

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: P547304

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-82-85-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: P547304
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-LD4-4HI-40-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

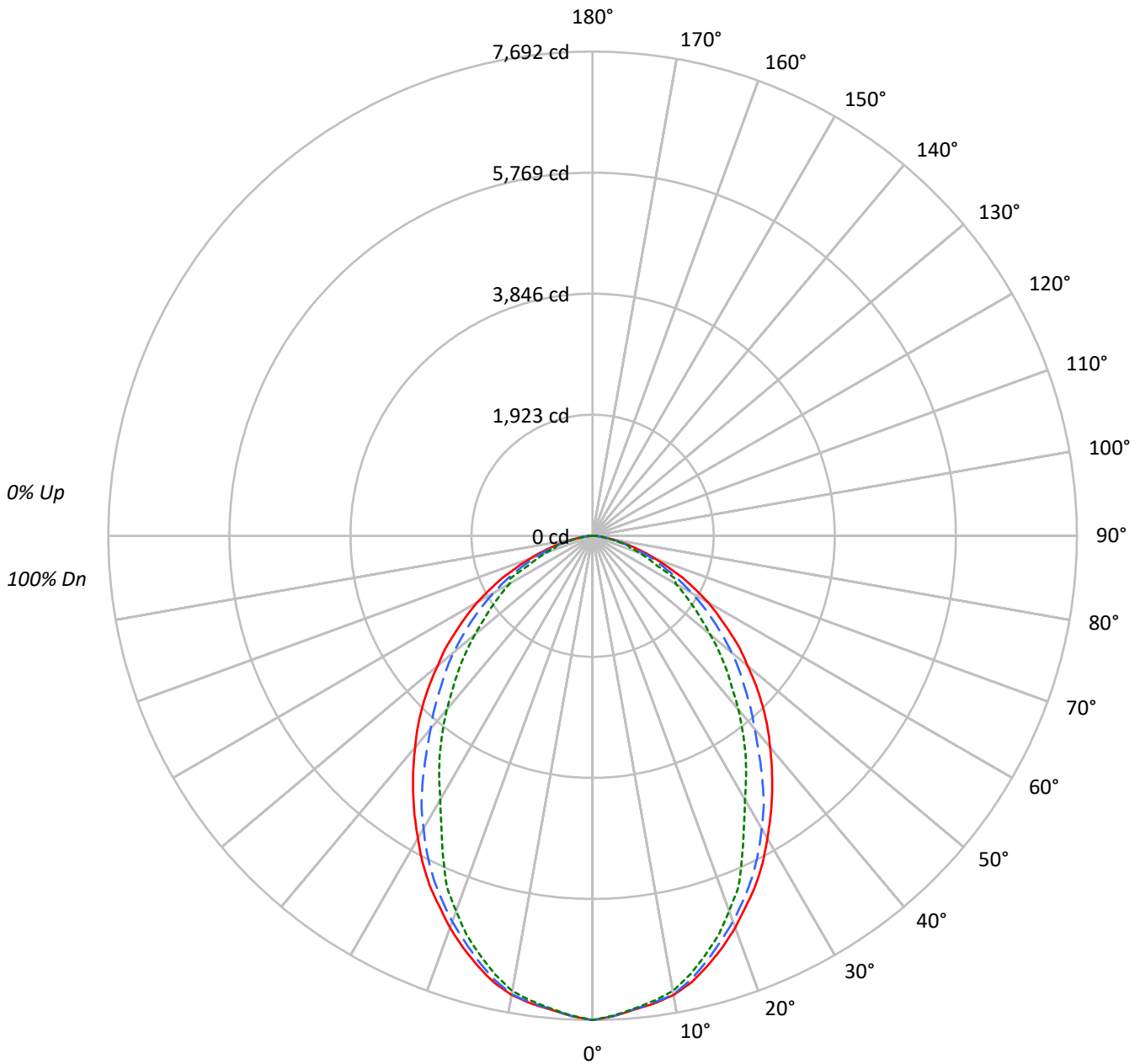
Lumens per Lamp: N/A
Luminaire Lumens: 15100.0 lumens
Efficiency: N/A
Efficacy: 87.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	10349	10349	10349
5°	10209	10197	10185
10°	10120	10108	10035
15°	9847	9748	9612
20°	9486	9333	9078
25°	9096	8898	8343
30°	8621	8344	7515
35°	8165	7712	6952
40°	7700	7028	6325
45°	7259	6497	5719
50°	6719	6031	5100
55°	6216	5465	4568
60°	5695	4881	4092
65°	5011	4275	3624
70°	4128	3743	3078
75°	3282	2866	3005
80°	2204	2067	1929
85°	1372	1647	1922



