

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: P547376

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-93-85-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: P547376
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-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

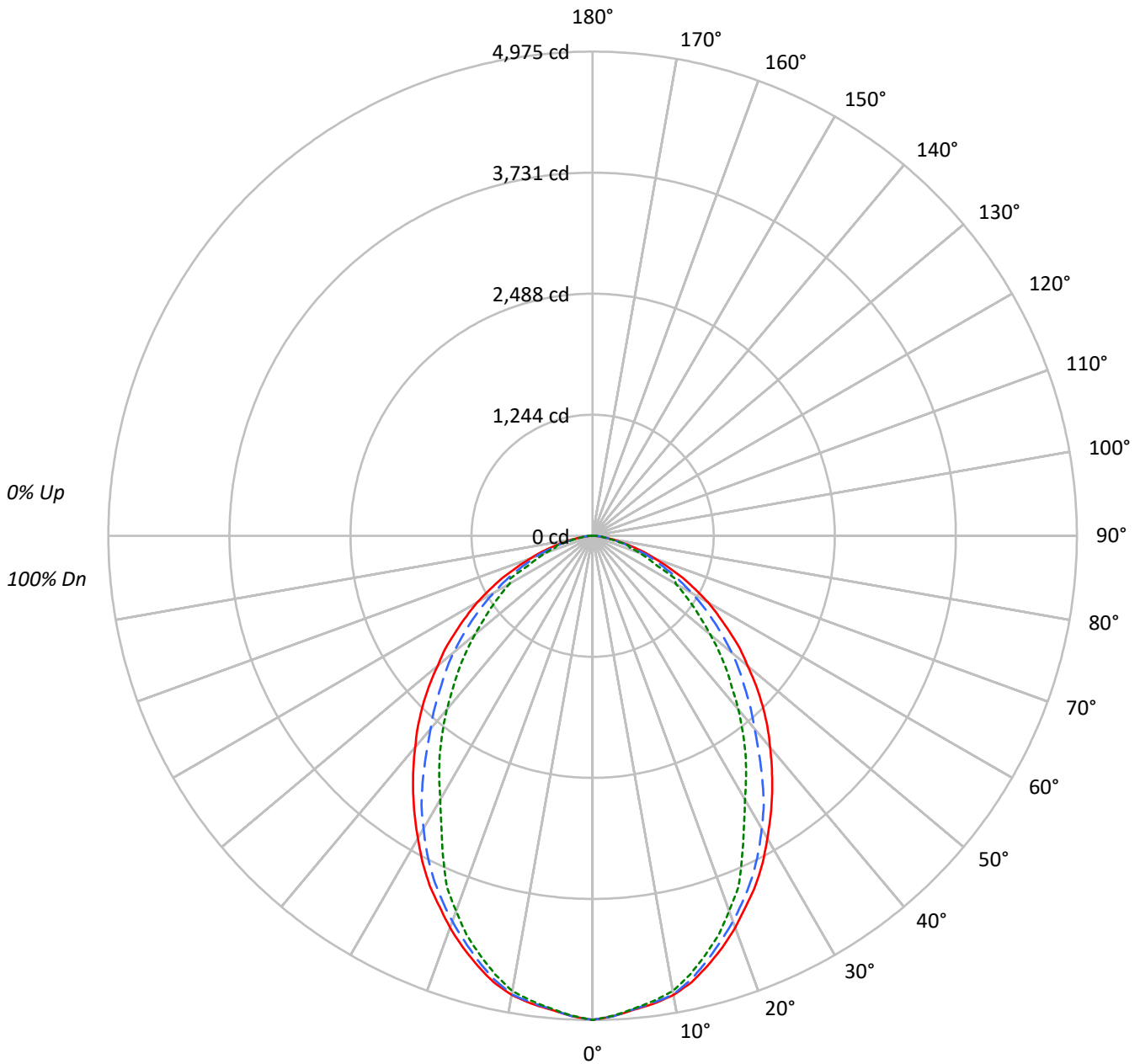
Lumens per Lamp: N/A
Luminaire Lumens: 9766.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6693	6693	6693
5°	6602	6595	6587
10°	6545	6537	6490
15°	6369	6305	6216
20°	6135	6036	5871
25°	5883	5755	5396
30°	5576	5397	4861
35°	5280	4988	4496
40°	4980	4546	4091
45°	4695	4202	3699
50°	4346	3900	3298
55°	4020	3535	2955
60°	3683	3157	2646
65°	3241	2765	2344
70°	2670	2421	1991
75°	2123	1854	1943
80°	1426	1337	1247
85°	888	1065	1243



