

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: P546696

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-82-85-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P546696
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-2HI-35-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

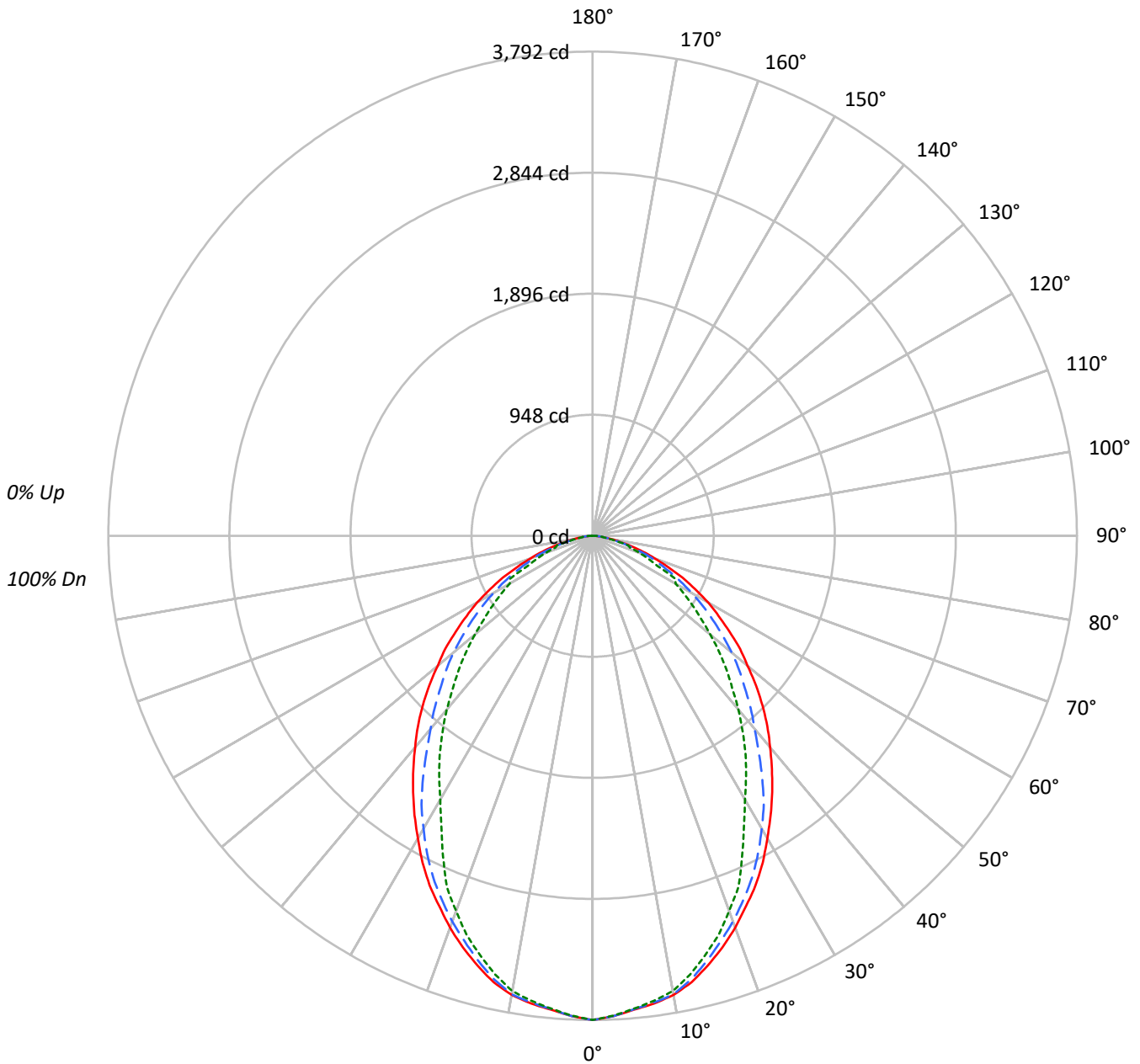
Lumens per Lamp: N/A
Luminaire Lumens: 7444.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5102	5102	5102
5°	5033	5027	5021
10°	4989	4983	4947
15°	4854	4806	4738
20°	4676	4601	4475
25°	4484	4386	4113
30°	4250	4114	3705
35°	4025	3802	3427
40°	3796	3465	3118
45°	3578	3203	2819
50°	3313	2973	2514
55°	3064	2694	2252
60°	2807	2407	2017
65°	2470	2107	1786
70°	2035	1845	1518
75°	1618	1413	1481
80°	1087	1019	951
85°	676	812	948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	353.0	4.7
10°-20°	968.7	13.0
20°-30°	1341.1	18.0
30°-40°	1430.0	19.2
40°-50°	1304.6	17.5
50°-60°	1022.0	13.7
60°-70°	666.1	8.9
70°-80°	295.1	4.0
80°-90°	63.4	0.9
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°	2662.8	35.8
0°-40°	4092.8	55.0
0°-60°	6419.4	86.2
0°-90°	7444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3792	3792	3792	3792	3792	
5°	3726	3722	3722	3717	3717	354
15°	3485	3485	3450	3415	3402	980
25°	3020	3003	2955	2849	2770	1387
35°	2450	2433	2315	2139	2087	1532
45°	1881	1841	1683	1543	1482	1449
55°	1306	1267	1148	1013	960	1172
65°	776	732	662	675	561	765
75°	311	289	272	259	285	334
