

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: P589223

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589223
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-LD4-2STD-40-UNV-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

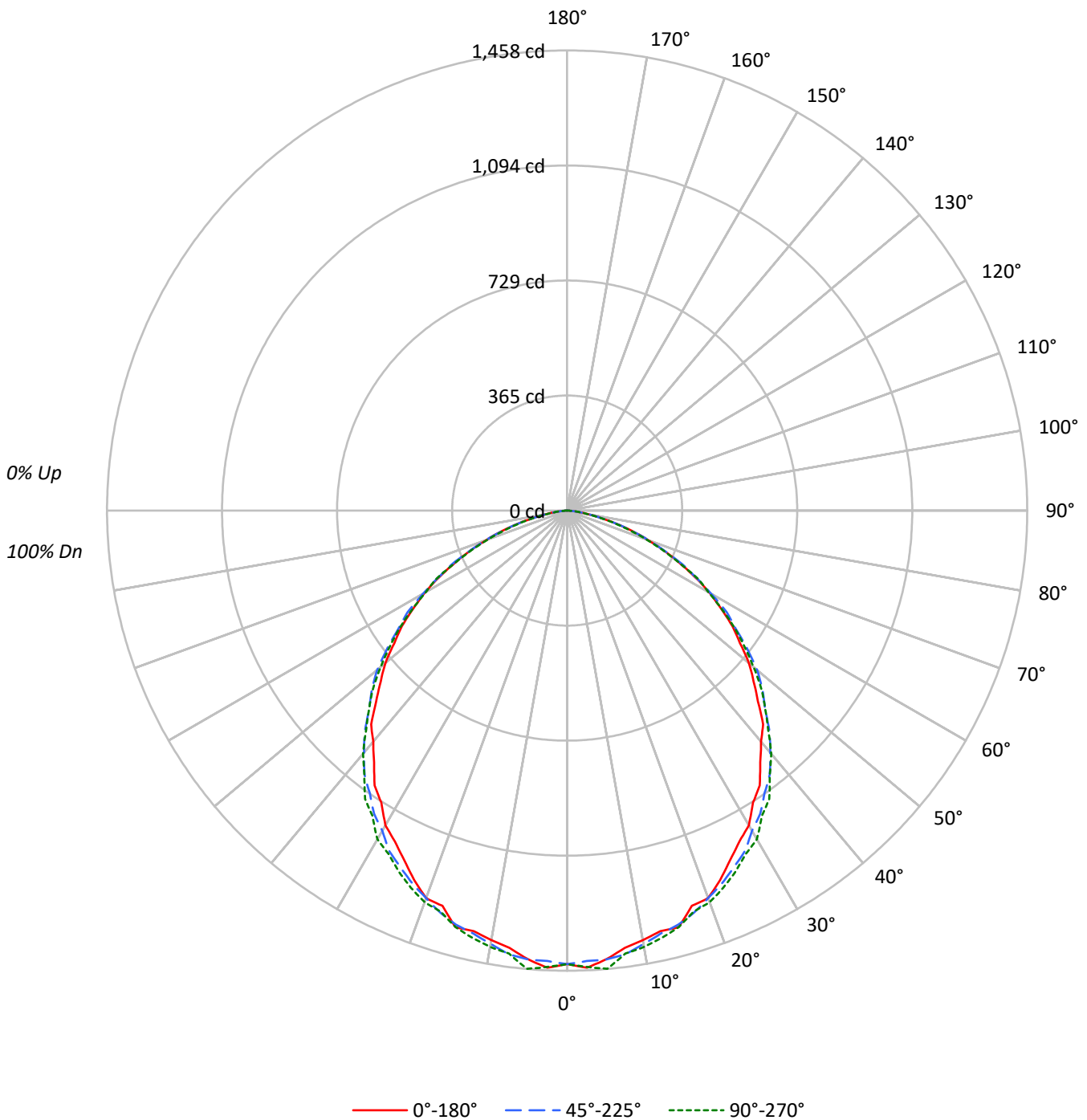
Lumens per Lamp: N/A
Luminaire Lumens: 3622.0 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	3867	3867	3867
5°	3854	3856	3937
10°	3776	3809	3836
15°	3806	3785	3807
20°	3742	3742	3782
25°	3627	3706	3747
30°	3577	3640	3737
35°	3493	3584	3665
40°	3357	3518	3534
45°	3255	3371	3376
50°	3149	3291	3228
55°	3000	3058	3036
60°	2805	2833	2782
65°	2501	2565	2483
70°	2146	2153	2094
75°	1700	1696	1630
80°	1139	1106	1065
85°	618	614	574



