

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: P546372

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-81-94-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: P546372
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-50-UNV-81-94-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

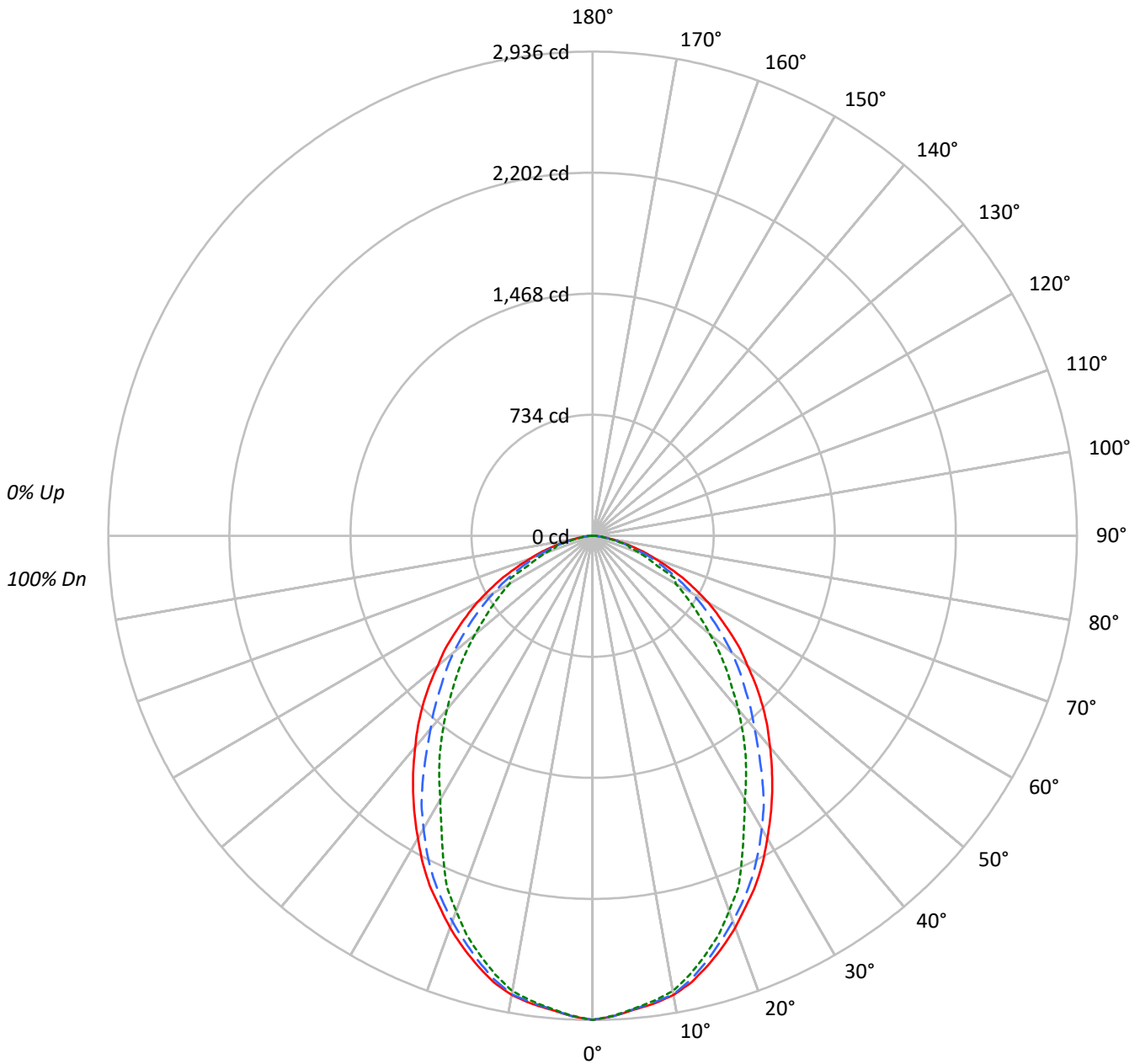
Lumens per Lamp: N/A
Luminaire Lumens: 5763.0 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7900	7900	7900
5°	7792	7783	7774
10°	7725	7715	7660
15°	7516	7441	7337
20°	7240	7124	6929
25°	6943	6792	6369
30°	6580	6369	5737
35°	6232	5887	5307
40°	5877	5365	4828
45°	5541	4959	4365
50°	5129	4603	3893
55°	4745	4172	3487
60°	4347	3726	3123
65°	3825	3263	2766
70°	3151	2857	2350
75°	2506	2188	2294
80°	1683	1578	1472
85°	1047	1257	1467



