

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: P589411

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589411
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-LD4-3LO-40-UNV-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

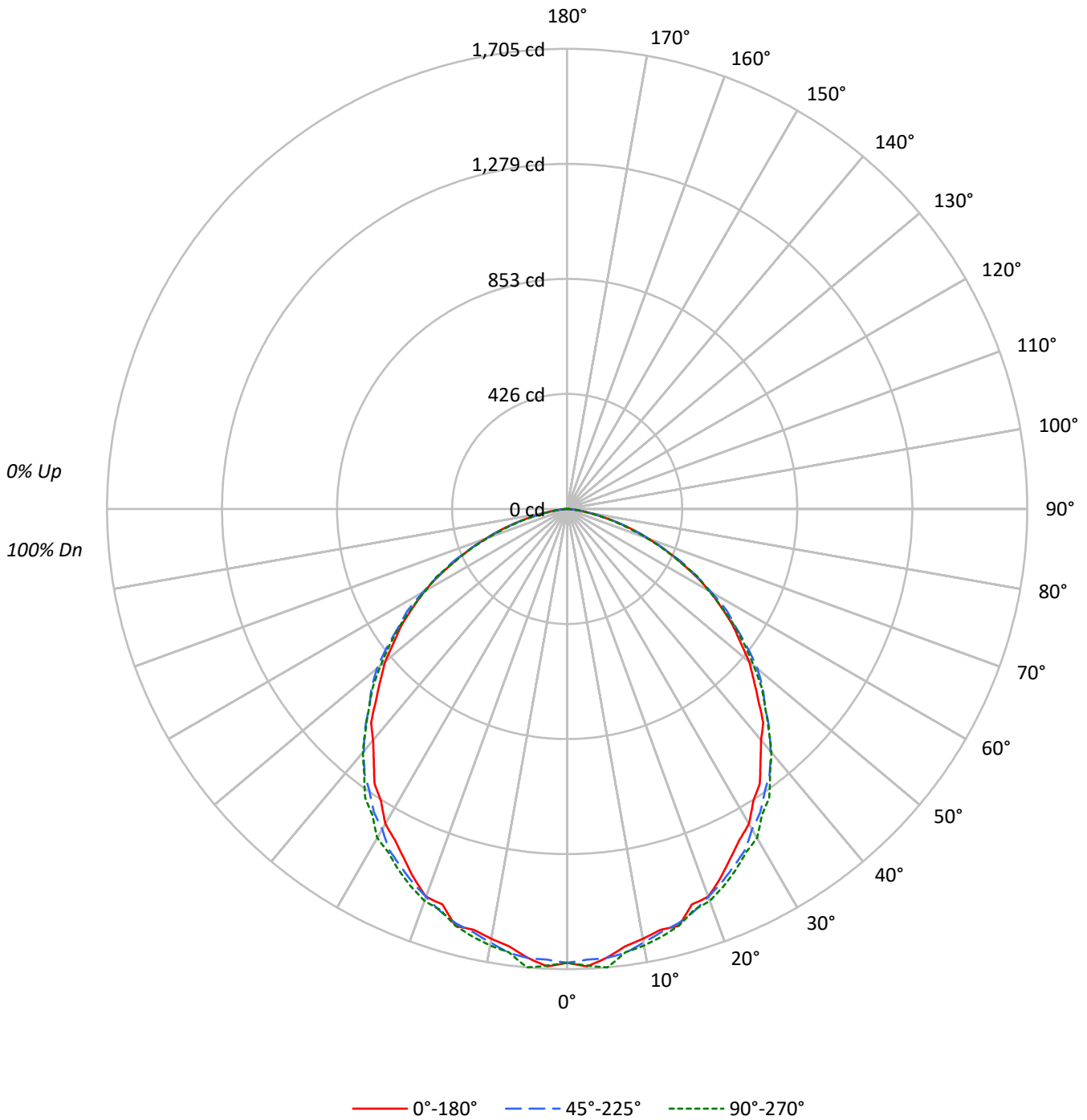
Lumens per Lamp: N/A
Luminaire Lumens: 4238.0 lumens
Efficiency: N/A
Efficacy: 120.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P589411

