

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: P547522

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-81-87-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: P547522
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-50-UNV-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

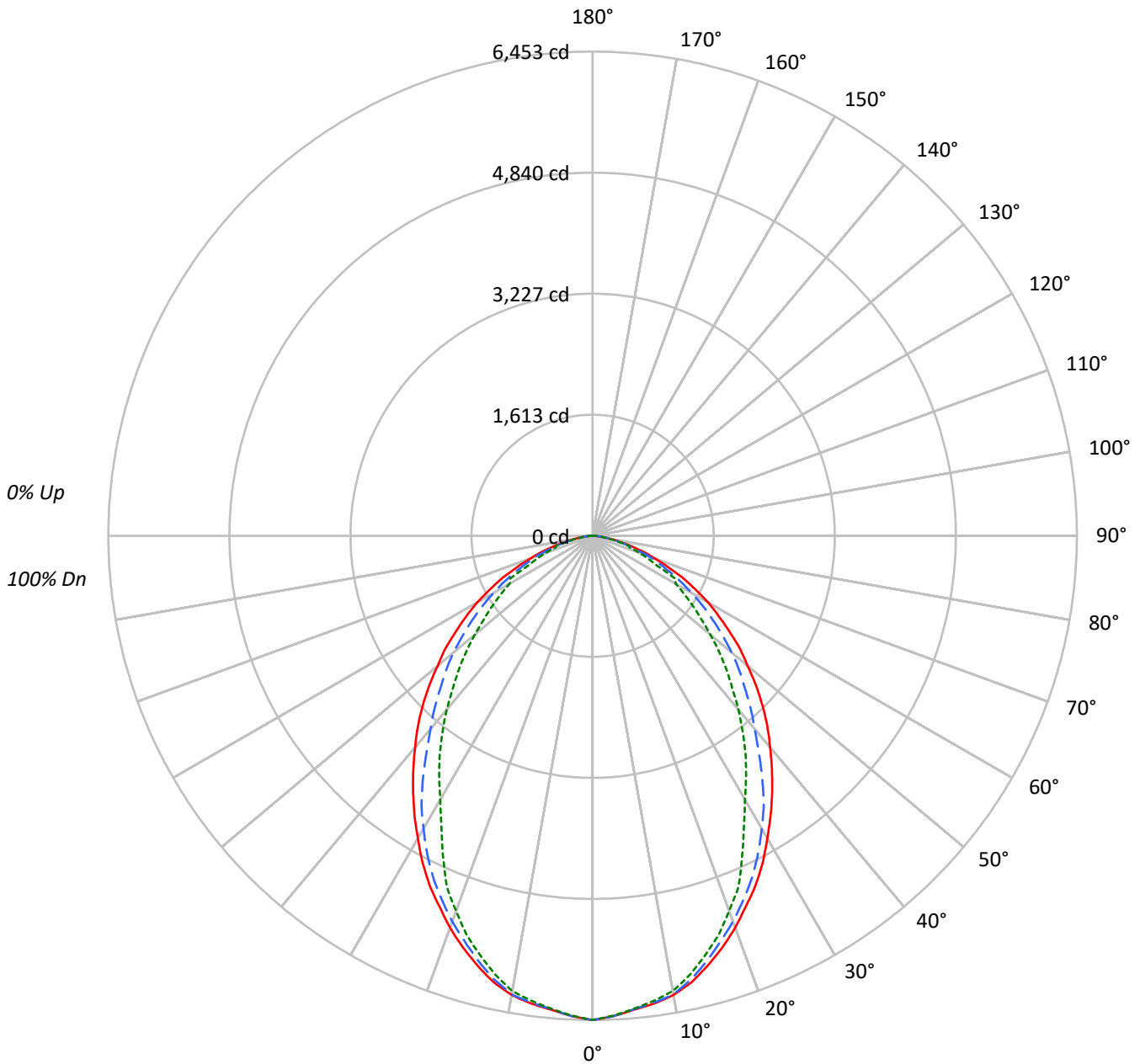
Lumens per Lamp: N/A
Luminaire Lumens: 12668.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8682	8682	8682
5°	8564	8554	8544
10°	8490	8480	8419
15°	8261	8178	8064
20°	7958	7830	7616
25°	7631	7464	6999
30°	7232	7000	6305
35°	6850	6470	5833
40°	6460	5896	5307
45°	6090	5451	4798
50°	5637	5059	4279
55°	5215	4585	3832
60°	4778	4095	3433
65°	4204	3586	3040
70°	3463	3140	2583
75°	2754	2404	2521
80°	1850	1734	1619
85°	1152	1382	1612



