

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: P545793

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-81-86-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: P545793  
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-81-86-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

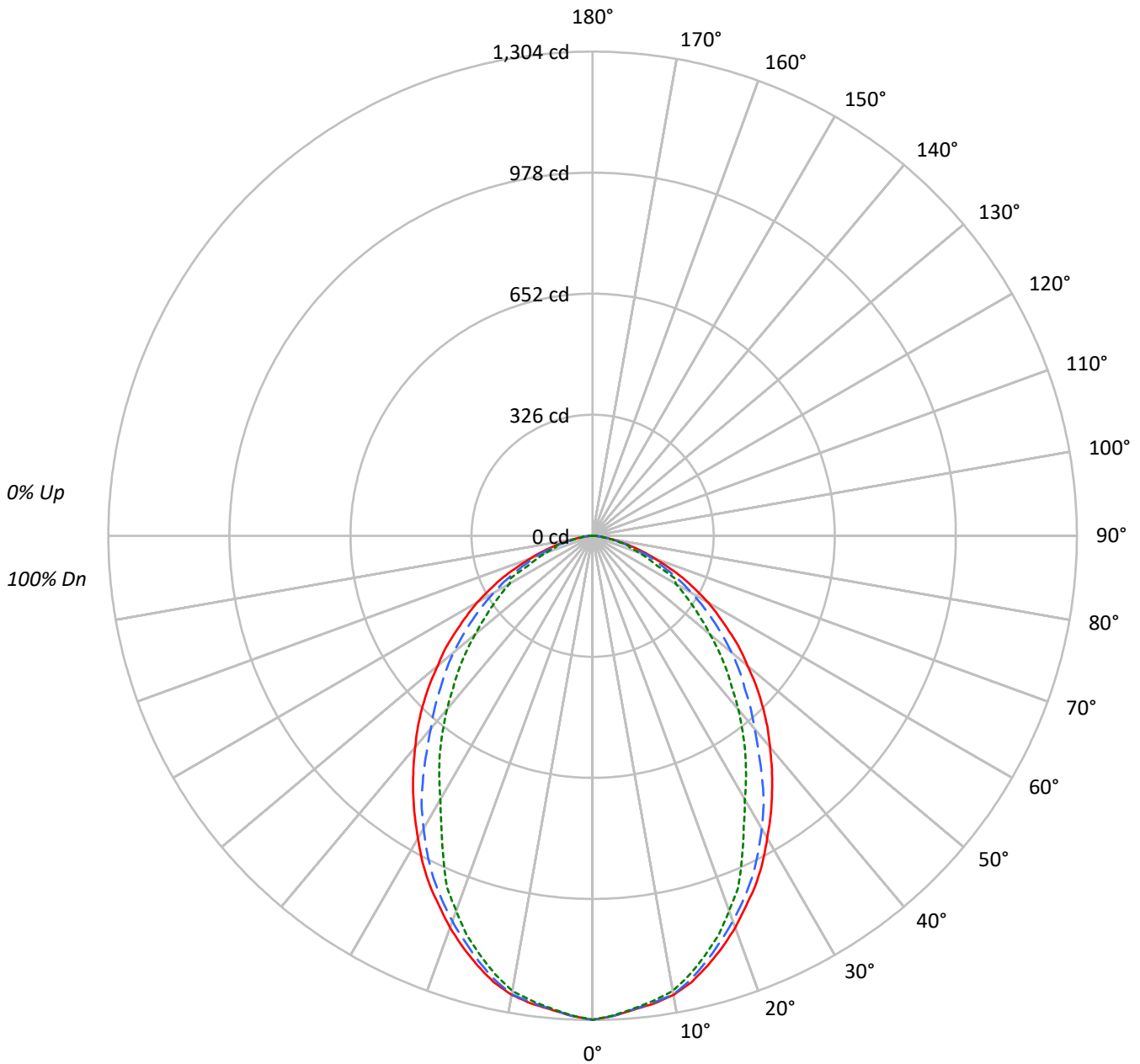
Lumens per Lamp: N/A  
Luminaire Lumens: 2559.0 lumens  
Efficiency: N/A  
Efficacy: 76.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	7015	7015	7015
5°	6920	6912	6904
10°	6860	6852	6802
15°	6675	6608	6516
20°	6430	6326	6154
25°	6166	6032	5656
30°	5844	5656	5095
35°	5535	5228	4713
40°	5219	4764	4288
45°	4921	4405	3877
50°	4555	4088	3457
55°	4214	3704	3096
60°	3861	3309	2774
65°	3396	2898	2457
70°	2798	2537	2087
75°	2225	1942	2038
80°	1494	1401	1308
85°	932	1118	1303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.3	4.7
10°-20°	333.0	13.0
20°-30°	461.0	18.0
30°-40°	491.6	19.2
40°-50°	448.5	17.5
50°-60°	351.3	13.7
60°-70°	229.0	8.9
70°-80°	101.5	4.0
80°-90°	21.8	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°	915.4	35.8
0°-40°	1407.0	55.0
0°-60°	2206.8	86.2
0°-90°	2559.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2559.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1281	1279	1279	1278	1278	122
15°	1198	1198	1186	1174	1169	337
25°	1038	1032	1016	980	952	477
35°	842	836	796	735	717	527
45°	646	633	579	530	509	498
55°	449	436	395	348	330	403
