

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: P547437

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-82-96-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: P547437
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-50-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

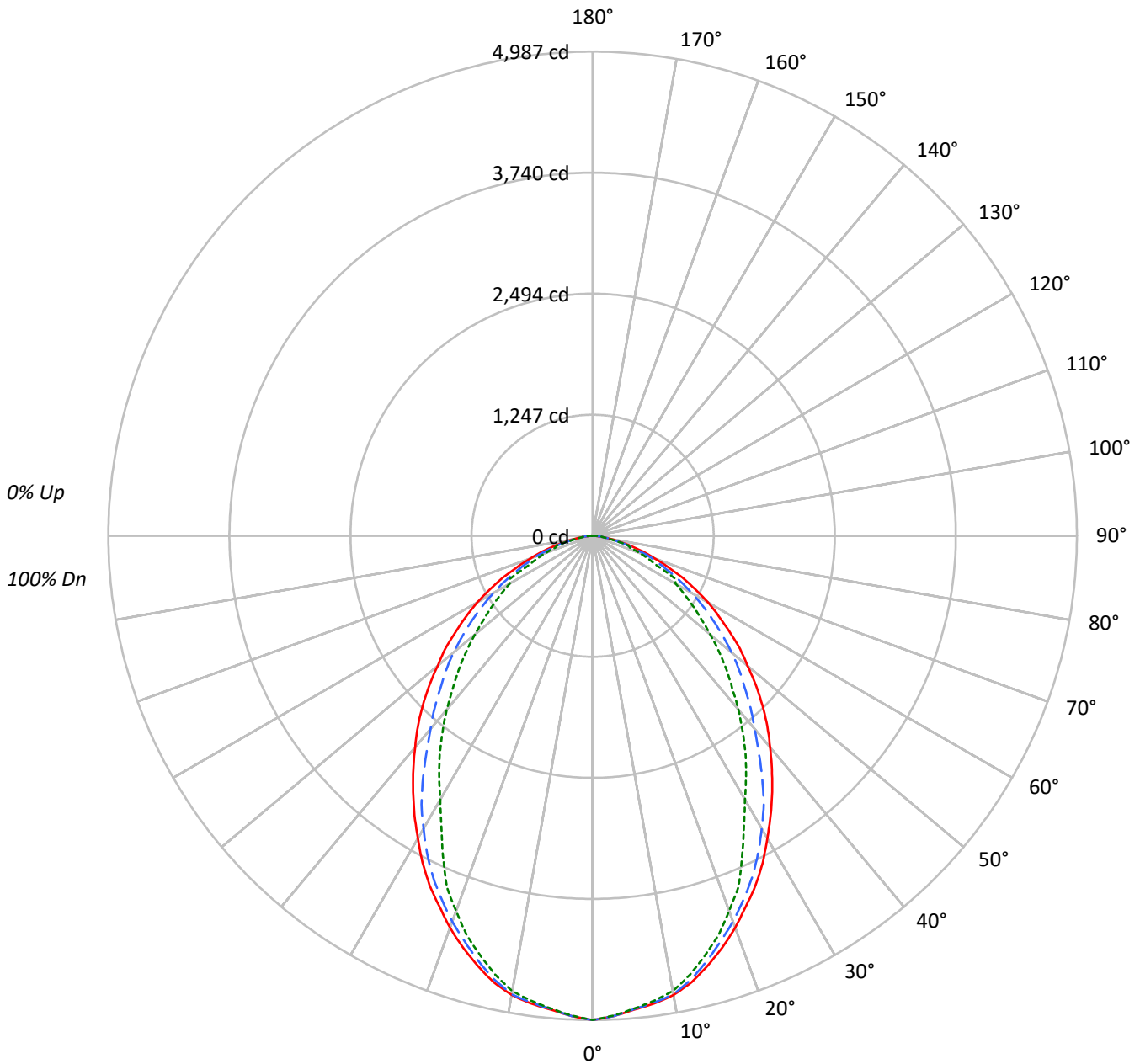
Lumens per Lamp: N/A
Luminaire Lumens: 9790.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (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°	6710	6710	6710
5°	6619	6611	6603
10°	6561	6553	6506
15°	6384	6320	6232
20°	6150	6051	5886
25°	5897	5769	5409
30°	5589	5410	4873
35°	5293	5000	4507
40°	4992	4557	4101
45°	4706	4212	3708
50°	4356	3910	3307
55°	4030	3543	2962
60°	3692	3165	2653
65°	3249	2771	2349
70°	2676	2427	1996
75°	2128	1858	1948
80°	1430	1340	1251
85°	891	1068	1246



