

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: P547424

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-81-85-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: P547424
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-LD4-4LO-50-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

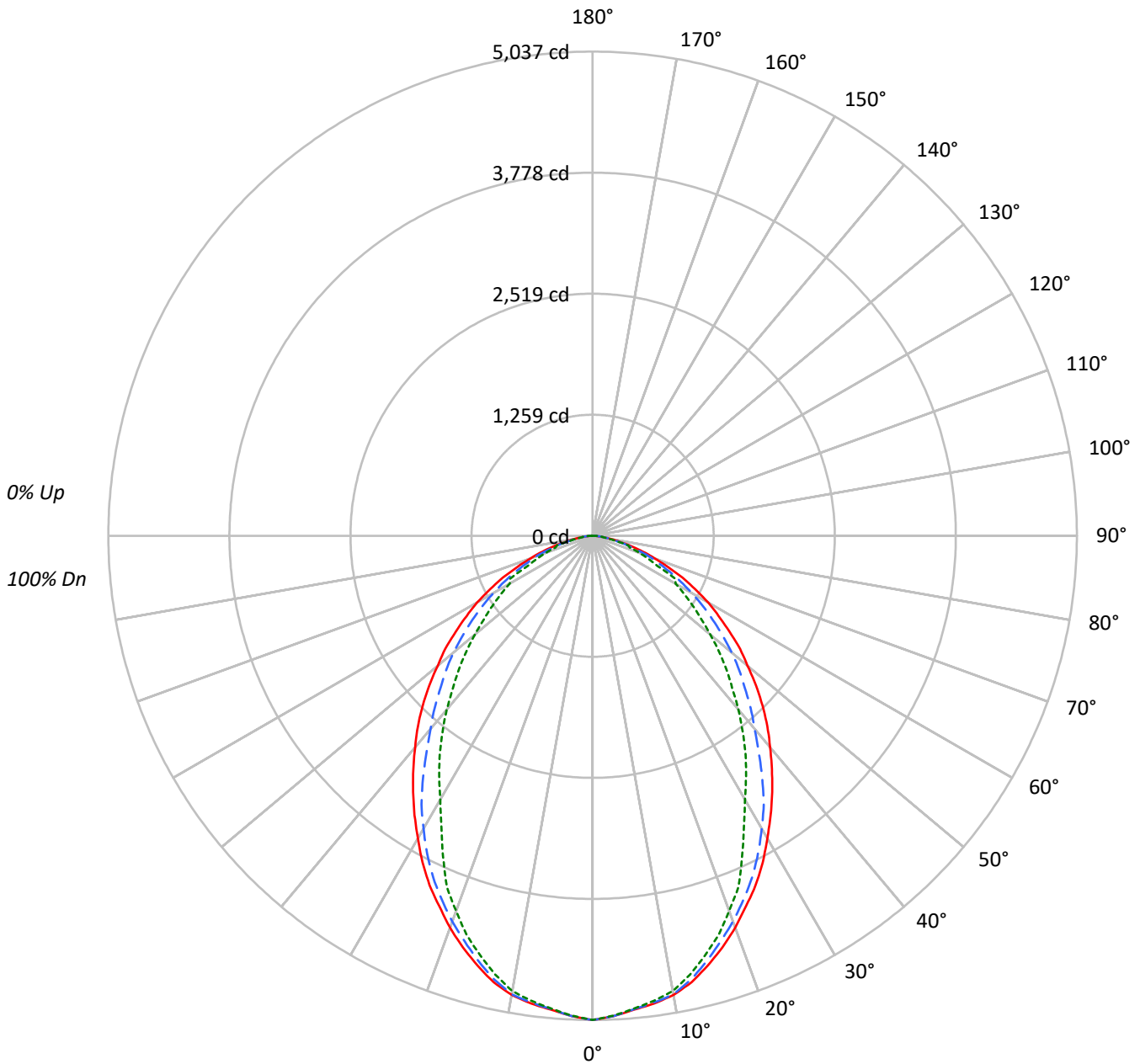
Lumens per Lamp: N/A
Luminaire Lumens: 9888.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6777	6777	6777
5°	6685	6677	6669
10°	6627	6619	6571
15°	6448	6383	6294
20°	6211	6111	5945
25°	5956	5826	5463
30°	5645	5464	4921
35°	5346	5050	4553
40°	5042	4602	4142
45°	4753	4255	3745
50°	4400	3949	3340
55°	4070	3579	2991
60°	3729	3197	2679
65°	3281	2799	2373
70°	2703	2451	2016
75°	2149	1877	1968
80°	1444	1354	1263
85°	898	1079	1258



