

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: P589598

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589598
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-40-UNV-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

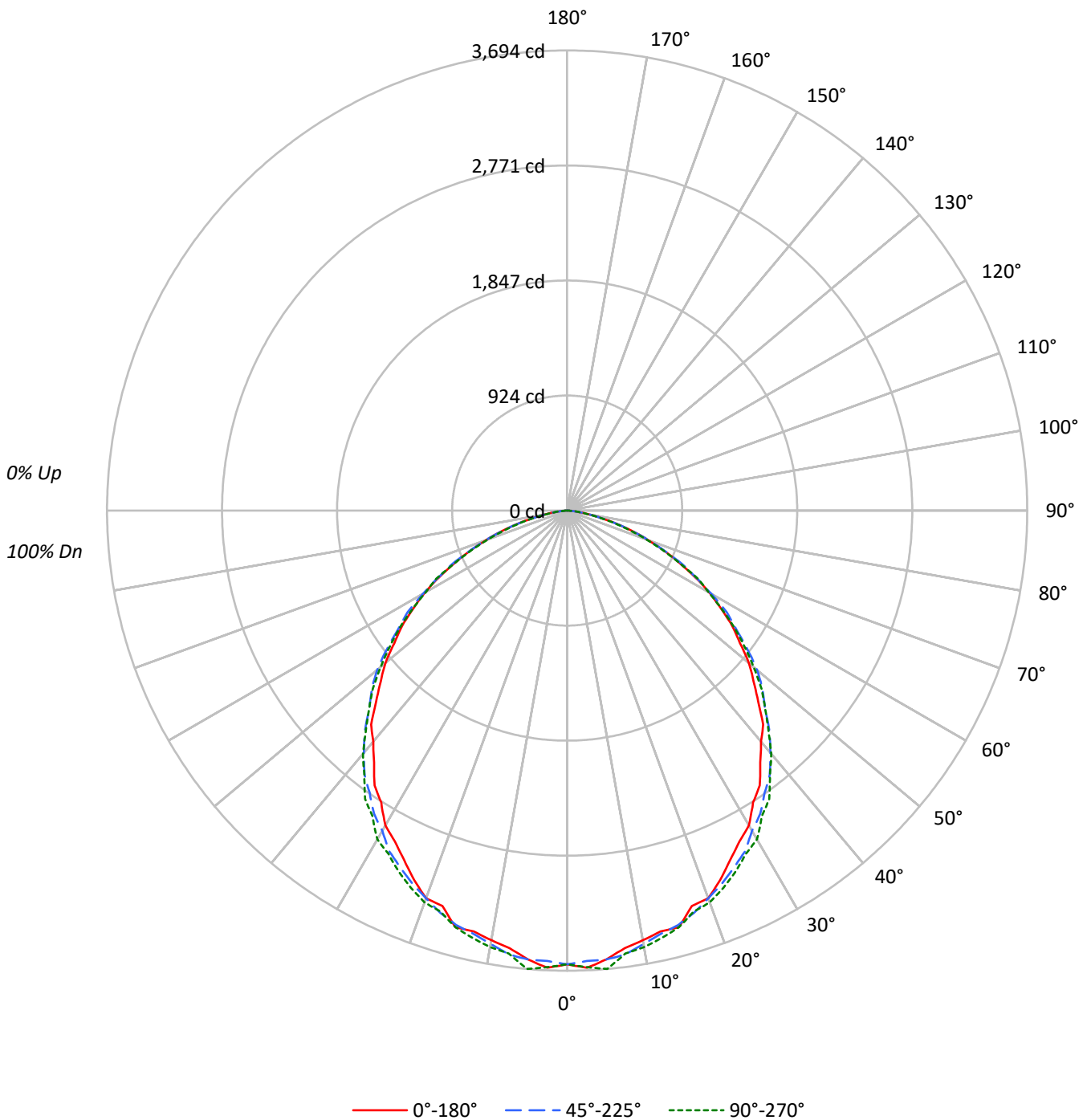
Lumens per Lamp: N/A
Luminaire Lumens: 9179.0 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9801	9801	9801
5°	9768	9772	9978
10°	9570	9654	9722
15°	9646	9594	9647
20°	9483	9483	9584
25°	9191	9392	9496
30°	9065	9224	9470
35°	8852	9083	9287
40°	8507	8917	8956
45°	8250	8543	8556
50°	7979	8339	8179
55°	7602	7750	7695
60°	7109	7180	7051
65°	6339	6500	6294
70°	5439	5457	5305
75°	4308	4297	4132
80°	2885	2805	2696
85°	1568	1553	1451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.6	3.7
10°-20°	970.9	10.6
20°-30°	1454.7	15.8
30°-40°	1724.1	18.8
40°-50°	1727.2	18.8
50°-60°	1466.1	16.0
60°-70°	988.5	10.8
70°-80°	434.3	4.7
80°-90°	70.6	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°	2768.2	30.2
0°-40°	4492.2	48.9
0°-60°	7685.6	83.7
0°-90°	9179.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3642	3642	3642	3642	3642	
5°	3616	3608	3618	3607	3694	341
15°	3462	3422	3444	3461	3463	965
25°	3096	3112	3163	3205	3198	1431
35°	2694	2702	2765	2829	2827	1673
45°	2168	2208	2245	2303	2248	1677
55°	1620	1610	1652	1641	1640	1441
65°	996	982	1021	982	988	990
75°	414	406	413	384	397	444
85°	51	49	50	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3642.0	3642.0	3642.0	3642.0	3642.0