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.2	3.7
10°-20°	383.1	10.6
20°-30°	574.0	15.8
30°-40°	680.3	18.8
40°-50°	681.6	18.8
50°-60°	578.5	16.0
60°-70°	390.0	10.8
70°-80°	171.4	4.7
80°-90°	27.9	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°	1092.3	30.2
0°-40°	1772.6	48.9
0°-60°	3032.7	83.7
0°-90°	3622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1437	1437	1437	1437	1437	
5°	1427	1424	1428	1423	1458	135
15°	1366	1350	1359	1366	1366	381
25°	1222	1228	1248	1265	1262	565
35°	1063	1066	1091	1116	1116	660
45°	855	871	886	909	887	662
55°	639	635	652	647	647	569
65°	393	388	403	387	390	391
75°	164	160	163	152	157	175
85°	20	20	20	19	19	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1437.1	1437.1	1437.1	1437.1	1437.1
2.5°	1449.6	1438.6	1428.4	1440.3	1447.5
5°	1426.9	1423.6	1427.5	1423.2	1457.5
7.5°	1397.6	1410.4	1417.8	1413.2	1415.2
10°	1382.0	1377.6	1394.1	1405.6	1403.9
12.5°	1365.3	1372.0	1372.9	1385.3	1386.5
15°	1366.2	1350.5	1358.8	1365.9	1366.4
17.5°	1313.2	1330.2	1336.0	1352.1	1332.1
20°	1306.7	1294.2	1306.7	1323.2	1320.6
22.5°	1266.8	1252.9	1279.6	1294.2	1293.3
25°	1221.5	1228.2	1248.2	1264.6	1262.0
27.5°	1181.8	1189.6	1218.2	1240.6	1226.1
30°	1151.2	1147.3	1171.4	1191.4	1202.6
32.5°	1096.4	1110.5	1138.7	1158.6	1148.0
35°	1063.2	1066.4	1091.1	1116.3	1115.6
37.5°	1005.1	1019.8	1054.5	1061.6	1055.1
40°	955.6	970.3	1001.6	1009.2	1006.1
42.5°	919.1	921.6	948.6	957.3	943.4
45°	855.4	871.4	885.8	908.7	887.1
47.5°	801.2	808.6	839.8	845.9	834.6
50°	752.1	754.6	786.0	778.4	771.0
52.5°	690.3	701.2	718.8	717.4	708.6
55°	639.4	635.2	651.9	647.4	647.2
57.5°	578.4	585.8	599.5	592.5	581.2
60°	521.2	521.4	526.4	518.4	517.0
62.5°	457.6	459.8	460.9	451.1	467.0
65°	392.8	387.6	402.8	387.4	390.0
67.5°	333.3	335.9	334.4	324.7	328.4
70°	272.8	276.1	273.7	262.7	266.1
72.5°	217.5	213.4	216.0	202.3	208.6
75°	163.5	160.1	163.1	151.6	156.8
77.5°	111.3	113.9	112.1	106.0	109.5
80°	73.5	71.4	71.4	67.9	68.7
82.5°	42.9	40.8	40.3	39.2	40.8
85°	20.0	19.5	19.9	19.3	18.6
87.5°	7.2	7.4	7.4	7.1	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)