

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: P546358

Luminaire Tested: **FMR-12-4-LD4-2STD-40-UNV-93-97-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: P546358
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-93-97-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

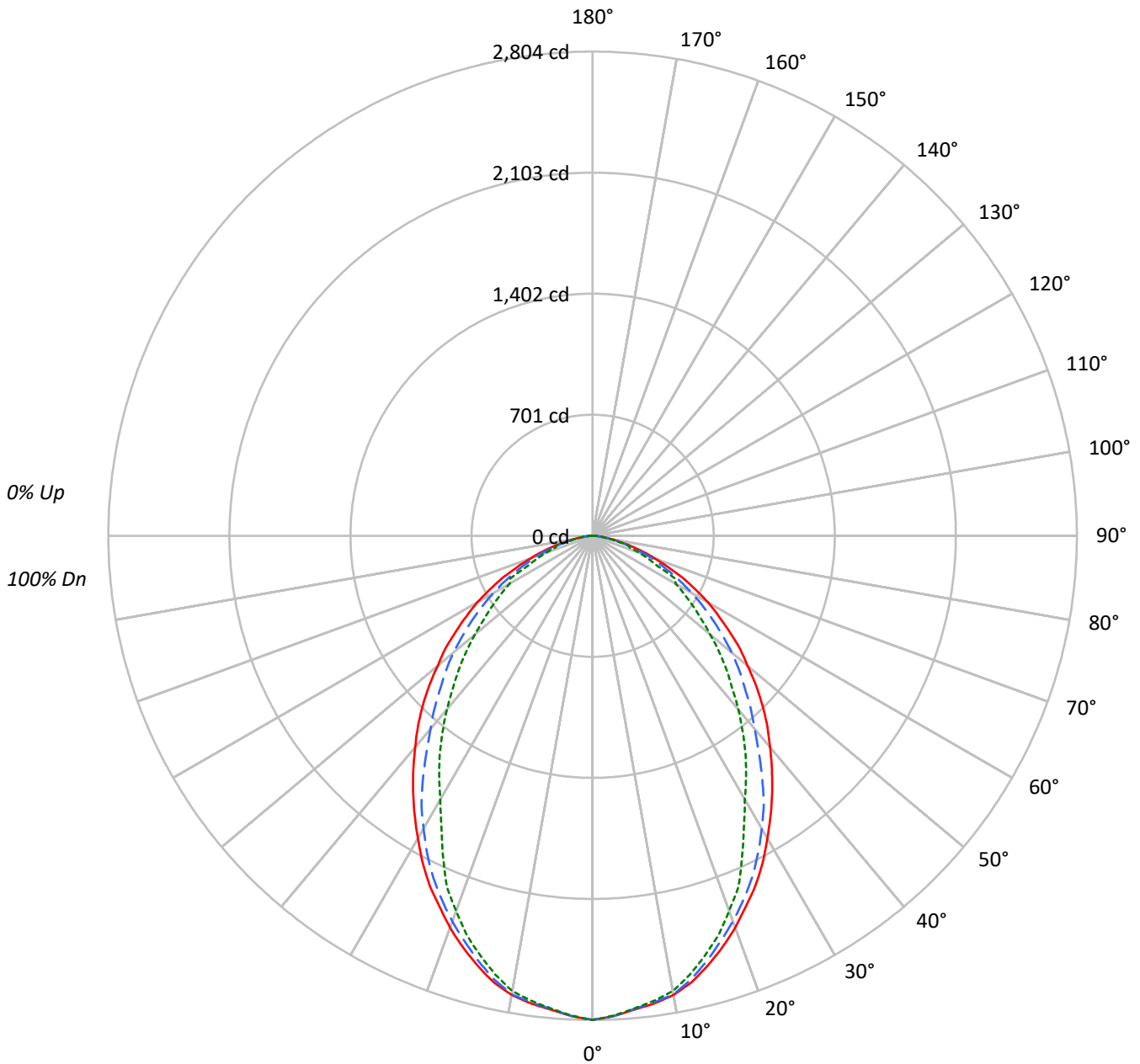
Lumens per Lamp: N/A
Luminaire Lumens: 5504.0 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	7545	7545	7545
5°	7442	7433	7425
10°	7377	7369	7316
15°	7179	7106	7007
20°	6915	6804	6618
25°	6631	6486	6082
30°	6284	6083	5479
35°	5952	5622	5068
40°	5613	5124	4611
45°	5292	4736	4169
50°	4899	4397	3718
55°	4532	3984	3330
60°	4152	3559	2983
65°	3653	3116	2642
70°	3009	2729	2244
75°	2392	2090	2191
80°	1607	1506	1407
85°	1000	1201	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.0	4.7
10°-20°	716.2	13.0
20°-30°	991.6	18.0
30°-40°	1057.3	19.2
40°-50°	964.6	17.5
50°-60°	755.7	13.7
60°-70°	492.5	8.9
70°-80°	218.2	4.0
80°-90°	46.8	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°	1968.8	35.8
0°-40°	3026.2	55.0
0°-60°	4746.4	86.2
0°-90°	5504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5504.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2804	2804	2804	2804	2804	
5°	2755	2752	2752	2749	2749	262
15°	2577	2577	2551	2525	2515	724
25°	2233	2220	2185	2107	2048	1025
35°	1812	1799	1711	1582	1543	1133
45°	1390	1361	1245	1141	1096	1071
55°	966	937	849	749	710	866
65°	574	541	489	499	415	565
75°	230	214	201	191	211	247
