

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: P588709

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-82-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588709  
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-82-84-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

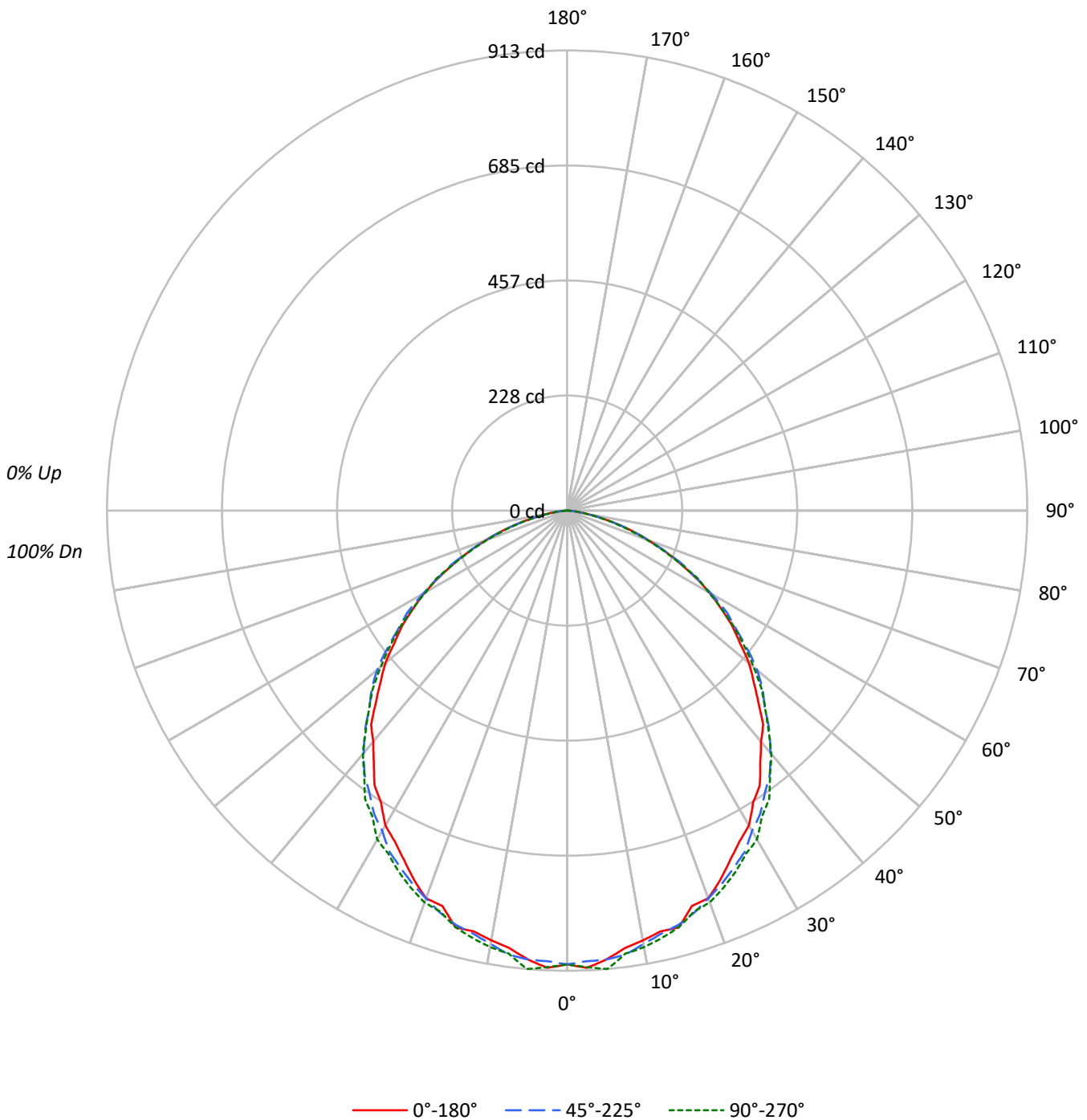
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2269.0 lumens  
Efficiency: N/A  
Efficacy: 105.0 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																		
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	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									100																			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86									86																			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73									73																			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62									62																			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53									53																			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46									46																			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41									41																			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36									36																			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32									32																			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29									29																			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26									26																			

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

	0°	45°	90°
0°	2423	2423	2423
5°	2415	2415	2467
10°	2366	2386	2403
15°	2384	2371	2385
20°	2344	2344	2369
25°	2272	2322	2347
30°	2241	2280	2341
35°	2188	2245	2296
40°	2103	2204	2214
45°	2039	2112	2115
50°	1972	2061	2022
55°	1879	1916	1902
60°	1757	1775	1743
65°	1567	1607	1556
70°	1345	1349	1312
75°	1065	1063	1021
80°	713	694	666
85°	389	383	358



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.7	3.7
10°-20°	240.0	10.6
20°-30°	359.6	15.8
30°-40°	426.2	18.8
40°-50°	427.0	18.8
50°-60°	362.4	16.0
60°-70°	244.3	10.8
70°-80°	107.4	4.7
80°-90°	17.4	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°	684.3	30.2
0°-40°	1110.5	48.9
0°-60°	1899.8	83.7
0°-90°	2269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2269.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	894	892	894	892	913	84
15°	856	846	851	856	856	238
25°	765	769	782	792	791	354
35°	666	668	684	699	699	414
45°	536	546	555	569	556	415
55°	401	398	408	406	405	356
65°	246	243	252	243	244	245
75°	102	100	102	95	98	110
85°	13	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°	900.3	900.3	900.3	900.3	900.3
2.5°	908.1	901.2	894.8	902.3	906.8
5°	893.9	891.8	894.2	891.6	913.1
7.5°	875.5	883.5	888.2	885.3	886.6
10°	865.8	863.0	873.3	880.5	879.5
12.5°	855.3	859.5	860.1	867.9	868.5
15°	855.9	846.0	851.2	855.6	856.0
17.5°	822.6	833.3	836.9	847.0	834.5
20°	818.6	810.8	818.6	828.9	827.3
22.5°	793.6	784.9	801.6	810.8	810.2
25°	765.2	769.4	781.9	792.2	790.6
27.5°	740.3	745.2	763.1	777.2	768.1
30°	721.2	718.7	733.8	746.4	753.4
32.5°	686.9	695.7	713.4	725.8	719.2
35°	666.1	668.0	683.5	699.3	698.8
37.5°	629.7	638.9	660.6	665.0	660.9
40°	598.6	607.8	627.5	632.2	630.3
42.5°	575.7	577.4	594.2	599.7	591.0
45°	535.9	545.9	554.9	569.2	555.7
47.5°	501.9	506.6	526.1	529.9	522.8
50°	471.1	472.7	492.4	487.6	483.0
52.5°	432.4	439.3	450.3	449.4	443.9
55°	400.6	397.9	408.4	405.6	405.4
57.5°	362.3	367.0	375.6	371.2	364.1
60°	326.5	326.6	329.8	324.8	323.8
62.5°	286.6	288.0	288.7	282.6	292.6
65°	246.1	242.8	252.4	242.7	244.3
67.5°	208.8	210.4	209.5	203.4	205.7
70°	170.9	173.0	171.5	164.6	166.7
72.5°	136.2	133.7	135.3	126.7	130.7
75°	102.4	100.3	102.2	95.0	98.2
77.5°	69.7	71.4	70.2	66.4	68.6
80°	46.0	44.8	44.8	42.5	43.0
82.5°	26.9	25.6	25.2	24.5	25.6
85°	12.6	12.2	12.4	12.1	11.6
87.5°	4.5	4.6	4.6	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)