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	600.7	4.7
10°-20°	1648.5	13.0
20°-30°	2282.3	18.0
30°-40°	2433.5	19.2
40°-50°	2220.1	17.5
50°-60°	1739.3	13.7
60°-70°	1133.6	8.9
70°-80°	502.2	4.0
80°-90°	107.8	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°	4531.4	35.8
0°-40°	6965.0	55.0
0°-60°	10924.3	86.2
0°-90°	12668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12668.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6453	6453	6453	6453	6453	
5°	6341	6334	6334	6326	6326	602
15°	5931	5931	5871	5811	5789	1667
25°	5140	5110	5028	4849	4715	2360
35°	4170	4140	3939	3640	3551	2607
45°	3200	3133	2865	2626	2522	2465
55°	2223	2156	1954	1723	1634	1994
65°	1320	1246	1126	1149	955	1301
75°	530	492	462	440	485	568
85°	75	82	90	97	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6452.9	6452.9	6452.9	6452.9	6452.9
2.5°	6408.1	6408.1	6408.1	6400.7	6400.7
5°	6341.0	6333.5	6333.5	6326.1	6326.1
7.5°	6288.8	6281.3	6273.9	6266.4	6251.5
10°	6214.2	6214.2	6206.7	6169.4	6162.0
12.5°	6094.8	6087.4	6057.5	6005.3	5990.4
15°	5930.7	5930.7	5871.0	5811.3	5789.0
17.5°	5751.7	5744.2	5669.6	5609.9	5580.1
20°	5557.7	5542.8	5468.2	5371.2	5319.0
22.5°	5341.4	5341.4	5251.8	5125.0	5072.8
25°	5139.9	5110.1	5028.0	4849.0	4714.7
27.5°	4908.7	4863.9	4774.4	4520.8	4364.1
30°	4655.0	4632.7	4505.8	4177.6	4058.2
32.5°	4416.3	4379.0	4244.7	3901.6	3804.6
35°	4170.1	4140.3	3938.9	3640.5	3551.0
37.5°	3924.0	3886.7	3633.0	3394.3	3282.4
40°	3677.8	3633.0	3357.0	3140.7	3021.3
42.5°	3446.5	3386.8	3118.3	2887.0	2752.7
45°	3200.3	3133.2	2864.6	2625.9	2521.5
47.5°	2954.2	2894.5	2648.3	2402.1	2282.8
50°	2693.1	2640.8	2417.0	2170.9	2044.0
52.5°	2476.7	2394.7	2178.3	1932.1	1827.7
55°	2223.1	2155.9	1954.5	1723.3	1633.7
57.5°	1991.8	1924.7	1738.2	1521.8	1447.2
60°	1775.5	1678.5	1521.8	1335.3	1275.7
62.5°	1536.8	1462.2	1327.9	1171.2	1245.8
65°	1320.4	1245.8	1126.5	1148.8	954.9
67.5°	1081.7	1044.4	940.0	835.5	805.7
70°	880.3	835.5	798.2	686.3	656.5
72.5°	701.2	656.5	604.3	544.6	522.2
75°	529.7	492.4	462.5	440.1	484.9
77.5°	365.5	350.6	328.2	305.9	298.4
80°	238.7	231.3	223.8	216.3	208.9
82.5°	141.7	141.7	141.7	141.7	141.7
85°	74.6	82.1	89.5	97.0	104.4
87.5°	44.8	44.8	52.2	59.7	67.1
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)