

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: P547480

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-80-85-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: P547480
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-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

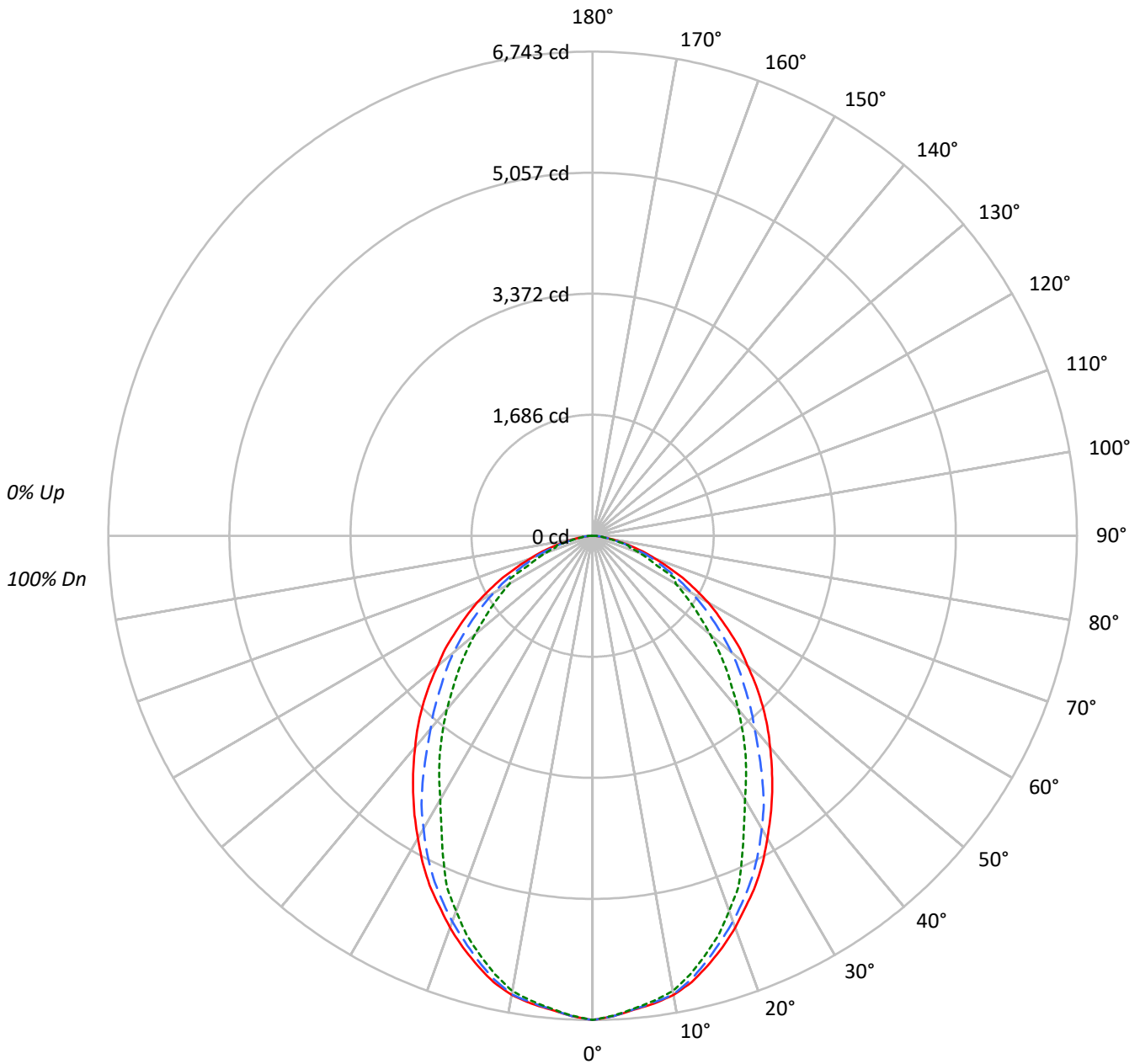
Lumens per Lamp: N/A
Luminaire Lumens: 13237.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	9072	9072	9072
5°	8949	8938	8928
10°	8871	8861	8797
15°	8632	8545	8426
20°	8315	8181	7958
25°	7973	7800	7314
30°	7557	7315	6588
35°	7157	6760	6095
40°	6750	6161	5545
45°	6363	5696	5013
50°	5890	5287	4471
55°	5449	4791	4004
60°	4992	4279	3587
65°	4393	3748	3177
70°	3618	3281	2699
75°	2877	2512	2634
80°	1932	1812	1691
85°	1204	1443	1684



