

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: P546327

Luminaire Tested: **FMR-12-4-LD4-2STD-40-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: P546327
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-12-4-LD4-2STD-40-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

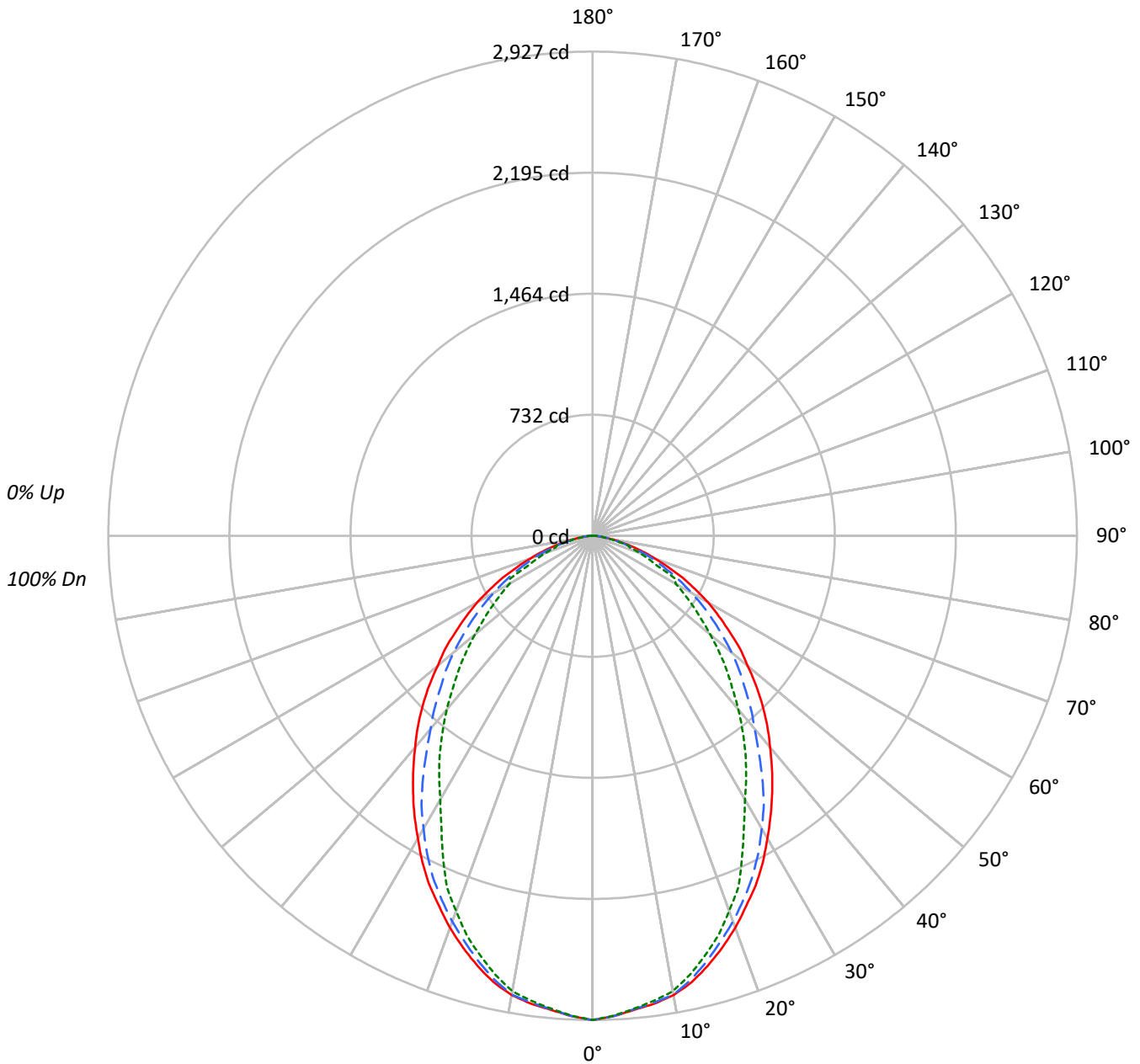
Lumens per Lamp: N/A
Luminaire Lumens: 5747.0 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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: P546327

CATALOG NUMBER: FMR-12-4-LD4-2STD-40-UNV-80-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546327

