

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: P547145

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-82-86-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: P547145
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-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

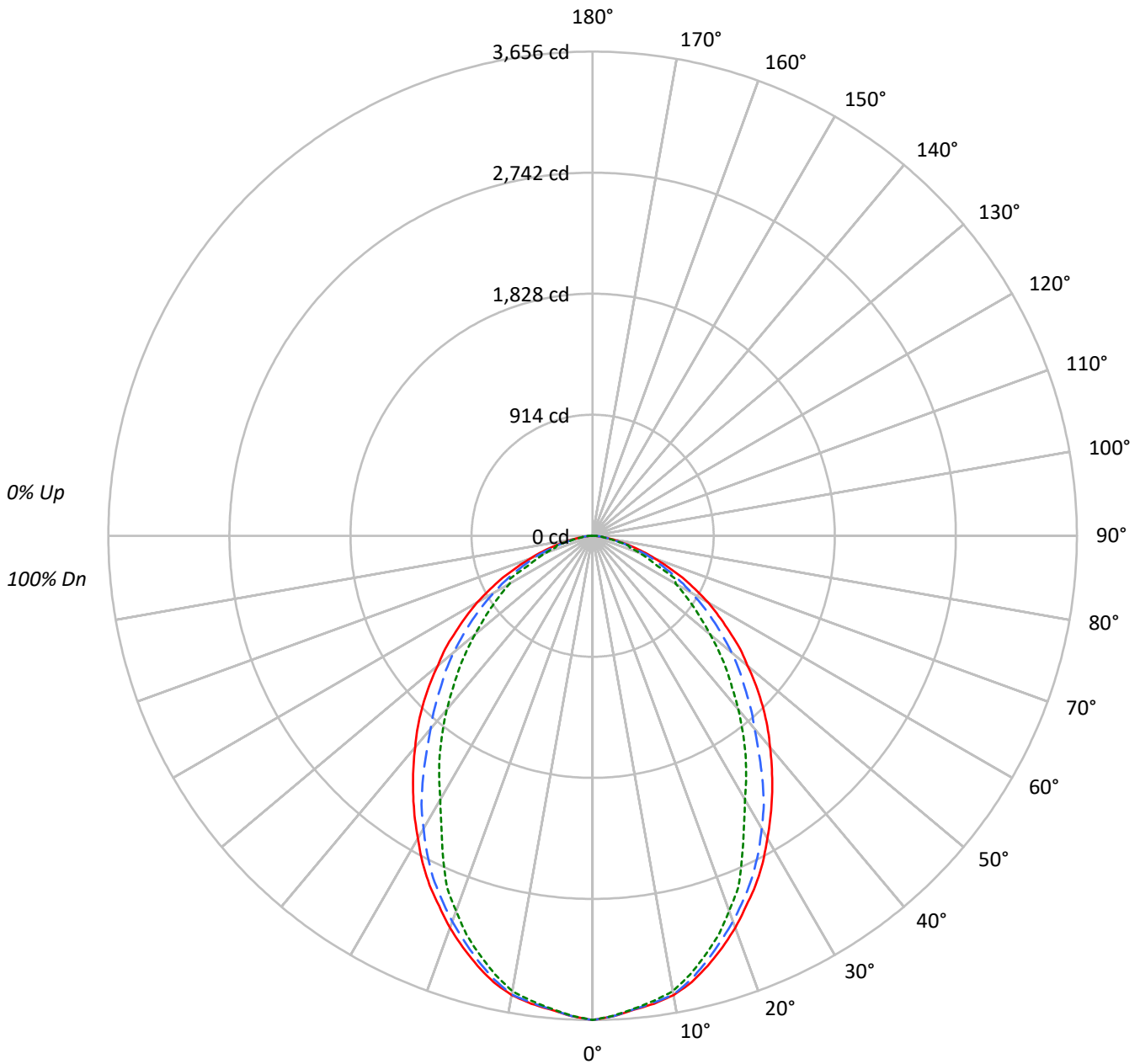
Lumens per Lamp: N/A
Luminaire Lumens: 7178.0 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4920	4920	4920
5°	4853	4847	4841
10°	4811	4805	4770
15°	4681	4634	4569
20°	4509	4436	4315
25°	4324	4230	3966
30°	4098	3967	3573
35°	3881	3666	3305
40°	3660	3341	3007
45°	3451	3089	2719
50°	3194	2867	2424
55°	2955	2598	2171
60°	2707	2320	1945
65°	2382	2032	1723
70°	1962	1779	1463
75°	1560	1363	1429
80°	1048	982	917
85°	653	783	914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	340.4	4.7
10°-20°	934.1	13.0
20°-30°	1293.2	18.0
30°-40°	1378.9	19.2
40°-50°	1258.0	17.5
50°-60°	985.5	13.7
60°-70°	642.3	8.9
70°-80°	284.6	4.0
80°-90°	61.1	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°	2567.6	35.8
0°-40°	3946.5	55.0
0°-60°	6190.0	86.2
0°-90°	7178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3656	3656	3656	3656	3656	
5°	3593	3589	3589	3584	3584	341
15°	3360	3360	3327	3293	3280	945
25°	2912	2896	2849	2748	2672	1337
35°	2363	2346	2232	2063	2012	1477
45°	1813	1775	1623	1488	1429	1397
55°	1260	1222	1108	976	926	1130
65°	748	706	638	651	541	737
75°	300	279	262	249	275	322
