

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: P589049

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-80-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589049
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-LD4-2HI-50-UNV-80-88-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

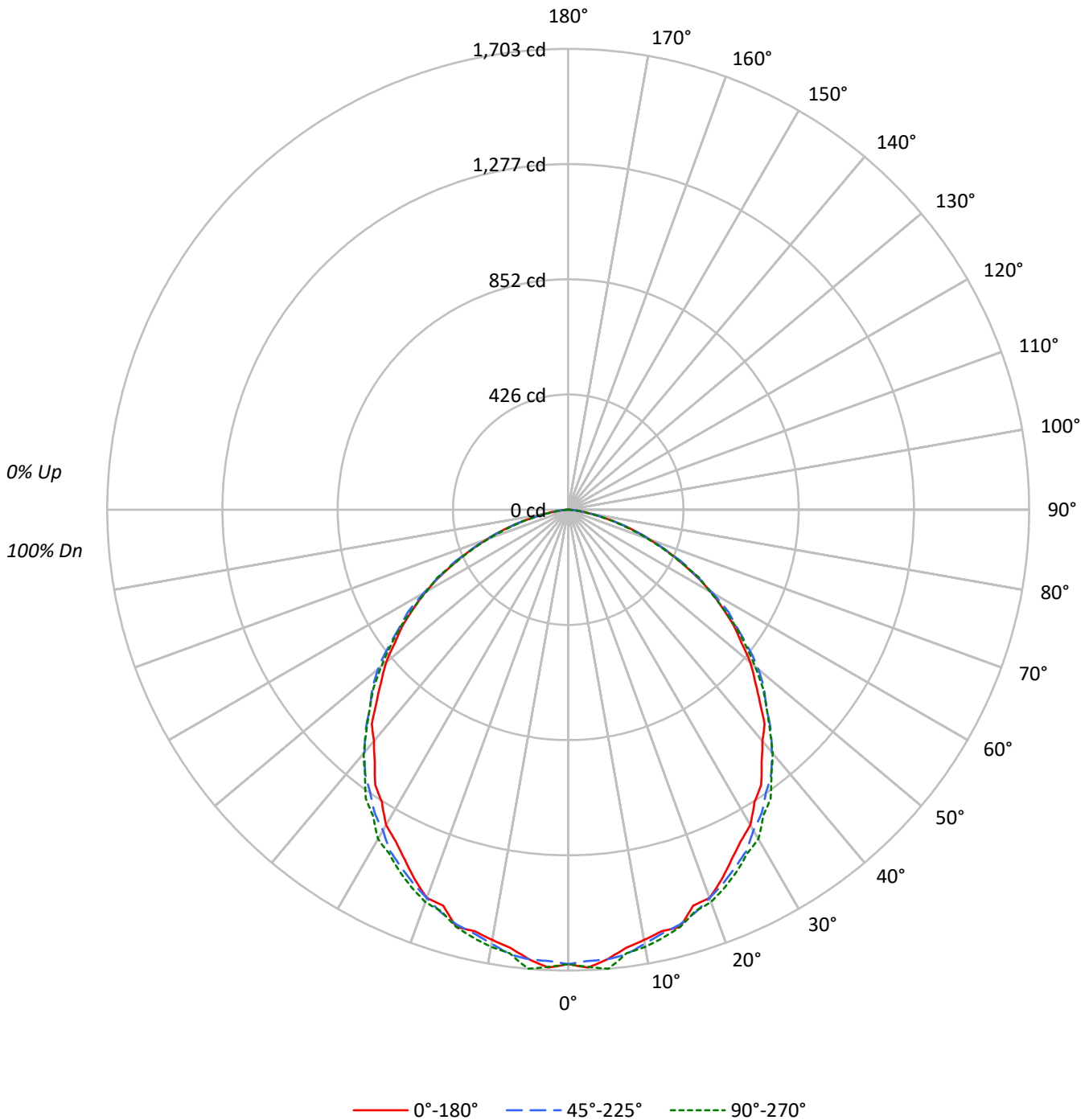
Lumens per Lamp: N/A
Luminaire Lumens: 4232.0 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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: P589049

CATALOG NUMBER: FMR-24-2-LD4-2HI-50-UNV-80-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589049

