

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: P589421

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-93-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589421
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-93-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

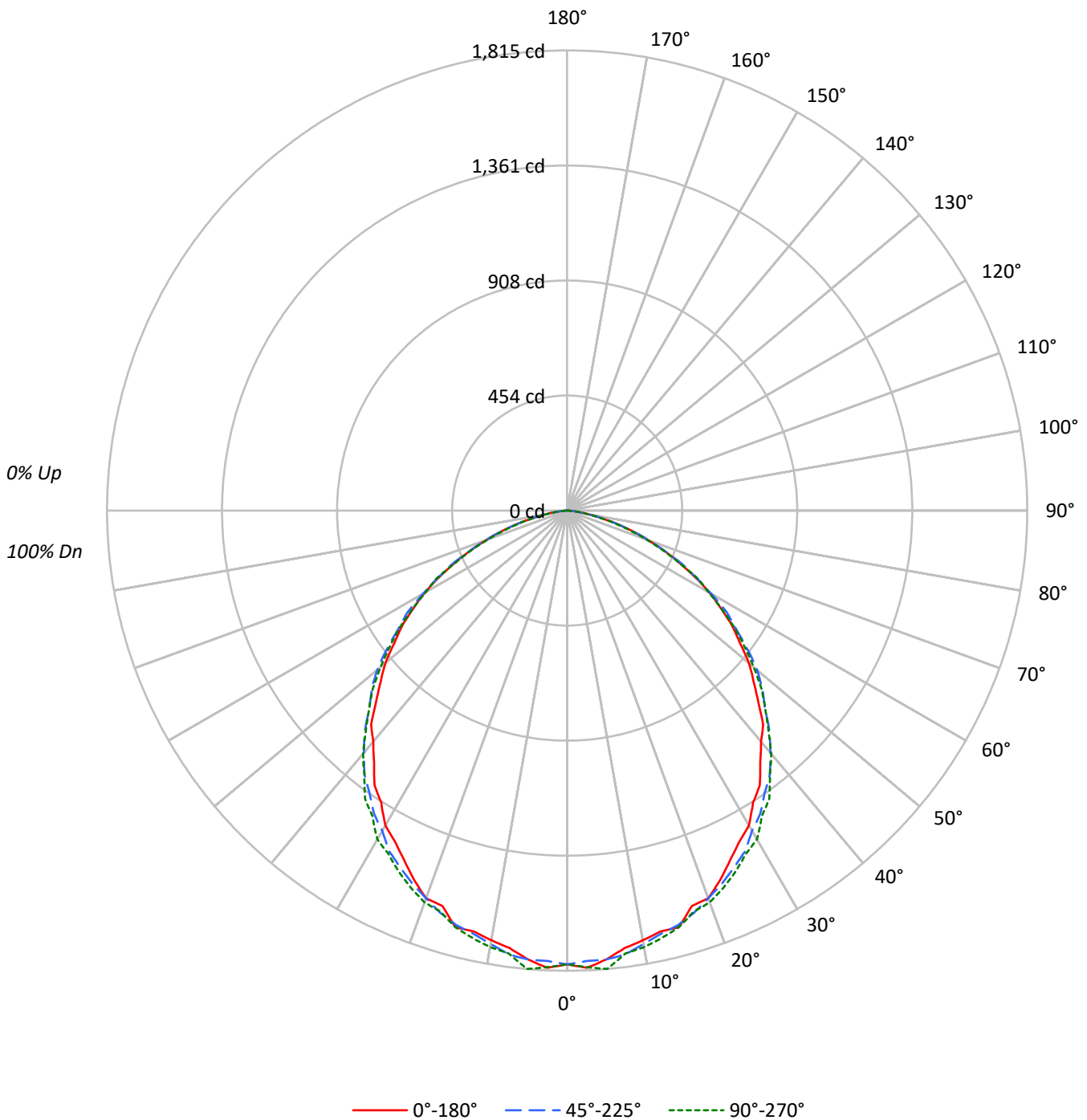
Lumens per Lamp: N/A
Luminaire Lumens: 4510.0 lumens
Efficiency: N/A
Efficacy: 128.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P589421

