

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: P589576

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-82-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589576
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-82-87-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

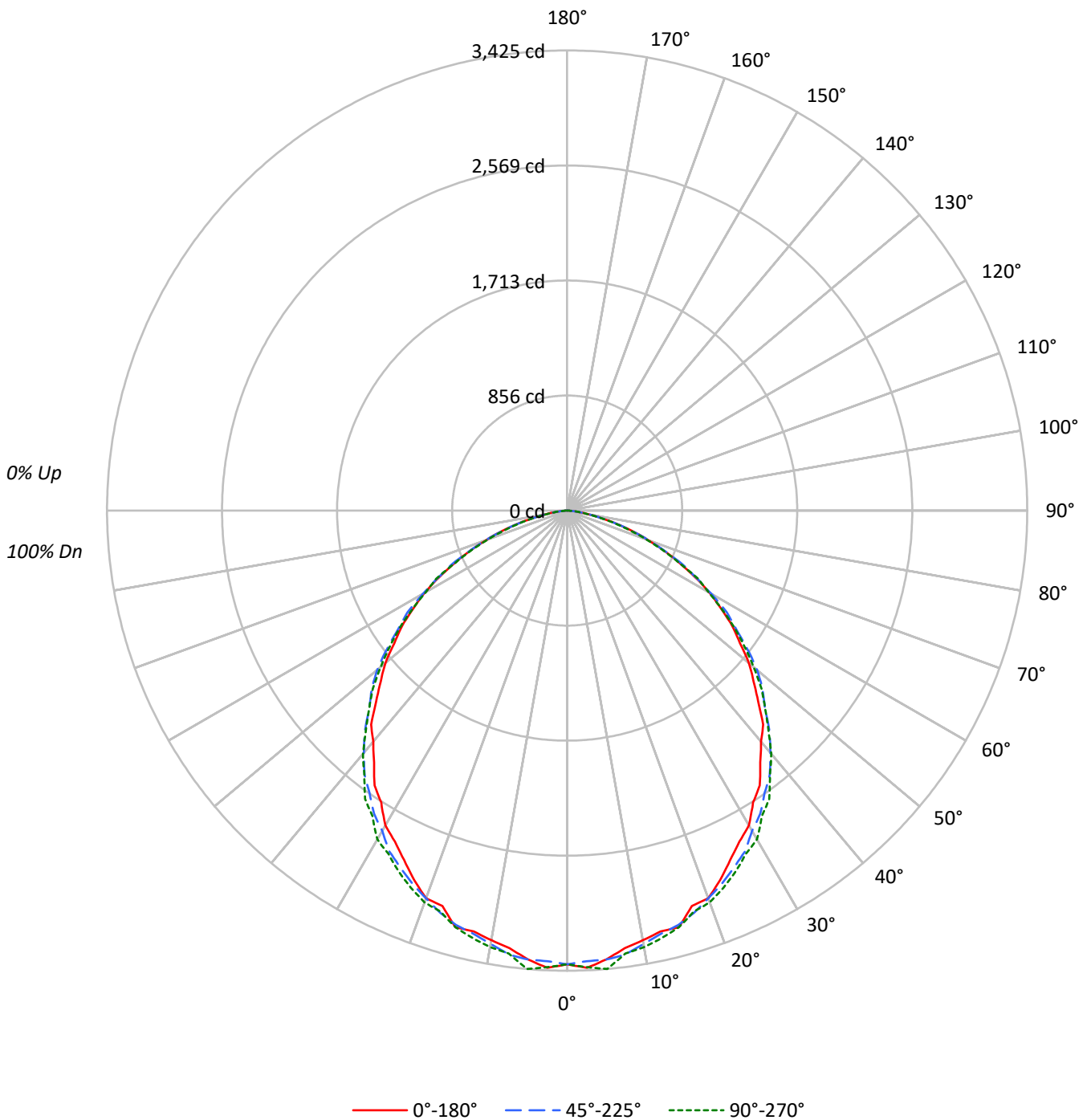
Lumens per Lamp: N/A
Luminaire Lumens: 8511.0 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	9087	9087	9087
5°	9057	9061	9252
10°	8874	8951	9014
15°	8944	8895	8945
20°	8793	8793	8886
25°	8522	8709	8804
30°	8405	8553	8781
35°	8207	8422	8611
40°	7888	8268	8305
45°	7649	7921	7933
50°	7398	7732	7584
55°	7049	7186	7135
60°	6592	6657	6537
65°	5877	6027	5836
70°	5043	5060	4919
75°	3994	3985	3830
80°	2676	2602	2500
85°	1454	1442	1346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	317.7	3.7
10°-20°	900.3	10.6
20°-30°	1348.8	15.8
30°-40°	1598.6	18.8
40°-50°	1601.5	18.8
50°-60°	1359.4	16.0
60°-70°	916.5	10.8
70°-80°	402.7	4.7
80°-90°	65.4	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°	2566.7	30.2
0°-40°	4165.3	48.9
0°-60°	7126.3	83.7
0°-90°	8511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8511.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3377	3377	3377	3377	3377	
5°	3353	3345	3354	3344	3425	316
15°	3210	3173	3193	3210	3211	894
25°	2870	2886	2933	2972	2965	1327
35°	2498	2506	2564	2623	2621	1551
45°	2010	2048	2082	2135	2085	1555
55°	1502	1492	1532	1521	1521	1337
65°	923	911	947	910	916	918
75°	384	376	383	356	368	412
