

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: P589637

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-82-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589637
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-82-84-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

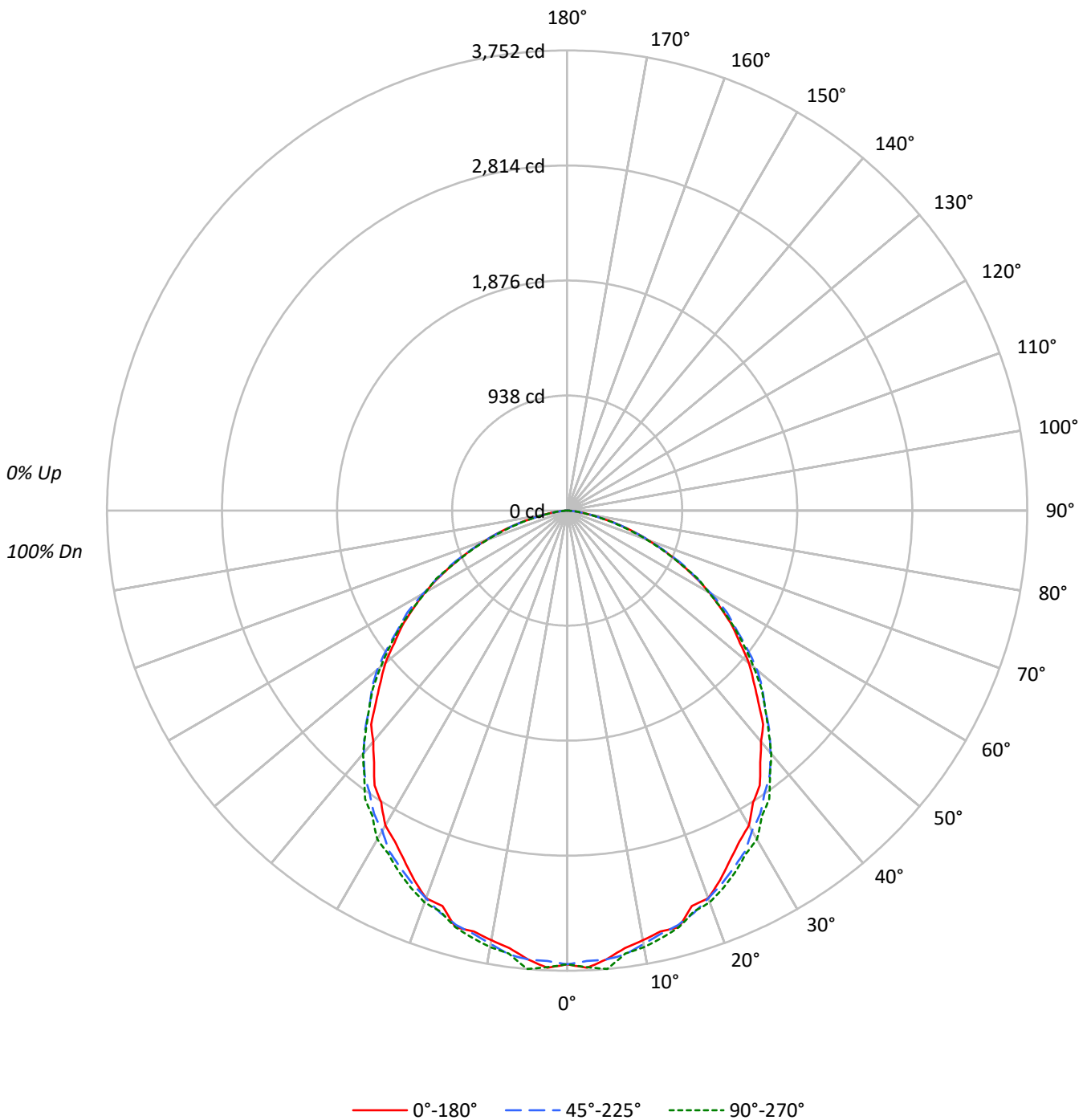
Lumens per Lamp: N/A
Luminaire Lumens: 9323.0 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9954	9954	9954
5°	9921	9925	10134
10°	9720	9805	9874
15°	9797	9744	9799
20°	9632	9632	9734
25°	9335	9540	9645
30°	9207	9369	9618
35°	8990	9226	9433
40°	8640	9057	9097
45°	8379	8677	8690
50°	8104	8470	8308
55°	7722	7872	7816
60°	7220	7293	7161
65°	6438	6602	6392
70°	5524	5543	5389
75°	4375	4365	4196
80°	2930	2850	2738
85°	1593	1578	1476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.0	3.7
10°-20°	986.2	10.6
20°-30°	1477.5	15.8
30°-40°	1751.1	18.8
40°-50°	1754.3	18.8
50°-60°	1489.2	16.0
60°-70°	1004.0	10.8
70°-80°	441.2	4.7
80°-90°	71.7	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°	2811.6	30.2
0°-40°	4562.7	48.9
0°-60°	7806.2	83.7
0°-90°	9323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9323.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3699	3699	3699	3699	3699	
5°	3673	3664	3674	3663	3752	346
15°	3517	3476	3498	3516	3517	980
25°	3144	3161	3213	3255	3248	1454
35°	2737	2745	2808	2873	2871	1699
45°	2202	2243	2280	2339	2284	1703
55°	1646	1635	1678	1666	1666	1464
65°	1011	998	1037	997	1004	1006
75°	421	412	420	390	404	451
