

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: P546363

Luminaire Tested: **FMR-12-4-LD4-2STD-50-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: P546363
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-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

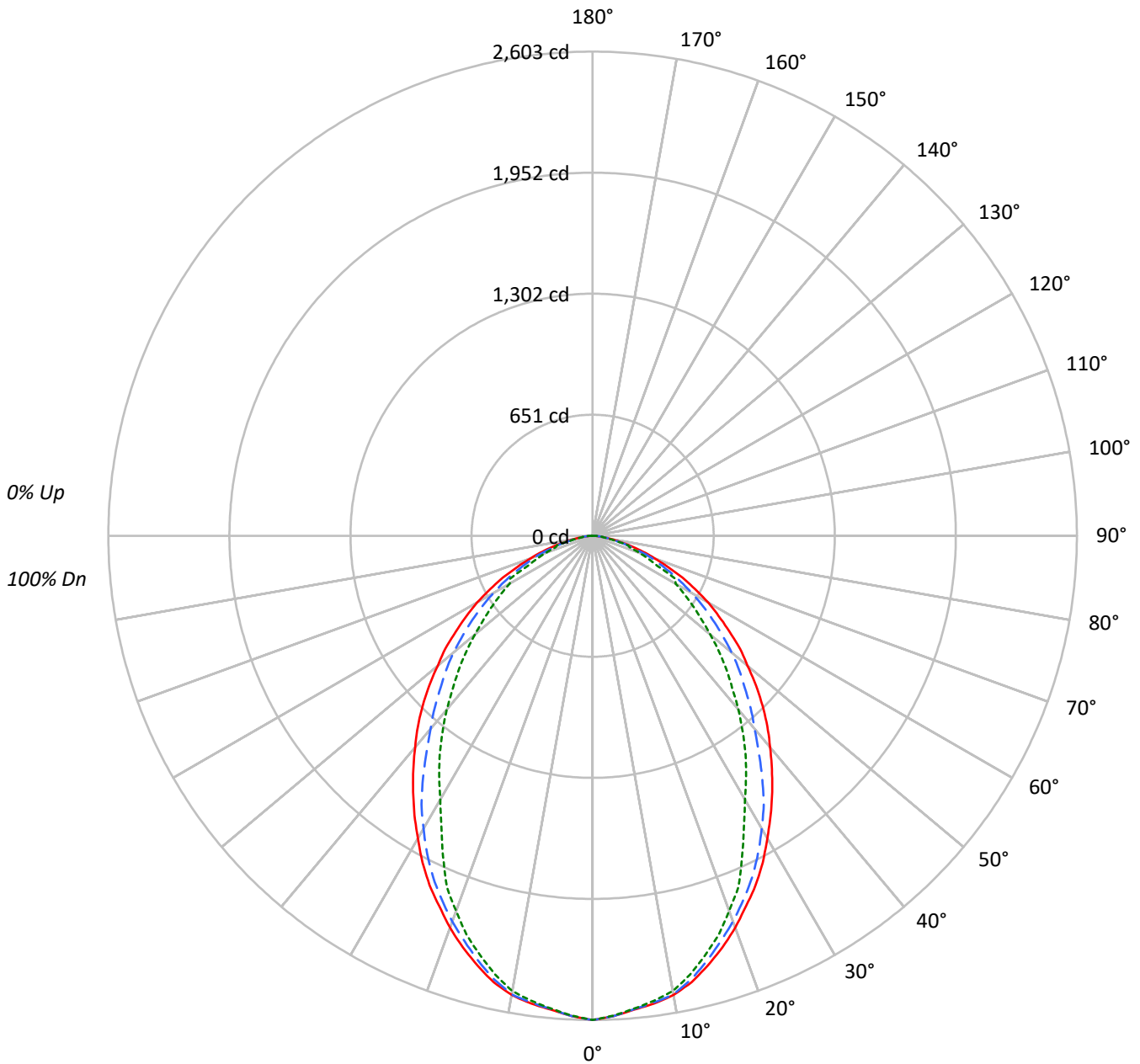
Lumens per Lamp: N/A
Luminaire Lumens: 5110.0 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7005	7005	7005
5°	6909	6901	6893
10°	6850	6841	6792
15°	6665	6598	6505
20°	6420	6317	6144
25°	6156	6022	5647
30°	5835	5648	5087
35°	5526	5220	4706
40°	5211	4757	4281
45°	4913	4397	3871
50°	4548	4082	3452
55°	4207	3699	3092
60°	3855	3304	2770
65°	3391	2893	2453
70°	2794	2533	2083
75°	2222	1940	2034
80°	1492	1399	1306
85°	929	1115	1300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.3	4.7
10°-20°	665.0	13.0
20°-30°	920.6	18.0
30°-40°	981.6	19.2
40°-50°	895.5	17.5
50°-60°	701.6	13.7
60°-70°	457.2	8.9
70°-80°	202.6	4.0
80°-90°	43.5	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°	1827.9	35.8
0°-40°	2809.5	55.0
0°-60°	4406.7	86.2
0°-90°	5110.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5110.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2603	2603	2603	2603	2603	
5°	2558	2555	2555	2552	2552	243
15°	2392	2392	2368	2344	2335	673
25°	2073	2061	2028	1956	1902	952
35°	1682	1670	1589	1468	1432	1052
45°	1291	1264	1156	1059	1017	994
55°	897	870	788	695	659	804
65°	533	502	454	463	385	525
75°	214	199	187	178	196	229
