

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: P588833

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588833  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-24-2-LD4-1LO-40-UNV-81-88-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

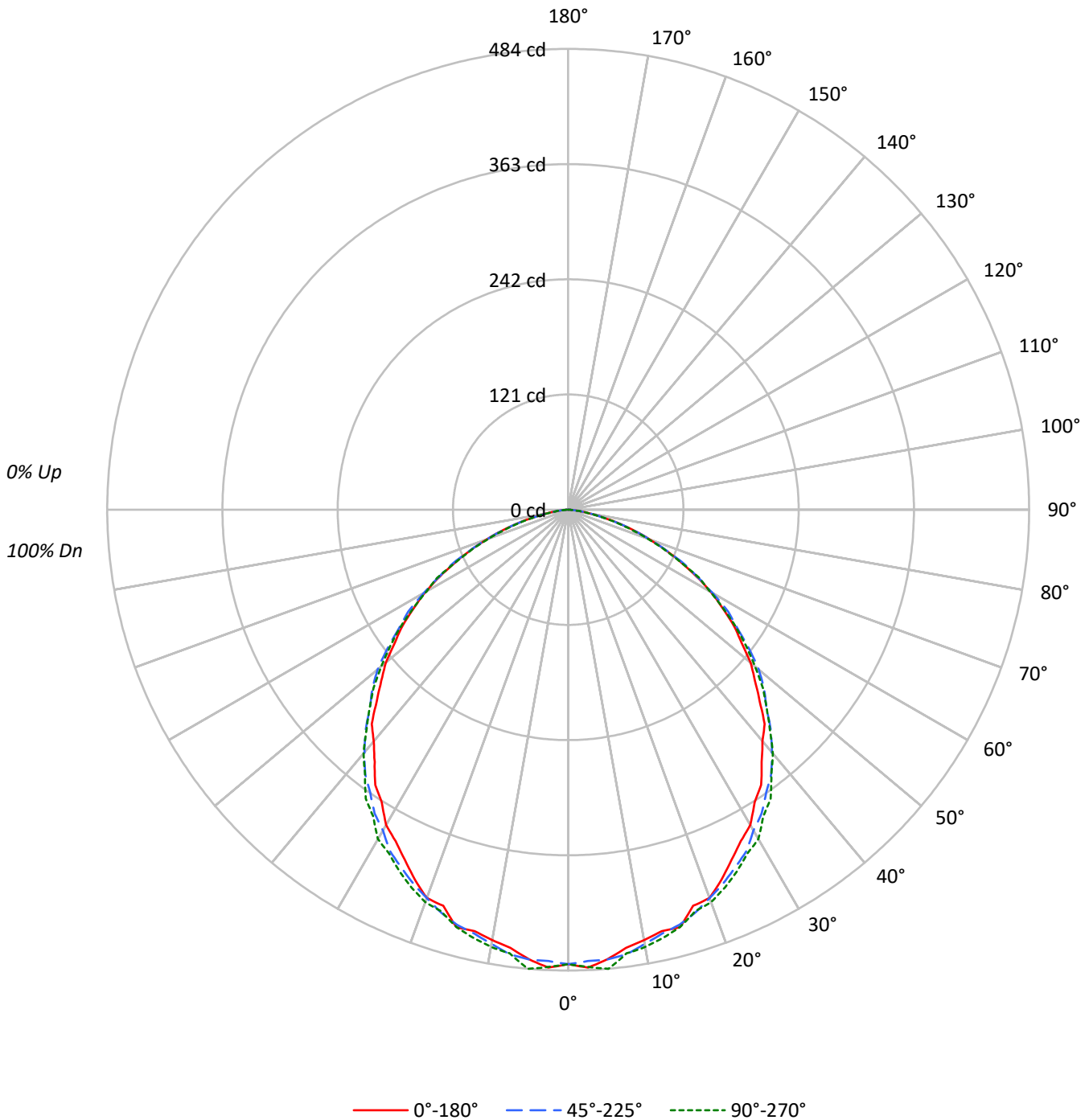
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1203.0 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1284	1284	1284
5°	1280	1281	1308
10°	1254	1265	1274
15°	1264	1257	1264
20°	1243	1243	1256
25°	1205	1231	1244
30°	1188	1209	1241
35°	1160	1191	1217
40°	1115	1169	1174
45°	1081	1120	1122
50°	1046	1093	1072
55°	996	1016	1009
60°	932	941	924
65°	831	852	825
70°	713	715	696
75°	565	564	542
80°	378	367	353
85°	207	204	191



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.9	3.7
10°-20°	127.2	10.6
20°-30°	190.6	15.8
30°-40°	226.0	18.8
40°-50°	226.4	18.8
50°-60°	192.2	16.0
60°-70°	129.6	10.8
70°-80°	56.9	4.7
80°-90°	9.3	0.8
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°	362.8	30.2
0°-40°	588.8	48.9
0°-60°	1007.3	83.7
0°-90°	1203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1203.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	474	473	474	473	484	45
15°	454	448	451	454	454	126
25°	406	408	415	420	419	188
35°	353	354	362	371	370	219
45°	284	289	294	302	295	220
55°	212	211	216	215	215	189
65°	130	129	134	129	130	130
75°	54	53	54	50	52	58
85°	7	6	7	6	6	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	477.3	477.3	477.3	477.3	477.3
2.5°	481.4	477.8	474.4	478.4	480.8
5°	473.9	472.8	474.1	472.7	484.1
7.5°	464.2	468.4	470.9	469.4	470.0
10°	459.0	457.5	463.0	466.8	466.3
12.5°	453.5	455.7	456.0	460.1	460.5
15°	453.8	448.5	451.3	453.7	453.8
17.5°	436.2	441.8	443.7	449.1	442.4
20°	434.0	429.9	434.0	439.5	438.6
22.5°	420.7	416.1	425.0	429.9	429.6
25°	405.7	407.9	414.6	420.0	419.1
27.5°	392.5	395.1	404.6	412.1	407.2
30°	382.3	381.1	389.1	395.7	399.4
32.5°	364.2	368.9	378.2	384.8	381.3
35°	353.1	354.2	362.4	370.8	370.5
37.5°	333.8	338.7	350.2	352.6	350.4
40°	317.4	322.3	332.7	335.2	334.2
42.5°	305.3	306.1	315.0	317.9	313.3
45°	284.1	289.4	294.2	301.8	294.7
47.5°	266.1	268.6	278.9	281.0	277.2
50°	249.8	250.6	261.1	258.5	256.1
52.5°	229.3	232.9	238.8	238.3	235.4
55°	212.4	211.0	216.5	215.0	215.0
57.5°	192.1	194.6	199.1	196.8	193.0
60°	173.1	173.2	174.8	172.2	171.7
62.5°	152.0	152.7	153.1	149.8	155.1
65°	130.5	128.7	133.8	128.7	129.5
67.5°	110.7	111.5	111.1	107.9	109.1
70°	90.6	91.7	90.9	87.3	88.4
72.5°	72.2	70.9	71.7	67.2	69.3
75°	54.3	53.2	54.2	50.4	52.1
77.5°	37.0	37.8	37.2	35.2	36.4
80°	24.4	23.7	23.7	22.6	22.8
82.5°	14.2	13.6	13.4	13.0	13.6
85°	6.7	6.5	6.6	6.4	6.2
87.5°	2.4	2.5	2.5	2.3	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)