

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: P547119

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-93-84-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: P547119
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-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

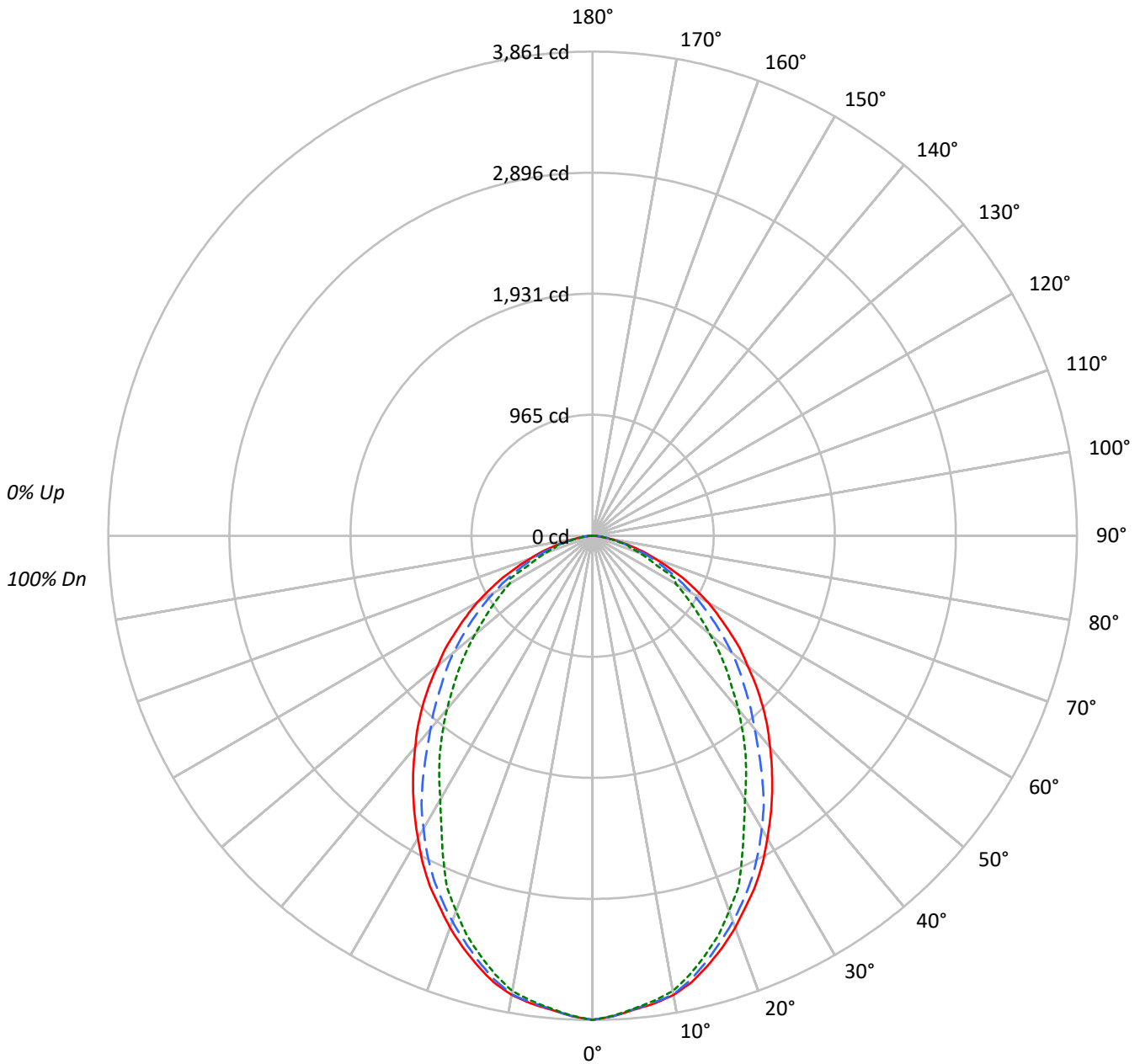
Lumens per Lamp: N/A
Luminaire Lumens: 7579.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5194	5194	5194
5°	5124	5118	5112
10°	5079	5073	5037
15°	4942	4893	4824
20°	4761	4684	4556
25°	4565	4466	4188
30°	4327	4188	3772
35°	4098	3871	3490
40°	3865	3528	3175
45°	3643	3261	2871
50°	3373	3027	2560
55°	3120	2743	2293
60°	2858	2450	2054
65°	2515	2145	1819
70°	2072	1879	1545
75°	1647	1438	1508
80°	1106	1038	969
85°	689	827	965



