

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: P546762

Luminaire Tested: **FMR-24-4-LD4-2HI-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: P546762
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-LD4-2HI-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

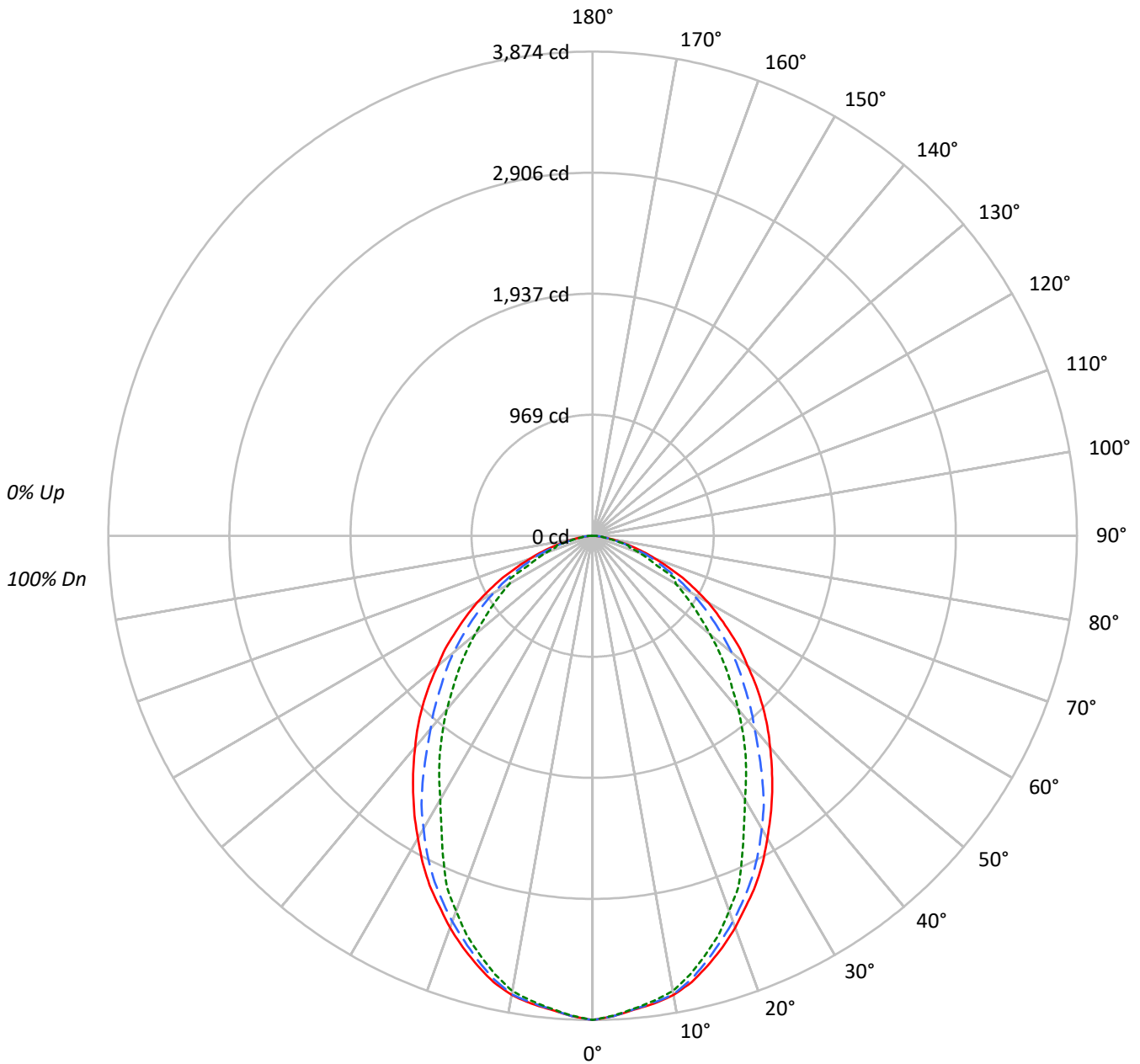
Lumens per Lamp: N/A
Luminaire Lumens: 7605.0 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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				20				
RC	80				70				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			100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5212	5212	5212
5°	5141	5135	5129
10°	5097	5091	5054
15°	4959	4910	4841
20°	4777	4700	4572
25°	4581	4481	4202
30°	4342	4203	3785
35°	4112	3884	3502
40°	3878	3540	3186
45°	3656	3272	2880
50°	3384	3037	2569
55°	3131	2753	2301
60°	2868	2458	2061
65°	2524	2153	1825
70°	2079	1885	1550
75°	1653	1444	1513
80°	1110	1041	972
85°	692	829	968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.6	4.7
10°-20°	989.7	13.0
20°-30°	1370.1	18.0
30°-40°	1460.9	19.2
40°-50°	1332.8	17.5
50°-60°	1044.1	13.7
60°-70°	680.5	8.9
70°-80°	301.5	4.0
80°-90°	64.7	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°	2720.4	35.8
0°-40°	4181.3	55.0
0°-60°	6558.2	86.2
0°-90°	7605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7605.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3874	3874	3874	3874	3874	
5°	3807	3802	3802	3798	3798	361
15°	3560	3560	3525	3489	3475	1001
25°	3086	3068	3018	2911	2830	1417
35°	2504	2486	2365	2186	2132	1565
45°	1921	1881	1720	1576	1514	1480
