

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: P547391

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-81-84-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: P547391
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-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC 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

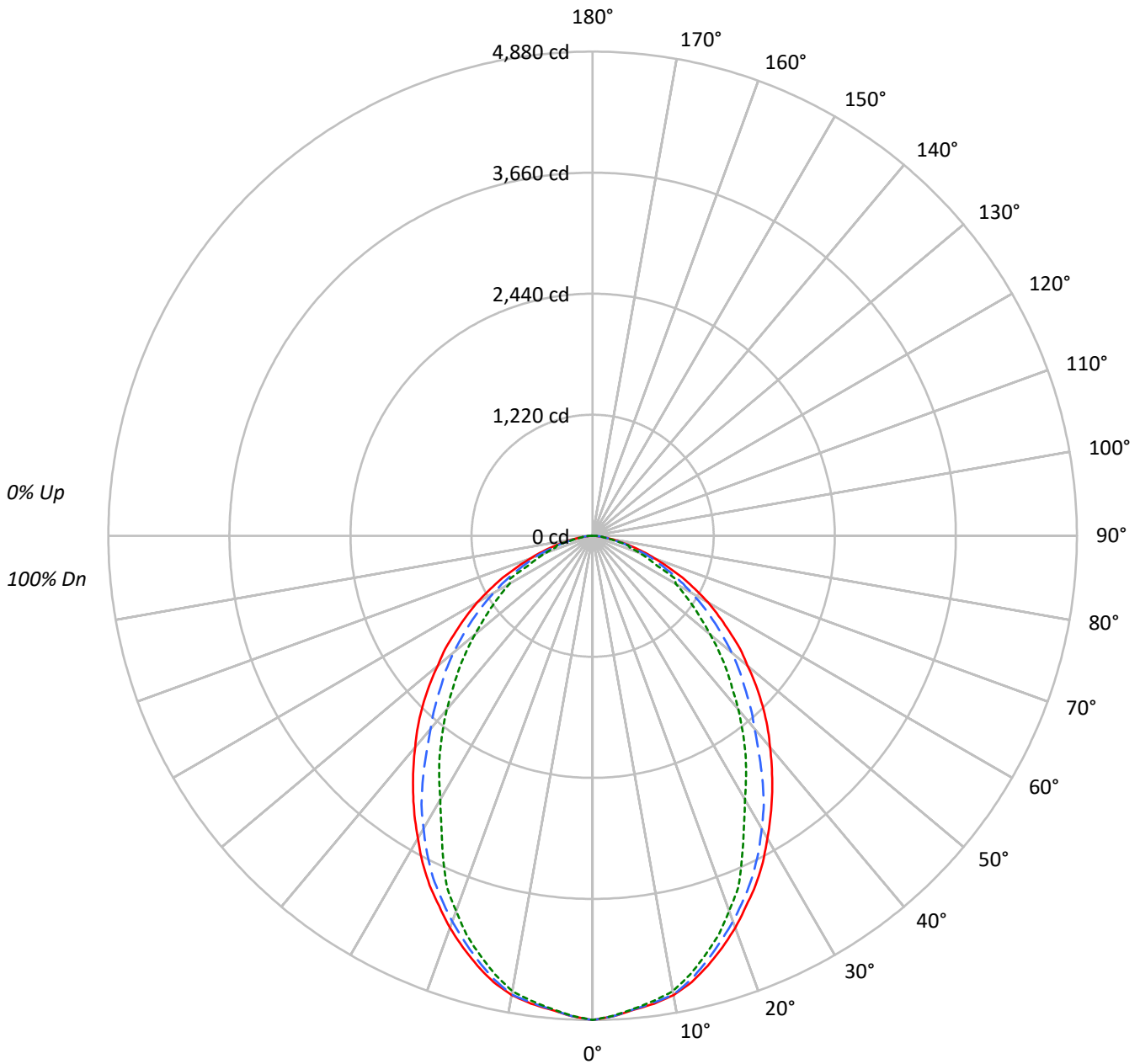
Lumens per Lamp: N/A
Luminaire Lumens: 9581.0 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6567	6567	6567
5°	6477	6470	6462
10°	6421	6413	6367
15°	6248	6185	6099
20°	6019	5922	5760
25°	5771	5646	5294
30°	5470	5294	4769
35°	5180	4893	4411
40°	4886	4460	4014
45°	4606	4123	3629
50°	4263	3826	3236
55°	3944	3468	2898
60°	3613	3097	2596
65°	3180	2713	2299
70°	2619	2375	1953
75°	2083	1818	1906
80°	1399	1312	1224
85°	871	1045	1220



