

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: P547367

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-82-84-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: P547367
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-35-UNV-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

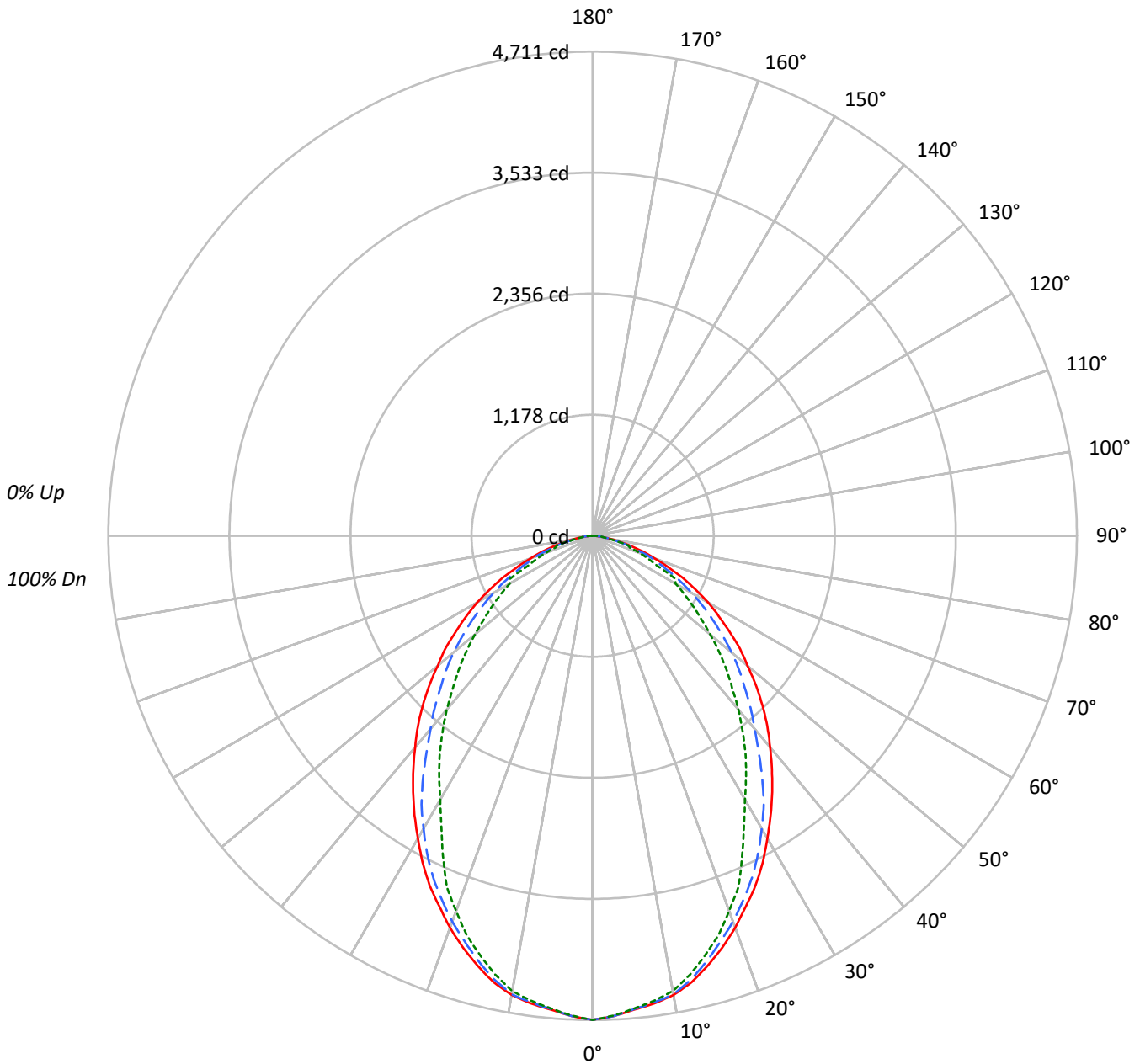
Lumens per Lamp: N/A
Luminaire Lumens: 9248.0 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (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°	6338	6338	6338
5°	6252	6245	6237
10°	6198	6191	6146
15°	6031	5970	5887
20°	5809	5716	5560
25°	5571	5449	5110
30°	5280	5111	4603
35°	5000	4723	4258
40°	4716	4304	3874
45°	4446	3979	3503
50°	4115	3693	3123
55°	3807	3347	2798
60°	3488	2990	2506
65°	3069	2618	2219
70°	2528	2292	1885
75°	2010	1756	1840
80°	1351	1266	1182
85°	841	1010	1176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	438.5	4.7
10°-20°	1203.5	13.0
20°-30°	1666.1	18.0
30°-40°	1776.6	19.2
40°-50°	1620.7	17.5
50°-60°	1269.7	13.7
60°-70°	827.5	8.9
70°-80°	366.6	4.0
80°-90°	78.7	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°	3308.1	35.8
0°-40°	5084.6	55.0
0°-60°	7975.1	86.2
0°-90°	9248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4711	4711	4711	4711	4711	
5°	4629	4624	4624	4618	4618	439
15°	4330	4330	4286	4242	4226	1217
25°	3752	3730	3671	3540	3442	1723
35°	3044	3022	2876	2658	2592	1903
45°	2336	2287	2091	1917	1841	1800
55°	1623	1574	1427	1258	1193	1456
65°	964	910	822	839	697	950
75°	387	359	338	321	354	414
