

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: P546724

Luminaire Tested: **FMR-24-4-LD4-2HI-40-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: P546724
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-LD4-2HI-40-UNV-81-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC 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

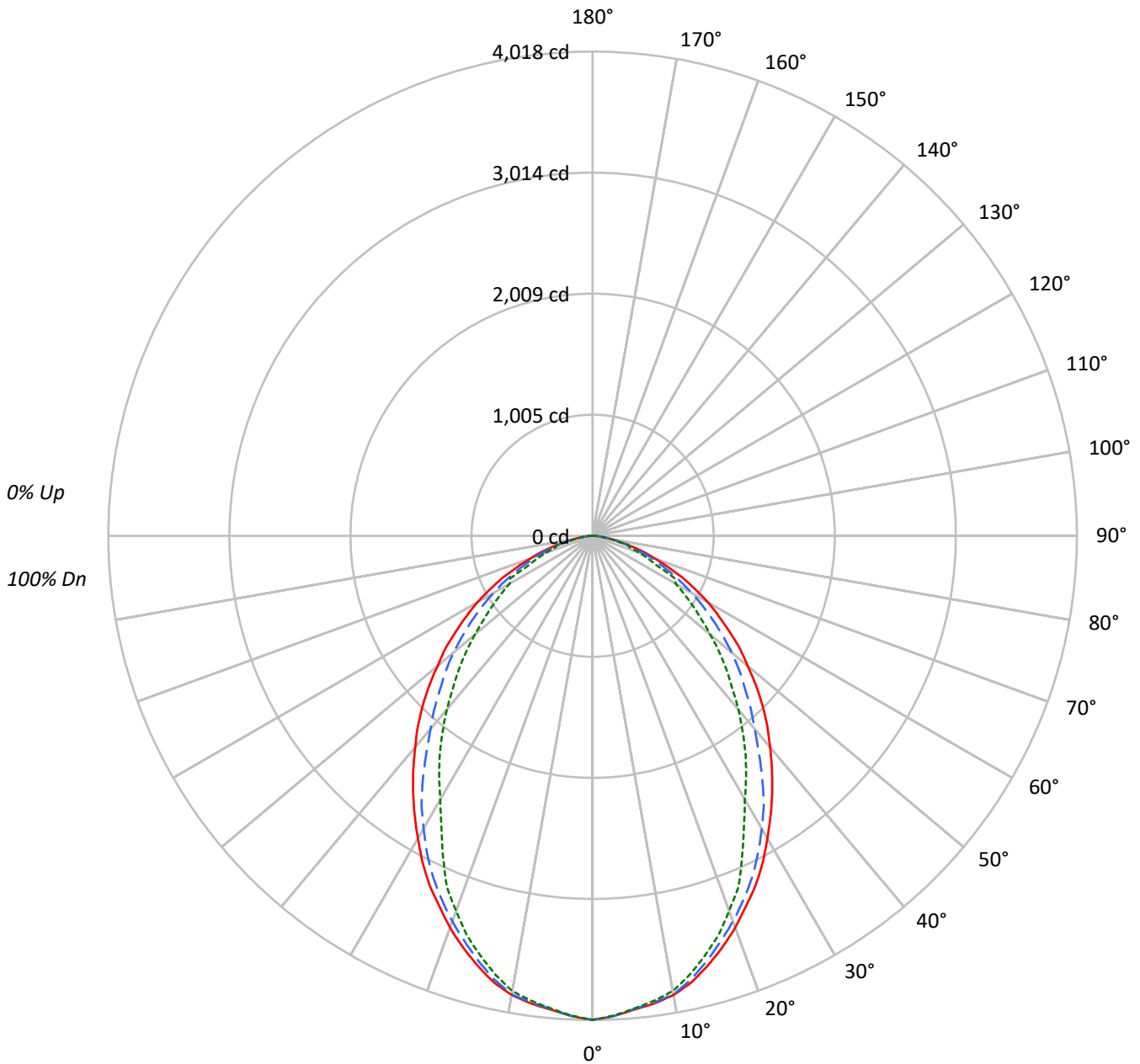
Lumens per Lamp: N/A
Luminaire Lumens: 7887.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5406	5406	5406
5°	5332	5326	5320
10°	5286	5280	5241
15°	5143	5092	5020
20°	4954	4875	4742
25°	4751	4647	4358
30°	4503	4358	3925
35°	4265	4028	3631
40°	4022	3671	3304
45°	3791	3394	2987
50°	3510	3150	2664
55°	3247	2855	2386
60°	2975	2550	2137
65°	2617	2233	1893
70°	2156	1955	1608
75°	1714	1497	1569
80°	1151	1079	1007
85°	716	860	1003



