

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: P546107

Luminaire Tested: **FMR-12-4-LD4-2HI-35-UNV-80-88-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: P546107
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-LD4-2HI-35-UNV-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

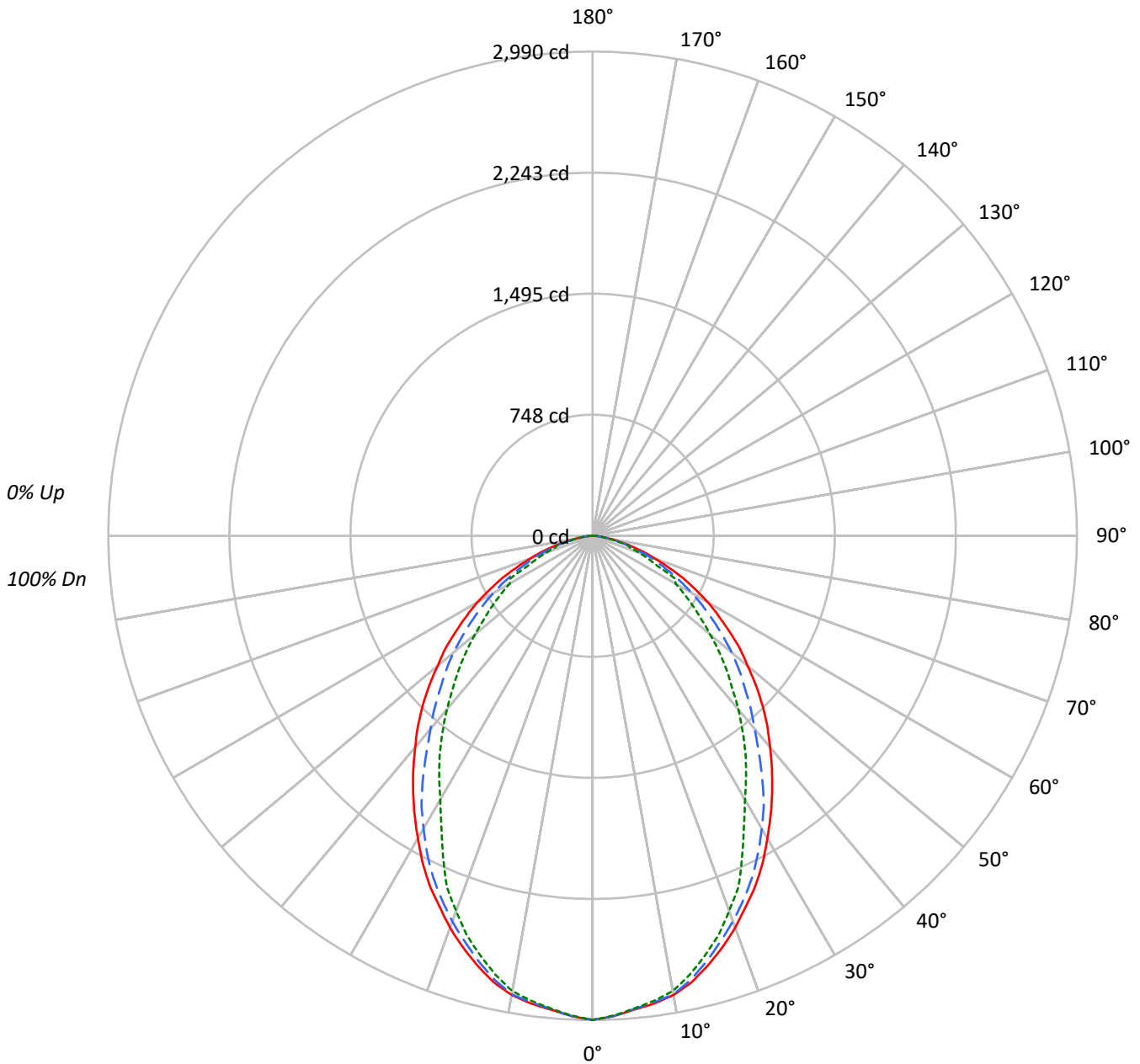
Lumens per Lamp: N/A
Luminaire Lumens: 5869.0 lumens
Efficiency: N/A
Efficacy: 67.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P546107

