

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: P547273

Luminaire Tested: **FMR-24-4-LD4-4HI-35-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: P547273
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

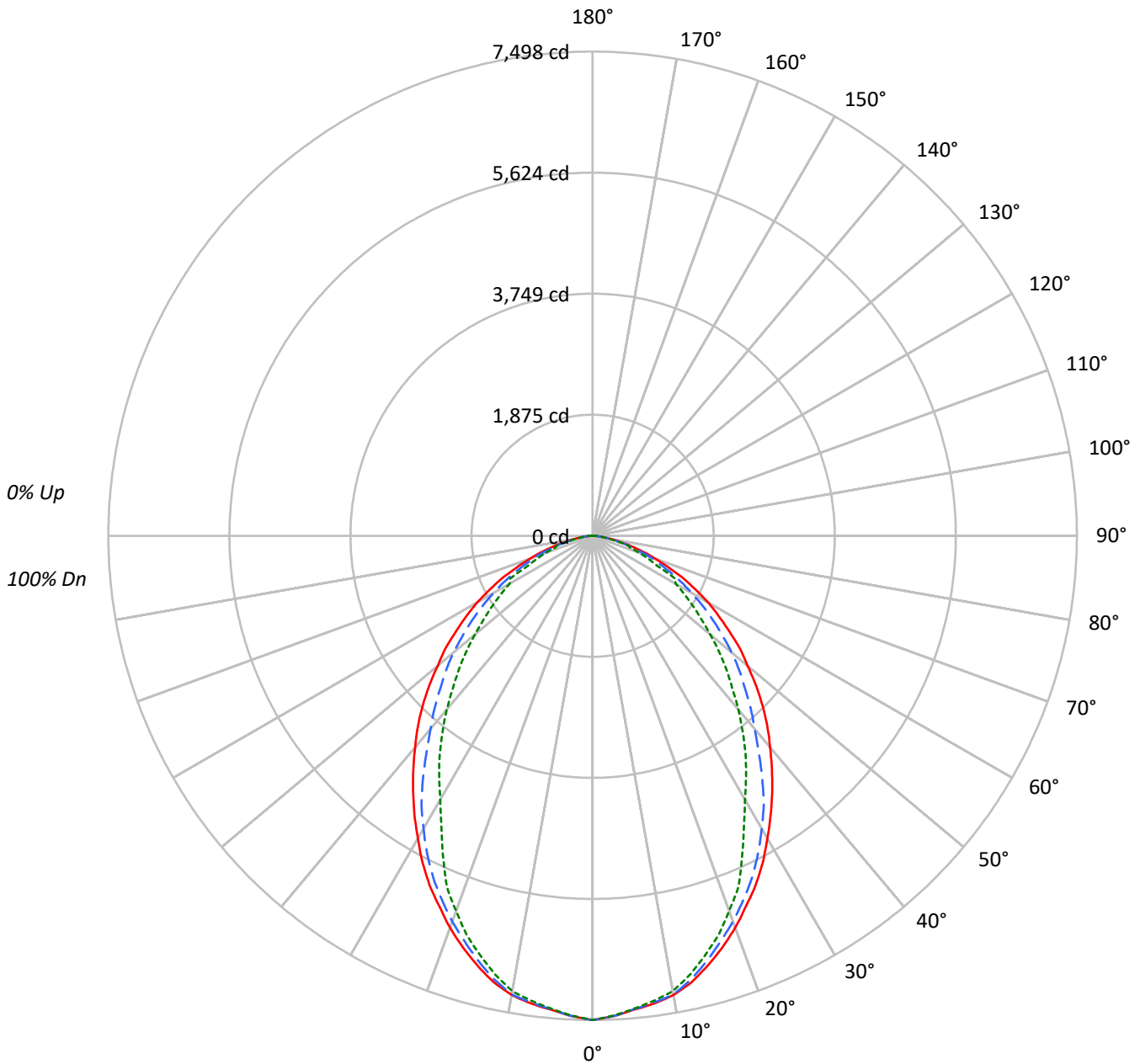
Lumens per Lamp: N/A
Luminaire Lumens: 14720.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	10089	10089	10089
5°	9952	9940	9928
10°	9865	9854	9782
15°	9599	9503	9370
20°	9247	9098	8850
25°	8867	8674	8133
30°	8404	8134	7326
35°	7959	7518	6777
40°	7506	6851	6166
45°	7076	6334	5575
50°	6550	5879	4972
55°	6060	5328	4453
60°	5552	4759	3989
65°	4885	4167	3533
70°	4024	3649	3001
75°	3200	2794	2929
80°	2149	2015	1881
85°	1338	1606	1874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	698.0	4.7
10°-20°	1915.5	13.0
20°-30°	2651.9	18.0
30°-40°	2827.7	19.2
40°-50°	2579.7	17.5
50°-60°	2021.0	13.7
60°-70°	1317.2	8.9
70°-80°	583.6	4.0
80°-90°	125.3	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°	5265.5	35.8
0°-40°	8093.2	55.0
0°-60°	12693.9	86.2
0°-90°	14720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7498	7498	7498	7498	7498	
5°	7368	7360	7360	7351	7351	699
15°	6891	6891	6822	6753	6727	1937
25°	5972	5938	5842	5634	5478	2742
35°	4846	4811	4577	4230	4126	3029
45°	3719	3641	3329	3051	2930	2865
55°	2583	2505	2271	2002	1898	2317
65°	1534	1448	1309	1335	1110	1512
75°	616	572	537	511	563	660
85°	87	95	104	113	121	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7498.2	7498.2	7498.2	7498.2	7498.2
