

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: P547114

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-82-87-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: P547114
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-LD4-3LO-40-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

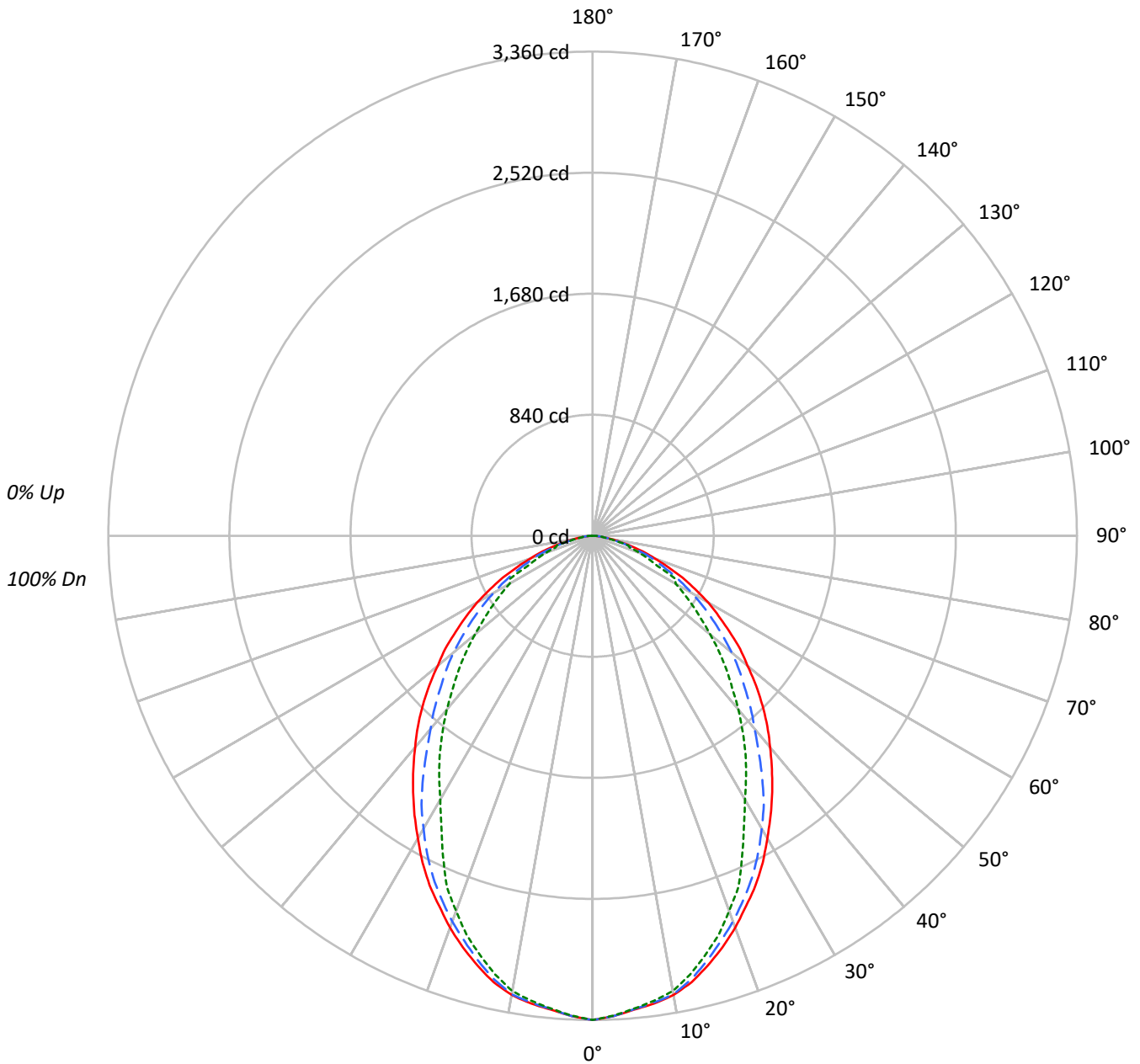
Lumens per Lamp: N/A
Luminaire Lumens: 6596.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4521	4521	4521
5°	4459	4454	4449
10°	4421	4415	4383
15°	4301	4258	4199
20°	4143	4077	3965
25°	3973	3887	3645
30°	3766	3645	3283
35°	3566	3369	3037
40°	3364	3070	2763
45°	3171	2838	2498
50°	2935	2634	2228
55°	2715	2387	1996
60°	2488	2132	1787
65°	2189	1867	1583
70°	1803	1635	1345
75°	1434	1252	1313
80°	963	903	843
85°	599	719	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.8	4.7
10°-20°	858.4	13.0
20°-30°	1188.3	18.0
30°-40°	1267.1	19.2
40°-50°	1156.0	17.5
50°-60°	905.6	13.7
60°-70°	590.2	8.9
70°-80°	261.5	4.0
80°-90°	56.1	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°	2359.4	35.8
0°-40°	3626.6	55.0
0°-60°	5688.1	86.2
0°-90°	6596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6596.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3360	3360	3360	3360	3360	
5°	3302	3298	3298	3294	3294	313
15°	3088	3088	3057	3026	3014	868
25°	2676	2661	2618	2525	2455	1229
35°	2171	2156	2051	1896	1849	1357
45°	1666	1631	1492	1367	1313	1284
55°	1158	1123	1018	897	851	1038
65°	688	649	586	598	497	678
75°	276	256	241	229	252	296
