

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: P547434

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-82-87-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: P547434
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-50-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

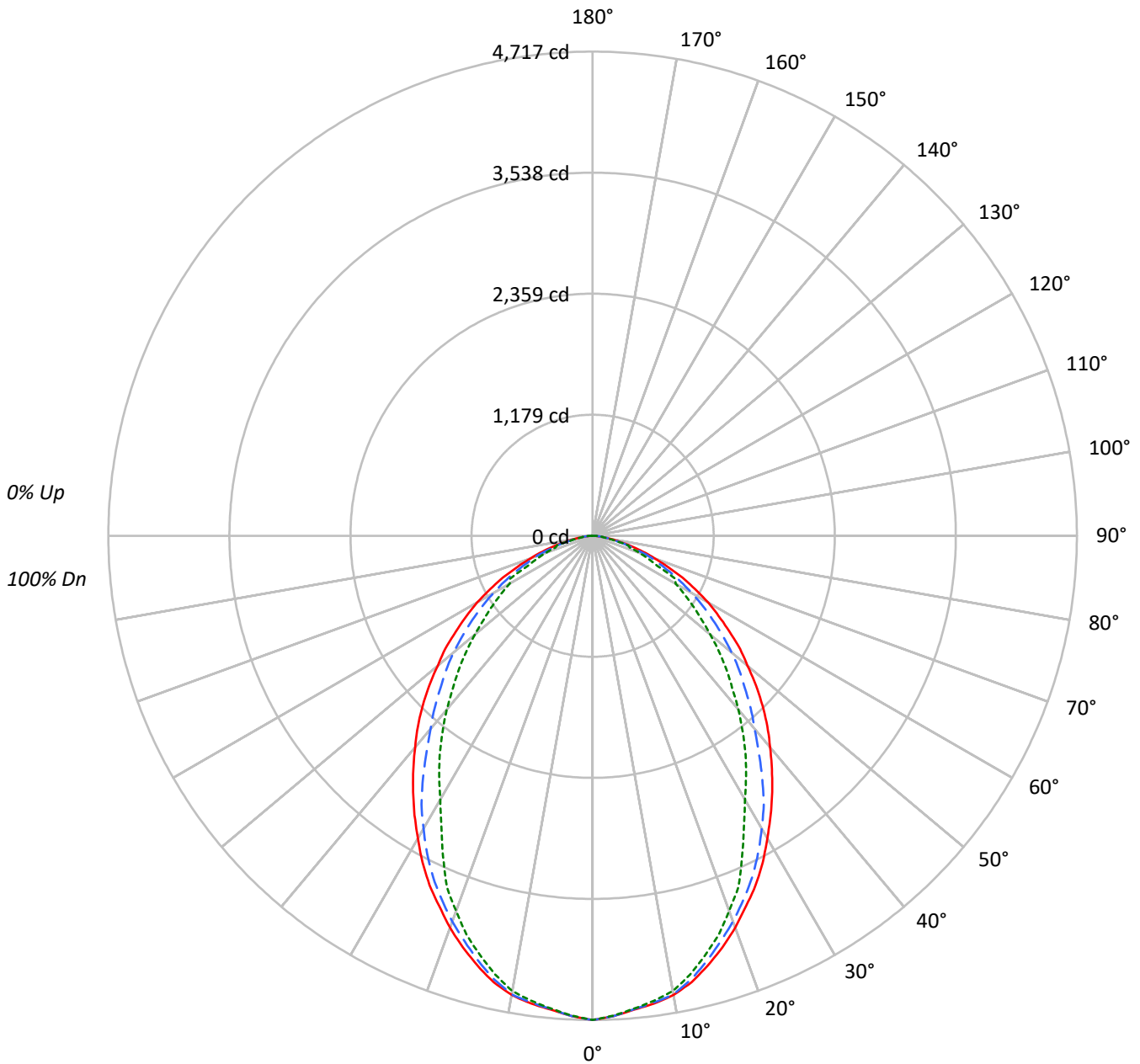
Lumens per Lamp: N/A
Luminaire Lumens: 9260.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (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°	6347	6347	6347
5°	6260	6253	6246
10°	6206	6199	6154
15°	6039	5978	5894
20°	5817	5723	5567
25°	5578	5456	5116
30°	5287	5117	4609
35°	5007	4729	4264
40°	4722	4310	3879
45°	4451	3984	3507
50°	4121	3698	3127
55°	3812	3351	2801
60°	3492	2993	2509
65°	3073	2621	2222
70°	2531	2295	1888
75°	2013	1758	1843
80°	1352	1268	1183
85°	841	1010	1178