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	463.1	4.7
10°-20°	1270.9	13.0
20°-30°	1759.4	18.0
30°-40°	1876.1	19.2
40°-50°	1711.5	17.5
50°-60°	1340.8	13.7
60°-70°	873.9	8.9
70°-80°	387.2	4.0
80°-90°	83.1	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°	3493.4	35.8
0°-40°	5369.4	55.0
0°-60°	8421.8	86.2
0°-90°	9766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4975	4975	4975	4975	4975	
5°	4888	4883	4883	4877	4877	464
15°	4572	4572	4526	4480	4463	1285
25°	3962	3940	3876	3738	3635	1819
35°	3215	3192	3037	2806	2738	2010
45°	2467	2415	2208	2024	1944	1900
55°	1714	1662	1507	1328	1260	1537
65°	1018	960	868	886	736	1003
75°	408	380	357	339	374	438
85°	58	63	69	75	80	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4974.7	4974.7	4974.7	4974.7	4974.7
2.5°	4940.2	4940.2	4940.2	4934.4	4934.4
5°	4888.4	4882.7	4882.7	4876.9	4876.9
7.5°	4848.1	4842.4	4836.6	4830.9	4819.4
10°	4790.6	4790.6	4784.9	4756.1	4750.4
12.5°	4698.6	4692.9	4669.9	4629.6	4618.1
15°	4572.1	4572.1	4526.1	4480.1	4462.8
17.5°	4434.1	4428.3	4370.8	4324.8	4301.8
20°	4284.5	4273.0	4215.5	4140.8	4100.5
22.5°	4117.8	4117.8	4048.7	3951.0	3910.7
25°	3962.5	3939.5	3876.2	3738.2	3634.7
27.5°	3784.2	3749.7	3680.7	3485.1	3364.4
30°	3588.7	3571.4	3473.6	3220.6	3128.6
32.5°	3404.6	3375.9	3272.4	3007.8	2933.0
35°	3214.8	3191.8	3036.6	2806.5	2737.5
37.5°	3025.1	2996.3	2800.8	2616.7	2530.5
40°	2835.3	2800.8	2588.0	2421.2	2329.2
42.5°	2657.0	2611.0	2403.9	2225.7	2122.1
45°	2467.2	2415.4	2208.4	2024.4	1943.9
47.5°	2277.4	2231.4	2041.6	1851.8	1759.8
50°	2076.1	2035.9	1863.3	1673.6	1575.8
52.5°	1909.4	1846.1	1679.3	1489.5	1409.0
55°	1713.8	1662.1	1506.8	1328.5	1259.5
57.5°	1535.5	1483.8	1340.0	1173.2	1115.7
60°	1368.8	1294.0	1173.2	1029.4	983.4
62.5°	1184.7	1127.2	1023.7	902.9	960.4
65°	1017.9	960.4	868.4	885.7	736.1
67.5°	833.9	805.1	724.6	644.1	621.1
70°	678.6	644.1	615.4	529.1	506.1
72.5°	540.6	506.1	465.8	419.8	402.6
75°	408.3	379.6	356.6	339.3	373.8
77.5°	281.8	270.3	253.0	235.8	230.0
80°	184.0	178.3	172.5	166.8	161.0
82.5°	109.3	109.3	109.3	109.3	109.3
85°	57.5	63.3	69.0	74.8	80.5
87.5°	34.5	34.5	40.3	46.0	51.8
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)