

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: P547041

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-81-86-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: P547041
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-50-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

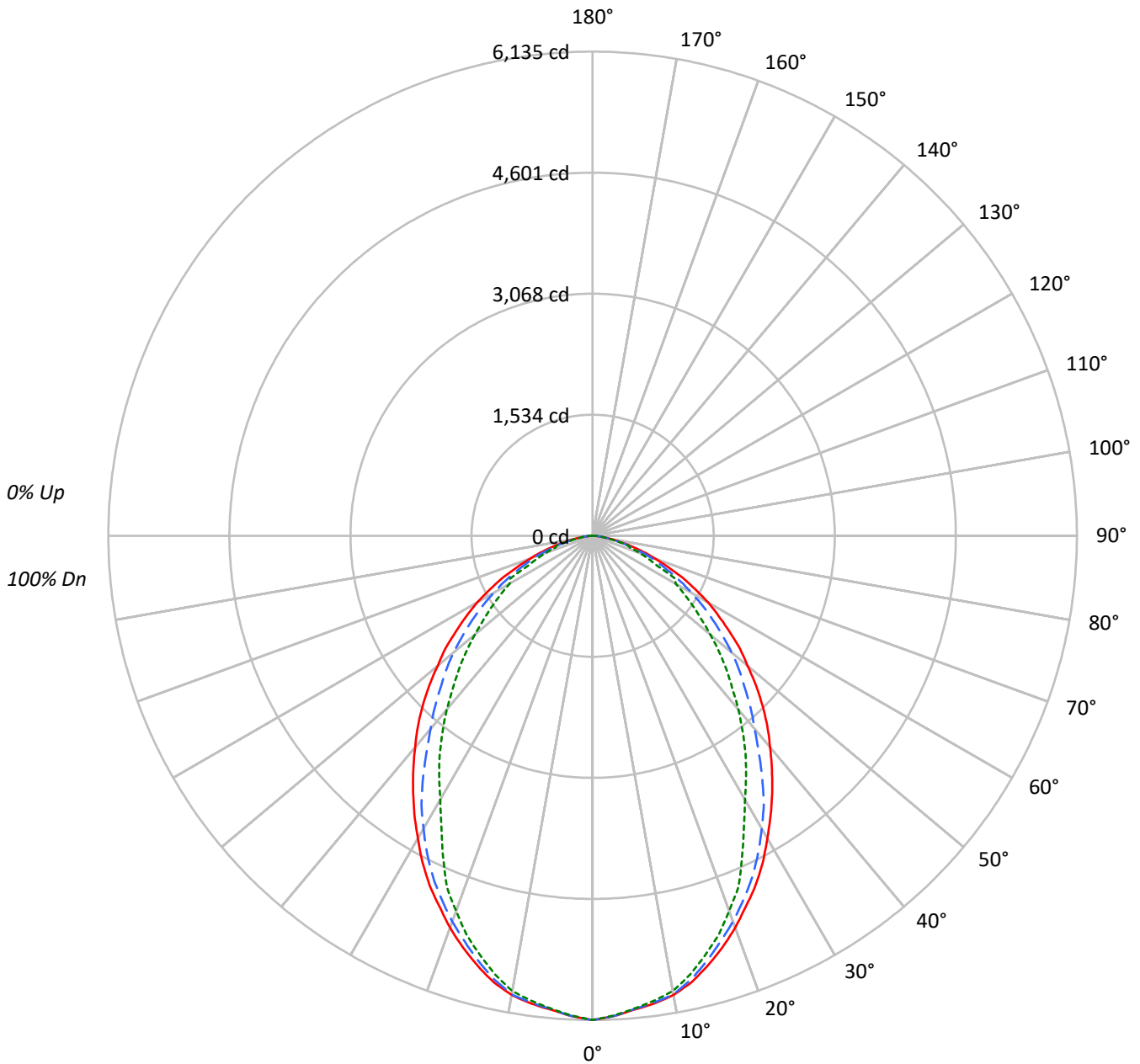
Lumens per Lamp: N/A
Luminaire Lumens: 12044.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	8255	8255	8255
5°	8143	8133	8123
10°	8072	8062	8004
15°	7854	7775	7667
20°	7566	7444	7241
25°	7255	7097	6655
30°	6876	6656	5994
35°	6512	6151	5545
40°	6141	5606	5045
45°	5790	5182	4562
50°	5359	4810	4068
55°	4958	4359	3644
60°	4542	3894	3264
65°	3997	3410	2890
70°	3292	2985	2455
75°	2618	2286	2397
80°	1759	1649	1539
85°	1095	1314	1533



