

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: P547402

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-82-87-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: P547402
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-24-4-LD4-4LO-40-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

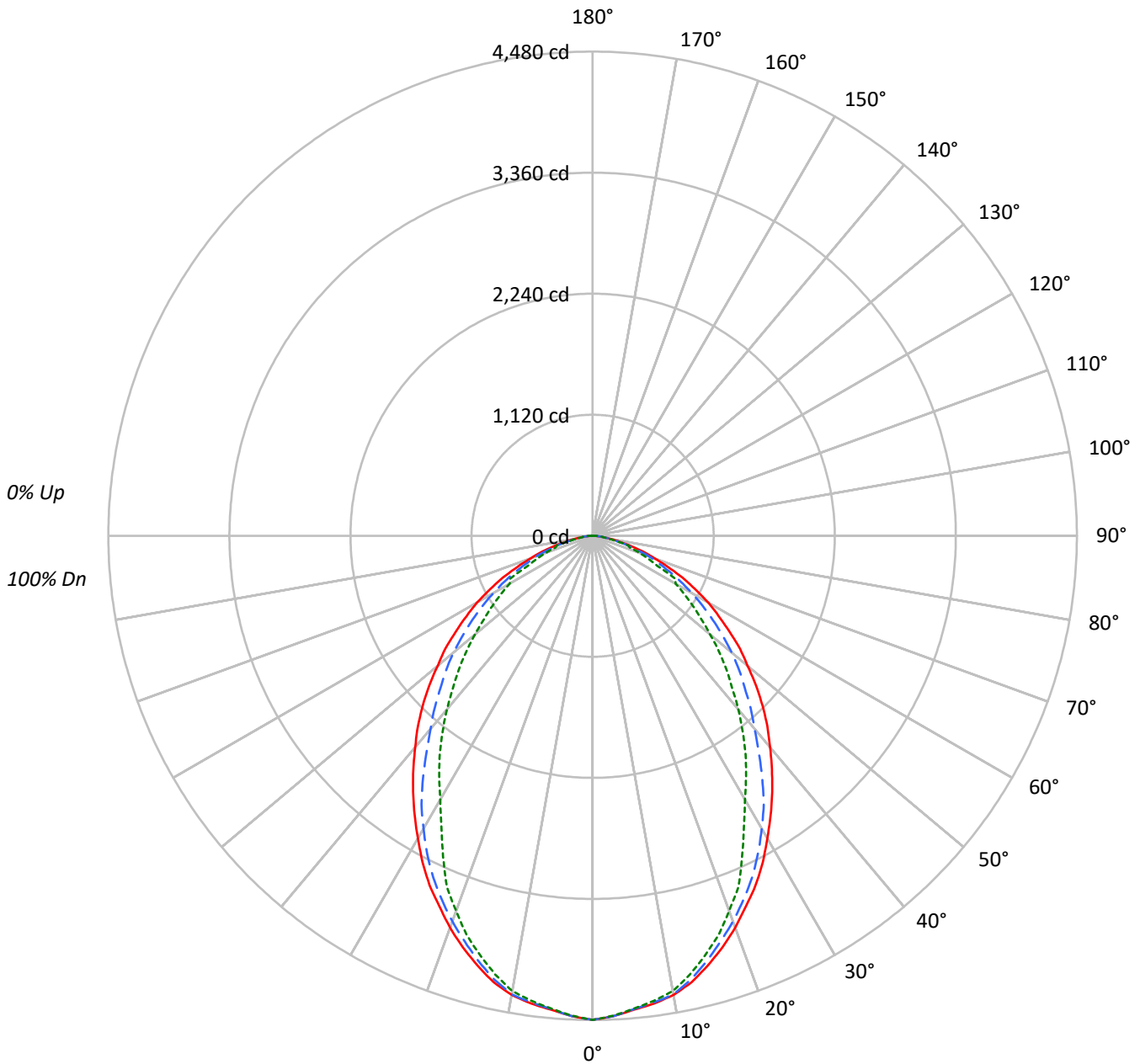
Lumens per Lamp: N/A
Luminaire Lumens: 8794.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6027	6027	6027
5°	5945	5938	5931
10°	5894	5887	5844
15°	5735	5677	5598
20°	5524	5435	5287
25°	5297	5182	4859
30°	5021	4860	4377
35°	4755	4491	4049
40°	4484	4093	3684
45°	4227	3784	3331
50°	3913	3512	2970
55°	3620	3183	2660
60°	3317	2843	2383
65°	2918	2490	2110
70°	2404	2180	1793
75°	1912	1669	1750
80°	1284	1204	1124
85°	800	959	1119



