

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: P547234

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-81-87-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: P547234
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-LD4-3STD-50-UNV-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

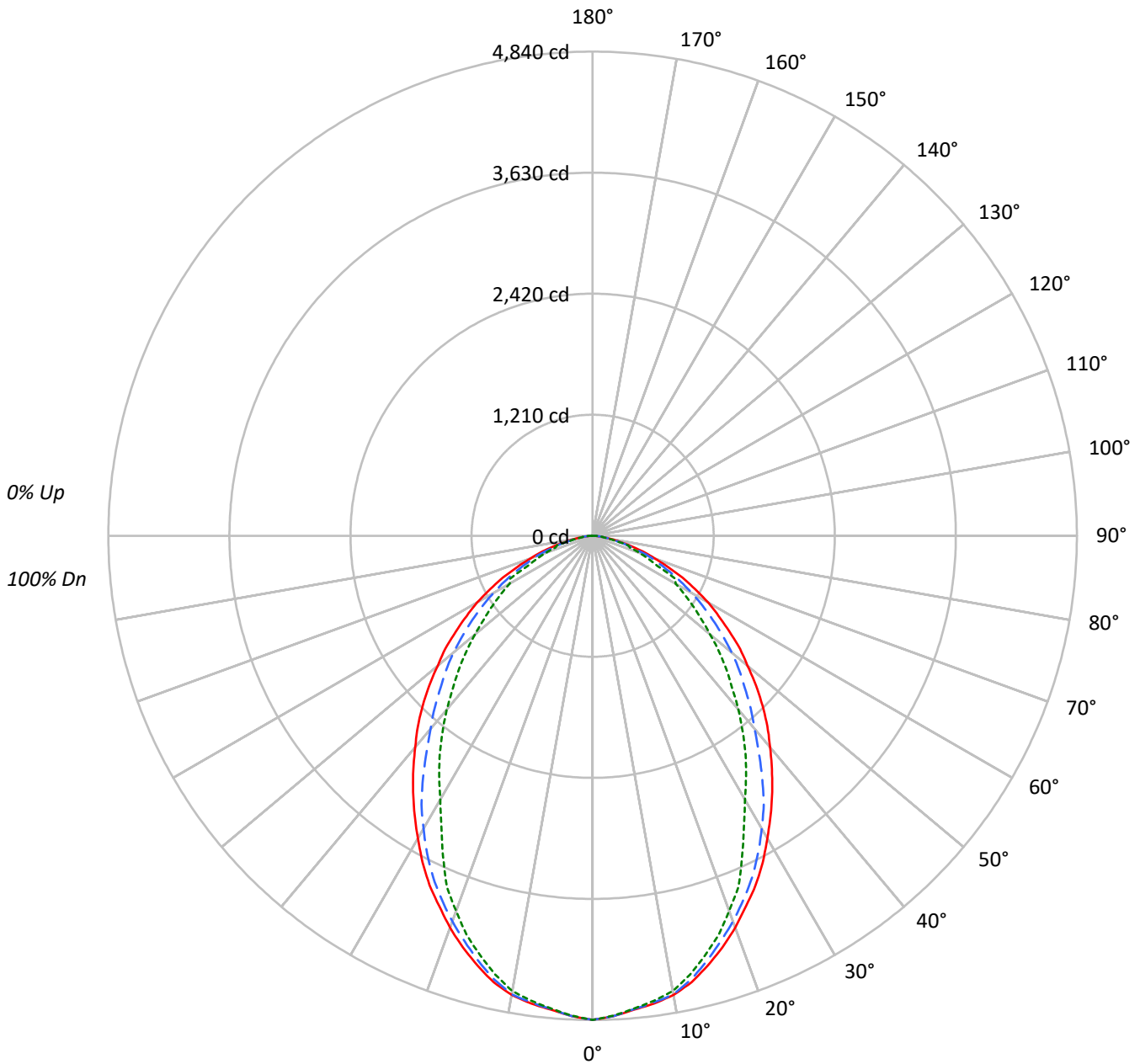
Lumens per Lamp: N/A
Luminaire Lumens: 9501.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6512	6512	6512
5°	6423	6416	6408
10°	6368	6360	6314
15°	6196	6134	6048
20°	5968	5872	5712
25°	5723	5598	5249
30°	5424	5250	4729
35°	5137	4852	4374
40°	4845	4422	3980
45°	4567	4088	3598
50°	4228	3795	3209
55°	3911	3439	2874
60°	3583	3071	2574
65°	3153	2690	2280
70°	2597	2355	1937
75°	2065	1803	1891
80°	1387	1301	1214
85°	865	1036	1209



