

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: P588707

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-81-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588707  
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-81-96-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

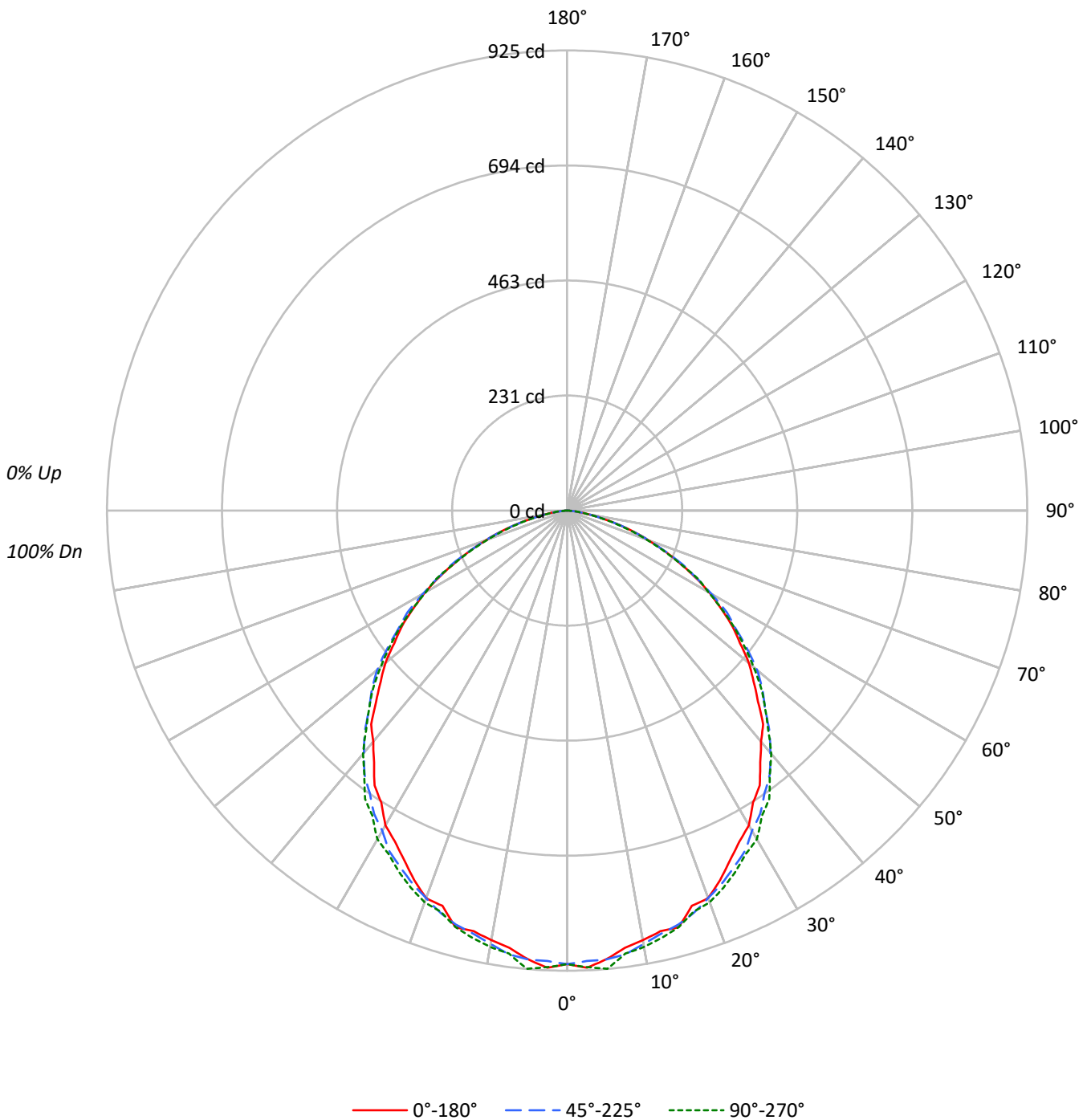
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2298.0 lumens  
Efficiency: N/A  
Efficacy: 106.4 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°	2454	2454	2454
5°	2445	2447	2498
10°	2396	2417	2434
15°	2415	2402	2415
20°	2374	2374	2399
25°	2301	2351	2377
30°	2270	2309	2371
35°	2216	2274	2325
40°	2130	2232	2242
45°	2065	2139	2142
50°	1997	2088	2048
55°	1903	1940	1926
60°	1780	1798	1765
65°	1587	1628	1576
70°	1362	1366	1328
75°	1078	1076	1035
80°	722	702	676
85°	392	389	364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.8	3.7
10°-20°	243.1	10.6
20°-30°	364.2	15.8
30°-40°	431.6	18.8
40°-50°	432.4	18.8
50°-60°	367.1	16.0
60°-70°	247.5	10.8
70°-80°	108.7	4.7
80°-90°	17.7	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°	693.0	30.2
0°-40°	1124.6	48.9
0°-60°	1924.1	83.7
0°-90°	2298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	905	903	906	903	925	85
15°	867	857	862	867	867	241
25°	775	779	792	802	801	358
35°	675	677	692	708	708	419
45°	543	553	562	576	563	420
55°	406	403	414	411	411	361
65°	249	246	256	246	248	248
75°	104	102	104	96	100	111
85°	13	12	13	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	911.8	911.8	911.8	911.8	911.8
2.5°	919.7	912.7	906.3	913.8	918.4
5°	905.3	903.2	905.7	903.0	924.7
7.5°	886.7	894.8	899.5	896.6	897.9
10°	876.8	874.0	884.5	891.8	890.7
12.5°	866.2	870.5	871.1	878.9	879.6
15°	866.8	856.8	862.1	866.6	866.9
17.5°	833.1	844.0	847.6	857.9	845.2
20°	829.0	821.1	829.0	839.5	837.9
22.5°	803.7	794.9	811.8	821.1	820.6
25°	775.0	779.2	791.9	802.3	800.7
27.5°	749.8	754.7	772.9	787.1	777.9
30°	730.4	727.9	743.2	755.9	763.0
32.5°	695.6	704.6	722.5	735.1	728.4
35°	674.6	676.6	692.2	708.2	707.8
37.5°	637.7	647.0	669.0	673.5	669.4
40°	606.3	615.6	635.5	640.3	638.3
42.5°	583.1	584.7	601.8	607.3	598.5
45°	542.7	552.8	562.0	576.5	562.8
47.5°	508.3	513.1	532.8	536.7	529.5
50°	477.1	478.8	498.7	493.9	489.2
52.5°	437.9	444.9	456.1	455.1	449.6
55°	405.7	403.0	413.6	410.7	410.6
57.5°	367.0	371.7	380.4	375.9	368.7
60°	330.7	330.8	334.0	328.9	328.0
62.5°	290.3	291.7	292.4	286.2	296.3
65°	249.2	245.9	255.6	245.8	247.5
67.5°	211.4	213.1	212.1	206.0	208.4
70°	173.1	175.2	173.6	166.7	168.8
72.5°	138.0	135.4	137.0	128.3	132.3
75°	103.7	101.6	103.5	96.2	99.5
77.5°	70.6	72.3	71.1	67.2	69.5
80°	46.6	45.3	45.3	43.1	43.6
82.5°	27.2	25.9	25.5	24.8	25.9
85°	12.7	12.4	12.6	12.2	11.8
87.5°	4.6	4.7	4.7	4.5	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)