

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: P589612

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589612
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-40-UNV-82-97-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

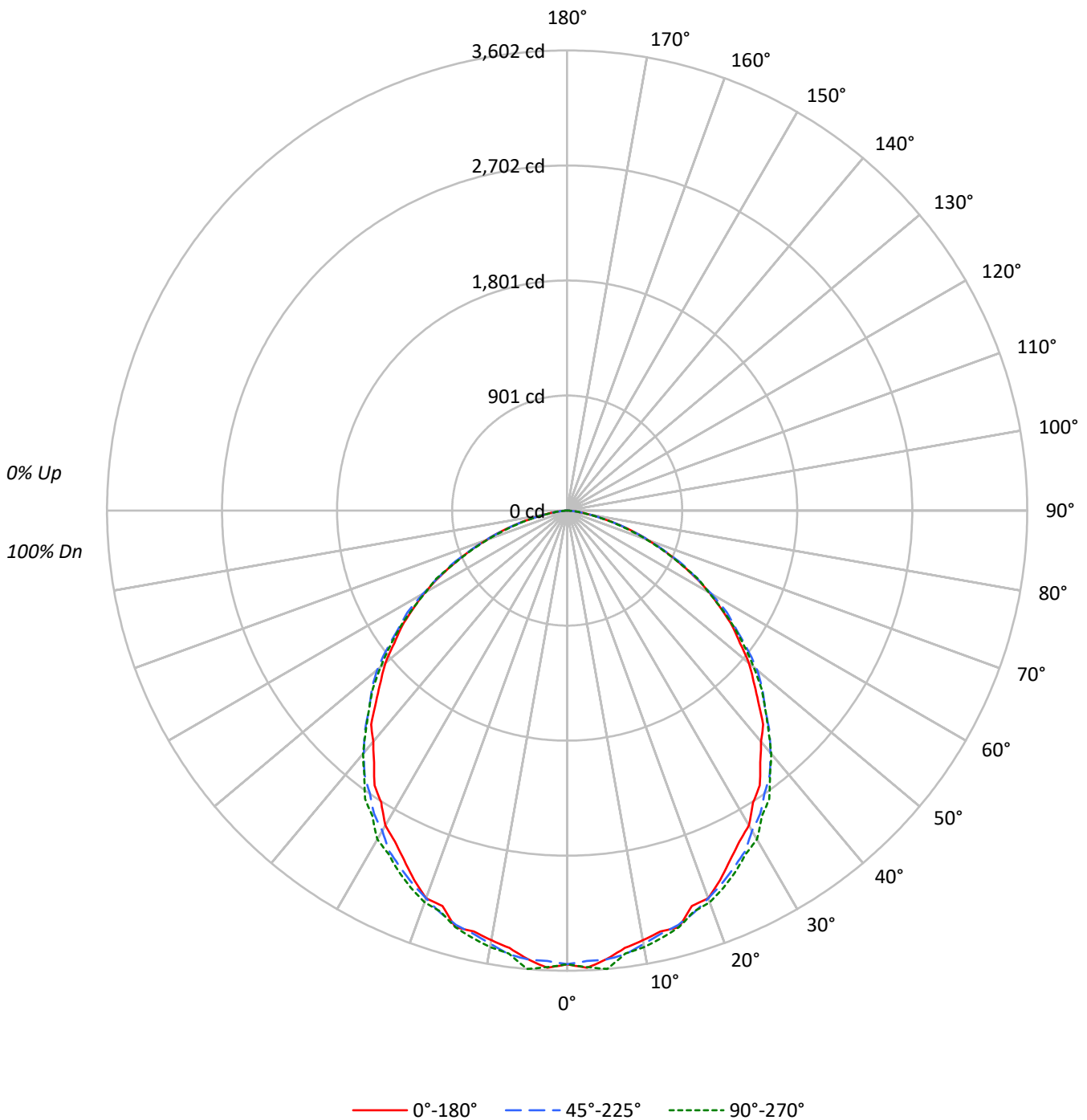
Lumens per Lamp: N/A
Luminaire Lumens: 8950.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	9556	9556	9556
5°	9524	9528	9729
10°	9331	9413	9479
15°	9405	9354	9406
20°	9246	9246	9345
25°	8962	9158	9259
30°	8839	8994	9234
35°	8631	8857	9055
40°	8295	8694	8733
45°	8044	8330	8342
50°	7780	8131	7976
55°	7413	7557	7503
60°	6931	7001	6875
65°	6181	6338	6137
70°	5303	5321	5173
75°	4199	4190	4028
80°	2814	2735	2628
85°	1528	1516	1417