CATALOG NUMBER: FMR-24-2-LD4-2HI-50-UNV-80-88-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	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						100													
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86						86													
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73						73													
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62						62													
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53						53													
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46						46													
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41						41													
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36						36													
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32						32													
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29						29													
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26						26													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4519	4519	4519
5°	4504	4505	4600
10°	4412	4451	4482
15°	4447	4423	4448
20°	4372	4372	4419
25°	4238	4330	4378
30°	4180	4253	4366
35°	4081	4188	4282
40°	3922	4111	4129
45°	3804	3939	3945
50°	3679	3845	3771
55°	3505	3573	3548
60°	3278	3310	3251
65°	2923	2997	2902
70°	2507	2516	2446
75°	1986	1982	1905
80°	1331	1294	1243
85°	722	716	670



TEST NUMBER: P589049

CATALOG NUMBER: FMR-24-2-LD4-2HI-50-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.9	3.7
10°-20°	447.6	10.6
20°-30°	670.7	15.8
30°-40°	794.9	18.8
40°-50°	796.3	18.8
50°-60°	676.0	16.0
60°-70°	455.7	10.8
70°-80°	200.3	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°	1276.3	30.2
0°-40°	2071.1	48.9
0°-60°	3543.5	83.7
0°-90°	4232.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4232.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1679	1679	1679	1679	1679	
5°	1667	1663	1668	1663	1703	157
15°	1596	1578	1588	1596	1596	445
25°	1427	1435	1458	1478	1474	660
35°	1242	1246	1275	1304	1303	771
45°	1000	1018	1035	1062	1036	773
55°	747	742	762	756	756	665
65°	459	453	471	453	456	456
75°	191	187	191	177	183	205
85°	23	23	23	22	22	34
90°	0	0	0	0	0	



TEST NUMBER: P589049

CATALOG NUMBER: FMR-24-2-LD4-2HI-50-UNV-80-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1679.2	1679.2	1679.2	1679.2	1679.2
2.5°	1693.7	1680.9	1669.0	1682.8	1691.3
5°	1667.2	1663.3	1667.9	1662.9	1703.0
7.5°	1633.0	1647.9	1656.6	1651.2	1653.6
10°	1614.8	1609.6	1628.9	1642.3	1640.3
12.5°	1595.2	1603.1	1604.1	1618.7	1620.0
15°	1596.3	1577.9	1587.7	1595.9	1596.5
17.5°	1534.3	1554.3	1561.0	1579.9	1556.4
20°	1526.7	1512.2	1526.7	1546.0	1543.0
22.5°	1480.1	1463.9	1495.1	1512.2	1511.1
25°	1427.2	1435.0	1458.4	1477.5	1474.5
27.5°	1380.8	1389.9	1423.3	1449.6	1432.6
30°	1345.1	1340.5	1368.7	1392.1	1405.1
32.5°	1281.1	1297.6	1330.5	1353.7	1341.4
35°	1242.3	1246.0	1274.8	1304.3	1303.4
37.5°	1174.4	1191.6	1232.1	1240.3	1232.8
40°	1116.5	1133.7	1170.3	1179.2	1175.5
42.5°	1073.8	1076.9	1108.3	1118.5	1102.2
45°	999.5	1018.1	1035.0	1061.7	1036.5
47.5°	936.2	944.8	981.3	988.4	975.2
50°	878.7	881.7	918.4	909.5	900.8
52.5°	806.5	819.3	839.9	838.2	828.0
55°	747.1	742.1	761.6	756.4	756.2
57.5°	675.8	684.5	700.5	692.3	679.0
60°	609.0	609.2	615.1	605.8	604.0
62.5°	534.6	537.2	538.5	527.1	545.7
65°	459.0	452.9	470.7	452.7	455.7
67.5°	389.4	392.4	390.7	379.4	383.7
70°	318.7	322.6	319.8	307.0	310.9
72.5°	254.1	249.3	252.4	236.3	243.7
75°	191.0	187.1	190.6	177.1	183.2
77.5°	130.1	133.1	130.9	123.8	127.9
80°	85.9	83.5	83.5	79.4	80.2
82.5°	50.1	47.7	47.0	45.7	47.7
85°	23.4	22.8	23.2	22.5	21.7
87.5°	8.5	8.7	8.7	8.2	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)