

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: P589627

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589627  
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-LD4-4HI-50-UNV-80-96-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

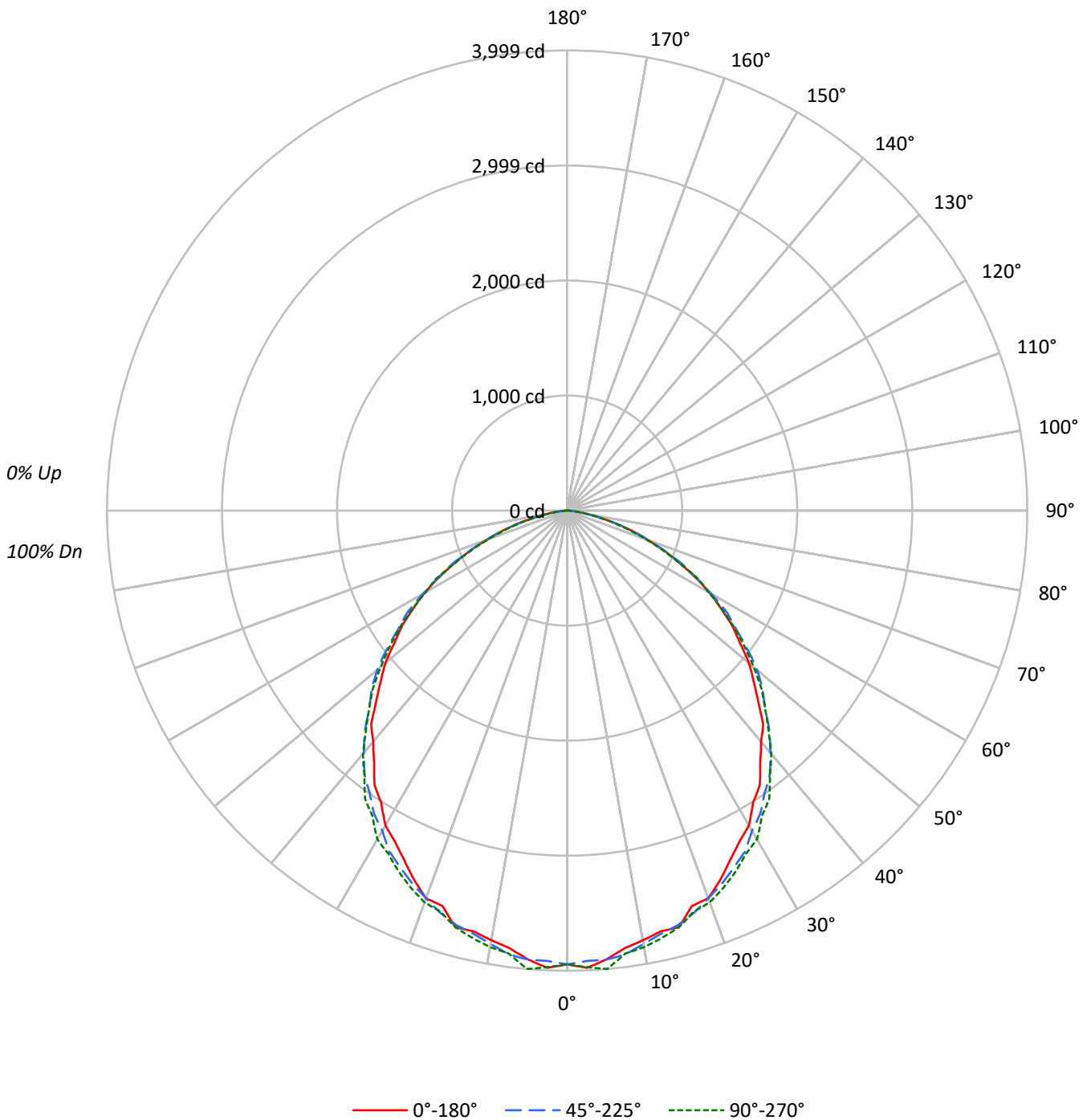
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9937.0 lumens  
Efficiency: N/A  
Efficacy: 115.0 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): 86.4  
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°	10610	10610	10610
5°	10575	10579	10802
10°	10361	10451	10524
15°	10442	10386	10444
20°	10266	10266	10375
25°	9950	10168	10280
30°	9814	9986	10252
35°	9583	9833	10054
40°	9210	9653	9696
45°	8931	9249	9262
50°	8638	9028	8855
55°	8230	8390	8330
60°	7696	7773	7633
65°	6862	7037	6814
70°	5888	5908	5744
75°	4663	4653	4473
80°	3124	3037	2920
85°	1698	1683	1572



