

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: P547348

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-93-94-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: P547348
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-LD4-4HI-50-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

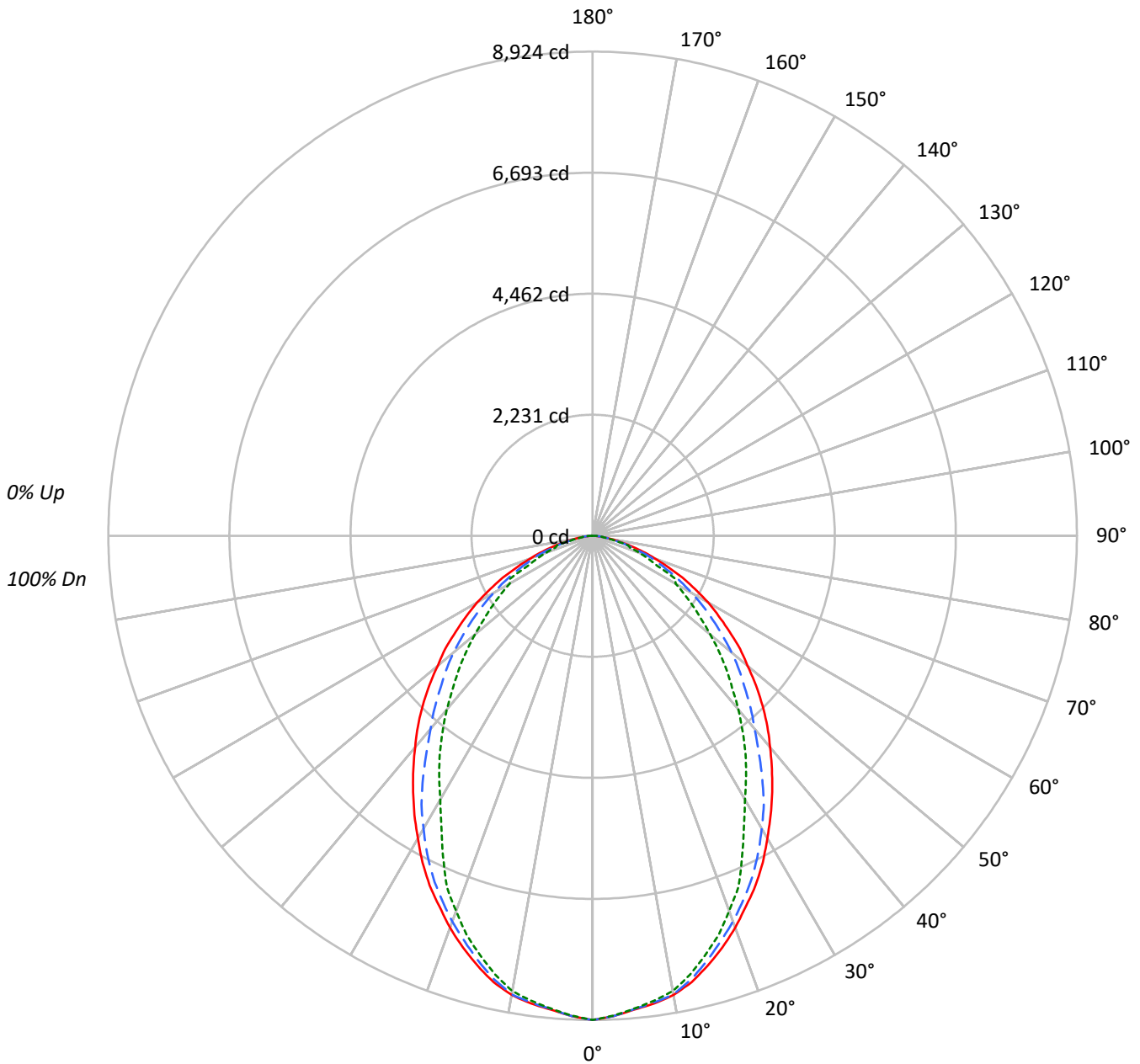
Lumens per Lamp: N/A
Luminaire Lumens: 17519.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
Input Voltage (V): NR
Input Current (A_{in}): 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°	12007	12007	12007
5°	11844	11830	11816
10°	11741	11727	11643
15°	11425	11310	11152
20°	11005	10828	10532
25°	10553	10323	9680
30°	10002	9681	8719
35°	9473	8947	8066
40°	8933	8154	7339
45°	8422	7538	6635
50°	7796	6997	5917
55°	7212	6341	5300
60°	6607	5663	4747
65°	5814	4960	4204
70°	4789	4343	3572
75°	3808	3325	3486
80°	2558	2398	2239
85°	1593	1911	2229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	830.7	4.7
10°-20°	2279.8	13.0
20°-30°	3156.2	18.0
30°-40°	3365.4	19.2
40°-50°	3070.3	17.5
50°-60°	2405.3	13.7
60°-70°	1567.7	8.9
70°-80°	694.5	4.0
80°-90°	149.1	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°	6266.7	35.8
0°-40°	9632.1	55.0
0°-60°	15107.7	86.2
0°-90°	17519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8924	8924	8924	8924	8924	
5°	8769	8759	8759	8749	8749	832
15°	8202	8202	8119	8037	8006	2306
25°	7108	7067	6954	6706	6520	3263
35°	5767	5726	5447	5034	4911	3605
45°	4426	4333	3962	3632	3487	3409
55°	3074	2982	2703	2383	2259	2758
65°	1826	1723	1558	1589	1320	1800
