

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: P546713

Luminaire Tested: **FMR-24-4-LD4-2HI-40-UNV-80-86-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: P546713
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-40-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

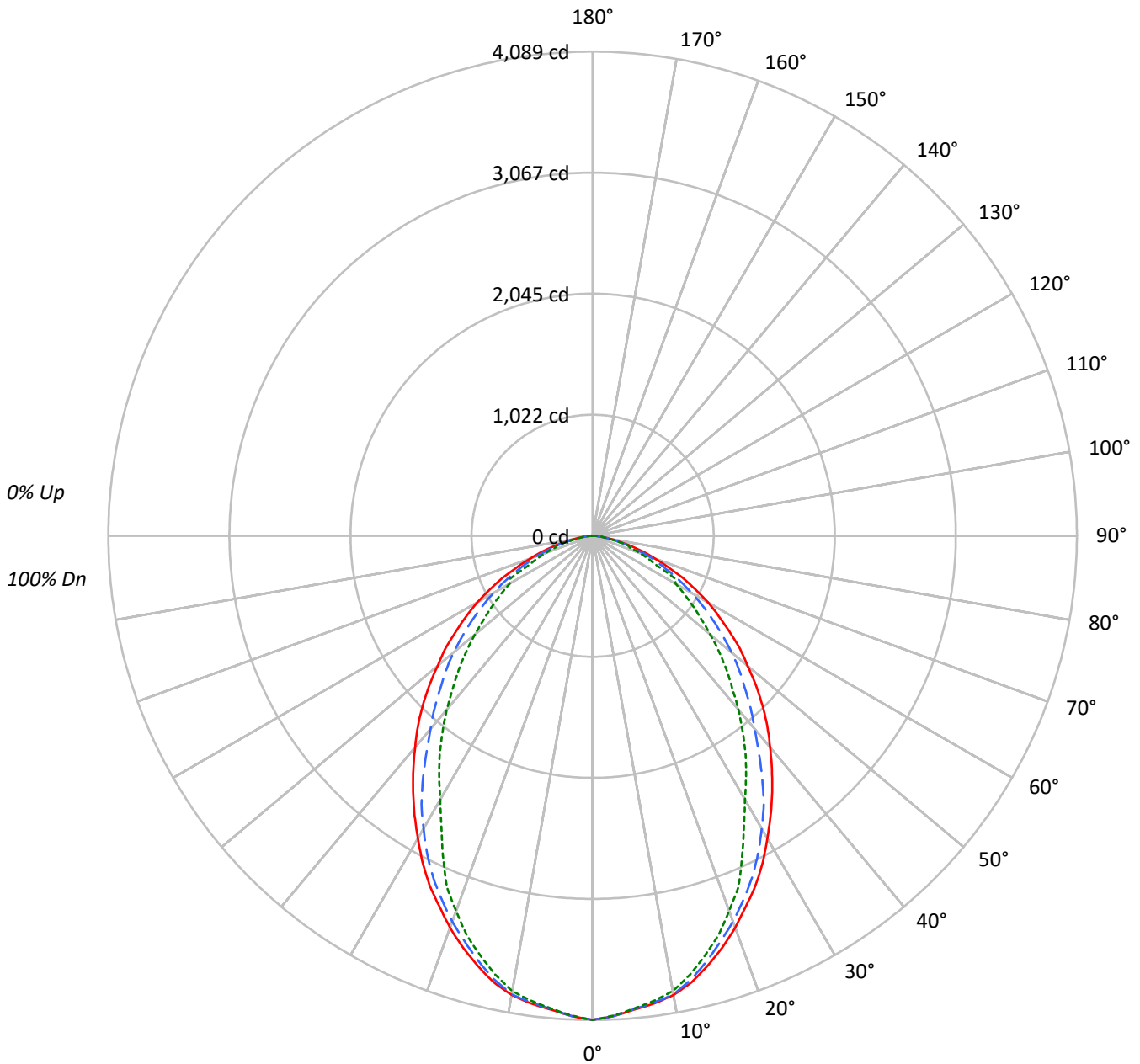
Lumens per Lamp: N/A
Luminaire Lumens: 8027.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P546713

CATALOG NUMBER: FMR-24-4-LD4-2HI-40-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546713