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.1	4.7
10°-20°	1205.0	13.0
20°-30°	1668.3	18.0
30°-40°	1778.9	19.2
40°-50°	1622.8	17.5
50°-60°	1271.4	13.7
60°-70°	828.6	8.9
70°-80°	367.1	4.0
80°-90°	78.8	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°	3312.4	35.8
0°-40°	5091.3	55.0
0°-60°	7985.4	86.2
0°-90°	9260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4717	4717	4717	4717	4717	
5°	4635	4630	4630	4624	4624	440
15°	4335	4335	4292	4248	4232	1219
25°	3757	3735	3675	3544	3446	1725
35°	3048	3026	2879	2661	2596	1906
45°	2339	2290	2094	1920	1843	1802
55°	1625	1576	1429	1260	1194	1458
65°	965	911	823	840	698	951
75°	387	360	338	322	354	415
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°	4716.9	4716.9	4716.9	4716.9	4716.9
2.5°	4684.2	4684.2	4684.2	4678.7	4678.7
5°	4635.1	4629.7	4629.7	4624.2	4624.2
7.5°	4597.0	4591.5	4586.0	4580.6	4569.7
10°	4542.4	4542.4	4537.0	4509.7	4504.2
12.5°	4455.2	4449.7	4427.9	4389.7	4378.8
15°	4335.2	4335.2	4291.6	4248.0	4231.6
17.5°	4204.3	4198.9	4144.3	4100.7	4078.9
20°	4062.5	4051.6	3997.1	3926.2	3888.1
22.5°	3904.4	3904.4	3839.0	3746.3	3708.1
25°	3757.2	3735.4	3675.4	3544.5	3446.4
27.5°	3588.1	3555.4	3490.0	3304.6	3190.1
30°	3402.7	3386.4	3293.7	3053.7	2966.5
32.5°	3228.2	3201.0	3102.8	2852.0	2781.1
35°	3048.3	3026.5	2879.2	2661.1	2595.7
37.5°	2868.3	2841.1	2655.7	2481.2	2399.4
40°	2688.4	2655.7	2453.9	2295.7	2208.5
42.5°	2519.3	2475.7	2279.4	2110.3	2012.2
45°	2339.4	2290.3	2094.0	1919.5	1843.1
47.5°	2159.4	2115.8	1935.8	1755.9	1668.6
50°	1968.6	1930.4	1766.8	1586.8	1494.1
52.5°	1810.4	1750.4	1592.3	1412.3	1336.0
55°	1625.0	1575.9	1428.7	1259.7	1194.2
57.5°	1456.0	1406.9	1270.6	1112.4	1057.9
60°	1297.8	1226.9	1112.4	976.1	932.5
62.5°	1123.3	1068.8	970.6	856.1	910.7
65°	965.2	910.7	823.4	839.8	698.0
67.5°	790.7	763.4	687.1	610.7	588.9
70°	643.5	610.7	583.5	501.7	479.9
72.5°	512.6	479.9	441.7	398.1	381.7
75°	387.2	359.9	338.1	321.7	354.5
77.5°	267.2	256.3	239.9	223.6	218.1
80°	174.5	169.0	163.6	158.1	152.7
82.5°	103.6	103.6	103.6	103.6	103.6
85°	54.5	60.0	65.4	70.9	76.3
87.5°	32.7	32.7	38.2	43.6	49.1
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)