

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: P546933

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-93-96-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: P546933
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-LD4-2STD-40-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

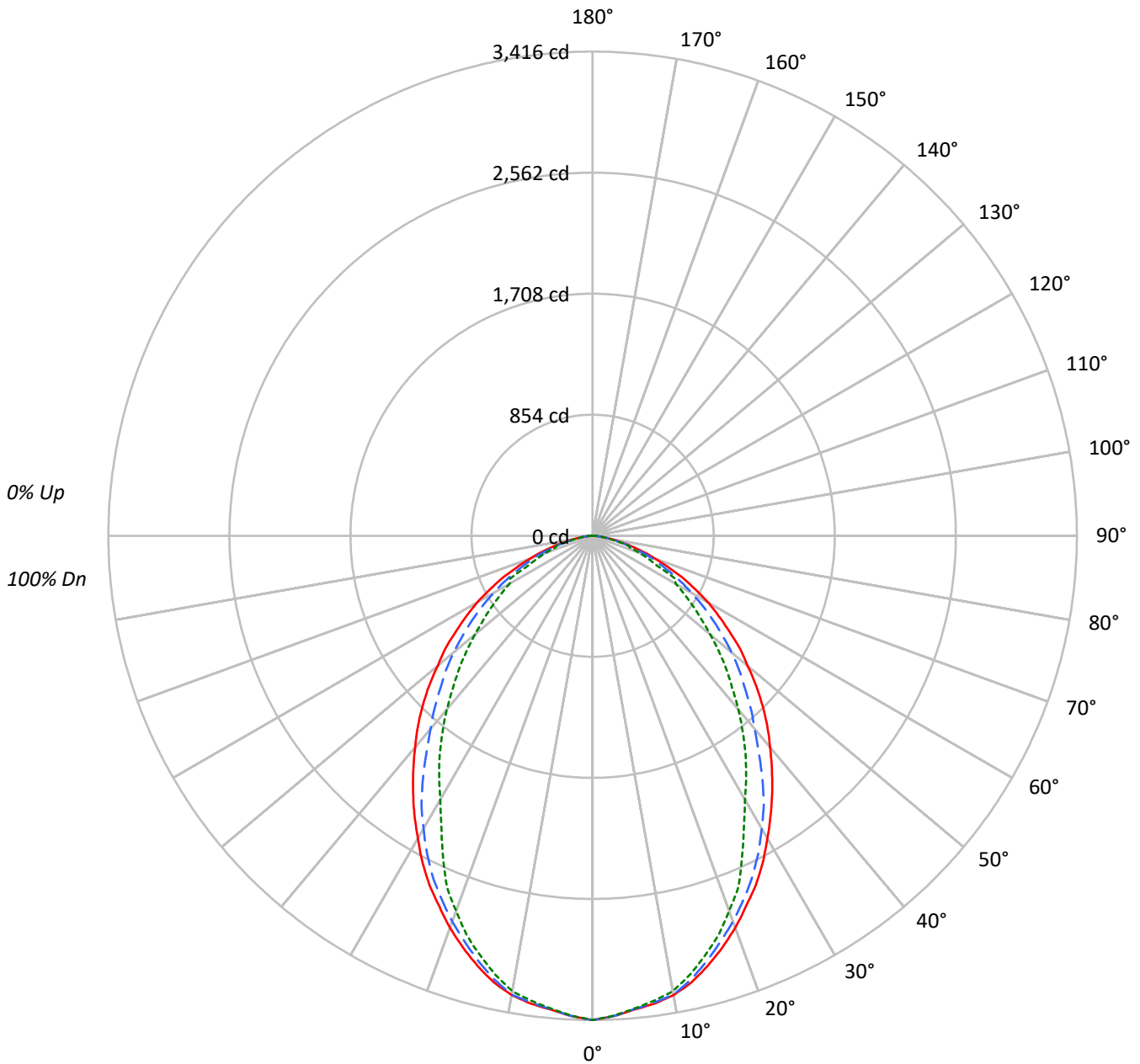
Lumens per Lamp: N/A
Luminaire Lumens: 6707.0 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (A_{in}): 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									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4597	4597	4597
5°	4534	4529	4524
10°	4495	4490	4457
15°	4374	4330	4269
20°	4213	4145	4032
25°	4040	3952	3706
30°	3829	3706	3338
35°	3627	3425	3088
40°	3420	3122	2810
45°	3224	2886	2540
50°	2984	2679	2265
55°	2761	2427	2029
60°	2530	2168	1817
65°	2226	1899	1610
70°	1834	1662	1367
75°	1458	1273	1334
80°	979	918	857
85°	610	732	854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.0	4.7
10°-20°	872.8	13.0
20°-30°	1208.3	18.0
30°-40°	1288.4	19.2
40°-50°	1175.4	17.5
50°-60°	920.9	13.7
60°-70°	600.2	8.9
70°-80°	265.9	4.0
80°-90°	57.1	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°	2399.2	35.8
0°-40°	3687.6	55.0
0°-60°	5783.9	86.2
0°-90°	6707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3416	3416	3416	3416	3416	
5°	3357	3353	3353	3349	3349	319
15°	3140	3140	3108	3077	3065	883
25°	2721	2706	2662	2567	2496	1249
35°	2208	2192	2085	1927	1880	1380
45°	1694	1659	1517	1390	1335	1305
55°	1177	1142	1035	912	865	1056