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.0	3.7
10°-20°	946.7	10.6
20°-30°	1418.4	15.8
30°-40°	1681.0	18.8
40°-50°	1684.1	18.8
50°-60°	1429.6	16.0
60°-70°	963.8	10.8
70°-80°	423.5	4.7
80°-90°	68.8	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°	2699.1	30.2
0°-40°	4380.1	48.9
0°-60°	7493.8	83.7
0°-90°	8950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3551	3551	3551	3551	3551	
5°	3526	3518	3527	3517	3602	332
15°	3376	3337	3358	3375	3376	941
25°	3018	3035	3084	3125	3118	1395
35°	2627	2635	2696	2758	2756	1631
45°	2114	2153	2189	2245	2192	1635
55°	1580	1570	1611	1600	1599	1405
65°	971	958	995	957	964	965
75°	404	396	403	375	387	433
85°	50	48	49	48	46	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3551.1	3551.1	3551.1	3551.1	3551.1
2.5°	3581.9	3554.8	3529.6	3558.9	3576.8
5°	3525.9	3517.7	3527.3	3516.7	3601.6
7.5°	3453.5	3485.1	3503.4	3492.0	3497.0
10°	3415.0	3404.0	3444.8	3473.2	3469.1
12.5°	3373.7	3390.2	3392.5	3423.2	3426.0
15°	3376.0	3337.0	3357.6	3375.1	3376.4
17.5°	3244.9	3287.0	3301.2	3341.1	3291.6
20°	3228.8	3198.1	3228.8	3269.6	3263.2
22.5°	3130.2	3095.8	3161.9	3198.1	3195.8
25°	3018.3	3034.9	3084.4	3124.7	3118.3
27.5°	2920.2	2939.5	3010.1	3065.6	3029.8
30°	2844.6	2834.9	2894.6	2944.1	2971.6
32.5°	2709.3	2744.2	2813.9	2862.9	2836.8
35°	2627.2	2635.0	2696.0	2758.4	2756.5
37.5°	2483.7	2520.0	2605.7	2623.1	2607.1
40°	2361.3	2397.5	2475.0	2493.8	2486.0
42.5°	2271.0	2277.4	2343.9	2365.4	2331.0
45°	2113.7	2153.1	2188.9	2245.3	2192.1
47.5°	1979.8	1998.2	2075.2	2090.3	2062.4
50°	1858.3	1864.7	1942.2	1923.4	1905.1
52.5°	1705.6	1732.7	1776.3	1772.6	1751.0
55°	1580.0	1569.5	1610.7	1599.7	1599.3
57.5°	1429.2	1447.5	1481.4	1464.0	1436.0
60°	1287.9	1288.4	1300.8	1281.1	1277.4
62.5°	1130.7	1136.2	1138.9	1114.6	1154.1
65°	970.7	957.8	995.4	957.4	963.8
67.5°	823.5	829.9	826.2	802.4	811.6
70°	674.0	682.3	676.3	649.2	657.5
72.5°	537.4	527.3	533.7	499.8	515.4
75°	403.9	395.7	403.0	374.6	387.4
77.5°	275.1	281.5	276.9	261.8	270.5
80°	181.6	176.5	176.5	167.8	169.6
82.5°	105.9	100.9	99.5	96.7	100.9
85°	49.5	48.1	49.1	47.7	45.9
87.5°	17.9	18.3	18.3	17.4	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)