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	370.9	3.7
10°-20°	1051.1	10.6
20°-30°	1574.8	15.8
30°-40°	1866.4	18.8
40°-50°	1869.9	18.8
50°-60°	1587.2	16.0
60°-70°	1070.1	10.8
70°-80°	470.2	4.7
80°-90°	76.4	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°	2996.8	30.2
0°-40°	4863.2	48.9
0°-60°	8320.3	83.7
0°-90°	9937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9937.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3943	3943	3943	3943	3943	
5°	3915	3906	3916	3905	3999	369
15°	3748	3705	3728	3747	3749	1044
25°	3351	3370	3424	3469	3462	1549
35°	2917	2926	2993	3063	3060	1811
45°	2347	2391	2430	2493	2434	1815
55°	1754	1742	1788	1776	1776	1561
65°	1078	1063	1105	1063	1070	1072
75°	448	439	448	416	430	481
85°	55	54	54	53	51	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3942.8	3942.8	3942.8	3942.8	3942.8
2.5°	3976.9	3946.8	3918.8	3951.4	3971.3
5°	3914.8	3905.6	3916.3	3904.6	3998.7
7.5°	3834.3	3869.4	3889.8	3877.1	3882.7
10°	3791.6	3779.3	3824.6	3856.2	3851.6
12.5°	3745.7	3764.1	3766.6	3800.7	3803.8
15°	3748.3	3705.0	3727.9	3747.3	3748.8
17.5°	3602.7	3649.5	3665.3	3709.6	3654.6
20°	3584.9	3550.8	3584.9	3630.2	3623.1
22.5°	3475.4	3437.2	3510.5	3550.8	3548.2
25°	3351.2	3369.5	3424.5	3469.3	3462.2
27.5°	3242.3	3263.7	3342.0	3403.6	3363.9
30°	3158.3	3147.6	3213.8	3268.7	3299.3
32.5°	3008.1	3046.8	3124.2	3178.6	3149.6
35°	2917.0	2925.6	2993.3	3062.6	3060.5
37.5°	2757.6	2797.9	2893.0	2912.4	2894.6
40°	2621.7	2661.9	2748.0	2768.8	2760.2
42.5°	2521.4	2528.6	2602.4	2626.3	2588.1
45°	2346.8	2390.6	2430.3	2492.9	2433.9
47.5°	2198.2	2218.5	2304.1	2320.9	2289.8
50°	2063.3	2070.4	2156.4	2135.6	2115.2
52.5°	1893.7	1923.8	1972.1	1968.1	1944.1
55°	1754.3	1742.5	1788.4	1776.1	1775.6
57.5°	1586.8	1607.1	1644.8	1625.5	1594.4
60°	1430.0	1430.5	1444.2	1422.3	1418.3
62.5°	1255.4	1261.5	1264.5	1237.6	1281.3
65°	1077.7	1063.4	1105.2	1062.9	1070.1
67.5°	914.3	921.4	917.3	890.9	901.1
70°	748.3	757.5	750.9	720.8	730.0
72.5°	596.6	585.4	592.6	554.9	572.2
75°	448.5	439.3	447.5	415.9	430.2
77.5°	305.4	312.6	307.5	290.7	300.4
80°	201.6	196.0	196.0	186.3	188.4
82.5°	117.6	112.0	110.5	107.4	112.0
85°	55.0	53.5	54.5	52.9	50.9
87.5°	19.9	20.4	20.4	19.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)