

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: P547401

Luminaire Tested: **FMR-24-4-LD4-4LO-40-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: P547401
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

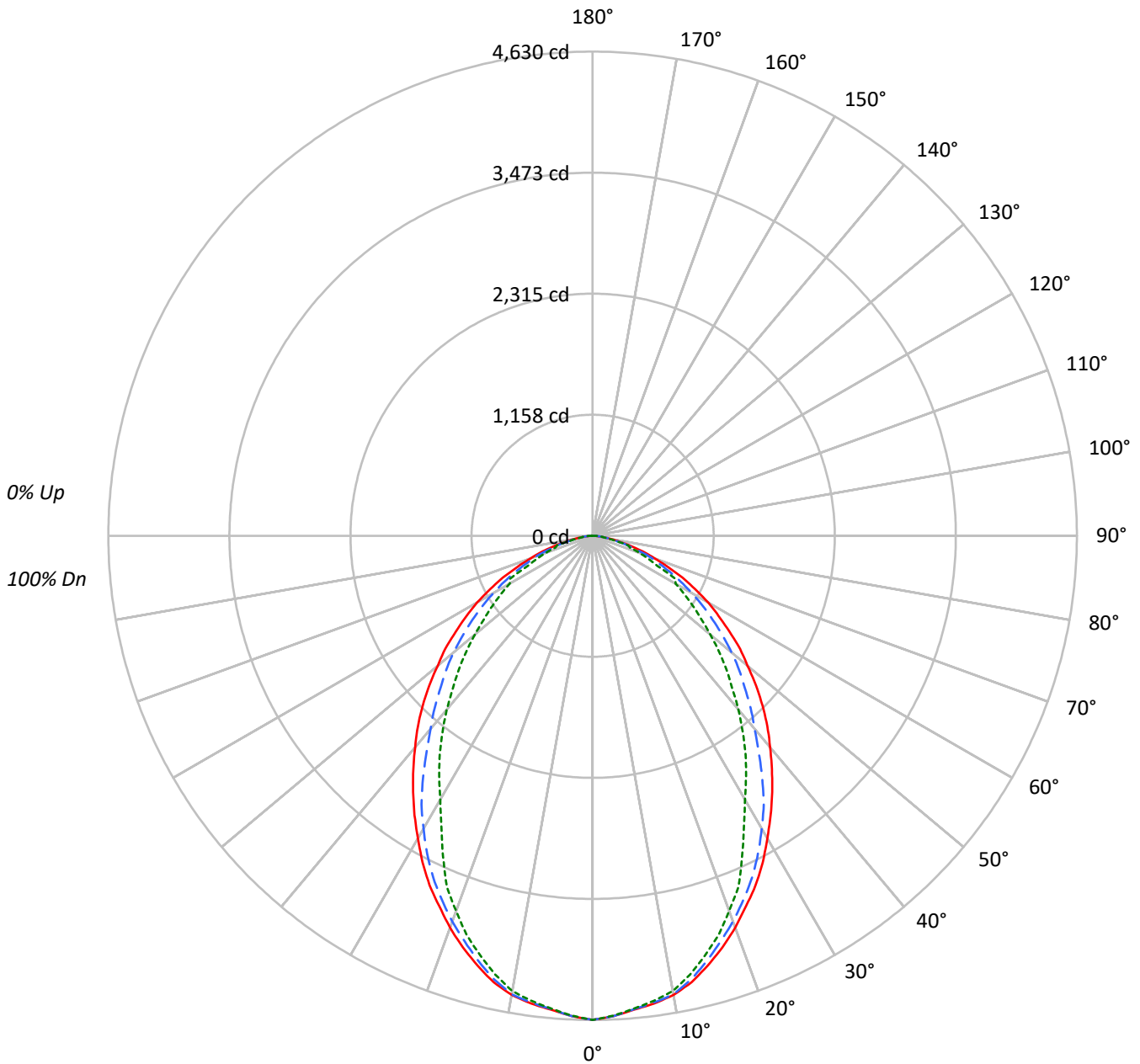
Lumens per Lamp: N/A
Luminaire Lumens: 9089.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6229	6229	6229
5°	6145	6138	6130
10°	6091	6084	6040
15°	5927	5868	5786
20°	5709	5618	5464
25°	5475	5356	5022
30°	5189	5023	4524
35°	4914	4642	4185
40°	4635	4230	3807
45°	4369	3911	3442
50°	4045	3630	3070
55°	3742	3290	2750
60°	3428	2938	2463
65°	3016	2573	2181
70°	2485	2253	1853
75°	1975	1725	1809
80°	1327	1244	1161
85°	826	991	1156