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	627.7	4.7
10°-20°	1722.6	13.0
20°-30°	2384.8	18.0
30°-40°	2542.9	19.2
40°-50°	2319.8	17.5
50°-60°	1817.4	13.7
60°-70°	1184.5	8.9
70°-80°	524.8	4.0
80°-90°	112.7	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°	4735.0	35.8
0°-40°	7277.8	55.0
0°-60°	11415.1	86.2
0°-90°	13237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6743	6743	6743	6743	6743	
5°	6626	6618	6618	6610	6610	629
15°	6197	6197	6135	6072	6049	1742
25°	5371	5340	5254	5067	4926	2466
35°	4358	4326	4116	3804	3710	2724
45°	3344	3274	2993	2744	2635	2576
55°	2323	2253	2042	1801	1707	2084
65°	1380	1302	1177	1200	998	1360
75°	554	514	483	460	507	593
85°	78	86	94	101	109	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6742.8	6742.8	6742.8	6742.8	6742.8
2.5°	6696.0	6696.0	6696.0	6688.2	6688.2
5°	6625.8	6618.0	6618.0	6610.2	6610.2
7.5°	6571.3	6563.5	6555.7	6547.9	6532.3
10°	6493.3	6493.3	6485.5	6446.5	6438.7
12.5°	6368.6	6360.8	6329.6	6275.0	6259.5
15°	6197.1	6197.1	6134.7	6072.4	6049.0
17.5°	6010.0	6002.2	5924.3	5861.9	5830.7
20°	5807.3	5791.8	5713.8	5612.5	5557.9
22.5°	5581.3	5581.3	5487.7	5355.2	5300.7
25°	5370.8	5339.6	5253.9	5066.8	4926.5
27.5°	5129.2	5082.4	4988.9	4723.8	4560.1
30°	4864.1	4840.7	4708.2	4365.2	4240.5
32.5°	4614.7	4575.7	4435.4	4076.8	3975.5
35°	4357.5	4326.3	4115.8	3804.0	3710.5
37.5°	4100.2	4061.2	3796.2	3546.8	3429.8
40°	3843.0	3796.2	3507.8	3281.7	3157.0
42.5°	3601.3	3539.0	3258.3	3016.7	2876.4
45°	3344.1	3273.9	2993.3	2743.9	2634.7
47.5°	3086.9	3024.5	2767.3	2510.0	2385.3
50°	2814.0	2759.5	2525.6	2268.4	2135.9
52.5°	2588.0	2502.2	2276.2	2018.9	1909.8
55°	2322.9	2252.8	2042.3	1800.7	1707.1
57.5°	2081.3	2011.1	1816.3	1590.2	1512.2
60°	1855.2	1753.9	1590.2	1395.3	1333.0
62.5°	1605.8	1527.8	1387.5	1223.8	1301.8
65°	1379.7	1301.8	1177.1	1200.4	997.8
67.5°	1130.3	1091.3	982.2	873.0	841.9
70°	919.8	873.0	834.1	717.1	686.0
72.5°	732.7	686.0	631.4	569.0	545.7
75°	553.5	514.5	483.3	459.9	506.7
77.5°	382.0	366.4	343.0	319.6	311.8
80°	249.4	241.6	233.9	226.1	218.3
82.5°	148.1	148.1	148.1	148.1	148.1
85°	78.0	85.7	93.5	101.3	109.1
87.5°	46.8	46.8	54.6	62.4	70.2
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)