

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: P547479

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-80-84-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: P547479
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-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

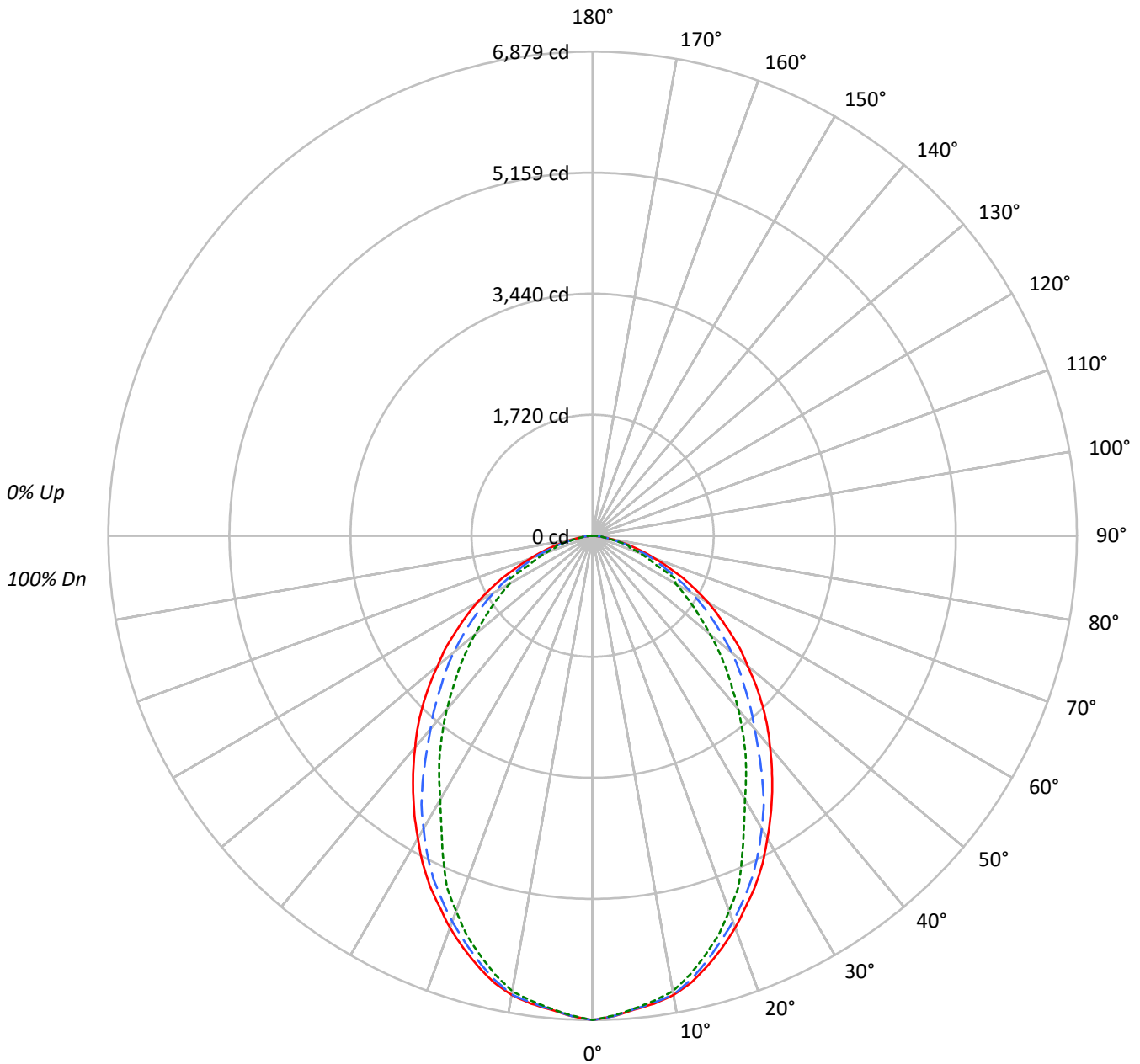
Lumens per Lamp: N/A
Luminaire Lumens: 13505.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	9256	9256	9256
5°	9130	9119	9109
10°	9051	9040	8975
15°	8807	8718	8597
20°	8484	8347	8119
25°	8135	7958	7462
30°	7710	7463	6722
35°	7302	6897	6218
40°	6887	6286	5657
45°	6492	5811	5115
50°	6010	5394	4561
55°	5560	4888	4086
60°	5093	4366	3659
65°	4482	3823	3241
70°	3692	3348	2753
75°	2936	2563	2687
80°	1972	1849	1726
85°	1227	1473	1718



