

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: P547349

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-93-96-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: P547349
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-LD4-4HI-50-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

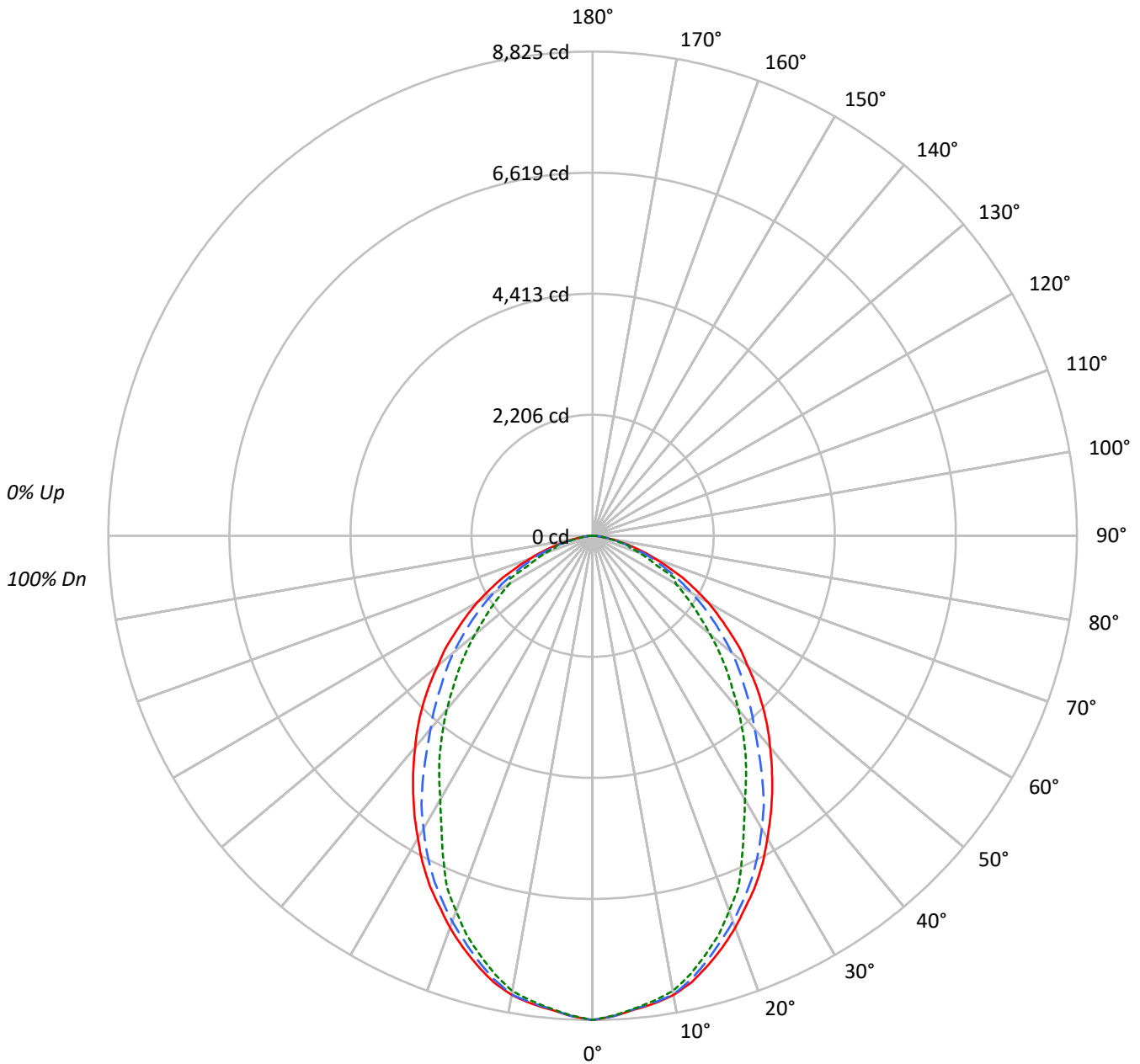
Lumens per Lamp: N/A
Luminaire Lumens: 17325.0 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	11874	11874	11874
5°	11713	11699	11685
10°	11611	11597	11514
15°	11298	11184	11028
20°	10883	10708	10416
25°	10436	10209	9573
30°	9891	9574	8623
35°	9368	8848	7977
40°	8834	8064	7257
45°	8328	7455	6562
50°	7710	6919	5852
55°	7132	6270	5241
60°	6534	5601	4695
65°	5749	4905	4158
70°	4736	4295	3532
75°	3766	3289	3448
80°	2530	2372	2214
85°	1575	1890	2205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	821.5	4.7
10°-20°	2254.5	13.0
20°-30°	3121.3	18.0
30°-40°	3328.2	19.2
40°-50°	3036.3	17.5
50°-60°	2378.7	13.7
60°-70°	1550.3	8.9
70°-80°	686.9	4.0
80°-90°	147.4	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°	6197.3	35.8
0°-40°	9525.5	55.0
0°-60°	14940.4	86.2
0°-90°	17325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17325.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8825	8825	8825	8825	8825	
5°	8672	8662	8662	8652	8652	823
15°	8111	8111	8029	7948	7917	2280
25°	7030	6989	6876	6632	6448	3227
35°	5703	5662	5387	4979	4856	3566
45°	4377	4285	3918	3591	3448	3371
55°	3040	2948	2673	2357	2234	2727
65°	1806	1704	1541	1571	1306	1780
75°	724	673	633	602	663	776
