

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: P588753

Luminaire Tested: **FMR-24-2-LD4-1HI-40-UNV-93-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588753  
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-93-88-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

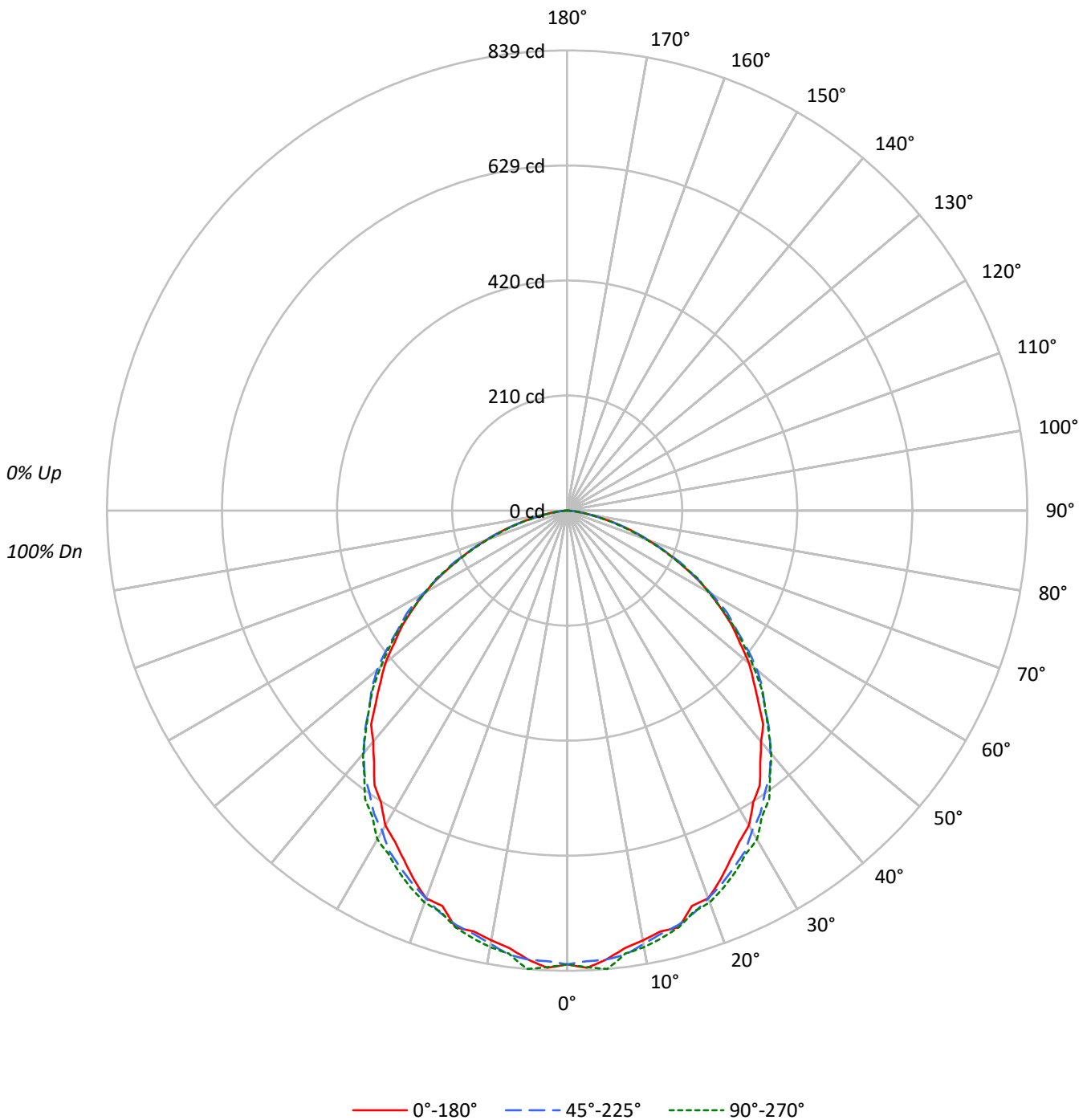
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2085.0 lumens  
Efficiency: N/A  
Efficacy: 96.5 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°	2226	2226	2226
5°	2219	2220	2266
10°	2174	2193	2208
15°	2191	2179	2191
20°	2154	2154	2177
25°	2088	2133	2157
30°	2059	2095	2151
35°	2010	2063	2110
40°	1932	2025	2034
45°	1874	1940	1944
50°	1812	1894	1858
55°	1727	1760	1748
60°	1615	1631	1602
65°	1440	1477	1429
70°	1235	1240	1205
75°	978	976	939
80°	656	637	612
85°	355	352	330



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.8	3.7
10°-20°	220.5	10.6
20°-30°	330.4	15.8
30°-40°	391.6	18.8
40°-50°	392.3	18.8
50°-60°	333.0	16.0
60°-70°	224.5	10.8
70°-80°	98.7	4.7
80°-90°	16.0	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°	628.8	30.2
0°-40°	1020.4	48.9
0°-60°	1745.8	83.7
0°-90°	2085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2085.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	821	820	822	819	839	77
15°	786	777	782	786	787	219
25°	703	707	718	728	726	325
35°	612	614	628	643	642	380
45°	492	502	510	523	511	381
55°	368	366	375	373	373	327
65°	226	223	232	223	224	225
75°	94	92	94	87	90	101
85°	12	11	11	11	11	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	827.3	827.3	827.3	827.3	827.3
2.5°	834.4	828.1	822.3	829.1	833.3
5°	821.4	819.5	821.7	819.3	839.0
7.5°	804.5	811.9	816.2	813.5	814.7
10°	795.6	793.0	802.5	809.1	808.2
12.5°	785.9	789.8	790.3	797.5	798.1
15°	786.5	777.4	782.2	786.3	786.6
17.5°	755.9	765.8	769.1	778.4	766.8
20°	752.2	745.0	752.2	761.7	760.2
22.5°	729.2	721.2	736.6	745.0	744.5
25°	703.2	707.0	718.5	727.9	726.4
27.5°	680.3	684.8	701.2	714.2	705.8
30°	662.7	660.4	674.3	685.9	692.3
32.5°	631.2	639.3	655.5	666.9	660.9
35°	612.0	613.9	628.1	642.6	642.2
37.5°	578.6	587.1	607.0	611.1	607.3
40°	550.1	558.5	576.6	581.0	579.1
42.5°	529.1	530.5	546.0	551.1	543.0
45°	492.4	501.6	509.9	523.1	510.7
47.5°	461.2	465.5	483.4	487.0	480.4
50°	432.9	434.4	452.5	448.1	443.8
52.5°	397.3	403.7	413.8	412.9	407.9
55°	368.1	365.6	375.2	372.7	372.6
57.5°	332.9	337.2	345.1	341.1	334.5
60°	300.0	300.1	303.0	298.4	297.6
62.5°	263.4	264.7	265.3	259.7	268.9
65°	226.1	223.1	231.9	223.0	224.5
67.5°	191.8	193.3	192.5	186.9	189.1
70°	157.0	158.9	157.6	151.2	153.2
72.5°	125.2	122.8	124.3	116.4	120.1
75°	94.1	92.2	93.9	87.3	90.3
77.5°	64.1	65.6	64.5	61.0	63.0
80°	42.3	41.1	41.1	39.1	39.5
82.5°	24.7	23.5	23.2	22.5	23.5
85°	11.5	11.2	11.4	11.1	10.7
87.5°	4.2	4.3	4.3	4.1	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)