

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: P589568

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589568
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-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

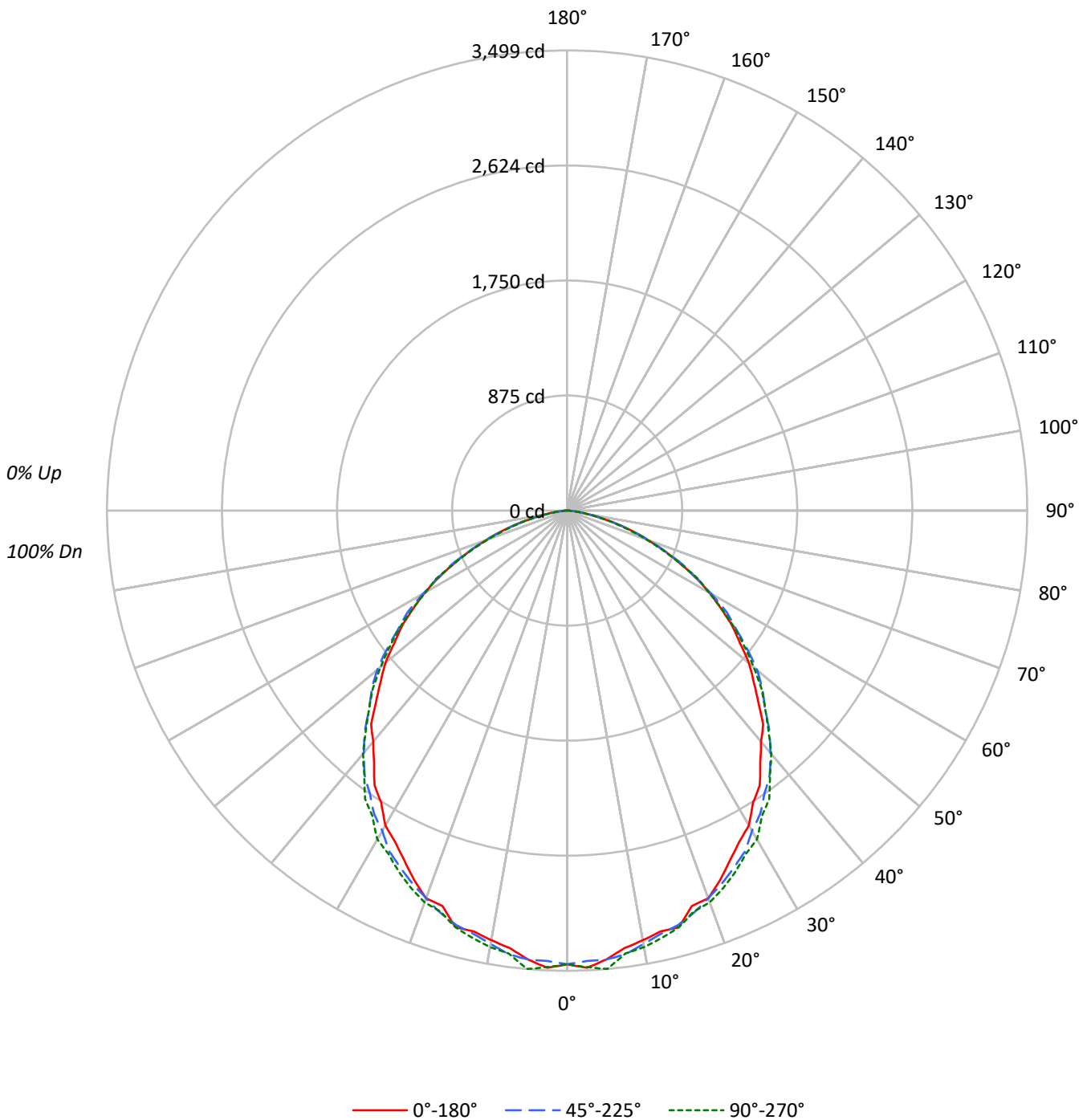
Lumens per Lamp: N/A
Luminaire Lumens: 8694.0 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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					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°	9283	9283	9283
5°	9252	9256	9451
10°	9064	9143	9208
15°	9136	9087	9137
20°	8982	8982	9078
25°	8706	8896	8994
30°	8586	8737	8969
35°	8384	8603	8796
40°	8058	8446	8483
45°	7814	8092	8104
50°	7557	7899	7747
55°	7201	7341	7288
60°	6733	6801	6678
65°	6004	6157	5961
70°	5151	5169	5025
75°	4080	4070	3913
80°	2734	2658	2554
85°	1485	1473	1374



