

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: P547144

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-82-85-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: P547144
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-50-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

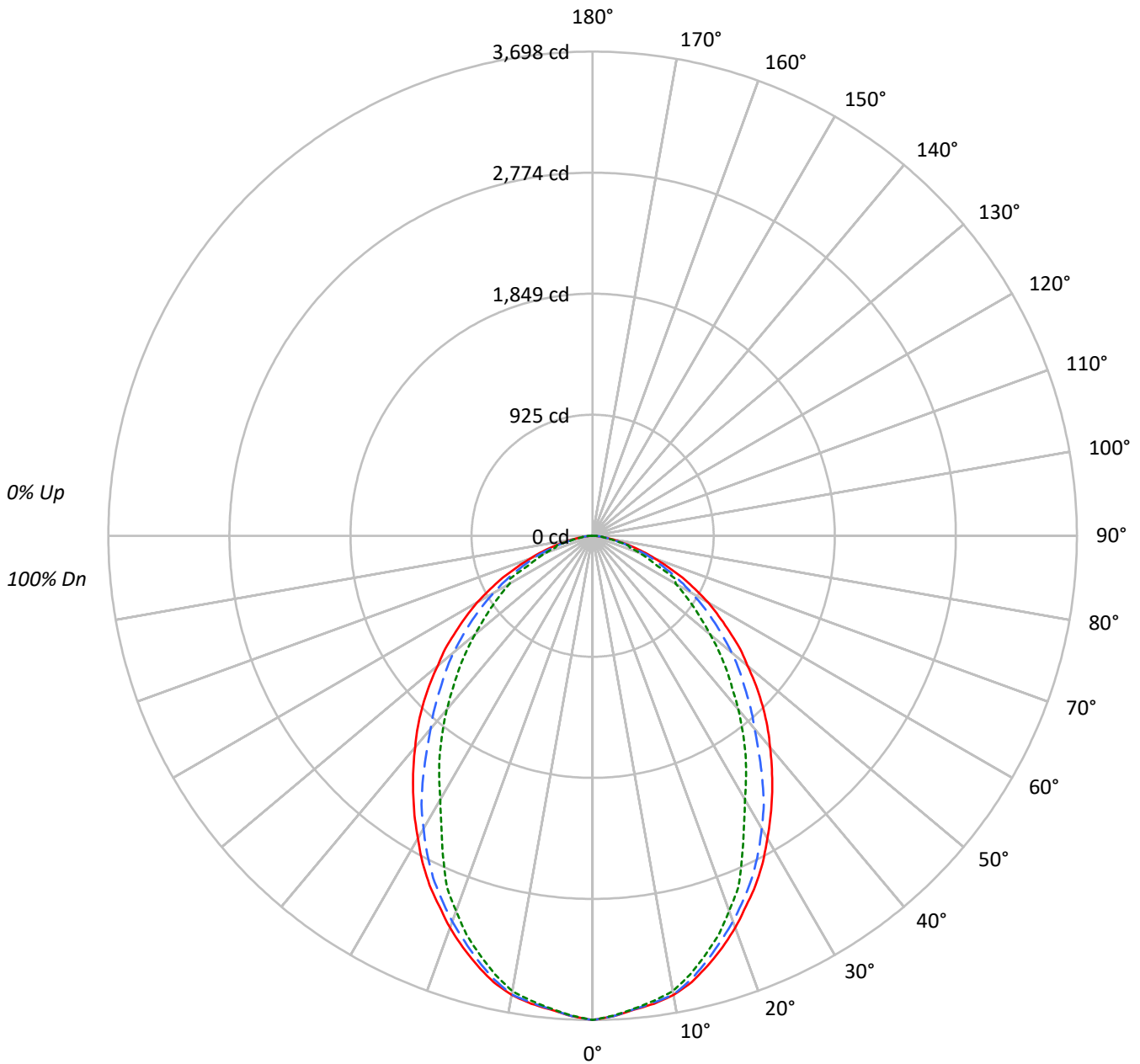
Lumens per Lamp: N/A
Luminaire Lumens: 7260.0 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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			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°	4976	4976	4976
5°	4908	4902	4897
10°	4866	4860	4825
15°	4735	4687	4621
20°	4561	4487	4365
25°	4373	4278	4011
30°	4145	4012	3613
35°	3926	3708	3343
40°	3702	3379	3041
45°	3490	3124	2750
50°	3231	2900	2452
55°	2989	2628	2196
60°	2738	2347	1967
65°	2409	2055	1742
70°	1985	1800	1480
75°	1578	1378	1445
80°	1060	994	927
85°	661	792	925



