

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: P547079

Luminaire Tested: **FMR-24-4-LD4-3LO-35-UNV-82-84-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: P547079
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-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 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

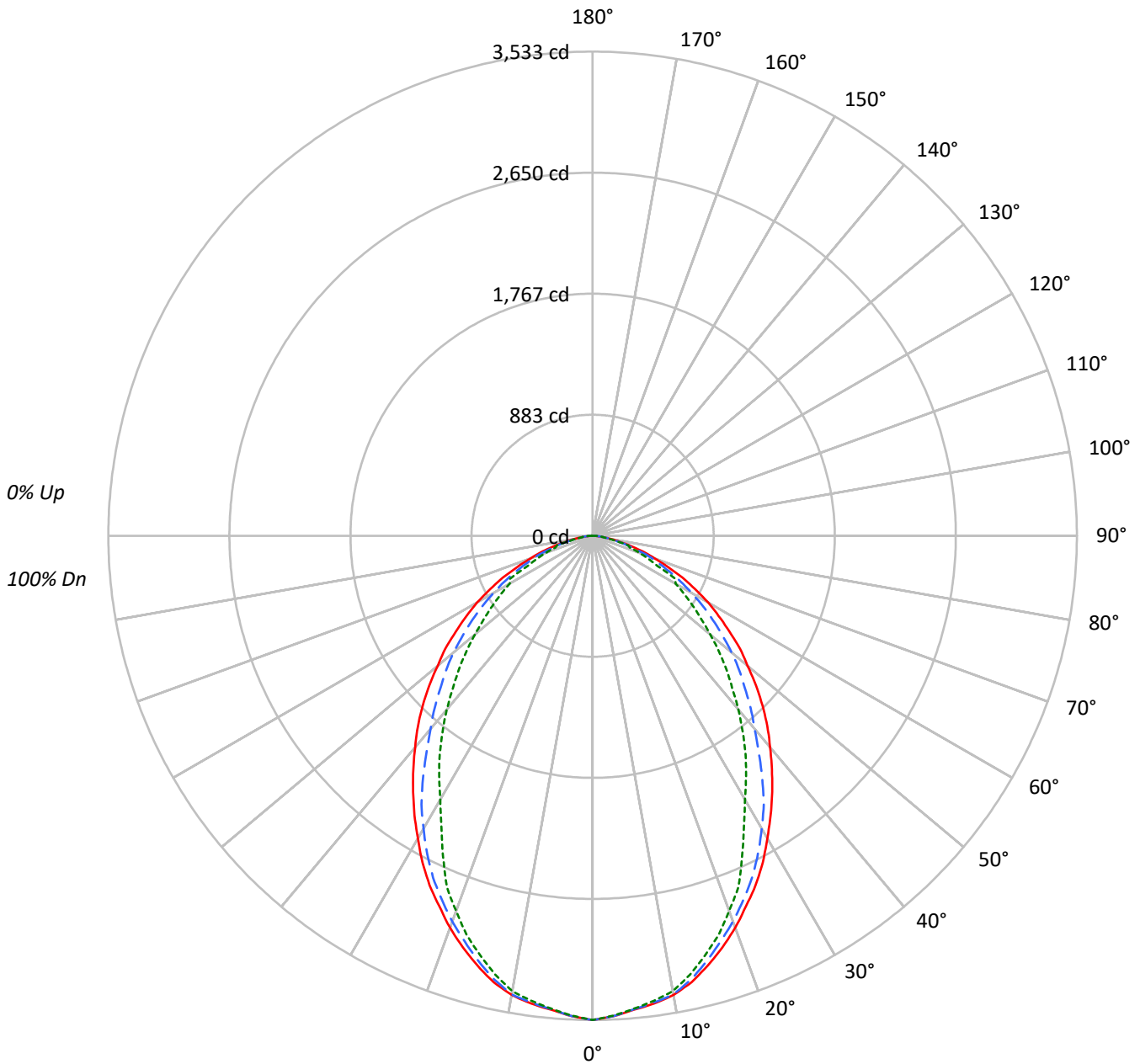
Lumens per Lamp: N/A
Luminaire Lumens: 6936.0 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P547079

