

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: P589621

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589621  
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-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

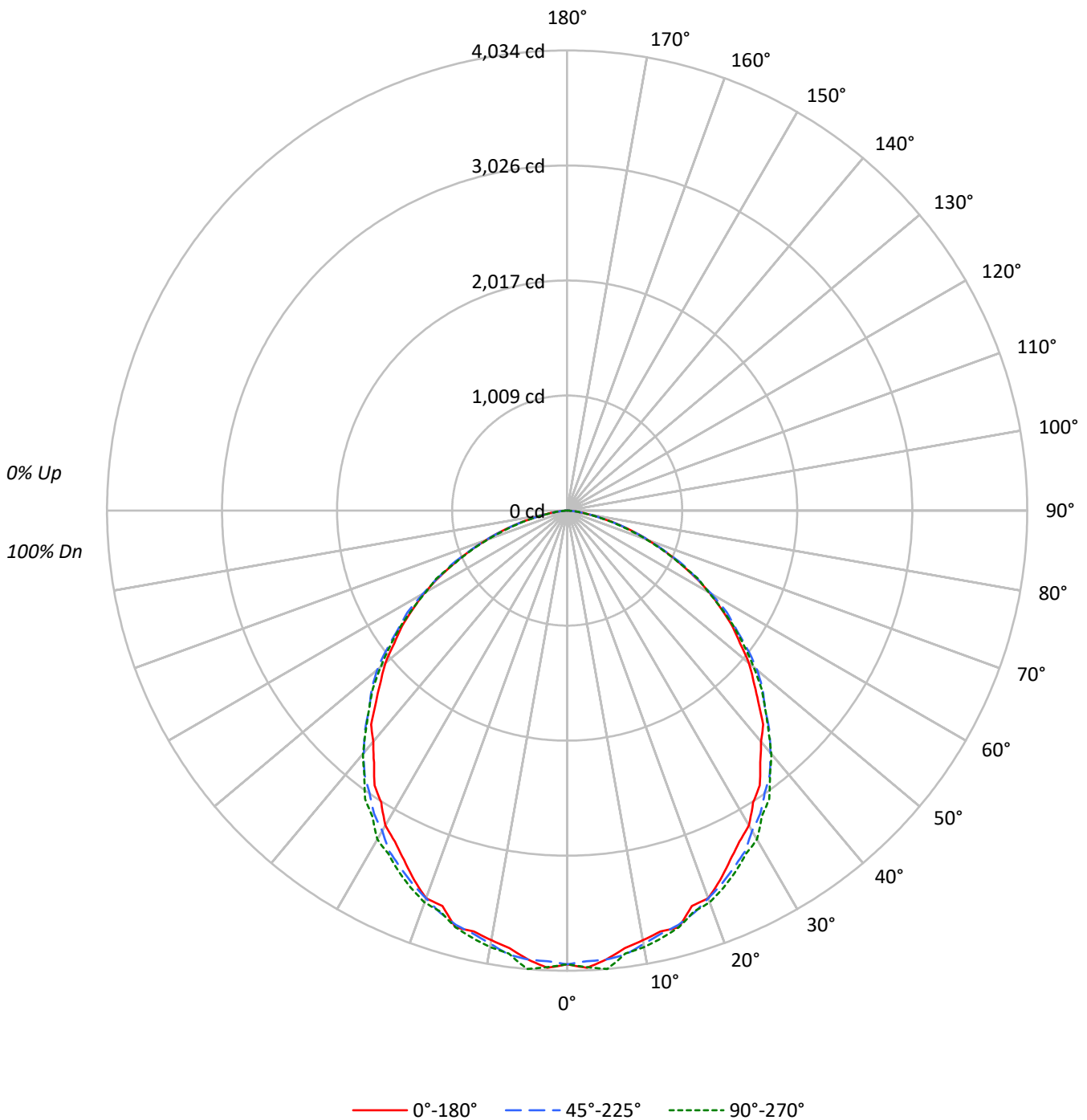
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10025.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 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°	10704	10704	10704
5°	10668	10673	10897
10°	10452	10543	10618
15°	10535	10478	10536
20°	10357	10357	10467
25°	10038	10258	10371
30°	9900	10074	10343
35°	9667	9920	10143
40°	9291	9739	9782
45°	9010	9331	9344
50°	8714	9108	8933
55°	8303	8465	8404
60°	7764	7842	7701
65°	6923	7100	6874
70°	5940	5960	5795
75°	4705	4693	4512
80°	3152	3064	2944
85°	1714	1698	1587



