

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: P589605

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-82-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589605
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-82-84-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

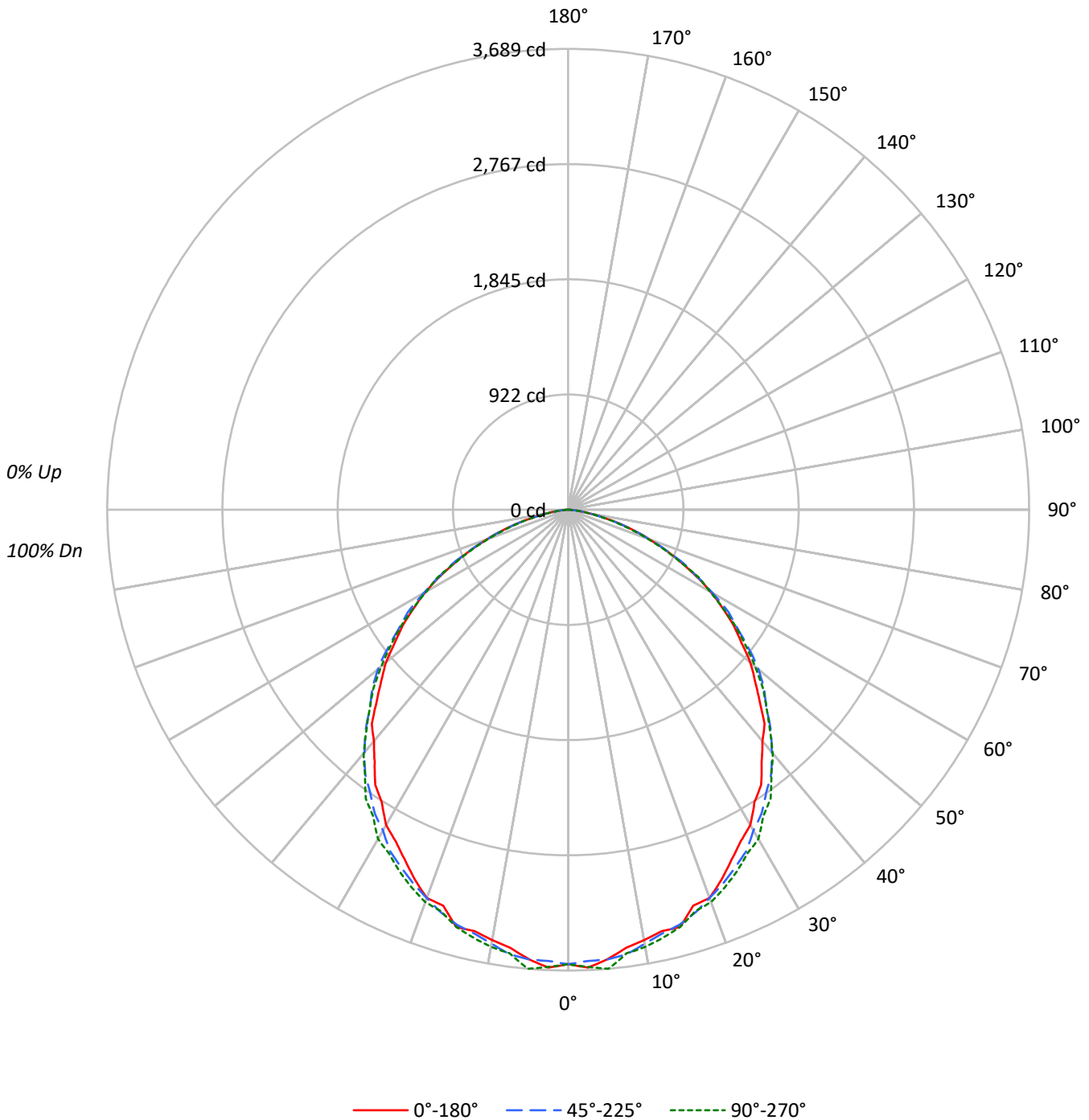
Lumens per Lamp: N/A
Luminaire Lumens: 9168.0 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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					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°	9789	9789	9789
5°	9756	9760	9966
10°	9559	9642	9710
15°	9634	9582	9636
20°	9471	9471	9572
25°	9180	9381	9484
30°	9054	9213	9459
35°	8841	9072	9276
40°	8497	8906	8946
45°	8240	8533	8546
50°	7969	8329	8170
55°	7593	7741	7686
60°	7100	7171	7042
65°	6331	6493	6287
70°	5432	5451	5299
75°	4302	4292	4127
80°	2882	2802	2693
85°	1565	1553	1451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.2	3.7
10°-20°	969.8	10.6
20°-30°	1452.9	15.8
30°-40°	1722.0	18.8
40°-50°	1725.2	18.8
50°-60°	1464.4	16.0
60°-70°	987.3	10.8
70°-80°	433.8	4.7
80°-90°	70.5	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°	2764.8	30.2
0°-40°	4486.8	48.9
0°-60°	7676.4	83.7
0°-90°	9168.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9168.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3638	3638	3638	3638	3638	
5°	3612	3603	3613	3602	3689	341
15°	3458	3418	3439	3457	3459	964
25°	3092	3109	3160	3201	3194	1429
35°	2691	2699	2762	2826	2824	1671
45°	2165	2206	2242	2300	2246	1675
55°	1618	1608	1650	1639	1638	1440
