

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: P589412

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-81-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589412
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-81-97-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

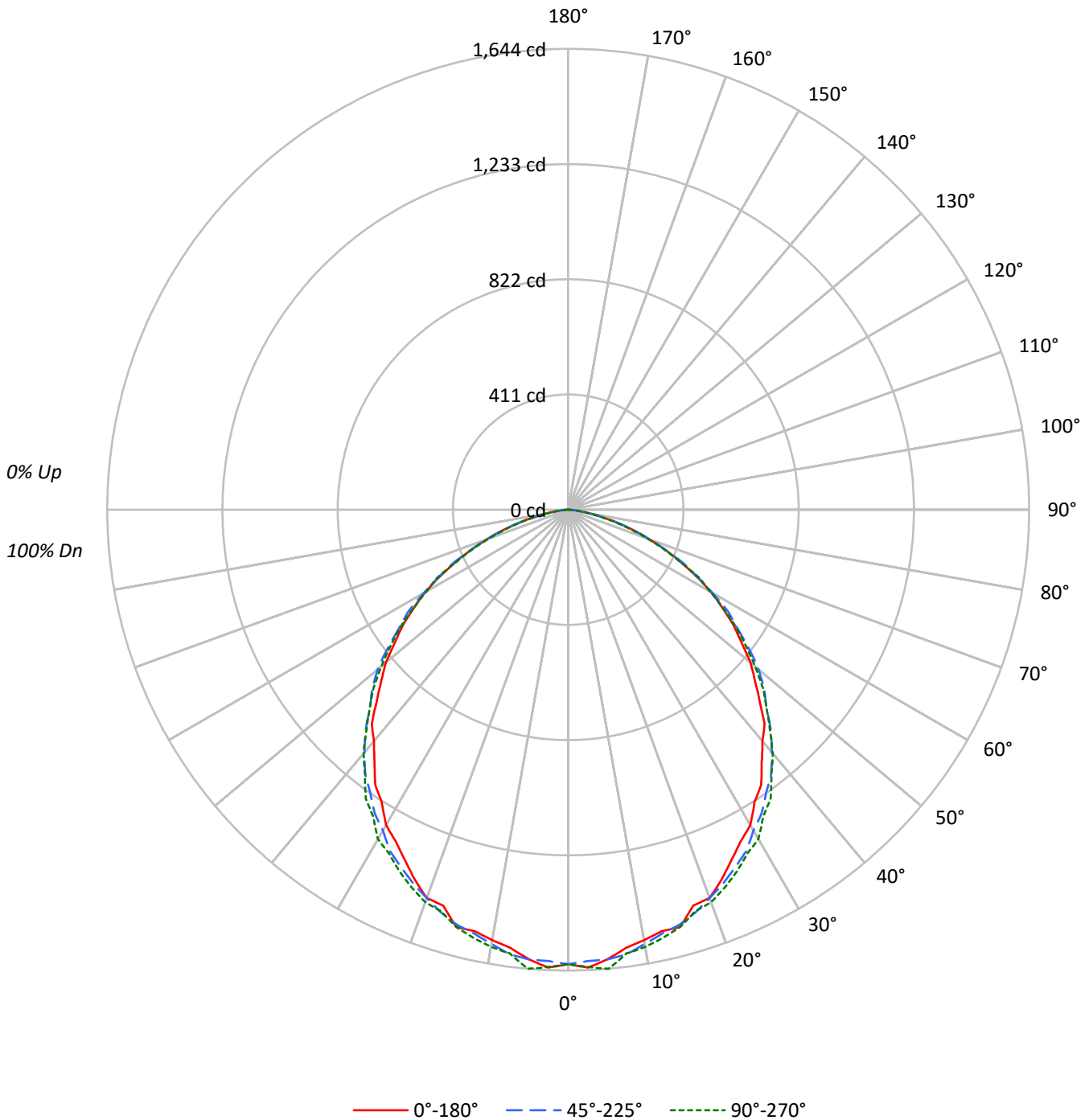
Lumens per Lamp: N/A
Luminaire Lumens: 4086.0 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	4363	4363	4363
5°	4348	4350	4441
10°	4260	4297	4328
15°	4294	4271	4294
20°	4221	4221	4266
25°	4092	4181	4227
30°	4035	4106	4215
35°	3940	4043	4134
40°	3787	3969	3987
45°	3672	3803	3809
50°	3552	3712	3641
55°	3384	3450	3425
60°	3165	3196	3139
65°	2821	2893	2802
70°	2421	2430	2362
75°	1917	1913	1839
80°	1285	1249	1201
85°	698	692	645



