

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: P589582

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-93-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589582
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-35-UNV-93-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

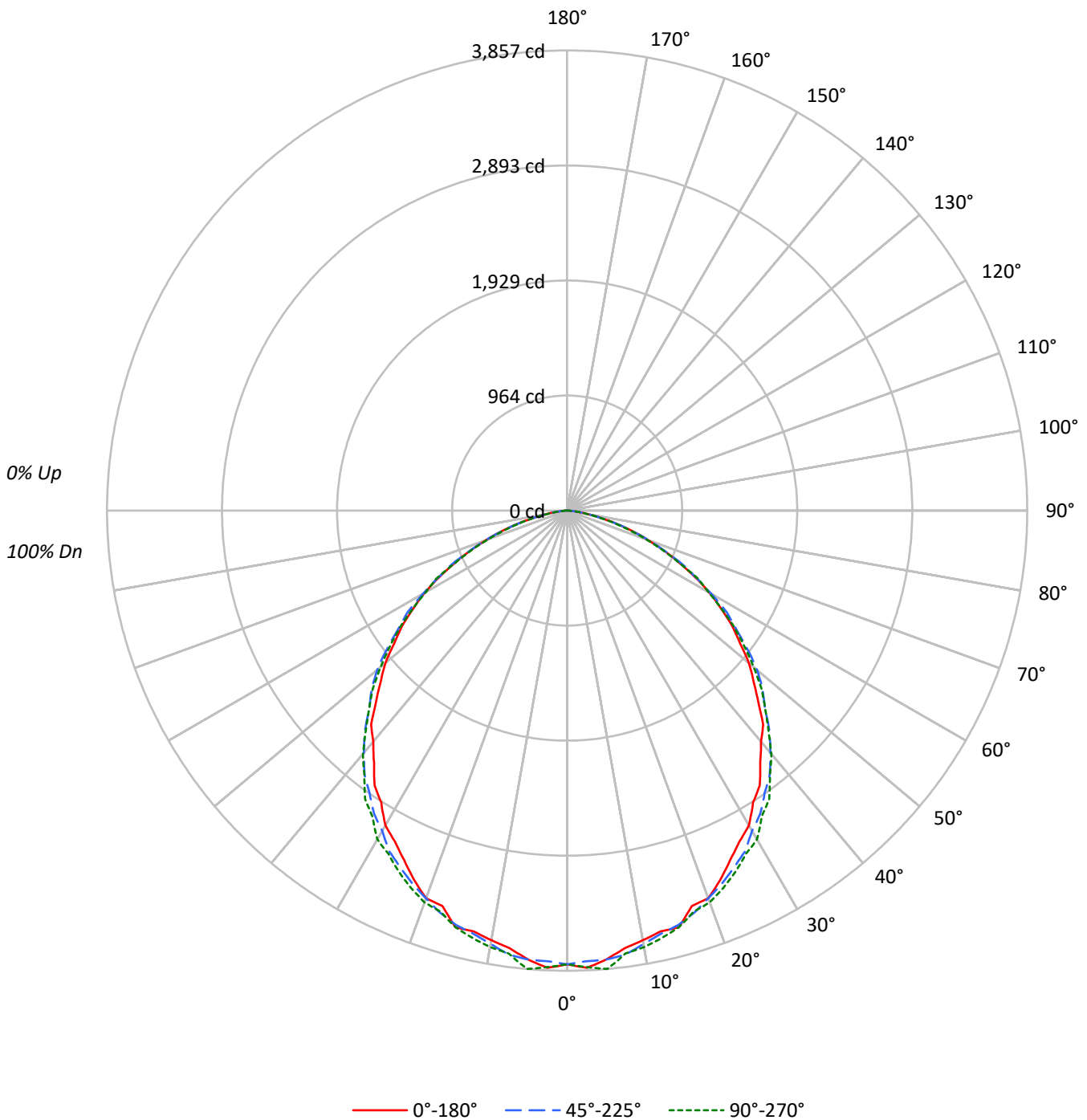
Lumens per Lamp: N/A
Luminaire Lumens: 9585.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589582

