

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: P589643

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589643
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

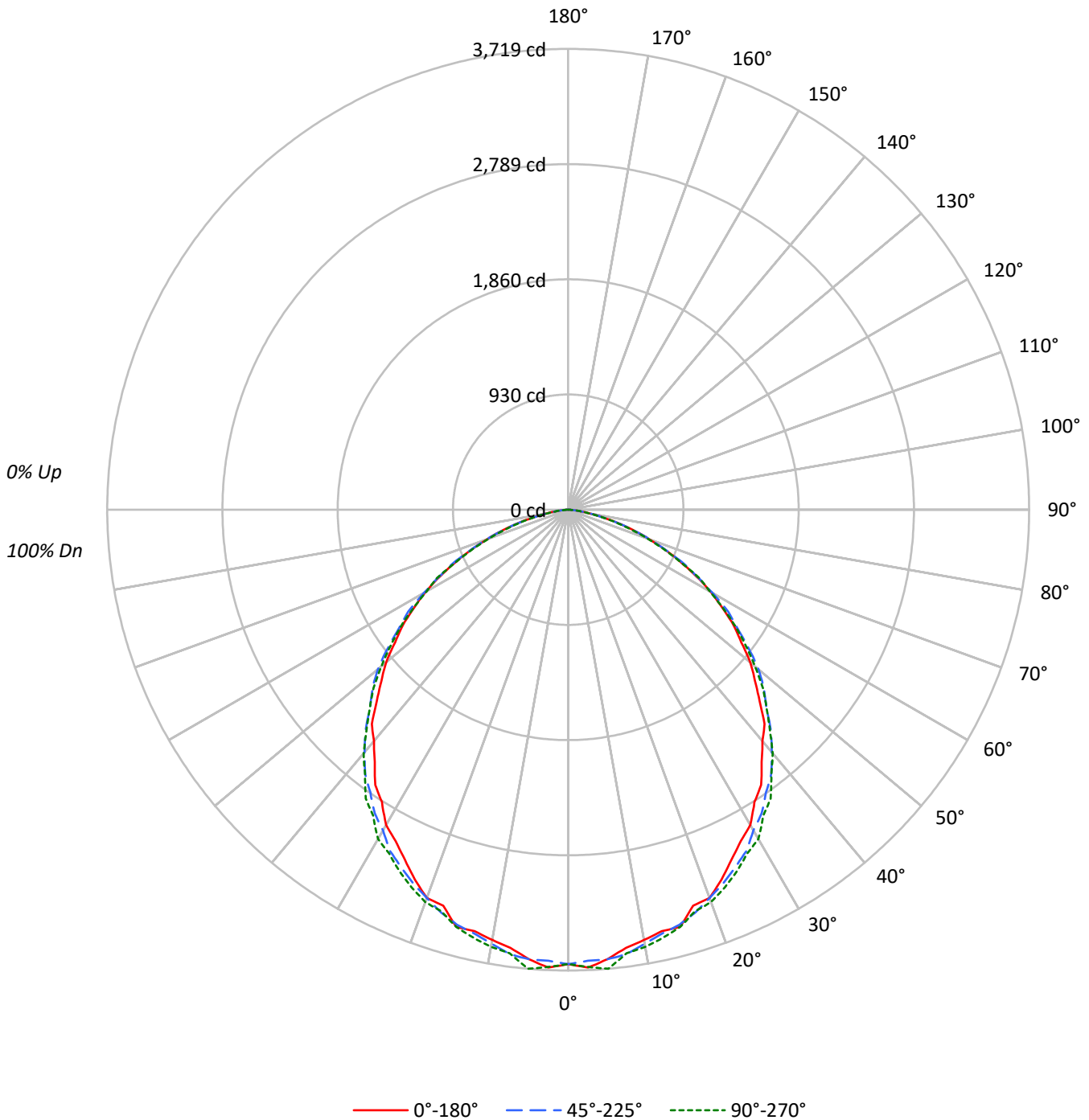
Lumens per Lamp: N/A
Luminaire Lumens: 9241.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9867	9867	9867
5°	9834	9838	10045
10°	9635	9719	9788
15°	9711	9658	9712
20°	9547	9547	9649
25°	9253	9456	9560
30°	9126	9287	9534
35°	8911	9145	9350
40°	8565	8977	9017
45°	8305	8601	8614
50°	8032	8395	8235
55°	7654	7803	7747
60°	7157	7229	7098
65°	6381	6544	6336
70°	5475	5494	5342
75°	4337	4326	4159
80°	2906	2825	2715
85°	1578	1565	1460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.9	3.7
10°-20°	977.5	10.6
20°-30°	1464.5	15.8
30°-40°	1735.7	18.8
40°-50°	1738.9	18.8
50°-60°	1476.0	16.0
60°-70°	995.2	10.8
70°-80°	437.3	4.7
80°-90°	71.1	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°	2786.9	30.2
0°-40°	4522.6	48.9
0°-60°	7737.5	83.7
0°-90°	9241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3667	3667	3667	3667	3667	
5°	3641	3632	3642	3631	3719	343
15°	3486	3446	3467	3485	3486	971
25°	3116	3134	3185	3226	3220	1441
35°	2713	2721	2784	2848	2846	1684
45°	2182	2223	2260	2318	2263	1688
55°	1631	1620	1663	1652	1651	1451
65°	1002	989	1028	988	995	997
75°	417	409	416	387	400	447
85°	51	50	51	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3666.6	3666.6	3666.6	3666.6	3666.6
