

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: P589631

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589631
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-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

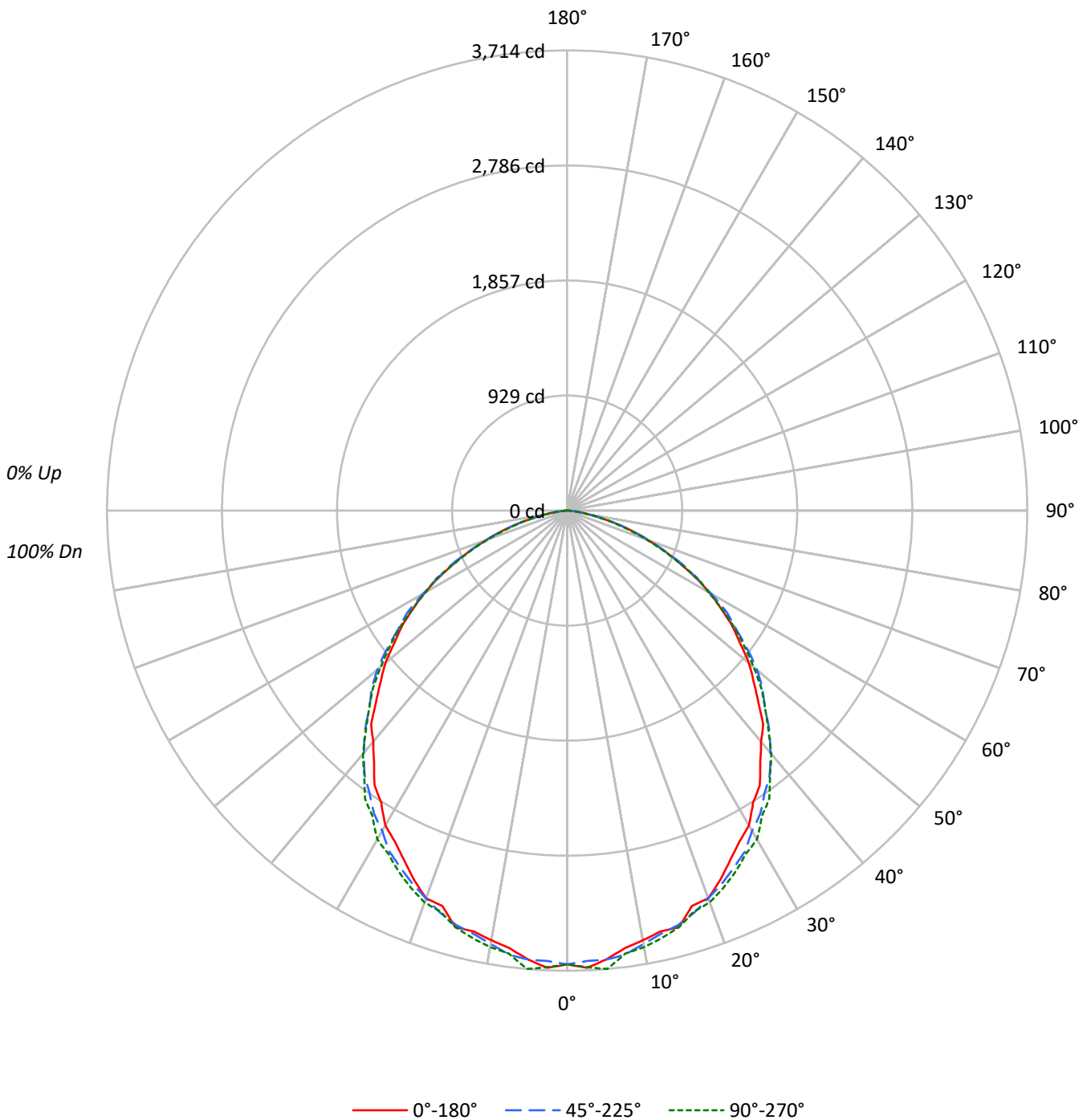
Lumens per Lamp: N/A
Luminaire Lumens: 9229.0 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9854	9854	9854
5°	9821	9825	10032
10°	9622	9706	9775
15°	9698	9646	9700
20°	9535	9535	9636
25°	9241	9443	9547
30°	9114	9275	9521
35°	8900	9133	9338
40°	8553	8965	9005
45°	8295	8590	8603
50°	8022	8385	8224
55°	7644	7792	7737
60°	7148	7219	7089
65°	6373	6535	6328
70°	5468	5487	5334
75°	4330	4321	4154
80°	2901	2820	2710
85°	1578	1562	1460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.4	3.7
10°-20°	976.2	10.6
20°-30°	1462.6	15.8
30°-40°	1733.5	18.8
40°-50°	1736.7	18.8
50°-60°	1474.1	16.0
60°-70°	993.9	10.8
70°-80°	436.7	4.7
80°-90°	71.0	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°	2783.2	30.2
0°-40°	4516.7	48.9
0°-60°	7727.5	83.7
0°-90°	9229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3662	3662	3662	3662	3662	
5°	3636	3627	3637	3626	3714	343
15°	3481	3441	3462	3480	3482	970
25°	3112	3130	3180	3222	3216	1439
35°	2709	2717	2780	2844	2842	1682
45°	2180	2220	2257	2315	2260	1686
55°	1629	1618	1661	1650	1649	1449
65°	1001	988	1026	987	994	995
75°	416	408	416	386	400	446
85°	51	50	51	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3661.8	3661.8	3661.8	3661.8	3661.8
