

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: P545261

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-82-96-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: P545261  
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-LD4-1HI-35-UNV-82-96-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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**

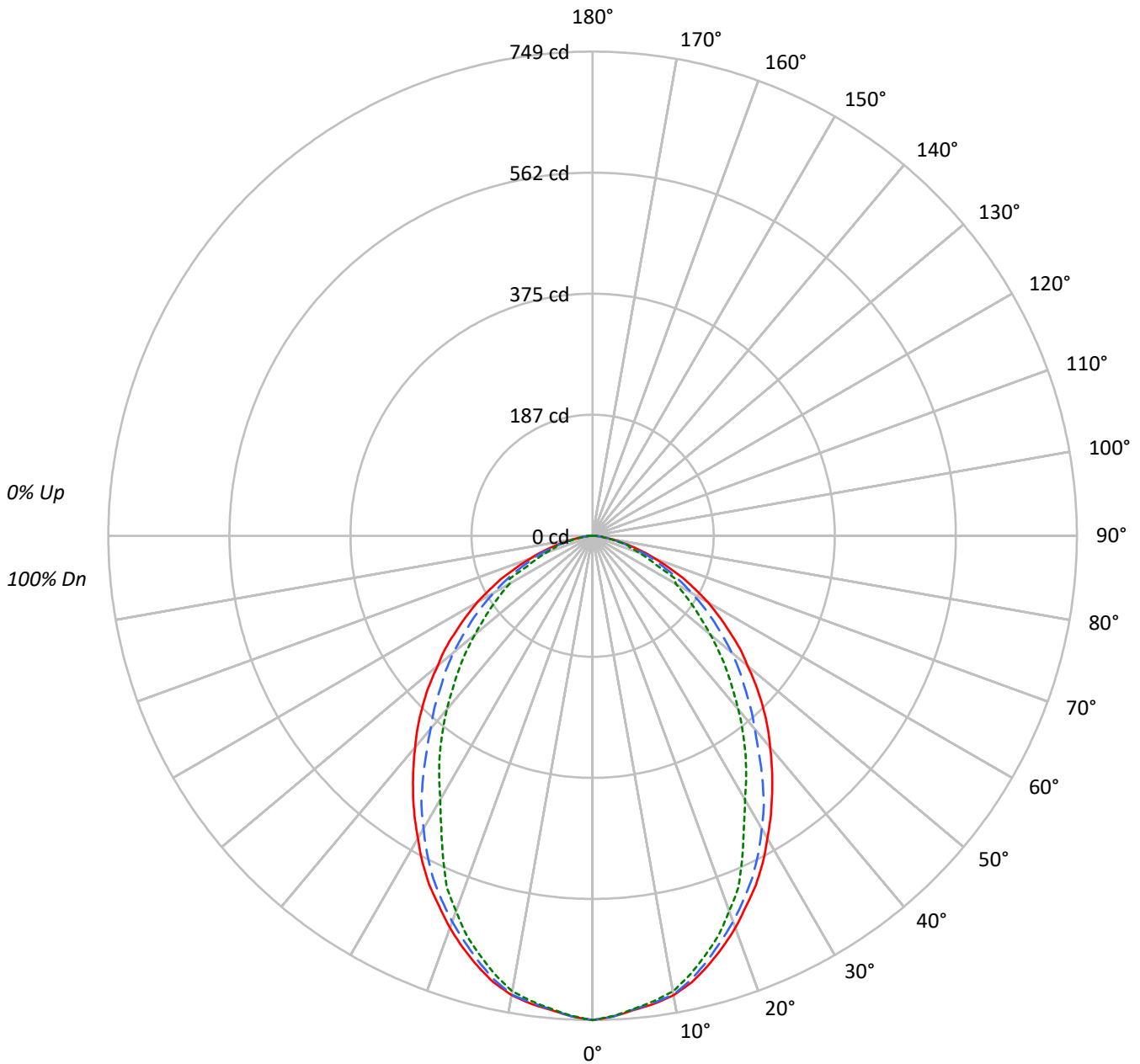
Lumens per Lamp: N/A  
Luminaire Lumens: 1471.0 lumens  
Efficiency: N/A  
Efficacy: 68.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				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°	4033	4033	4033
5°	3978	3973	3969
10°	3944	3939	3910
15°	3837	3798	3745
20°	3696	3637	3537
25°	3544	3467	3251
30°	3359	3251	2928
35°	3181	3005	2709
40°	3001	2739	2465
45°	2828	2531	2229
50°	2618	2350	1988
55°	2422	2130	1780
60°	2220	1902	1594
65°	1952	1666	1412
70°	1608	1459	1199
75°	1279	1117	1171
80°	859	806	753
85°	537	642	747



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.8	4.7
10°-20°	191.4	13.0
20°-30°	265.0	18.0
30°-40°	282.6	19.2
40°-50°	257.8	17.5
50°-60°	202.0	13.7
60°-70°	131.6	8.9
70°-80°	58.3	4.0
80°-90°	12.5	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°	526.2	35.8
0°-40°	808.8	55.0
0°-60°	1268.5	86.2
0°-90°	1471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1471.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	749	749	749	749	749	
5°	736	735	735	735	735	70
15°	689	689	682	675	672	194
25°	597	593	584	563	548	274
35°	484	481	457	423	412	303
45°	372	364	333	305	293	286
55°	258	250	227	200	190	232
65°	153	145	131	133	111	151
75°	62	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	749.3	749.3	749.3	749.3	749.3
2.5°	744.1	744.1	744.1	743.2	743.2
5°	736.3	735.4	735.4	734.6	734.6
7.5°	730.3	729.4	728.5	727.7	725.9
10°	721.6	721.6	720.7	716.4	715.5
12.5°	707.7	706.9	703.4	697.3	695.6
15°	688.7	688.7	681.7	674.8	672.2
17.5°	667.9	667.0	658.4	651.4	648.0
20°	645.4	643.6	635.0	623.7	617.6
22.5°	620.2	620.2	609.8	595.1	589.1
25°	596.8	593.4	583.9	563.1	547.5
27.5°	570.0	564.8	554.4	524.9	506.8
30°	540.5	537.9	523.2	485.1	471.2
32.5°	512.8	508.5	492.9	453.0	441.8
35°	484.2	480.8	457.4	422.7	412.3
37.5°	455.6	451.3	421.9	394.1	381.2
40°	427.1	421.9	389.8	364.7	350.8
42.5°	400.2	393.3	362.1	335.2	319.6
45°	371.6	363.8	332.6	304.9	292.8
47.5°	343.0	336.1	307.5	278.9	265.1
50°	312.7	306.7	280.7	252.1	237.4
52.5°	287.6	278.1	252.9	224.4	212.2
55°	258.1	250.3	227.0	200.1	189.7
57.5°	231.3	223.5	201.8	176.7	168.1
60°	206.2	194.9	176.7	155.1	148.1
62.5°	178.4	169.8	154.2	136.0	144.7
65°	153.3	144.7	130.8	133.4	110.9
67.5°	125.6	121.3	109.1	97.0	93.6
70°	102.2	97.0	92.7	79.7	76.2
72.5°	81.4	76.2	70.2	63.2	60.6
75°	61.5	57.2	53.7	51.1	56.3
77.5°	42.4	40.7	38.1	35.5	34.7
80°	27.7	26.9	26.0	25.1	24.3
82.5°	16.5	16.5	16.5	16.5	16.5
85°	8.7	9.5	10.4	11.3	12.1
87.5°	5.2	5.2	6.1	6.9	7.8
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)