.7	50.8
70°	55.5	52.7	50.3	43.3	41.4
72.5°	44.2	41.4	38.1	34.3	32.9
75°	33.4	31.1	29.2	27.8	30.6
77.5°	23.1	22.1	20.7	19.3	18.8
80°	15.1	14.6	14.1	13.6	13.2
82.5°	8.9	8.9	8.9	8.9	8.9
85°	4.7	5.2	5.6	6.1	6.6
87.5°	2.8	2.8	3.3	3.8	4.2
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)