85°	42	46	51	55	59	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3656.4	3656.4	3656.4	3656.4	3656.4
2.5°	3631.0	3631.0	3631.0	3626.8	3626.8
5°	3593.0	3588.7	3588.7	3584.5	3584.5
7.5°	3563.4	3559.2	3554.9	3550.7	3542.2
10°	3521.1	3521.1	3516.9	3495.8	3491.5
12.5°	3453.5	3449.3	3432.3	3402.8	3394.3
15°	3360.5	3360.5	3326.7	3292.9	3280.2
17.5°	3259.0	3254.8	3212.5	3178.7	3161.8
20°	3149.1	3140.7	3098.4	3043.5	3013.9
22.5°	3026.6	3026.6	2975.8	2904.0	2874.4
25°	2912.4	2895.5	2849.0	2747.6	2671.5
27.5°	2781.4	2756.0	2705.3	2561.6	2472.8
30°	2637.7	2625.0	2553.1	2367.1	2299.5
32.5°	2502.4	2481.3	2405.2	2210.7	2155.8
35°	2362.9	2346.0	2231.9	2062.8	2012.1
37.5°	2223.4	2202.3	2058.6	1923.3	1859.9
40°	2083.9	2058.6	1902.2	1779.6	1711.9
42.5°	1952.9	1919.1	1766.9	1635.9	1559.8
45°	1813.4	1775.4	1623.2	1487.9	1428.7
47.5°	1673.9	1640.1	1500.6	1361.1	1293.5
50°	1526.0	1496.4	1369.6	1230.1	1158.2
52.5°	1403.4	1356.9	1234.3	1094.8	1035.6
55°	1259.7	1221.6	1107.5	976.4	925.7
57.5°	1128.6	1090.6	984.9	862.3	820.0
60°	1006.0	951.1	862.3	756.6	722.8
62.5°	870.8	828.5	752.4	663.6	705.9
65°	748.2	705.9	638.3	651.0	541.1
67.5°	612.9	591.8	532.6	473.4	456.5
70°	498.8	473.4	452.3	388.9	372.0
72.5°	397.3	372.0	342.4	308.6	295.9
75°	300.1	279.0	262.1	249.4	274.8
77.5°	207.1	198.7	186.0	173.3	169.1
80°	135.3	131.0	126.8	122.6	118.4
82.5°	80.3	80.3	80.3	80.3	80.3
85°	42.3	46.5	50.7	55.0	59.2
87.5°	25.4	25.4	29.6	33.8	38.0
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)