

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: P545311

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-81-84-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: P545311  
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-81-84-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

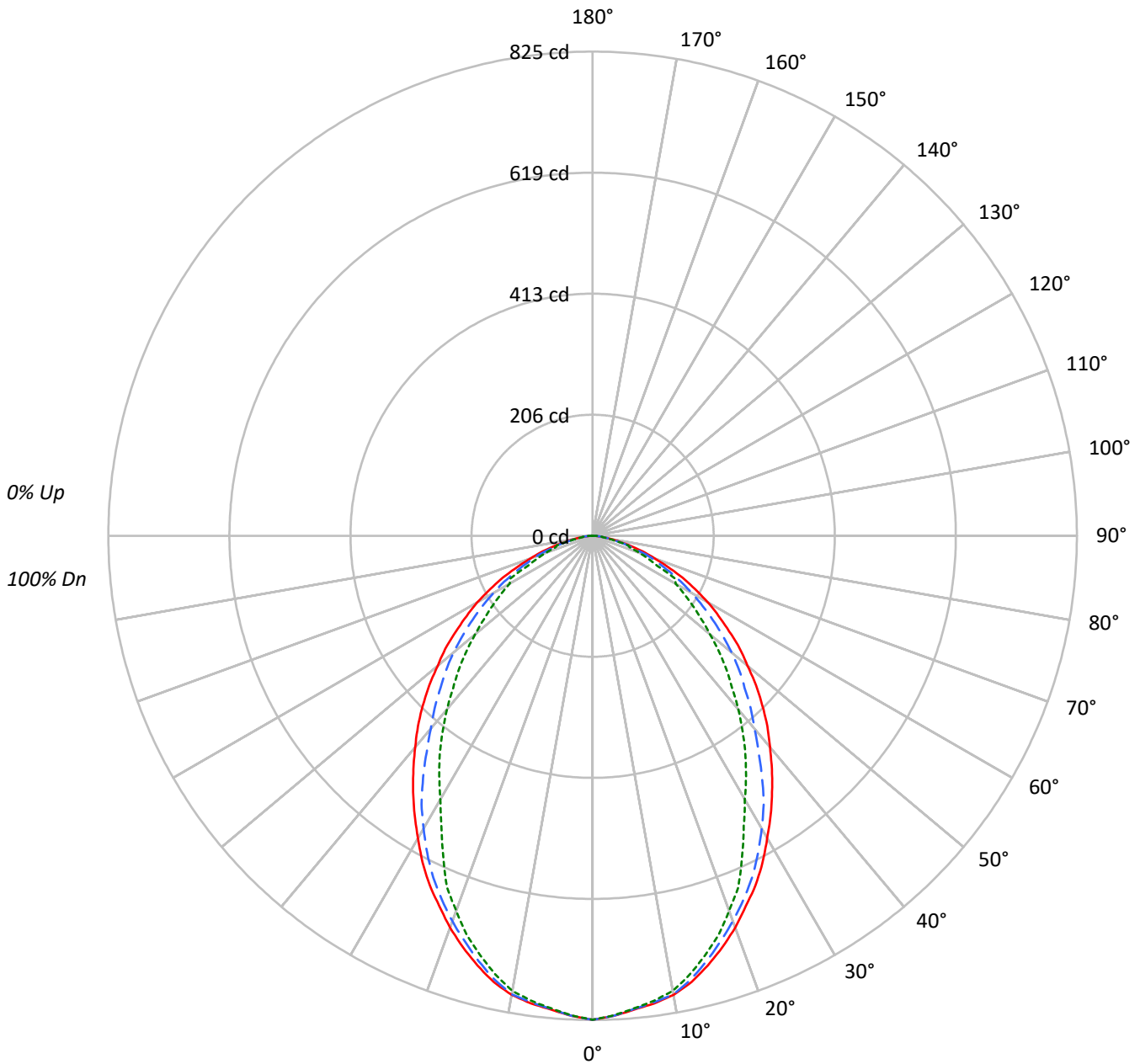
Lumens per Lamp: N/A  
Luminaire Lumens: 1619.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	4439	4439	4439
5°	4378	4373	4368
10°	4340	4335	4304
15°	4223	4181	4122
20°	4068	4002	3893
25°	3901	3816	3578
30°	3697	3579	3223
35°	3502	3307	2982
40°	3302	3014	2713
45°	3113	2786	2453
50°	2882	2586	2187
55°	2666	2344	1959
60°	2442	2094	1755
65°	2150	1834	1554
70°	1770	1605	1320
75°	1408	1229	1289
80°	945	886	828
85°	587	704	821



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.8	4.7
10°-20°	210.7	13.0
20°-30°	291.7	18.0
30°-40°	311.0	19.2
40°-50°	283.7	17.5
50°-60°	222.3	13.7
60°-70°	144.9	8.9
70°-80°	64.2	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°	579.1	35.8
0°-40°	890.1	55.0
0°-60°	1396.1	86.2
0°-90°	1619.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1619.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	810	809	809	808	808	77
15°	758	758	750	743	740	213
25°	657	653	643	620	603	302
35°	533	529	503	465	454	333
45°	409	400	366	336	322	315
55°	284	276	250	220	209	255
65°	169	159	144	147	122	166
75°	68	63	59	56	62	73
85°	10	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°	824.7	824.7	824.7	824.7	824.7
2.5°	819.0	819.0	819.0	818.0	818.0
5°	810.4	809.4	809.4	808.5	808.5
7.5°	803.7	802.8	801.8	800.9	799.0
10°	794.2	794.2	793.2	788.5	787.5
12.5°	778.9	778.0	774.2	767.5	765.6
15°	758.0	758.0	750.3	742.7	739.8
17.5°	735.1	734.1	724.6	717.0	713.1
20°	710.3	708.4	698.8	686.5	679.8
22.5°	682.6	682.6	671.2	655.0	648.3
25°	656.9	653.1	642.6	619.7	602.6
27.5°	627.3	621.6	610.2	577.8	557.7
30°	594.9	592.1	575.9	533.9	518.7
32.5°	564.4	559.6	542.5	498.6	486.2
35°	533.0	529.1	503.4	465.3	453.8
37.5°	501.5	496.7	464.3	433.8	419.5
40°	470.0	464.3	429.0	401.4	386.1
42.5°	440.5	432.8	398.5	369.0	351.8
45°	409.0	400.4	366.1	335.6	322.3
47.5°	377.5	369.9	338.5	307.0	291.7
50°	344.2	337.5	308.9	277.4	261.2
52.5°	316.5	306.0	278.4	246.9	233.6
55°	284.1	275.5	249.8	220.2	208.8
57.5°	254.6	246.0	222.1	194.5	185.0
60°	226.9	214.5	194.5	170.7	163.0
62.5°	196.4	186.9	169.7	149.7	159.2
65°	168.8	159.2	144.0	146.8	122.0
67.5°	138.2	133.5	120.1	106.8	103.0
70°	112.5	106.8	102.0	87.7	83.9
72.5°	89.6	83.9	77.2	69.6	66.7
75°	67.7	62.9	59.1	56.3	62.0
77.5°	46.7	44.8	41.9	39.1	38.1
80°	30.5	29.6	28.6	27.6	26.7
82.5°	18.1	18.1	18.1	18.1	18.1
85°	9.5	10.5	11.4	12.4	13.3
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)