

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: P546140

Luminaire Tested: **FMR-12-4-LD4-2HI-40-UNV-80-94-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: P546140
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-40-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

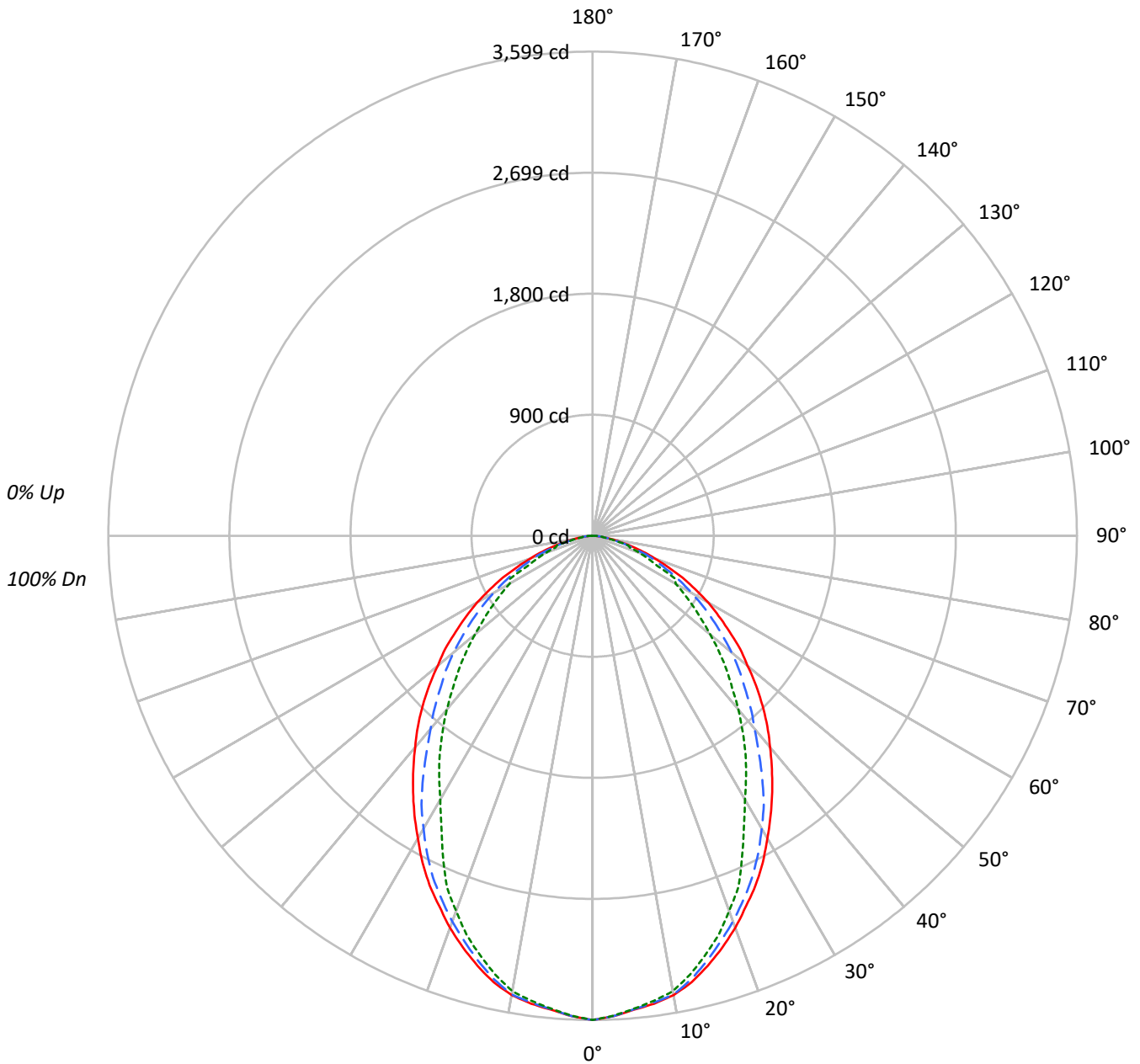
Lumens per Lamp: N/A
Luminaire Lumens: 7066.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	9686	9686	9686
5°	9554	9543	9532
10°	9471	9460	9392
15°	9216	9123	8996
20°	8877	8735	8496
25°	8513	8327	7808
30°	8068	7810	7034
35°	7641	7217	6507
40°	7206	6578	5920
45°	6793	6081	5352
50°	6288	5644	4773
55°	5818	5115	4275
60°	5330	4569	3829
65°	4690	4001	3391
70°	3863	3503	2881
75°	3071	2682	2812
80°	2064	1934	1805
85°	1284	1541	1800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	335.0	4.7
10°-20°	919.5	13.0
20°-30°	1273.0	18.0
30°-40°	1357.4	19.2
40°-50°	1238.3	17.5
50°-60°	970.1	13.7
60°-70°	632.3	8.9
70°-80°	280.1	4.0
80°-90°	60.2	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°	2527.6	35.8
0°-40°	3885.0	55.0
0°-60°	6093.4	86.2
0°-90°	7066.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7066.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3599	3599	3599	3599	3599	
5°	3537	3533	3533	3529	3529	336
15°	3308	3308	3275	3242	3229	930
25°	2867	2850	2805	2705	2630	1316
35°	2326	2309	2197	2031	1981	1454
45°	1785	1748	1598	1465	1406	1375
55°	1240	1202	1090	961	911	1112
65°	736	695	628	641	533	726
75°	295	275	258	246	270	317