55°	1335	1294	1173	1034	981	1197
65°	793	748	676	690	573	781
75°	318	296	278	264	291	341
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3873.9	3873.9	3873.9	3873.9	3873.9
2.5°	3847.0	3847.0	3847.0	3842.5	3842.5
5°	3806.7	3802.2	3802.2	3797.8	3797.8
7.5°	3775.4	3770.9	3766.4	3761.9	3753.0
10°	3730.6	3730.6	3726.1	3703.7	3699.2
12.5°	3658.9	3654.4	3636.5	3605.2	3596.2
15°	3560.4	3560.4	3524.6	3488.7	3475.3
17.5°	3452.9	3448.4	3403.6	3367.8	3349.9
20°	3336.5	3327.5	3282.7	3224.5	3193.2
22.5°	3206.6	3206.6	3152.9	3076.7	3045.4
25°	3085.7	3067.8	3018.5	2911.0	2830.4
27.5°	2946.8	2920.0	2866.2	2714.0	2619.9
30°	2794.6	2781.1	2705.0	2507.9	2436.3
32.5°	2651.3	2628.9	2548.3	2342.2	2284.0
35°	2503.5	2485.6	2364.6	2185.5	2131.8
37.5°	2355.7	2333.3	2181.0	2037.7	1970.5
40°	2207.9	2181.0	2015.3	1885.4	1813.8
42.5°	2069.1	2033.2	1872.0	1733.2	1652.6
45°	1921.3	1881.0	1719.7	1576.4	1513.7
47.5°	1773.5	1737.7	1589.9	1442.1	1370.4
50°	1616.7	1585.4	1451.0	1303.2	1227.1
52.5°	1486.9	1437.6	1307.7	1159.9	1097.2
55°	1334.6	1294.3	1173.4	1034.5	980.8
57.5°	1195.8	1155.4	1043.5	913.6	868.8
60°	1065.9	1007.7	913.6	801.6	765.8
62.5°	922.6	877.8	797.2	703.1	747.9
65°	792.7	747.9	676.3	689.7	573.2
67.5°	649.4	627.0	564.3	501.6	483.7
70°	528.5	501.6	479.2	412.0	394.1
72.5°	421.0	394.1	362.8	326.9	313.5
75°	318.0	295.6	277.7	264.2	291.1
77.5°	219.4	210.5	197.1	183.6	179.1
80°	143.3	138.8	134.4	129.9	125.4
82.5°	85.1	85.1	85.1	85.1	85.1
85°	44.8	49.3	53.7	58.2	62.7
87.5°	26.9	26.9	31.3	35.8	40.3
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)