85°	44	48	53	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3791.9	3791.9	3791.9	3791.9	3791.9
2.5°	3765.6	3765.6	3765.6	3761.2	3761.2
5°	3726.1	3721.7	3721.7	3717.4	3717.4
7.5°	3695.4	3691.0	3686.7	3682.3	3673.5
10°	3651.6	3651.6	3647.2	3625.3	3620.9
12.5°	3581.5	3577.1	3559.5	3528.9	3520.1
15°	3485.0	3485.0	3449.9	3414.9	3401.7
17.5°	3379.8	3375.4	3331.6	3296.5	3279.0
20°	3265.8	3257.1	3213.2	3156.2	3125.6
22.5°	3138.7	3138.7	3086.1	3011.6	2980.9
25°	3020.3	3002.8	2954.6	2849.4	2770.5
27.5°	2884.5	2858.2	2805.5	2656.5	2564.4
30°	2735.4	2722.3	2647.7	2454.9	2384.7
32.5°	2595.1	2573.2	2494.3	2292.7	2235.7
35°	2450.5	2432.9	2314.6	2139.2	2086.6
37.5°	2305.8	2283.9	2134.8	1994.6	1928.8
40°	2161.1	2134.8	1972.7	1845.5	1775.4
42.5°	2025.3	1990.2	1832.4	1696.5	1617.6
45°	1880.6	1841.1	1683.3	1543.1	1481.7
47.5°	1735.9	1700.9	1556.2	1411.5	1341.4
50°	1582.5	1551.8	1420.3	1275.6	1201.1
52.5°	1455.4	1407.2	1280.0	1135.4	1074.0
55°	1306.3	1266.9	1148.5	1012.6	960.0
57.5°	1170.4	1131.0	1021.4	894.3	850.4
60°	1043.3	986.3	894.3	784.7	749.6
62.5°	903.0	859.2	780.3	688.2	732.1
65°	775.9	732.1	661.9	675.1	561.1
67.5°	635.6	613.7	552.3	491.0	473.4
70°	517.3	491.0	469.1	403.3	385.8
72.5°	412.1	385.8	355.1	320.0	306.9
75°	311.2	289.3	271.8	258.6	284.9
77.5°	214.8	206.0	192.9	179.7	175.3
80°	140.3	135.9	131.5	127.1	122.7
82.5°	83.3	83.3	83.3	83.3	83.3
85°	43.8	48.2	52.6	57.0	61.4
87.5°	26.3	26.3	30.7	35.1	39.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)