2.5°	3693.5	3665.6	3639.6	3669.9	3688.3
5°	3635.8	3627.3	3637.2	3626.4	3713.8
7.5°	3561.1	3593.8	3612.7	3600.8	3606.0
10°	3521.4	3510.1	3552.1	3581.5	3577.2
12.5°	3478.9	3495.9	3498.2	3529.9	3532.8
15°	3481.2	3441.0	3462.3	3480.3	3481.7
17.5°	3346.0	3389.5	3404.2	3445.3	3394.2
20°	3329.5	3297.8	3329.5	3371.5	3364.9
22.5°	3227.8	3192.3	3260.4	3297.8	3295.4
25°	3112.4	3129.5	3180.5	3222.1	3215.5
27.5°	3011.3	3031.1	3103.9	3161.1	3124.3
30°	2933.2	2923.3	2984.8	3035.8	3064.2
32.5°	2793.8	2829.7	2901.6	2952.2	2925.2
35°	2709.1	2717.2	2780.1	2844.4	2842.5
37.5°	2561.2	2598.5	2686.9	2704.9	2688.3
40°	2434.9	2472.3	2552.2	2571.6	2563.5
42.5°	2341.8	2348.4	2417.0	2439.2	2403.7
45°	2179.6	2220.3	2257.1	2315.3	2260.5
47.5°	2041.5	2060.5	2139.9	2155.5	2126.7
50°	1916.3	1922.9	2002.8	1983.4	1964.5
52.5°	1758.8	1786.7	1831.6	1827.8	1805.6
55°	1629.3	1618.4	1660.9	1649.6	1649.1
57.5°	1473.7	1492.6	1527.6	1509.6	1480.8
60°	1328.1	1328.6	1341.3	1321.0	1317.2
62.5°	1165.9	1171.6	1174.4	1149.4	1190.0
65°	1000.9	987.7	1026.4	987.2	993.8
67.5°	849.1	855.8	852.0	827.4	836.9
70°	695.0	703.5	697.4	669.5	678.0
72.5°	554.1	543.7	550.3	515.4	531.4
75°	416.5	408.0	415.6	386.3	399.5
77.5°	283.7	290.3	285.6	270.0	279.0
80°	187.2	182.0	182.0	173.0	174.9
82.5°	109.2	104.0	102.6	99.8	104.0
85°	51.1	49.6	50.6	49.2	47.3
87.5°	18.4	18.9	18.9	18.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)