

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: P547113

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-82-86-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: P547113
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-LD4-3LO-40-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

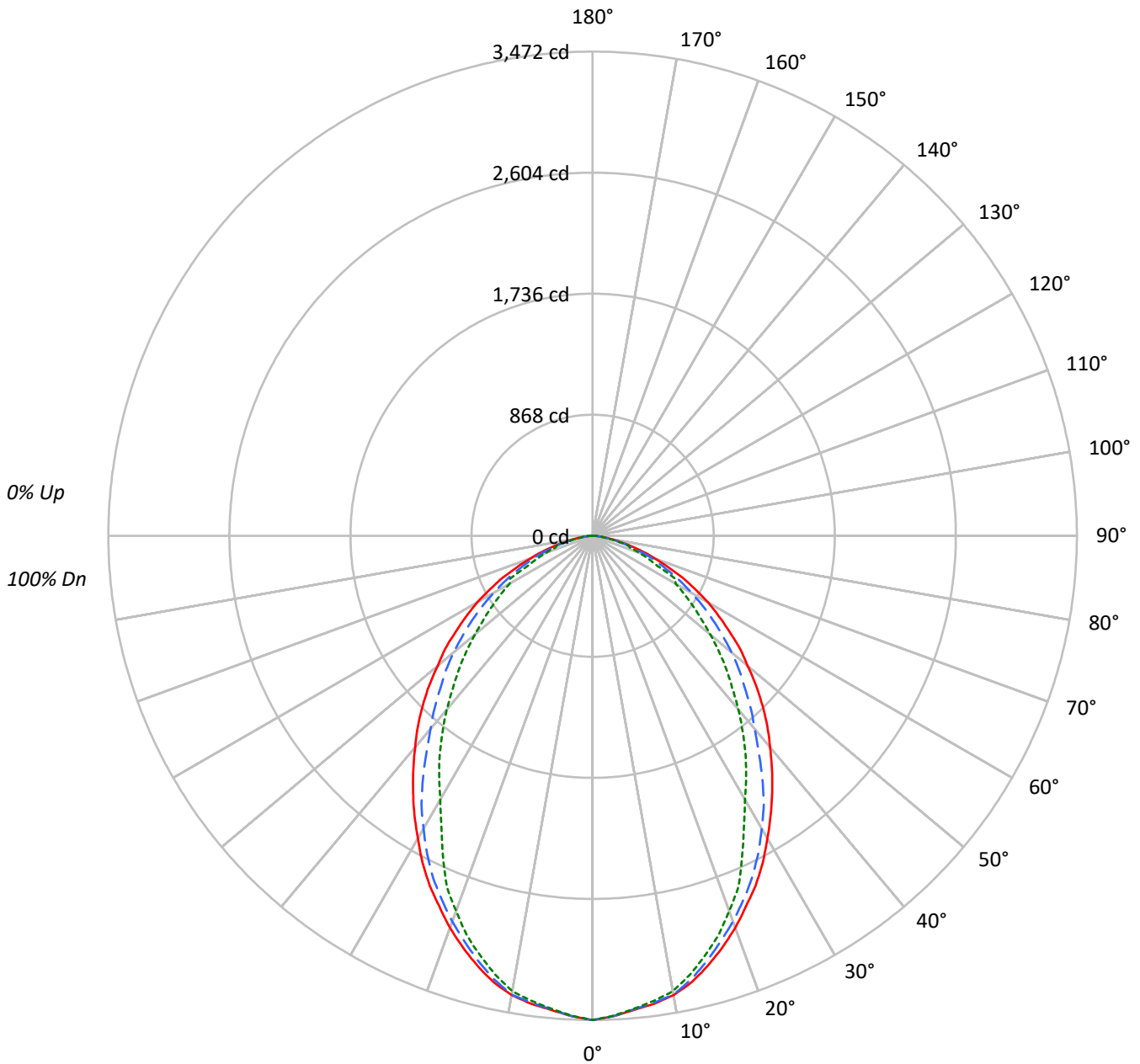
Lumens per Lamp: N/A
Luminaire Lumens: 6817.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4672	4672	4672
5°	4609	4603	4598
10°	4569	4563	4530
15°	4446	4401	4339
20°	4282	4213	4098
25°	4106	4017	3767
30°	3892	3767	3393
35°	3686	3482	3139
40°	3476	3173	2856
45°	3277	2933	2582
50°	3033	2723	2303
55°	2806	2467	2062
60°	2571	2204	1847
65°	2262	1930	1636
70°	1864	1690	1390
75°	1482	1294	1356
80°	996	933	871
85°	619	744	868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.2	4.7
10°-20°	887.1	13.0
20°-30°	1228.1	18.0
30°-40°	1309.6	19.2
40°-50°	1194.7	17.5
50°-60°	935.9	13.7
60°-70°	610.0	8.9
70°-80°	270.3	4.0
80°-90°	58.0	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°	2438.5	35.8
0°-40°	3748.1	55.0
0°-60°	5878.7	86.2
0°-90°	6817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3472	3472	3472	3472	3472	
5°	3412	3408	3408	3404	3404	324
15°	3192	3192	3159	3127	3115	897
25°	2766	2750	2706	2609	2537	1270
35°	2244	2228	2120	1959	1911	1403
45°	1722	1686	1542	1413	1357	1327
55°	1196	1160	1052	927	879	1073
65°	711	670	606	618	514	700
75°	285	265	249	237	261	305
