

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: P588747

Luminaire Tested: **FMR-24-2-LD4-1HI-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588747  
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-82-96-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

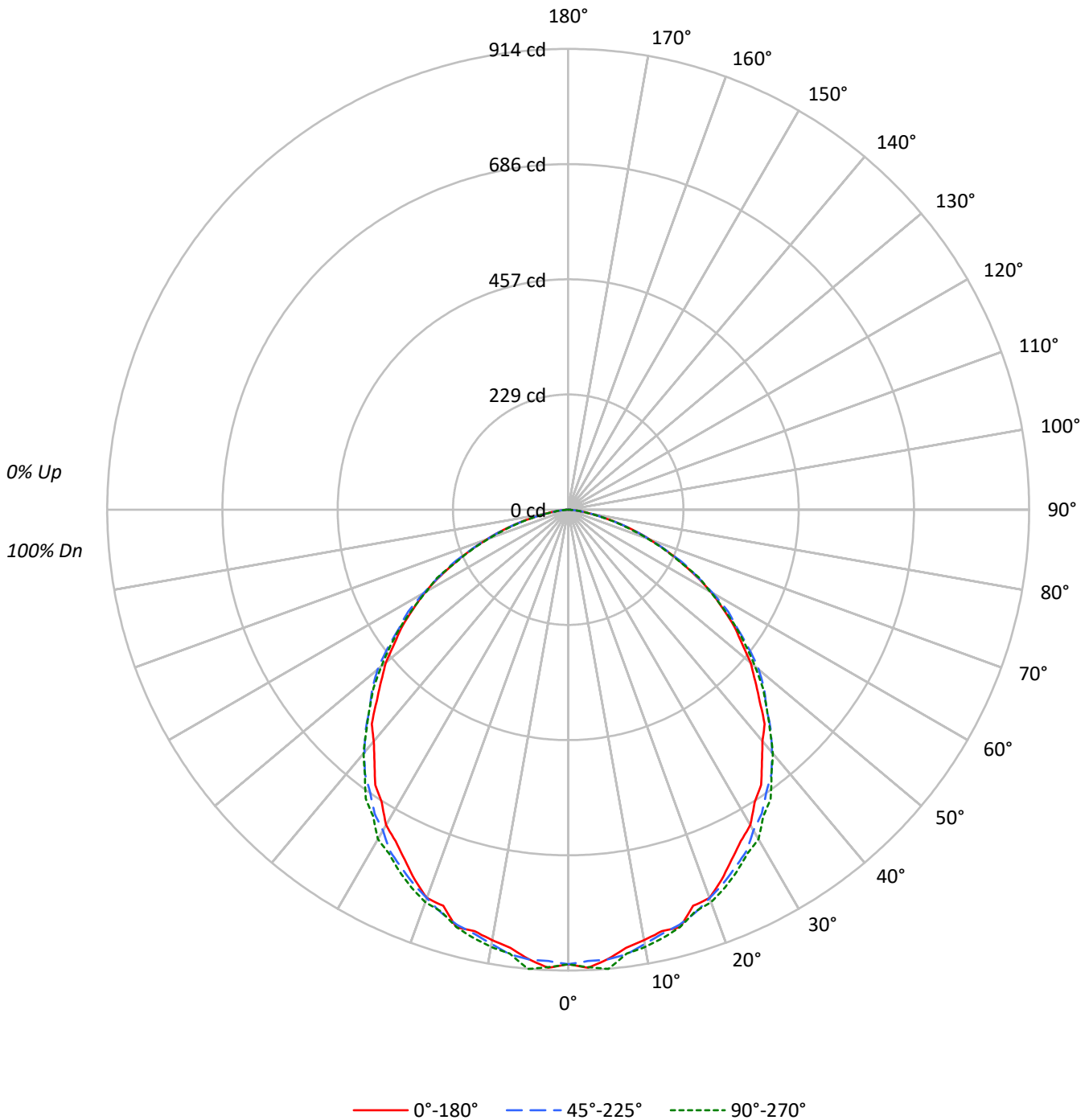
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2272.0 lumens  
Efficiency: N/A  
Efficacy: 105.2 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°	2426	2426	2426
5°	2418	2419	2470
10°	2369	2390	2406
15°	2388	2375	2388
20°	2347	2347	2372
25°	2275	2325	2350
30°	2244	2283	2344
35°	2191	2248	2299
40°	2106	2207	2217
45°	2042	2115	2118
50°	1975	2064	2025
55°	1882	1918	1905
60°	1760	1777	1745
65°	1569	1609	1558
70°	1346	1351	1313
75°	1066	1064	1023
80°	714	694	668
85°	389	386	358



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	3.7
10°-20°	240.3	10.6
20°-30°	360.1	15.8
30°-40°	426.7	18.8
40°-50°	427.5	18.8
50°-60°	362.9	16.0
60°-70°	244.7	10.8
70°-80°	107.5	4.7
80°-90°	17.5	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°	685.2	30.2
0°-40°	1111.9	48.9
0°-60°	1902.4	83.7
0°-90°	2272.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2272.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	895	893	895	893	914	84
15°	857	847	852	857	857	239
25°	766	770	783	793	792	354
35°	667	669	684	700	700	414
45°	537	547	556	570	556	415
55°	401	398	409	406	406	357
65°	246	243	253	243	245	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°	901.5	901.5	901.5	901.5	901.5
2.5°	909.3	902.4	896.0	903.5	908.0
5°	895.1	893.0	895.4	892.7	914.3
7.5°	876.7	884.7	889.4	886.5	887.7
10°	866.9	864.1	874.5	881.7	880.6
12.5°	856.4	860.6	861.2	869.0	869.7
15°	857.0	847.1	852.4	856.8	857.1
17.5°	823.7	834.4	838.0	848.2	835.6
20°	819.6	811.8	819.6	830.0	828.4
22.5°	794.6	785.9	802.7	811.8	811.3
25°	766.2	770.4	783.0	793.2	791.6
27.5°	741.3	746.2	764.1	778.2	769.1
30°	722.1	719.7	734.8	747.4	754.4
32.5°	687.8	696.6	714.3	726.8	720.1
35°	666.9	668.9	684.4	700.2	699.8
37.5°	630.5	639.7	661.5	665.9	661.8
40°	599.4	608.6	628.3	633.1	631.1
42.5°	576.5	578.1	595.0	600.5	591.7
45°	536.6	546.6	555.7	570.0	556.5
47.5°	502.6	507.2	526.8	530.6	523.5
50°	471.7	473.4	493.0	488.3	483.6
52.5°	433.0	439.9	450.9	450.0	444.5
55°	401.1	398.4	408.9	406.1	406.0
57.5°	362.8	367.5	376.1	371.6	364.5
60°	327.0	327.1	330.2	325.2	324.3
62.5°	287.0	288.4	289.1	283.0	293.0
65°	246.4	243.1	252.7	243.0	244.7
67.5°	209.0	210.7	209.7	203.7	206.0
70°	171.1	173.2	171.7	164.8	166.9
72.5°	136.4	133.9	135.5	126.9	130.8
75°	102.5	100.4	102.3	95.1	98.4
77.5°	69.8	71.5	70.3	66.5	68.7
80°	46.1	44.8	44.8	42.6	43.1
82.5°	26.9	25.6	25.3	24.6	25.6
85°	12.6	12.2	12.5	12.1	11.6
87.5°	4.5	4.7	4.7	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)