

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: P589639

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589639
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-50-UNV-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

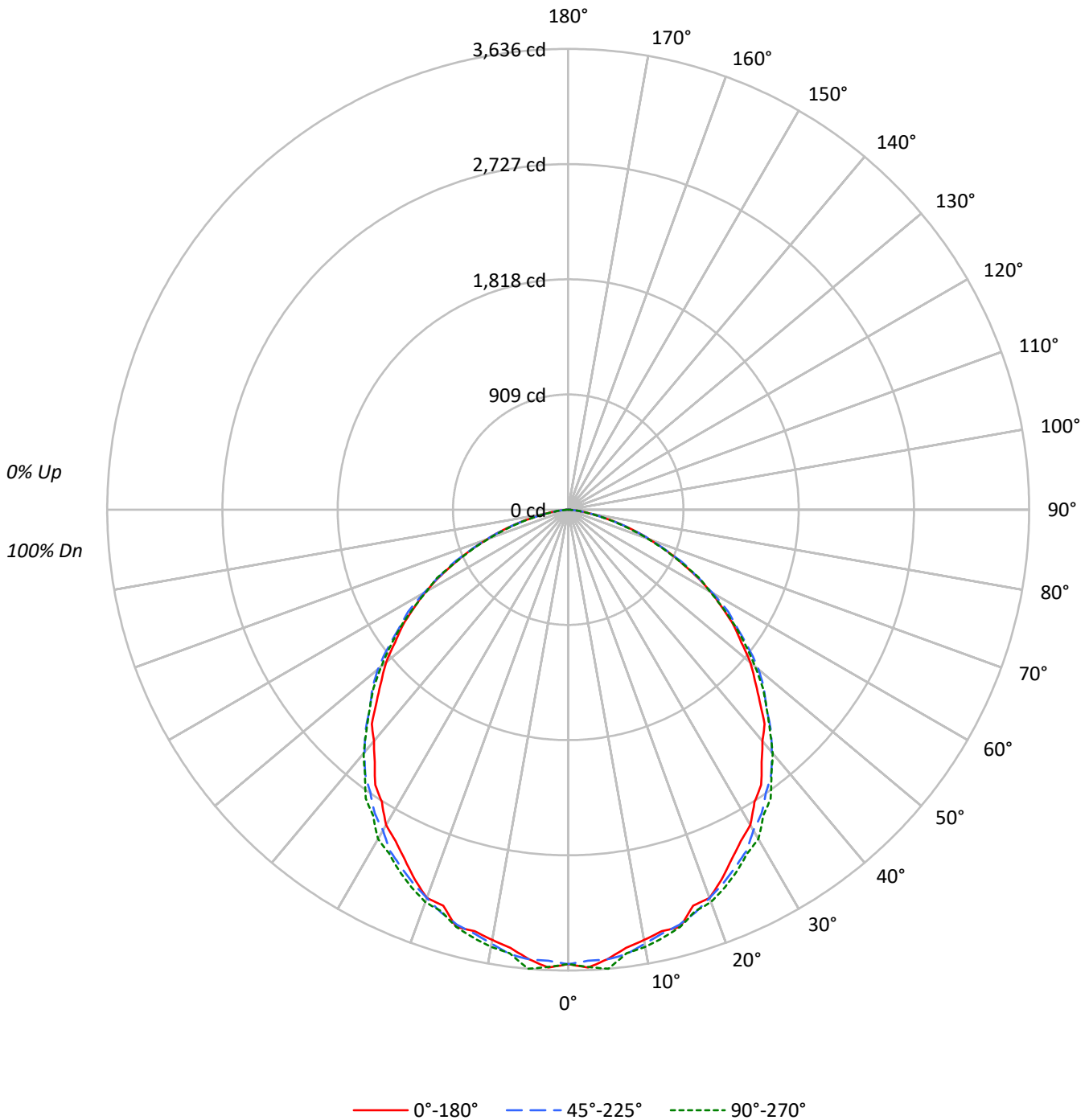
Lumens per Lamp: N/A
Luminaire Lumens: 9035.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9647	9647	9647
5°	9615	9619	9821
10°	9420	9502	9569
15°	9494	9443	9496
20°	9334	9334	9434
25°	9047	9245	9347
30°	8923	9079	9321
35°	8713	8941	9141
40°	8374	8777	8816
45°	8120	8409	8421
50°	7854	8208	8051
55°	7483	7629	7575
60°	6998	7067	6940
65°	6239	6399	6195
70°	5353	5371	5222
75°	4240	4231	4066
80°	2841	2762	2655
85°	1544	1528	1430



