

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: P589424

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-93-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589424
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-93-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

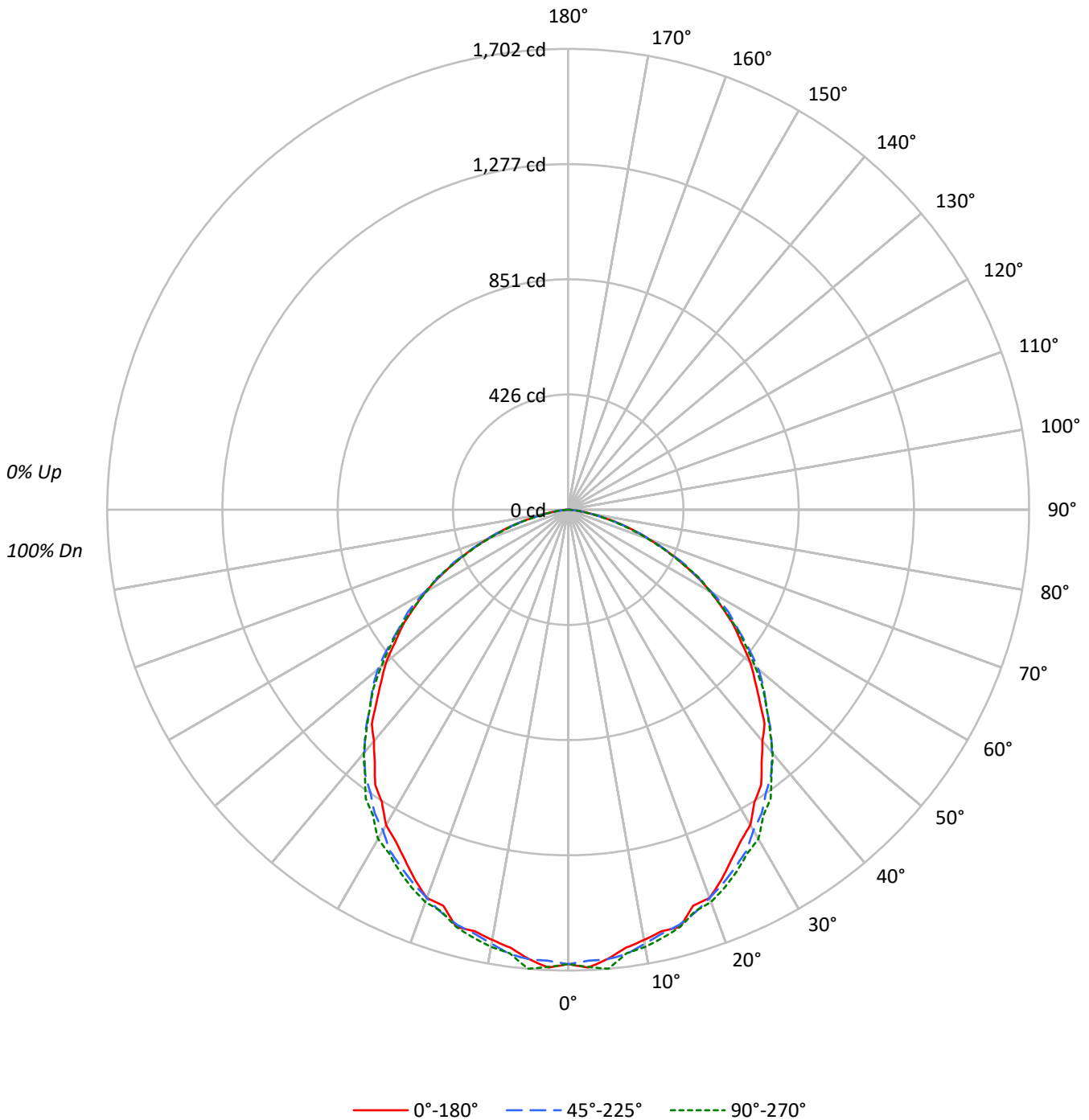
Lumens per Lamp: N/A
Luminaire Lumens: 4229.0 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589424

