

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: P547386

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-80-87-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: P547386
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-LD4-4LO-40-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

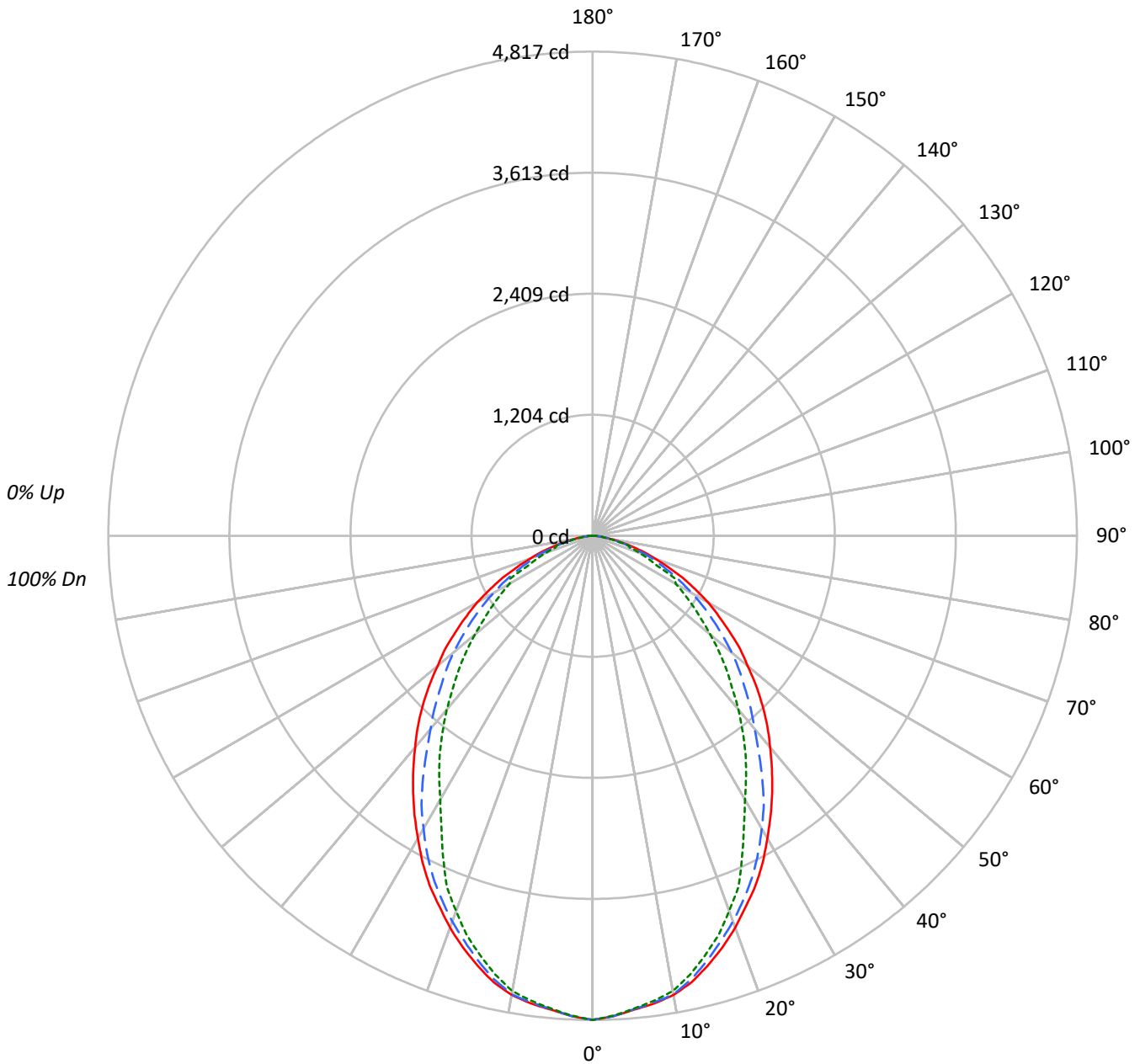
Lumens per Lamp: N/A
Luminaire Lumens: 9456.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6481	6481	6481
5°	6393	6385	6378
10°	6337	6330	6284
15°	6167	6104	6019
20°	5940	5844	5685
25°	5696	5572	5225
30°	5398	5226	4706
35°	5113	4829	4354
40°	4822	4401	3961
45°	4546	4069	3581
50°	4208	3777	3194
55°	3893	3422	2861
60°	3566	3057	2562
65°	3138	2677	2269
70°	2585	2344	1928
75°	2056	1795	1882
80°	1381	1295	1208
85°	860	1031	1204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	448.4	4.7
10°-20°	1230.5	13.0
20°-30°	1703.6	18.0
30°-40°	1816.5	19.2
40°-50°	1657.2	17.5
50°-60°	1298.3	13.7
60°-70°	846.2	8.9
70°-80°	374.9	4.0
80°-90°	80.5	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°	3382.5	35.8
0°-40°	5199.0	55.0
0°-60°	8154.5	86.2
0°-90°	9456.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9456.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4817	4817	4817	4817	4817	
5°	4733	4728	4728	4722	4722	449
15°	4427	4427	4382	4338	4321	1245
25°	3837	3814	3753	3620	3519	1761
35°	3113	3090	2940	2717	2651	1946
45°	2389	2339	2138	1960	1882	1840
55°	1659	1609	1459	1286	1220	1488
65°	986	930	841	858	713	971
75°	395	368	345	328	362	424
