

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: P547487

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-81-84-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: P547487
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-40-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

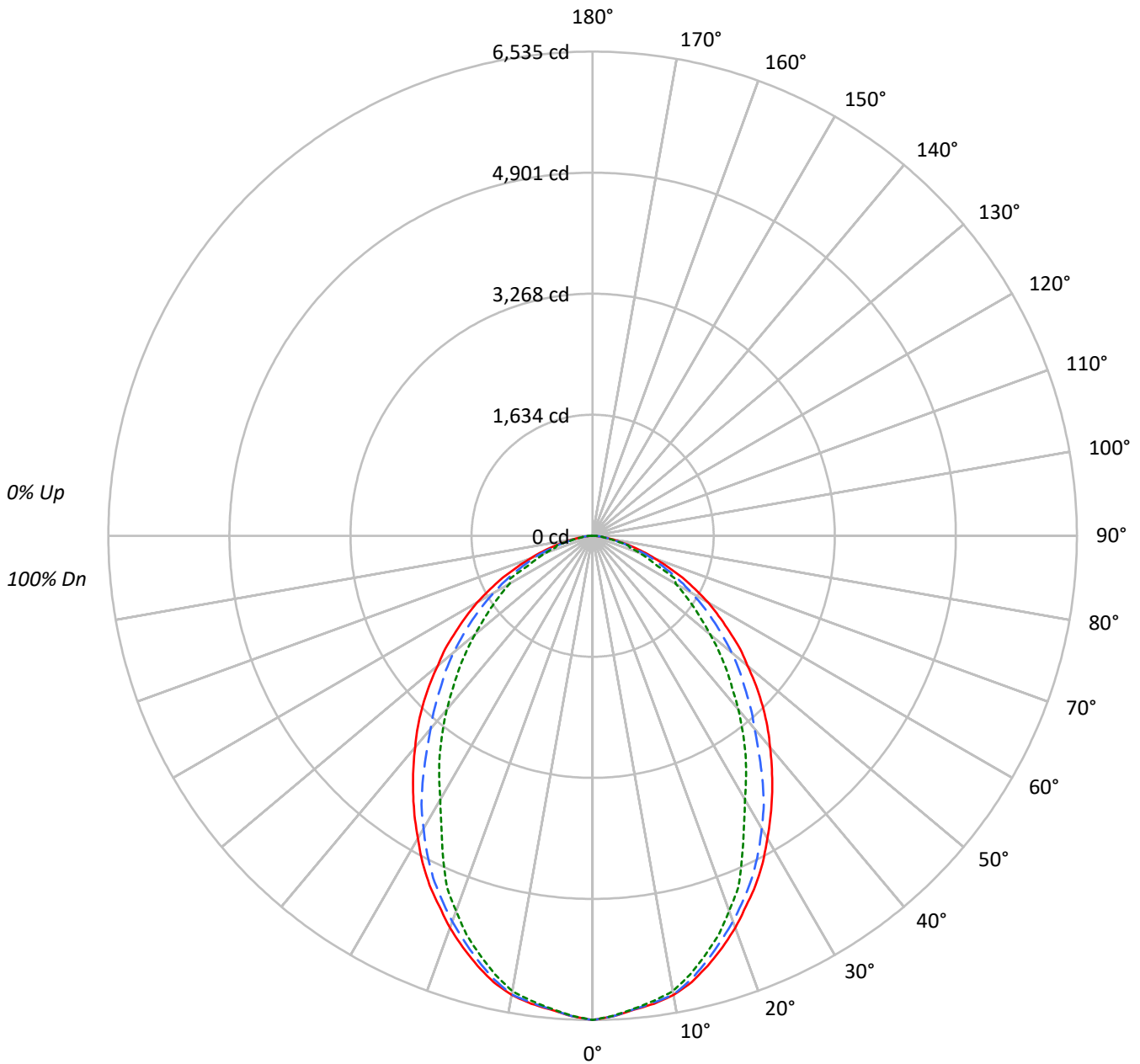
Lumens per Lamp: N/A
Luminaire Lumens: 12830.0 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
Input Voltage (V): NR
Input Current (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°	8793	8793	8793
5°	8674	8664	8653
10°	8599	8588	8526
15°	8367	8283	8167
20°	8060	7930	7713
25°	7728	7560	7089
30°	7325	7090	6386
35°	6937	6553	5907
40°	6542	5972	5374
45°	6168	5521	4859
50°	5709	5124	4333
55°	5282	4643	3881
60°	4839	4148	3477
65°	4258	3632	3079
70°	3507	3180	2616
75°	2789	2435	2553
80°	1874	1757	1640
85°	1167	1400	1633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	608.4	4.7
10°-20°	1669.6	13.0
20°-30°	2311.4	18.0
30°-40°	2464.7	19.2
40°-50°	2248.5	17.5
50°-60°	1761.5	13.7
60°-70°	1148.1	8.9
70°-80°	508.6	4.0
80°-90°	109.2	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°	4589.4	35.8
0°-40°	7054.1	55.0
0°-60°	11064.1	86.2
0°-90°	12830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6535	6535	6535	6535	6535	
5°	6422	6414	6414	6407	6407	610
15°	6007	6007	5946	5886	5863	1689
25°	5206	5176	5092	4911	4775	2390
35°	4224	4193	3989	3687	3596	2640
45°	3241	3173	2901	2660	2554	2497
55°	2252	2184	1980	1745	1655	2019
65°	1337	1262	1141	1164	967	1318
