

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: P547389

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-80-96-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: P547389
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-40-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

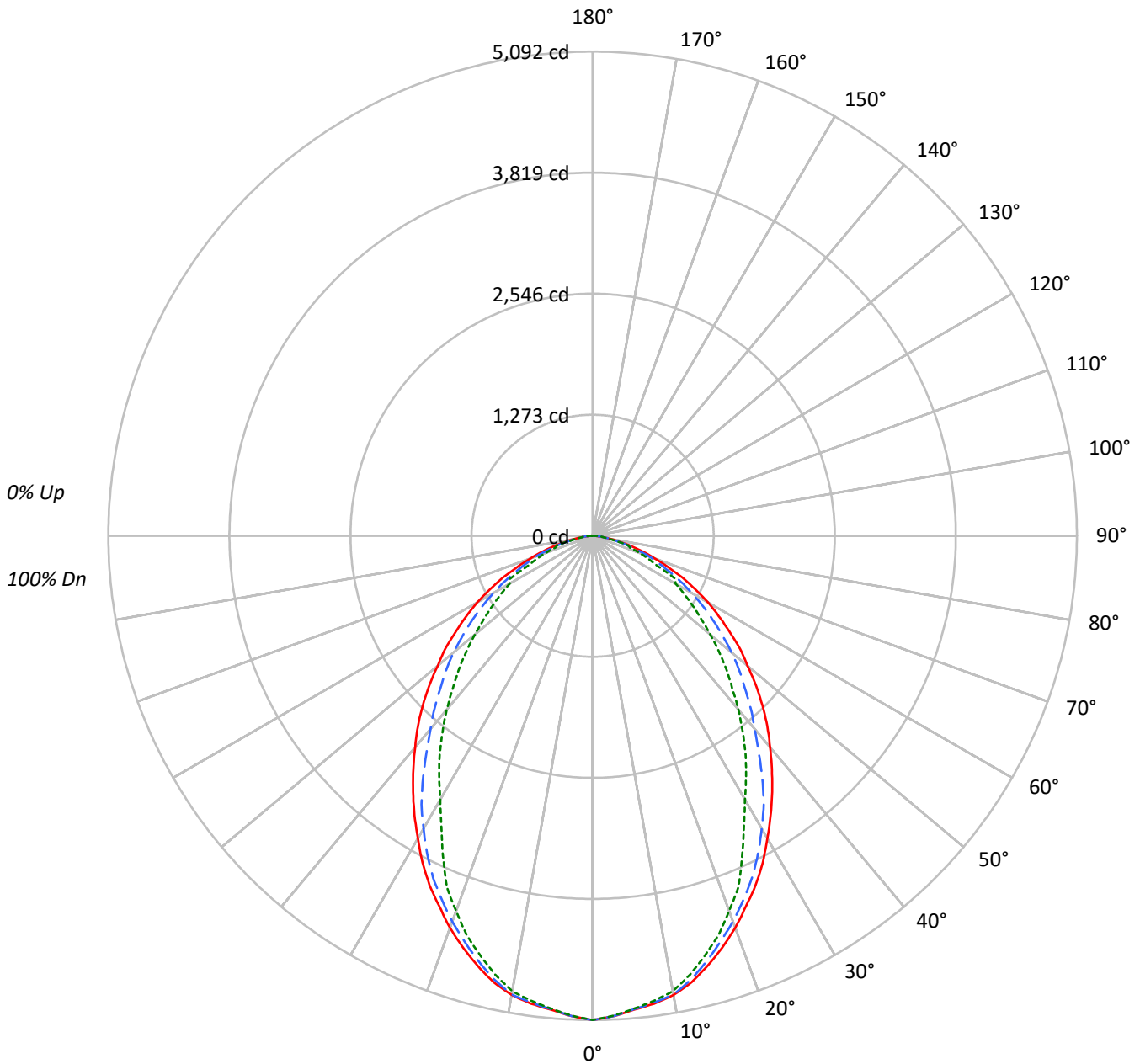
Lumens per Lamp: N/A
Luminaire Lumens: 9997.0 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6852	6852	6852
5°	6759	6751	6743
10°	6700	6692	6644
15°	6519	6454	6364
20°	6280	6179	6010
25°	6022	5891	5524
30°	5707	5524	4976
35°	5405	5106	4603
40°	5098	4653	4188
45°	4806	4301	3786
50°	4448	3993	3377
55°	4115	3618	3024
60°	3770	3232	2709
65°	3317	2830	2399
70°	2733	2478	2038
75°	2173	1897	1989
80°	1460	1368	1277
85°	909	1090	1272



