

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: P589344

Luminaire Tested: **FMR-24-2-LD4-3HI-50-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589344
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-3HI-50-UNV-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

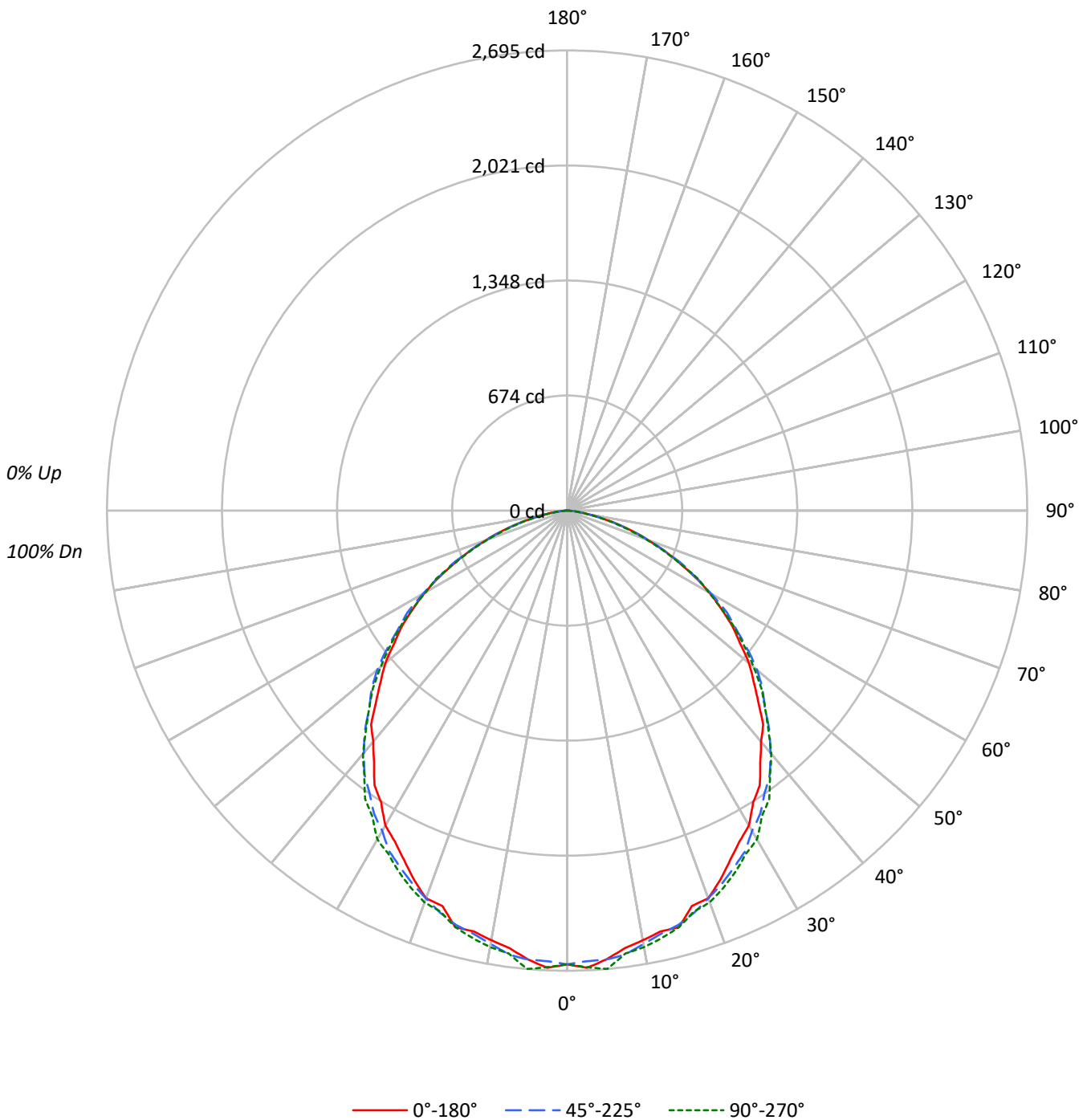
Lumens per Lamp: N/A
Luminaire Lumens: 6697.0 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 64.8
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				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7150	7150	7150
5°	7127	7130	7280
10°	6982	7043	7093
15°	7037	6999	7039
20°	6919	6919	6992
25°	6706	6853	6928
30°	6614	6730	6909
35°	6458	6627	6776
40°	6207	6506	6535
45°	6019	6233	6242
50°	5821	6084	5968
55°	5547	5655	5614
60°	5187	5238	5144
65°	4625	4742	4592
70°	3968	3982	3871
75°	3143	3136	3014
80°	2106	2047	1967
85°	1145	1133	1059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.9	3.7
10°-20°	708.4	10.6
20°-30°	1061.3	15.8
30°-40°	1257.9	18.8
40°-50°	1260.2	18.8
50°-60°	1069.7	16.0
60°-70°	721.2	10.8
70°-80°	316.9	4.7
80°-90°	51.5	0.8
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°	2019.6	30.2
0°-40°	3277.5	48.9
0°-60°	5607.4	83.7
0°-90°	6697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2657	2657	2657	2657	2657	
5°	2638	2632	2639	2632	2695	249
15°	2526	2497	2512	2526	2526	704
25°	2258	2271	2308	2338	2333	1044
35°	1966	1972	2017	2064	2063	1221
45°	1582	1611	1638	1680	1640	1223
55°	1182	1174	1205	1197	1197	1052
65°	726	717	745	716	721	722
