

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: P547159

Luminaire Tested: **FMR-24-4-LD4-3STD-35-UNV-80-84-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: P547159
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-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

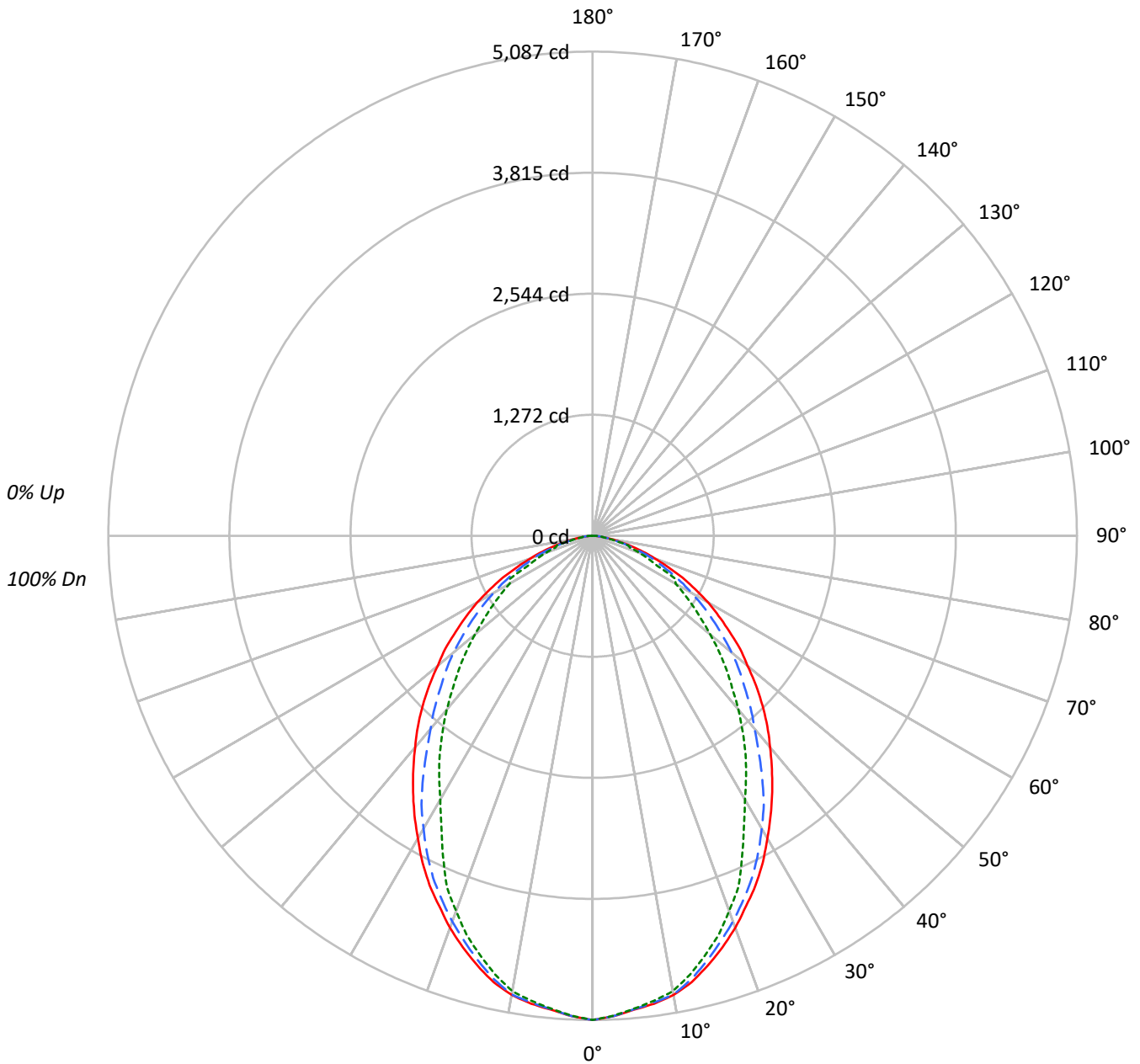
Lumens per Lamp: N/A
Luminaire Lumens: 9987.0 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P547159

