

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: P588755

Luminaire Tested: **FMR-24-2-LD4-1HI-40-UNV-93-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588755  
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-93-96-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

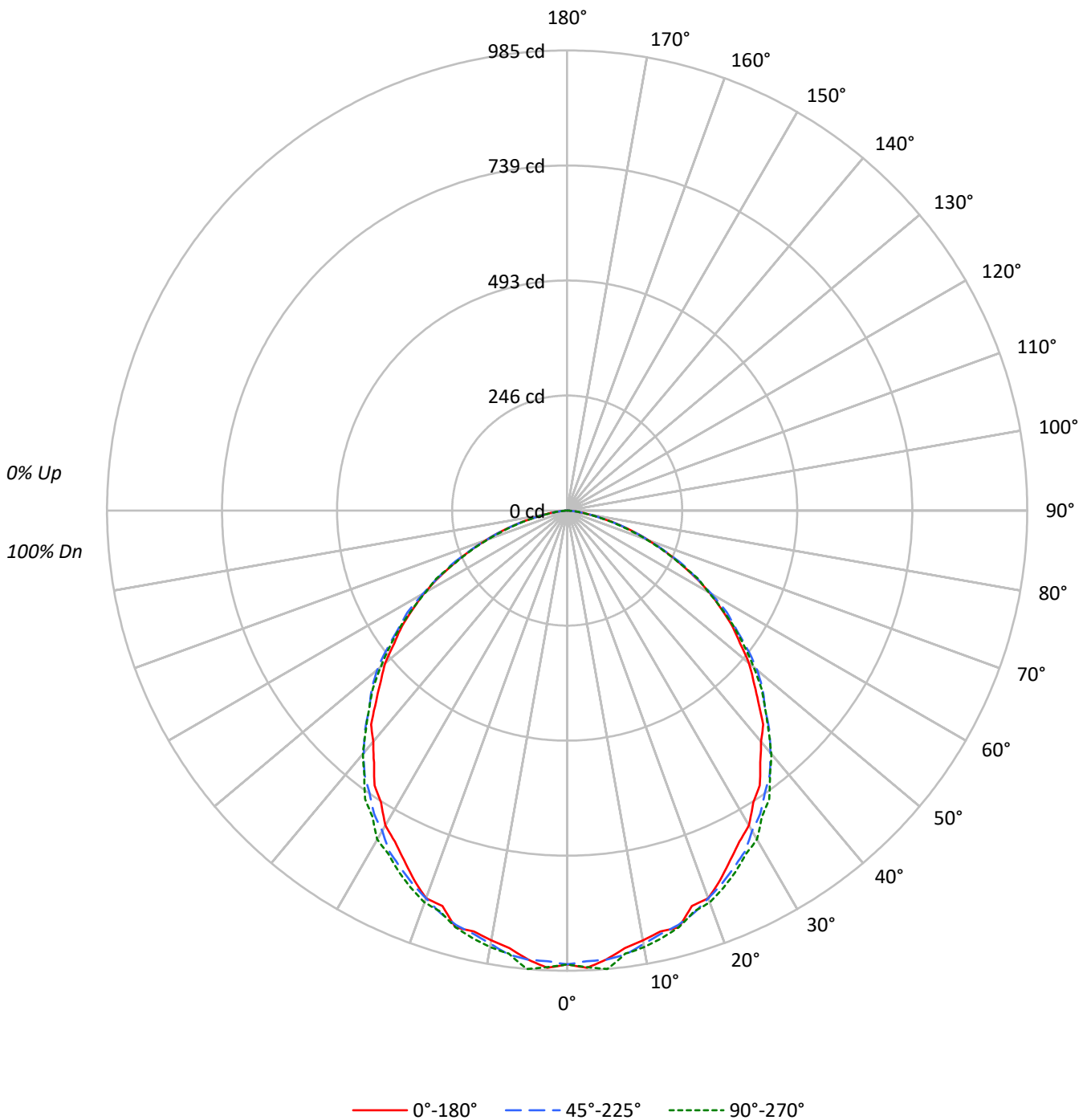
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2448.0 lumens  
Efficiency: N/A  
Efficacy: 113.3 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 (A<sub>in</sub>): 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°	2614	2614	2614
5°	2605	2606	2661
10°	2552	2575	2593
15°	2573	2559	2573
20°	2529	2529	2556
25°	2451	2505	2532
30°	2417	2460	2526
35°	2361	2422	2477
40°	2269	2378	2389
45°	2200	2278	2282
50°	2128	2224	2182
55°	2028	2067	2052
60°	1896	1915	1880
65°	1691	1734	1678
70°	1451	1456	1415
75°	1149	1146	1102
80°	770	748	719
85°	417	414	386



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.4	3.7
10°-20°	258.9	10.6
20°-30°	387.9	15.8
30°-40°	459.8	18.8
40°-50°	460.6	18.8
50°-60°	391.0	16.0
60°-70°	263.6	10.8
70°-80°	115.8	4.7
80°-90°	18.8	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°	738.3	30.2
0°-40°	1198.1	48.9
0°-60°	2049.7	83.7
0°-90°	2448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2448.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	964	962	965	962	985	91
15°	923	913	918	923	924	257
25°	826	830	844	855	853	382
35°	719	721	737	754	754	446
45°	578	589	599	614	600	447
55°	432	429	441	438	437	384
65°	266	262	272	262	264	264
75°	110	108	110	102	106	118
85°	14	13	13	13	12	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	971.3	971.3	971.3	971.3	971.3
2.5°	979.7	972.3	965.4	973.4	978.3
5°	964.4	962.1	964.8	961.9	985.1
7.5°	944.6	953.2	958.3	955.1	956.5
10°	934.1	931.0	942.2	950.0	948.9
12.5°	922.8	927.3	927.9	936.3	937.1
15°	923.4	912.7	918.4	923.1	923.5
17.5°	887.5	899.1	903.0	913.9	900.3
20°	883.1	874.7	883.1	894.3	892.5
22.5°	856.2	846.8	864.8	874.7	874.1
25°	825.6	830.1	843.6	854.7	852.9
27.5°	798.7	804.0	823.3	838.5	828.7
30°	778.0	775.4	791.7	805.3	812.8
32.5°	741.1	750.6	769.6	783.1	775.9
35°	718.6	720.7	737.4	754.5	754.0
37.5°	679.3	689.3	712.7	717.5	713.1
40°	645.9	655.8	677.0	682.1	680.0
42.5°	621.2	622.9	641.1	647.0	637.6
45°	578.1	588.9	598.7	614.1	599.6
47.5°	541.5	546.5	567.6	571.7	564.1
50°	508.3	510.0	531.2	526.1	521.1
52.5°	466.5	473.9	485.8	484.8	478.9
55°	432.2	429.3	440.6	437.6	437.4
57.5°	390.9	395.9	405.2	400.4	392.8
60°	352.3	352.4	355.8	350.4	349.4
62.5°	309.3	310.8	311.5	304.9	315.7
65°	265.5	262.0	272.3	261.9	263.6
67.5°	225.2	227.0	226.0	219.5	222.0
70°	184.4	186.6	185.0	177.6	179.8
72.5°	147.0	144.2	146.0	136.7	141.0
75°	110.5	108.2	110.2	102.5	106.0
77.5°	75.2	77.0	75.7	71.6	74.0
80°	49.7	48.3	48.3	45.9	46.4
82.5°	29.0	27.6	27.2	26.5	27.6
85°	13.5	13.2	13.4	13.0	12.5
87.5°	4.9	5.0	5.0	4.8	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)