

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: P547015

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-82-84-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: P547015
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-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

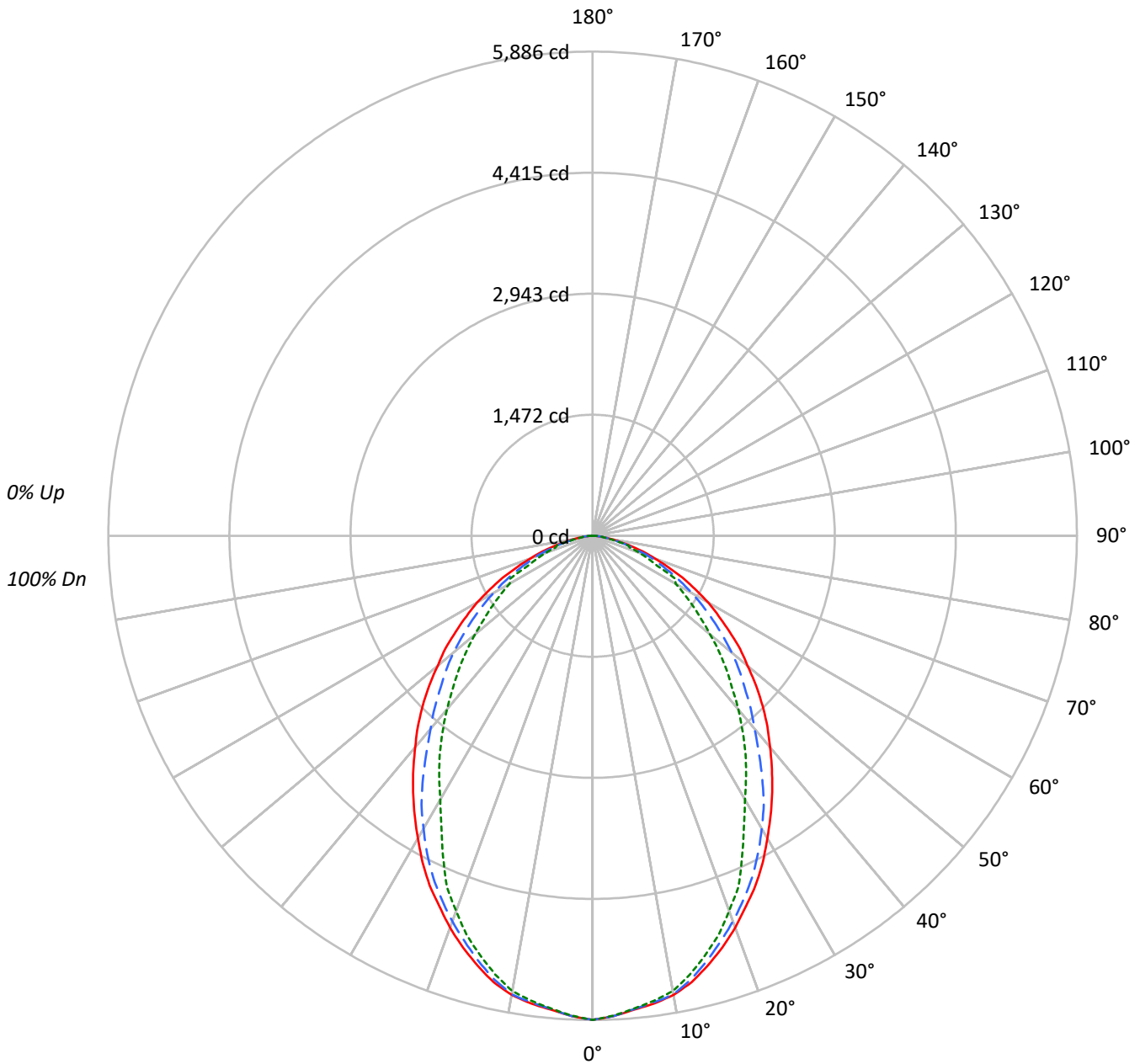
Lumens per Lamp: N/A
Luminaire Lumens: 11554.0 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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				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°	7919	7919	7919
5°	7811	7802	7793
10°	7743	7734	7678
15°	7535	7459	7355
20°	7258	7141	6946
25°	6960	6808	6384
30°	6596	6385	5751
35°	6247	5901	5320
40°	5892	5378	4840
45°	5554	4971	4376
50°	5141	4614	3902
55°	4756	4182	3495
60°	4358	3735	3131
65°	3834	3271	2773
70°	3159	2864	2356
75°	2511	2193	2299
80°	1687	1581	1476
85°	1050	1260	1471