2.5°	7446.2	7446.2	7446.2	7437.5	7437.5
5°	7368.1	7359.5	7359.5	7350.8	7350.8
7.5°	7307.5	7298.8	7290.1	7281.5	7264.1
10°	7220.8	7220.8	7212.1	7168.8	7160.1
12.5°	7082.1	7073.4	7038.7	6978.1	6960.7
15°	6891.4	6891.4	6822.0	6752.7	6726.7
17.5°	6683.3	6674.7	6588.0	6518.6	6484.0
20°	6458.0	6440.6	6353.9	6241.3	6180.6
22.5°	6206.6	6206.6	6102.6	5955.2	5894.5
25°	5972.5	5937.9	5842.5	5634.5	5478.4
27.5°	5703.8	5651.8	5547.8	5253.1	5071.0
30°	5409.1	5383.1	5235.7	4854.3	4715.6
32.5°	5131.7	5088.4	4932.3	4533.6	4420.9
35°	4845.6	4811.0	4576.9	4230.2	4126.2
37.5°	4559.6	4516.2	4221.5	3944.1	3814.1
40°	4273.5	4221.5	3900.8	3649.4	3510.7
42.5°	4004.8	3935.5	3623.4	3354.7	3198.6
45°	3718.7	3640.7	3328.7	3051.3	2929.9
47.5°	3432.7	3363.3	3077.3	2791.2	2652.5
50°	3129.3	3068.6	2808.6	2522.5	2375.1
52.5°	2877.9	2782.6	2531.2	2245.1	2123.8
55°	2583.2	2505.2	2271.1	2002.4	1898.4
57.5°	2314.5	2236.4	2019.7	1768.4	1681.7
60°	2063.1	1950.4	1768.4	1551.6	1482.3
62.5°	1785.7	1699.0	1543.0	1360.9	1447.6
65°	1534.3	1447.6	1308.9	1334.9	1109.6
67.5°	1256.9	1213.6	1092.2	970.9	936.2
70°	1022.9	970.9	927.5	797.5	762.8
72.5°	814.8	762.8	702.1	632.8	606.8
75°	615.5	572.1	537.4	511.4	563.4
77.5°	424.8	407.4	381.4	355.4	346.7
80°	277.4	268.7	260.1	251.4	242.7
82.5°	164.7	164.7	164.7	164.7	164.7
85°	86.7	95.4	104.0	112.7	121.4
87.5°	52.0	52.0	60.7	69.3	78.0
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)