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	454.3	4.7
10°-20°	1246.8	13.0
20°-30°	1726.1	18.0
30°-40°	1840.5	19.2
40°-50°	1679.1	17.5
50°-60°	1315.4	13.7
60°-70°	857.3	8.9
70°-80°	379.8	4.0
80°-90°	81.6	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°	3427.2	35.8
0°-40°	5267.7	55.0
0°-60°	8262.3	86.2
0°-90°	9581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4880	4880	4880	4880	4880	
5°	4796	4790	4790	4784	4784	455
15°	4486	4486	4440	4395	4378	1261
25°	3887	3865	3803	3667	3566	1785
35°	3154	3131	2979	2753	2686	1972
45°	2420	2370	2167	1986	1907	1864
55°	1681	1631	1478	1303	1236	1508
65°	999	942	852	869	722	984
75°	401	372	350	333	367	429
85°	56	62	68	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4880.4	4880.4	4880.4	4880.4	4880.4
2.5°	4846.6	4846.6	4846.6	4840.9	4840.9
5°	4795.8	4790.2	4790.2	4784.5	4784.5
7.5°	4756.3	4750.7	4745.0	4739.4	4728.1
10°	4699.9	4699.9	4694.2	4666.0	4660.4
12.5°	4609.6	4604.0	4581.4	4541.9	4530.6
15°	4485.5	4485.5	4440.3	4395.2	4378.3
17.5°	4350.1	4344.4	4288.0	4242.9	4220.3
20°	4203.4	4192.1	4135.7	4062.3	4022.8
22.5°	4039.8	4039.8	3972.1	3876.1	3836.6
25°	3887.4	3864.9	3802.8	3667.4	3565.8
27.5°	3712.5	3678.7	3611.0	3419.1	3300.6
30°	3520.7	3503.8	3407.8	3159.6	3069.3
32.5°	3340.1	3311.9	3210.4	2950.8	2877.5
35°	3153.9	3131.4	2979.0	2753.4	2685.6
37.5°	2967.8	2939.5	2747.7	2567.2	2482.5
40°	2781.6	2747.7	2539.0	2375.3	2285.1
42.5°	2606.7	2561.5	2358.4	2183.5	2081.9
45°	2420.5	2369.7	2166.6	1986.0	1907.0
47.5°	2234.3	2189.1	2003.0	1816.8	1726.5
50°	2036.8	1997.3	1828.0	1641.9	1545.9
52.5°	1873.2	1811.1	1647.5	1461.3	1382.3
55°	1681.4	1630.6	1478.2	1303.3	1235.6
57.5°	1506.4	1455.7	1314.6	1151.0	1094.6
60°	1342.8	1269.5	1151.0	1009.9	964.8
62.5°	1162.3	1105.9	1004.3	885.8	942.2
65°	998.7	942.2	852.0	868.9	722.2
67.5°	818.1	789.9	710.9	631.9	609.3
70°	665.8	631.9	603.7	519.1	496.5
72.5°	530.4	496.5	457.0	411.9	394.9
75°	400.6	372.4	349.8	332.9	366.7
77.5°	276.5	265.2	248.3	231.3	225.7
80°	180.5	174.9	169.3	163.6	158.0
82.5°	107.2	107.2	107.2	107.2	107.2
85°	56.4	62.1	67.7	73.3	79.0
87.5°	33.9	33.9	39.5	45.1	50.8
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)