CATALOG NUMBER: FMR-24-2-LD4-3LO-40-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589421

CATALOG NUMBER: FMR-24-2-LD4-3LO-40-UNV-93-84-EDD

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°	4816	4816	4816
5°	4799	4801	4903
10°	4702	4743	4777
15°	4739	4714	4740
20°	4659	4659	4709
25°	4516	4615	4665
30°	4454	4532	4653
35°	4349	4463	4563
40°	4180	4381	4401
45°	4053	4198	4204
50°	3920	4097	4019
55°	3735	3808	3781
60°	3493	3528	3464
65°	3114	3194	3093
70°	2672	2681	2607
75°	2117	2112	2030
80°	1418	1379	1325
85°	772	763	713



TEST NUMBER: P589421

CATALOG NUMBER: FMR-24-2-LD4-3LO-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.3	3.7
10°-20°	477.1	10.6
20°-30°	714.7	15.8
30°-40°	847.1	18.8
40°-50°	848.7	18.8
50°-60°	720.4	16.0
60°-70°	485.7	10.8
70°-80°	213.4	4.7
80°-90°	34.7	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°	1360.1	30.2
0°-40°	2207.2	48.9
0°-60°	3776.2	83.7
0°-90°	4510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4510.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1790	1790	1790	1790	1790	
5°	1777	1773	1777	1772	1815	168
15°	1701	1682	1692	1701	1701	474
25°	1521	1529	1554	1575	1571	703
35°	1324	1328	1359	1390	1389	822
45°	1065	1085	1103	1131	1105	824
55°	796	791	812	806	806	708
65°	489	483	502	482	486	486
75°	204	199	203	189	195	218
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



TEST NUMBER: P589421

CATALOG NUMBER: FMR-24-2-LD4-3LO-40-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1789.5	1789.5	1789.5	1789.5	1789.5
2.5°	1804.9	1791.3	1778.6	1793.4	1802.4
5°	1776.7	1772.6	1777.4	1772.1	1814.9
7.5°	1740.2	1756.2	1765.4	1759.6	1762.2
10°	1720.8	1715.3	1735.9	1750.2	1748.1
12.5°	1700.0	1708.4	1709.5	1725.0	1726.4
15°	1701.2	1681.6	1692.0	1700.7	1701.4
17.5°	1635.1	1656.4	1663.5	1683.6	1658.7
20°	1627.0	1611.5	1627.0	1647.6	1644.4
22.5°	1577.4	1560.0	1593.3	1611.5	1610.4
25°	1521.0	1529.3	1554.2	1574.6	1571.3
27.5°	1471.5	1481.2	1516.8	1544.8	1526.8
30°	1433.4	1428.6	1458.6	1483.5	1497.4
32.5°	1365.3	1382.8	1417.9	1442.7	1429.5
35°	1323.9	1327.8	1358.6	1390.0	1389.1
37.5°	1251.6	1269.8	1313.0	1321.8	1313.7
40°	1189.9	1208.1	1247.2	1256.7	1252.7
42.5°	1144.4	1147.6	1181.1	1192.0	1174.6
45°	1065.1	1085.0	1103.0	1131.4	1104.6
47.5°	997.7	1006.9	1045.7	1053.3	1039.2
50°	936.4	939.7	978.7	969.2	960.0
52.5°	859.5	873.1	895.1	893.2	882.4
55°	796.2	790.9	811.7	806.1	805.9
57.5°	720.2	729.4	746.5	737.7	723.6
60°	649.0	649.2	655.5	645.5	643.7
62.5°	569.8	572.5	573.9	561.7	581.5
65°	489.1	482.7	501.6	482.4	485.7
67.5°	415.0	418.2	416.3	404.3	409.0
70°	339.6	343.8	340.8	327.2	331.3
72.5°	270.8	265.7	268.9	251.8	259.7
75°	203.6	199.4	203.1	188.8	195.2
77.5°	138.6	141.9	139.6	131.9	136.3
80°	91.5	89.0	89.0	84.6	85.5
82.5°	53.4	50.8	50.1	48.8	50.8
85°	25.0	24.3	24.7	24.0	23.1
87.5°	9.0	9.2	9.2	8.8	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)