

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: P547151

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-93-84-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: P547151
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-LD4-3LO-50-UNV-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

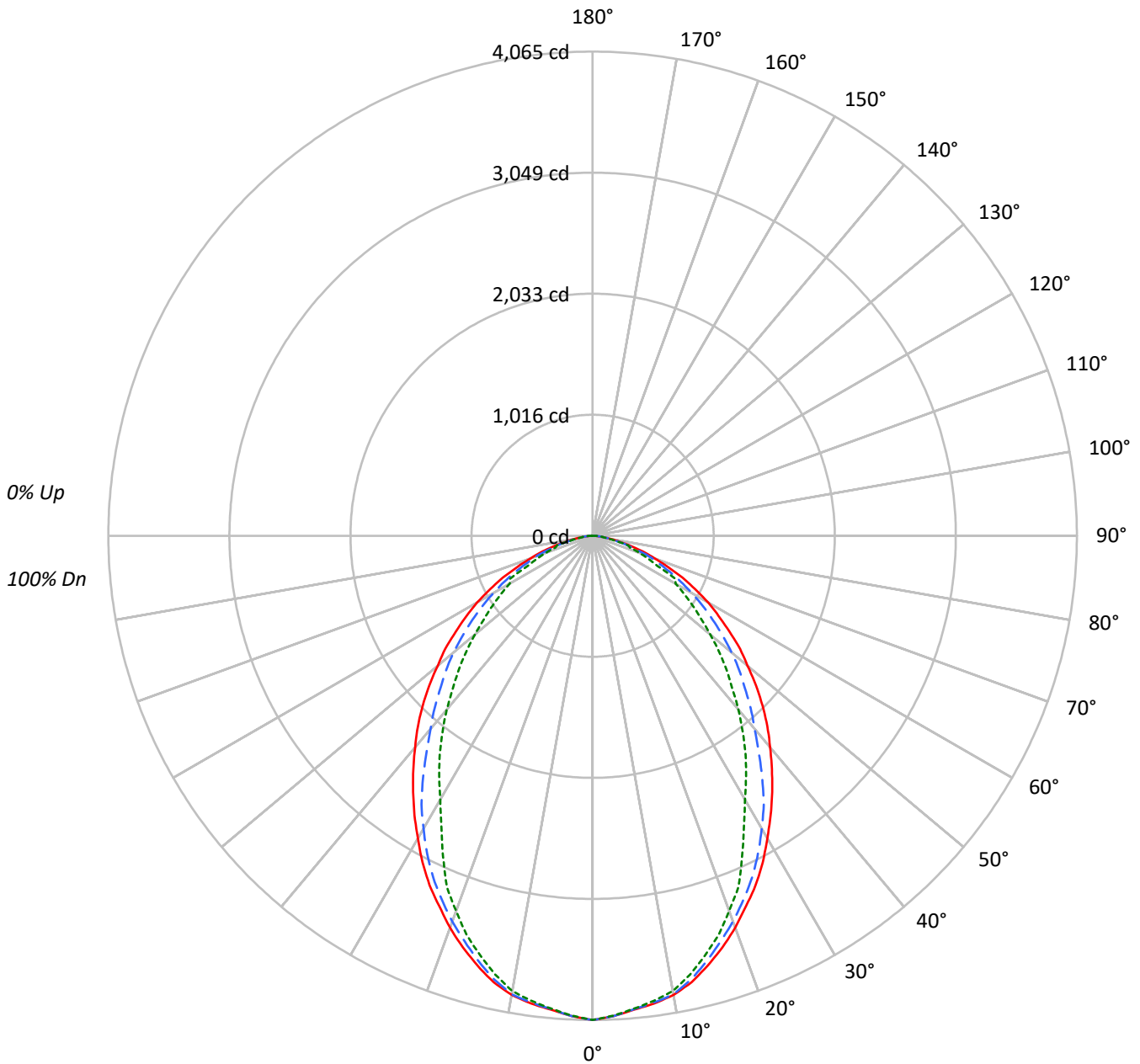
Lumens per Lamp: N/A
Luminaire Lumens: 7980.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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: P547151