65°	267	252	228	232	193	263
75°	107	100	93	89	98	115
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1303.5	1303.5	1303.5	1303.5	1303.5
2.5°	1294.5	1294.5	1294.5	1293.0	1293.0
5°	1280.9	1279.4	1279.4	1277.9	1277.9
7.5°	1270.4	1268.9	1267.4	1265.8	1262.8
10°	1255.3	1255.3	1253.8	1246.3	1244.7
12.5°	1231.2	1229.7	1223.7	1213.1	1210.1
15°	1198.0	1198.0	1186.0	1173.9	1169.4
17.5°	1161.9	1160.4	1145.3	1133.2	1127.2
20°	1122.7	1119.7	1104.6	1085.0	1074.5
22.5°	1079.0	1079.0	1060.9	1035.3	1024.7
25°	1038.3	1032.3	1015.7	979.5	952.4
27.5°	991.6	982.5	964.5	913.2	881.6
30°	940.3	935.8	910.2	843.9	819.8
32.5°	892.1	884.6	857.5	788.1	768.5
35°	842.4	836.4	795.7	735.4	717.3
37.5°	792.7	785.1	733.9	685.7	663.1
40°	742.9	733.9	678.1	634.4	610.3
42.5°	696.2	684.2	629.9	583.2	556.1
45°	646.5	632.9	578.7	530.4	509.4
47.5°	596.8	584.7	535.0	485.2	461.1
50°	544.0	533.5	488.3	438.5	412.9
52.5°	500.3	483.7	440.0	390.3	369.2
55°	449.1	435.5	394.8	348.1	330.0
57.5°	402.4	388.8	351.1	307.4	292.4
60°	358.7	339.1	307.4	269.7	257.7
62.5°	310.4	295.4	268.2	236.6	251.7
65°	266.7	251.7	227.6	232.1	192.9
67.5°	218.5	211.0	189.9	168.8	162.8
70°	177.8	168.8	161.2	138.6	132.6
72.5°	141.7	132.6	122.1	110.0	105.5
75°	107.0	99.5	93.4	88.9	98.0
77.5°	73.8	70.8	66.3	61.8	60.3
80°	48.2	46.7	45.2	43.7	42.2
82.5°	28.6	28.6	28.6	28.6	28.6
85°	15.1	16.6	18.1	19.6	21.1
87.5°	9.0	9.0	10.5	12.1	13.6
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)