85°	56	61	67	72	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4816.8	4816.8	4816.8	4816.8	4816.8
2.5°	4783.3	4783.3	4783.3	4777.8	4777.8
5°	4733.2	4727.7	4727.7	4722.1	4722.1
7.5°	4694.3	4688.7	4683.1	4677.5	4666.4
10°	4638.6	4638.6	4633.0	4605.2	4599.6
12.5°	4549.5	4543.9	4521.6	4482.6	4471.5
15°	4427.0	4427.0	4382.4	4337.9	4321.2
17.5°	4293.3	4287.8	4232.1	4187.5	4165.2
20°	4148.5	4137.4	4081.7	4009.3	3970.3
22.5°	3987.1	3987.1	3920.2	3825.6	3786.6
25°	3836.7	3814.4	3753.2	3619.5	3519.3
27.5°	3664.1	3630.7	3563.8	3374.5	3257.6
30°	3474.7	3458.0	3363.4	3118.4	3029.3
32.5°	3296.6	3268.7	3168.5	2912.3	2839.9
35°	3112.8	3090.5	2940.2	2717.4	2650.6
37.5°	2929.0	2901.2	2711.9	2533.7	2450.1
40°	2745.3	2711.9	2505.8	2344.3	2255.2
42.5°	2572.7	2528.1	2327.6	2155.0	2054.8
45°	2388.9	2338.8	2138.3	1960.1	1882.2
47.5°	2205.1	2160.6	1976.8	1793.1	1704.0
50°	2010.2	1971.3	1804.2	1620.4	1525.8
52.5°	1848.7	1787.5	1626.0	1442.2	1364.3
55°	1659.4	1609.3	1458.9	1286.3	1219.5
57.5°	1486.8	1436.7	1297.5	1136.0	1080.3
60°	1325.3	1252.9	1136.0	996.8	952.2
62.5°	1147.1	1091.4	991.2	874.3	929.9
65°	985.6	929.9	840.8	857.6	712.8
67.5°	807.4	779.6	701.6	623.7	601.4
70°	657.1	623.7	595.8	512.3	490.0
72.5°	523.4	490.0	451.0	406.5	389.8
75°	395.4	367.5	345.2	328.5	362.0
77.5°	272.9	261.7	245.0	228.3	222.7
80°	178.2	172.6	167.1	161.5	155.9
82.5°	105.8	105.8	105.8	105.8	105.8
85°	55.7	61.3	66.8	72.4	78.0
87.5°	33.4	33.4	39.0	44.5	50.1
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)