

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: P547121

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-93-86-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: P547121
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-93-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

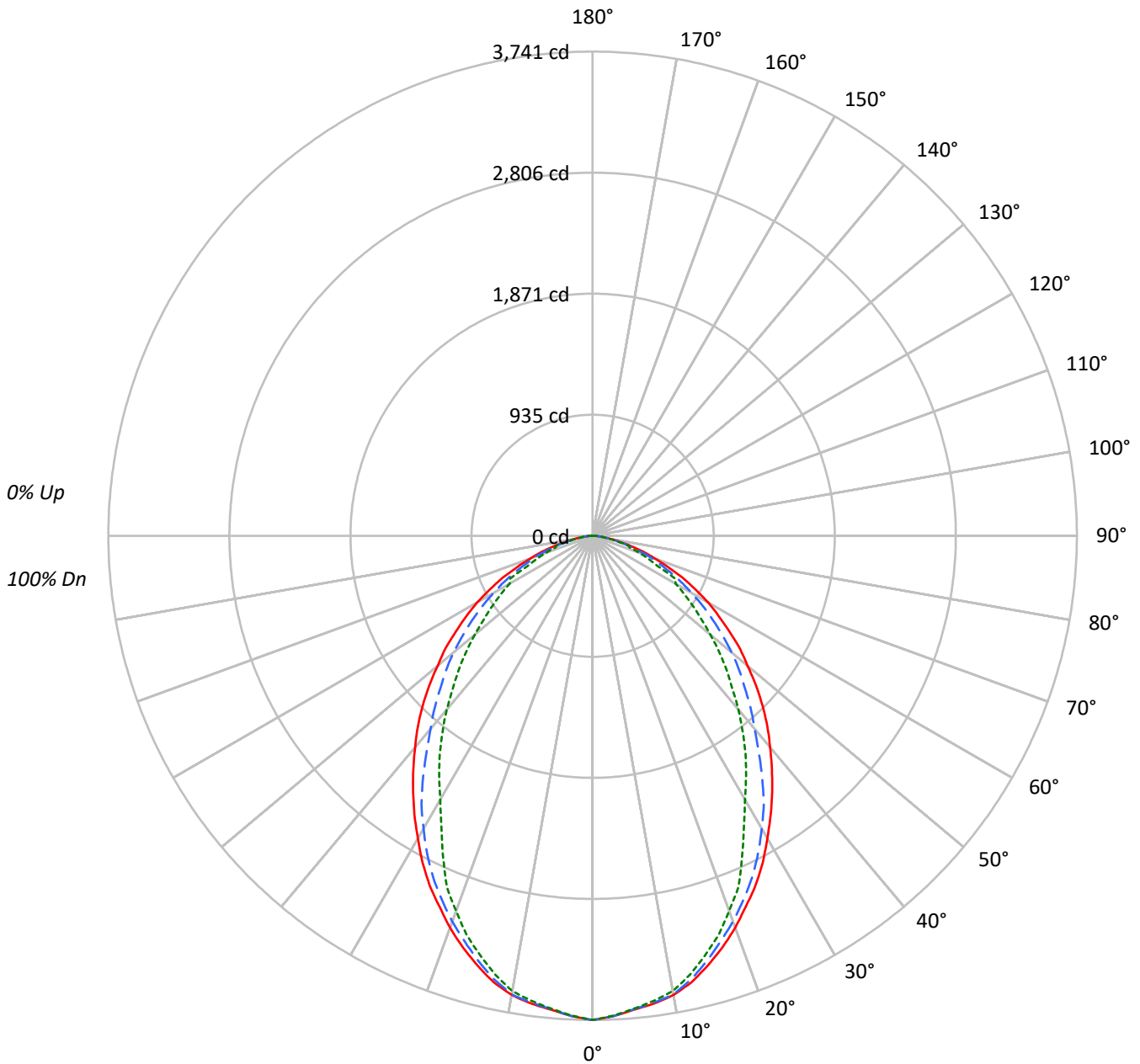
Lumens per Lamp: N/A
Luminaire Lumens: 7344.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P547121