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	464.2	4.7
10°-20°	1274.0	13.0
20°-30°	1763.8	18.0
30°-40°	1880.7	19.2
40°-50°	1715.7	17.5
50°-60°	1344.1	13.7
60°-70°	876.0	8.9
70°-80°	388.1	4.0
80°-90°	83.3	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°	3502.0	35.8
0°-40°	5382.6	55.0
0°-60°	8442.5	86.2
0°-90°	9790.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4987	4987	4987	4987	4987	
5°	4900	4895	4895	4889	4889	465
15°	4583	4583	4537	4491	4474	1289
25°	3972	3949	3886	3747	3644	1824
35°	3223	3200	3044	2813	2744	2015
45°	2473	2421	2214	2029	1949	1905
55°	1718	1666	1510	1332	1263	1541
65°	1020	963	870	888	738	1006
75°	409	380	357	340	375	439
85°	58	63	69	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4986.9	4986.9	4986.9	4986.9	4986.9
2.5°	4952.3	4952.3	4952.3	4946.5	4946.5
5°	4900.4	4894.7	4894.7	4888.9	4888.9
7.5°	4860.1	4854.3	4848.5	4842.8	4831.2
10°	4802.4	4802.4	4796.6	4767.8	4762.1
12.5°	4710.2	4704.4	4681.3	4641.0	4629.5
15°	4583.3	4583.3	4537.2	4491.1	4473.8
17.5°	4445.0	4439.2	4381.5	4335.4	4312.4
20°	4295.1	4283.5	4225.9	4150.9	4110.6
22.5°	4127.9	4127.9	4058.7	3960.7	3920.3
25°	3972.2	3949.2	3885.7	3747.4	3643.6
27.5°	3793.5	3758.9	3689.7	3493.7	3372.6
30°	3597.5	3580.2	3482.2	3228.5	3136.3
32.5°	3413.0	3384.2	3280.4	3015.2	2940.3
35°	3222.7	3199.7	3044.0	2813.4	2744.2
37.5°	3032.5	3003.7	2807.7	2623.2	2536.7
40°	2842.2	2807.7	2594.3	2427.1	2334.9
42.5°	2663.5	2617.4	2409.9	2231.1	2127.4
45°	2473.3	2421.4	2213.8	2029.3	1948.6
47.5°	2283.0	2236.9	2046.6	1856.4	1764.2
50°	2081.2	2040.9	1867.9	1677.7	1579.7
52.5°	1914.0	1850.6	1683.4	1493.2	1412.5
55°	1718.0	1666.1	1510.5	1331.8	1262.6
57.5°	1539.3	1487.4	1343.3	1176.1	1118.4
60°	1372.1	1297.2	1176.1	1032.0	985.8
62.5°	1187.6	1130.0	1026.2	905.1	962.8
65°	1020.4	962.8	870.5	887.8	737.9
67.5°	836.0	807.1	726.4	645.7	622.6
70°	680.3	645.7	616.9	530.4	507.3
72.5°	541.9	507.3	467.0	420.9	403.6
75°	409.3	380.5	357.4	340.1	374.7
77.5°	282.5	271.0	253.7	236.4	230.6
80°	184.5	178.7	173.0	167.2	161.4
82.5°	109.5	109.5	109.5	109.5	109.5
85°	57.7	63.4	69.2	74.9	80.7
87.5°	34.6	34.6	40.4	46.1	51.9
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)