

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: P547088

Luminaire Tested: **FMR-24-4-LD4-3LO-35-UNV-93-85-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: P547088
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-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

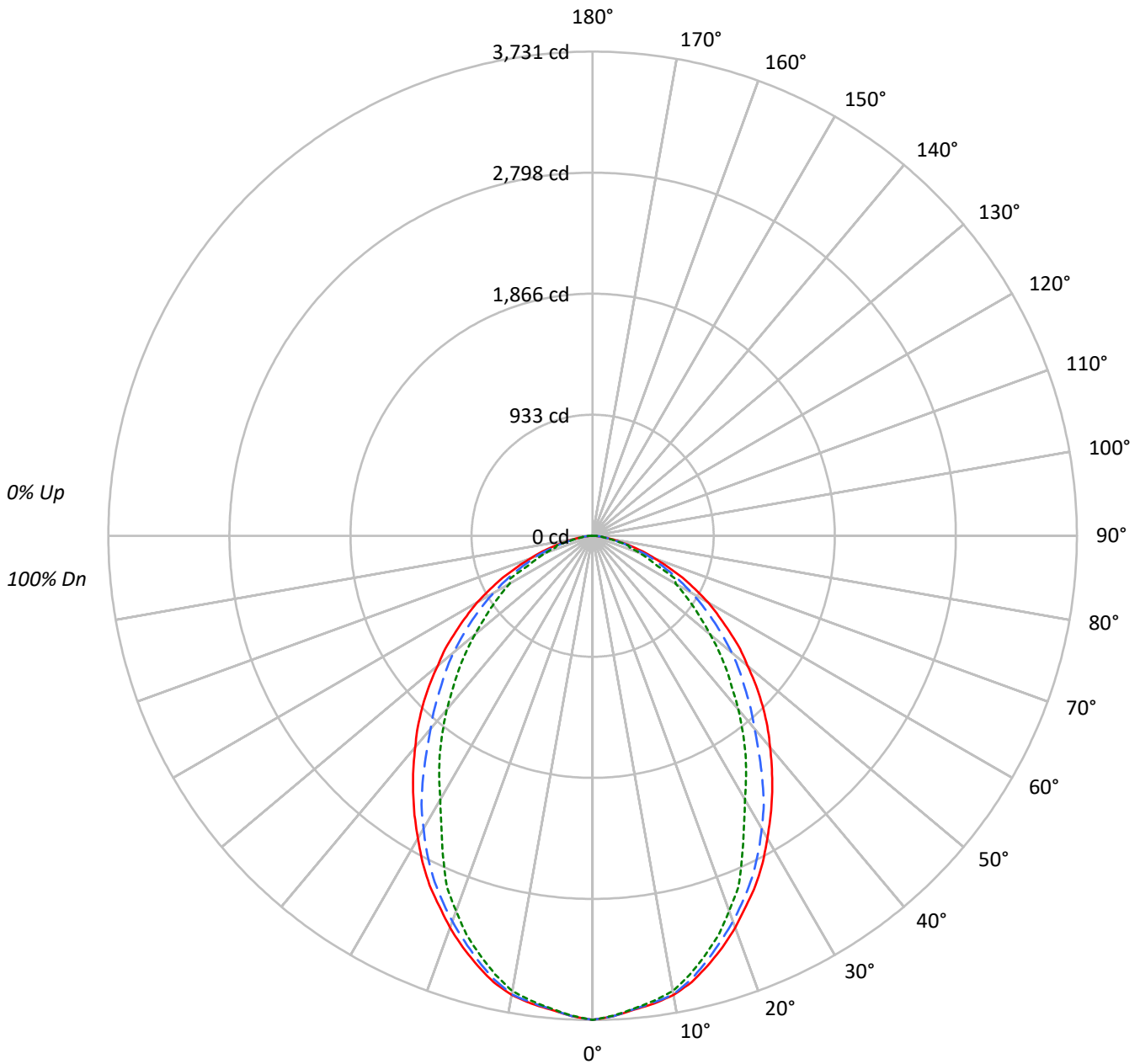
Lumens per Lamp: N/A
Luminaire Lumens: 7324.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5020	5020	5020
5°	4952	4946	4940
10°	4909	4903	4867
15°	4776	4728	4662
20°	4601	4527	4403
25°	4412	4316	4047
30°	4181	4047	3645
35°	3960	3741	3372
40°	3735	3409	3068
45°	3521	3151	2774
50°	3259	2925	2474
55°	3015	2651	2216
60°	2762	2368	1985
65°	2430	2074	1758
70°	2002	1816	1493
75°	1592	1390	1457
80°	1069	1003	936
85°	665	800	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.3	4.7
10°-20°	953.1	13.0
20°-30°	1319.5	18.0
30°-40°	1407.0	19.2
40°-50°	1283.6	17.5
50°-60°	1005.6	13.7
60°-70°	655.4	8.9
70°-80°	290.4	4.0
80°-90°	62.3	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°	2619.9	35.8
0°-40°	4026.8	55.0
0°-60°	6315.9	86.2
0°-90°	7324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7324.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3731	3731	3731	3731	3731	
5°	3666	3662	3662	3657	3657	348
15°	3429	3429	3394	3360	3347	964
25°	2972	2954	2907	2804	2726	1364
35°	2411	2394	2277	2105	2053	1507
45°	1850	1812	1656	1518	1458	1425
55°	1285	1246	1130	996	944	1153
65°	763	720	651	664	552	752
75°	306	285	267	254	280	328