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.0	4.7
10°-20°	1026.4	13.0
20°-30°	1420.9	18.0
30°-40°	1515.1	19.2
40°-50°	1382.2	17.5
50°-60°	1082.9	13.7
60°-70°	705.8	8.9
70°-80°	312.7	4.0
80°-90°	67.1	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°	2821.2	35.8
0°-40°	4336.4	55.0
0°-60°	6801.4	86.2
0°-90°	7887.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7887.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4018	4018	4018	4018	4018	
5°	3948	3943	3943	3939	3939	375
15°	3692	3692	3655	3618	3604	1038
25°	3200	3182	3130	3019	2935	1469
35°	2596	2578	2452	2266	2211	1623
45°	1992	1951	1784	1635	1570	1535
55°	1384	1342	1217	1073	1017	1241
65°	822	776	701	715	594	810
75°	330	306	288	274	302	353
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4017.5	4017.5	4017.5	4017.5	4017.5
2.5°	3989.7	3989.7	3989.7	3985.0	3985.0
5°	3947.9	3943.2	3943.2	3938.6	3938.6
7.5°	3915.4	3910.7	3906.1	3901.4	3892.1
10°	3868.9	3868.9	3864.3	3841.0	3836.4
12.5°	3794.6	3789.9	3771.4	3738.9	3729.6
15°	3692.4	3692.4	3655.3	3618.1	3604.2
17.5°	3580.9	3576.3	3529.9	3492.7	3474.1
20°	3460.2	3450.9	3404.5	3344.1	3311.6
22.5°	3325.5	3325.5	3269.8	3190.8	3158.3
25°	3200.1	3181.5	3130.4	3019.0	2935.4
27.5°	3056.1	3028.2	2972.5	2814.6	2717.1
30°	2898.2	2884.3	2805.3	2600.9	2526.6
32.5°	2749.6	2726.3	2642.7	2429.1	2368.7
35°	2596.3	2577.7	2452.3	2266.5	2210.8
37.5°	2443.0	2419.8	2261.9	2113.3	2043.6
40°	2289.8	2261.9	2090.0	1955.4	1881.0
42.5°	2145.8	2108.6	1941.4	1797.4	1713.8
45°	1992.5	1950.7	1783.5	1634.9	1569.9
47.5°	1839.2	1802.1	1648.8	1495.5	1421.2
50°	1676.7	1644.2	1504.8	1351.6	1272.6
52.5°	1542.0	1490.9	1356.2	1202.9	1137.9
55°	1384.1	1342.3	1216.9	1072.9	1017.2
57.5°	1240.1	1198.3	1082.2	947.5	901.0
60°	1105.4	1045.0	947.5	831.4	794.2
62.5°	956.8	910.3	826.7	729.2	775.6
65°	822.1	775.6	701.3	715.3	594.5
67.5°	673.5	650.2	585.2	520.2	501.6
70°	548.1	520.2	497.0	427.3	408.7
72.5°	436.6	408.7	376.2	339.1	325.1
75°	329.8	306.5	288.0	274.0	301.9
77.5°	227.6	218.3	204.4	190.4	185.8
80°	148.6	144.0	139.3	134.7	130.0
82.5°	88.2	88.2	88.2	88.2	88.2
85°	46.4	51.1	55.7	60.4	65.0
87.5°	27.9	27.9	32.5	37.2	41.8
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)