

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: P547161

Luminaire Tested: **FMR-24-4-LD4-3STD-35-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: P547161
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-LD4-3STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

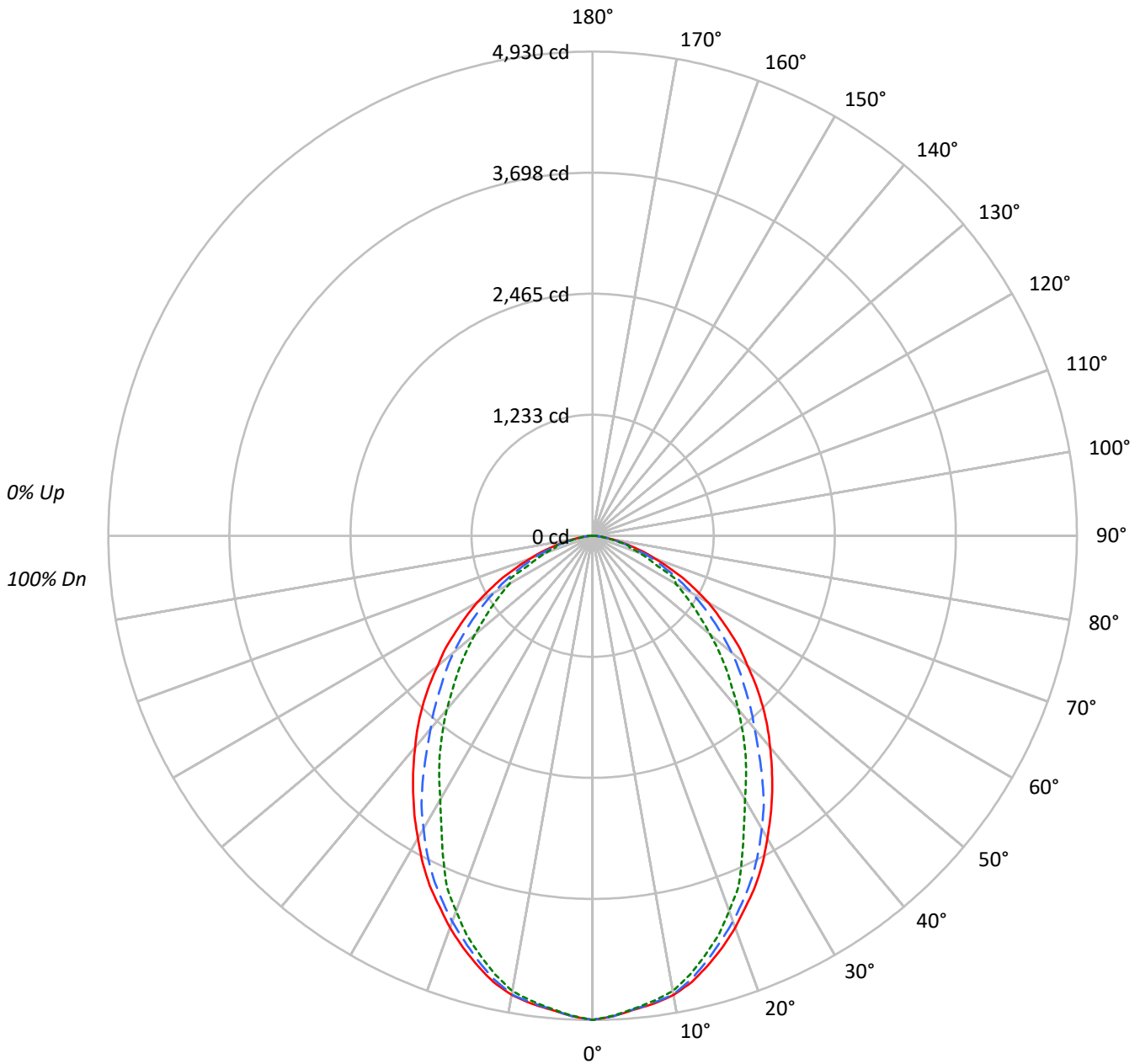
Lumens per Lamp: N/A
Luminaire Lumens: 9678.0 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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: P547161

