

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: P547427

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-81-88-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: P547427
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-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

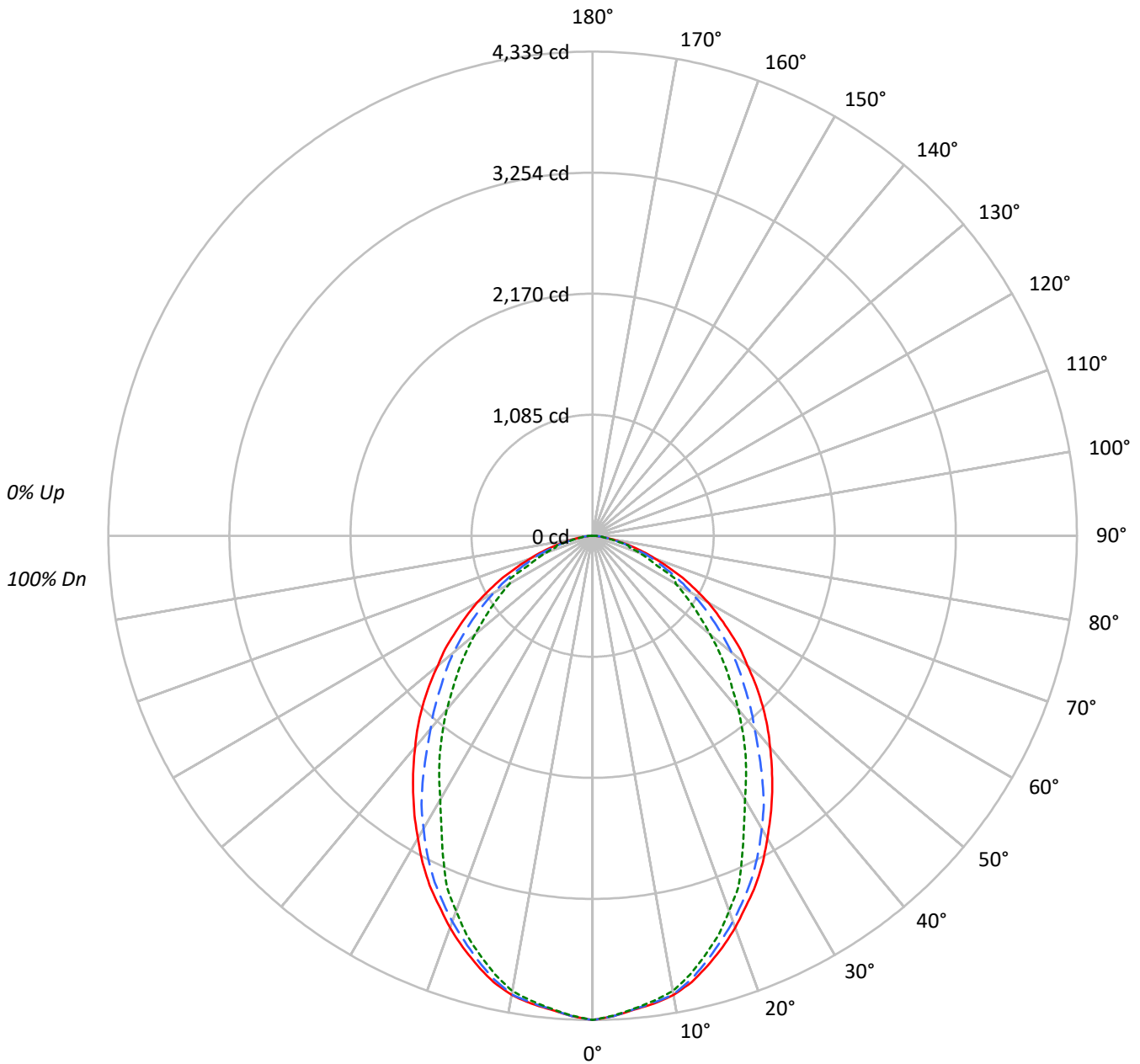
Lumens per Lamp: N/A
Luminaire Lumens: 8518.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	5838	5838	5838
5°	5759	5752	5745
10°	5709	5702	5661
15°	5555	5499	5422
20°	5351	5265	5121
25°	5131	5019	4706
30°	4863	4707	4240
35°	4606	4350	3922
40°	4344	3965	3568
45°	4095	3665	3226
50°	3790	3402	2877
55°	3506	3083	2577
60°	3212	2754	2308
65°	2827	2411	2044
70°	2329	2111	1736
75°	1851	1617	1695
80°	1244	1166	1089
85°	775	929	1084