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.0	4.7
10°-20°	1144.4	13.0
20°-30°	1584.3	18.0
30°-40°	1689.3	19.2
40°-50°	1541.2	17.5
50°-60°	1207.4	13.7
60°-70°	786.9	8.9
70°-80°	348.6	4.0
80°-90°	74.9	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°	3145.7	35.8
0°-40°	4835.0	55.0
0°-60°	7583.6	86.2
0°-90°	8794.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8794.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4480	4480	4480	4480	4480	
5°	4402	4397	4397	4392	4392	418
15°	4117	4117	4076	4034	4019	1157
25°	3568	3547	3490	3366	3273	1638
35°	2895	2874	2734	2527	2465	1810
45°	2222	2175	1989	1823	1750	1711
55°	1543	1497	1357	1196	1134	1384
65°	917	865	782	798	663	903
75°	368	342	321	306	337	394
85°	52	57	62	67	72	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4479.5	4479.5	4479.5	4479.5	4479.5
2.5°	4448.5	4448.5	4448.5	4443.3	4443.3
5°	4401.9	4396.7	4396.7	4391.5	4391.5
7.5°	4365.6	4360.4	4355.3	4350.1	4339.7
10°	4313.8	4313.8	4308.7	4282.8	4277.6
12.5°	4231.0	4225.8	4205.1	4168.8	4158.5
15°	4117.0	4117.0	4075.6	4034.2	4018.6
17.5°	3992.8	3987.6	3935.8	3894.4	3873.6
20°	3858.1	3847.7	3796.0	3728.6	3692.4
22.5°	3707.9	3707.9	3645.8	3557.7	3521.5
25°	3568.1	3547.4	3490.4	3366.1	3272.9
27.5°	3407.6	3376.5	3314.3	3138.3	3029.5
30°	3231.5	3216.0	3127.9	2900.1	2817.2
32.5°	3065.8	3039.9	2946.7	2708.4	2641.1
35°	2894.9	2874.2	2734.3	2527.2	2465.0
37.5°	2724.0	2698.1	2522.0	2356.3	2278.6
40°	2553.1	2522.0	2330.4	2180.2	2097.4
42.5°	2392.5	2351.1	2164.7	2004.1	1910.9
45°	2221.6	2175.0	1988.6	1822.9	1750.4
47.5°	2050.8	2009.3	1838.4	1667.5	1584.7
50°	1869.5	1833.2	1677.9	1507.0	1419.0
52.5°	1719.3	1662.4	1512.2	1341.3	1268.8
55°	1543.2	1496.6	1356.8	1196.3	1134.1
57.5°	1382.7	1336.1	1206.6	1056.4	1004.7
60°	1232.5	1165.2	1056.4	927.0	885.6
62.5°	1066.8	1015.0	921.8	813.1	864.8
65°	916.6	864.8	782.0	797.5	662.9
67.5°	750.9	725.0	652.5	580.0	559.3
70°	611.1	580.0	554.1	476.4	455.7
72.5°	486.8	455.7	419.5	378.0	362.5
75°	367.7	341.8	321.1	305.5	336.6
77.5°	253.8	243.4	227.9	212.3	207.1
80°	165.7	160.5	155.4	150.2	145.0
82.5°	98.4	98.4	98.4	98.4	98.4
85°	51.8	57.0	62.1	67.3	72.5
87.5°	31.1	31.1	36.3	41.4	46.6
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)