

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: P547017

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-82-86-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: P547017
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-LD4-3HI-40-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

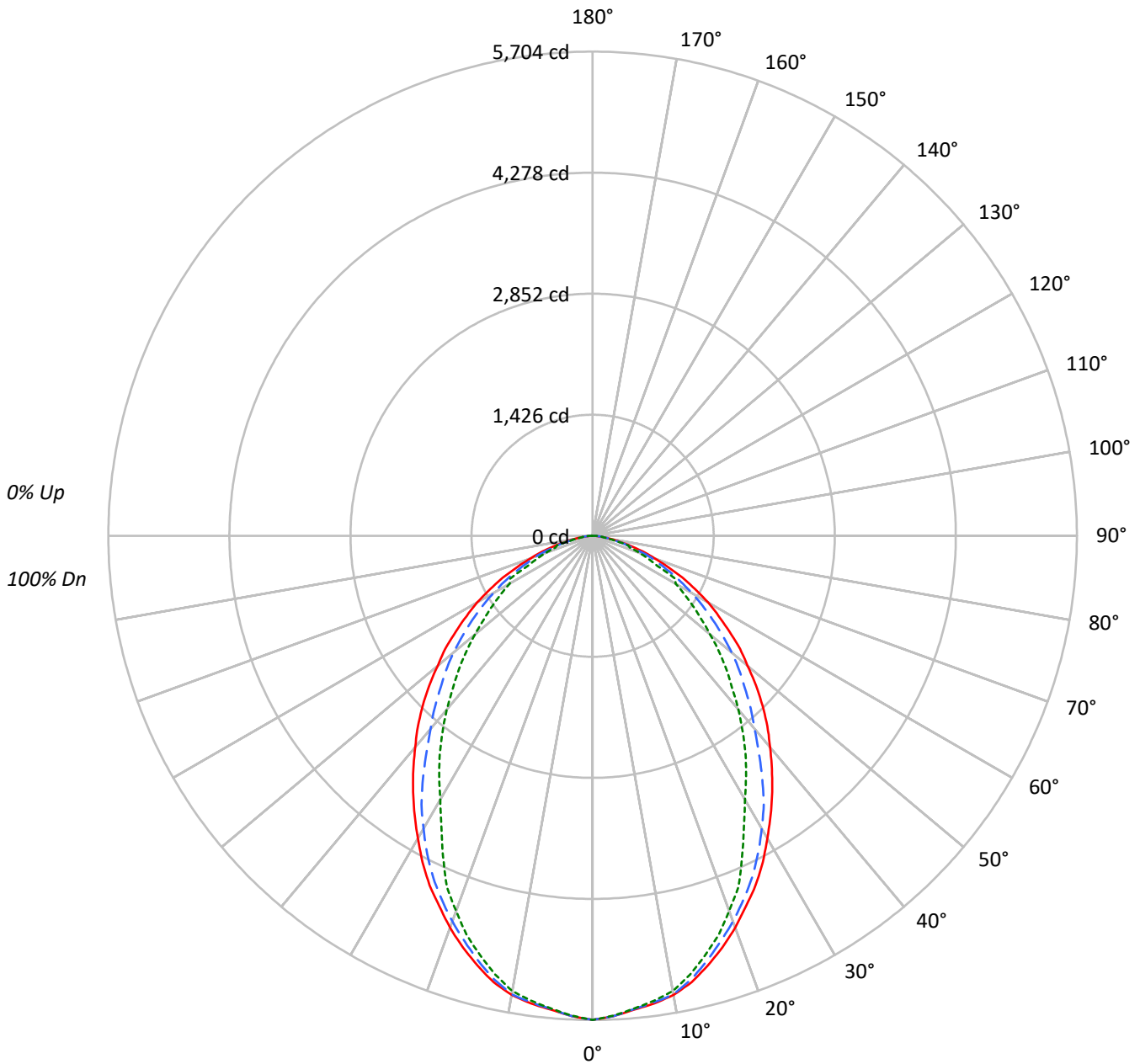
Lumens per Lamp: N/A
Luminaire Lumens: 11197.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	7674	7674	7674
5°	7570	7561	7552
10°	7504	7495	7441
15°	7302	7228	7127
20°	7034	6920	6732
25°	6745	6598	6187
30°	6392	6188	5573
35°	6054	5719	5155
40°	5710	5212	4690
45°	5382	4818	4241
50°	4982	4472	3782
55°	4609	4053	3387
60°	4223	3620	3034
65°	3716	3170	2687
70°	3061	2775	2283
75°	2434	2125	2228
80°	1635	1533	1430
85°	1017	1221	1425



