

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: P545263

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-93-84-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: P545263  
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-93-84-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

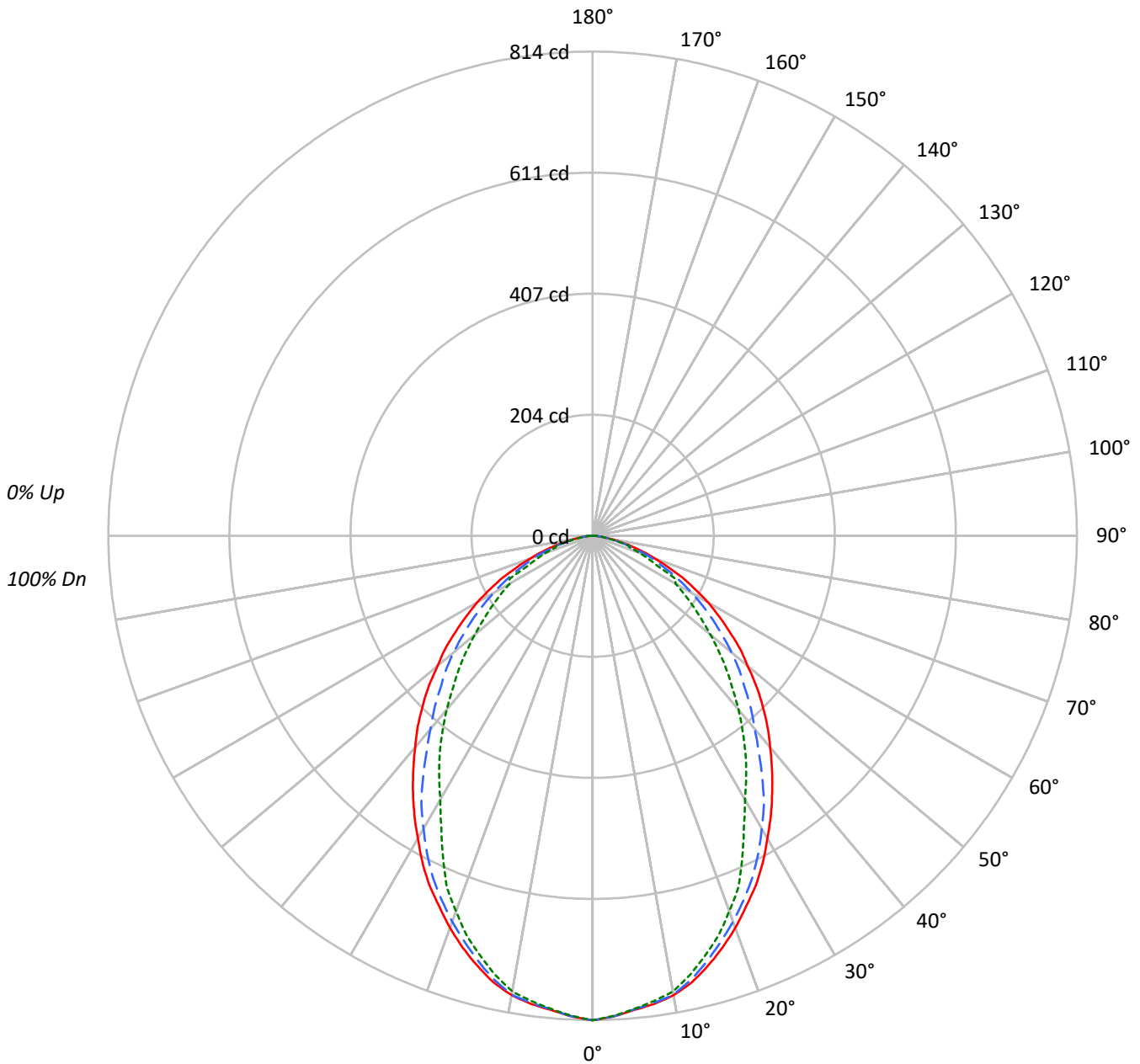
Lumens per Lamp: N/A  
Luminaire Lumens: 1599.0 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	4384	4384	4384
5°	4324	4319	4314
10°	4287	4281	4251
15°	4171	4129	4071
20°	4018	3953	3845
25°	3853	3769	3534
30°	3652	3534	3183
35°	3459	3267	2945
40°	3261	2977	2680
45°	3075	2752	2423
50°	2846	2555	2160
55°	2633	2315	1935
60°	2412	2068	1733
65°	2123	1811	1535
70°	1748	1586	1304
75°	1391	1214	1273
80°	933	874	818
85°	580	698	815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.8	4.7
10°-20°	208.1	13.0
20°-30°	288.1	18.0
30°-40°	307.2	19.2
40°-50°	280.2	17.5
50°-60°	219.5	13.7
60°-70°	143.1	8.9
70°-80°	63.4	4.0
80°-90°	13.6	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°	572.0	35.8
0°-40°	879.1	55.0
0°-60°	1378.9	86.2
0°-90°	1599.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1599.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	800	799	799	798	798	76
15°	749	749	741	734	731	210
25°	649	645	635	612	595	298
35°	526	523	497	460	448	329
45°	404	396	362	332	318	311
55°	281	272	247	218	206	252
65°	167	157	142	145	120	164
75°	67	62	58	56	61	72
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	814.5	814.5	814.5	814.5	814.5
2.5°	808.9	808.9	808.9	807.9	807.9
5°	800.4	799.4	799.4	798.5	798.5
7.5°	793.8	792.9	791.9	791.0	789.1
10°	784.4	784.4	783.4	778.7	777.8
12.5°	769.3	768.4	764.6	758.0	756.1
15°	748.6	748.6	741.1	733.5	730.7
17.5°	726.0	725.1	715.6	708.1	704.3
20°	701.5	699.6	690.2	678.0	671.4
22.5°	674.2	674.2	662.9	646.9	640.3
25°	648.8	645.0	634.7	612.1	595.1
27.5°	619.6	613.9	602.6	570.6	550.9
30°	587.6	584.8	568.7	527.3	512.2
32.5°	557.4	552.7	535.8	492.5	480.2
35°	526.4	522.6	497.2	459.5	448.2
37.5°	495.3	490.6	458.6	428.4	414.3
40°	464.2	458.6	423.7	396.4	381.4
42.5°	435.0	427.5	393.6	364.4	347.5
45°	404.0	395.5	361.6	331.5	318.3
47.5°	372.9	365.4	334.3	303.2	288.1
50°	339.9	333.3	305.1	274.0	258.0
52.5°	312.6	302.3	275.0	243.9	230.7
55°	280.6	272.1	246.7	217.5	206.2
57.5°	251.4	242.9	219.4	192.1	182.7
60°	224.1	211.9	192.1	168.6	161.0
62.5°	194.0	184.6	167.6	147.8	157.3
65°	166.7	157.3	142.2	145.0	120.5
67.5°	136.5	131.8	118.6	105.5	101.7
70°	111.1	105.5	100.8	86.6	82.9
72.5°	88.5	82.9	76.3	68.7	65.9
75°	66.9	62.1	58.4	55.6	61.2
77.5°	46.1	44.3	41.4	38.6	37.7
80°	30.1	29.2	28.2	27.3	26.4
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.4	11.3	12.2	13.2
87.5°	5.6	5.6	6.6	7.5	8.5
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)