

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: P544968

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-82-85-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: P544968  
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-LD4-2HI-35-UNV-82-85-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

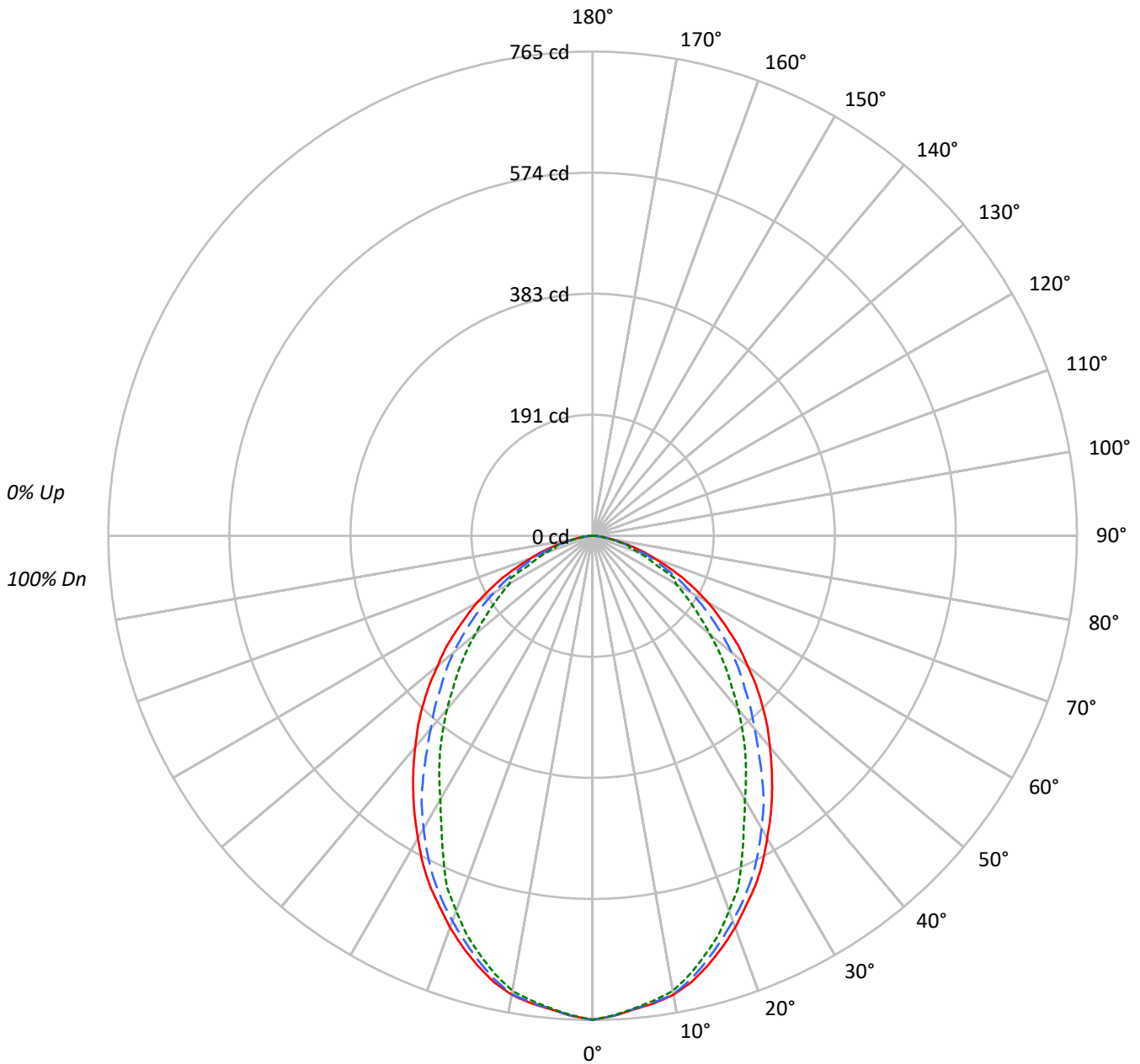
Lumens per Lamp: N/A  
Luminaire Lumens: 1501.0 lumens  
Efficiency: N/A  
Efficacy: 69.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	8230	8230	8230
5°	8118	8108	8099
10°	8048	8038	7980
15°	7831	7752	7643
20°	7543	7422	7219
25°	7233	7076	6634
30°	6856	6636	5977
35°	6493	6133	5528
40°	6124	5590	5030
45°	5772	5167	4548
50°	5344	4796	4056
55°	4943	4346	3633
60°	4529	3881	3255
65°	3986	3400	2881
70°	3282	2977	2448
75°	2612	2279	2391
80°	1754	1643	1531
85°	1087	1309	1531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.2	4.7
10°-20°	195.3	13.0
20°-30°	270.4	18.0
30°-40°	288.3	19.2
40°-50°	263.1	17.5
50°-60°	206.1	13.7
60°-70°	134.3	8.9
70°-80°	59.5	4.0
80°-90°	12.8	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°	536.9	35.8
0°-40°	825.3	55.0
0°-60°	1294.4	86.2
0°-90°	1501.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1501.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	751	750	750	750	750	71
15°	703	703	696	689	686	198
25°	609	606	596	574	559	280
35°	494	491	467	431	421	309
45°	379	371	339	311	299	292
55°	263	256	232	204	194	236
65°	156	148	134	136	113	154
75°	63	58	55	52	58	67
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	764.6	764.6	764.6	764.6	764.6
2.5°	759.3	759.3	759.3	758.4	758.4
5°	751.3	750.4	750.4	749.6	749.6
7.5°	745.1	744.3	743.4	742.5	740.7
10°	736.3	736.3	735.4	731.0	730.1
12.5°	722.2	721.3	717.7	711.6	709.8
15°	702.7	702.7	695.6	688.6	685.9
17.5°	681.5	680.6	671.8	664.7	661.2
20°	658.5	656.8	647.9	636.4	630.2
22.5°	632.9	632.9	622.3	607.3	601.1
25°	609.0	605.5	595.8	574.5	558.6
27.5°	581.6	576.3	565.7	535.7	517.1
30°	551.6	548.9	533.9	495.0	480.9
32.5°	523.3	518.9	502.9	462.3	450.8
35°	494.1	490.6	466.7	431.4	420.7
37.5°	464.9	460.5	430.5	402.2	388.9
40°	435.8	430.5	397.8	372.1	358.0
42.5°	408.4	401.3	369.5	342.1	326.2
45°	379.2	371.2	339.4	311.1	298.8
47.5°	350.0	343.0	313.8	284.6	270.5
50°	319.1	312.9	286.4	257.2	242.2
52.5°	293.5	283.7	258.1	228.9	216.6
55°	263.4	255.5	231.6	204.2	193.6
57.5°	236.0	228.1	206.0	180.3	171.5
60°	210.4	198.9	180.3	158.2	151.2
62.5°	182.1	173.2	157.3	138.8	147.6
65°	156.5	147.6	133.5	136.1	113.1
67.5°	128.2	123.7	111.4	99.0	95.5
70°	104.3	99.0	94.6	81.3	77.8
72.5°	83.1	77.8	71.6	64.5	61.9
75°	62.8	58.3	54.8	52.2	57.5
77.5°	43.3	41.5	38.9	36.2	35.4
80°	28.3	27.4	26.5	25.6	24.7
82.5°	16.8	16.8	16.8	16.8	16.8
85°	8.8	9.7	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
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)