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.9	4.7
10°-20°	1457.1	13.0
20°-30°	2017.2	18.0
30°-40°	2151.0	19.2
40°-50°	1962.3	17.5
50°-60°	1537.3	13.7
60°-70°	1001.9	8.9
70°-80°	443.9	4.0
80°-90°	95.3	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°	4005.3	35.8
0°-40°	6156.2	55.0
0°-60°	9655.8	86.2
0°-90°	11197.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11197.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5704	5704	5704	5704	5704	
5°	5605	5598	5598	5592	5592	532
15°	5242	5242	5189	5136	5117	1474
25°	4543	4517	4444	4286	4167	2086
35°	3686	3660	3482	3218	3139	2304
45°	2829	2769	2532	2321	2229	2179
55°	1965	1906	1728	1523	1444	1762
65°	1167	1101	996	1015	844	1150
75°	468	435	409	389	429	502
85°	66	72	79	86	92	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5703.6	5703.6	5703.6	5703.6	5703.6
2.5°	5664.0	5664.0	5664.0	5657.4	5657.4
5°	5604.7	5598.1	5598.1	5591.5	5591.5
7.5°	5558.5	5551.9	5545.4	5538.8	5525.6
10°	5492.6	5492.6	5486.0	5453.0	5446.4
12.5°	5387.1	5380.5	5354.1	5308.0	5294.8
15°	5242.0	5242.0	5189.3	5136.5	5116.8
17.5°	5083.8	5077.2	5011.3	4958.5	4932.1
20°	4912.4	4899.2	4833.2	4747.5	4701.4
22.5°	4721.1	4721.1	4642.0	4529.9	4483.8
25°	4543.1	4516.7	4444.2	4285.9	4167.3
27.5°	4338.7	4299.1	4220.0	3995.8	3857.3
30°	4114.5	4094.7	3982.6	3692.5	3587.0
32.5°	3903.5	3870.5	3751.8	3448.5	3362.8
35°	3685.9	3659.5	3481.5	3217.8	3138.6
37.5°	3468.3	3435.3	3211.2	3000.2	2901.3
40°	3250.7	3211.2	2967.2	2776.0	2670.5
42.5°	3046.3	2993.6	2756.2	2551.8	2433.1
45°	2828.7	2769.4	2532.0	2321.0	2228.7
47.5°	2611.1	2558.4	2340.8	2123.2	2017.7
50°	2380.3	2334.2	2136.4	1918.8	1806.7
52.5°	2189.1	2116.6	1925.4	1707.8	1615.5
55°	1964.9	1905.6	1727.6	1523.2	1444.0
57.5°	1760.5	1701.2	1536.3	1345.1	1279.2
60°	1569.3	1483.6	1345.1	1180.3	1127.5
62.5°	1358.3	1292.4	1173.7	1035.2	1101.2
65°	1167.1	1101.2	995.7	1015.4	844.0
67.5°	956.1	923.1	830.8	738.5	712.1
70°	778.1	738.5	705.5	606.6	580.3
72.5°	619.8	580.3	534.1	481.3	461.6
75°	468.2	435.2	408.8	389.0	428.6
77.5°	323.1	309.9	290.1	270.3	263.8
80°	211.0	204.4	197.8	191.2	184.6
82.5°	125.3	125.3	125.3	125.3	125.3
85°	65.9	72.5	79.1	85.7	92.3
87.5°	39.6	39.6	46.2	52.8	59.3
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)