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.5	3.7
10°-20°	919.6	10.6
20°-30°	1377.8	15.8
30°-40°	1633.0	18.8
40°-50°	1636.0	18.8
50°-60°	1388.7	16.0
60°-70°	936.2	10.8
70°-80°	411.4	4.7
80°-90°	66.9	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°	2621.9	30.2
0°-40°	4254.9	48.9
0°-60°	7279.5	83.7
0°-90°	8694.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8694.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3450	3450	3450	3450	3450	
5°	3425	3417	3426	3416	3499	323
15°	3279	3242	3262	3278	3280	914
25°	2932	2948	2996	3035	3029	1355
35°	2552	2560	2619	2680	2678	1585
45°	2053	2092	2126	2181	2129	1588
55°	1535	1525	1565	1554	1554	1365
65°	943	930	967	930	936	938
75°	392	384	392	364	376	421
85°	48	47	48	46	44	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3449.6	3449.6	3449.6	3449.6	3449.6
2.5°	3479.4	3453.1	3428.6	3457.1	3474.5
5°	3425.1	3417.0	3426.4	3416.2	3498.6
7.5°	3354.7	3385.4	3403.2	3392.1	3397.0
10°	3317.3	3306.6	3346.2	3373.8	3369.8
12.5°	3277.2	3293.2	3295.5	3325.3	3328.0
15°	3279.4	3241.6	3261.6	3278.5	3279.9
17.5°	3152.0	3193.0	3206.8	3245.6	3197.5
20°	3136.4	3106.6	3136.4	3176.1	3169.9
22.5°	3040.7	3007.3	3071.4	3106.6	3104.4
25°	2932.0	2948.0	2996.2	3035.3	3029.1
27.5°	2836.7	2855.4	2924.0	2977.9	2943.1
30°	2763.2	2753.9	2811.8	2859.9	2886.6
32.5°	2631.8	2665.7	2733.4	2781.0	2755.6
35°	2552.1	2559.7	2618.9	2679.5	2677.7
37.5°	2412.7	2447.9	2531.2	2548.1	2532.5
40°	2293.8	2329.0	2404.2	2422.5	2414.9
42.5°	2206.0	2212.3	2276.8	2297.8	2264.4
45°	2053.3	2091.6	2126.3	2181.1	2129.4
47.5°	1923.2	1941.0	2015.8	2030.5	2003.4
50°	1805.2	1811.4	1886.7	1868.4	1850.6
52.5°	1656.9	1683.1	1725.4	1721.9	1701.0
55°	1534.8	1524.6	1564.7	1554.0	1553.5
57.5°	1388.3	1406.1	1439.1	1422.1	1395.0
60°	1251.1	1251.6	1263.6	1244.4	1240.9
62.5°	1098.3	1103.7	1106.4	1082.7	1121.1
65°	942.9	930.4	966.9	930.0	936.2
67.5°	799.9	806.2	802.6	779.4	788.3
70°	654.7	662.7	657.0	630.7	638.7
72.5°	522.0	512.2	518.4	485.5	500.6
75°	392.4	384.4	391.5	363.9	376.4
77.5°	267.2	273.5	269.0	254.3	262.8
80°	176.4	171.5	171.5	163.0	164.8
82.5°	102.9	98.0	96.7	94.0	98.0
85°	48.1	46.8	47.7	46.3	44.5
87.5°	17.4	17.8	17.8	16.9	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)