

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: P546369

Luminaire Tested: **FMR-12-4-LD4-2STD-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: P546369
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-12-4-LD4-2STD-50-UNV-81-86-EDD
Description: 1X4 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

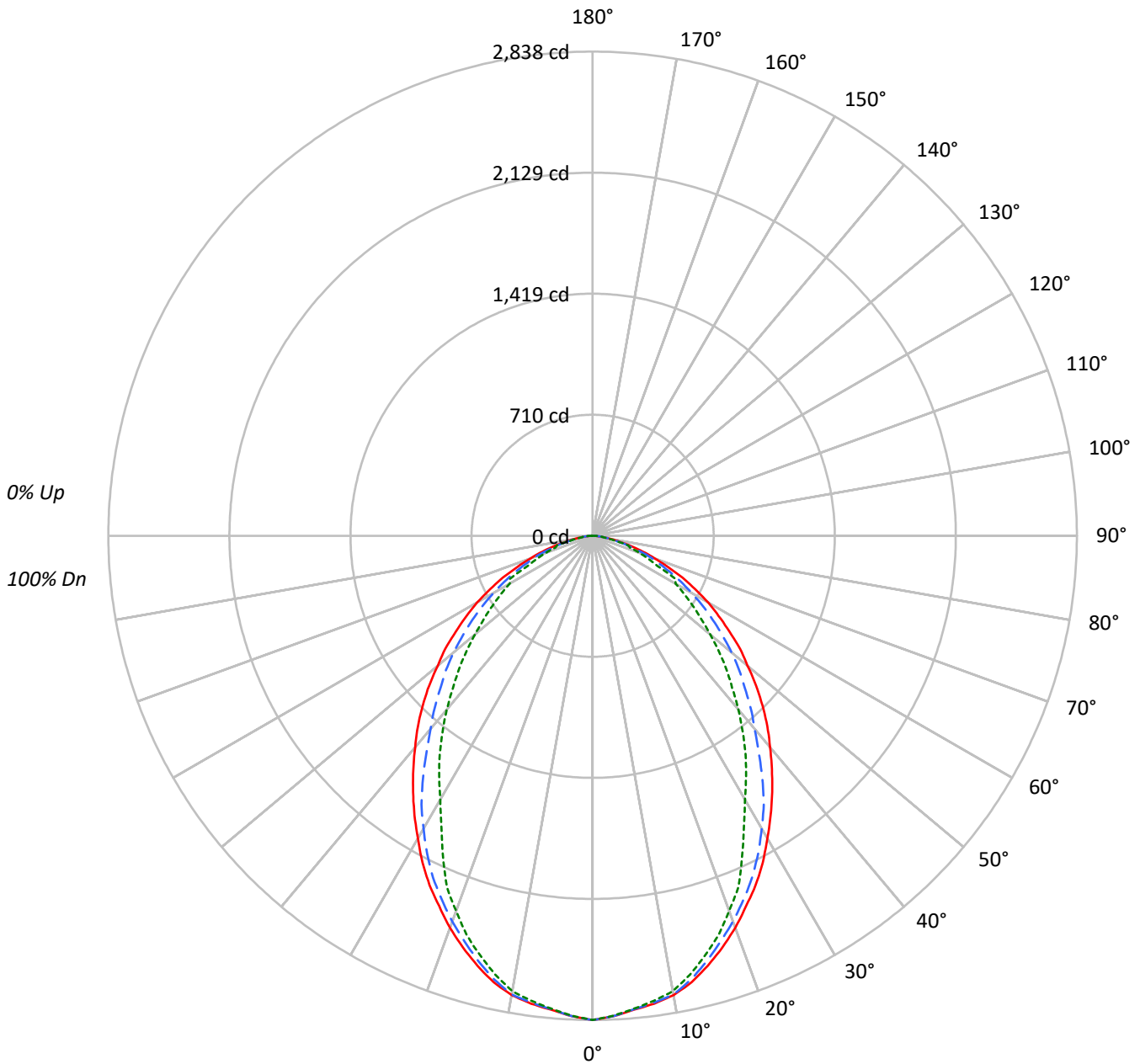
Lumens per Lamp: N/A
Luminaire Lumens: 5572.0 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	7638	7638	7638
5°	7534	7525	7516
10°	7469	7460	7406
15°	7267	7194	7094
20°	7000	6888	6700
25°	6713	6567	6157
30°	6362	6158	5546
35°	6025	5691	5131
40°	5683	5187	4668
45°	5357	4795	4221
50°	4959	4451	3764
55°	4587	4033	3371
60°	4203	3603	3020
65°	3698	3155	2674
70°	3046	2762	2272
75°	2423	2115	2218
80°	1627	1525	1424
85°	1013	1216	1417