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-93-86-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°	5033	5033	5033
5°	4965	4959	4953
10°	4922	4916	4881
15°	4789	4741	4675
20°	4613	4539	4415
25°	4424	4327	4058
30°	4193	4058	3655
35°	3971	3751	3381
40°	3745	3418	3076
45°	3530	3160	2782
50°	3268	2933	2480
55°	3023	2658	2222
60°	2770	2374	1990
65°	2437	2079	1762
70°	2007	1821	1497
75°	1596	1394	1461
80°	1072	1005	938
85°	667	801	934



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.2	4.7
10°-20°	955.7	13.0
20°-30°	1323.1	18.0
30°-40°	1410.8	19.2
40°-50°	1287.1	17.5
50°-60°	1008.3	13.7
60°-70°	657.2	8.9
70°-80°	291.2	4.0
80°-90°	62.5	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°	2627.0	35.8
0°-40°	4037.8	55.0
0°-60°	6333.2	86.2
0°-90°	7344.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7344.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3741	3741	3741	3741	3741	
5°	3676	3672	3672	3667	3667	349
15°	3438	3438	3404	3369	3356	967
25°	2980	2962	2915	2811	2733	1368
35°	2418	2400	2284	2110	2059	1511
45°	1855	1816	1661	1522	1462	1429
55°	1289	1250	1133	999	947	1156
65°	766	722	653	666	554	754
75°	307	285	268	255	281	329
85°	43	48	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3740.9	3740.9	3740.9	3740.9	3740.9
2.5°	3715.0	3715.0	3715.0	3710.7	3710.7
5°	3676.1	3671.7	3671.7	3667.4	3667.4
7.5°	3645.8	3641.5	3637.1	3632.8	3624.2
10°	3602.5	3602.5	3598.2	3576.6	3572.3
12.5°	3533.3	3529.0	3511.7	3481.4	3472.8
15°	3438.2	3438.2	3403.6	3369.0	3356.0
17.5°	3334.4	3330.1	3286.8	3252.2	3234.9
20°	3222.0	3213.3	3170.1	3113.8	3083.6
22.5°	3096.5	3096.5	3044.6	2971.1	2940.9
25°	2979.8	2962.5	2914.9	2811.1	2733.3
27.5°	2845.7	2819.8	2767.9	2620.8	2530.0
30°	2698.7	2685.7	2612.2	2421.9	2352.7
32.5°	2560.3	2538.6	2460.8	2261.9	2205.6
35°	2417.6	2400.3	2283.5	2110.5	2058.6
37.5°	2274.8	2253.2	2106.2	1967.8	1902.9
40°	2132.1	2106.2	1946.2	1820.7	1751.5
42.5°	1998.0	1963.5	1807.8	1673.7	1595.8
45°	1855.3	1816.4	1660.7	1522.3	1461.8
47.5°	1712.6	1678.0	1535.3	1392.6	1323.4
50°	1561.2	1531.0	1401.2	1258.5	1185.0
52.5°	1435.8	1388.3	1262.8	1120.1	1059.6
55°	1288.8	1249.9	1133.1	999.0	947.1
57.5°	1154.7	1115.8	1007.7	882.3	839.0
60°	1029.3	973.1	882.3	774.1	739.5
62.5°	890.9	847.7	769.8	679.0	722.2
65°	765.5	722.2	653.0	666.0	553.6
67.5°	627.1	605.5	544.9	484.4	467.1
70°	510.3	484.4	462.8	397.9	380.6
72.5°	406.5	380.6	350.3	315.7	302.7
75°	307.1	285.4	268.1	255.2	281.1
77.5°	211.9	203.3	190.3	177.3	173.0
80°	138.4	134.1	129.7	125.4	121.1
82.5°	82.2	82.2	82.2	82.2	82.2
85°	43.2	47.6	51.9	56.2	60.5
87.5°	25.9	25.9	30.3	34.6	38.9
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)