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.0	4.7
10°-20°	1182.8	13.0
20°-30°	1637.5	18.0
30°-40°	1746.0	19.2
40°-50°	1592.9	17.5
50°-60°	1247.9	13.7
60°-70°	813.3	8.9
70°-80°	360.3	4.0
80°-90°	77.4	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°	3251.2	35.8
0°-40°	4997.2	55.0
0°-60°	7838.0	86.2
0°-90°	9089.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9089.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4630	4630	4630	4630	4630	
5°	4550	4544	4544	4539	4539	432
15°	4255	4255	4212	4170	4154	1196
25°	3688	3666	3608	3479	3383	1693
35°	2992	2971	2826	2612	2548	1871
45°	2296	2248	2055	1884	1809	1769
55°	1595	1547	1402	1236	1172	1431
65°	947	894	808	824	685	934
75°	380	353	332	316	348	407
85°	54	59	64	70	75	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4629.8	4629.8	4629.8	4629.8	4629.8
2.5°	4597.7	4597.7	4597.7	4592.3	4592.3
5°	4549.5	4544.2	4544.2	4538.8	4538.8
7.5°	4512.1	4506.7	4501.4	4496.0	4485.3
10°	4458.5	4458.5	4453.2	4426.4	4421.1
12.5°	4372.9	4367.5	4346.1	4308.7	4298.0
15°	4255.1	4255.1	4212.3	4169.5	4153.5
17.5°	4126.7	4121.3	4067.8	4025.0	4003.6
20°	3987.5	3976.8	3923.3	3853.7	3816.3
22.5°	3832.3	3832.3	3768.1	3677.1	3639.6
25°	3687.8	3666.4	3607.5	3479.1	3382.7
27.5°	3521.9	3489.8	3425.5	3243.5	3131.1
30°	3339.9	3323.8	3232.8	2997.3	2911.7
32.5°	3168.6	3141.9	3045.5	2799.3	2729.7
35°	2992.0	2970.6	2826.1	2612.0	2547.7
37.5°	2815.4	2788.6	2606.6	2435.3	2355.1
40°	2638.7	2606.6	2408.6	2253.4	2167.7
42.5°	2472.8	2430.0	2237.3	2071.4	1975.0
45°	2296.2	2248.0	2055.3	1884.0	1809.1
47.5°	2119.5	2076.7	1900.1	1723.5	1637.8
50°	1932.2	1894.7	1734.2	1557.5	1466.6
52.5°	1777.0	1718.1	1562.9	1386.3	1311.3
55°	1595.0	1546.8	1402.3	1236.4	1172.2
57.5°	1429.1	1380.9	1247.1	1091.9	1038.4
60°	1273.9	1204.3	1091.9	958.1	915.3
62.5°	1102.6	1049.1	952.7	840.3	893.8
65°	947.4	893.8	808.2	824.3	685.1
67.5°	776.1	749.3	674.4	599.5	578.1
70°	631.6	599.5	572.7	492.4	471.0
72.5°	503.1	471.0	433.5	390.7	374.7
75°	380.0	353.3	331.8	315.8	347.9
77.5°	262.3	251.6	235.5	219.4	214.1
80°	171.3	165.9	160.6	155.2	149.9
82.5°	101.7	101.7	101.7	101.7	101.7
85°	53.5	58.9	64.2	69.6	74.9
87.5°	32.1	32.1	37.5	42.8	48.2
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)