85°	32	36	39	42	45	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2803.7	2803.7	2803.7	2803.7	2803.7
2.5°	2784.2	2784.2	2784.2	2781.0	2781.0
5°	2755.0	2751.8	2751.8	2748.6	2748.6
7.5°	2732.4	2729.1	2725.9	2722.6	2716.2
10°	2699.9	2699.9	2696.7	2680.5	2677.3
12.5°	2648.1	2644.8	2631.9	2609.2	2602.7
15°	2576.8	2576.8	2550.8	2524.9	2515.2
17.5°	2499.0	2495.7	2463.3	2437.4	2424.4
20°	2414.7	2408.2	2375.8	2333.7	2311.0
22.5°	2320.7	2320.7	2281.8	2226.7	2204.0
25°	2233.2	2220.2	2184.6	2106.8	2048.5
27.5°	2132.7	2113.3	2074.4	1964.2	1896.1
30°	2022.5	2012.8	1957.7	1815.1	1763.2
32.5°	1918.8	1902.6	1844.3	1695.2	1653.0
35°	1811.8	1798.9	1711.4	1581.7	1542.8
37.5°	1704.9	1688.7	1578.5	1474.8	1426.1
40°	1597.9	1578.5	1458.6	1364.6	1312.7
42.5°	1497.4	1471.5	1354.8	1254.4	1196.0
45°	1390.5	1361.3	1244.6	1140.9	1095.5
47.5°	1283.5	1257.6	1150.6	1043.7	991.8
50°	1170.1	1147.4	1050.2	943.2	888.1
52.5°	1076.1	1040.4	946.4	839.5	794.1
55°	965.9	936.7	849.2	748.7	709.8
57.5°	865.4	836.2	755.2	661.2	628.8
60°	771.4	729.3	661.2	580.2	554.3
62.5°	667.7	635.3	576.9	508.9	541.3
65°	573.7	541.3	489.4	499.1	414.9
67.5°	470.0	453.8	408.4	363.0	350.1
70°	382.5	363.0	346.8	298.2	285.2
72.5°	304.7	285.2	262.5	236.6	226.9
75°	230.1	213.9	201.0	191.2	210.7
77.5°	158.8	152.3	142.6	132.9	129.6
80°	103.7	100.5	97.2	94.0	90.8
82.5°	61.6	61.6	61.6	61.6	61.6
85°	32.4	35.7	38.9	42.1	45.4
87.5°	19.4	19.4	22.7	25.9	29.2
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)