75°	732	681	640	609	671	785
85°	103	114	124	134	144	143
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8923.9	8923.9	8923.9	8923.9	8923.9
2.5°	8862.0	8862.0	8862.0	8851.7	8851.7
5°	8769.2	8758.9	8758.9	8748.6	8748.6
7.5°	8697.0	8686.7	8676.3	8666.0	8645.4
10°	8593.8	8593.8	8583.5	8531.9	8521.6
12.5°	8428.7	8418.4	8377.2	8304.9	8284.3
15°	8201.8	8201.8	8119.2	8036.7	8005.8
17.5°	7954.2	7943.9	7840.7	7758.2	7716.9
20°	7685.9	7665.3	7562.1	7428.0	7355.8
22.5°	7386.8	7386.8	7263.0	7087.6	7015.4
25°	7108.2	7066.9	6953.5	6705.9	6520.2
27.5°	6788.4	6726.5	6602.7	6251.9	6035.3
30°	6437.6	6406.7	6231.3	5777.4	5612.3
32.5°	6107.5	6055.9	5870.2	5395.6	5261.5
35°	5767.0	5725.8	5447.2	5034.5	4910.7
37.5°	5426.6	5375.0	5024.2	4694.1	4539.3
40°	5086.1	5024.2	4642.5	4343.3	4178.3
42.5°	4766.3	4683.8	4312.4	3992.6	3806.9
45°	4425.9	4333.0	3961.6	3631.5	3487.0
47.5°	4085.4	4002.9	3662.4	3322.0	3156.9
50°	3724.3	3652.1	3342.6	3002.2	2826.8
52.5°	3425.1	3311.7	3012.5	2672.0	2527.6
55°	3074.4	2981.5	2703.0	2383.2	2259.4
57.5°	2754.6	2661.7	2403.8	2104.6	2001.4
60°	2455.4	2321.3	2104.6	1846.7	1764.2
62.5°	2125.2	2022.1	1836.4	1619.7	1722.9
65°	1826.1	1722.9	1557.8	1588.8	1320.5
67.5°	1495.9	1444.3	1299.9	1155.5	1114.2
70°	1217.4	1155.5	1103.9	949.1	907.9
72.5°	969.8	907.9	835.7	753.1	722.2
75°	732.5	680.9	639.6	608.7	670.6
77.5°	505.5	484.9	453.9	423.0	412.7
80°	330.1	319.8	309.5	299.2	288.9
82.5°	196.0	196.0	196.0	196.0	196.0
85°	103.2	113.5	123.8	134.1	144.4
87.5°	61.9	61.9	72.2	82.5	92.9
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)