

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: P589579

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589579
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

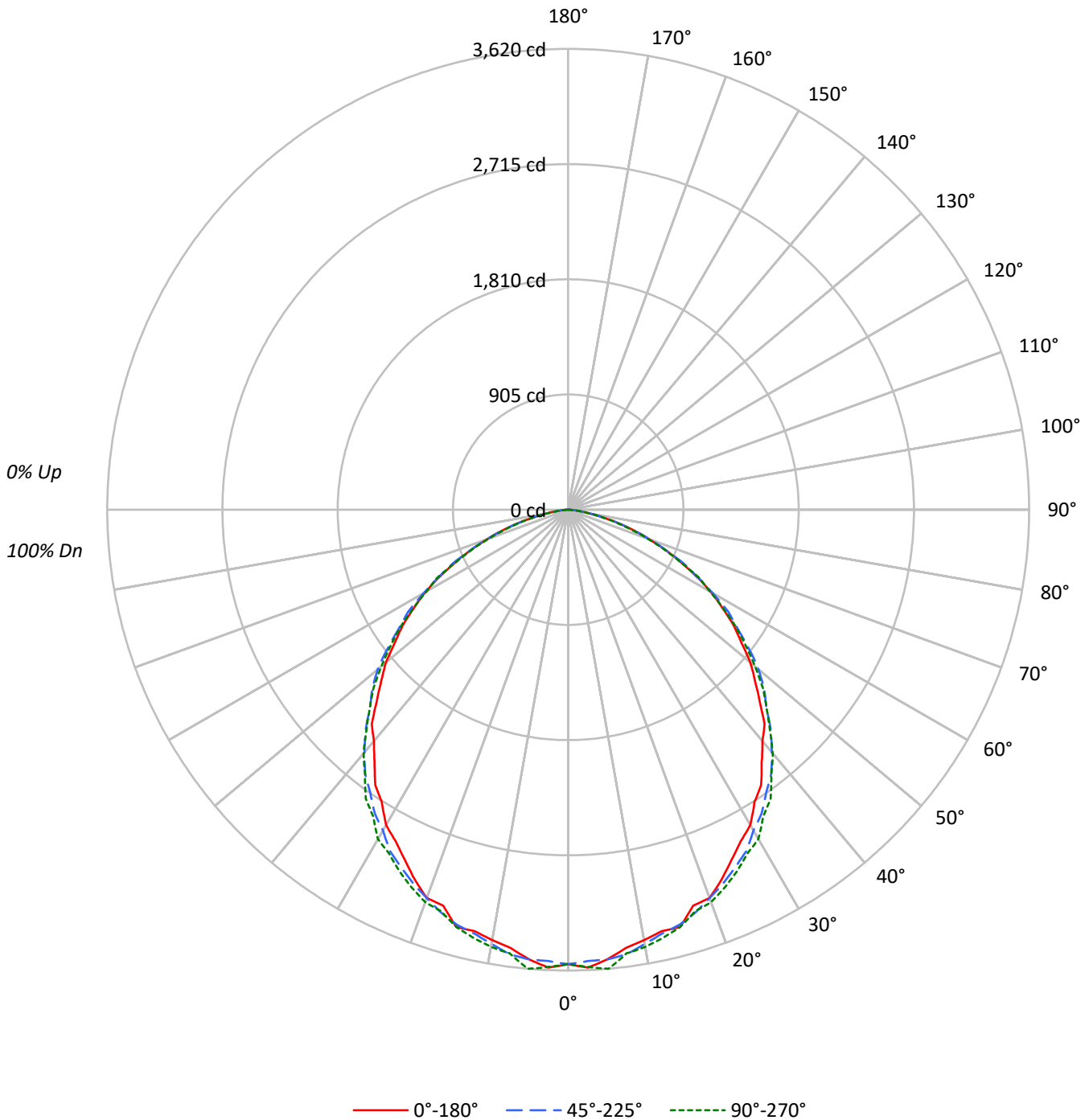
Lumens per Lamp: N/A
Luminaire Lumens: 8997.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589579