65°	699	660	596	608	506	689
75°	280	261	245	233	257	301
85°	40	43	47	51	55	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3416.5	3416.5	3416.5	3416.5	3416.5
2.5°	3392.8	3392.8	3392.8	3388.8	3388.8
5°	3357.2	3353.3	3353.3	3349.3	3349.3
7.5°	3329.6	3325.6	3321.7	3317.7	3309.8
10°	3290.1	3290.1	3286.1	3266.4	3262.4
12.5°	3226.9	3222.9	3207.1	3179.5	3171.6
15°	3140.0	3140.0	3108.4	3076.8	3064.9
17.5°	3045.2	3041.2	3001.7	2970.1	2954.3
20°	2942.5	2934.6	2895.1	2843.8	2816.1
22.5°	2828.0	2828.0	2780.6	2713.4	2685.8
25°	2721.3	2705.5	2662.1	2567.3	2496.2
27.5°	2598.9	2575.2	2527.8	2393.5	2310.6
30°	2464.6	2452.7	2385.6	2211.8	2148.6
32.5°	2338.2	2318.5	2247.4	2065.7	2014.3
35°	2207.9	2192.1	2085.4	1927.4	1880.0
37.5°	2077.5	2057.8	1923.5	1797.1	1737.9
40°	1947.2	1923.5	1777.3	1662.8	1599.6
42.5°	1824.7	1793.1	1651.0	1528.5	1457.4
45°	1694.4	1658.9	1516.7	1390.3	1335.0
47.5°	1564.1	1532.5	1402.1	1271.8	1208.6
50°	1425.8	1398.2	1279.7	1149.4	1082.2
52.5°	1311.3	1267.8	1153.3	1023.0	967.7
55°	1177.0	1141.5	1034.8	912.4	865.0
57.5°	1054.6	1019.0	920.3	805.7	766.2
60°	940.0	888.7	805.7	707.0	675.4
62.5°	813.6	774.1	703.0	620.1	659.6
65°	699.1	659.6	596.4	608.2	505.6
67.5°	572.7	553.0	497.7	442.4	426.6
70°	466.1	442.4	422.6	363.4	347.6
72.5°	371.3	347.6	319.9	288.3	276.5
75°	280.4	260.7	244.9	233.0	256.7
77.5°	193.5	185.6	173.8	161.9	158.0
80°	126.4	122.4	118.5	114.5	110.6
82.5°	75.0	75.0	75.0	75.0	75.0
85°	39.5	43.4	47.4	51.3	55.3
87.5°	23.7	23.7	27.6	31.6	35.5
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)