85°	43	47	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°	3730.7	3730.7	3730.7	3730.7	3730.7
2.5°	3704.9	3704.9	3704.9	3700.6	3700.6
5°	3666.1	3661.7	3661.7	3657.4	3657.4
7.5°	3635.9	3631.5	3627.2	3622.9	3614.3
10°	3592.7	3592.7	3588.4	3566.9	3562.5
12.5°	3523.7	3519.4	3502.2	3472.0	3463.3
15°	3428.8	3428.8	3394.3	3359.8	3346.9
17.5°	3325.3	3321.0	3277.9	3243.4	3226.1
20°	3213.2	3204.6	3161.4	3105.4	3075.2
22.5°	3088.1	3088.1	3036.4	2963.0	2932.8
25°	2971.7	2954.4	2907.0	2803.5	2725.8
27.5°	2838.0	2812.1	2760.3	2613.7	2523.1
30°	2691.3	2678.4	2605.1	2415.3	2346.3
32.5°	2553.3	2531.7	2454.1	2255.7	2199.6
35°	2411.0	2393.7	2277.3	2104.7	2053.0
37.5°	2268.6	2247.1	2100.4	1962.4	1897.7
40°	2126.3	2100.4	1940.9	1815.8	1746.8
42.5°	1992.6	1958.1	1802.8	1669.1	1591.5
45°	1850.3	1811.5	1656.2	1518.2	1457.8
47.5°	1707.9	1673.4	1531.1	1388.8	1319.8
50°	1557.0	1526.8	1397.4	1255.1	1181.8
52.5°	1431.9	1384.5	1259.4	1117.1	1056.7
55°	1285.3	1246.5	1130.0	996.3	944.5
57.5°	1151.6	1112.8	1004.9	879.9	836.7
60°	1026.5	970.4	879.9	772.0	737.5
62.5°	888.5	845.3	767.7	677.1	720.3
65°	763.4	720.3	651.3	664.2	552.1
67.5°	625.4	603.8	543.4	483.1	465.8
70°	508.9	483.1	461.5	396.8	379.5
72.5°	405.4	379.5	349.4	314.8	301.9
75°	306.2	284.7	267.4	254.5	280.3
77.5°	211.3	202.7	189.8	176.8	172.5
80°	138.0	133.7	129.4	125.1	120.8
82.5°	81.9	81.9	81.9	81.9	81.9
85°	43.1	47.4	51.8	56.1	60.4
87.5°	25.9	25.9	30.2	34.5	38.8
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)