

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: P545796

Luminaire Tested: **FMR-12-2-LD4-2STD-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: P545796  
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-81-94-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**

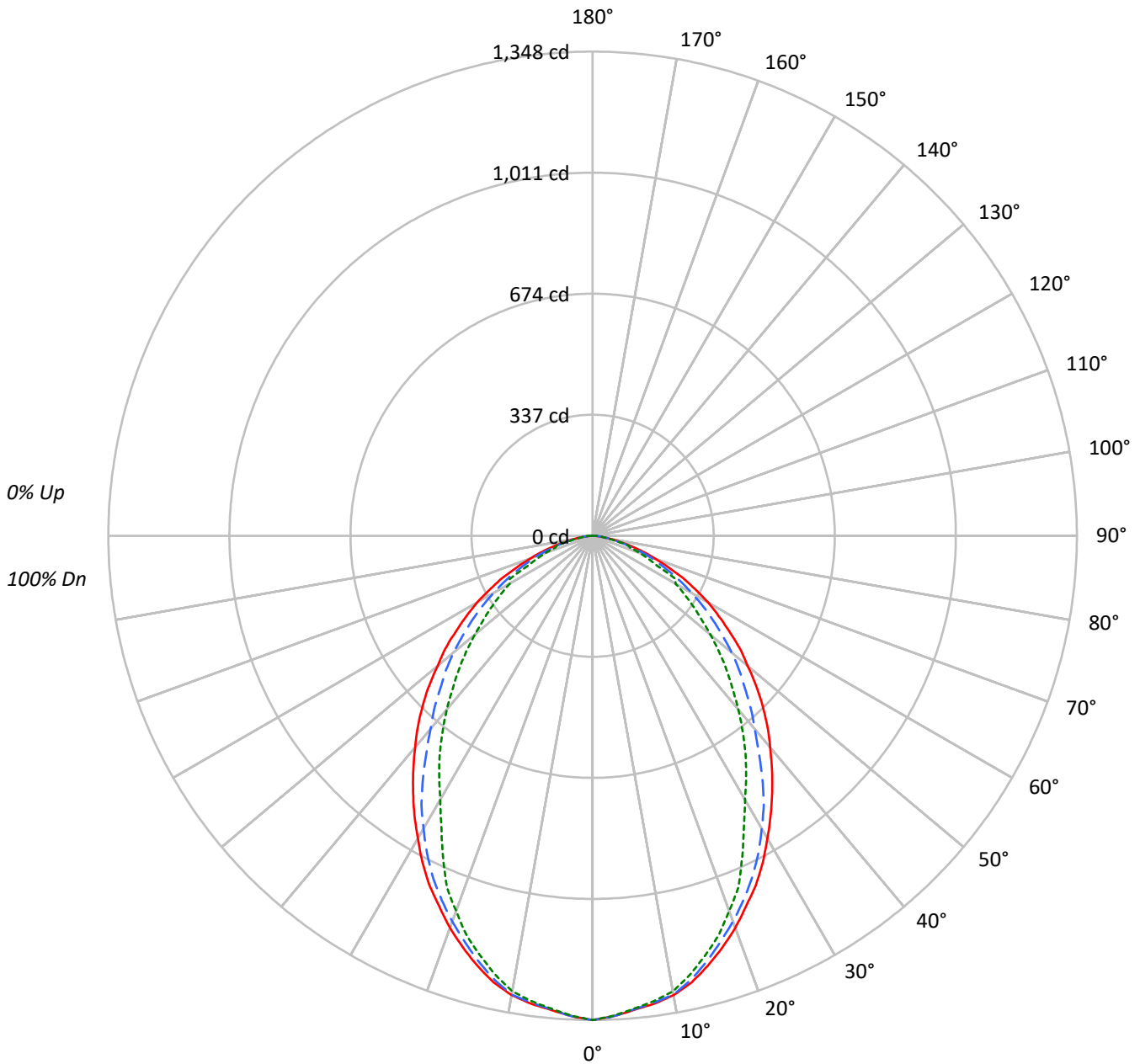
Lumens per Lamp: N/A  
Luminaire Lumens: 2647.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	7256	7256	7256
5°	7158	7150	7141
10°	7096	7088	7037
15°	6905	6835	6740
20°	6651	6544	6365
25°	6378	6239	5850
30°	6045	5851	5270
35°	5725	5407	4875
40°	5399	4928	4435
45°	5090	4556	4010
50°	4711	4228	3576
55°	4358	3832	3203
60°	3993	3423	2870
65°	3514	2998	2541
70°	2894	2625	2159
75°	2302	2009	2106
80°	1547	1450	1351
85°	963	1155	1346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.5	4.7
10°-20°	344.5	13.0
20°-30°	476.9	18.0
30°-40°	508.5	19.2
40°-50°	463.9	17.5
50°-60°	363.4	13.7
60°-70°	236.9	8.9
70°-80°	104.9	4.0
80°-90°	22.5	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°	946.9	35.8
0°-40°	1455.3	55.0
0°-60°	2282.7	86.2
0°-90°	2647.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2647.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1348	1348	1348	1348	1348	
5°	1325	1323	1323	1322	1322	126
15°	1239	1239	1227	1214	1210	348
25°	1074	1068	1051	1013	985	493
35°	871	865	823	761	742	545
45°	669	655	599	549	527	515
55°	464	450	408	360	341	417
65°	276	260	235	240	200	272
