

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: P547059

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-93-88-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: P547059
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-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

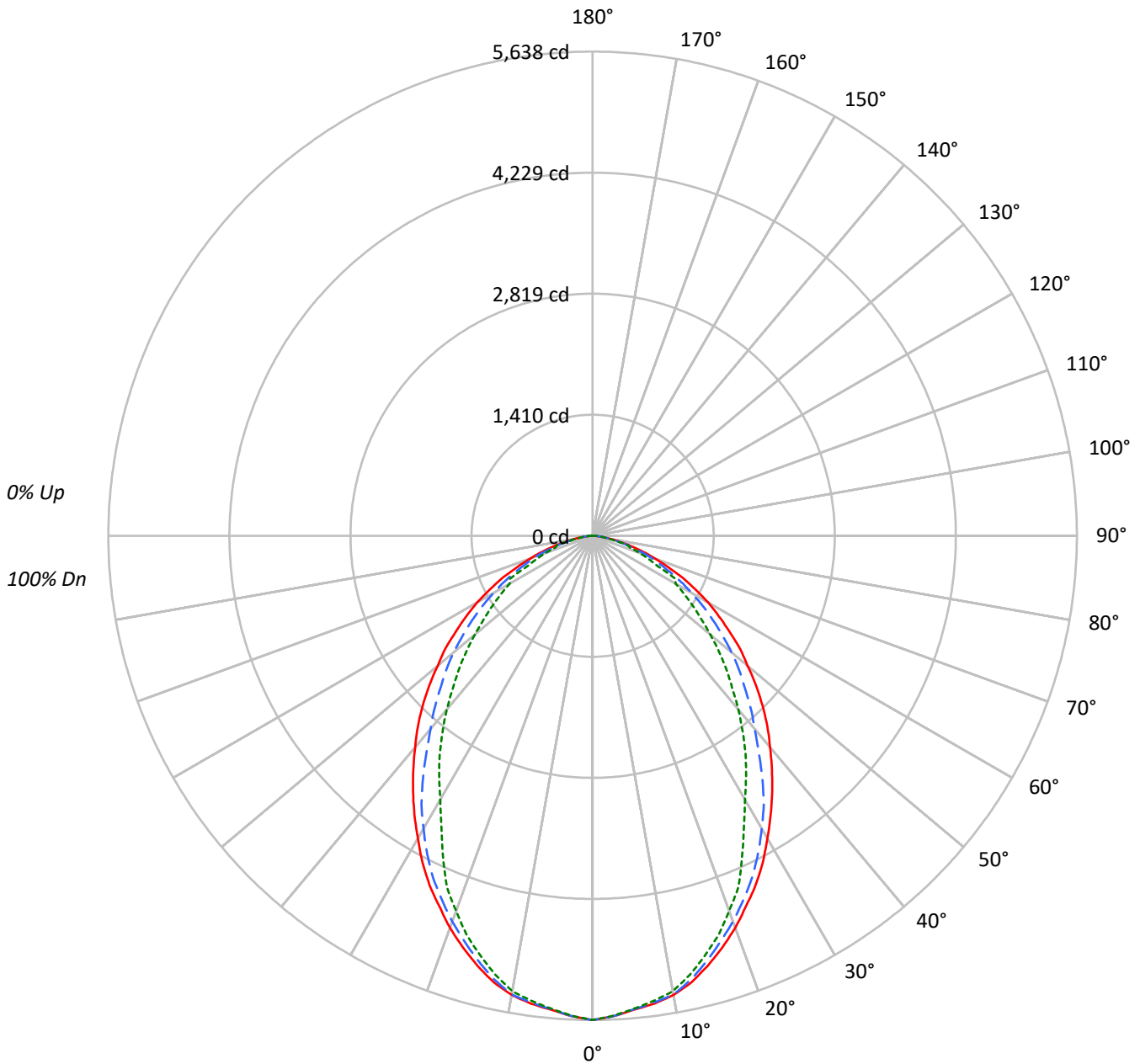
Lumens per Lamp: N/A
Luminaire Lumens: 11069.0 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	7586	7586	7586
5°	7483	7475	7466
10°	7418	7410	7356
15°	7218	7146	7046
20°	6953	6841	6655
25°	6668	6522	6116
30°	6319	6117	5509
35°	5985	5653	5096
40°	5644	5152	4637
45°	5321	4763	4192
50°	4926	4421	3738
55°	4557	4006	3349
60°	4175	3578	2999
65°	3673	3134	2656
70°	3026	2744	2257
75°	2406	2101	2203
80°	1616	1516	1414
85°	1007	1207	1409



