

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: P589121

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589121
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-LD4-2LO-40-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

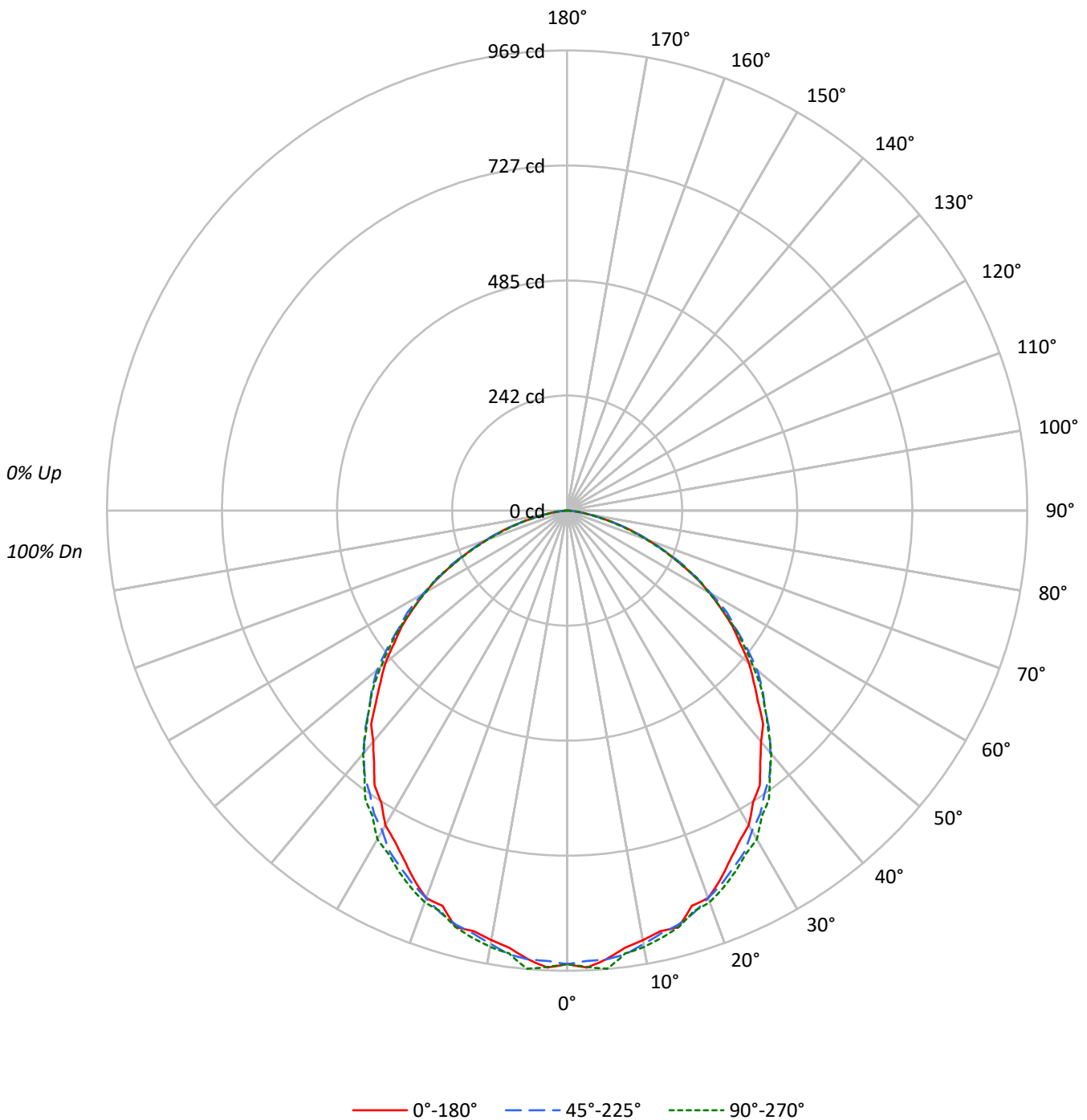
Lumens per Lamp: N/A
Luminaire Lumens: 2407.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P589121

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589121

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-88-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°	2570	2570	2570
5°	2562	2562	2616
10°	2510	2531	2549
15°	2529	2516	2530
20°	2487	2487	2513
25°	2410	2463	2490
30°	2377	2419	2483
35°	2321	2382	2435
40°	2231	2338	2349
45°	2163	2240	2243
50°	2092	2187	2145
55°	1993	2032	2018
60°	1864	1883	1849
65°	1662	1705	1650
70°	1426	1431	1391
75°	1129	1127	1083
80°	756	736	707
85°	411	408	380



TEST NUMBER: P589121

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	3.7
10°-20°	254.6	10.6
20°-30°	381.5	15.8
30°-40°	452.1	18.8
40°-50°	452.9	18.8
50°-60°	384.5	16.0
60°-70°	259.2	10.8
70°-80°	113.9	4.7
80°-90°	18.5	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°	725.9	30.2
0°-40°	1178.0	48.9
0°-60°	2015.4	83.7
0°-90°	2407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2407.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	955	955	955	955	955	
5°	948	946	949	946	969	89
15°	908	898	903	908	908	253
25°	812	816	830	840	839	375
35°	707	709	725	742	741	439
45°	568	579	589	604	590	440
55°	425	422	433	430	430	378
65°	261	258	268	258	259	260
75°	109	106	108	101	104	116
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



TEST NUMBER: P589121

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	955.0	955.0	955.0	955.0	955.0
2.5°	963.3	956.0	949.2	957.1	961.9
5°	948.3	946.0	948.6	945.8	968.6
7.5°	928.8	937.3	942.2	939.1	940.5
10°	918.4	915.5	926.4	934.1	933.0
12.5°	907.3	911.8	912.4	920.6	921.4
15°	907.9	897.5	903.0	907.7	908.1
17.5°	872.7	884.0	887.8	898.6	885.2
20°	868.3	860.1	868.3	879.3	877.6
22.5°	841.8	832.6	850.3	860.1	859.5
25°	811.8	816.2	829.5	840.4	838.6
27.5°	785.4	790.5	809.5	824.5	814.8
30°	765.0	762.4	778.5	791.8	799.2
32.5°	728.6	738.0	756.8	769.9	762.9
35°	706.6	708.7	725.1	741.8	741.3
37.5°	668.0	677.7	700.8	705.5	701.1
40°	635.0	644.8	665.6	670.7	668.6
42.5°	610.8	612.5	630.4	636.2	626.9
45°	568.5	579.1	588.7	603.8	589.5
47.5°	532.5	537.4	558.1	562.2	554.6
50°	499.8	501.5	522.3	517.3	512.4
52.5°	458.7	466.0	477.7	476.7	470.9
55°	424.9	422.1	433.2	430.2	430.1
57.5°	384.4	389.3	398.4	393.7	386.2
60°	346.4	346.5	349.8	344.5	343.5
62.5°	304.1	305.6	306.3	299.8	310.4
65°	261.0	257.6	267.7	257.5	259.2
67.5°	221.5	223.2	222.2	215.8	218.3
70°	181.3	183.5	181.9	174.6	176.8
72.5°	144.5	141.8	143.5	134.4	138.6
75°	108.6	106.4	108.4	100.7	104.2
77.5°	74.0	75.7	74.5	70.4	72.8
80°	48.8	47.5	47.5	45.1	45.6
82.5°	28.5	27.1	26.8	26.0	27.1
85°	13.3	12.9	13.2	12.8	12.3
87.5°	4.8	4.9	4.9	4.7	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)