

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: P547049

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-82-86-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: P547049
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-50-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

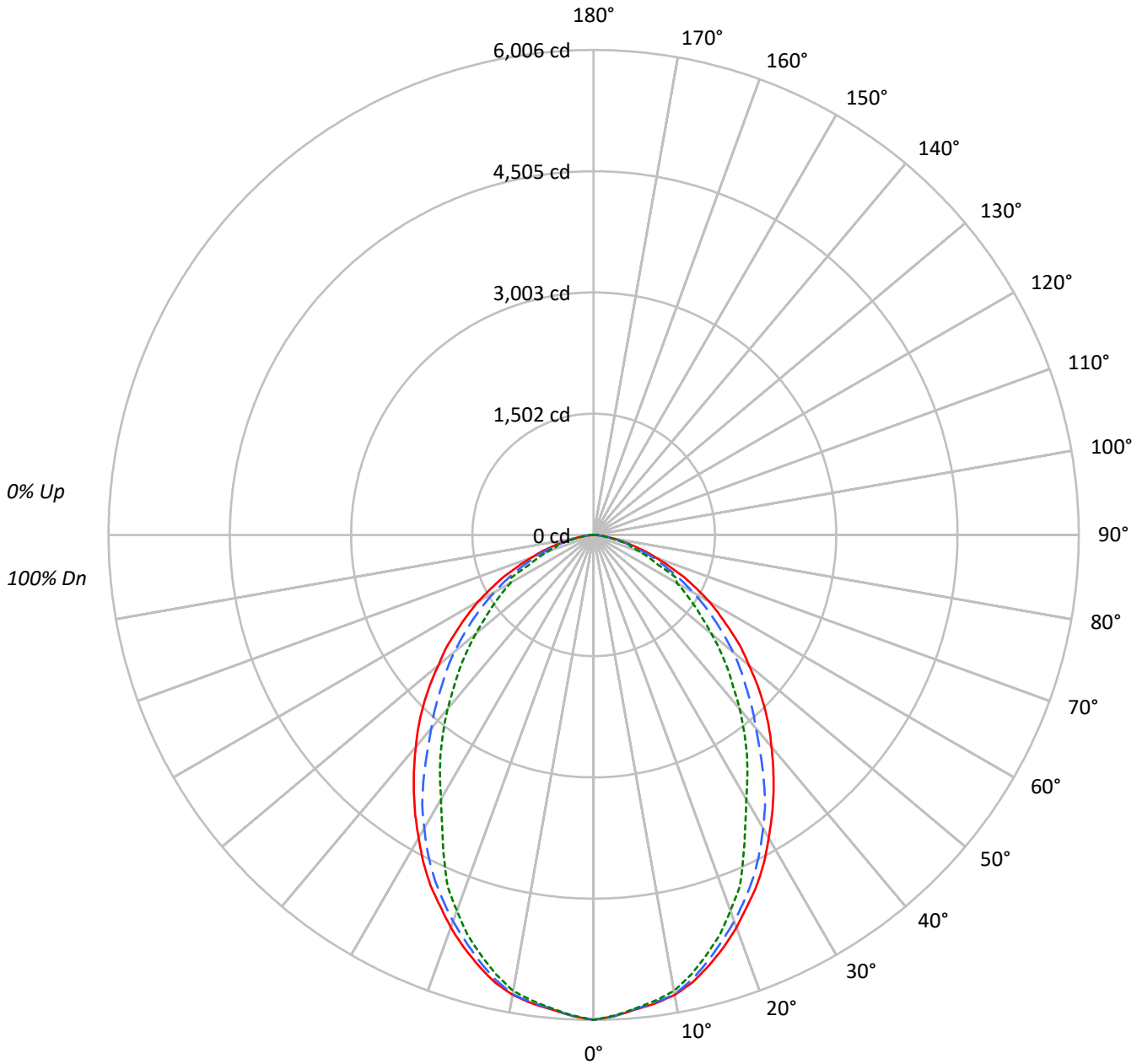
Lumens per Lamp: N/A
Luminaire Lumens: 11790.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8081	8081	8081
5°	7971	7961	7952
10°	7902	7892	7835
15°	7689	7611	7505
20°	7406	7287	7088
25°	7102	6947	6514
30°	6731	6515	5868
35°	6375	6021	5428
40°	6012	5488	4939
45°	5668	5073	4465
50°	5246	4709	3982
55°	4853	4267	3567
60°	4447	3812	3195
65°	3912	3338	2829
70°	3223	2923	2404
75°	2563	2238	2346
80°	1722	1614	1506
85°	1071	1286	1501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.0	4.7
10°-20°	1534.3	13.0
20°-30°	2124.1	18.0
30°-40°	2264.9	19.2
40°-50°	2066.2	17.5
50°-60°	1618.7	13.7
60°-70°	1055.0	8.9
70°-80°	467.4	4.0
80°-90°	100.4	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°	4217.4	35.8
0°-40°	6482.3	55.0
0°-60°	10167.2	86.2
0°-90°	11790.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6006	6006	6006	6006	6006	
5°	5902	5895	5895	5888	5888	560
15°	5520	5520	5464	5409	5388	1552
25°	4784	4756	4680	4513	4388	2196
35°	3881	3853	3666	3388	3305	2426
45°	2978	2916	2666	2444	2347	2294
55°	2069	2006	1819	1604	1520	1856
65°	1229	1160	1048	1069	889	1211
75°	493	458	430	410	451	528