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.2	4.7
10°-20°	725.1	13.0
20°-30°	1003.8	18.0
30°-40°	1070.4	19.2
40°-50°	976.5	17.5
50°-60°	765.0	13.7
60°-70°	498.6	8.9
70°-80°	220.9	4.0
80°-90°	47.4	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°	1993.2	35.8
0°-40°	3063.5	55.0
0°-60°	4805.1	86.2
0°-90°	5572.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5572.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2838	2838	2838	2838	2838	
5°	2789	2786	2786	2782	2782	265
15°	2609	2609	2582	2556	2546	733
25°	2261	2248	2212	2133	2074	1038
35°	1834	1821	1732	1601	1562	1147
45°	1408	1378	1260	1155	1109	1084
55°	978	948	860	758	719	877
65°	581	548	496	505	420	572
75°	233	217	203	194	213	250
85°	33	36	39	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2838.3	2838.3	2838.3	2838.3	2838.3
2.5°	2818.6	2818.6	2818.6	2815.3	2815.3
5°	2789.1	2785.8	2785.8	2782.5	2782.5
7.5°	2766.1	2762.8	2759.6	2756.3	2749.7
10°	2733.3	2733.3	2730.0	2713.6	2710.3
12.5°	2680.8	2677.5	2664.4	2641.4	2634.9
15°	2608.6	2608.6	2582.4	2556.1	2546.3
17.5°	2529.9	2526.6	2493.8	2467.5	2454.4
20°	2444.5	2438.0	2405.2	2362.5	2339.5
22.5°	2349.4	2349.4	2310.0	2254.2	2231.3
25°	2260.8	2247.7	2211.6	2132.8	2073.8
27.5°	2159.1	2139.4	2100.0	1988.5	1919.5
30°	2047.5	2037.7	1981.9	1837.5	1785.0
32.5°	1942.5	1926.1	1867.0	1716.1	1673.4
35°	1834.2	1821.1	1732.5	1601.3	1561.9
37.5°	1726.0	1709.5	1598.0	1493.0	1443.8
40°	1617.7	1598.0	1476.6	1381.4	1328.9
42.5°	1515.9	1489.7	1371.6	1269.9	1210.8
45°	1407.7	1378.1	1260.0	1155.0	1109.1
47.5°	1299.4	1273.1	1164.9	1056.6	1004.1
50°	1184.5	1161.6	1063.1	954.9	899.1
52.5°	1089.4	1053.3	958.1	849.9	803.9
55°	977.8	948.3	859.7	758.0	718.6
57.5°	876.1	846.6	764.5	669.4	636.6
60°	780.9	738.3	669.4	587.3	561.1
62.5°	675.9	643.1	584.1	515.2	548.0
65°	580.8	548.0	495.5	505.3	420.0
67.5°	475.8	459.4	413.4	367.5	354.4
70°	387.2	367.5	351.1	301.9	288.8
72.5°	308.4	288.8	265.8	239.5	229.7
75°	233.0	216.6	203.4	193.6	213.3
77.5°	160.8	154.2	144.4	134.5	131.3
80°	105.0	101.7	98.4	95.2	91.9
82.5°	62.3	62.3	62.3	62.3	62.3
85°	32.8	36.1	39.4	42.7	45.9
87.5°	19.7	19.7	23.0	26.3	29.5
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)