

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: P547001

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-80-86-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: P547001
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-LD4-3HI-40-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

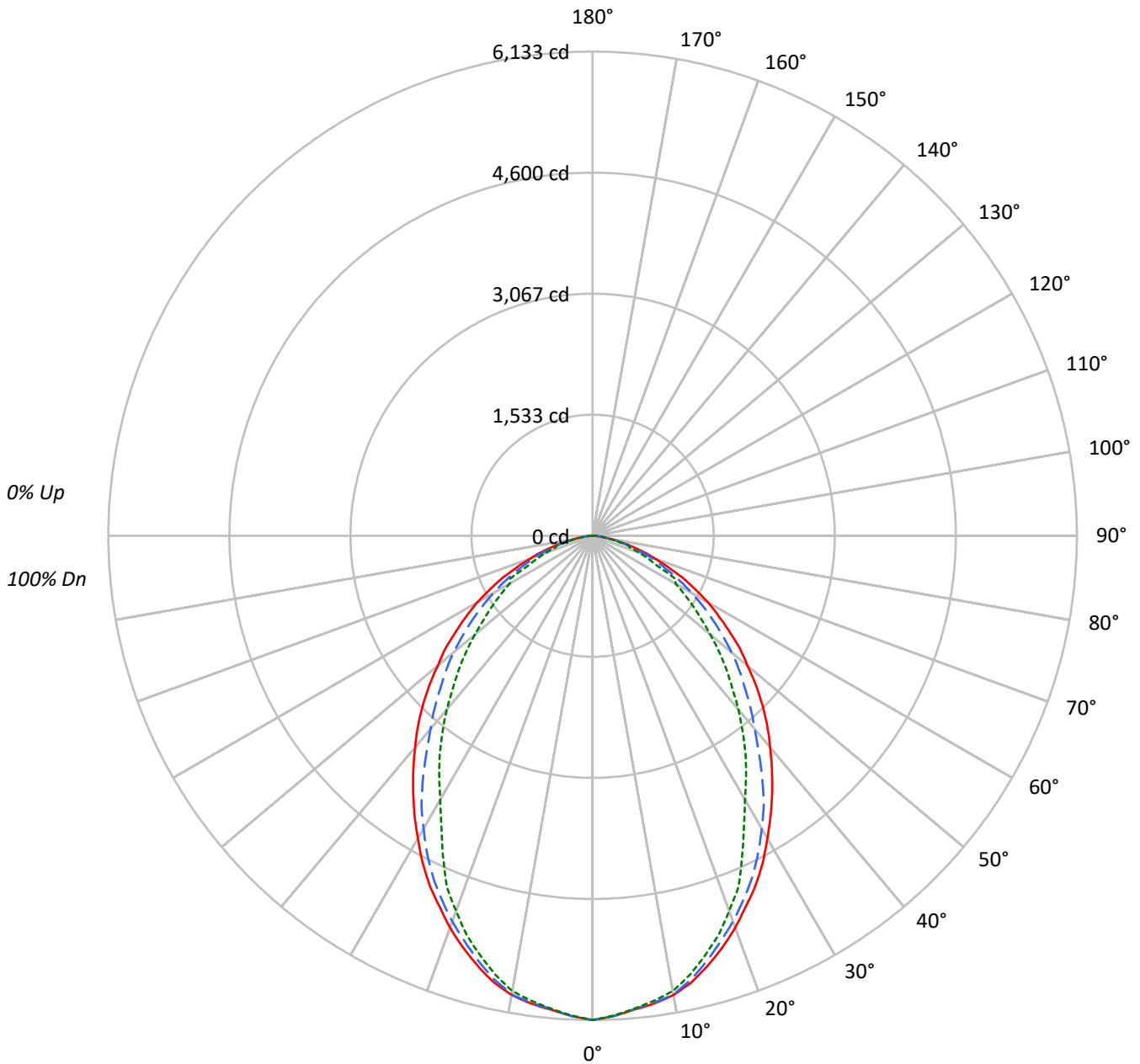
Lumens per Lamp: N/A
Luminaire Lumens: 12040.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	8252	8252	8252
5°	8140	8130	8121
10°	8069	8059	8001
15°	7852	7773	7664
20°	7563	7441	7238
25°	7252	7095	6652
30°	6874	6653	5993
35°	6510	6149	5543
40°	6140	5604	5044
45°	5788	5181	4560
50°	5358	4809	4066
55°	4956	4358	3643
60°	4541	3892	3263
65°	3996	3408	2889
70°	3291	2985	2454
75°	2617	2285	2396
80°	1758	1648	1538
85°	1095	1314	1533