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2603.0	2603.0	2603.0	2603.0	2603.0
2.5°	2584.9	2584.9	2584.9	2581.9	2581.9
5°	2557.8	2554.8	2554.8	2551.8	2551.8
7.5°	2536.8	2533.8	2530.7	2527.7	2521.7
10°	2506.7	2506.7	2503.7	2488.6	2485.6
12.5°	2458.5	2455.5	2443.5	2422.4	2416.4
15°	2392.3	2392.3	2368.2	2344.2	2335.1
17.5°	2320.1	2317.1	2287.0	2262.9	2250.9
20°	2241.9	2235.8	2205.8	2166.6	2145.6
22.5°	2154.6	2154.6	2118.5	2067.3	2046.3
25°	2073.3	2061.3	2028.2	1956.0	1901.8
27.5°	1980.1	1962.0	1925.9	1823.6	1760.4
30°	1877.7	1868.7	1817.6	1685.2	1637.0
32.5°	1781.5	1766.4	1712.2	1573.8	1534.7
35°	1682.1	1670.1	1588.9	1468.5	1432.4
37.5°	1582.8	1567.8	1465.5	1369.2	1324.1
40°	1483.5	1465.5	1354.1	1266.9	1218.7
42.5°	1390.3	1366.2	1257.8	1164.6	1110.4
45°	1291.0	1263.9	1155.5	1059.2	1017.1
47.5°	1191.6	1167.6	1068.3	969.0	920.8
50°	1086.3	1065.3	975.0	875.7	824.5
52.5°	999.1	966.0	878.7	779.4	737.3
55°	896.7	869.7	788.4	695.1	659.0
57.5°	803.5	776.4	701.1	613.9	583.8
60°	716.2	677.1	613.9	538.6	514.6
62.5°	619.9	589.8	535.6	472.4	502.5
65°	532.6	502.5	454.4	463.4	385.2
67.5°	436.3	421.3	379.2	337.0	325.0
70°	355.1	337.0	322.0	276.8	264.8
72.5°	282.9	264.8	243.7	219.7	210.6
75°	213.7	198.6	186.6	177.5	195.6
77.5°	147.5	141.4	132.4	123.4	120.4
80°	96.3	93.3	90.3	87.3	84.3
82.5°	57.2	57.2	57.2	57.2	57.2
85°	30.1	33.1	36.1	39.1	42.1
87.5°	18.1	18.1	21.1	24.1	27.1
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)