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	547.9	4.7
10°-20°	1503.5	13.0
20°-30°	2081.6	18.0
30°-40°	2219.5	19.2
40°-50°	2024.9	17.5
50°-60°	1586.3	13.7
60°-70°	1033.9	8.9
70°-80°	458.1	4.0
80°-90°	98.3	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°	4133.0	35.8
0°-40°	6352.5	55.0
0°-60°	9963.7	86.2
0°-90°	11554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11554.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5886	5886	5886	5886	5886	
5°	5783	5777	5777	5770	5770	549
15°	5409	5409	5355	5300	5280	1521
25°	4688	4661	4586	4423	4300	2152
35°	3803	3776	3592	3320	3239	2378
45°	2919	2858	2613	2395	2300	2248
55°	2028	1966	1783	1572	1490	1819
65°	1204	1136	1027	1048	871	1187
75°	483	449	422	401	442	518
85°	68	75	82	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5885.5	5885.5	5885.5	5885.5	5885.5
2.5°	5844.6	5844.6	5844.6	5837.8	5837.8
5°	5783.4	5776.6	5776.6	5769.8	5769.8
7.5°	5735.8	5729.0	5722.2	5715.4	5701.7
10°	5667.7	5667.7	5660.9	5626.9	5620.1
12.5°	5558.9	5552.1	5524.8	5477.2	5463.6
15°	5409.2	5409.2	5354.7	5300.3	5279.9
17.5°	5245.9	5239.1	5171.0	5116.6	5089.4
20°	5069.0	5055.4	4987.3	4898.9	4851.2
22.5°	4871.7	4871.7	4790.0	4674.3	4626.7
25°	4688.0	4660.7	4585.9	4422.6	4300.1
27.5°	4477.0	4436.2	4354.6	4123.2	3980.3
30°	4245.7	4225.3	4109.6	3810.2	3701.4
32.5°	4028.0	3993.9	3871.5	3558.5	3470.0
35°	3803.4	3776.2	3592.5	3320.3	3238.7
37.5°	3578.9	3544.9	3313.5	3095.8	2993.8
40°	3354.4	3313.5	3061.8	2864.5	2755.6
42.5°	3143.4	3089.0	2844.1	2633.1	2510.7
45°	2918.9	2857.7	2612.7	2395.0	2299.7
47.5°	2694.4	2639.9	2415.4	2190.9	2082.0
50°	2456.2	2408.6	2204.5	1980.0	1864.3
52.5°	2258.9	2184.1	1986.8	1762.2	1667.0
55°	2027.6	1966.4	1782.6	1571.7	1490.1
57.5°	1816.7	1755.4	1585.3	1388.0	1320.0
60°	1619.4	1530.9	1388.0	1217.9	1163.5
62.5°	1401.6	1333.6	1211.1	1068.2	1136.3
65°	1204.3	1136.3	1027.4	1047.8	870.9
67.5°	986.6	952.6	857.3	762.0	734.8
70°	802.9	762.0	728.0	626.0	598.8
72.5°	639.6	598.8	551.1	496.7	476.3
75°	483.1	449.1	421.8	401.4	442.3
77.5°	333.4	319.8	299.4	279.0	272.2
80°	217.7	210.9	204.1	197.3	190.5
82.5°	129.3	129.3	129.3	129.3	129.3
85°	68.0	74.8	81.6	88.5	95.3
87.5°	40.8	40.8	47.6	54.4	61.2
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)