85°	52	50	51	50	48	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3699.1	3699.1	3699.1	3699.1	3699.1
2.5°	3731.1	3703.0	3676.7	3707.3	3725.9
5°	3672.9	3664.3	3674.3	3663.3	3751.7
7.5°	3597.4	3630.4	3649.5	3637.5	3642.8
10°	3557.3	3545.8	3588.3	3617.9	3613.6
12.5°	3514.3	3531.5	3533.9	3565.9	3568.7
15°	3516.7	3476.1	3497.6	3515.7	3517.2
17.5°	3380.1	3424.0	3438.8	3480.4	3428.8
20°	3363.4	3331.4	3363.4	3405.9	3399.2
22.5°	3260.7	3224.9	3293.6	3331.4	3329.0
25°	3144.1	3161.3	3212.9	3254.9	3248.3
27.5°	3041.9	3062.0	3135.5	3193.3	3156.1
30°	2963.1	2953.1	3015.2	3066.8	3095.4
32.5°	2822.2	2858.5	2931.1	2982.2	2955.0
35°	2736.7	2744.9	2808.4	2873.3	2871.4
37.5°	2587.2	2625.0	2714.3	2732.4	2715.7
40°	2459.7	2497.5	2578.2	2597.7	2589.6
42.5°	2365.6	2372.3	2441.6	2464.0	2428.2
45°	2201.8	2242.9	2280.1	2338.9	2283.5
47.5°	2062.3	2081.4	2161.7	2177.4	2148.3
50°	1935.8	1942.5	2023.2	2003.6	1984.5
52.5°	1776.7	1804.9	1850.3	1846.5	1824.0
55°	1645.9	1634.9	1677.9	1666.4	1665.9
57.5°	1488.7	1507.8	1543.2	1525.0	1495.9
60°	1341.6	1342.1	1355.0	1334.5	1330.6
62.5°	1177.8	1183.5	1186.4	1161.1	1202.2
65°	1011.1	997.7	1036.9	997.3	1003.9
67.5°	857.8	864.5	860.7	835.8	845.4
70°	702.1	710.7	704.5	676.3	684.9
72.5°	559.8	549.3	555.9	520.6	536.8
75°	420.8	412.2	419.8	390.2	403.6
77.5°	286.6	293.3	288.5	272.7	281.8
80°	189.1	183.9	183.9	174.8	176.7
82.5°	110.3	105.1	103.6	100.8	105.1
85°	51.6	50.1	51.1	49.7	47.8
87.5°	18.6	19.1	19.1	18.1	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)