65°	994	981	1020	981	987	989
75°	414	405	413	384	397	443
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°	3637.6	3637.6	3637.6	3637.6	3637.6
2.5°	3669.1	3641.4	3615.6	3645.6	3663.9
5°	3611.8	3603.3	3613.2	3602.4	3689.3
7.5°	3537.6	3570.0	3588.8	3577.0	3582.2
10°	3498.1	3486.9	3528.7	3557.8	3553.6
12.5°	3455.9	3472.8	3475.1	3506.6	3509.4
15°	3458.2	3418.3	3439.4	3457.3	3458.7
17.5°	3323.9	3367.1	3381.7	3422.5	3371.8
20°	3307.4	3276.0	3307.4	3349.3	3342.7
22.5°	3206.5	3171.2	3238.9	3276.0	3273.6
25°	3091.9	3108.8	3159.5	3200.8	3194.3
27.5°	2991.4	3011.1	3083.4	3140.2	3103.6
30°	2913.9	2904.0	2965.1	3015.8	3044.0
32.5°	2775.3	2811.0	2882.4	2932.6	2905.9
35°	2691.2	2699.2	2761.7	2825.6	2823.7
37.5°	2544.2	2581.3	2669.2	2687.0	2670.6
40°	2418.8	2455.9	2535.3	2554.6	2546.6
42.5°	2326.3	2332.9	2401.0	2423.1	2387.8
45°	2165.2	2205.6	2242.2	2300.0	2245.5
47.5°	2028.1	2046.8	2125.7	2141.2	2112.6
50°	1903.6	1910.2	1989.5	1970.3	1951.5
52.5°	1747.2	1774.9	1819.5	1815.8	1793.7
55°	1618.5	1607.7	1650.0	1638.7	1638.2
57.5°	1464.0	1482.8	1517.5	1499.7	1471.0
60°	1319.3	1319.8	1332.5	1312.3	1308.5
62.5°	1158.2	1163.9	1166.7	1141.8	1182.2
65°	994.3	981.2	1019.7	980.7	987.3
67.5°	843.5	850.1	846.4	821.9	831.3
70°	690.4	698.9	692.8	665.1	673.5
72.5°	550.5	540.1	546.7	511.9	527.9
75°	413.8	405.3	412.8	383.7	396.9
77.5°	281.8	288.4	283.7	268.2	277.1
80°	186.0	180.8	180.8	171.9	173.8
82.5°	108.5	103.3	101.9	99.1	103.3
85°	50.7	49.3	50.3	48.8	47.0
87.5°	18.3	18.8	18.8	17.8	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)