

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: P589705

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589705
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-LD4-4LO-40-UNV-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

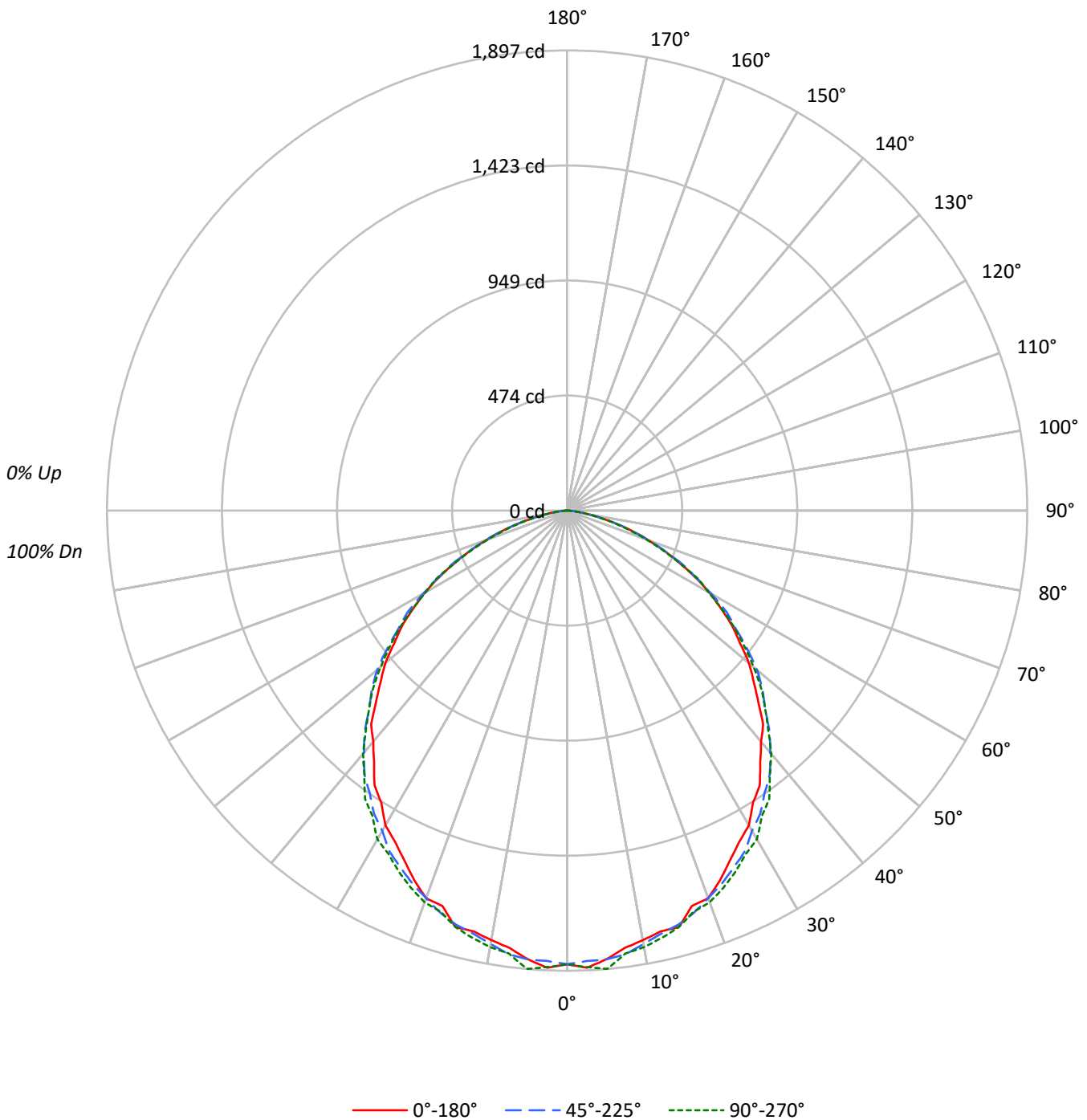
Lumens per Lamp: N/A
Luminaire Lumens: 4713.0 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	5032	5032	5032
5°	5015	5017	5123
10°	4914	4957	4992
15°	4953	4926	4953
20°	4869	4869	4921
25°	4719	4823	4876
30°	4654	4736	4862
35°	4545	4664	4769
40°	4368	4578	4599
45°	4236	4387	4393
50°	4097	4282	4200
55°	3903	3979	3951
60°	3650	3687	3620
65°	3254	3338	3231
70°	2792	2802	2724
75°	2211	2206	2121
80°	1481	1441	1384
85°	806	797	744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.9	3.7
10°-20°	498.5	10.6
20°-30°	746.9	15.8
30°-40°	885.2	18.8
40°-50°	886.9	18.8
50°-60°	752.8	16.0
60°-70°	507.5	10.8
70°-80°	223.0	4.7
80°-90°	36.2	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°	1421.3	30.2
0°-40°	2306.6	48.9
0°-60°	3946.2	83.7
0°-90°	4713.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4713.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1870	1870	1870	1870	1870	
5°	1857	1852	1857	1852	1897	175
15°	1778	1757	1768	1777	1778	495
25°	1589	1598	1624	1646	1642	735
35°	1384	1388	1420	1452	1452	859
45°	1113	1134	1153	1182	1154	861
55°	832	826	848	842	842	740
65°	511	504	524	504	508	508
75°	213	208	212	197	204	228