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.5	4.7
10°-20°	1236.4	13.0
20°-30°	1711.7	18.0
30°-40°	1825.2	19.2
40°-50°	1665.1	17.5
50°-60°	1304.4	13.7
60°-70°	850.2	8.9
70°-80°	376.7	4.0
80°-90°	80.9	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°	3398.6	35.8
0°-40°	5223.8	55.0
0°-60°	8193.3	86.2
0°-90°	9501.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9501.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4840	4840	4840	4840	4840	
5°	4756	4750	4750	4745	4745	451
15°	4448	4448	4403	4358	4342	1250
25°	3855	3833	3771	3637	3536	1770
35°	3128	3105	2954	2730	2663	1955
45°	2400	2350	2148	1969	1891	1849
55°	1667	1617	1466	1292	1225	1495
65°	990	934	845	862	716	976
75°	397	369	347	330	364	426
85°	56	62	67	73	78	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4839.7	4839.7	4839.7	4839.7	4839.7
2.5°	4806.1	4806.1	4806.1	4800.5	4800.5
5°	4755.8	4750.2	4750.2	4744.6	4744.6
7.5°	4716.6	4711.0	4705.4	4699.8	4688.6
10°	4660.6	4660.6	4655.0	4627.1	4621.5
12.5°	4571.1	4565.5	4543.1	4504.0	4492.8
15°	4448.0	4448.0	4403.3	4358.5	4341.7
17.5°	4313.8	4308.2	4252.2	4207.4	4185.1
20°	4168.3	4157.1	4101.1	4028.4	3989.2
22.5°	4006.0	4006.0	3938.9	3843.8	3804.6
25°	3855.0	3832.6	3771.0	3636.8	3536.0
27.5°	3681.5	3647.9	3580.8	3390.6	3273.1
30°	3491.3	3474.5	3379.4	3133.2	3043.7
32.5°	3312.2	3284.3	3183.6	2926.2	2853.5
35°	3127.6	3105.2	2954.2	2730.4	2663.2
37.5°	2943.0	2915.0	2724.8	2545.7	2461.8
40°	2758.3	2724.8	2517.8	2355.5	2266.0
42.5°	2584.9	2540.1	2338.7	2165.3	2064.6
45°	2400.3	2349.9	2148.5	1969.4	1891.1
47.5°	2215.6	2170.9	1986.2	1801.6	1712.1
50°	2019.8	1980.6	1812.8	1628.1	1533.0
52.5°	1857.5	1796.0	1633.7	1449.1	1370.8
55°	1667.3	1617.0	1465.9	1292.4	1225.3
57.5°	1493.9	1443.5	1303.6	1141.4	1085.4
60°	1331.6	1258.9	1141.4	1001.5	956.7
62.5°	1152.6	1096.6	995.9	878.4	934.4
65°	990.3	934.4	844.8	861.6	716.2
67.5°	811.3	783.3	705.0	626.6	604.3
70°	660.2	626.6	598.7	514.7	492.4
72.5°	525.9	492.4	453.2	408.4	391.7
75°	397.2	369.3	346.9	330.1	363.7
77.5°	274.2	263.0	246.2	229.4	223.8
80°	179.0	173.4	167.9	162.3	156.7
82.5°	106.3	106.3	106.3	106.3	106.3
85°	56.0	61.5	67.1	72.7	78.3
87.5°	33.6	33.6	39.2	44.8	50.4
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)