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	570.9	4.7
10°-20°	1566.8	13.0
20°-30°	2169.1	18.0
30°-40°	2312.9	19.2
40°-50°	2110.0	17.5
50°-60°	1653.1	13.7
60°-70°	1077.4	8.9
70°-80°	477.3	4.0
80°-90°	102.5	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°	4306.8	35.8
0°-40°	6619.7	55.0
0°-60°	10382.8	86.2
0°-90°	12040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6133	6133	6133	6133	6133	
5°	6027	6020	6020	6012	6012	572
15°	5637	5637	5580	5523	5502	1585
25°	4885	4857	4779	4609	4481	2243
35°	3963	3935	3744	3460	3375	2478
45°	3042	2978	2723	2496	2396	2343
55°	2113	2049	1858	1638	1553	1895
65°	1255	1184	1071	1092	908	1237
75°	503	468	440	418	461	540
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6133.0	6133.0	6133.0	6133.0	6133.0
2.5°	6090.5	6090.5	6090.5	6083.4	6083.4
5°	6026.7	6019.6	6019.6	6012.5	6012.5
7.5°	5977.0	5969.9	5962.9	5955.8	5941.6
10°	5906.1	5906.1	5899.0	5863.6	5856.5
12.5°	5792.7	5785.6	5757.2	5707.6	5693.4
15°	5636.7	5636.7	5580.0	5523.3	5502.0
17.5°	5466.5	5459.4	5388.5	5331.8	5303.5
20°	5282.2	5268.0	5197.1	5104.9	5055.3
22.5°	5076.6	5076.6	4991.5	4871.0	4821.3
25°	4885.1	4856.8	4778.8	4608.6	4481.0
27.5°	4665.3	4622.8	4537.7	4296.7	4147.8
30°	4424.3	4403.0	4282.5	3970.5	3857.1
32.5°	4197.4	4161.9	4034.3	3708.2	3616.0
35°	3963.4	3935.1	3743.6	3460.0	3374.9
37.5°	3729.4	3694.0	3452.9	3226.0	3119.7
40°	3495.5	3452.9	3190.6	2985.0	2871.5
42.5°	3275.7	3218.9	2963.7	2743.9	2616.3
45°	3041.7	2977.9	2722.6	2495.7	2396.5
47.5°	2807.7	2751.0	2517.0	2283.0	2169.6
50°	2559.6	2509.9	2297.2	2063.2	1942.7
52.5°	2353.9	2276.0	2070.3	1836.4	1737.1
55°	2112.9	2049.1	1857.6	1637.8	1552.8
57.5°	1893.1	1829.3	1652.0	1446.4	1375.5
60°	1687.5	1595.3	1446.4	1269.1	1212.4
62.5°	1460.6	1389.7	1262.1	1113.2	1184.1
65°	1255.0	1184.1	1070.6	1091.9	907.5
67.5°	1028.1	992.6	893.4	794.1	765.7
70°	836.6	794.1	758.7	652.3	623.9
72.5°	666.5	623.9	574.3	517.6	496.3
75°	503.4	468.0	439.6	418.3	460.9
77.5°	347.4	333.2	312.0	290.7	283.6
80°	226.9	219.8	212.7	205.6	198.5
82.5°	134.7	134.7	134.7	134.7	134.7
85°	70.9	78.0	85.1	92.2	99.3
87.5°	42.5	42.5	49.6	56.7	63.8
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)