

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: P546909

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-80-96-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: P546909
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-LD4-2STD-40-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

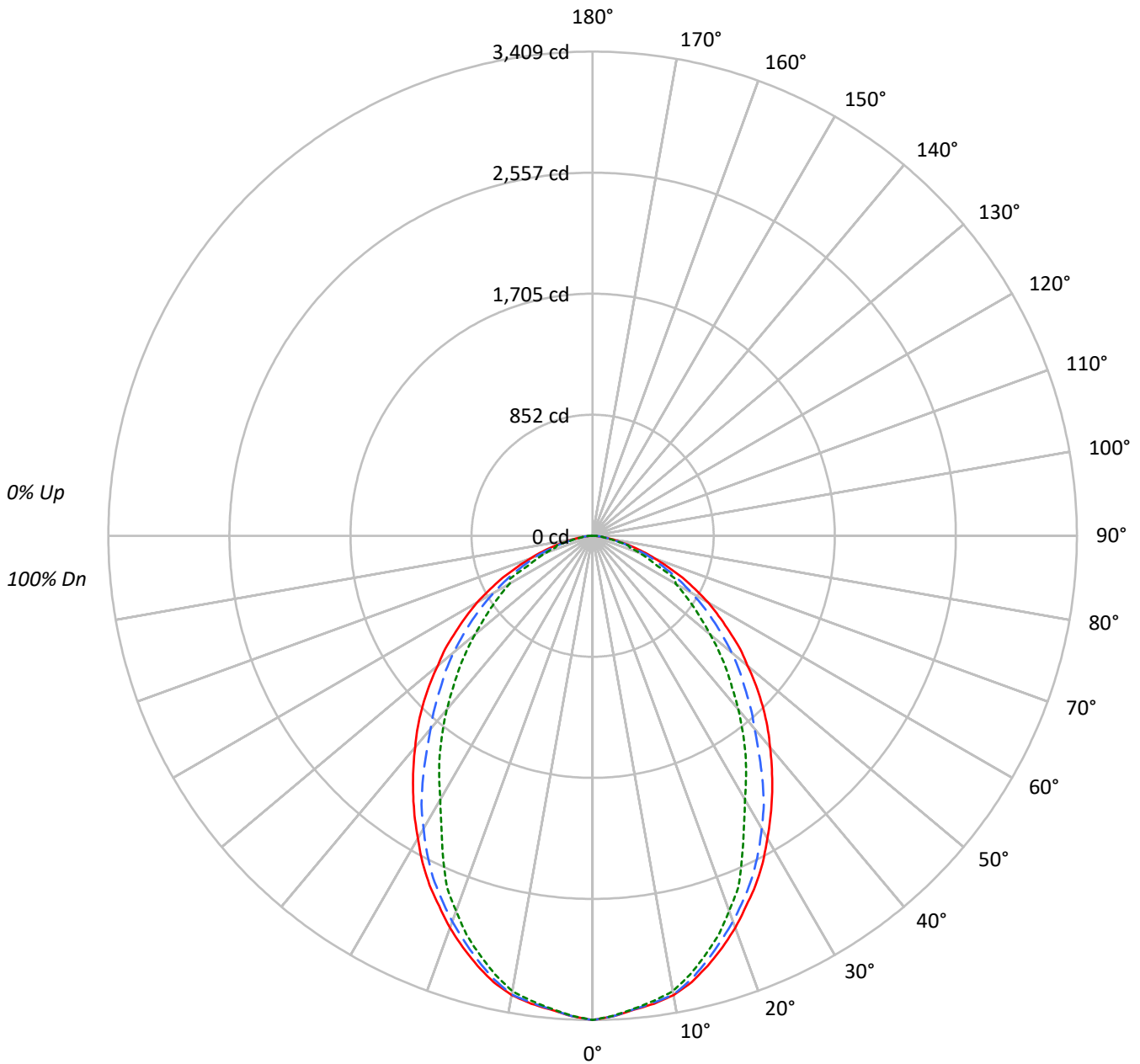
Lumens per Lamp: N/A
Luminaire Lumens: 6693.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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

