

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: P547495

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-82-84-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: P547495
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-LD4-4STD-40-UNV-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

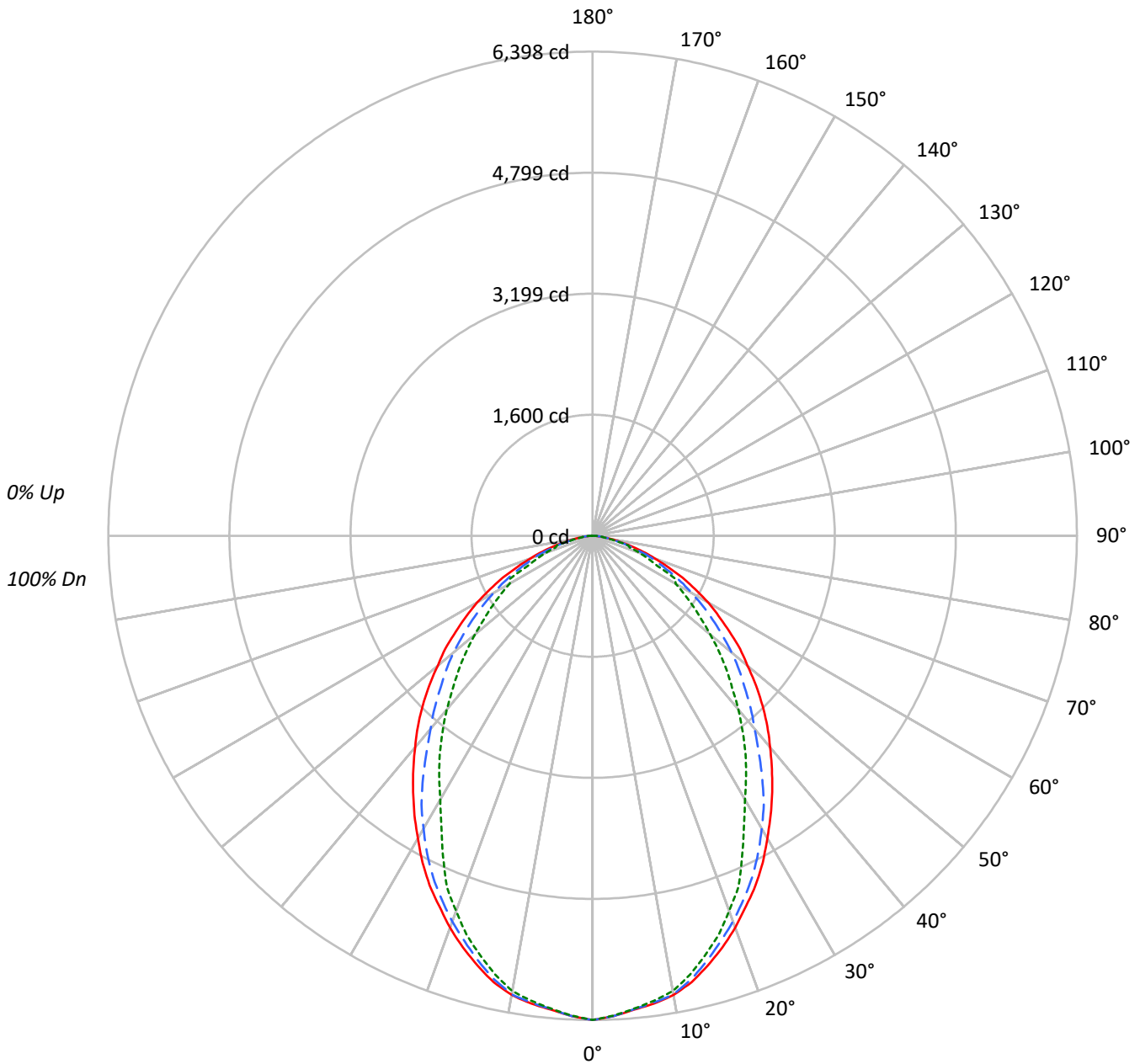
Lumens per Lamp: N/A
Luminaire Lumens: 12560.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8608	8608	8608
5°	8491	8481	8471
10°	8418	8408	8347
15°	8191	8108	7995
20°	7890	7763	7551
25°	7566	7401	6940
30°	7171	6941	6251
35°	6791	6415	5783
40°	6405	5846	5261
45°	6038	5404	4757
50°	5589	5016	4242
55°	5170	4546	3800
60°	4737	4060	3404
65°	4168	3556	3014
70°	3434	3113	2561
75°	2730	2384	2499
80°	1834	1719	1605
85°	1142	1371	1598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	595.6	4.7
10°-20°	1634.5	13.0
20°-30°	2262.8	18.0
30°-40°	2412.8	19.2
40°-50°	2201.2	17.5
50°-60°	1724.5	13.7
60°-70°	1123.9	8.9
70°-80°	497.9	4.0
80°-90°	106.9	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°	4492.8	35.8
0°-40°	6905.6	55.0
0°-60°	10831.2	86.2
0°-90°	12560.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12560.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6398	6398	6398	6398	6398	
5°	6287	6280	6280	6272	6272	597
15°	5880	5880	5821	5762	5740	1653
25°	5096	5066	4985	4808	4674	2340
35°	4135	4105	3905	3609	3521	2585
45°	3173	3106	2840	2604	2500	2444
55°	2204	2138	1938	1709	1620	1977
65°	1309	1235	1117	1139	947	1290
75°	525	488	459	436	481	563