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	571.1	4.7
10°-20°	1567.3	13.0
20°-30°	2169.8	18.0
30°-40°	2313.7	19.2
40°-50°	2110.7	17.5
50°-60°	1653.6	13.7
60°-70°	1077.8	8.9
70°-80°	477.5	4.0
80°-90°	102.5	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°	4308.2	35.8
0°-40°	6621.9	55.0
0°-60°	10386.3	86.2
0°-90°	12044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6135	6135	6135	6135	6135	
5°	6029	6022	6022	6014	6014	572
15°	5639	5639	5582	5525	5504	1585
25°	4887	4858	4780	4610	4482	2244
35°	3965	3936	3745	3461	3376	2479
45°	3043	2979	2724	2497	2397	2344
55°	2114	2050	1858	1638	1553	1896
65°	1255	1184	1071	1092	908	1237
75°	504	468	440	418	461	540
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6135.1	6135.1	6135.1	6135.1	6135.1
2.5°	6092.5	6092.5	6092.5	6085.4	6085.4
5°	6028.7	6021.6	6021.6	6014.5	6014.5
7.5°	5979.0	5971.9	5964.8	5957.7	5943.6
10°	5908.1	5908.1	5901.0	5865.5	5858.4
12.5°	5794.6	5787.5	5759.1	5709.5	5695.3
15°	5638.6	5638.6	5581.8	5525.1	5503.8
17.5°	5468.4	5461.3	5390.3	5333.6	5305.2
20°	5283.9	5269.8	5198.8	5106.6	5057.0
22.5°	5078.3	5078.3	4993.2	4872.6	4822.9
25°	4886.8	4858.4	4780.4	4610.2	4482.5
27.5°	4666.9	4624.3	4539.2	4298.1	4149.1
30°	4425.7	4404.5	4283.9	3971.8	3858.3
32.5°	4198.8	4163.3	4035.7	3709.4	3617.2
35°	3964.7	3936.4	3744.9	3461.2	3376.1
37.5°	3730.7	3695.2	3454.1	3227.1	3120.7
40°	3496.6	3454.1	3191.6	2986.0	2872.5
42.5°	3276.8	3220.0	2964.7	2744.8	2617.1
45°	3042.7	2978.9	2723.5	2496.6	2397.3
47.5°	2808.6	2751.9	2517.9	2283.8	2170.3
50°	2560.4	2510.8	2298.0	2063.9	1943.4
52.5°	2354.7	2276.7	2071.0	1837.0	1737.7
55°	2113.6	2049.7	1858.2	1638.4	1553.3
57.5°	1893.7	1829.9	1652.6	1446.9	1376.0
60°	1688.0	1595.8	1446.9	1269.6	1212.8
62.5°	1461.1	1390.1	1262.5	1113.5	1184.5
65°	1255.4	1184.5	1071.0	1092.3	907.8
67.5°	1028.4	993.0	893.7	794.4	766.0
70°	836.9	794.4	758.9	652.5	624.1
72.5°	666.7	624.1	574.5	517.8	496.5
75°	503.6	468.1	439.7	418.5	461.0
77.5°	347.5	333.3	312.1	290.8	283.7
80°	227.0	219.9	212.8	205.7	198.6
82.5°	134.8	134.8	134.8	134.8	134.8
85°	70.9	78.0	85.1	92.2	99.3
87.5°	42.6	42.6	49.6	56.7	63.8
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)