

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: P589789

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-81-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589789
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-LD4-4STD-40-UNV-81-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

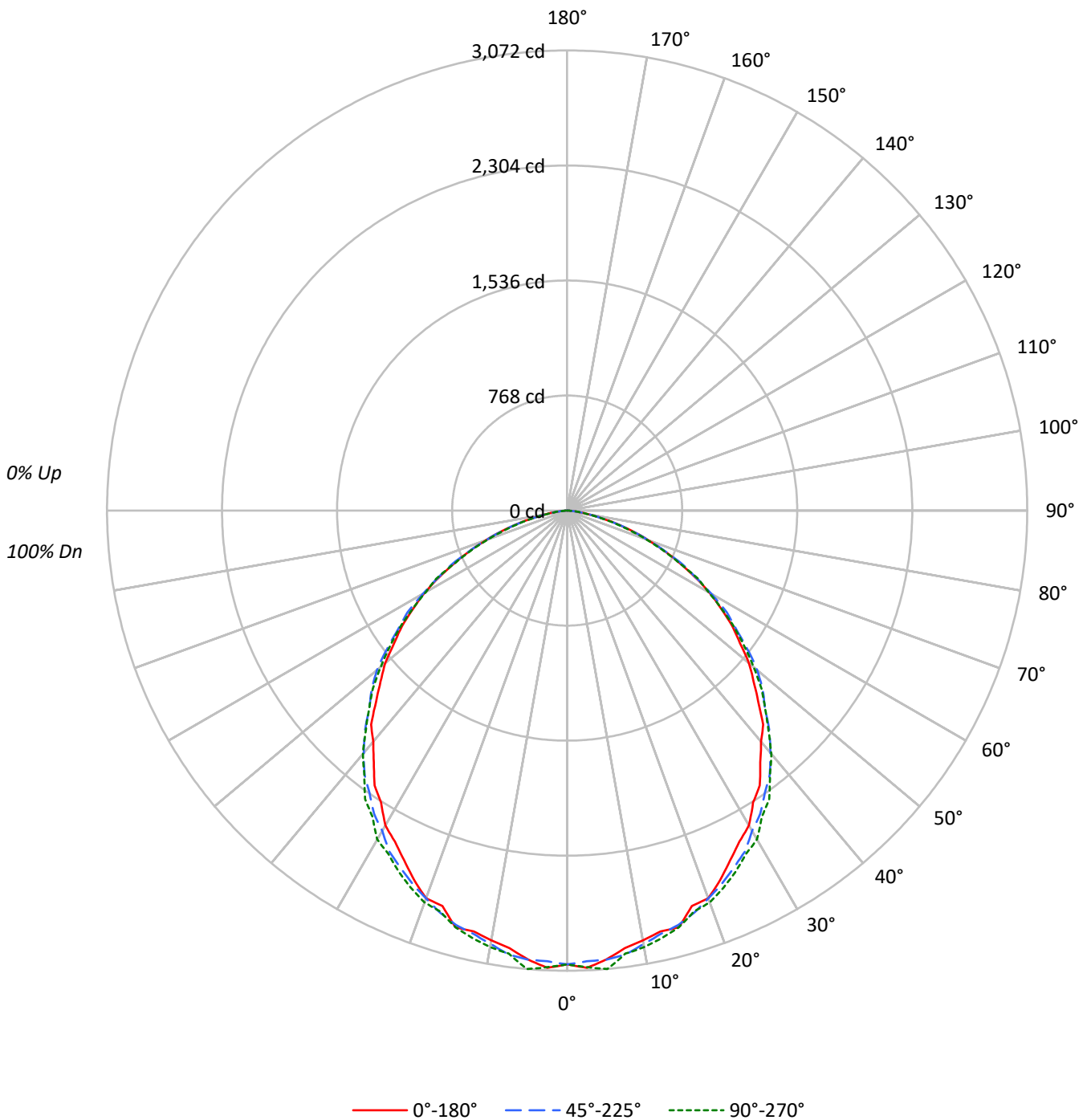
Lumens per Lamp: N/A
Luminaire Lumens: 7635.0 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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: P589789

