

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: P547096

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-80-85-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: P547096
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-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

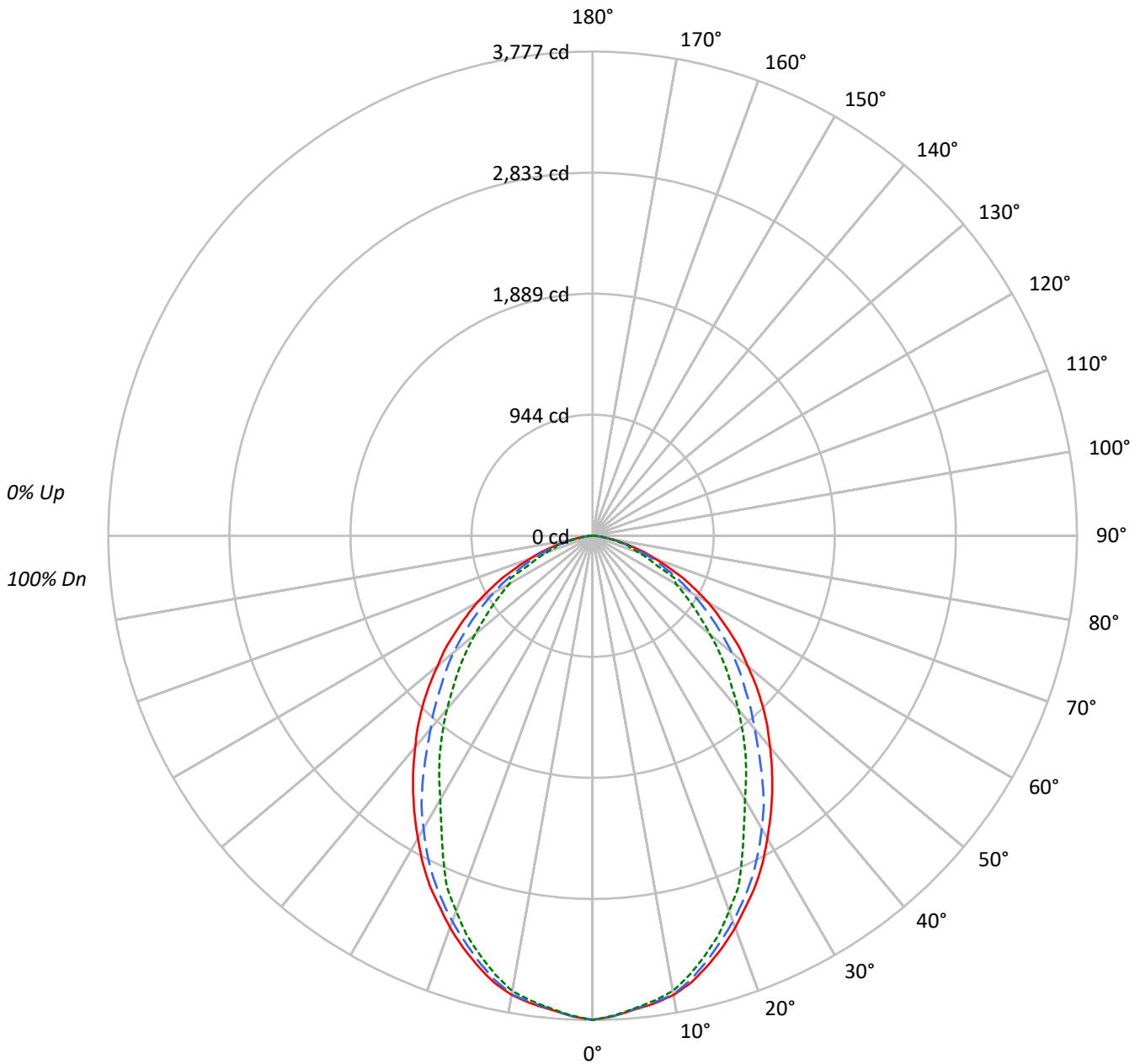
Lumens per Lamp: N/A
Luminaire Lumens: 7414.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	5081	5081	5081
5°	5012	5006	5001
10°	4969	4963	4927
15°	4835	4786	4719
20°	4657	4582	4457
25°	4466	4369	4096
30°	4233	4097	3690
35°	4009	3786	3414
40°	3781	3451	3106
45°	3564	3190	2808
50°	3299	2961	2504
55°	3052	2683	2243
60°	2796	2397	2009
65°	2460	2099	1779
70°	2027	1838	1511
75°	1612	1407	1475
80°	1082	1015	947
85°	675	809	943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.5	4.7
10°-20°	964.8	13.0
20°-30°	1335.7	18.0
30°-40°	1424.2	19.2
40°-50°	1299.3	17.5
50°-60°	1017.9	13.7
60°-70°	663.4	8.9
70°-80°	293.9	4.0
80°-90°	63.1	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°	2652.0	35.8
0°-40°	4076.3	55.0
0°-60°	6393.5	86.2
0°-90°	7414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3777	3777	3777	3777	3777	
5°	3711	3707	3707	3702	3702	352
15°	3471	3471	3436	3401	3388	976
25°	3008	2991	2943	2838	2759	1381
35°	2441	2423	2305	2131	2078	1526
45°	1873	1834	1676	1537	1476	1443
55°	1301	1262	1144	1008	956	1167
65°	773	729	659	672	559	762
75°	310	288	271	258	284	332
