

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: P589407

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589407
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-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

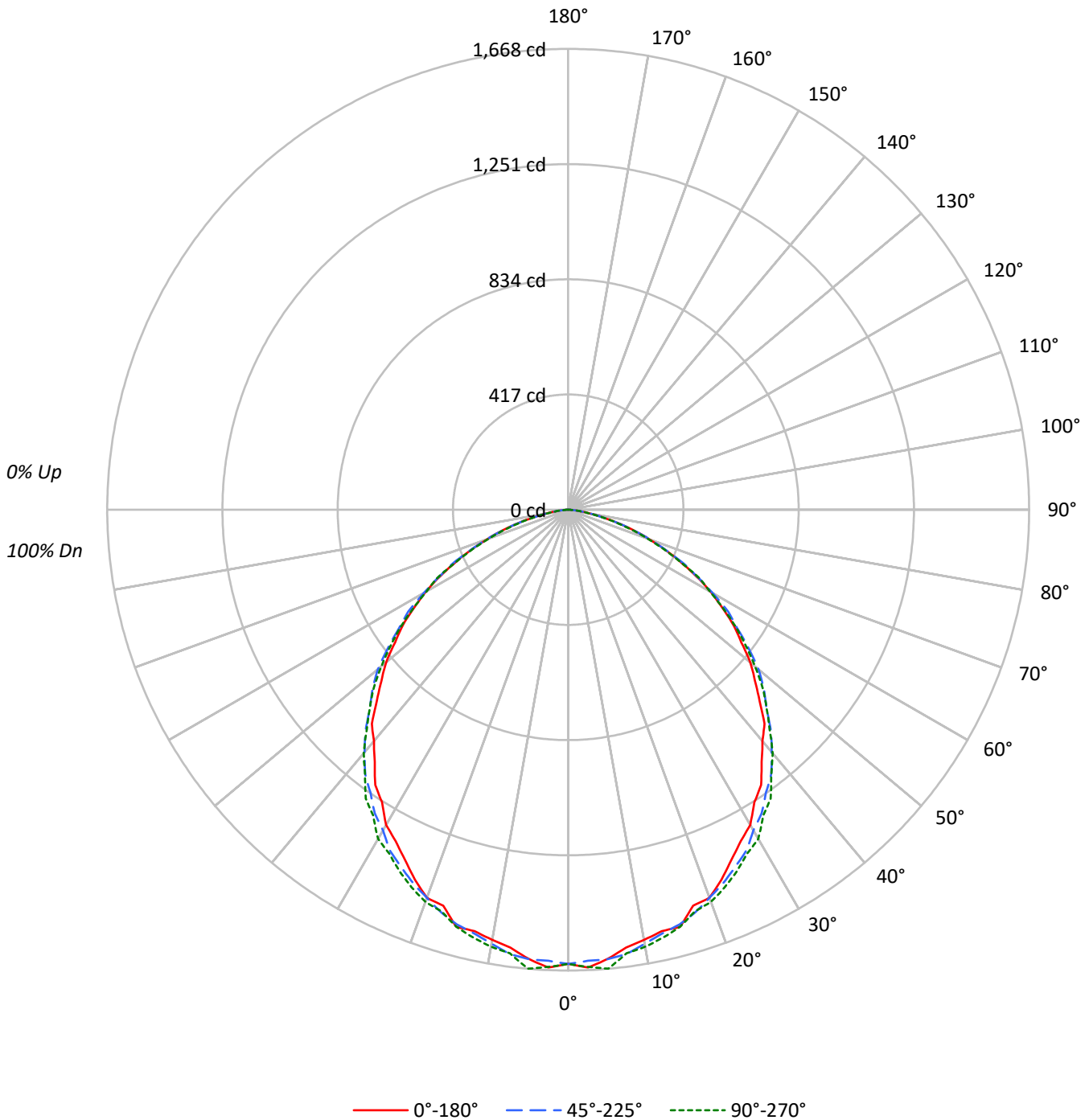
Lumens per Lamp: N/A
Luminaire Lumens: 4144.0 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
Input Voltage (V): NR
Input Current (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°	4425	4425	4425
5°	4410	4412	4505
10°	4321	4358	4389
15°	4355	4331	4355
20°	4281	4281	4327
25°	4149	4240	4287
30°	4093	4164	4275
35°	3996	4101	4193
40°	3841	4026	4044
45°	3725	3857	3863
50°	3602	3765	3693
55°	3432	3499	3474
60°	3209	3242	3183
65°	2862	2935	2841
70°	2456	2463	2395
75°	1944	1940	1865
80°	1303	1266	1216
85°	707	701	655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.7	3.7
10°-20°	438.3	10.6
20°-30°	656.7	15.8
30°-40°	778.4	18.8
40°-50°	779.8	18.8
50°-60°	661.9	16.0
60°-70°	446.3	10.8
70°-80°	196.1	4.7
80°-90°	31.9	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°	1249.7	30.2
0°-40°	2028.1	48.9
0°-60°	3469.8	83.7
0°-90°	4144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1644	1644	1644	1644	1644	
5°	1633	1629	1633	1628	1668	154
15°	1563	1545	1555	1563	1563	436
25°	1398	1405	1428	1447	1444	646
35°	1216	1220	1248	1277	1276	755
45°	979	997	1014	1040	1015	757
55°	732	727	746	741	740	651
65°	449	444	461	443	446	447
75°	187	183	187	173	179	200