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547161

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-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°	6633	6633	6633
5°	6543	6535	6528
10°	6486	6478	6432
15°	6311	6248	6160
20°	6079	5982	5818
25°	5830	5703	5347
30°	5525	5348	4817
35°	5233	4943	4456
40°	4935	4505	4054
45°	4652	4164	3665
50°	4307	3865	3269
55°	3984	3503	2928
60°	3650	3129	2623
65°	3212	2740	2323
70°	2646	2399	1973
75°	2103	1837	1926
80°	1413	1325	1237
85°	880	1056	1232



TEST NUMBER: P547161

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	458.9	4.7
10°-20°	1259.4	13.0
20°-30°	1743.6	18.0
30°-40°	1859.2	19.2
40°-50°	1696.1	17.5
50°-60°	1328.8	13.7
60°-70°	866.0	8.9
70°-80°	383.7	4.0
80°-90°	82.4	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°	3461.9	35.8
0°-40°	5321.1	55.0
0°-60°	8345.9	86.2
0°-90°	9678.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9678.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4930	4930	4930	4930	4930	
5°	4844	4839	4839	4833	4833	460
15°	4531	4531	4485	4440	4423	1274
25°	3927	3904	3841	3704	3602	1803
35°	3186	3163	3009	2781	2713	1992
45°	2445	2394	2188	2006	1926	1883
55°	1698	1647	1493	1316	1248	1523
65°	1009	952	861	878	730	994
75°	405	376	353	336	370	434
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



TEST NUMBER: P547161

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4929.8	4929.8	4929.8	4929.8	4929.8
2.5°	4895.6	4895.6	4895.6	4889.9	4889.9
5°	4844.4	4838.7	4838.7	4833.0	4833.0
7.5°	4804.5	4798.8	4793.1	4787.4	4776.0
10°	4747.5	4747.5	4741.8	4713.3	4707.6
12.5°	4656.3	4650.6	4627.8	4587.9	4576.5
15°	4530.9	4530.9	4485.3	4439.7	4422.6
17.5°	4394.1	4388.4	4331.4	4285.8	4263.0
20°	4245.9	4234.5	4177.5	4103.5	4063.6
22.5°	4080.7	4080.7	4012.3	3915.4	3875.5
25°	3926.8	3904.0	3841.3	3704.5	3601.9
27.5°	3750.1	3715.9	3647.5	3453.7	3334.1
30°	3556.3	3539.2	3442.3	3191.6	3100.4
32.5°	3374.0	3345.5	3242.9	2980.7	2906.6
35°	3185.9	3163.1	3009.2	2781.2	2712.8
37.5°	2997.8	2969.3	2775.5	2593.2	2507.7
40°	2809.7	2775.5	2564.7	2399.4	2308.2
42.5°	2633.0	2587.5	2382.3	2205.6	2103.0
45°	2445.0	2393.7	2188.5	2006.1	1926.3
47.5°	2256.9	2211.3	2023.2	1835.2	1744.0
50°	2057.4	2017.5	1846.6	1658.5	1561.6
52.5°	1892.1	1829.5	1664.2	1476.1	1396.3
55°	1698.4	1647.1	1493.2	1316.5	1248.1
57.5°	1521.7	1470.4	1327.9	1162.6	1105.7
60°	1356.4	1282.3	1162.6	1020.2	974.6
62.5°	1174.0	1117.1	1014.5	894.8	951.8
65°	1008.8	951.8	860.6	877.7	729.5
67.5°	826.4	797.9	718.1	638.3	615.5
70°	672.5	638.3	609.8	524.3	501.5
72.5°	535.7	501.5	461.6	416.0	398.9
75°	404.6	376.1	353.4	336.3	370.5
77.5°	279.3	267.9	250.8	233.7	228.0
80°	182.4	176.7	171.0	165.3	159.6
82.5°	108.3	108.3	108.3	108.3	108.3
85°	57.0	62.7	68.4	74.1	79.8
87.5°	34.2	34.2	39.9	45.6	51.3
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)