

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: P545316

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-81-94-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: P545316  
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-50-UNV-81-94-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

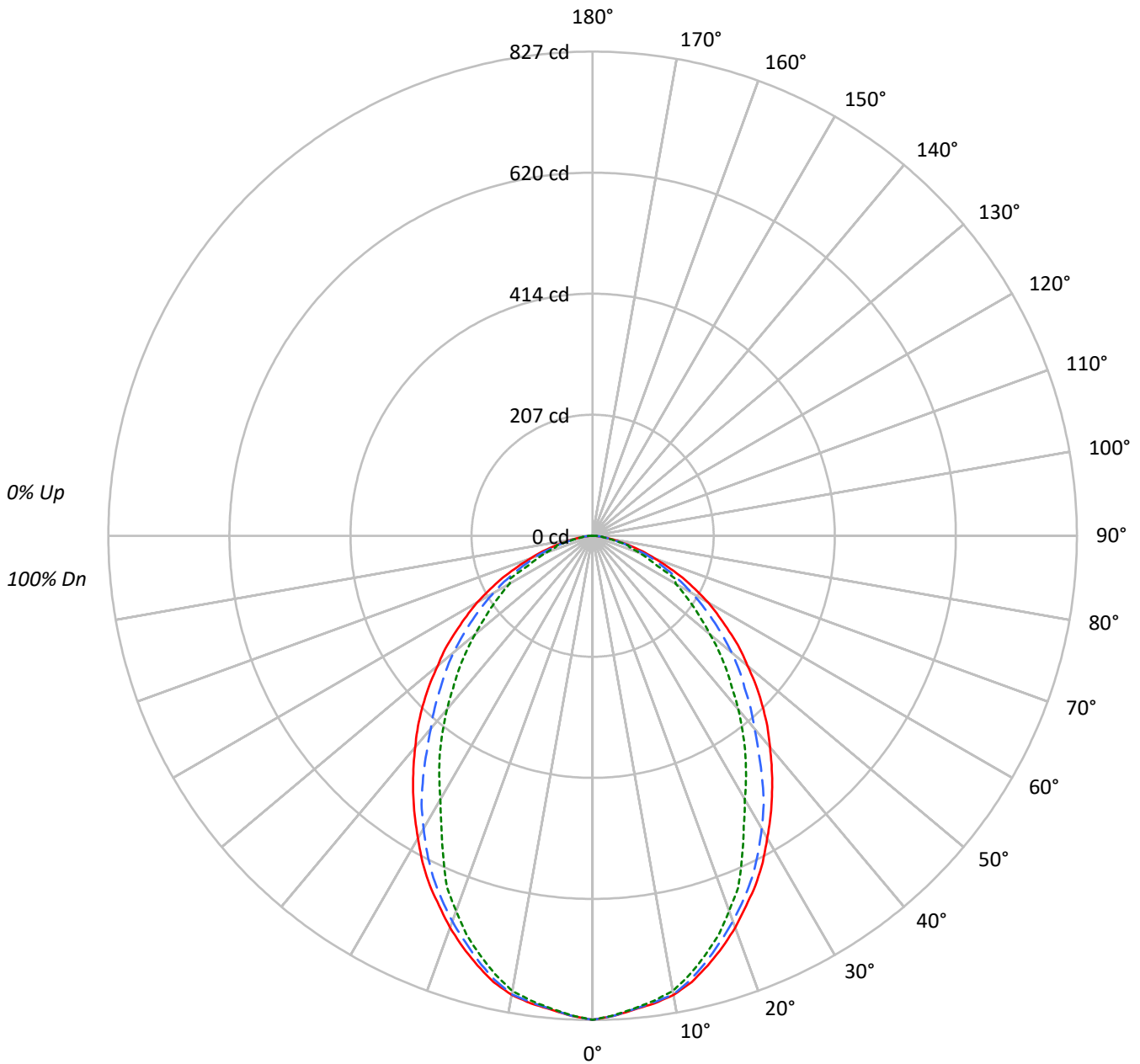
Lumens per Lamp: N/A  
Luminaire Lumens: 1623.0 lumens  
Efficiency: N/A  
Efficacy: 75.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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				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
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4449	4449	4449
5°	4389	4384	4379
10°	4351	4346	4315
15°	4233	4191	4133
20°	4078	4013	3903
25°	3910	3825	3587
30°	3706	3588	3231
35°	3510	3315	2989
40°	3310	3022	2720
45°	3121	2793	2458
50°	2889	2593	2193
55°	2672	2350	1964
60°	2449	2099	1759
65°	2155	1838	1557
70°	1775	1610	1323
75°	1412	1233	1291
80°	948	890	831
85°	593	710	827



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.0	4.7
10°-20°	211.2	13.0
20°-30°	292.4	18.0
30°-40°	311.8	19.2
40°-50°	284.4	17.5
50°-60°	222.8	13.7
60°-70°	145.2	8.9
70°-80°	64.3	4.0
80°-90°	13.8	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°	580.6	35.8
0°-40°	892.3	55.0
0°-60°	1399.6	86.2
0°-90°	1623.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1623.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	812	811	811	810	810	77
15°	760	760	752	744	742	214
25°	658	655	644	621	604	302
35°	534	530	505	466	455	334
45°	410	401	367	336	323	316
55°	285	276	250	221	209	255
65°	169	160	144	147	122	167
75°	68	63	59	56	62	73
85°	10	10	12	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	826.7	826.7	826.7	826.7	826.7
2.5°	821.0	821.0	821.0	820.0	820.0
5°	812.4	811.4	811.4	810.5	810.5
7.5°	805.7	804.8	803.8	802.8	800.9
10°	796.2	796.2	795.2	790.4	789.5
12.5°	780.9	779.9	776.1	769.4	767.5
15°	759.8	759.8	752.2	744.5	741.7
17.5°	736.9	735.9	726.4	718.7	714.9
20°	712.0	710.1	700.6	688.1	681.5
22.5°	684.3	684.3	672.9	656.6	649.9
25°	658.5	654.7	644.2	621.2	604.0
27.5°	628.9	623.2	611.7	579.2	559.1
30°	596.4	593.5	577.3	535.2	519.9
32.5°	565.8	561.0	543.8	499.9	487.4
35°	534.3	530.4	504.6	466.4	454.9
37.5°	502.7	498.0	465.5	434.9	420.5
40°	471.2	465.5	430.1	402.4	387.1
42.5°	441.6	433.9	399.5	369.9	352.7
45°	410.0	401.4	367.0	336.4	323.0
47.5°	378.5	370.8	339.3	307.8	292.5
50°	345.0	338.3	309.7	278.1	261.9
52.5°	317.3	306.8	279.1	247.5	234.2
55°	284.8	276.2	250.4	220.8	209.3
57.5°	255.2	246.6	222.7	195.0	185.4
60°	227.5	215.0	195.0	171.1	163.4
62.5°	196.9	187.3	170.1	150.1	159.6
65°	169.2	159.6	144.3	147.2	122.3
67.5°	138.6	133.8	120.4	107.0	103.2
70°	112.8	107.0	102.3	87.9	84.1
72.5°	89.8	84.1	77.4	69.8	66.9
75°	67.9	63.1	59.3	56.4	62.1
77.5°	46.8	44.9	42.1	39.2	38.2
80°	30.6	29.6	28.7	27.7	26.8
82.5°	18.2	18.2	18.2	18.2	18.2
85°	9.6	10.5	11.5	12.4	13.4
87.5°	5.7	5.7	6.7	7.6	8.6
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)