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.9	4.7
10°-20°	1108.5	13.0
20°-30°	1534.6	18.0
30°-40°	1636.3	19.2
40°-50°	1492.8	17.5
50°-60°	1169.5	13.7
60°-70°	762.2	8.9
70°-80°	337.7	4.0
80°-90°	72.5	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°	3047.0	35.8
0°-40°	4683.3	55.0
0°-60°	7345.6	86.2
0°-90°	8518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4339	4339	4339	4339	4339	
5°	4264	4259	4259	4254	4254	405
15°	3988	3988	3948	3908	3892	1121
25°	3456	3436	3381	3260	3170	1587
35°	2804	2784	2648	2448	2388	1753
45°	2152	2107	1926	1766	1696	1658
55°	1495	1450	1314	1159	1098	1341
65°	888	838	757	772	642	875
75°	356	331	311	296	326	382
85°	50	55	60	65	70	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4339.0	4339.0	4339.0	4339.0	4339.0
2.5°	4308.9	4308.9	4308.9	4303.8	4303.8
5°	4263.7	4258.7	4258.7	4253.7	4253.7
7.5°	4228.6	4223.6	4218.6	4213.6	4203.5
10°	4178.4	4178.4	4173.4	4148.3	4143.3
12.5°	4098.2	4093.2	4073.1	4038.0	4028.0
15°	3987.8	3987.8	3947.7	3907.6	3892.5
17.5°	3867.4	3862.4	3812.3	3772.1	3752.1
20°	3737.0	3727.0	3676.8	3611.6	3576.5
22.5°	3591.6	3591.6	3531.4	3446.1	3411.0
25°	3456.1	3436.1	3380.9	3260.5	3170.2
27.5°	3300.6	3270.5	3210.3	3039.8	2934.4
30°	3130.1	3115.0	3029.7	2809.0	2728.8
32.5°	2969.6	2944.5	2854.2	2623.4	2558.2
35°	2804.0	2784.0	2648.5	2447.9	2387.7
37.5°	2638.5	2613.4	2442.9	2282.3	2207.1
40°	2473.0	2442.9	2257.3	2111.8	2031.5
42.5°	2317.5	2277.3	2096.7	1941.2	1851.0
45°	2151.9	2106.8	1926.2	1765.7	1695.5
47.5°	1986.4	1946.3	1780.7	1615.2	1534.9
50°	1810.8	1775.7	1625.2	1459.7	1374.4
52.5°	1665.4	1610.2	1464.7	1299.2	1229.0
55°	1494.8	1449.7	1314.2	1158.7	1098.5
57.5°	1339.3	1294.2	1168.8	1023.3	973.1
60°	1193.8	1128.6	1023.3	897.9	857.8
62.5°	1033.3	983.2	892.9	787.5	837.7
65°	887.9	837.7	757.4	772.5	642.1
67.5°	727.3	702.3	632.0	561.8	541.7
70°	591.9	561.8	536.7	461.5	441.4
72.5°	471.5	441.4	406.3	366.2	351.1
75°	356.1	331.1	311.0	296.0	326.0
77.5°	245.8	235.8	220.7	205.7	200.6
80°	160.5	155.5	150.5	145.5	140.5
82.5°	95.3	95.3	95.3	95.3	95.3
85°	50.2	55.2	60.2	65.2	70.2
87.5°	30.1	30.1	35.1	40.1	45.1
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)