

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: P545802

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-82-87-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: P545802  
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-LD4-2STD-50-UNV-82-87-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

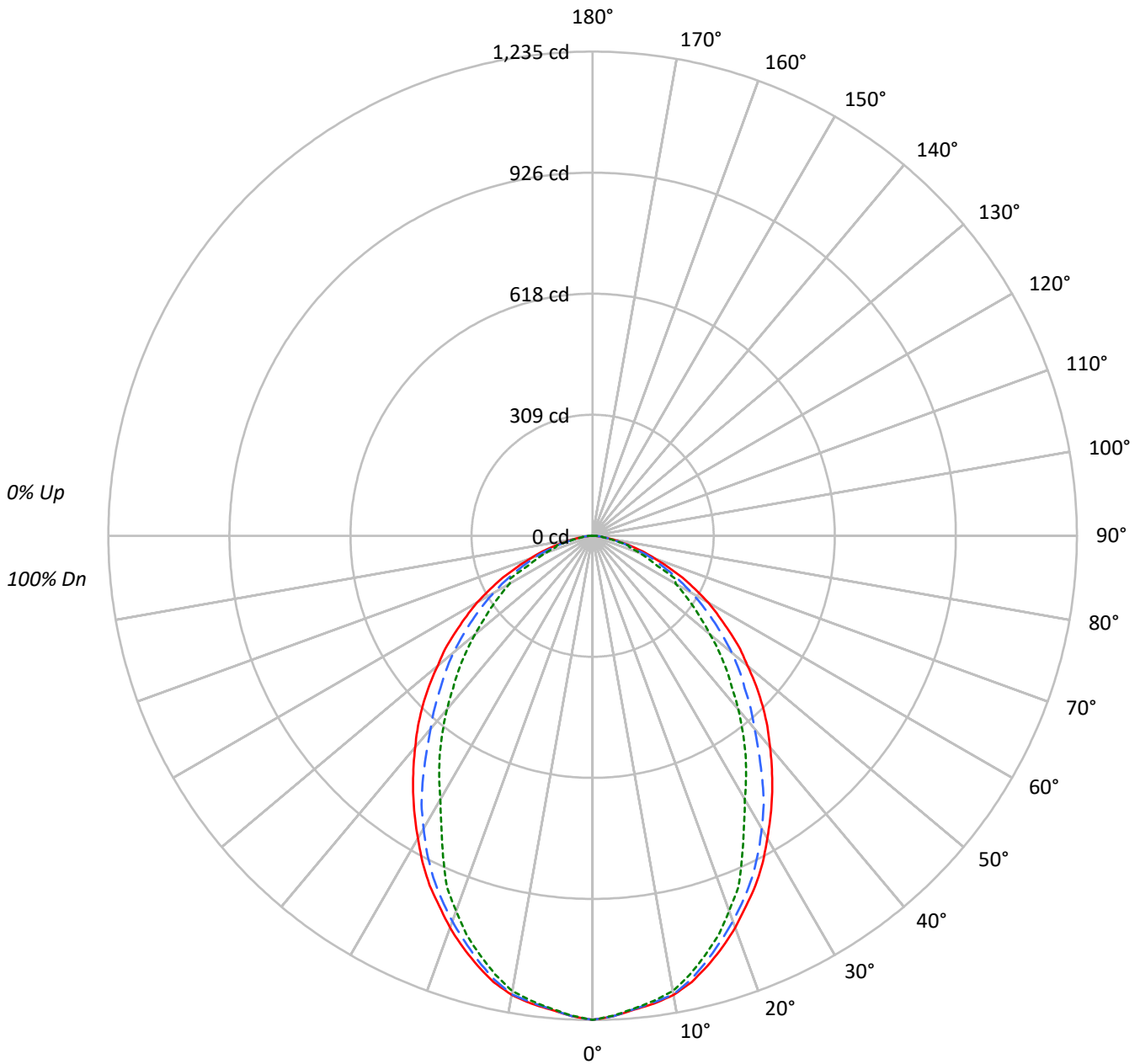
Lumens per Lamp: N/A  
Luminaire Lumens: 2424.0 lumens  
Efficiency: N/A  
Efficacy: 72.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	6646	6646	6646
5°	6555	6547	6540
10°	6498	6490	6444
15°	6323	6259	6172
20°	6091	5993	5829
25°	5840	5713	5358
30°	5535	5358	4826
35°	5243	4952	4464
40°	4944	4513	4062
45°	4661	4172	3672
50°	4315	3872	3275
55°	3992	3509	2933
60°	3657	3134	2627
65°	3218	2744	2327
70°	2650	2403	1976
75°	2106	1840	1930
80°	1416	1327	1240
85°	883	1056	1235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.9	4.7
10°-20°	315.4	13.0
20°-30°	436.7	18.0
30°-40°	465.7	19.2
40°-50°	424.8	17.5
50°-60°	332.8	13.7
60°-70°	216.9	8.9
70°-80°	96.1	4.0
80°-90°	20.6	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°	867.1	35.8
0°-40°	1332.7	55.0
0°-60°	2090.4	86.2
0°-90°	2424.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2424.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1235	1235	1235	1235	1235	
5°	1213	1212	1212	1210	1210	115
15°	1135	1135	1123	1112	1108	319
25°	984	978	962	928	902	452
35°	798	792	754	697	680	499
45°	612	600	548	502	482	472
