

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: P546303

Luminaire Tested: **FMR-12-4-LD4-2STD-35-UNV-81-84-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: P546303
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-35-UNV-81-84-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

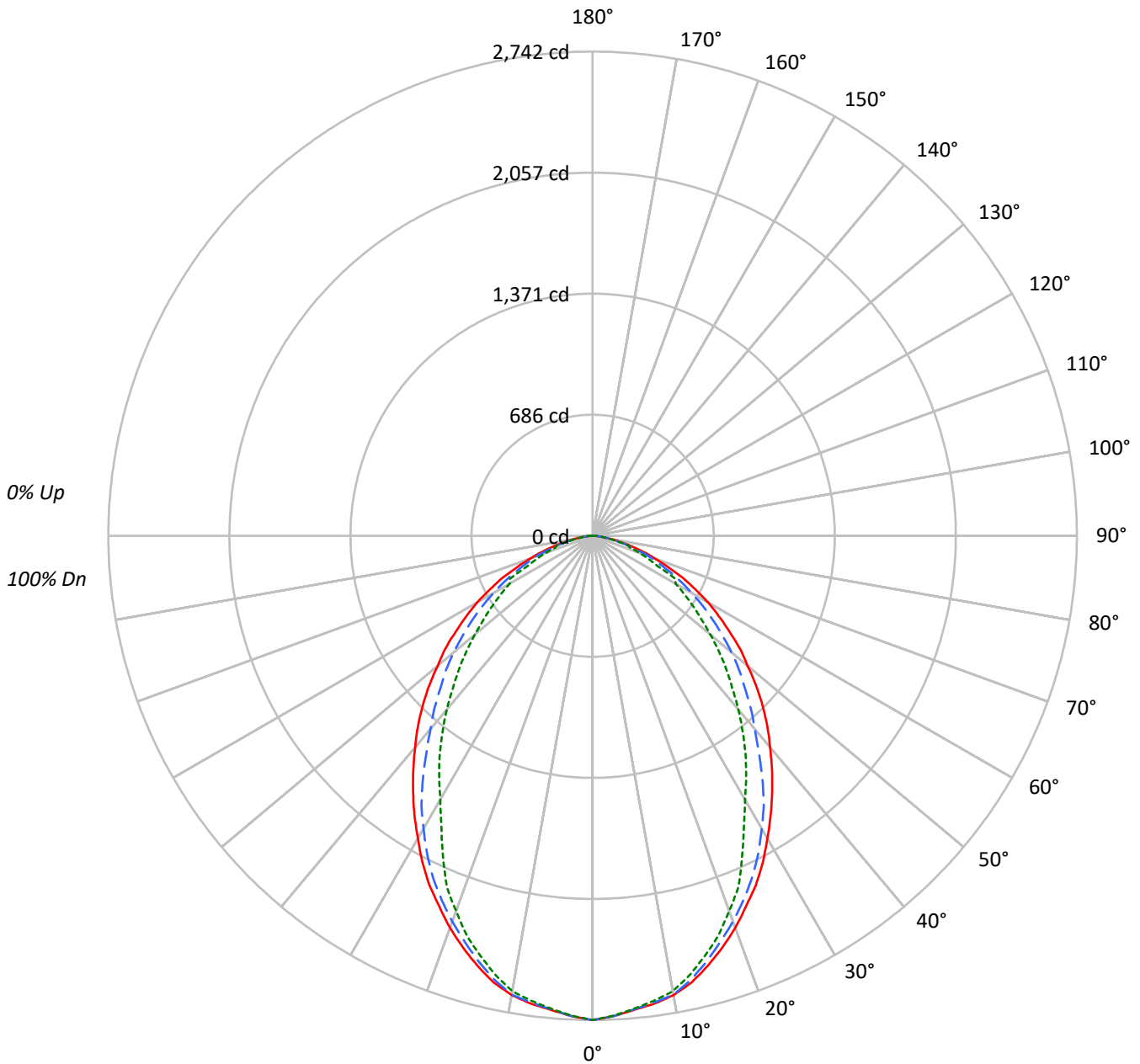
Lumens per Lamp: N/A
Luminaire Lumens: 5384.0 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7380	7380	7380
5°	7280	7271	7263
10°	7217	7208	7156
15°	7022	6951	6854
20°	6764	6655	6474
25°	6486	6345	5950
30°	6147	5950	5359
35°	5822	5500	4958
40°	5491	5012	4511
45°	5176	4633	4078
50°	4792	4301	3637
55°	4433	3897	3258
60°	4061	3481	2918
65°	3573	3049	2584
70°	2943	2670	2195
75°	2340	2044	2143
80°	1573	1474	1376
85°	979	1173	1371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.3	4.7
10°-20°	700.6	13.0
20°-30°	970.0	18.0
30°-40°	1034.3	19.2
40°-50°	943.6	17.5
50°-60°	739.2	13.7
60°-70°	481.8	8.9
70°-80°	213.5	4.0
80°-90°	45.8	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°	1925.9	35.8
0°-40°	2960.2	55.0
0°-60°	4643.0	86.2
0°-90°	5384.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5384.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2742	2742	2742	2742	2742	
5°	2695	2692	2692	2689	2689	256
15°	2521	2521	2495	2470	2460	709
25°	2184	2172	2137	2061	2004	1003
35°	1772	1760	1674	1547	1509	1108
45°	1360	1332	1218	1116	1072	1048
55°	945	916	831	732	694	847
65°	561	530	479	488	406	553
75°	225	209	197	187	206	241