CATALOG NUMBER: FMR-12-4-LD4-2STD-40-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°	7878	7878	7878
5°	7771	7762	7752
10°	7703	7694	7639
15°	7495	7420	7316
20°	7220	7104	6910
25°	6924	6773	6351
30°	6562	6352	5721
35°	6215	5870	5292
40°	5861	5350	4815
45°	5525	4946	4353
50°	5115	4590	3882
55°	4731	4160	3477
60°	4335	3716	3115
65°	3814	3254	2758
70°	3142	2849	2343
75°	2498	2181	2287
80°	1678	1573	1469
85°	1044	1254	1463



TEST NUMBER: P546327

CATALOG NUMBER: FMR-12-4-LD4-2STD-40-UNV-80-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.5	4.7
10°-20°	747.9	13.0
20°-30°	1035.4	18.0
30°-40°	1104.0	19.2
40°-50°	1007.2	17.5
50°-60°	789.0	13.7
60°-70°	514.3	8.9
70°-80°	227.8	4.0
80°-90°	48.9	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°	2055.7	35.8
0°-40°	3159.8	55.0
0°-60°	4956.0	86.2
0°-90°	5747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2927	2927	2927	2927	2927	
5°	2877	2873	2873	2870	2870	273
15°	2690	2690	2664	2636	2626	756
25°	2332	2318	2281	2200	2139	1071
35°	1892	1878	1787	1652	1611	1183
45°	1452	1421	1300	1191	1144	1118
55°	1008	978	887	782	741	905
65°	599	565	511	521	433	590
75°	240	223	210	200	220	258
85°	34	37	41	44	47	47
90°	0	0	0	0	0	



TEST NUMBER: P546327

CATALOG NUMBER: FMR-12-4-LD4-2STD-40-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2927.4	2927.4	2927.4	2927.4	2927.4
2.5°	2907.1	2907.1	2907.1	2903.8	2903.8
5°	2876.7	2873.3	2873.3	2869.9	2869.9
7.5°	2853.0	2849.6	2846.2	2842.8	2836.1
10°	2819.1	2819.1	2815.8	2798.8	2795.5
12.5°	2765.0	2761.6	2748.1	2724.4	2717.6
15°	2690.5	2690.5	2663.5	2636.4	2626.2
17.5°	2609.3	2605.9	2572.1	2545.0	2531.5
20°	2521.3	2514.6	2480.7	2436.7	2413.0
22.5°	2423.2	2423.2	2382.6	2325.0	2301.3
25°	2331.8	2318.3	2281.0	2199.8	2138.9
27.5°	2226.9	2206.6	2166.0	2050.9	1979.8
30°	2111.8	2101.7	2044.1	1895.2	1841.1
32.5°	2003.5	1986.6	1925.7	1770.0	1726.0
35°	1891.8	1878.3	1786.9	1651.6	1610.9
37.5°	1780.2	1763.2	1648.2	1539.9	1489.1
40°	1668.5	1648.2	1522.9	1424.8	1370.7
42.5°	1563.6	1536.5	1414.6	1309.7	1248.8
45°	1451.9	1421.4	1299.6	1191.3	1143.9
47.5°	1340.2	1313.1	1201.4	1089.8	1035.6
50°	1221.7	1198.1	1096.5	984.8	927.3
52.5°	1123.6	1086.4	988.2	876.5	829.2
55°	1008.5	978.1	886.7	781.8	741.2
57.5°	903.6	873.2	788.5	690.4	656.6
60°	805.5	761.5	690.4	605.8	578.7
62.5°	697.2	663.3	602.4	531.3	565.2
65°	599.0	565.2	511.0	521.2	433.2
67.5°	490.7	473.8	426.4	379.0	365.5
70°	399.4	379.0	362.1	311.4	297.8
72.5°	318.1	297.8	274.1	247.1	236.9
75°	240.3	223.4	209.8	199.7	220.0
77.5°	165.8	159.1	148.9	138.8	135.4
80°	108.3	104.9	101.5	98.1	94.8
82.5°	64.3	64.3	64.3	64.3	64.3
85°	33.8	37.2	40.6	44.0	47.4
87.5°	20.3	20.3	23.7	27.1	30.5
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)