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.4	4.7
10°-20°	986.3	13.0
20°-30°	1365.4	18.0
30°-40°	1455.9	19.2
40°-50°	1328.2	17.5
50°-60°	1040.6	13.7
60°-70°	678.2	8.9
70°-80°	300.5	4.0
80°-90°	64.5	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°	2711.1	35.8
0°-40°	4167.0	55.0
0°-60°	6535.8	86.2
0°-90°	7579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3861	3861	3861	3861	3861	
5°	3794	3789	3789	3785	3785	360
15°	3548	3548	3512	3477	3463	998
25°	3075	3057	3008	2901	2821	1412
35°	2495	2477	2357	2178	2124	1560
45°	1915	1874	1714	1571	1509	1475
55°	1330	1290	1169	1031	977	1193
65°	790	745	674	687	571	779
75°	317	295	277	263	290	340
85°	45	49	54	58	62	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3860.6	3860.6	3860.6	3860.6	3860.6
2.5°	3833.9	3833.9	3833.9	3829.4	3829.4
5°	3793.7	3789.2	3789.2	3784.8	3784.8
7.5°	3762.5	3758.0	3753.5	3749.1	3740.1
10°	3717.8	3717.8	3713.4	3691.0	3686.6
12.5°	3646.4	3641.9	3624.1	3592.9	3583.9
15°	3548.2	3548.2	3512.5	3476.8	3463.4
17.5°	3441.1	3436.6	3392.0	3356.3	3338.5
20°	3325.1	3316.1	3271.5	3213.5	3182.2
22.5°	3195.6	3195.6	3142.1	3066.2	3035.0
25°	3075.1	3057.3	3008.2	2901.1	2820.7
27.5°	2936.8	2910.0	2856.4	2704.7	2611.0
30°	2785.0	2771.6	2695.8	2499.4	2428.0
32.5°	2642.2	2619.9	2539.5	2334.2	2276.2
35°	2494.9	2477.1	2356.6	2178.0	2124.5
37.5°	2347.6	2325.3	2173.6	2030.7	1963.8
40°	2200.3	2173.6	2008.4	1879.0	1807.6
42.5°	2062.0	2026.3	1865.6	1727.2	1646.9
45°	1914.7	1874.5	1713.9	1571.0	1508.6
47.5°	1767.4	1731.7	1584.4	1437.1	1365.7
50°	1611.2	1580.0	1446.1	1298.8	1222.9
52.5°	1481.8	1432.7	1303.2	1156.0	1093.5
55°	1330.0	1289.9	1169.4	1031.0	977.4
57.5°	1191.7	1151.5	1039.9	910.5	865.9
60°	1062.2	1004.2	910.5	798.9	763.2
62.5°	919.4	874.8	794.4	700.7	745.3
65°	790.0	745.3	673.9	687.3	571.3
67.5°	647.2	624.8	562.4	499.9	482.0
70°	526.7	499.9	477.6	410.6	392.8
72.5°	419.5	392.8	361.5	325.8	312.4
75°	316.9	294.6	276.7	263.3	290.1
77.5°	218.7	209.8	196.4	183.0	178.5
80°	142.8	138.4	133.9	129.4	125.0
82.5°	84.8	84.8	84.8	84.8	84.8
85°	44.6	49.1	53.6	58.0	62.5
87.5°	26.8	26.8	31.2	35.7	40.2
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)