85°	32	35	38	41	44	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2742.5	2742.5	2742.5	2742.5	2742.5
2.5°	2723.5	2723.5	2723.5	2720.3	2720.3
5°	2695.0	2691.8	2691.8	2688.6	2688.6
7.5°	2672.8	2669.6	2666.4	2663.3	2656.9
10°	2641.1	2641.1	2637.9	2622.1	2618.9
12.5°	2590.4	2587.2	2574.5	2552.3	2546.0
15°	2520.6	2520.6	2495.2	2469.9	2460.4
17.5°	2444.5	2441.3	2409.6	2384.3	2371.6
20°	2362.1	2355.7	2324.0	2282.8	2260.6
22.5°	2270.1	2270.1	2232.1	2178.2	2156.0
25°	2184.5	2171.8	2137.0	2060.9	2003.8
27.5°	2086.2	2067.2	2029.2	1921.4	1854.8
30°	1978.4	1968.9	1915.0	1775.5	1724.8
32.5°	1877.0	1861.1	1804.1	1658.2	1617.0
35°	1772.3	1759.7	1674.1	1547.2	1509.2
37.5°	1667.7	1651.9	1544.1	1442.6	1395.0
40°	1563.1	1544.1	1426.8	1334.8	1284.1
42.5°	1464.8	1439.4	1325.3	1227.0	1169.9
45°	1360.2	1331.6	1217.5	1116.0	1071.7
47.5°	1255.5	1230.2	1125.6	1020.9	970.2
50°	1144.6	1122.4	1027.3	922.6	868.7
52.5°	1052.6	1017.8	925.8	821.2	776.8
55°	944.8	916.3	830.7	732.4	694.4
57.5°	846.5	818.0	738.7	646.8	615.1
60°	754.6	713.4	646.8	567.5	542.2
62.5°	653.1	621.4	564.4	497.8	529.5
65°	561.2	529.5	478.8	488.3	405.8
67.5°	459.7	443.9	399.5	355.1	342.4
70°	374.1	355.1	339.3	291.7	279.0
72.5°	298.0	279.0	256.8	231.5	221.9
75°	225.1	209.3	196.6	187.1	206.1
77.5°	155.4	149.0	139.5	130.0	126.8
80°	101.5	98.3	95.1	91.9	88.8
82.5°	60.2	60.2	60.2	60.2	60.2
85°	31.7	34.9	38.0	41.2	44.4
87.5°	19.0	19.0	22.2	25.4	28.5
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)