2.5°	3698.3	3670.4	3644.3	3674.6	3693.1
5°	3640.6	3632.0	3642.0	3631.1	3718.7
7.5°	3565.8	3598.4	3617.4	3605.5	3610.7
10°	3526.0	3514.6	3556.8	3586.1	3581.9
12.5°	3483.4	3500.4	3502.8	3534.5	3537.4
15°	3485.8	3445.5	3466.8	3484.8	3486.2
17.5°	3350.4	3393.9	3408.6	3449.8	3398.6
20°	3333.8	3302.1	3333.8	3375.9	3369.3
22.5°	3232.0	3196.5	3264.7	3302.1	3299.7
25°	3116.5	3133.5	3184.7	3226.3	3219.7
27.5°	3015.2	3035.1	3108.0	3165.2	3128.3
30°	2937.1	2927.1	2988.7	3039.8	3068.2
32.5°	2797.4	2833.4	2905.3	2956.0	2929.0
35°	2712.7	2720.7	2783.7	2848.1	2846.2
37.5°	2564.5	2601.9	2690.4	2708.4	2691.8
40°	2438.1	2475.5	2555.5	2574.9	2566.9
42.5°	2344.8	2351.4	2420.1	2442.3	2406.8
45°	2182.4	2223.2	2260.1	2318.3	2263.4
47.5°	2044.2	2063.1	2142.7	2158.3	2129.4
50°	1918.7	1925.4	2005.4	1986.0	1967.0
52.5°	1761.1	1789.0	1834.0	1830.2	1808.0
55°	1631.4	1620.5	1663.1	1651.7	1651.3
57.5°	1475.6	1494.6	1529.6	1511.6	1482.7
60°	1329.8	1330.3	1343.1	1322.7	1318.9
62.5°	1167.4	1173.1	1176.0	1150.9	1191.6
65°	1002.2	989.0	1027.8	988.5	995.1
67.5°	850.3	856.9	853.1	828.5	837.9
70°	695.9	704.4	698.3	670.4	678.9
72.5°	554.8	544.4	551.1	516.0	532.1
75°	417.1	408.6	416.1	386.8	400.0
77.5°	284.0	290.7	285.9	270.3	279.3
80°	187.5	182.3	182.3	173.3	175.2
82.5°	109.4	104.2	102.7	99.9	104.2
85°	51.1	49.7	50.7	49.2	47.3
87.5°	18.5	18.9	18.9	18.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)