

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: P547276

Luminaire Tested: **FMR-24-4-LD4-4HI-35-UNV-82-94-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: P547276
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-35-UNV-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

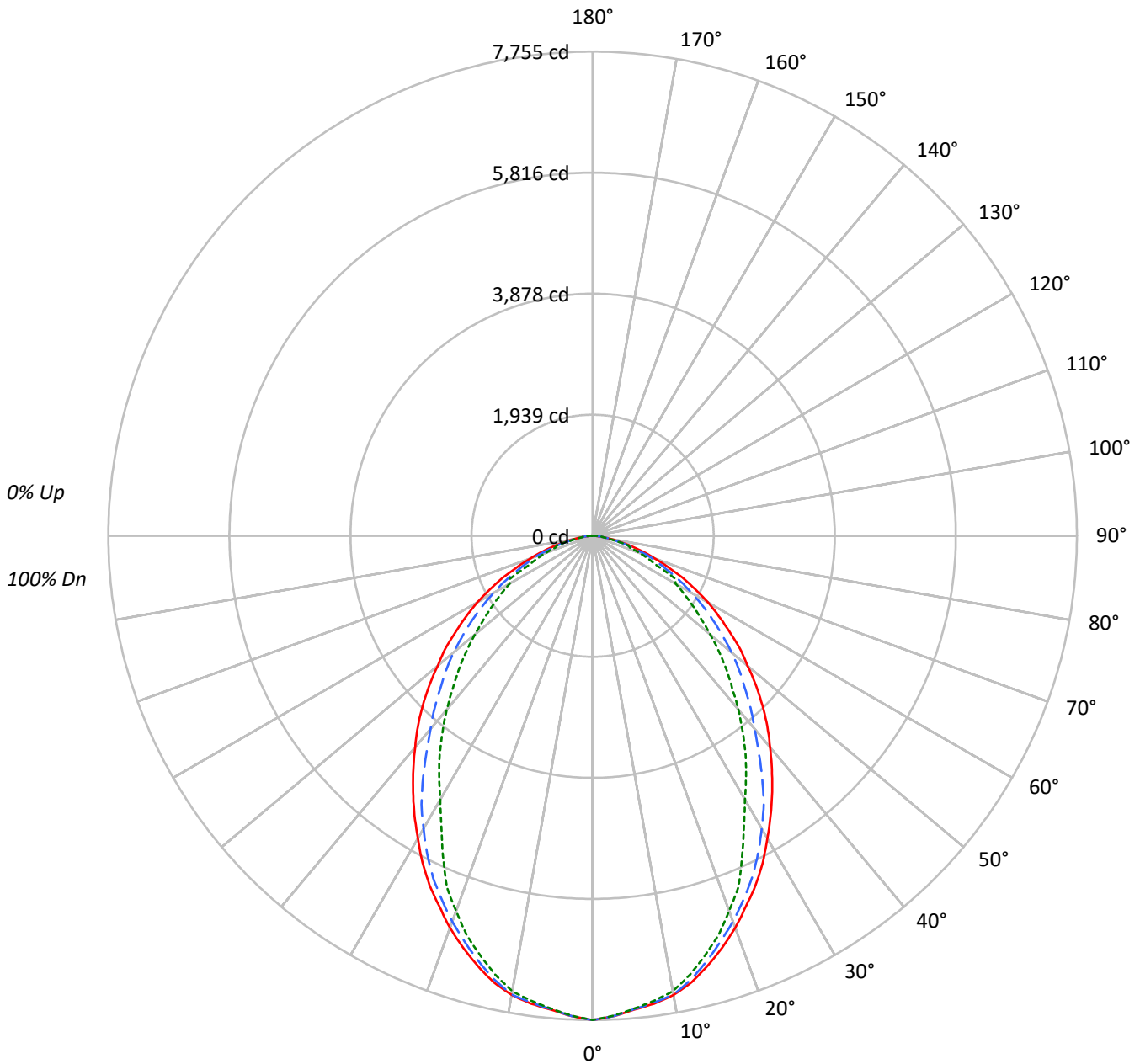
Lumens per Lamp: N/A
Luminaire Lumens: 15225.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	10435	10435	10435
5°	10293	10281	10269
10°	10204	10192	10118
15°	9929	9829	9691
20°	9564	9410	9153
25°	9171	8971	8412
30°	8692	8413	7578
35°	8232	7776	7010
40°	7764	7086	6378
45°	7319	6551	5766
50°	6775	6081	5142
55°	6267	5510	4606
60°	5742	4922	4126
65°	5052	4310	3654
70°	4162	3774	3104
75°	3309	2890	3030
80°	2223	2084	1945
85°	1385	1661	1937