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589579

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-82-96-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°	9606	9606	9606
5°	9574	9578	9780
10°	9380	9462	9529
15°	9455	9403	9456
20°	9295	9295	9394
25°	9009	9206	9307
30°	8885	9042	9282
35°	8676	8903	9103
40°	8338	8740	8779
45°	8086	8374	8386
50°	7821	8174	8017
55°	7452	7597	7543
60°	6968	7037	6911
65°	6213	6371	6169
70°	5330	5349	5201
75°	4222	4212	4050
80°	2828	2751	2642
85°	1538	1522	1423



TEST NUMBER: P589579

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	335.8	3.7
10°-20°	951.7	10.6
20°-30°	1425.8	15.8
30°-40°	1689.9	18.8
40°-50°	1693.0	18.8
50°-60°	1437.1	16.0
60°-70°	968.9	10.8
70°-80°	425.7	4.7
80°-90°	69.2	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°	2713.3	30.2
0°-40°	4403.2	48.9
0°-60°	7533.2	83.7
0°-90°	8997.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8997.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3570	3570	3570	3570	3570	
5°	3544	3536	3546	3535	3620	334
15°	3394	3354	3375	3393	3394	946
25°	3034	3051	3101	3141	3135	1403
35°	2641	2649	2710	2773	2771	1640
45°	2125	2164	2200	2257	2204	1644
55°	1588	1578	1619	1608	1608	1413
65°	976	963	1001	962	969	970
75°	406	398	405	377	390	435
85°	50	48	49	48	46	72
90°	0	0	0	0	0	



TEST NUMBER: P589579

CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3569.8	3569.8	3569.8	3569.8	3569.8
2.5°	3600.7	3573.5	3548.1	3577.6	3595.6
5°	3544.4	3536.1	3545.8	3535.2	3620.5
7.5°	3471.6	3503.4	3521.8	3510.3	3515.4
10°	3432.9	3421.8	3462.9	3491.4	3487.3
12.5°	3391.4	3408.0	3410.3	3441.2	3444.0
15°	3393.7	3354.5	3375.3	3392.8	3394.2
17.5°	3261.9	3304.3	3318.6	3358.7	3308.9
20°	3245.8	3214.9	3245.8	3286.8	3280.3
22.5°	3146.7	3112.1	3178.5	3214.9	3212.6
25°	3034.2	3050.8	3100.6	3141.1	3134.7
27.5°	2935.6	2954.9	3025.9	3081.7	3045.7
30°	2859.5	2849.8	2909.8	2959.5	2987.2
32.5°	2723.5	2758.6	2828.6	2877.9	2851.7
35°	2641.0	2648.9	2710.2	2772.9	2771.0
37.5°	2496.8	2533.2	2619.4	2636.9	2620.8
40°	2373.7	2410.1	2488.0	2506.9	2499.1
42.5°	2282.9	2289.4	2356.2	2377.9	2343.3
45°	2124.8	2164.5	2200.4	2257.1	2203.6
47.5°	1990.2	2008.7	2086.1	2101.3	2073.2
50°	1868.1	1874.5	1952.4	1933.5	1915.1
52.5°	1714.6	1741.8	1785.6	1781.9	1760.2
55°	1588.3	1577.7	1619.2	1608.1	1607.7
57.5°	1436.7	1455.1	1489.2	1471.7	1443.6
60°	1294.7	1295.2	1307.6	1287.8	1284.1
62.5°	1136.6	1142.1	1144.9	1120.5	1160.1
65°	975.8	962.9	1000.6	962.4	968.8
67.5°	827.8	834.3	830.6	806.6	815.8
70°	677.5	685.8	679.8	652.7	661.0
72.5°	540.2	530.1	536.5	502.4	518.1
75°	406.1	397.8	405.1	376.6	389.5
77.5°	276.5	283.0	278.4	263.2	271.9
80°	182.5	177.5	177.5	168.7	170.5
82.5°	106.5	101.4	100.0	97.3	101.4
85°	49.8	48.4	49.3	47.9	46.1
87.5°	18.0	18.4	18.4	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)