85°	102	112	122	133	143	141
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8825.1	8825.1	8825.1	8825.1	8825.1
2.5°	8763.9	8763.9	8763.9	8753.7	8753.7
5°	8672.1	8661.9	8661.9	8651.7	8651.7
7.5°	8600.7	8590.5	8580.3	8570.1	8549.7
10°	8498.6	8498.6	8488.4	8437.4	8427.2
12.5°	8335.4	8325.2	8284.4	8213.0	8192.6
15°	8111.0	8111.0	8029.3	7947.7	7917.1
17.5°	7866.1	7855.9	7753.9	7672.2	7631.4
20°	7600.8	7580.4	7478.4	7345.8	7274.4
22.5°	7305.0	7305.0	7182.5	7009.1	6937.7
25°	7029.5	6988.7	6876.5	6631.6	6448.0
27.5°	6713.2	6652.0	6529.6	6182.7	5968.4
30°	6366.3	6335.7	6162.3	5713.4	5550.1
32.5°	6039.9	5988.8	5805.2	5335.9	5203.3
35°	5703.2	5662.4	5386.9	4978.8	4856.4
37.5°	5366.5	5315.5	4968.6	4642.1	4489.1
40°	5029.8	4968.6	4591.1	4295.2	4132.0
42.5°	4713.5	4631.9	4264.6	3948.4	3764.7
45°	4376.9	4285.0	3917.7	3591.3	3448.4
47.5°	4040.2	3958.6	3621.9	3285.2	3122.0
50°	3683.1	3611.7	3305.6	2968.9	2795.5
52.5°	3387.2	3275.0	2979.1	2642.4	2499.6
55°	3040.3	2948.5	2673.0	2356.8	2234.3
57.5°	2724.1	2632.2	2377.2	2081.3	1979.3
60°	2428.2	2295.6	2081.3	1826.2	1744.6
62.5°	2101.7	1999.7	1816.0	1601.8	1703.8
65°	1805.8	1703.8	1540.6	1571.2	1305.9
67.5°	1479.4	1428.3	1285.5	1142.7	1101.9
70°	1203.9	1142.7	1091.7	938.6	897.8
72.5°	959.0	897.8	826.4	744.8	714.2
75°	724.4	673.4	632.6	601.9	663.2
77.5°	499.9	479.5	448.9	418.3	408.1
80°	326.5	316.3	306.1	295.9	285.7
82.5°	193.8	193.8	193.8	193.8	193.8
85°	102.0	112.2	122.4	132.6	142.8
87.5°	61.2	61.2	71.4	81.6	91.8
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)