85°	39	43	47	50	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3359.9	3359.9	3359.9	3359.9	3359.9
2.5°	3336.6	3336.6	3336.6	3332.7	3332.7
5°	3301.6	3297.8	3297.8	3293.9	3293.9
7.5°	3274.5	3270.6	3266.7	3262.8	3255.0
10°	3235.6	3235.6	3231.7	3212.3	3208.4
12.5°	3173.5	3169.6	3154.0	3126.9	3119.1
15°	3088.0	3088.0	3056.9	3025.9	3014.2
17.5°	2994.8	2990.9	2952.1	2921.0	2905.5
20°	2893.8	2886.0	2847.2	2796.7	2769.5
22.5°	2781.2	2781.2	2734.5	2668.5	2641.3
25°	2676.3	2660.7	2618.0	2524.8	2454.9
27.5°	2555.9	2532.6	2485.9	2353.9	2272.3
30°	2423.8	2412.1	2346.1	2175.2	2113.1
32.5°	2299.5	2280.1	2210.2	2031.5	1981.0
35°	2171.3	2155.8	2050.9	1895.5	1848.9
37.5°	2043.1	2023.7	1891.7	1767.4	1709.1
40°	1915.0	1891.7	1747.9	1635.3	1573.1
42.5°	1794.5	1763.5	1623.6	1503.2	1433.3
45°	1666.4	1631.4	1491.6	1367.3	1312.9
47.5°	1538.2	1507.1	1378.9	1250.7	1188.6
50°	1402.2	1375.0	1258.5	1130.3	1064.3
52.5°	1289.6	1246.9	1134.2	1006.0	951.7
55°	1157.5	1122.6	1017.7	897.3	850.7
57.5°	1037.1	1002.1	905.0	792.4	753.6
60°	924.5	874.0	792.4	695.3	664.2
62.5°	800.2	761.3	691.4	609.8	648.7
65°	687.5	648.7	586.5	598.2	497.2
67.5°	563.2	543.8	489.4	435.0	419.5
70°	458.3	435.0	415.6	357.4	341.8
72.5°	365.1	341.8	314.6	283.6	271.9
75°	275.8	256.4	240.8	229.2	252.5
77.5°	190.3	182.6	170.9	159.3	155.4
80°	124.3	120.4	116.5	112.6	108.8
82.5°	73.8	73.8	73.8	73.8	73.8
85°	38.8	42.7	46.6	50.5	54.4
87.5°	23.3	23.3	27.2	31.1	35.0
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)