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	721.9	4.7
10°-20°	1981.3	13.0
20°-30°	2742.9	18.0
30°-40°	2924.7	19.2
40°-50°	2668.2	17.5
50°-60°	2090.3	13.7
60°-70°	1362.4	8.9
70°-80°	603.6	4.0
80°-90°	129.6	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°	5446.1	35.8
0°-40°	8370.9	55.0
0°-60°	13129.4	86.2
0°-90°	15225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7755	7755	7755	7755	7755	
5°	7621	7612	7612	7603	7603	723
15°	7128	7128	7056	6984	6958	2004
25°	6177	6142	6043	5828	5666	2836
35°	5012	4976	4734	4375	4268	3133
45°	3846	3766	3443	3156	3030	2963
55°	2672	2591	2349	2071	1964	2396
65°	1587	1497	1354	1381	1148	1564
75°	637	592	556	529	583	682
85°	90	99	108	117	126	124
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7755.4	7755.4	7755.4	7755.4	7755.4
2.5°	7701.6	7701.6	7701.6	7692.7	7692.7
5°	7620.9	7612.0	7612.0	7603.0	7603.0
7.5°	7558.2	7549.2	7540.2	7531.3	7513.3
10°	7468.5	7468.5	7459.5	7414.7	7405.7
12.5°	7325.1	7316.1	7280.2	7217.5	7199.5
15°	7127.8	7127.8	7056.1	6984.4	6957.5
17.5°	6912.6	6903.7	6814.0	6742.3	6706.4
20°	6679.5	6661.6	6571.9	6455.4	6392.6
22.5°	6419.5	6419.5	6311.9	6159.5	6096.7
25°	6177.4	6141.6	6042.9	5827.8	5666.4
27.5°	5899.5	5845.7	5738.1	5433.3	5245.0
30°	5594.7	5567.8	5415.3	5020.8	4877.4
32.5°	5307.7	5262.9	5101.5	4689.1	4572.6
35°	5011.9	4976.0	4733.9	4375.3	4267.7
37.5°	4716.0	4671.2	4366.3	4079.4	3944.9
40°	4420.1	4366.3	4034.6	3774.6	3631.1
42.5°	4142.2	4070.5	3747.7	3469.8	3308.4
45°	3846.3	3765.6	3442.9	3156.0	3030.4
47.5°	3550.5	3478.7	3182.9	2887.0	2743.5
50°	3236.7	3173.9	2904.9	2609.0	2456.6
52.5°	2976.6	2878.0	2618.0	2322.1	2196.6
55°	2671.8	2591.1	2349.0	2071.1	1963.5
57.5°	2393.9	2313.2	2089.0	1829.0	1739.4
60°	2133.9	2017.3	1829.0	1604.9	1533.2
62.5°	1847.0	1757.3	1595.9	1407.6	1497.3
65°	1586.9	1497.3	1353.8	1380.7	1147.6
67.5°	1300.0	1255.2	1129.7	1004.2	968.3
70°	1058.0	1004.2	959.3	824.9	789.0
72.5°	842.8	789.0	726.2	654.5	627.6
75°	636.6	591.7	555.9	529.0	582.8
77.5°	439.3	421.4	394.5	367.6	358.6
80°	286.9	277.9	269.0	260.0	251.0
82.5°	170.4	170.4	170.4	170.4	170.4
85°	89.7	98.6	107.6	116.6	125.5
87.5°	53.8	53.8	62.8	71.7	80.7
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)