85°	23	22	23	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1644.2	1644.2	1644.2	1644.2	1644.2
2.5°	1658.5	1645.9	1634.3	1647.8	1656.1
5°	1632.6	1628.7	1633.2	1628.3	1667.6
7.5°	1599.0	1613.7	1622.2	1616.8	1619.2
10°	1581.2	1576.1	1595.0	1608.1	1606.2
12.5°	1562.1	1569.7	1570.8	1585.0	1586.3
15°	1563.1	1545.1	1554.6	1562.7	1563.3
17.5°	1502.4	1522.0	1528.5	1547.0	1524.1
20°	1495.0	1480.8	1495.0	1513.9	1510.9
22.5°	1449.3	1433.4	1464.0	1480.8	1479.7
25°	1397.5	1405.2	1428.1	1446.8	1443.8
27.5°	1352.1	1361.0	1393.7	1419.4	1402.9
30°	1317.1	1312.6	1340.2	1363.2	1375.9
32.5°	1254.5	1270.6	1302.9	1325.6	1313.5
35°	1216.5	1220.1	1248.3	1277.2	1276.3
37.5°	1150.0	1166.8	1206.5	1214.5	1207.1
40°	1093.3	1110.1	1146.0	1154.7	1151.1
42.5°	1051.5	1054.5	1085.3	1095.2	1079.3
45°	978.7	996.9	1013.5	1039.6	1015.0
47.5°	916.7	925.2	960.9	967.9	954.9
50°	860.4	863.4	899.3	890.6	882.1
52.5°	789.7	802.3	822.4	820.7	810.8
55°	731.6	726.7	745.8	740.7	740.5
57.5°	661.7	670.2	685.9	677.9	664.9
60°	596.3	596.6	602.3	593.2	591.5
62.5°	523.5	526.1	527.3	516.1	534.3
65°	449.4	443.5	460.9	443.3	446.2
67.5°	381.3	384.3	382.6	371.5	375.8
70°	312.1	315.9	313.1	300.6	304.4
72.5°	248.8	244.1	247.1	231.4	238.6
75°	187.0	183.2	186.6	173.4	179.4
77.5°	127.4	130.3	128.2	121.2	125.3
80°	84.1	81.7	81.7	77.7	78.5
82.5°	49.0	46.7	46.1	44.8	46.7
85°	22.9	22.3	22.7	22.1	21.2
87.5°	8.3	8.5	8.5	8.1	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)