

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: P547073

Luminaire Tested: **FMR-24-4-LD4-3LO-35-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: P547073
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-35-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

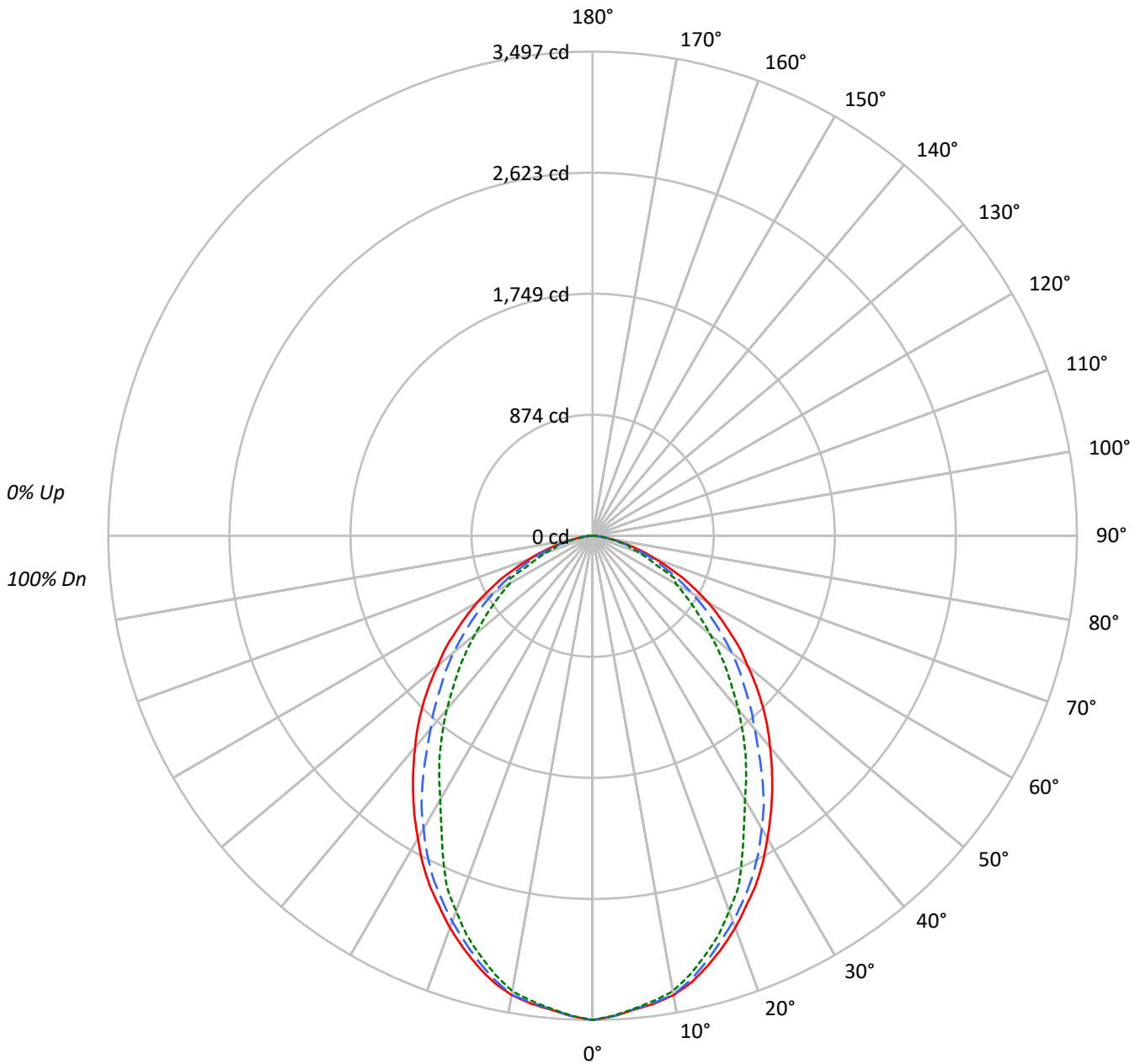
Lumens per Lamp: N/A
Luminaire Lumens: 6866.0 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
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°	4706	4706	4706
5°	4642	4636	4631
10°	4602	4596	4563
15°	4478	4433	4371
20°	4313	4244	4128
25°	4136	4046	3794
30°	3920	3794	3417
35°	3712	3507	3161
40°	3501	3196	2876
45°	3301	2954	2600
50°	3055	2742	2319
55°	2826	2485	2077
60°	2590	2220	1861
65°	2279	1944	1648
70°	1877	1702	1400
75°	1493	1303	1366
80°	1003	940	877
85°	624	749	874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.6	4.7
10°-20°	893.5	13.0
20°-30°	1237.0	18.0
30°-40°	1319.0	19.2
40°-50°	1203.3	17.5
50°-60°	942.7	13.7
60°-70°	614.4	8.9
70°-80°	272.2	4.0
80°-90°	58.4	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°	2456.0	35.8
0°-40°	3775.0	55.0
0°-60°	5921.0	86.2
0°-90°	6866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6866.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3497	3497	3497	3497	3497	
5°	3437	3433	3433	3429	3429	326
15°	3214	3214	3182	3150	3138	904
25°	2786	2770	2725	2628	2555	1279
35°	2260	2244	2135	1973	1925	1413
45°	1735	1698	1553	1423	1367	1336
55°	1205	1168	1059	934	886	1081
65°	716	675	610	623	518	705