75°	302	296	302	280	290	324
85°	37	36	37	36	34	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2657.2	2657.2	2657.2	2657.2	2657.2
2.5°	2680.2	2659.9	2641.1	2663.0	2676.4
5°	2638.3	2632.2	2639.4	2631.5	2694.9
7.5°	2584.1	2607.8	2621.5	2612.9	2616.7
10°	2555.3	2547.1	2577.6	2598.9	2595.8
12.5°	2524.4	2536.8	2538.5	2561.5	2563.5
15°	2526.1	2497.0	2512.4	2525.5	2526.5
17.5°	2428.0	2459.6	2470.2	2500.1	2463.0
20°	2416.0	2393.0	2416.0	2446.5	2441.7
22.5°	2342.2	2316.5	2365.9	2393.0	2391.3
25°	2258.5	2270.9	2307.9	2338.1	2333.3
27.5°	2185.1	2199.5	2252.4	2293.9	2267.1
30°	2128.5	2121.3	2165.9	2203.0	2223.5
32.5°	2027.3	2053.4	2105.5	2142.2	2122.7
35°	1965.9	1971.7	2017.3	2064.0	2062.6
37.5°	1858.5	1885.6	1949.8	1962.8	1950.8
40°	1766.9	1794.0	1852.0	1866.0	1860.2
42.5°	1699.3	1704.1	1753.9	1770.0	1744.2
45°	1581.6	1611.1	1637.9	1680.1	1640.3
47.5°	1481.4	1495.2	1552.8	1564.1	1543.2
50°	1390.5	1395.3	1453.3	1439.2	1425.5
52.5°	1276.3	1296.5	1329.1	1326.4	1310.2
55°	1182.3	1174.4	1205.3	1197.0	1196.7
57.5°	1069.4	1083.1	1108.5	1095.5	1074.5
60°	963.7	964.1	973.3	958.6	955.8
62.5°	846.0	850.2	852.2	834.0	863.5
65°	726.3	716.7	744.8	716.4	721.2
67.5°	616.2	621.0	618.2	600.4	607.3
70°	504.3	510.5	506.1	485.8	492.0
72.5°	402.1	394.5	399.4	374.0	385.6
75°	302.3	296.1	301.6	280.3	289.9
77.5°	205.9	210.7	207.2	195.9	202.4
80°	135.9	132.1	132.1	125.6	126.9
82.5°	79.3	75.5	74.4	72.4	75.5
85°	37.1	36.0	36.7	35.7	34.3
87.5°	13.4	13.7	13.7	13.0	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)