75°	111	103	97	92	101	119
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1348.3	1348.3	1348.3	1348.3	1348.3
2.5°	1339.0	1339.0	1339.0	1337.4	1337.4
5°	1325.0	1323.4	1323.4	1321.8	1321.8
7.5°	1314.1	1312.5	1310.9	1309.4	1306.3
10°	1298.5	1298.5	1296.9	1289.1	1287.6
12.5°	1273.5	1272.0	1265.7	1254.8	1251.7
15°	1239.2	1239.2	1226.8	1214.3	1209.6
17.5°	1201.8	1200.3	1184.7	1172.2	1166.0
20°	1161.3	1158.2	1142.6	1122.3	1111.4
22.5°	1116.1	1116.1	1097.4	1070.9	1060.0
25°	1074.0	1067.8	1050.6	1013.2	985.2
27.5°	1025.7	1016.3	997.6	944.6	911.9
30°	972.7	968.0	941.5	872.9	848.0
32.5°	922.8	915.0	886.9	815.2	795.0
35°	871.4	865.1	823.0	760.7	742.0
37.5°	819.9	812.1	759.1	709.2	685.9
40°	768.5	759.1	701.5	656.2	631.3
42.5°	720.2	707.7	651.6	603.2	575.2
45°	668.7	654.7	598.6	548.7	526.9
47.5°	617.3	604.8	553.4	501.9	477.0
50°	562.7	551.8	505.0	453.6	427.1
52.5°	517.5	500.4	455.2	403.7	381.9
55°	464.5	450.5	408.4	360.1	341.4
57.5°	416.2	402.2	363.2	318.0	302.4
60°	371.0	350.7	318.0	279.0	266.6
62.5°	321.1	305.5	277.5	244.7	260.3
65°	275.9	260.3	235.4	240.1	199.5
67.5°	226.0	218.2	196.4	174.6	168.3
70°	183.9	174.6	166.8	143.4	137.2
72.5°	146.5	137.2	126.3	113.8	109.1
75°	110.7	102.9	96.6	92.0	101.3
77.5°	76.4	73.3	68.6	63.9	62.4
80°	49.9	48.3	46.8	45.2	43.6
82.5°	29.6	29.6	29.6	29.6	29.6
85°	15.6	17.1	18.7	20.3	21.8
87.5°	9.4	9.4	10.9	12.5	14.0
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)