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3776.6	3776.6	3776.6	3776.6	3776.6
2.5°	3750.4	3750.4	3750.4	3746.0	3746.0
5°	3711.1	3706.7	3706.7	3702.4	3702.4
7.5°	3680.5	3676.2	3671.8	3667.4	3658.7
10°	3636.9	3636.9	3632.5	3610.7	3606.3
12.5°	3567.0	3562.7	3545.2	3514.6	3505.9
15°	3471.0	3471.0	3436.0	3401.1	3388.0
17.5°	3366.2	3361.8	3318.2	3283.2	3265.8
20°	3252.7	3243.9	3200.3	3143.5	3113.0
22.5°	3126.1	3126.1	3073.7	2999.4	2968.9
25°	3008.2	2990.7	2942.7	2837.9	2759.3
27.5°	2872.8	2846.6	2794.2	2645.8	2554.1
30°	2724.4	2711.3	2637.1	2445.0	2375.1
32.5°	2584.7	2562.8	2484.3	2283.4	2226.7
35°	2440.6	2423.1	2305.2	2130.6	2078.2
37.5°	2296.5	2274.7	2126.2	1986.5	1921.0
40°	2152.4	2126.2	1964.7	1838.1	1768.2
42.5°	2017.1	1982.2	1825.0	1689.6	1611.1
45°	1873.0	1833.7	1676.5	1536.8	1475.7
47.5°	1728.9	1694.0	1549.9	1405.9	1336.0
50°	1576.1	1545.6	1414.6	1270.5	1196.3
52.5°	1449.5	1401.5	1274.9	1130.8	1069.7
55°	1301.1	1261.8	1143.9	1008.5	956.2
57.5°	1165.7	1126.4	1017.3	890.7	847.0
60°	1039.1	982.4	890.7	781.5	746.6
62.5°	899.4	855.7	777.1	685.5	729.1
65°	772.8	729.1	659.3	672.4	558.8
67.5°	633.1	611.2	550.1	489.0	471.5
70°	515.2	489.0	467.2	401.7	384.2
72.5°	410.4	384.2	353.6	318.7	305.6
75°	310.0	288.2	270.7	257.6	283.8
77.5°	213.9	205.2	192.1	179.0	174.6
80°	139.7	135.3	131.0	126.6	122.2
82.5°	83.0	83.0	83.0	83.0	83.0
85°	43.7	48.0	52.4	56.8	61.1
87.5°	26.2	26.2	30.6	34.9	39.3
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)