TEST NUMBER: P546909

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-80-96-EDD

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°	4587	4587	4587
5°	4525	4520	4514
10°	4486	4480	4448
15°	4365	4321	4260
20°	4204	4137	4024
25°	4032	3944	3698
30°	3821	3699	3331
35°	3619	3418	3082
40°	3413	3115	2804
45°	3217	2880	2535
50°	2978	2673	2260
55°	2755	2422	2025
60°	2524	2164	1814
65°	2221	1895	1606
70°	1830	1659	1364
75°	1455	1271	1332
80°	977	916	855
85°	608	730	852



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	317.4	4.7
10°-20°	871.0	13.0
20°-30°	1205.8	18.0
30°-40°	1285.7	19.2
40°-50°	1173.0	17.5
50°-60°	918.9	13.7
60°-70°	598.9	8.9
70°-80°	265.3	4.0
80°-90°	57.0	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°	2394.1	35.8
0°-40°	3679.9	55.0
0°-60°	5771.8	86.2
0°-90°	6693.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6693.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3409	3409	3409	3409	3409	
5°	3350	3346	3346	3342	3342	318
15°	3133	3133	3102	3070	3058	881
25°	2716	2700	2656	2562	2491	1247
35°	2203	2188	2081	1923	1876	1377
45°	1691	1655	1514	1387	1332	1302
55°	1174	1139	1033	910	863	1054
65°	698	658	595	607	504	688
75°	280	260	244	232	256	300
85°	39	43	47	51	55	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3409.3	3409.3	3409.3	3409.3	3409.3
2.5°	3385.7	3385.7	3385.7	3381.7	3381.7
5°	3350.2	3346.3	3346.3	3342.3	3342.3
7.5°	3322.6	3318.7	3314.7	3310.8	3302.9
10°	3283.2	3283.2	3279.3	3259.6	3255.6
12.5°	3220.1	3216.2	3200.4	3172.8	3165.0
15°	3133.4	3133.4	3101.9	3070.4	3058.5
17.5°	3038.8	3034.9	2995.5	2963.9	2948.2
20°	2936.4	2928.5	2889.1	2837.8	2810.2
22.5°	2822.1	2822.1	2774.8	2707.8	2680.2
25°	2715.6	2699.9	2656.5	2561.9	2491.0
27.5°	2593.5	2569.8	2522.5	2388.5	2305.7
30°	2459.4	2447.6	2380.6	2207.2	2144.1
32.5°	2333.3	2313.6	2242.7	2061.4	2010.1
35°	2203.3	2187.5	2081.1	1923.4	1876.1
37.5°	2073.2	2053.5	1919.5	1793.3	1734.2
40°	1943.1	1919.5	1773.6	1659.3	1596.3
42.5°	1820.9	1789.4	1647.5	1525.3	1454.4
45°	1690.9	1655.4	1513.5	1387.4	1332.2
47.5°	1560.8	1529.3	1399.2	1269.1	1206.1
50°	1422.9	1395.3	1277.0	1147.0	1079.9
52.5°	1308.6	1265.2	1150.9	1020.8	965.6
55°	1174.5	1139.1	1032.7	910.5	863.2
57.5°	1052.4	1016.9	918.3	804.0	764.6
60°	938.1	886.8	804.0	705.5	674.0
62.5°	811.9	772.5	701.6	618.8	658.2
65°	697.6	658.2	595.2	607.0	504.5
67.5°	571.5	551.8	496.6	441.4	425.7
70°	465.1	441.4	421.7	362.6	346.8
72.5°	370.5	346.8	319.3	287.7	275.9
75°	279.8	260.1	244.4	232.5	256.2
77.5°	193.1	185.2	173.4	161.6	157.7
80°	126.1	122.2	118.2	114.3	110.4
82.5°	74.9	74.9	74.9	74.9	74.9
85°	39.4	43.4	47.3	51.2	55.2
87.5°	23.6	23.6	27.6	31.5	35.5
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)