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	374.2	3.7
10°-20°	1060.4	10.6
20°-30°	1588.7	15.8
30°-40°	1883.0	18.8
40°-50°	1886.4	18.8
50°-60°	1601.3	16.0
60°-70°	1079.6	10.8
70°-80°	474.4	4.7
80°-90°	77.1	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°	3023.3	30.2
0°-40°	4906.2	48.9
0°-60°	8394.0	83.7
0°-90°	10025.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10025.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3978	3978	3978	3978	3978	
5°	3949	3940	3951	3939	4034	372
15°	3782	3738	3761	3780	3782	1054
25°	3381	3399	3455	3500	3493	1563
35°	2943	2952	3020	3090	3088	1827
45°	2368	2412	2452	2515	2455	1831
55°	1770	1758	1804	1792	1791	1574
65°	1087	1073	1115	1072	1080	1081
75°	452	443	451	420	434	485
85°	56	54	55	53	51	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3977.7	3977.7	3977.7	3977.7	3977.7
2.5°	4012.1	3981.8	3953.5	3986.4	4006.4
5°	3949.4	3940.2	3951.0	3939.1	4034.2
7.5°	3868.3	3903.7	3924.3	3911.4	3917.1
10°	3825.1	3812.8	3858.5	3890.4	3885.7
12.5°	3778.9	3797.4	3800.0	3834.4	3837.5
15°	3781.5	3737.8	3760.9	3780.5	3782.0
17.5°	3634.6	3681.8	3697.8	3742.4	3687.0
20°	3616.6	3582.2	3616.6	3662.3	3655.1
22.5°	3506.2	3467.7	3541.6	3582.2	3579.6
25°	3380.9	3399.4	3454.8	3500.0	3492.8
27.5°	3271.0	3292.6	3371.6	3433.8	3393.7
30°	3186.2	3175.5	3242.2	3297.7	3328.5
32.5°	3034.7	3073.8	3151.8	3206.8	3177.5
35°	2942.8	2951.5	3019.8	3089.7	3087.6
37.5°	2782.1	2822.6	2918.7	2938.2	2920.2
40°	2644.9	2685.5	2772.3	2793.4	2784.6
42.5°	2543.8	2550.9	2625.4	2649.6	2611.0
45°	2367.6	2411.8	2451.8	2515.0	2455.4
47.5°	2217.6	2238.2	2324.5	2341.4	2310.1
50°	2081.5	2088.7	2175.5	2154.5	2133.9
52.5°	1910.5	1940.8	1989.6	1985.5	1961.4
55°	1769.8	1758.0	1804.2	1791.9	1791.4
57.5°	1600.8	1621.4	1659.4	1639.9	1608.5
60°	1442.6	1443.2	1457.0	1434.9	1430.8
62.5°	1266.5	1272.6	1275.7	1248.5	1292.7
65°	1087.2	1072.9	1115.0	1072.4	1079.5
67.5°	922.4	929.6	925.5	898.8	909.0
70°	755.0	764.2	757.5	727.2	736.5
72.5°	601.9	590.6	597.8	559.8	577.3
75°	452.5	443.2	451.4	419.6	434.0
77.5°	308.1	315.3	310.2	293.3	303.0
80°	203.4	197.7	197.7	188.0	190.0
82.5°	118.6	113.0	111.4	108.4	113.0
85°	55.5	53.9	55.0	53.4	51.4
87.5°	20.0	20.5	20.5	19.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)