CATALOG NUMBER: FMR-12-4-LD4-2HI-35-UNV-80-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546107

CATALOG NUMBER: FMR-12-4-LD4-2HI-35-UNV-80-88-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°	8045	8045	8045
5°	7935	7926	7917
10°	7867	7857	7801
15°	7655	7578	7472
20°	7373	7255	7057
25°	7070	6917	6486
30°	6701	6486	5842
35°	6347	5995	5404
40°	5985	5463	4917
45°	5643	5051	4446
50°	5223	4688	3965
55°	4832	4248	3551
60°	4427	3795	3181
65°	3895	3323	2817
70°	3209	2910	2393
75°	2551	2228	2336
80°	1714	1607	1500
85°	1068	1281	1494



TEST NUMBER: P546107

CATALOG NUMBER: FMR-12-4-LD4-2HI-35-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.3	4.7
10°-20°	763.7	13.0
20°-30°	1057.4	18.0
30°-40°	1127.5	19.2
40°-50°	1028.6	17.5
50°-60°	805.8	13.7
60°-70°	525.2	8.9
70°-80°	232.7	4.0
80°-90°	50.0	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°	2099.4	35.8
0°-40°	3226.8	55.0
0°-60°	5061.2	86.2
0°-90°	5869.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5869.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2990	2990	2990	2990	2990	
5°	2938	2934	2934	2931	2931	279
15°	2748	2748	2720	2692	2682	772
25°	2381	2368	2330	2246	2184	1093
35°	1932	1918	1825	1687	1645	1208
45°	1483	1452	1327	1217	1168	1142
55°	1030	999	906	798	757	924
65°	612	577	522	532	442	603
75°	245	228	214	204	225	263
85°	35	38	42	45	48	48
90°	0	0	0	0	0	



TEST NUMBER: P546107

CATALOG NUMBER: FMR-12-4-LD4-2HI-35-UNV-80-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2989.6	2989.6	2989.6	2989.6	2989.6
2.5°	2968.9	2968.9	2968.9	2965.4	2965.4
5°	2937.7	2934.3	2934.3	2930.8	2930.8
7.5°	2913.6	2910.1	2906.6	2903.2	2896.3
10°	2879.0	2879.0	2875.5	2858.3	2854.8
12.5°	2823.7	2820.2	2806.4	2782.2	2775.3
15°	2747.7	2747.7	2720.0	2692.4	2682.0
17.5°	2664.7	2661.3	2626.7	2599.0	2585.2
20°	2574.8	2567.9	2533.4	2488.4	2464.3
22.5°	2474.6	2474.6	2433.1	2374.4	2350.2
25°	2381.3	2367.5	2329.5	2246.5	2184.3
27.5°	2274.2	2253.4	2212.0	2094.4	2021.9
30°	2156.7	2146.3	2087.5	1935.5	1880.2
32.5°	2046.1	2028.8	1966.6	1807.6	1762.6
35°	1932.0	1918.2	1824.9	1686.6	1645.1
37.5°	1817.9	1800.7	1683.2	1572.6	1520.7
40°	1703.9	1683.2	1555.3	1455.0	1399.8
42.5°	1596.8	1569.1	1444.7	1337.5	1275.3
45°	1482.7	1451.6	1327.2	1216.6	1168.2
47.5°	1368.6	1341.0	1226.9	1112.9	1057.6
50°	1247.7	1223.5	1119.8	1005.7	947.0
52.5°	1147.4	1109.4	1009.2	895.1	846.8
55°	1029.9	998.8	905.5	798.4	756.9
57.5°	922.8	891.7	805.3	705.1	670.5
60°	822.6	777.6	705.1	618.7	591.0
62.5°	712.0	677.4	615.2	542.6	577.2
65°	611.7	577.2	521.9	532.3	442.4
67.5°	501.1	483.9	435.5	387.1	373.3
70°	407.8	387.1	369.8	318.0	304.1
72.5°	324.9	304.1	280.0	252.3	241.9
75°	245.4	228.1	214.3	203.9	224.7
77.5°	169.4	162.4	152.1	141.7	138.2
80°	110.6	107.1	103.7	100.2	96.8
82.5°	65.7	65.7	65.7	65.7	65.7
85°	34.6	38.0	41.5	44.9	48.4
87.5°	20.7	20.7	24.2	27.6	31.1
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)