

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: P547370

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-82-87-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: P547370
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-35-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

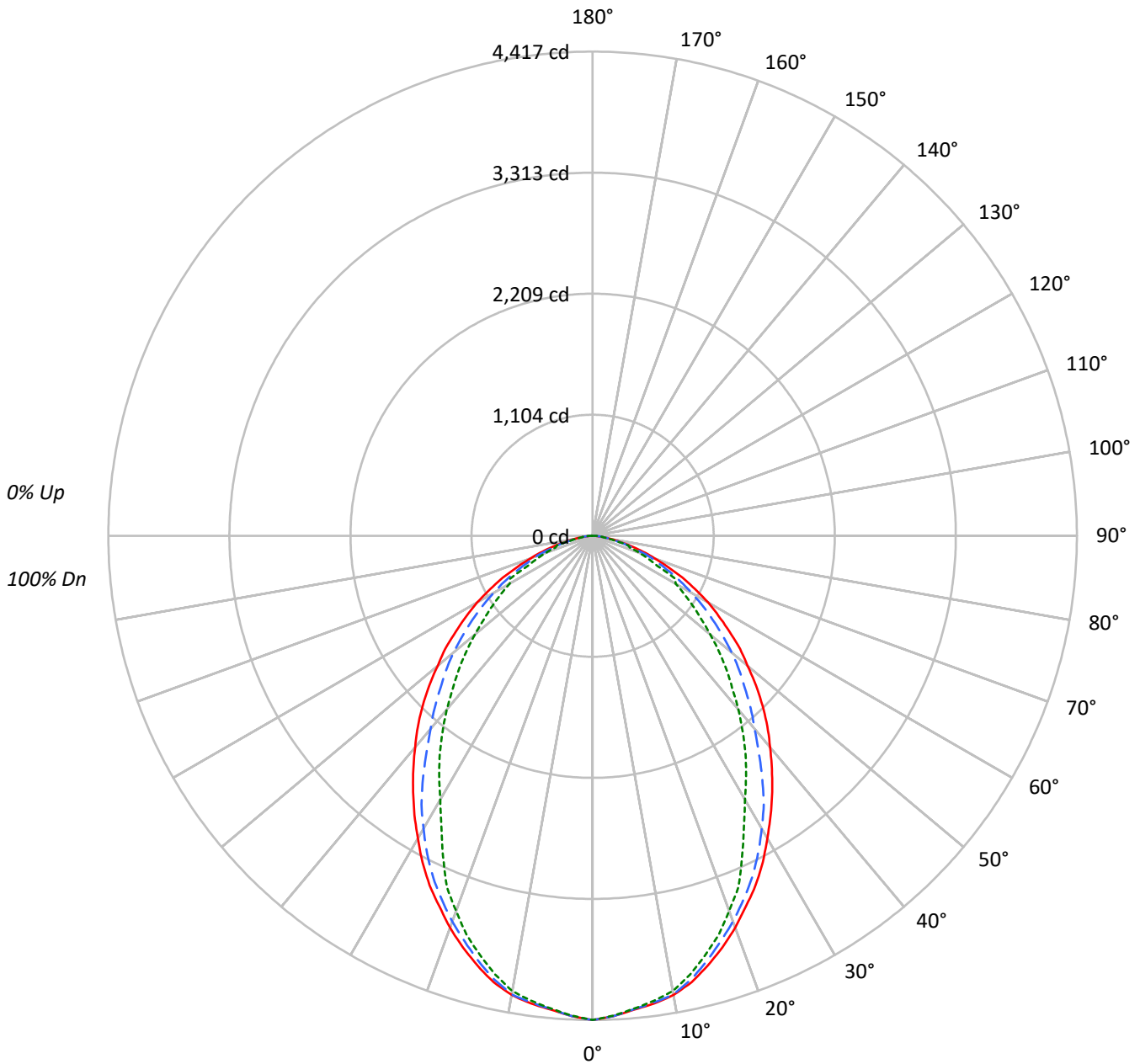
Lumens per Lamp: N/A
Luminaire Lumens: 8671.0 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5943	5943	5943
5°	5862	5855	5848
10°	5811	5804	5762
15°	5655	5598	5519
20°	5447	5359	5213
25°	5223	5109	4791
30°	4950	4792	4316
35°	4688	4428	3992
40°	4422	4036	3632
45°	4168	3731	3284
50°	3859	3463	2929
55°	3570	3138	2623
60°	3270	2803	2350
65°	2877	2455	2081
70°	2370	2150	1768
75°	1884	1646	1725
80°	1266	1187	1108
85°	789	946	1104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	411.2	4.7
10°-20°	1128.4	13.0
20°-30°	1562.2	18.0
30°-40°	1665.7	19.2
40°-50°	1519.6	17.5
50°-60°	1190.5	13.7
60°-70°	775.9	8.9
70°-80°	343.8	4.0
80°-90°	73.8	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°	3101.7	35.8
0°-40°	4767.4	55.0
0°-60°	7477.5	86.2
0°-90°	8671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8671.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4417	4417	4417	4417	4417	
5°	4340	4335	4335	4330	4330	412
15°	4060	4060	4019	3978	3962	1141
25°	3518	3498	3442	3319	3227	1615
35°	2854	2834	2696	2492	2431	1785
45°	2191	2145	1961	1797	1726	1687
55°	1522	1476	1338	1180	1118	1365
65°	904	853	771	786	654	891
75°	362	337	317	301	332	389