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	640.4	4.7
10°-20°	1757.4	13.0
20°-30°	2433.1	18.0
30°-40°	2594.3	19.2
40°-50°	2366.8	17.5
50°-60°	1854.2	13.7
60°-70°	1208.5	8.9
70°-80°	535.4	4.0
80°-90°	114.9	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°	4830.9	35.8
0°-40°	7425.2	55.0
0°-60°	11646.2	86.2
0°-90°	13505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6879	6879	6879	6879	6879	
5°	6760	6752	6752	6744	6744	642
15°	6323	6323	6259	6195	6172	1777
25°	5480	5448	5360	5169	5026	2516
35°	4446	4414	4199	3881	3786	2779
45°	3412	3340	3054	2799	2688	2628
55°	2370	2298	2084	1837	1742	2126
65°	1408	1328	1201	1225	1018	1387
75°	565	525	493	469	517	605
85°	80	88	95	103	111	110
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6879.3	6879.3	6879.3	6879.3	6879.3
2.5°	6831.5	6831.5	6831.5	6823.6	6823.6
5°	6760.0	6752.0	6752.0	6744.1	6744.1
7.5°	6704.3	6696.3	6688.4	6680.4	6664.5
10°	6624.8	6624.8	6616.8	6577.1	6569.1
12.5°	6497.5	6489.6	6457.8	6402.1	6386.2
15°	6322.6	6322.6	6258.9	6195.3	6171.5
17.5°	6131.7	6123.7	6044.2	5980.6	5948.8
20°	5924.9	5909.0	5829.5	5726.1	5670.4
22.5°	5694.3	5694.3	5598.8	5463.6	5408.0
25°	5479.6	5447.7	5360.3	5169.4	5026.2
27.5°	5233.0	5185.3	5089.9	4819.5	4652.5
30°	4962.6	4938.8	4803.6	4453.6	4326.4
32.5°	4708.1	4668.4	4525.2	4159.4	4056.0
35°	4445.7	4413.9	4199.1	3881.0	3785.6
37.5°	4183.2	4143.5	3873.1	3618.6	3499.3
40°	3920.8	3873.1	3578.8	3348.2	3220.9
42.5°	3674.2	3610.6	3324.3	3077.8	2934.6
45°	3411.8	3340.2	3053.9	2799.4	2688.1
47.5°	3149.4	3085.7	2823.3	2560.8	2433.6
50°	2871.0	2815.3	2576.7	2314.3	2179.1
52.5°	2640.4	2552.9	2322.2	2059.8	1948.5
55°	2370.0	2298.4	2083.7	1837.1	1741.7
57.5°	2123.4	2051.9	1853.0	1622.4	1542.9
60°	1892.8	1789.4	1622.4	1423.6	1359.9
62.5°	1638.3	1558.8	1415.6	1248.6	1328.1
65°	1407.7	1328.1	1200.9	1224.7	1018.0
67.5°	1153.2	1113.4	1002.1	890.7	858.9
70°	938.4	890.7	851.0	731.7	699.9
72.5°	747.6	699.9	644.2	580.6	556.7
75°	564.7	524.9	493.1	469.2	516.9
77.5°	389.7	373.8	349.9	326.1	318.1
80°	254.5	246.5	238.6	230.6	222.7
82.5°	151.1	151.1	151.1	151.1	151.1
85°	79.5	87.5	95.4	103.4	111.3
87.5°	47.7	47.7	55.7	63.6	71.6
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)