75°	536	499	468	446	491	575
85°	76	83	91	98	106	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6535.4	6535.4	6535.4	6535.4	6535.4
2.5°	6490.1	6490.1	6490.1	6482.5	6482.5
5°	6422.1	6414.5	6414.5	6407.0	6407.0
7.5°	6369.2	6361.7	6354.1	6346.5	6331.4
10°	6293.7	6293.7	6286.1	6248.3	6240.8
12.5°	6172.8	6165.2	6135.0	6082.1	6067.0
15°	6006.6	6006.6	5946.1	5885.7	5863.0
17.5°	5825.2	5817.7	5742.1	5681.7	5651.4
20°	5628.8	5613.7	5538.1	5439.9	5387.0
22.5°	5409.7	5409.7	5319.0	5190.6	5137.7
25°	5205.7	5175.5	5092.3	4911.0	4775.0
27.5°	4971.5	4926.1	4835.5	4578.6	4419.9
30°	4714.6	4691.9	4563.5	4231.0	4110.1
32.5°	4472.8	4435.0	4299.0	3951.5	3853.3
35°	4223.5	4193.3	3989.3	3687.0	3596.4
37.5°	3974.1	3936.4	3679.5	3437.7	3324.4
40°	3724.8	3679.5	3399.9	3180.8	3059.9
42.5°	3490.6	3430.2	3158.2	2923.9	2787.9
45°	3241.3	3173.3	2901.3	2659.5	2553.7
47.5°	2991.9	2931.5	2682.2	2432.8	2312.0
50°	2727.5	2674.6	2448.0	2198.6	2070.2
52.5°	2508.4	2425.3	2206.2	1956.9	1851.1
55°	2251.5	2183.5	1979.5	1745.3	1654.6
57.5°	2017.3	1949.3	1760.4	1541.3	1465.7
60°	1798.2	1700.0	1541.3	1352.4	1292.0
62.5°	1556.4	1480.9	1344.9	1186.2	1261.8
65°	1337.3	1261.8	1140.9	1163.5	967.1
67.5°	1095.5	1057.8	952.0	846.2	816.0
70°	891.5	846.2	808.4	695.1	664.9
72.5°	710.2	664.9	612.0	551.5	528.9
75°	536.4	498.7	468.4	445.8	491.1
77.5°	370.2	355.1	332.4	309.8	302.2
80°	241.8	234.2	226.7	219.1	211.6
82.5°	143.6	143.6	143.6	143.6	143.6
85°	75.6	83.1	90.7	98.2	105.8
87.5°	45.3	45.3	52.9	60.4	68.0
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)