75°	287	267	251	239	263	308
85°	40	44	48	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3497.4	3497.4	3497.4	3497.4	3497.4
2.5°	3473.2	3473.2	3473.2	3469.1	3469.1
5°	3436.8	3432.8	3432.8	3428.7	3428.7
7.5°	3408.5	3404.5	3400.4	3396.4	3388.3
10°	3368.1	3368.1	3364.0	3343.8	3339.8
12.5°	3303.4	3299.3	3283.2	3254.9	3246.8
15°	3214.4	3214.4	3182.1	3149.7	3137.6
17.5°	3117.4	3113.3	3072.9	3040.6	3024.4
20°	3012.3	3004.2	2963.7	2911.2	2882.9
22.5°	2895.0	2895.0	2846.5	2777.7	2749.4
25°	2785.8	2769.7	2725.2	2628.1	2555.4
27.5°	2660.5	2636.2	2587.7	2450.2	2365.3
30°	2523.0	2510.9	2442.1	2264.2	2199.6
32.5°	2393.6	2373.4	2300.6	2114.6	2062.1
35°	2260.2	2244.0	2134.9	1973.1	1924.6
37.5°	2126.8	2106.6	1969.1	1839.7	1779.0
40°	1993.3	1969.1	1819.5	1702.2	1637.5
42.5°	1868.0	1835.7	1690.1	1564.8	1492.0
45°	1734.6	1698.2	1552.6	1423.2	1366.6
47.5°	1601.1	1568.8	1435.4	1301.9	1237.2
50°	1459.6	1431.3	1310.0	1176.6	1107.9
52.5°	1342.4	1297.9	1180.6	1047.2	990.6
55°	1204.9	1168.5	1059.3	934.0	885.5
57.5°	1079.6	1043.2	942.1	824.8	784.4
60°	962.3	909.7	824.8	723.7	691.4
62.5°	832.9	792.5	719.7	634.8	675.2
65°	715.7	675.2	610.5	622.7	517.5
67.5°	586.3	566.1	509.5	452.8	436.7
70°	477.1	452.8	432.6	372.0	355.8
72.5°	380.1	355.8	327.5	295.2	283.0
75°	287.1	266.9	250.7	238.6	262.8
77.5°	198.1	190.0	177.9	165.8	161.7
80°	129.4	125.3	121.3	117.3	113.2
82.5°	76.8	76.8	76.8	76.8	76.8
85°	40.4	44.5	48.5	52.6	56.6
87.5°	24.3	24.3	28.3	32.3	36.4
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)