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547151

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-84-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			100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5469	5469	5469
5°	5395	5389	5382
10°	5348	5342	5303
15°	5204	5152	5080
20°	5013	4932	4798
25°	4807	4702	4409
30°	4556	4410	3972
35°	4315	4075	3674
40°	4069	3714	3343
45°	3836	3434	3022
50°	3551	3187	2695
55°	3285	2888	2414
60°	3010	2580	2162
65°	2648	2259	1915
70°	2181	1978	1627
75°	1735	1515	1588
80°	1165	1093	1020
85°	726	871	1016



TEST NUMBER: P547151

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	378.4	4.7
10°-20°	1038.5	13.0
20°-30°	1437.7	18.0
30°-40°	1533.0	19.2
40°-50°	1398.5	17.5
50°-60°	1095.6	13.7
60°-70°	714.1	8.9
70°-80°	316.4	4.0
80°-90°	67.9	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°	2854.5	35.8
0°-40°	4387.5	55.0
0°-60°	6881.6	86.2
0°-90°	7980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7980.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4065	4065	4065	4065	4065	
5°	3994	3990	3990	3985	3985	379
15°	3736	3736	3698	3661	3647	1050
25°	3238	3219	3167	3055	2970	1486
35°	2627	2608	2481	2293	2237	1642
45°	2016	1974	1804	1654	1588	1553
55°	1400	1358	1231	1086	1029	1256
65°	832	785	710	724	602	820
75°	334	310	291	277	306	358
85°	47	52	56	61	66	65
90°	0	0	0	0	0	



TEST NUMBER: P547151

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4064.9	4064.9	4064.9	4064.9	4064.9
2.5°	4036.7	4036.7	4036.7	4032.0	4032.0
5°	3994.4	3989.7	3989.7	3985.0	3985.0
7.5°	3961.5	3956.8	3952.1	3947.4	3938.0
10°	3914.5	3914.5	3909.8	3886.3	3881.6
12.5°	3839.3	3834.6	3815.8	3782.9	3773.5
15°	3736.0	3736.0	3698.4	3660.8	3646.7
17.5°	3623.2	3618.5	3571.5	3533.9	3515.1
20°	3501.0	3491.6	3444.6	3383.5	3350.6
22.5°	3364.7	3364.7	3308.3	3228.4	3195.5
25°	3237.8	3219.0	3167.3	3054.6	2970.0
27.5°	3092.1	3064.0	3007.6	2847.8	2749.1
30°	2932.4	2918.3	2838.4	2631.6	2556.4
32.5°	2782.0	2758.5	2673.9	2457.7	2396.6
35°	2626.9	2608.1	2481.2	2293.3	2236.9
37.5°	2471.8	2448.3	2288.6	2138.2	2067.7
40°	2316.8	2288.6	2114.7	1978.4	1903.2
42.5°	2171.1	2133.5	1964.3	1818.6	1734.0
45°	2016.0	1973.7	1804.5	1654.2	1588.4
47.5°	1860.9	1823.3	1668.3	1513.2	1438.0
50°	1696.5	1663.6	1522.6	1367.5	1287.6
52.5°	1560.2	1508.5	1372.2	1217.1	1151.3
55°	1400.4	1358.1	1231.2	1085.5	1029.1
57.5°	1254.7	1212.4	1094.9	958.7	911.7
60°	1118.4	1057.3	958.7	841.2	803.6
62.5°	968.1	921.1	836.5	737.8	784.8
65°	831.8	784.8	709.6	723.7	601.5
67.5°	681.4	657.9	592.1	526.3	507.5
70°	554.5	526.3	502.8	432.3	413.5
72.5°	441.7	413.5	380.6	343.0	329.0
75°	333.7	310.2	291.4	277.3	305.5
77.5°	230.3	220.9	206.8	192.7	188.0
80°	150.4	145.7	141.0	136.3	131.6
82.5°	89.3	89.3	89.3	89.3	89.3
85°	47.0	51.7	56.4	61.1	65.8
87.5°	28.2	28.2	32.9	37.6	42.3
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)