85°	47	46	47	45	44	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3376.9	3376.9	3376.9	3376.9	3376.9
2.5°	3406.2	3380.4	3356.5	3384.4	3401.4
5°	3353.0	3345.1	3354.3	3344.2	3424.9
7.5°	3284.1	3314.2	3331.6	3320.7	3325.5
10°	3247.5	3237.0	3275.8	3302.8	3298.9
12.5°	3208.2	3223.9	3226.1	3255.3	3257.9
15°	3210.4	3173.3	3193.0	3209.5	3210.8
17.5°	3085.7	3125.8	3139.3	3177.3	3130.2
20°	3070.4	3041.2	3070.4	3109.2	3103.1
22.5°	2976.7	2944.0	3006.8	3041.2	3039.0
25°	2870.3	2886.0	2933.1	2971.5	2965.3
27.5°	2777.0	2795.3	2862.5	2915.2	2881.2
30°	2705.0	2695.9	2752.6	2799.7	2825.8
32.5°	2576.4	2609.6	2675.8	2722.5	2697.6
35°	2498.4	2505.8	2563.8	2623.1	2621.3
37.5°	2361.9	2396.3	2477.9	2494.5	2479.2
40°	2245.5	2279.9	2353.6	2371.5	2364.1
42.5°	2159.6	2165.7	2228.9	2249.4	2216.7
45°	2010.0	2047.5	2081.5	2135.2	2084.6
47.5°	1882.7	1900.2	1973.4	1987.8	1961.2
50°	1767.2	1773.3	1847.0	1829.1	1811.6
52.5°	1622.0	1647.7	1689.1	1685.6	1665.1
55°	1502.5	1492.5	1531.7	1521.3	1520.8
57.5°	1359.1	1376.5	1408.8	1392.2	1365.6
60°	1224.8	1225.2	1237.0	1218.2	1214.7
62.5°	1075.2	1080.4	1083.1	1060.0	1097.5
65°	923.0	910.8	946.6	910.4	916.5
67.5°	783.1	789.2	785.7	763.0	771.7
70°	640.9	648.8	643.1	617.4	625.2
72.5°	511.0	501.4	507.5	475.3	490.1
75°	384.1	376.3	383.3	356.2	368.4
77.5°	261.6	267.7	263.4	249.0	257.2
80°	172.7	167.9	167.9	159.6	161.3
82.5°	100.7	95.9	94.6	92.0	95.9
85°	47.1	45.8	46.7	45.3	43.6
87.5°	17.0	17.4	17.4	16.6	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)