

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: P588767

Luminaire Tested: **FMR-24-2-LD4-1HI-50-UNV-81-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588767  
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-50-UNV-81-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

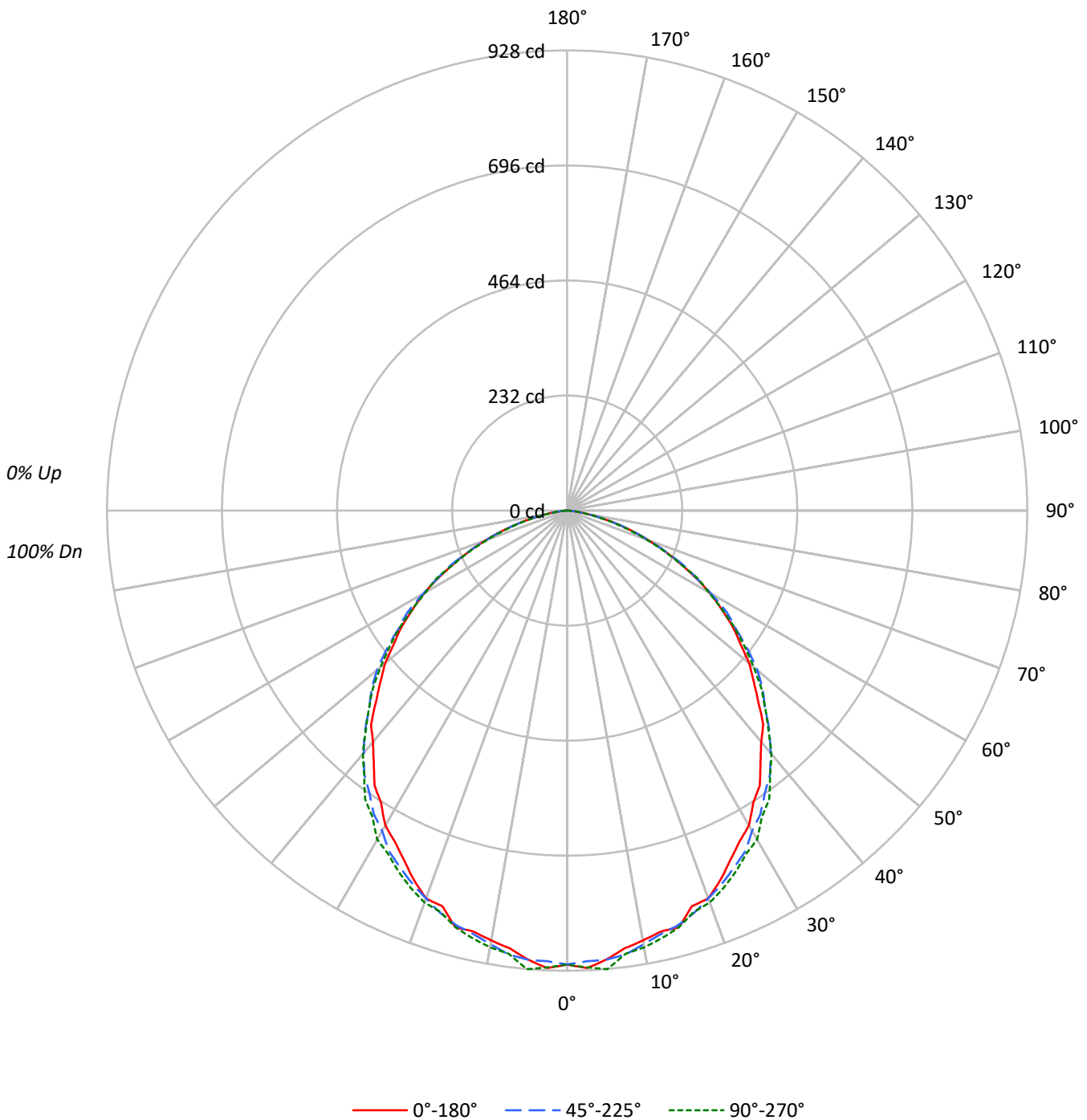
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2307.0 lumens  
Efficiency: N/A  
Efficacy: 106.8 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): 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°	2463	2463	2463
5°	2455	2456	2508
10°	2405	2426	2443
15°	2424	2411	2425
20°	2383	2383	2409
25°	2310	2360	2387
30°	2278	2318	2380
35°	2225	2283	2334
40°	2138	2241	2251
45°	2073	2147	2151
50°	2005	2096	2056
55°	1911	1948	1934
60°	1787	1805	1772
65°	1593	1634	1582
70°	1367	1371	1334
75°	1082	1080	1039
80°	725	705	677
85°	395	389	364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.1	3.7
10°-20°	244.0	10.6
20°-30°	365.6	15.8
30°-40°	433.3	18.8
40°-50°	434.1	18.8
50°-60°	368.5	16.0
60°-70°	248.4	10.8
70°-80°	109.2	4.7
80°-90°	17.7	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°	695.7	30.2
0°-40°	1129.0	48.9
0°-60°	1931.7	83.7
0°-90°	2307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2307.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	909	907	909	906	928	86
15°	870	860	866	870	870	242
25°	778	782	795	805	804	360
35°	677	679	695	711	710	420
45°	545	555	564	579	565	421
55°	407	405	415	412	412	362
65°	250	247	257	247	248	249
75°	104	102	104	97	100	112
85°	13	12	13	12	12	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	915.4	915.4	915.4	915.4	915.4
2.5°	923.3	916.3	909.8	917.4	922.0
5°	908.9	906.7	909.2	906.5	928.4
7.5°	890.2	898.3	903.1	900.1	901.4
10°	880.3	877.4	887.9	895.3	894.2
12.5°	869.6	873.9	874.5	882.4	883.1
15°	870.2	860.2	865.5	870.0	870.3
17.5°	836.4	847.3	850.9	861.2	848.5
20°	832.3	824.4	832.3	842.8	841.1
22.5°	806.9	798.0	815.0	824.4	823.8
25°	778.0	782.3	795.0	805.4	803.8
27.5°	752.7	757.7	775.9	790.2	781.0
30°	733.2	730.8	746.1	758.9	766.0
32.5°	698.4	707.3	725.3	738.0	731.2
35°	677.2	679.2	694.9	711.0	710.5
37.5°	640.2	649.6	671.7	676.1	672.0
40°	608.7	618.0	638.0	642.8	640.8
42.5°	585.4	587.0	604.2	609.7	600.9
45°	544.8	555.0	564.2	578.8	565.1
47.5°	510.3	515.1	534.9	538.8	531.6
50°	479.0	480.7	500.6	495.8	491.1
52.5°	439.7	446.6	457.9	456.9	451.4
55°	407.3	404.6	415.2	412.4	412.2
57.5°	368.4	373.1	381.9	377.4	370.2
60°	332.0	332.1	335.3	330.2	329.3
62.5°	291.4	292.9	293.6	287.3	297.5
65°	250.2	246.9	256.6	246.8	248.4
67.5°	212.3	213.9	213.0	206.8	209.2
70°	173.7	175.9	174.3	167.4	169.5
72.5°	138.5	135.9	137.6	128.8	132.8
75°	104.1	102.0	103.9	96.6	99.9
77.5°	70.9	72.6	71.4	67.5	69.7
80°	46.8	45.5	45.5	43.3	43.7
82.5°	27.3	26.0	25.6	24.9	26.0
85°	12.8	12.4	12.6	12.3	11.8
87.5°	4.6	4.7	4.7	4.5	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)