55°	425	412	374	330	313	382
65°	253	238	216	220	183	249
75°	101	94	88	84	93	109
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1234.8	1234.8	1234.8	1234.8	1234.8
2.5°	1226.2	1226.2	1226.2	1224.8	1224.8
5°	1213.3	1211.9	1211.9	1210.5	1210.5
7.5°	1203.3	1201.9	1200.5	1199.1	1196.2
10°	1189.1	1189.1	1187.6	1180.5	1179.1
12.5°	1166.2	1164.8	1159.1	1149.1	1146.3
15°	1134.8	1134.8	1123.4	1112.0	1107.7
17.5°	1100.6	1099.1	1084.9	1073.5	1067.7
20°	1063.5	1060.6	1046.3	1027.8	1017.8
22.5°	1022.1	1022.1	1004.9	980.7	970.7
25°	983.5	977.8	962.1	927.8	902.2
27.5°	939.3	930.7	913.6	865.0	835.1
30°	890.7	886.5	862.2	799.4	776.5
32.5°	845.1	837.9	812.2	746.6	728.0
35°	798.0	792.2	753.7	696.6	679.5
37.5°	750.8	743.7	695.2	649.5	628.1
40°	703.7	695.2	642.4	601.0	578.1
42.5°	659.5	648.1	596.7	552.4	526.7
45°	612.4	599.5	548.1	502.5	482.5
47.5°	565.3	553.9	506.7	459.6	436.8
50°	515.3	505.3	462.5	415.4	391.1
52.5°	473.9	458.2	416.8	369.7	349.7
55°	425.4	412.5	374.0	329.7	312.6
57.5°	381.1	368.3	332.6	291.2	276.9
60°	339.7	321.2	291.2	255.5	244.1
62.5°	294.1	279.8	254.1	224.1	238.4
65°	252.7	238.4	215.5	219.8	182.7
67.5°	207.0	199.8	179.9	159.9	154.2
70°	168.4	159.9	152.7	131.3	125.6
72.5°	134.2	125.6	115.6	104.2	99.9
75°	101.3	94.2	88.5	84.2	92.8
77.5°	69.9	67.1	62.8	58.5	57.1
80°	45.7	44.3	42.8	41.4	40.0
82.5°	27.1	27.1	27.1	27.1	27.1
85°	14.3	15.7	17.1	18.6	20.0
87.5°	8.6	8.6	10.0	11.4	12.8
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)