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	468.9	4.7
10°-20°	1286.7	13.0
20°-30°	1781.4	18.0
30°-40°	1899.5	19.2
40°-50°	1732.9	17.5
50°-60°	1357.6	13.7
60°-70°	884.8	8.9
70°-80°	392.0	4.0
80°-90°	84.2	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°	3537.0	35.8
0°-40°	5436.5	55.0
0°-60°	8527.0	86.2
0°-90°	9888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5037	5037	5037	5037	5037	
5°	4950	4944	4944	4938	4938	470
15°	4629	4629	4583	4536	4519	1301
25°	4012	3989	3925	3785	3680	1842
35°	3255	3232	3074	2842	2772	2035
45°	2498	2446	2236	2050	1968	1924
55°	1735	1683	1526	1345	1275	1556
65°	1031	972	879	897	745	1016
75°	413	384	361	344	378	443
85°	58	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5036.8	5036.8	5036.8	5036.8	5036.8
2.5°	5001.9	5001.9	5001.9	4996.1	4996.1
5°	4949.5	4943.6	4943.6	4937.8	4937.8
7.5°	4908.7	4902.9	4897.1	4891.2	4879.6
10°	4850.5	4850.5	4844.7	4815.5	4809.7
12.5°	4757.3	4751.5	4728.2	4687.4	4675.8
15°	4629.2	4629.2	4582.6	4536.0	4518.6
17.5°	4489.5	4483.6	4425.4	4378.8	4355.5
20°	4338.1	4326.4	4268.2	4192.5	4151.7
22.5°	4169.2	4169.2	4099.3	4000.3	3959.6
25°	4012.0	3988.7	3924.6	3784.9	3680.1
27.5°	3831.5	3796.5	3726.7	3528.7	3406.4
30°	3633.5	3616.0	3517.0	3260.8	3167.7
32.5°	3447.2	3418.0	3313.2	3045.4	2969.7
35°	3255.0	3231.7	3074.5	2841.6	2771.7
37.5°	3062.8	3033.7	2835.8	2649.4	2562.1
40°	2870.7	2835.8	2620.3	2451.4	2358.3
42.5°	2690.2	2643.6	2434.0	2253.5	2148.7
45°	2498.0	2445.6	2236.0	2049.7	1968.1
47.5°	2305.9	2259.3	2067.1	1875.0	1781.8
50°	2102.1	2061.3	1886.6	1694.5	1595.5
52.5°	1933.2	1869.2	1700.3	1508.1	1426.6
55°	1735.2	1682.8	1525.6	1345.1	1275.2
57.5°	1554.7	1502.3	1356.7	1187.9	1129.6
60°	1385.9	1310.2	1187.9	1042.3	995.7
62.5°	1199.5	1141.3	1036.5	914.2	972.4
65°	1030.7	972.4	879.3	896.7	745.3
67.5°	844.3	815.2	733.7	652.2	628.9
70°	687.1	652.2	623.1	535.7	512.4
72.5°	547.4	512.4	471.7	425.1	407.6
75°	413.4	384.3	361.0	343.6	378.5
77.5°	285.3	273.7	256.2	238.7	232.9
80°	186.3	180.5	174.7	168.9	163.0
82.5°	110.6	110.6	110.6	110.6	110.6
85°	58.2	64.1	69.9	75.7	81.5
87.5°	34.9	34.9	40.8	46.6	52.4
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)