

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: P588701

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-81-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588701  
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-35-UNV-81-84-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

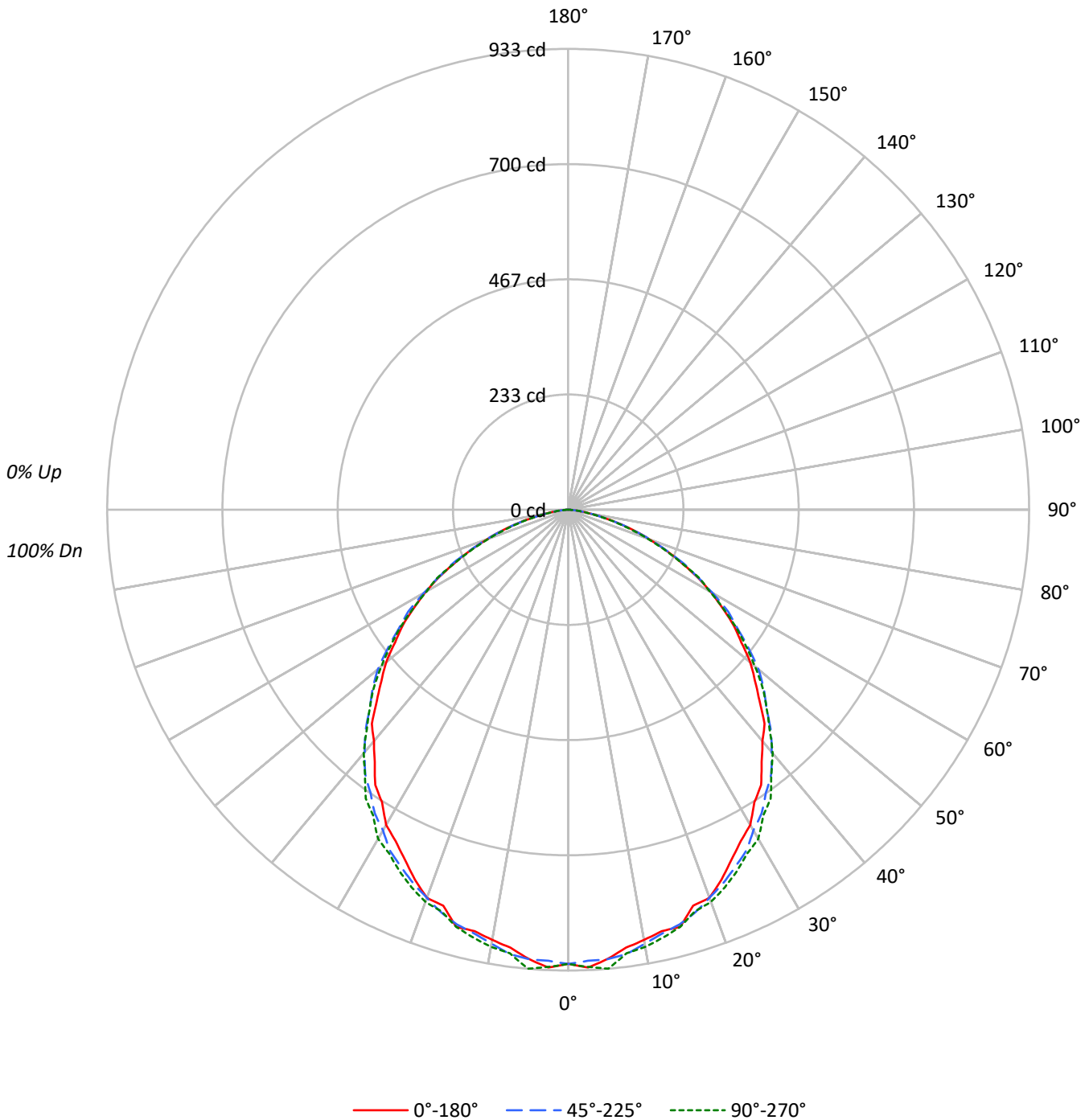
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2318.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 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°	2475	2475	2475
5°	2467	2468	2520
10°	2417	2438	2455
15°	2436	2423	2436
20°	2395	2395	2420
25°	2321	2372	2398
30°	2289	2330	2391
35°	2235	2294	2345
40°	2148	2252	2262
45°	2083	2157	2160
50°	2015	2106	2066
55°	1920	1957	1943
60°	1795	1813	1780
65°	1601	1642	1589
70°	1374	1378	1340
75°	1088	1085	1043
80°	728	708	680
85°	395	392	367



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.5	3.7
10°-20°	245.2	10.6
20°-30°	367.3	15.8
30°-40°	435.4	18.8
40°-50°	436.2	18.8
50°-60°	370.3	16.0
60°-70°	249.6	10.8
70°-80°	109.7	4.7
80°-90°	17.8	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°	699.0	30.2
0°-40°	1134.4	48.9
0°-60°	1940.9	83.7
0°-90°	2318.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2318.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	913	911	914	911	933	86
15°	874	864	870	874	874	244
25°	782	786	799	809	808	361
35°	680	682	698	714	714	422
45°	547	558	567	582	568	423
55°	409	406	417	414	414	364
65°	251	248	258	248	250	250
75°	105	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°	919.7	919.7	919.7	919.7	919.7
2.5°	927.7	920.7	914.1	921.7	926.4
5°	913.2	911.1	913.5	910.8	932.8
7.5°	894.4	902.6	907.4	904.4	905.7
10°	884.5	881.6	892.2	899.5	898.5
12.5°	873.8	878.0	878.6	886.6	887.3
15°	874.4	864.3	869.6	874.1	874.5
17.5°	840.4	851.3	855.0	865.3	852.5
20°	836.2	828.3	836.2	846.8	845.1
22.5°	810.7	801.8	818.9	828.3	827.7
25°	781.7	786.0	798.8	809.3	807.6
27.5°	756.3	761.3	779.6	794.0	784.7
30°	736.7	734.2	749.7	762.5	769.6
32.5°	701.7	710.7	728.8	741.5	734.7
35°	680.4	682.5	698.3	714.4	713.9
37.5°	643.3	652.7	674.9	679.4	675.2
40°	611.6	620.9	641.0	645.9	643.9
42.5°	588.2	589.8	607.1	612.6	603.7
45°	547.4	557.7	566.9	581.5	567.7
47.5°	512.8	517.5	537.5	541.4	534.1
50°	481.3	483.0	503.0	498.2	493.4
52.5°	441.8	448.8	460.0	459.1	453.5
55°	409.2	406.5	417.2	414.3	414.2
57.5°	370.1	374.9	383.7	379.2	371.9
60°	333.6	333.7	336.9	331.8	330.8
62.5°	292.8	294.3	295.0	288.7	298.9
65°	251.4	248.1	257.8	248.0	249.6
67.5°	213.3	214.9	214.0	207.8	210.2
70°	174.6	176.7	175.2	168.2	170.3
72.5°	139.2	136.6	138.2	129.4	133.5
75°	104.6	102.5	104.4	97.0	100.3
77.5°	71.3	72.9	71.7	67.8	70.1
80°	47.0	45.7	45.7	43.5	43.9
82.5°	27.4	26.1	25.8	25.1	26.1
85°	12.8	12.5	12.7	12.4	11.9
87.5°	4.6	4.8	4.8	4.5	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)