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.5	3.7
10°-20°	432.2	10.6
20°-30°	647.5	15.8
30°-40°	767.5	18.8
40°-50°	768.9	18.8
50°-60°	652.6	16.0
60°-70°	440.0	10.8
70°-80°	193.3	4.7
80°-90°	31.4	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°	1232.2	30.2
0°-40°	1999.7	48.9
0°-60°	3421.2	83.7
0°-90°	4086.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4086.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1621	1621	1621	1621	1621	
5°	1610	1606	1610	1606	1644	152
15°	1541	1524	1533	1541	1542	429
25°	1378	1386	1408	1426	1424	637
35°	1199	1203	1231	1259	1258	745
45°	965	983	999	1025	1001	746
55°	721	716	735	730	730	642
65°	443	437	454	437	440	441
75°	184	181	184	171	177	198
85°	23	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1621.2	1621.2	1621.2	1621.2	1621.2
2.5°	1635.2	1622.9	1611.4	1624.8	1632.9
5°	1609.7	1605.9	1610.3	1605.5	1644.2
7.5°	1576.6	1591.1	1599.5	1594.2	1596.5
10°	1559.1	1554.0	1572.7	1585.6	1583.8
12.5°	1540.2	1547.7	1548.8	1562.8	1564.1
15°	1541.3	1523.5	1532.9	1540.8	1541.5
17.5°	1481.4	1500.7	1507.1	1525.4	1502.7
20°	1474.1	1460.0	1474.1	1492.7	1489.8
22.5°	1429.1	1413.4	1443.5	1460.0	1459.0
25°	1378.0	1385.5	1408.1	1426.5	1423.6
27.5°	1333.2	1342.0	1374.2	1399.5	1383.2
30°	1298.7	1294.3	1321.5	1344.1	1356.6
32.5°	1236.9	1252.8	1284.6	1307.0	1295.1
35°	1199.4	1203.0	1230.8	1259.3	1258.5
37.5°	1133.9	1150.4	1189.6	1197.5	1190.2
40°	1078.0	1094.6	1129.9	1138.5	1135.0
42.5°	1036.8	1039.7	1070.1	1079.9	1064.2
45°	965.0	983.0	999.3	1025.1	1000.8
47.5°	903.9	912.2	947.4	954.3	941.5
50°	848.4	851.3	886.7	878.1	869.7
52.5°	778.7	791.0	810.9	809.3	799.4
55°	721.3	716.5	735.4	730.3	730.1
57.5°	652.5	660.8	676.3	668.4	655.6
60°	588.0	588.2	593.9	584.9	583.2
62.5°	516.2	518.7	520.0	508.9	526.9
65°	443.1	437.3	454.4	437.1	440.0
67.5°	375.9	378.9	377.2	366.3	370.5
70°	307.7	311.5	308.8	296.4	300.2
72.5°	245.3	240.7	243.7	228.2	235.3
75°	184.4	180.6	184.0	171.0	176.9
77.5°	125.6	128.5	126.4	119.5	123.5
80°	82.9	80.6	80.6	76.6	77.5
82.5°	48.4	46.1	45.4	44.2	46.1
85°	22.6	22.0	22.4	21.8	20.9
87.5°	8.2	8.4	8.4	8.0	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)