

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: P547115

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-82-88-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: P547115
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-40-UNV-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

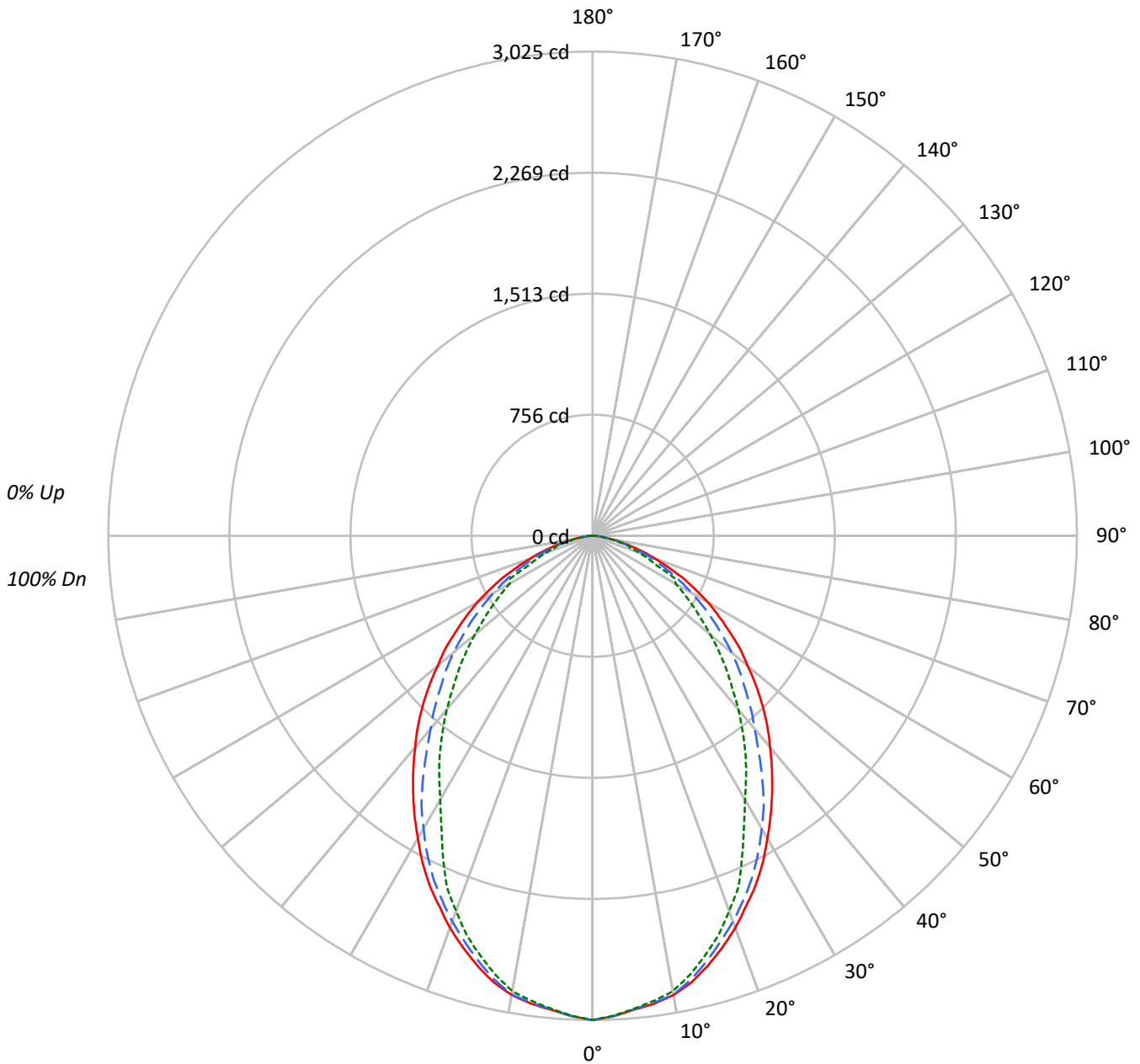
Lumens per Lamp: N/A
Luminaire Lumens: 5939.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4070	4070	4070
5°	4015	4010	4006
10°	3980	3976	3947
15°	3873	3834	3780
20°	3731	3671	3570
25°	3577	3499	3282
30°	3391	3282	2956
35°	3211	3033	2734
40°	3028	2764	2488
45°	2855	2555	2249
50°	2643	2372	2006
55°	2445	2149	1797
60°	2240	1920	1609
65°	1971	1681	1425
70°	1624	1472	1211
75°	1291	1127	1182
80°	867	813	759
85°	540	648	756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.6	4.7
10°-20°	772.9	13.0
20°-30°	1070.0	18.0
30°-40°	1140.9	19.2
40°-50°	1040.8	17.5
50°-60°	815.4	13.7
60°-70°	531.4	8.9
70°-80°	235.4	4.0
80°-90°	50.6	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°	2124.4	35.8
0°-40°	3265.3	55.0
0°-60°	5121.5	86.2
0°-90°	5939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3025	3025	3025	3025	3025	
5°	2973	2969	2969	2966	2966	282
15°	2780	2780	2752	2724	2714	782
25°	2410	2396	2357	2273	2210	1106
35°	1955	1941	1847	1707	1665	1222
45°	1500	1469	1343	1231	1182	1156
55°	1042	1011	916	808	766	935
65°	619	584	528	539	448	610
75°	248	231	217	206	227	266