85°	51	56	61	66	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4416.9	4416.9	4416.9	4416.9	4416.9
2.5°	4386.3	4386.3	4386.3	4381.1	4381.1
5°	4340.3	4335.2	4335.2	4330.1	4330.1
7.5°	4304.6	4299.4	4294.3	4289.2	4279.0
10°	4253.5	4253.5	4248.4	4222.9	4217.7
12.5°	4171.8	4166.7	4146.3	4110.5	4100.3
15°	4059.5	4059.5	4018.6	3977.8	3962.4
17.5°	3936.9	3931.8	3880.7	3839.9	3819.5
20°	3804.1	3793.9	3742.9	3676.5	3640.7
22.5°	3656.1	3656.1	3594.8	3508.0	3472.2
25°	3518.2	3497.8	3441.6	3319.1	3227.1
27.5°	3359.9	3329.3	3268.0	3094.4	2987.1
30°	3186.3	3171.0	3084.2	2859.5	2777.8
32.5°	3022.9	2997.4	2905.4	2670.6	2604.2
35°	2854.4	2834.0	2696.1	2491.8	2430.6
37.5°	2685.9	2660.3	2486.7	2323.3	2246.7
40°	2517.4	2486.7	2297.8	2149.7	2068.0
42.5°	2359.1	2318.2	2134.4	1976.1	1884.2
45°	2190.6	2144.6	1960.8	1797.4	1725.9
47.5°	2022.1	1981.2	1812.7	1644.2	1562.5
50°	1843.4	1807.6	1654.4	1485.9	1399.1
52.5°	1695.3	1639.1	1491.0	1322.5	1251.0
55°	1521.7	1475.7	1337.8	1179.5	1118.3
57.5°	1363.4	1317.4	1189.8	1041.7	990.6
60°	1215.3	1148.9	1041.7	914.0	873.2
62.5°	1051.9	1000.8	908.9	801.7	852.7
65°	903.8	852.7	771.0	786.4	653.6
67.5°	740.4	714.9	643.4	571.9	551.5
70°	602.5	571.9	546.4	469.8	449.3
72.5°	480.0	449.3	413.6	372.8	357.4
75°	362.5	337.0	316.6	301.3	331.9
77.5°	250.2	240.0	224.7	209.4	204.2
80°	163.4	158.3	153.2	148.1	143.0
82.5°	97.0	97.0	97.0	97.0	97.0
85°	51.1	56.2	61.3	66.4	71.5
87.5°	30.6	30.6	35.7	40.8	46.0
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)