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3599.3	3599.3	3599.3	3599.3	3599.3
2.5°	3574.4	3574.4	3574.4	3570.2	3570.2
5°	3536.9	3532.7	3532.7	3528.6	3528.6
7.5°	3507.8	3503.6	3499.5	3495.3	3487.0
10°	3466.2	3466.2	3462.0	3441.2	3437.0
12.5°	3399.6	3395.4	3378.8	3349.7	3341.3
15°	3308.1	3308.1	3274.8	3241.5	3229.0
17.5°	3208.2	3204.0	3162.4	3129.1	3112.5
20°	3100.0	3091.7	3050.1	2996.0	2966.8
22.5°	2979.3	2979.3	2929.4	2858.7	2829.5
25°	2867.0	2850.3	2804.6	2704.7	2629.8
27.5°	2738.0	2713.0	2663.1	2521.6	2434.2
30°	2596.5	2584.0	2513.3	2330.2	2263.6
32.5°	2463.4	2442.5	2367.6	2176.2	2122.1
35°	2326.0	2309.4	2197.0	2030.6	1980.7
37.5°	2188.7	2167.9	2026.4	1893.3	1830.9
40°	2051.4	2026.4	1872.5	1751.8	1685.2
42.5°	1922.4	1889.1	1739.3	1610.3	1535.4
45°	1785.1	1747.6	1597.9	1464.7	1406.4
47.5°	1647.8	1614.5	1477.2	1339.9	1273.3
50°	1502.1	1473.0	1348.2	1210.9	1140.1
52.5°	1381.5	1335.7	1215.0	1077.7	1019.5
55°	1240.0	1202.5	1090.2	961.2	911.3
57.5°	1111.0	1073.6	969.5	848.9	807.2
60°	990.3	936.2	848.9	744.8	711.5
62.5°	857.2	815.6	740.7	653.3	694.9
65°	736.5	694.9	628.3	640.8	532.6
67.5°	603.4	582.5	524.3	466.0	449.4
70°	491.0	466.0	445.2	382.8	366.2
72.5°	391.1	366.2	337.0	303.8	291.3
75°	295.4	274.6	258.0	245.5	270.5
77.5°	203.9	195.6	183.1	170.6	166.4
80°	133.2	129.0	124.8	120.7	116.5
82.5°	79.1	79.1	79.1	79.1	79.1
85°	41.6	45.8	49.9	54.1	58.3
87.5°	25.0	25.0	29.1	33.3	37.4
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)