

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: P545797

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-81-96-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: P545797  
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-81-96-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

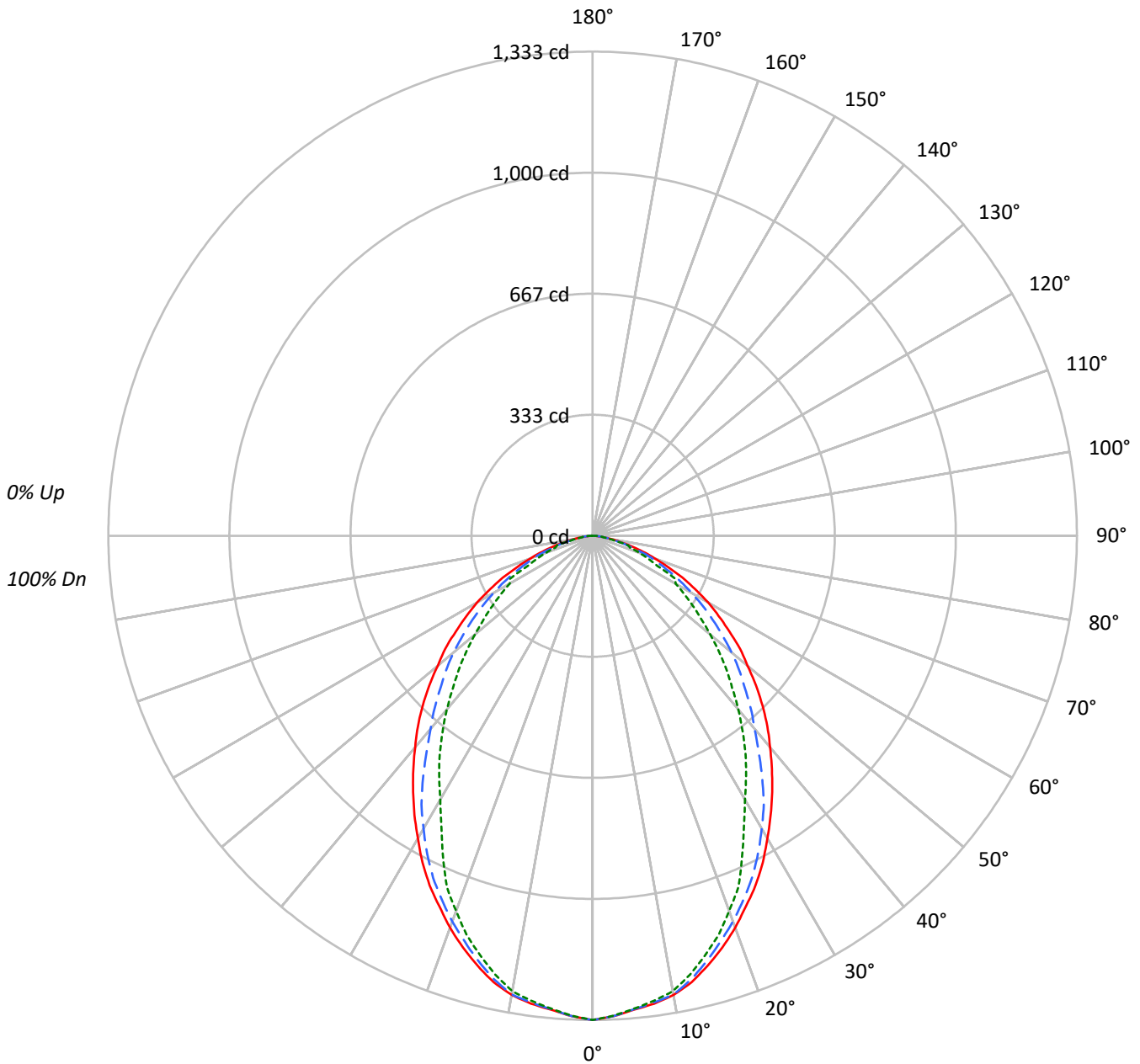
Lumens per Lamp: N/A  
Luminaire Lumens: 2617.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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				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°	7175	7175	7175
5°	7077	7069	7061
10°	7015	7007	6957
15°	6827	6758	6663
20°	6576	6470	6293
25°	6305	6168	5784
30°	5977	5785	5210
35°	5660	5346	4820
40°	5338	4872	4385
45°	5032	4504	3965
50°	4658	4181	3536
55°	4310	3789	3167
60°	3948	3384	2836
65°	3474	2963	2513
70°	2862	2595	2134
75°	2275	1986	2084
80°	1528	1432	1339
85°	951	1142	1334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.1	4.7
10°-20°	340.6	13.0
20°-30°	471.5	18.0
30°-40°	502.7	19.2
40°-50°	458.6	17.5
50°-60°	359.3	13.7
60°-70°	234.2	8.9
70°-80°	103.7	4.0
80°-90°	22.3	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°	936.1	35.8
0°-40°	1438.8	55.0
0°-60°	2256.8	86.2
0°-90°	2617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2617.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1333	1333	1333	1333	1333	
5°	1310	1308	1308	1307	1307	124
15°	1225	1225	1213	1200	1196	344
25°	1062	1056	1039	1002	974	487
35°	862	855	814	752	734	539
45°	661	647	592	542	521	509
55°	459	445	404	356	338	412
65°	273	257	233	237	197	269
75°	109	102	96	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1333.1	1333.1	1333.1	1333.1	1333.1
2.5°	1323.8	1323.8	1323.8	1322.3	1322.3
5°	1309.9	1308.4	1308.4	1306.9	1306.9
7.5°	1299.2	1297.6	1296.1	1294.5	1291.5
10°	1283.7	1283.7	1282.2	1274.5	1273.0
12.5°	1259.1	1257.6	1251.4	1240.6	1237.5
15°	1225.2	1225.2	1212.9	1200.5	1195.9
17.5°	1188.2	1186.7	1171.2	1158.9	1152.8
20°	1148.1	1145.0	1129.6	1109.6	1098.8
22.5°	1103.4	1103.4	1084.9	1058.7	1048.0
25°	1061.8	1055.7	1038.7	1001.7	974.0
27.5°	1014.1	1004.8	986.3	933.9	901.6
30°	961.7	957.0	930.8	863.0	838.4
32.5°	912.3	904.6	876.9	806.0	786.0
35°	861.5	855.3	813.7	752.1	733.6
37.5°	810.6	802.9	750.5	701.2	678.1
40°	759.8	750.5	693.5	648.8	624.2
42.5°	712.0	699.7	644.2	596.4	568.7
45°	661.1	647.3	591.8	542.5	520.9
47.5°	610.3	598.0	547.1	496.2	471.6
50°	556.3	545.6	499.3	448.5	422.3
52.5°	511.7	494.7	450.0	399.1	377.6
55°	459.3	445.4	403.8	356.0	337.5
57.5°	411.5	397.6	359.1	314.4	299.0
60°	366.8	346.8	314.4	275.9	263.5
62.5°	317.5	302.1	274.3	242.0	257.4
65°	272.8	257.4	232.7	237.3	197.3
67.5°	223.5	215.8	194.2	172.6	166.4
70°	181.9	172.6	164.9	141.8	135.6
72.5°	144.9	135.6	124.8	112.5	107.9
75°	109.4	101.7	95.5	90.9	100.2
77.5°	75.5	72.4	67.8	63.2	61.6
80°	49.3	47.8	46.2	44.7	43.2
82.5°	29.3	29.3	29.3	29.3	29.3
85°	15.4	17.0	18.5	20.0	21.6
87.5°	9.2	9.2	10.8	12.3	13.9
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)