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547159

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-84-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°	6845	6845	6845
5°	6752	6744	6736
10°	6693	6685	6637
15°	6513	6447	6357
20°	6274	6173	6004
25°	6016	5885	5518
30°	5702	5519	4971
35°	5400	5101	4598
40°	5093	4648	4184
45°	4801	4297	3782
50°	4444	3989	3373
55°	4111	3615	3021
60°	3767	3229	2706
65°	3314	2827	2397
70°	2730	2476	2036
75°	2171	1895	1987
80°	1458	1367	1276
85°	908	1090	1271



TEST NUMBER: P547159

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	473.6	4.7
10°-20°	1299.6	13.0
20°-30°	1799.2	18.0
30°-40°	1918.5	19.2
40°-50°	1750.2	17.5
50°-60°	1371.2	13.7
60°-70°	893.7	8.9
70°-80°	395.9	4.0
80°-90°	85.0	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°	3572.4	35.8
0°-40°	5490.9	55.0
0°-60°	8612.4	86.2
0°-90°	9987.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9987.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5087	5087	5087	5087	5087	
5°	4999	4993	4993	4987	4987	475
15°	4676	4676	4628	4582	4564	1314
25°	4052	4029	3964	3823	3717	1860
35°	3288	3264	3105	2870	2800	2055
45°	2523	2470	2258	2070	1988	1943
55°	1753	1700	1541	1359	1288	1572
65°	1041	982	888	906	753	1026
75°	418	388	365	347	382	448
85°	59	65	71	76	82	82
90°	0	0	0	0	0	



TEST NUMBER: P547159

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5087.2	5087.2	5087.2	5087.2	5087.2
2.5°	5052.0	5052.0	5052.0	5046.1	5046.1
5°	4999.0	4993.1	4993.1	4987.3	4987.3
7.5°	4957.9	4952.0	4946.1	4940.2	4928.5
10°	4899.0	4899.0	4893.2	4863.8	4857.9
12.5°	4804.9	4799.1	4775.5	4734.4	4722.6
15°	4675.6	4675.6	4628.5	4581.5	4563.8
17.5°	4534.4	4528.5	4469.7	4422.7	4399.1
20°	4381.5	4369.7	4310.9	4234.5	4193.3
22.5°	4210.9	4210.9	4140.4	4040.4	3999.2
25°	4052.2	4028.6	3963.9	3822.8	3716.9
27.5°	3869.8	3834.5	3764.0	3564.0	3440.5
30°	3669.9	3652.2	3552.2	3293.5	3199.4
32.5°	3481.7	3452.3	3346.4	3075.9	2999.4
35°	3287.6	3264.1	3105.3	2870.0	2799.5
37.5°	3093.5	3064.1	2864.1	2675.9	2587.7
40°	2899.4	2864.1	2646.5	2476.0	2381.9
42.5°	2717.1	2670.1	2458.3	2276.0	2170.2
45°	2523.0	2470.1	2258.4	2070.2	1987.8
47.5°	2329.0	2281.9	2087.8	1893.7	1799.6
50°	2123.1	2081.9	1905.5	1711.4	1611.5
52.5°	1952.6	1887.9	1717.3	1523.2	1440.9
55°	1752.6	1699.7	1540.9	1358.6	1288.0
57.5°	1570.3	1517.4	1370.3	1199.8	1141.0
60°	1399.7	1323.3	1199.8	1052.7	1005.7
62.5°	1211.5	1152.7	1046.9	923.3	982.2
65°	1041.0	982.2	888.1	905.7	752.8
67.5°	852.8	823.4	741.0	658.7	635.2
70°	694.0	658.7	629.3	541.1	517.5
72.5°	552.8	517.5	476.4	429.3	411.7
75°	417.6	388.2	364.6	347.0	382.3
77.5°	288.2	276.4	258.8	241.1	235.2
80°	188.2	182.3	176.4	170.6	164.7
82.5°	111.7	111.7	111.7	111.7	111.7
85°	58.8	64.7	70.6	76.5	82.3
87.5°	35.3	35.3	41.2	47.0	52.9
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)