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.3	4.7
10°-20°	750.0	13.0
20°-30°	1038.3	18.0
30°-40°	1107.1	19.2
40°-50°	1010.0	17.5
50°-60°	791.2	13.7
60°-70°	515.7	8.9
70°-80°	228.5	4.0
80°-90°	49.1	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°	2061.5	35.8
0°-40°	3168.6	55.0
0°-60°	4969.8	86.2
0°-90°	5763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5763.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2936	2936	2936	2936	2936	
5°	2885	2881	2881	2878	2878	274
15°	2698	2698	2671	2644	2634	758
25°	2338	2325	2287	2206	2145	1074
35°	1897	1884	1792	1656	1615	1186
45°	1456	1425	1303	1195	1147	1121
55°	1011	981	889	784	743	907
65°	601	567	512	523	434	592
75°	241	224	210	200	221	258
85°	34	37	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2935.6	2935.6	2935.6	2935.6	2935.6
2.5°	2915.2	2915.2	2915.2	2911.8	2911.8
5°	2884.7	2881.3	2881.3	2877.9	2877.9
7.5°	2860.9	2857.5	2854.1	2850.8	2844.0
10°	2827.0	2827.0	2823.6	2806.6	2803.2
12.5°	2772.7	2769.3	2755.7	2732.0	2725.2
15°	2698.0	2698.0	2670.9	2643.7	2633.6
17.5°	2616.6	2613.2	2579.3	2552.1	2538.5
20°	2528.3	2521.6	2487.6	2443.5	2419.7
22.5°	2429.9	2429.9	2389.2	2331.5	2307.8
25°	2338.3	2324.7	2287.4	2205.9	2144.9
27.5°	2233.1	2212.7	2172.0	2056.6	1985.3
30°	2117.7	2107.5	2049.8	1900.5	1846.2
32.5°	2009.1	1992.1	1931.0	1774.9	1730.8
35°	1897.1	1883.5	1791.9	1656.2	1615.4
37.5°	1785.1	1768.1	1652.8	1544.2	1493.3
40°	1673.1	1652.8	1527.2	1428.8	1374.5
42.5°	1567.9	1540.8	1418.6	1313.4	1252.3
45°	1455.9	1425.4	1303.2	1194.6	1147.1
47.5°	1343.9	1316.8	1204.8	1092.8	1038.5
50°	1225.1	1201.4	1099.6	987.6	929.9
52.5°	1126.7	1089.4	991.0	879.0	831.5
55°	1011.3	980.8	889.2	784.0	743.2
57.5°	906.1	875.6	790.7	692.3	658.4
60°	807.7	763.6	692.3	607.5	580.3
62.5°	699.1	665.2	604.1	532.8	566.8
65°	600.7	566.8	512.5	522.6	434.4
67.5°	492.1	475.1	427.6	380.1	366.5
70°	400.5	380.1	363.1	312.2	298.7
72.5°	319.0	298.7	274.9	247.7	237.6
75°	241.0	224.0	210.4	200.2	220.6
77.5°	166.3	159.5	149.3	139.1	135.8
80°	108.6	105.2	101.8	98.4	95.0
82.5°	64.5	64.5	64.5	64.5	64.5
85°	33.9	37.3	40.7	44.1	47.5
87.5°	20.4	20.4	23.8	27.2	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)