85°	40	44	48	52	56	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3472.5	3472.5	3472.5	3472.5	3472.5
2.5°	3448.4	3448.4	3448.4	3444.4	3444.4
5°	3412.3	3408.3	3408.3	3404.2	3404.2
7.5°	3384.2	3380.2	3376.1	3372.1	3364.1
10°	3344.0	3344.0	3340.0	3319.9	3315.9
12.5°	3279.8	3275.8	3259.7	3231.6	3223.6
15°	3191.5	3191.5	3159.4	3127.2	3115.2
17.5°	3095.1	3091.1	3051.0	3018.9	3002.8
20°	2990.8	2982.7	2942.6	2890.4	2862.3
22.5°	2874.3	2874.3	2826.2	2757.9	2729.8
25°	2765.9	2749.9	2705.7	2609.4	2537.1
27.5°	2641.5	2617.4	2569.2	2432.7	2348.4
30°	2505.0	2493.0	2424.7	2248.1	2183.9
32.5°	2376.5	2356.5	2284.2	2099.6	2047.4
35°	2244.1	2228.0	2119.6	1959.0	1910.9
37.5°	2111.6	2091.5	1955.0	1826.6	1766.4
40°	1979.1	1955.0	1806.5	1690.1	1625.8
42.5°	1854.7	1822.6	1678.0	1553.6	1481.3
45°	1722.2	1686.1	1541.5	1413.1	1356.9
47.5°	1589.7	1557.6	1425.1	1292.6	1228.4
50°	1449.2	1421.1	1300.7	1168.2	1100.0
52.5°	1332.8	1288.6	1172.2	1039.7	983.5
55°	1196.3	1160.2	1051.8	927.3	879.2
57.5°	1071.9	1035.7	935.4	818.9	778.8
60°	955.4	903.2	818.9	718.6	686.5
62.5°	827.0	786.8	714.6	630.3	670.4
65°	710.6	670.4	606.2	618.2	513.8
67.5°	582.1	562.0	505.8	449.6	433.6
70°	473.7	449.6	429.5	369.3	353.3
72.5°	377.4	353.3	325.2	293.1	281.0
75°	285.0	265.0	248.9	236.9	260.9
77.5°	196.7	188.7	176.6	164.6	160.6
80°	128.5	124.4	120.4	116.4	112.4
82.5°	76.3	76.3	76.3	76.3	76.3
85°	40.1	44.2	48.2	52.2	56.2
87.5°	24.1	24.1	28.1	32.1	36.1
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)