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	716.0	4.7
10°-20°	1965.0	13.0
20°-30°	2720.4	18.0
30°-40°	2900.7	19.2
40°-50°	2646.3	17.5
50°-60°	2073.2	13.7
60°-70°	1351.2	8.9
70°-80°	598.6	4.0
80°-90°	128.5	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°	5401.4	35.8
0°-40°	8302.1	55.0
0°-60°	13021.6	86.2
0°-90°	15100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7692	7692	7692	7692	7692	
5°	7558	7550	7550	7541	7541	717
15°	7069	7069	6998	6927	6900	1987
25°	6127	6091	5993	5780	5620	2813
35°	4971	4935	4695	4339	4233	3108
45°	3815	3735	3415	3130	3006	2938
55°	2650	2570	2330	2054	1947	2377
65°	1574	1485	1343	1369	1138	1551
75°	631	587	551	525	578	677
85°	89	98	107	116	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7691.7	7691.7	7691.7	7691.7	7691.7
2.5°	7638.4	7638.4	7638.4	7629.5	7629.5
5°	7558.4	7549.5	7549.5	7540.6	7540.6
7.5°	7496.1	7487.2	7478.3	7469.4	7451.6
10°	7407.2	7407.2	7398.3	7353.8	7344.9
12.5°	7264.9	7256.0	7220.5	7158.2	7140.4
15°	7069.3	7069.3	6998.1	6927.0	6900.3
17.5°	6855.9	6847.0	6758.1	6686.9	6651.4
20°	6624.7	6606.9	6518.0	6402.4	6340.1
22.5°	6366.8	6366.8	6260.1	6108.9	6046.7
25°	6126.7	6091.1	5993.3	5779.9	5619.9
27.5°	5851.1	5797.7	5691.0	5388.7	5201.9
30°	5548.7	5522.0	5370.9	4979.6	4837.3
32.5°	5264.2	5219.7	5059.7	4650.6	4535.0
35°	4970.7	4935.2	4695.1	4339.4	4232.7
37.5°	4677.3	4632.8	4330.5	4045.9	3912.6
40°	4383.8	4330.5	4001.5	3743.6	3601.3
42.5°	4108.2	4037.1	3716.9	3441.3	3281.2
45°	3814.7	3734.7	3414.6	3130.0	3005.6
47.5°	3521.3	3450.2	3156.7	2863.3	2721.0
50°	3210.1	3147.8	2881.1	2587.6	2436.5
52.5°	2952.2	2854.4	2596.5	2303.1	2178.6
55°	2649.9	2569.8	2329.8	2054.1	1947.4
57.5°	2374.2	2294.2	2071.9	1814.0	1725.1
60°	2116.3	2000.7	1814.0	1591.7	1520.6
62.5°	1831.8	1742.9	1582.8	1396.1	1485.0
65°	1573.9	1485.0	1342.7	1369.4	1138.2
67.5°	1289.4	1244.9	1120.4	995.9	960.4
70°	1049.3	995.9	951.5	818.1	782.5
72.5°	835.9	782.5	720.3	649.1	622.5
75°	631.3	586.9	551.3	524.6	578.0
77.5°	435.7	417.9	391.3	364.6	355.7
80°	284.5	275.7	266.8	257.9	249.0
82.5°	169.0	169.0	169.0	169.0	169.0
85°	88.9	97.8	106.7	115.6	124.5
87.5°	53.4	53.4	62.2	71.1	80.0
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)