CATALOG NUMBER: FMR-24-4-LD4-3LO-35-UNV-82-84-EDD

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°	4754	4754	4754
5°	4689	4684	4678
10°	4649	4643	4609
15°	4523	4478	4415
20°	4357	4287	4170
25°	4178	4087	3832
30°	3960	3833	3452
35°	3750	3542	3193
40°	3537	3228	2905
45°	3334	2985	2627
50°	3086	2770	2343
55°	2855	2510	2098
60°	2616	2242	1880
65°	2302	1964	1664
70°	1896	1719	1414
75°	1508	1316	1380
80°	1013	949	886
85°	630	756	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.9	4.7
10°-20°	902.6	13.0
20°-30°	1249.6	18.0
30°-40°	1332.4	19.2
40°-50°	1215.6	17.5
50°-60°	952.3	13.7
60°-70°	620.7	8.9
70°-80°	275.0	4.0
80°-90°	59.0	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°	2481.1	35.8
0°-40°	3813.5	55.0
0°-60°	5981.3	86.2
0°-90°	6936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6936.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3533	3533	3533	3533	3533	
5°	3472	3468	3468	3464	3464	330
15°	3247	3247	3214	3182	3170	913
25°	2814	2798	2753	2655	2581	1292
35°	2283	2267	2157	1993	1944	1427
45°	1752	1716	1568	1438	1381	1350
55°	1217	1180	1070	944	894	1092
65°	723	682	617	629	523	712
75°	290	270	253	241	266	311
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3533.1	3533.1	3533.1	3533.1	3533.1
2.5°	3508.6	3508.6	3508.6	3504.5	3504.5
5°	3471.8	3467.8	3467.8	3463.7	3463.7
7.5°	3443.2	3439.2	3435.1	3431.0	3422.8
10°	3402.4	3402.4	3398.3	3377.9	3373.8
12.5°	3337.0	3333.0	3316.6	3288.0	3279.9
15°	3247.2	3247.2	3214.5	3181.8	3169.6
17.5°	3149.2	3145.1	3104.2	3071.6	3055.2
20°	3043.0	3034.8	2993.9	2940.9	2912.3
22.5°	2924.5	2924.5	2875.5	2806.1	2777.5
25°	2814.2	2797.9	2753.0	2654.9	2581.4
27.5°	2687.6	2663.1	2614.1	2475.2	2389.4
30°	2548.7	2536.5	2467.0	2287.3	2222.0
32.5°	2418.0	2397.6	2324.1	2136.2	2083.1
35°	2283.2	2266.9	2156.6	1993.2	1944.2
37.5°	2148.5	2128.0	1989.2	1858.5	1797.2
40°	2013.7	1989.2	1838.0	1719.6	1654.2
42.5°	1887.0	1854.4	1707.3	1580.7	1507.2
45°	1752.3	1715.5	1568.5	1437.7	1380.6
47.5°	1617.5	1584.8	1450.0	1315.2	1249.9
50°	1474.5	1445.9	1323.4	1188.6	1119.2
52.5°	1356.1	1311.1	1192.7	1057.9	1000.7
55°	1217.2	1180.4	1070.1	943.5	894.5
57.5°	1090.6	1053.8	951.7	833.2	792.4
60°	972.1	919.0	833.2	731.1	698.5
62.5°	841.4	800.6	727.0	641.3	682.1
65°	723.0	682.1	616.8	629.0	522.8
67.5°	592.3	571.8	514.6	457.5	441.1
70°	482.0	457.5	437.0	375.8	359.4
72.5°	383.9	359.4	330.8	298.2	285.9
75°	290.0	269.6	253.2	241.0	265.5
77.5°	200.1	192.0	179.7	167.5	163.4
80°	130.7	126.6	122.5	118.5	114.4
82.5°	77.6	77.6	77.6	77.6	77.6
85°	40.8	44.9	49.0	53.1	57.2
87.5°	24.5	24.5	28.6	32.7	36.8
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)