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589789

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-81-84-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°	8152	8152	8152
5°	8125	8128	8299
10°	7960	8030	8087
15°	8023	7980	8025
20°	7888	7888	7972
25°	7645	7812	7898
30°	7540	7673	7877
35°	7363	7555	7725
40°	7076	7417	7450
45°	6862	7106	7117
50°	6637	6936	6804
55°	6324	6447	6401
60°	5913	5972	5865
65°	5272	5407	5235
70°	4524	4539	4413
75°	3583	3575	3436
80°	2400	2334	2242
85°	1303	1294	1207



TEST NUMBER: P589789

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.0	3.7
10°-20°	807.6	10.6
20°-30°	1210.0	15.8
30°-40°	1434.1	18.8
40°-50°	1436.7	18.8
50°-60°	1219.5	16.0
60°-70°	822.2	10.8
70°-80°	361.3	4.7
80°-90°	58.7	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°	2302.5	30.2
0°-40°	3736.6	48.9
0°-60°	6392.8	83.7
0°-90°	7635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7635.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3029	3029	3029	3029	3029	
5°	3008	3001	3009	3000	3072	284
15°	2880	2847	2864	2879	2880	802
25°	2575	2589	2631	2666	2660	1190
35°	2241	2248	2300	2353	2352	1392
45°	1803	1837	1867	1915	1870	1395
55°	1348	1339	1374	1365	1364	1199
65°	828	817	849	817	822	824
75°	345	338	344	320	330	369
85°	42	41	42	41	39	61
90°	0	0	0	0	0	



TEST NUMBER: P589789

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3029.4	3029.4	3029.4	3029.4	3029.4
2.5°	3055.6	3032.5	3011.0	3036.0	3051.3
5°	3007.9	3000.8	3009.0	3000.0	3072.4
7.5°	2946.1	2973.1	2988.7	2978.9	2983.2
10°	2913.2	2903.8	2938.6	2962.9	2959.4
12.5°	2878.0	2892.1	2894.0	2920.2	2922.6
15°	2880.0	2846.7	2864.3	2879.2	2880.4
17.5°	2768.1	2804.1	2816.2	2850.2	2808.0
20°	2754.4	2728.2	2754.4	2789.2	2783.7
22.5°	2670.3	2641.0	2697.3	2728.2	2726.2
25°	2574.9	2589.0	2631.2	2665.6	2660.1
27.5°	2491.2	2507.6	2567.8	2615.2	2584.6
30°	2426.6	2418.4	2469.3	2511.5	2535.0
32.5°	2311.2	2341.0	2400.4	2442.3	2420.0
35°	2241.2	2247.9	2299.9	2353.1	2351.5
37.5°	2118.8	2149.7	2222.8	2237.7	2224.0
40°	2014.4	2045.3	2111.4	2127.4	2120.8
42.5°	1937.3	1942.8	1999.5	2017.9	1988.6
45°	1803.2	1836.8	1867.3	1915.4	1870.0
47.5°	1688.9	1704.6	1770.3	1783.2	1759.3
50°	1585.3	1590.8	1656.9	1640.8	1625.2
52.5°	1455.0	1478.1	1515.3	1512.1	1493.8
55°	1347.9	1338.9	1374.1	1364.7	1364.3
57.5°	1219.2	1234.8	1263.8	1248.9	1225.0
60°	1098.7	1099.1	1109.7	1092.8	1089.7
62.5°	964.5	969.2	971.6	950.9	984.5
65°	828.0	817.1	849.2	816.7	822.2
67.5°	702.5	708.0	704.8	684.5	692.3
70°	575.0	582.0	576.9	553.9	560.9
72.5°	458.4	449.8	455.3	426.3	439.6
75°	344.6	337.6	343.8	319.6	330.5
77.5°	234.7	240.2	236.2	223.3	230.8
80°	154.9	150.6	150.6	143.2	144.7
82.5°	90.4	86.1	84.9	82.5	86.1
85°	42.2	41.1	41.9	40.7	39.1
87.5°	15.3	15.6	15.6	14.9	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)