CATALOG NUMBER: FMR-24-4-LD4-2HI-40-UNV-80-86-EDD

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°	5501	5501	5501
5°	5427	5420	5414
10°	5380	5373	5335
15°	5235	5182	5109
20°	5042	4961	4826
25°	4835	4730	4435
30°	4583	4436	3995
35°	4340	4100	3696
40°	4093	3736	3362
45°	3859	3454	3040
50°	3572	3206	2711
55°	3304	2905	2428
60°	3027	2595	2175
65°	2664	2273	1926
70°	2194	1990	1637
75°	1745	1524	1598
80°	1172	1099	1026
85°	730	875	1022



TEST NUMBER: P546713

CATALOG NUMBER: FMR-24-4-LD4-2HI-40-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	380.6	4.7
10°-20°	1044.6	13.0
20°-30°	1446.1	18.0
30°-40°	1542.0	19.2
40°-50°	1406.8	17.5
50°-60°	1102.1	13.7
60°-70°	718.3	8.9
70°-80°	318.2	4.0
80°-90°	68.3	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°	2871.3	35.8
0°-40°	4413.3	55.0
0°-60°	6922.2	86.2
0°-90°	8027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4089	4089	4089	4089	4089	
5°	4018	4013	4013	4008	4008	381
15°	3758	3758	3720	3682	3668	1056
25°	3257	3238	3186	3072	2988	1495
35°	2642	2624	2496	2307	2250	1652
45°	2028	1985	1815	1664	1598	1562
55°	1409	1366	1238	1092	1035	1263
65°	837	789	714	728	605	825
75°	336	312	293	279	307	360
85°	47	52	57	62	66	66
90°	0	0	0	0	0	



TEST NUMBER: P546713

CATALOG NUMBER: FMR-24-4-LD4-2HI-40-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4088.8	4088.8	4088.8	4088.8	4088.8
2.5°	4060.5	4060.5	4060.5	4055.8	4055.8
5°	4017.9	4013.2	4013.2	4008.5	4008.5
7.5°	3984.9	3980.1	3975.4	3970.7	3961.2
10°	3937.6	3937.6	3932.9	3909.2	3904.5
12.5°	3862.0	3857.2	3838.3	3805.2	3795.8
15°	3758.0	3758.0	3720.1	3682.3	3668.1
17.5°	3644.5	3639.8	3592.5	3554.7	3535.8
20°	3521.6	3512.2	3464.9	3403.4	3370.3
22.5°	3384.5	3384.5	3327.8	3247.4	3214.4
25°	3256.9	3238.0	3186.0	3072.5	2987.5
27.5°	3110.4	3082.0	3025.3	2864.6	2765.3
30°	2949.6	2935.5	2855.1	2647.1	2571.5
32.5°	2798.4	2774.7	2689.7	2472.2	2410.8
35°	2642.4	2623.5	2495.9	2306.8	2250.0
37.5°	2486.4	2462.8	2302.0	2150.8	2079.9
40°	2330.4	2302.0	2127.1	1990.1	1914.4
42.5°	2183.9	2146.1	1975.9	1829.3	1744.3
45°	2027.9	1985.3	1815.2	1663.9	1597.7
47.5°	1871.9	1834.1	1678.1	1522.1	1446.5
50°	1706.4	1673.4	1531.5	1375.6	1295.2
52.5°	1569.4	1517.4	1380.3	1224.3	1158.1
55°	1408.6	1366.1	1238.5	1091.9	1035.2
57.5°	1262.1	1219.6	1101.4	964.3	917.0
60°	1125.0	1063.6	964.3	846.1	808.3
62.5°	973.8	926.5	841.4	742.1	789.4
65°	836.7	789.4	713.8	728.0	605.1
67.5°	685.4	661.8	595.6	529.4	510.5
70°	557.8	529.4	505.8	434.9	416.0
72.5°	444.3	416.0	382.9	345.1	330.9
75°	335.6	312.0	293.1	278.9	307.3
77.5°	231.6	222.2	208.0	193.8	189.1
80°	151.3	146.5	141.8	137.1	132.4
82.5°	89.8	89.8	89.8	89.8	89.8
85°	47.3	52.0	56.7	61.5	66.2
87.5°	28.4	28.4	33.1	37.8	42.5
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)