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589582

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-93-85-EDD

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°	10234	10234	10234
5°	10200	10204	10419
10°	9993	10081	10152
15°	10072	10018	10074
20°	9902	9902	10008
25°	9598	9808	9916
30°	9466	9632	9889
35°	9243	9485	9698
40°	8883	9311	9353
45°	8615	8921	8934
50°	8332	8708	8542
55°	7939	8093	8035
60°	7423	7498	7363
65°	6619	6788	6572
70°	5679	5699	5540
75°	4498	4487	4314
80°	3014	2929	2816
85°	1636	1621	1516



TEST NUMBER: P589582

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.7	3.7
10°-20°	1013.9	10.6
20°-30°	1519.0	15.8
30°-40°	1800.3	18.8
40°-50°	1803.6	18.8
50°-60°	1531.0	16.0
60°-70°	1032.2	10.8
70°-80°	453.6	4.7
80°-90°	73.7	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°	2890.6	30.2
0°-40°	4690.9	48.9
0°-60°	8025.5	83.7
0°-90°	9585.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9585.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3803	3803	3803	3803	3803	
5°	3776	3767	3778	3766	3857	356
15°	3616	3574	3596	3614	3616	1007
25°	3232	3250	3303	3346	3340	1494
35°	2814	2822	2887	2954	2952	1747
45°	2264	2306	2344	2405	2348	1751
55°	1692	1681	1725	1713	1713	1505
65°	1040	1026	1066	1025	1032	1034
75°	433	424	432	401	415	464
85°	53	52	52	51	49	77
90°	0	0	0	0	0	



TEST NUMBER: P589582

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3803.1	3803.1	3803.1	3803.1	3803.1
2.5°	3836.0	3807.0	3780.0	3811.4	3830.6
5°	3776.1	3767.2	3777.6	3766.3	3857.1
7.5°	3698.5	3732.4	3752.0	3739.7	3745.1
10°	3657.2	3645.5	3689.2	3719.6	3715.2
12.5°	3613.1	3630.7	3633.2	3666.1	3669.0
15°	3615.5	3573.8	3595.9	3614.5	3616.0
17.5°	3475.1	3520.2	3535.5	3578.2	3525.2
20°	3457.9	3425.0	3457.9	3501.6	3494.7
22.5°	3352.3	3315.5	3386.2	3425.0	3422.5
25°	3232.5	3250.2	3303.2	3346.4	3339.5
27.5°	3127.4	3148.0	3223.7	3283.1	3244.8
30°	3046.4	3036.1	3099.9	3153.0	3182.4
32.5°	2901.5	2938.9	3013.5	3066.0	3038.0
35°	2813.6	2822.0	2887.3	2954.1	2952.1
37.5°	2660.0	2698.7	2790.6	2809.2	2792.0
40°	2528.8	2567.6	2650.6	2670.8	2662.4
42.5°	2432.1	2439.0	2510.2	2533.3	2496.4
45°	2263.7	2305.9	2344.2	2404.6	2347.7
47.5°	2120.3	2139.9	2222.4	2238.6	2208.7
50°	1990.2	1997.0	2080.0	2059.9	2040.3
52.5°	1826.7	1855.6	1902.3	1898.4	1875.3
55°	1692.1	1680.8	1725.0	1713.2	1712.7
57.5°	1530.6	1550.2	1586.5	1567.9	1537.9
60°	1379.3	1379.8	1393.1	1372.0	1368.0
62.5°	1210.9	1216.8	1219.7	1193.7	1235.9
65°	1039.5	1025.8	1066.0	1025.3	1032.2
67.5°	881.9	888.8	884.8	859.3	869.1
70°	721.8	730.7	724.3	695.3	704.1
72.5°	575.5	564.7	571.6	535.2	551.9
75°	432.6	423.8	431.6	401.2	414.9
77.5°	294.6	301.5	296.6	280.4	289.7
80°	194.5	189.0	189.0	179.7	181.7
82.5°	113.4	108.0	106.6	103.6	108.0
85°	53.0	51.6	52.5	51.1	49.1
87.5°	19.2	19.6	19.6	18.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)