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.2	3.7
10°-20°	955.7	10.6
20°-30°	1431.8	15.8
30°-40°	1697.0	18.8
40°-50°	1700.1	18.8
50°-60°	1443.1	16.0
60°-70°	973.0	10.8
70°-80°	427.5	4.7
80°-90°	69.5	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°	2724.7	30.2
0°-40°	4421.7	48.9
0°-60°	7565.0	83.7
0°-90°	9035.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9035.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3585	3585	3585	3585	3585	
5°	3559	3551	3561	3550	3636	336
15°	3408	3369	3390	3407	3408	950
25°	3047	3064	3114	3154	3148	1409
35°	2652	2660	2722	2785	2783	1647
45°	2134	2174	2210	2267	2213	1651
55°	1595	1584	1626	1615	1614	1419
65°	980	967	1005	966	973	975
75°	408	399	407	378	391	437
85°	50	49	50	48	46	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3584.9	3584.9	3584.9	3584.9	3584.9
2.5°	3615.9	3588.6	3563.1	3592.7	3610.8
5°	3559.4	3551.1	3560.8	3550.1	3635.8
7.5°	3486.3	3518.2	3536.7	3525.2	3530.2
10°	3447.4	3436.3	3477.5	3506.2	3502.0
12.5°	3405.7	3422.4	3424.7	3455.7	3458.5
15°	3408.0	3368.7	3389.5	3407.1	3408.5
17.5°	3275.7	3318.3	3332.6	3372.9	3322.9
20°	3259.5	3228.5	3259.5	3300.7	3294.2
22.5°	3160.0	3125.2	3191.9	3228.5	3226.1
25°	3047.0	3063.7	3113.7	3154.4	3147.9
27.5°	2948.0	2967.4	3038.7	3094.7	3058.6
30°	2871.6	2861.9	2922.0	2972.0	2999.8
32.5°	2735.0	2770.2	2840.6	2890.1	2863.7
35°	2652.2	2660.1	2721.6	2784.6	2782.7
37.5°	2507.3	2543.9	2630.4	2648.0	2631.8
40°	2383.7	2420.3	2498.5	2517.5	2509.6
42.5°	2292.6	2299.0	2366.1	2387.9	2353.2
45°	2133.8	2173.6	2209.7	2266.6	2212.9
47.5°	1998.6	2017.1	2094.9	2110.2	2081.9
50°	1876.0	1882.5	1960.7	1941.7	1923.2
52.5°	1721.8	1749.2	1793.1	1789.4	1767.7
55°	1595.0	1584.4	1626.0	1614.9	1614.5
57.5°	1442.7	1461.3	1495.5	1477.9	1449.7
60°	1300.2	1300.6	1313.1	1293.2	1289.5
62.5°	1141.4	1147.0	1149.7	1125.2	1165.0
65°	979.9	966.9	1004.9	966.5	972.9
67.5°	831.3	837.8	834.1	810.0	819.3
70°	680.4	688.7	682.7	655.4	663.7
72.5°	542.5	532.3	538.8	504.5	520.3
75°	407.8	399.4	406.9	378.2	391.1
77.5°	277.7	284.2	279.6	264.3	273.1
80°	183.3	178.2	178.2	169.4	171.3
82.5°	106.9	101.8	100.4	97.7	101.8
85°	50.0	48.6	49.5	48.1	46.3
87.5°	18.1	18.5	18.5	17.6	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)