

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: P547477

Luminaire Tested: **FMR-24-4-LD4-4STD-35-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: P547477
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-LD4-4STD-35-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 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

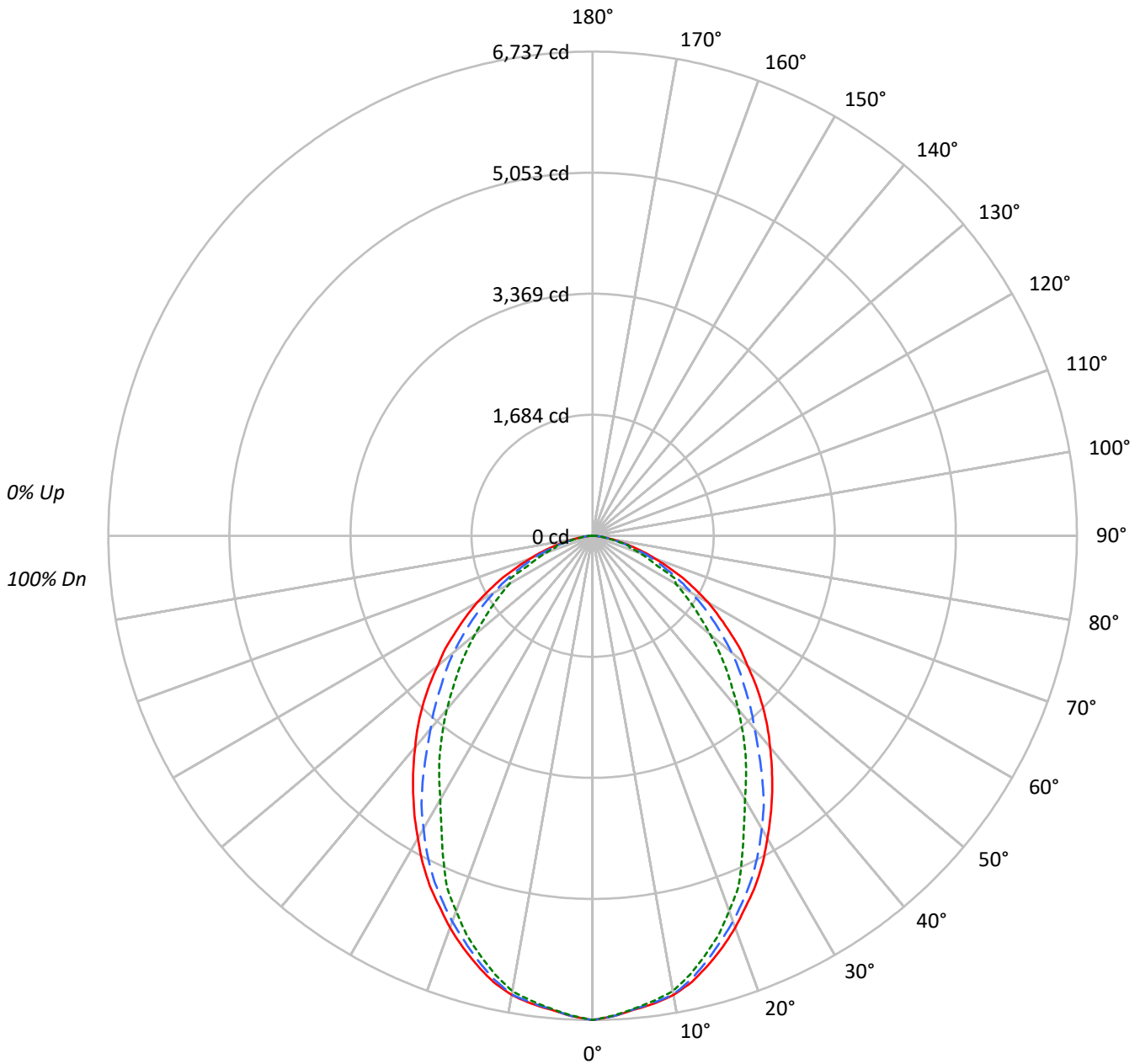
Lumens per Lamp: N/A
Luminaire Lumens: 13226.0 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	9065	9065	9065
5°	8942	8931	8920
10°	8864	8853	8790
15°	8625	8538	8419
20°	8308	8175	7951
25°	7967	7793	7308
30°	7551	7309	6583
35°	7151	6755	6090
40°	6744	6156	5540
45°	6358	5691	5009
50°	5885	5282	4467
55°	5445	4787	4001
60°	4988	4276	3584
65°	4389	3744	3174
70°	3616	3279	2696
75°	2875	2510	2632
80°	1931	1811	1690
85°	1203	1443	1683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	627.1	4.7
10°-20°	1721.1	13.0
20°-30°	2382.8	18.0
30°-40°	2540.7	19.2
40°-50°	2317.9	17.5
50°-60°	1815.9	13.7
60°-70°	1183.5	8.9
70°-80°	524.3	4.0
80°-90°	112.6	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°	4731.0	35.8
0°-40°	7271.8	55.0
0°-60°	11405.6	86.2
0°-90°	13226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13226.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6737	6737	6737	6737	6737	
5°	6620	6612	6612	6605	6605	628
15°	6192	6192	6130	6067	6044	1741
25°	5366	5335	5250	5063	4922	2464
35°	4354	4323	4112	3801	3707	2722
45°	3341	3271	2991	2742	2633	2574
55°	2321	2251	2041	1799	1706	2082
65°	1379	1301	1176	1199	997	1359