2.5°	3673.5	3645.8	3619.9	3650.0	3668.3
5°	3616.1	3607.7	3617.5	3606.7	3693.7
7.5°	3541.8	3574.3	3593.1	3581.3	3586.5
10°	3502.3	3491.0	3532.9	3562.1	3557.8
12.5°	3460.0	3476.9	3479.3	3510.8	3513.6
15°	3462.4	3422.4	3443.6	3461.4	3462.8
17.5°	3327.9	3371.1	3385.7	3426.6	3375.8
20°	3311.4	3279.9	3311.4	3353.3	3346.7
22.5°	3210.3	3175.0	3242.8	3279.9	3277.6
25°	3095.6	3112.5	3163.3	3204.7	3198.1
27.5°	2994.9	3014.7	3087.1	3144.0	3107.3
30°	2917.4	2907.5	2968.6	3019.4	3047.6
32.5°	2778.6	2814.4	2885.9	2936.2	2909.4
35°	2694.5	2702.5	2765.0	2829.0	2827.1
37.5°	2547.3	2584.4	2672.4	2690.2	2673.8
40°	2421.7	2458.9	2538.3	2557.6	2549.6
42.5°	2329.1	2335.7	2403.9	2426.0	2390.7
45°	2167.8	2208.2	2244.9	2302.8	2248.2
47.5°	2030.5	2049.3	2128.3	2143.8	2115.1
50°	1905.9	1912.5	1991.9	1972.6	1953.8
52.5°	1749.3	1777.0	1821.7	1817.9	1795.8
55°	1620.4	1609.6	1651.9	1640.7	1640.2
57.5°	1465.7	1484.5	1519.3	1501.5	1472.8
60°	1320.9	1321.4	1334.1	1313.8	1310.1
62.5°	1159.6	1165.3	1168.1	1143.1	1183.6
65°	995.5	982.3	1020.9	981.9	988.4
67.5°	844.5	851.1	847.4	822.9	832.3
70°	691.3	699.7	693.6	665.9	674.3
72.5°	551.1	540.8	547.4	512.6	528.5
75°	414.3	405.8	413.3	384.2	397.4
77.5°	282.1	288.7	284.0	268.5	277.4
80°	186.2	181.0	181.0	172.1	174.0
82.5°	108.6	103.5	102.0	99.2	103.5
85°	50.8	49.4	50.3	48.9	47.0
87.5°	18.3	18.8	18.8	17.9	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)