

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: P547100

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-80-94-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: P547100
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-80-94-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

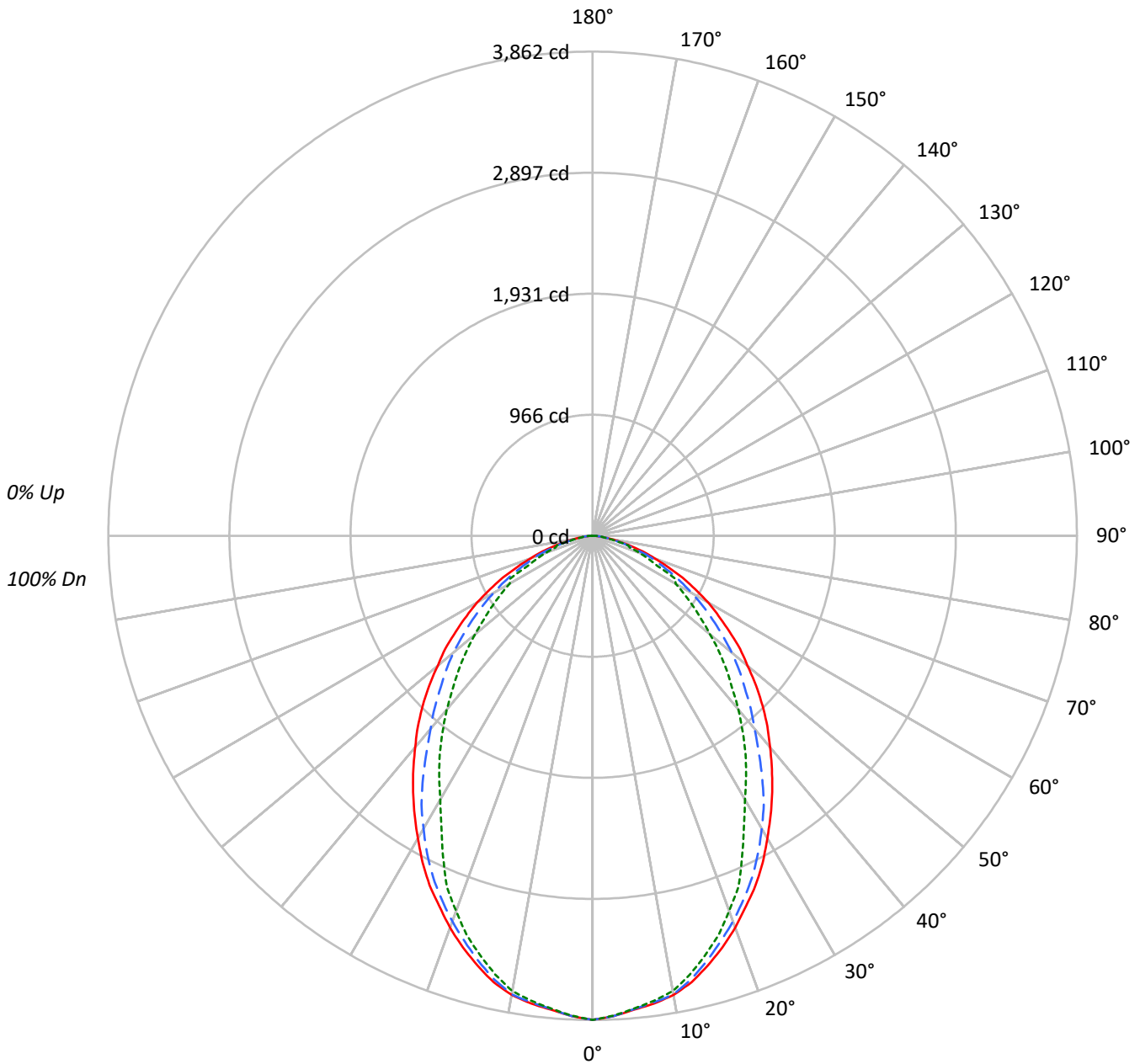
Lumens per Lamp: N/A
Luminaire Lumens: 7581.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	5196	5196	5196
5°	5125	5119	5113
10°	5081	5075	5038
15°	4944	4894	4826
20°	4762	4686	4558
25°	4566	4467	4189
30°	4328	4189	3773
35°	4099	3872	3490
40°	3866	3529	3176
45°	3644	3262	2871
50°	3373	3028	2560
55°	3121	2744	2293
60°	2859	2451	2054
65°	2516	2146	1819
70°	2072	1879	1546
75°	1648	1439	1509
80°	1107	1038	969
85°	689	827	965



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.5	4.7
10°-20°	986.5	13.0
20°-30°	1365.8	18.0
30°-40°	1456.3	19.2
40°-50°	1328.6	17.5
50°-60°	1040.9	13.7
60°-70°	678.4	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°	2711.8	35.8
0°-40°	4168.1	55.0
0°-60°	6537.6	86.2
0°-90°	7581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3862	3862	3862	3862	3862	
5°	3795	3790	3790	3786	3786	360
15°	3549	3549	3513	3478	3464	998
25°	3076	3058	3009	2902	2822	1412
35°	2496	2478	2357	2179	2125	1560
45°	1915	1875	1714	1572	1509	1475
55°	1330	1290	1170	1031	978	1193
65°	790	746	674	688	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°	3861.7	3861.7	3861.7	3861.7	3861.7
2.5°	3834.9	3834.9	3834.9	3830.4	3830.4
5°	3794.7	3790.2	3790.2	3785.8	3785.8
7.5°	3763.4	3759.0	3754.5	3750.1	3741.1
10°	3718.8	3718.8	3714.3	3692.0	3687.6
12.5°	3647.4	3642.9	3625.0	3593.8	3584.9
15°	3549.2	3549.2	3513.4	3477.7	3464.3
17.5°	3442.0	3437.5	3392.9	3357.2	3339.3
20°	3325.9	3317.0	3272.4	3214.3	3183.1
22.5°	3196.5	3196.5	3142.9	3067.0	3035.8
25°	3075.9	3058.1	3009.0	2901.8	2821.5
27.5°	2937.5	2910.8	2857.2	2705.4	2611.6
30°	2785.8	2772.4	2696.5	2500.0	2428.6
32.5°	2642.9	2620.6	2540.2	2334.9	2276.8
35°	2495.6	2477.7	2357.2	2178.6	2125.0
37.5°	2348.2	2325.9	2174.1	2031.3	1964.3
40°	2200.9	2174.1	2009.0	1879.5	1808.1
42.5°	2062.5	2026.8	1866.1	1727.7	1647.3
45°	1915.2	1875.0	1714.3	1571.5	1508.9
47.5°	1767.9	1732.2	1584.8	1437.5	1366.1
50°	1611.6	1580.4	1446.4	1299.1	1223.2
52.5°	1482.2	1433.1	1303.6	1156.3	1093.8
55°	1330.4	1290.2	1169.7	1031.3	977.7
57.5°	1192.0	1151.8	1040.2	910.7	866.1
60°	1062.5	1004.5	910.7	799.1	763.4
62.5°	919.7	875.0	794.7	700.9	745.5
65°	790.2	745.5	674.1	687.5	571.4
67.5°	647.3	625.0	562.5	500.0	482.1
70°	526.8	500.0	477.7	410.7	392.9
72.5°	419.6	392.9	361.6	325.9	312.5
75°	317.0	294.6	276.8	263.4	290.2
77.5°	218.8	209.8	196.4	183.0	178.6
80°	142.9	138.4	133.9	129.5	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	31.3	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)