75°	553	514	483	460	506	593
85°	78	86	94	101	109	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6737.1	6737.1	6737.1	6737.1	6737.1
2.5°	6690.4	6690.4	6690.4	6682.6	6682.6
5°	6620.3	6612.5	6612.5	6604.7	6604.7
7.5°	6565.8	6558.0	6550.2	6542.4	6526.9
10°	6487.9	6487.9	6480.1	6441.2	6433.4
12.5°	6363.3	6355.5	6324.4	6269.8	6254.3
15°	6191.9	6191.9	6129.6	6067.3	6044.0
17.5°	6005.0	5997.2	5919.3	5857.0	5825.9
20°	5802.5	5786.9	5709.1	5607.8	5553.3
22.5°	5576.6	5576.6	5483.2	5350.8	5296.3
25°	5366.4	5335.2	5249.5	5062.6	4922.4
27.5°	5124.9	5078.2	4984.7	4719.9	4556.3
30°	4860.1	4836.7	4704.3	4361.6	4237.0
32.5°	4610.9	4571.9	4431.7	4073.4	3972.2
35°	4353.8	4322.7	4112.4	3800.8	3707.4
37.5°	4096.8	4057.9	3793.1	3543.8	3427.0
40°	3839.8	3793.1	3504.9	3279.0	3154.4
42.5°	3598.3	3536.0	3255.6	3014.2	2874.0
45°	3341.3	3271.2	2990.8	2741.6	2632.6
47.5°	3084.3	3022.0	2765.0	2507.9	2383.3
50°	2811.7	2757.2	2523.5	2266.5	2134.1
52.5°	2585.8	2500.1	2274.3	2017.3	1908.2
55°	2321.0	2250.9	2040.6	1799.2	1705.7
57.5°	2079.6	2009.5	1814.7	1588.9	1511.0
60°	1853.7	1752.4	1588.9	1394.2	1331.9
62.5°	1604.5	1526.6	1386.4	1222.8	1300.7
65°	1378.6	1300.7	1176.1	1199.4	996.9
67.5°	1129.3	1090.4	981.4	872.3	841.2
70°	919.1	872.3	833.4	716.6	685.4
72.5°	732.1	685.4	630.9	568.6	545.2
75°	553.0	514.0	482.9	459.5	506.3
77.5°	381.6	366.1	342.7	319.3	311.5
80°	249.2	241.4	233.7	225.9	218.1
82.5°	148.0	148.0	148.0	148.0	148.0
85°	77.9	85.7	93.5	101.3	109.0
87.5°	46.7	46.7	54.5	62.3	70.1
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)