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.2	4.7
10°-20°	944.8	13.0
20°-30°	1308.0	18.0
30°-40°	1394.7	19.2
40°-50°	1272.3	17.5
50°-60°	996.8	13.7
60°-70°	649.6	8.9
70°-80°	287.8	4.0
80°-90°	61.8	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°	2597.0	35.8
0°-40°	3991.6	55.0
0°-60°	6260.7	86.2
0°-90°	7260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3698	3698	3698	3698	3698	
5°	3634	3630	3630	3626	3626	345
15°	3399	3399	3365	3330	3318	956
25°	2946	2929	2882	2779	2702	1352
35°	2390	2373	2257	2086	2035	1494
45°	1834	1796	1642	1505	1445	1413
55°	1274	1236	1120	988	936	1143
65°	757	714	646	658	547	746
75°	304	282	265	252	278	325
85°	43	47	51	56	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3698.1	3698.1	3698.1	3698.1	3698.1
2.5°	3672.5	3672.5	3672.5	3668.2	3668.2
5°	3634.0	3629.7	3629.7	3625.5	3625.5
7.5°	3604.1	3599.8	3595.5	3591.3	3582.7
10°	3561.3	3561.3	3557.1	3535.7	3531.4
12.5°	3492.9	3488.7	3471.6	3441.6	3433.1
15°	3398.9	3398.9	3364.7	3330.5	3317.6
17.5°	3296.3	3292.0	3249.2	3215.0	3197.9
20°	3185.1	3176.6	3133.8	3078.2	3048.3
22.5°	3061.1	3061.1	3009.8	2937.1	2907.2
25°	2945.7	2928.6	2881.6	2779.0	2702.0
27.5°	2813.2	2787.5	2736.2	2590.8	2501.1
30°	2667.8	2655.0	2582.3	2394.2	2325.8
32.5°	2531.0	2509.6	2432.7	2236.0	2180.4
35°	2389.9	2372.8	2257.4	2086.4	2035.0
37.5°	2248.8	2227.4	2082.1	1945.3	1881.1
40°	2107.7	2082.1	1923.9	1799.9	1731.5
42.5°	1975.2	1941.0	1787.1	1654.5	1577.6
45°	1834.1	1795.6	1641.7	1504.9	1445.1
47.5°	1693.0	1658.8	1517.7	1376.7	1308.2
50°	1543.4	1513.5	1385.2	1244.1	1171.4
52.5°	1419.4	1372.4	1248.4	1107.3	1047.5
55°	1274.0	1235.6	1120.1	987.6	936.3
57.5°	1141.5	1103.0	996.1	872.2	829.4
60°	1017.5	961.9	872.2	765.3	731.1
62.5°	880.7	838.0	761.0	671.2	714.0
65°	756.7	714.0	645.6	658.4	547.2
67.5°	619.9	598.5	538.7	478.8	461.7
70°	504.5	478.8	457.5	393.3	376.2
72.5°	401.9	376.2	346.3	312.1	299.3
75°	303.5	282.2	265.1	252.2	277.9
77.5°	209.5	200.9	188.1	175.3	171.0
80°	136.8	132.5	128.3	124.0	119.7
82.5°	81.2	81.2	81.2	81.2	81.2
85°	42.8	47.0	51.3	55.6	59.9
87.5°	25.7	25.7	29.9	34.2	38.5
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)