CATALOG NUMBER: FMR-24-2-LD4-3LO-40-UNV-81-96-EDD

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°	4525	4525	4525
5°	4510	4512	4607
10°	4418	4457	4489
15°	4454	4429	4454
20°	4378	4378	4425
25°	4244	4336	4384
30°	4185	4259	4372
35°	4087	4194	4288
40°	3928	4117	4135
45°	3809	3945	3950
50°	3684	3850	3777
55°	3510	3578	3553
60°	3282	3315	3256
65°	2926	3001	2906
70°	2511	2519	2449
75°	1989	1984	1908
80°	1333	1296	1244
85°	722	716	670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.2	3.7
10°-20°	448.3	10.6
20°-30°	671.6	15.8
30°-40°	796.0	18.8
40°-50°	797.5	18.8
50°-60°	676.9	16.0
60°-70°	456.4	10.8
70°-80°	200.5	4.7
80°-90°	32.6	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°	1278.1	30.2
0°-40°	2074.1	48.9
0°-60°	3548.5	83.7
0°-90°	4238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4238.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1682	1682	1682	1682	1682	
5°	1670	1666	1670	1665	1705	157
15°	1599	1580	1590	1598	1599	445
25°	1429	1437	1460	1480	1477	661
35°	1244	1248	1277	1306	1305	772
45°	1001	1020	1036	1063	1038	774
55°	748	743	763	758	757	666
65°	460	454	471	453	456	457
75°	191	187	191	177	184	205
85°	23	23	23	23	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1681.5	1681.5	1681.5	1681.5	1681.5
2.5°	1696.1	1683.3	1671.3	1685.2	1693.7
5°	1669.6	1665.7	1670.2	1665.2	1705.4
7.5°	1635.3	1650.3	1659.0	1653.5	1655.9
10°	1617.0	1611.8	1631.2	1644.6	1642.7
12.5°	1597.5	1605.3	1606.4	1621.0	1622.3
15°	1598.6	1580.1	1589.9	1598.2	1598.8
17.5°	1536.5	1556.5	1563.2	1582.1	1558.6
20°	1528.9	1514.4	1528.9	1548.2	1545.2
22.5°	1482.2	1465.9	1497.2	1514.4	1513.3
25°	1429.2	1437.1	1460.5	1479.6	1476.6
27.5°	1382.8	1391.9	1425.3	1451.6	1434.7
30°	1347.0	1342.4	1370.6	1394.1	1407.1
32.5°	1282.9	1299.4	1332.4	1355.6	1343.3
35°	1244.1	1247.7	1276.6	1306.1	1305.3
37.5°	1176.1	1193.2	1233.8	1242.1	1234.5
40°	1118.1	1135.3	1172.0	1180.9	1177.2
42.5°	1075.4	1078.4	1109.9	1120.1	1103.8
45°	1000.9	1019.6	1036.5	1063.2	1038.0
47.5°	937.5	946.2	982.6	989.8	976.6
50°	880.0	883.0	919.7	910.8	902.1
52.5°	807.7	820.5	841.1	839.4	829.2
55°	748.2	743.2	762.7	757.5	757.3
57.5°	676.7	685.4	701.5	693.2	680.0
60°	609.9	610.1	615.9	606.6	604.9
62.5°	535.4	538.0	539.3	527.8	546.5
65°	459.6	453.5	471.3	453.3	456.4
67.5°	389.9	393.0	391.2	379.9	384.3
70°	319.2	323.1	320.2	307.4	311.3
72.5°	254.5	249.7	252.7	236.7	244.0
75°	191.3	187.4	190.8	177.4	183.5
77.5°	130.3	133.3	131.1	124.0	128.1
80°	86.0	83.6	83.6	79.5	80.3
82.5°	50.2	47.8	47.1	45.8	47.8
85°	23.4	22.8	23.2	22.6	21.7
87.5°	8.5	8.7	8.7	8.3	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)