85°	26	25	26	25	24	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1870.0	1870.0	1870.0	1870.0	1870.0
2.5°	1886.2	1871.9	1858.7	1874.1	1883.5
5°	1856.7	1852.4	1857.4	1851.9	1896.6
7.5°	1818.6	1835.2	1844.9	1838.9	1841.5
10°	1798.3	1792.5	1814.0	1829.0	1826.8
12.5°	1776.6	1785.3	1786.5	1802.6	1804.1
15°	1777.8	1757.2	1768.1	1777.3	1778.0
17.5°	1708.7	1730.9	1738.4	1759.4	1733.3
20°	1700.3	1684.1	1700.3	1721.8	1718.4
22.5°	1648.4	1630.2	1665.0	1684.1	1682.9
25°	1589.4	1598.1	1624.2	1645.5	1642.1
27.5°	1537.8	1547.9	1585.1	1614.3	1595.5
30°	1497.9	1492.9	1524.2	1550.3	1564.8
32.5°	1426.7	1445.1	1481.8	1507.6	1493.8
35°	1383.5	1387.6	1419.7	1452.5	1451.6
37.5°	1307.9	1327.0	1372.1	1381.3	1372.9
40°	1243.4	1262.5	1303.3	1313.2	1309.1
42.5°	1195.9	1199.3	1234.3	1245.6	1227.5
45°	1113.1	1133.8	1152.7	1182.4	1154.4
47.5°	1042.6	1052.2	1092.8	1100.8	1086.0
50°	978.6	982.0	1022.8	1012.9	1003.2
52.5°	898.2	912.4	935.4	933.4	922.1
55°	832.0	826.5	848.2	842.4	842.2
57.5°	752.6	762.2	780.1	770.9	756.2
60°	678.2	678.5	685.0	674.6	672.7
62.5°	595.4	598.3	599.8	587.0	607.7
65°	511.1	504.4	524.2	504.1	507.5
67.5°	433.6	437.0	435.1	422.5	427.4
70°	354.9	359.3	356.1	341.9	346.2
72.5°	283.0	277.7	281.0	263.2	271.4
75°	212.7	208.4	212.2	197.3	204.0
77.5°	144.9	148.2	145.8	137.9	142.5
80°	95.6	93.0	93.0	88.4	89.3
82.5°	55.8	53.1	52.4	50.9	53.1
85°	26.1	25.4	25.8	25.1	24.1
87.5°	9.4	9.7	9.7	9.2	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)