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.0	4.7
10°-20°	1300.9	13.0
20°-30°	1801.1	18.0
30°-40°	1920.4	19.2
40°-50°	1752.0	17.5
50°-60°	1372.6	13.7
60°-70°	894.6	8.9
70°-80°	396.3	4.0
80°-90°	85.1	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°	3576.0	35.8
0°-40°	5496.5	55.0
0°-60°	8621.0	86.2
0°-90°	9997.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9997.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5092	5092	5092	5092	5092	
5°	5004	4998	4998	4992	4992	475
15°	4680	4680	4633	4586	4568	1316
25°	4056	4033	3968	3827	3721	1862
35°	3291	3267	3108	2873	2802	2057
45°	2526	2473	2261	2072	1990	1945
55°	1754	1701	1542	1360	1289	1574
65°	1042	983	889	907	754	1027
75°	418	388	365	347	383	448
85°	59	65	71	76	82	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5092.3	5092.3	5092.3	5092.3	5092.3
2.5°	5057.0	5057.0	5057.0	5051.1	5051.1
5°	5004.0	4998.1	4998.1	4992.3	4992.3
7.5°	4962.8	4956.9	4951.0	4945.2	4933.4
10°	4904.0	4904.0	4898.1	4868.6	4862.7
12.5°	4809.8	4803.9	4780.3	4739.1	4727.3
15°	4680.2	4680.2	4633.1	4586.0	4568.4
17.5°	4539.0	4533.1	4474.2	4427.1	4403.5
20°	4385.9	4374.1	4315.2	4238.7	4197.5
22.5°	4215.2	4215.2	4144.5	4044.4	4003.2
25°	4056.2	4032.7	3967.9	3826.6	3720.6
27.5°	3873.7	3838.4	3767.7	3567.6	3444.0
30°	3673.5	3655.9	3555.8	3296.8	3202.6
32.5°	3485.2	3455.7	3349.8	3079.0	3002.4
35°	3290.9	3267.3	3108.4	2872.9	2802.3
37.5°	3096.6	3067.2	2867.0	2678.6	2590.3
40°	2902.3	2867.0	2649.2	2478.5	2384.3
42.5°	2719.8	2672.7	2460.8	2278.3	2172.3
45°	2525.6	2472.6	2260.6	2072.3	1989.8
47.5°	2331.3	2284.2	2089.9	1895.6	1801.5
50°	2125.2	2084.0	1907.4	1713.1	1613.1
52.5°	1954.5	1889.8	1719.0	1524.8	1442.3
55°	1754.4	1701.4	1542.4	1359.9	1289.3
57.5°	1571.9	1518.9	1371.7	1201.0	1142.1
60°	1401.1	1324.6	1201.0	1053.8	1006.7
62.5°	1212.7	1153.9	1047.9	924.3	983.1
65°	1042.0	983.1	889.0	906.6	753.5
67.5°	853.6	824.2	741.8	659.4	635.8
70°	694.7	659.4	629.9	541.6	518.1
72.5°	553.4	518.1	476.9	429.8	412.1
75°	418.0	388.5	365.0	347.3	382.7
77.5°	288.5	276.7	259.0	241.4	235.5
80°	188.4	182.5	176.6	170.7	164.8
82.5°	111.9	111.9	111.9	111.9	111.9
85°	58.9	64.8	70.6	76.5	82.4
87.5°	35.3	35.3	41.2	47.1	53.0
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)