

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: P588748

Luminaire Tested: **FMR-24-2-LD4-1HI-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588748  
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-LD4-1HI-40-UNV-82-97-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

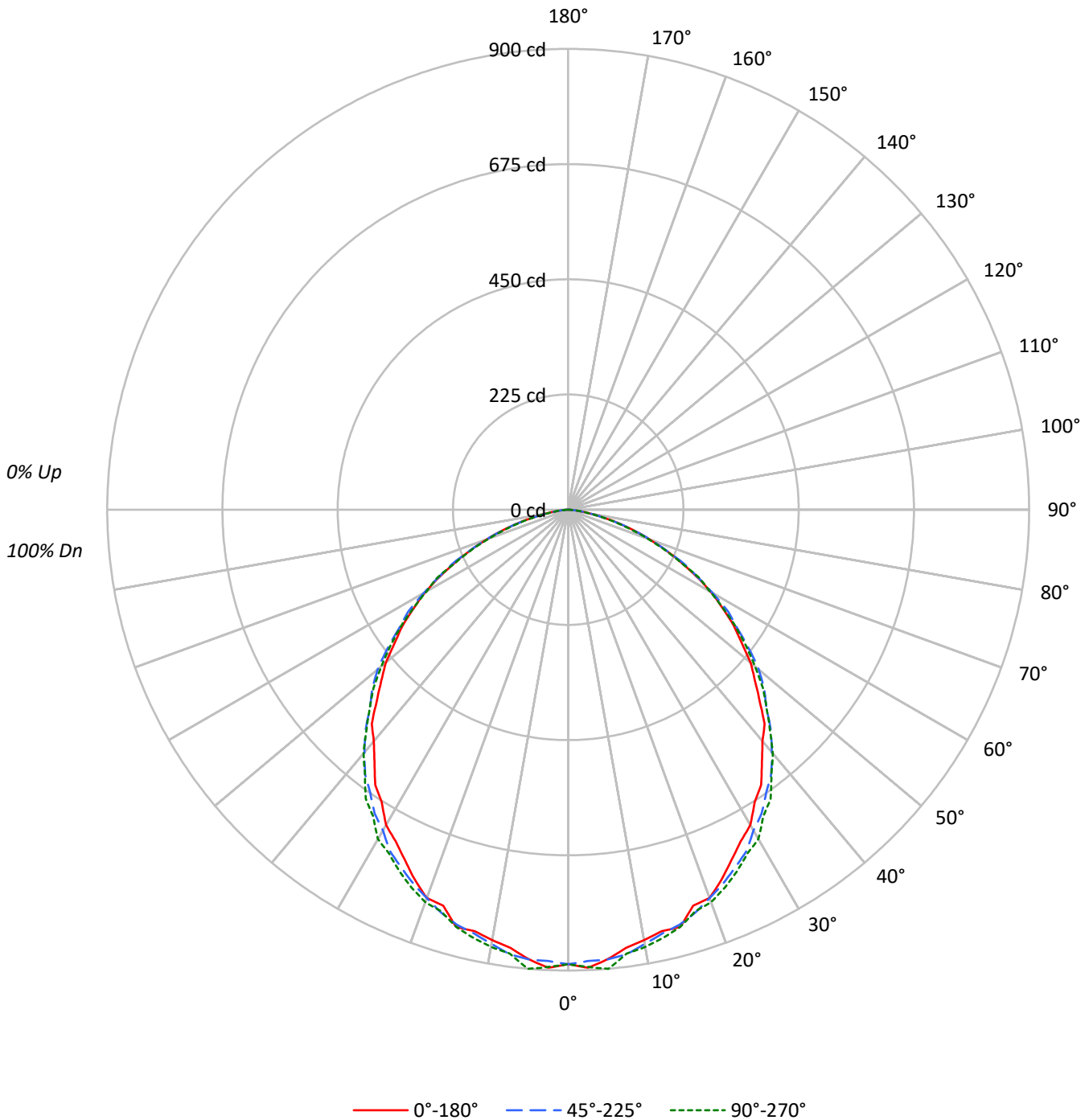
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2237.0 lumens  
Efficiency: N/A  
Efficacy: 103.6 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): 21.6  
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°	2389	2389	2389
5°	2381	2381	2432
10°	2332	2353	2369
15°	2351	2338	2351
20°	2311	2311	2336
25°	2240	2289	2314
30°	2209	2248	2308
35°	2157	2214	2263
40°	2073	2173	2183
45°	2011	2082	2085
50°	1945	2033	1994
55°	1853	1889	1875
60°	1732	1750	1718
65°	1545	1584	1534
70°	1326	1330	1293
75°	1050	1047	1006
80°	704	683	657
85°	383	380	355



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.5	3.7
10°-20°	236.6	10.6
20°-30°	354.5	15.8
30°-40°	420.2	18.8
40°-50°	420.9	18.8
50°-60°	357.3	16.0
60°-70°	240.9	10.8
70°-80°	105.8	4.7
80°-90°	17.2	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°	674.6	30.2
0°-40°	1094.8	48.9
0°-60°	1873.0	83.7
0°-90°	2237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2237.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	888	888	888	888	888	
5°	881	879	882	879	900	83
15°	844	834	839	844	844	235
25°	754	758	771	781	779	349
35°	657	659	674	689	689	408
45°	528	538	547	561	548	409
55°	395	392	403	400	400	351
65°	243	239	249	239	241	241
75°	101	99	101	94	97	108
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	887.6	887.6	887.6	887.6	887.6
2.5°	895.3	888.5	882.2	889.5	894.0
5°	881.3	879.2	881.6	879.0	900.2
7.5°	863.2	871.1	875.7	872.8	874.1
10°	853.5	850.8	861.0	868.1	867.1
12.5°	843.2	847.4	847.9	855.6	856.3
15°	843.8	834.1	839.2	843.6	843.9
17.5°	811.0	821.6	825.1	835.1	822.7
20°	807.0	799.3	807.0	817.2	815.6
22.5°	782.4	773.8	790.3	799.3	798.8
25°	754.4	758.5	770.9	781.0	779.4
27.5°	729.9	734.7	752.4	766.2	757.3
30°	711.0	708.6	723.5	735.9	742.7
32.5°	677.2	685.9	703.3	715.6	709.0
35°	656.7	658.6	673.9	689.4	689.0
37.5°	620.8	629.8	651.3	655.6	651.6
40°	590.2	599.2	618.6	623.3	621.4
42.5°	567.6	569.2	585.8	591.2	582.6
45°	528.3	538.2	547.1	561.2	547.9
47.5°	494.8	499.4	518.7	522.5	515.5
50°	464.5	466.1	485.5	480.8	476.2
52.5°	426.3	433.1	444.0	443.0	437.7
55°	394.9	392.3	402.6	399.8	399.7
57.5°	357.2	361.8	370.3	365.9	358.9
60°	321.9	322.0	325.1	320.2	319.3
62.5°	282.6	284.0	284.7	278.6	288.5
65°	242.6	239.4	248.8	239.3	240.9
67.5°	205.8	207.4	206.5	200.6	202.8
70°	168.5	170.5	169.0	162.3	164.3
72.5°	134.3	131.8	133.4	124.9	128.8
75°	101.0	98.9	100.7	93.6	96.8
77.5°	68.8	70.4	69.2	65.4	67.6
80°	45.4	44.1	44.1	41.9	42.4
82.5°	26.5	25.2	24.9	24.2	25.2
85°	12.4	12.0	12.3	11.9	11.5
87.5°	4.5	4.6	4.6	4.4	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)