85°	54	60	65	71	76	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4710.8	4710.8	4710.8	4710.8	4710.8
2.5°	4678.1	4678.1	4678.1	4672.7	4672.7
5°	4629.1	4623.7	4623.7	4618.2	4618.2
7.5°	4591.0	4585.5	4580.1	4574.7	4563.8
10°	4536.5	4536.5	4531.1	4503.9	4498.4
12.5°	4449.4	4444.0	4422.2	4384.0	4373.2
15°	4329.6	4329.6	4286.0	4242.4	4226.1
17.5°	4198.9	4193.4	4139.0	4095.4	4073.6
20°	4057.3	4046.4	3991.9	3921.1	3883.0
22.5°	3899.4	3899.4	3834.0	3741.4	3703.3
25°	3752.3	3730.5	3670.6	3539.9	3441.9
27.5°	3583.5	3550.8	3485.5	3300.3	3185.9
30°	3398.3	3382.0	3289.4	3049.8	2962.6
32.5°	3224.0	3196.8	3098.8	2848.3	2777.5
35°	3044.3	3022.5	2875.5	2657.7	2592.3
37.5°	2864.6	2837.4	2652.2	2477.9	2396.2
40°	2684.9	2652.2	2450.7	2292.8	2205.6
42.5°	2516.1	2472.5	2276.4	2107.6	2009.6
45°	2336.3	2287.3	2091.3	1917.0	1840.8
47.5°	2156.6	2113.1	1933.3	1753.6	1666.5
50°	1966.0	1927.9	1764.5	1584.8	1492.2
52.5°	1808.1	1748.2	1590.2	1410.5	1334.3
55°	1622.9	1573.9	1426.9	1258.0	1192.7
57.5°	1454.1	1405.1	1268.9	1111.0	1056.5
60°	1296.2	1225.4	1111.0	974.8	931.3
62.5°	1121.9	1067.4	969.4	855.0	909.5
65°	963.9	909.5	822.3	838.7	697.1
67.5°	789.7	762.4	686.2	610.0	588.2
70°	642.6	610.0	582.7	501.0	479.2
72.5°	511.9	479.2	441.1	397.6	381.2
75°	386.7	359.4	337.7	321.3	354.0
77.5°	266.9	256.0	239.6	223.3	217.8
80°	174.3	168.8	163.4	157.9	152.5
82.5°	103.5	103.5	103.5	103.5	103.5
85°	54.5	59.9	65.4	70.8	76.2
87.5°	32.7	32.7	38.1	43.6	49.0
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)