85°	74	81	89	96	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6397.9	6397.9	6397.9	6397.9	6397.9
2.5°	6353.5	6353.5	6353.5	6346.1	6346.1
5°	6287.0	6279.6	6279.6	6272.2	6272.2
7.5°	6235.2	6227.8	6220.4	6213.0	6198.2
10°	6161.2	6161.2	6153.8	6116.8	6109.4
12.5°	6042.9	6035.5	6005.9	5954.1	5939.3
15°	5880.1	5880.1	5821.0	5761.8	5739.6
17.5°	5702.6	5695.2	5621.3	5562.1	5532.5
20°	5510.3	5495.5	5421.6	5325.4	5273.6
22.5°	5295.8	5295.8	5207.1	5081.3	5029.6
25°	5096.1	5066.5	4985.2	4807.7	4674.5
27.5°	4866.8	4822.5	4733.7	4482.2	4326.9
30°	4615.4	4593.2	4467.4	4142.0	4023.6
32.5°	4378.7	4341.7	4208.6	3868.3	3772.2
35°	4134.6	4105.0	3905.3	3609.4	3520.7
37.5°	3890.5	3853.5	3602.1	3365.4	3254.4
40°	3646.4	3602.1	3328.4	3113.9	2995.5
42.5°	3417.1	3358.0	3091.7	2862.4	2729.3
45°	3173.1	3106.5	2840.2	2603.5	2500.0
47.5°	2929.0	2869.8	2625.7	2381.6	2263.3
50°	2670.1	2618.3	2396.4	2152.4	2026.6
52.5°	2455.6	2374.2	2159.8	1915.7	1812.1
55°	2204.1	2137.6	1937.9	1708.6	1619.8
57.5°	1974.8	1908.3	1723.4	1508.9	1434.9
60°	1760.3	1664.2	1508.9	1324.0	1264.8
62.5°	1523.7	1449.7	1316.6	1161.2	1235.2
65°	1309.2	1235.2	1116.9	1139.0	946.7
67.5°	1072.5	1035.5	931.9	828.4	798.8
70°	872.8	828.4	791.4	680.5	650.9
72.5°	695.3	650.9	599.1	539.9	517.7
75°	525.1	488.2	458.6	436.4	480.8
77.5°	362.4	347.6	325.4	303.3	295.9
80°	236.7	229.3	221.9	214.5	207.1
82.5°	140.5	140.5	140.5	140.5	140.5
85°	74.0	81.4	88.8	96.2	103.5
87.5°	44.4	44.4	51.8	59.2	66.6
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)