CATALOG NUMBER: FMR-24-2-LD4-3LO-40-UNV-93-87-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°	4515	4515	4515
5°	4500	4502	4597
10°	4409	4448	4479
15°	4444	4420	4445
20°	4369	4369	4416
25°	4235	4327	4375
30°	4176	4250	4363
35°	4078	4185	4279
40°	3920	4108	4127
45°	3801	3936	3942
50°	3676	3842	3769
55°	3503	3571	3545
60°	3275	3308	3249
65°	2920	2995	2900
70°	2506	2515	2445
75°	1985	1980	1904
80°	1330	1292	1243
85°	722	716	670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.8	3.7
10°-20°	447.3	10.6
20°-30°	670.2	15.8
30°-40°	794.3	18.8
40°-50°	795.8	18.8
50°-60°	675.5	16.0
60°-70°	455.4	10.8
70°-80°	200.1	4.7
80°-90°	32.5	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°	1275.4	30.2
0°-40°	2069.7	48.9
0°-60°	3541.0	83.7
0°-90°	4229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1666	1662	1667	1662	1702	157
15°	1595	1577	1586	1595	1595	444
25°	1426	1434	1457	1476	1473	659
35°	1241	1245	1274	1303	1302	771
45°	999	1017	1034	1061	1036	773
55°	747	742	761	756	756	664
65°	459	453	470	452	455	456
75°	191	187	190	177	183	205
85°	23	23	23	22	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1678.0	1678.0	1678.0	1678.0	1678.0
2.5°	1692.5	1679.7	1667.8	1681.6	1690.1
5°	1666.0	1662.1	1666.7	1661.7	1701.8
7.5°	1631.8	1646.8	1655.4	1650.0	1652.4
10°	1613.6	1608.4	1627.7	1641.1	1639.2
12.5°	1594.1	1601.9	1603.0	1617.5	1618.8
15°	1595.2	1576.8	1586.5	1594.8	1595.4
17.5°	1533.2	1553.2	1559.9	1578.7	1555.3
20°	1525.7	1511.1	1525.7	1544.9	1541.9
22.5°	1479.1	1462.8	1494.0	1511.1	1510.1
25°	1426.2	1434.0	1457.4	1476.5	1473.4
27.5°	1379.8	1388.9	1422.3	1448.5	1431.6
30°	1344.1	1339.6	1367.7	1391.1	1404.1
32.5°	1280.2	1296.7	1329.6	1352.8	1340.4
35°	1241.4	1245.1	1273.9	1303.4	1302.5
37.5°	1173.6	1190.7	1231.2	1239.5	1231.9
40°	1115.8	1132.9	1169.5	1178.4	1174.7
42.5°	1073.1	1076.1	1107.5	1117.7	1101.5
45°	998.8	1017.4	1034.3	1060.9	1035.8
47.5°	935.5	944.2	980.6	987.7	974.5
50°	878.1	881.1	917.7	908.9	900.2
52.5°	805.9	818.7	839.3	837.6	827.4
55°	746.6	741.6	761.1	755.9	755.7
57.5°	675.3	684.0	700.0	691.8	678.6
60°	608.6	608.8	614.6	605.3	603.6
62.5°	534.3	536.9	538.2	526.7	545.3
65°	458.6	452.6	470.3	452.4	455.4
67.5°	389.1	392.1	390.4	379.1	383.5
70°	318.5	322.4	319.6	306.8	310.7
72.5°	253.9	249.1	252.2	236.1	243.5
75°	190.9	187.0	190.4	177.0	183.1
77.5°	130.0	133.0	130.9	123.7	127.8
80°	85.8	83.4	83.4	79.3	80.2
82.5°	50.0	47.7	47.0	45.7	47.7
85°	23.4	22.7	23.2	22.5	21.7
87.5°	8.4	8.7	8.7	8.2	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)