85°	35	38	42	46	49	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3025.2	3025.2	3025.2	3025.2	3025.2
2.5°	3004.3	3004.3	3004.3	3000.8	3000.8
5°	2972.8	2969.3	2969.3	2965.8	2965.8
7.5°	2948.3	2944.8	2941.3	2937.8	2930.8
10°	2913.3	2913.3	2909.8	2892.3	2888.8
12.5°	2857.4	2853.9	2839.9	2815.4	2808.4
15°	2780.4	2780.4	2752.5	2724.5	2714.0
17.5°	2696.5	2693.0	2658.0	2630.0	2616.1
20°	2605.6	2598.6	2563.6	2518.1	2493.6
22.5°	2504.1	2504.1	2462.2	2402.7	2378.2
25°	2409.7	2395.7	2357.2	2273.3	2210.4
27.5°	2301.3	2280.3	2238.3	2119.4	2046.0
30°	2182.4	2171.9	2112.4	1958.5	1902.6
32.5°	2070.5	2053.0	1990.0	1829.1	1783.7
35°	1955.0	1941.1	1846.6	1706.7	1664.8
37.5°	1839.6	1822.1	1703.2	1591.3	1538.9
40°	1724.2	1703.2	1573.8	1472.4	1416.4
42.5°	1615.8	1587.8	1461.9	1353.5	1290.5
45°	1500.4	1468.9	1343.0	1231.1	1182.1
47.5°	1385.0	1357.0	1241.6	1126.2	1070.2
50°	1262.6	1238.1	1133.2	1017.7	958.3
52.5°	1161.1	1122.7	1021.2	905.8	856.9
55°	1042.2	1010.7	916.3	807.9	765.9
57.5°	933.8	902.3	814.9	713.5	678.5
60°	832.4	786.9	713.5	626.0	598.1
62.5°	720.5	685.5	622.5	549.1	584.1
65°	619.0	584.1	528.1	538.6	447.7
67.5°	507.1	489.6	440.7	391.7	377.7
70°	412.7	391.7	374.2	321.8	307.8
72.5°	328.8	307.8	283.3	255.3	244.8
75°	248.3	230.8	216.8	206.3	227.3
77.5°	171.4	164.4	153.9	143.4	139.9
80°	111.9	108.4	104.9	101.4	97.9
82.5°	66.5	66.5	66.5	66.5	66.5
85°	35.0	38.5	42.0	45.5	49.0
87.5°	21.0	21.0	24.5	28.0	31.5
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)