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6005.7	6005.7	6005.7	6005.7	6005.7
2.5°	5964.0	5964.0	5964.0	5957.1	5957.1
5°	5901.5	5894.6	5894.6	5887.6	5887.6
7.5°	5852.9	5846.0	5839.0	5832.1	5818.2
10°	5783.5	5783.5	5776.6	5741.8	5734.9
12.5°	5672.4	5665.5	5637.7	5589.1	5575.2
15°	5519.7	5519.7	5464.1	5408.6	5387.7
17.5°	5353.0	5346.1	5276.7	5221.1	5193.3
20°	5172.5	5158.6	5089.2	4998.9	4950.3
22.5°	4971.2	4971.2	4887.9	4769.8	4721.2
25°	4783.7	4755.9	4679.6	4512.9	4388.0
27.5°	4568.5	4526.8	4443.5	4207.4	4061.6
30°	4332.4	4311.6	4193.6	3888.1	3777.0
32.5°	4110.2	4075.5	3950.5	3631.2	3540.9
35°	3881.1	3853.3	3665.9	3388.2	3304.9
37.5°	3652.0	3617.3	3381.2	3159.1	3054.9
40°	3422.9	3381.2	3124.3	2923.0	2811.9
42.5°	3207.7	3152.1	2902.2	2686.9	2562.0
45°	2978.5	2916.0	2666.1	2443.9	2346.7
47.5°	2749.4	2693.9	2464.8	2235.6	2124.5
50°	2506.4	2457.8	2249.5	2020.4	1902.4
52.5°	2305.1	2228.7	2027.3	1798.2	1701.0
55°	2069.0	2006.5	1819.1	1603.8	1520.5
57.5°	1853.8	1791.3	1617.7	1416.4	1346.9
60°	1652.4	1562.2	1416.4	1242.8	1187.2
62.5°	1430.3	1360.8	1235.8	1090.0	1159.5
65°	1228.9	1159.5	1048.4	1069.2	888.7
67.5°	1006.7	972.0	874.8	777.6	749.8
70°	819.3	777.6	742.9	638.8	611.0
72.5°	652.6	611.0	562.4	506.8	486.0
75°	493.0	458.2	430.5	409.6	451.3
77.5°	340.2	326.3	305.5	284.7	277.7
80°	222.2	215.2	208.3	201.3	194.4
82.5°	131.9	131.9	131.9	131.9	131.9
85°	69.4	76.4	83.3	90.3	97.2
87.5°	41.7	41.7	48.6	55.5	62.5
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)