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	524.9	4.7
10°-20°	1440.4	13.0
20°-30°	1994.2	18.0
30°-40°	2126.4	19.2
40°-50°	1939.9	17.5
50°-60°	1519.7	13.7
60°-70°	990.5	8.9
70°-80°	438.8	4.0
80°-90°	94.2	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°	3959.5	35.8
0°-40°	6085.9	55.0
0°-60°	9545.5	86.2
0°-90°	11069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11069.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5638	5638	5638	5638	5638	
5°	5541	5534	5534	5528	5528	526
15°	5182	5182	5130	5078	5058	1457
25°	4491	4465	4393	4237	4120	2062
35°	3644	3618	3442	3181	3103	2278
45°	2796	2738	2503	2294	2203	2154
55°	1942	1884	1708	1506	1428	1742
65°	1154	1089	984	1004	834	1137
75°	463	430	404	385	424	496
85°	65	72	78	85	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5638.4	5638.4	5638.4	5638.4	5638.4
2.5°	5599.3	5599.3	5599.3	5592.8	5592.8
5°	5540.6	5534.1	5534.1	5527.6	5527.6
7.5°	5495.0	5488.5	5482.0	5475.4	5462.4
10°	5429.8	5429.8	5423.3	5390.7	5384.2
12.5°	5325.5	5319.0	5292.9	5247.3	5234.3
15°	5182.1	5182.1	5130.0	5077.8	5058.3
17.5°	5025.7	5019.2	4954.0	4901.8	4875.7
20°	4856.2	4843.2	4778.0	4693.2	4647.6
22.5°	4667.2	4667.2	4588.9	4478.1	4432.5
25°	4491.2	4465.1	4393.4	4236.9	4119.6
27.5°	4289.1	4250.0	4171.8	3950.1	3813.3
30°	4067.5	4047.9	3937.1	3650.3	3546.0
32.5°	3858.9	3826.3	3709.0	3409.1	3324.4
35°	3643.8	3617.7	3441.7	3181.0	3102.7
37.5°	3428.7	3396.1	3174.5	2965.9	2868.1
40°	3213.6	3174.5	2933.3	2744.2	2639.9
42.5°	3011.5	2959.3	2724.7	2522.6	2405.3
45°	2796.4	2737.7	2503.1	2294.5	2203.2
47.5°	2581.3	2529.1	2314.0	2098.9	1994.6
50°	2353.1	2307.5	2112.0	1896.8	1786.0
52.5°	2164.1	2092.4	1903.4	1688.3	1597.0
55°	1942.5	1883.8	1707.8	1505.7	1427.5
57.5°	1740.4	1681.7	1518.8	1329.7	1264.6
60°	1551.4	1466.6	1329.7	1166.8	1114.6
62.5°	1342.8	1277.6	1160.3	1023.4	1088.6
65°	1153.8	1088.6	984.3	1003.8	834.4
67.5°	945.2	912.6	821.3	730.1	704.0
70°	769.2	730.1	697.5	599.7	573.6
72.5°	612.7	573.6	528.0	475.8	456.3
75°	462.8	430.2	404.1	384.6	423.7
77.5°	319.4	306.4	286.8	267.3	260.7
80°	208.6	202.1	195.6	189.0	182.5
82.5°	123.8	123.8	123.8	123.8	123.8
85°	65.2	71.7	78.2	84.7	91.3
87.5°	39.1	39.1	45.6	52.1	58.7
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)