

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: P589044

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-93-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589044
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-40-UNV-93-97-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

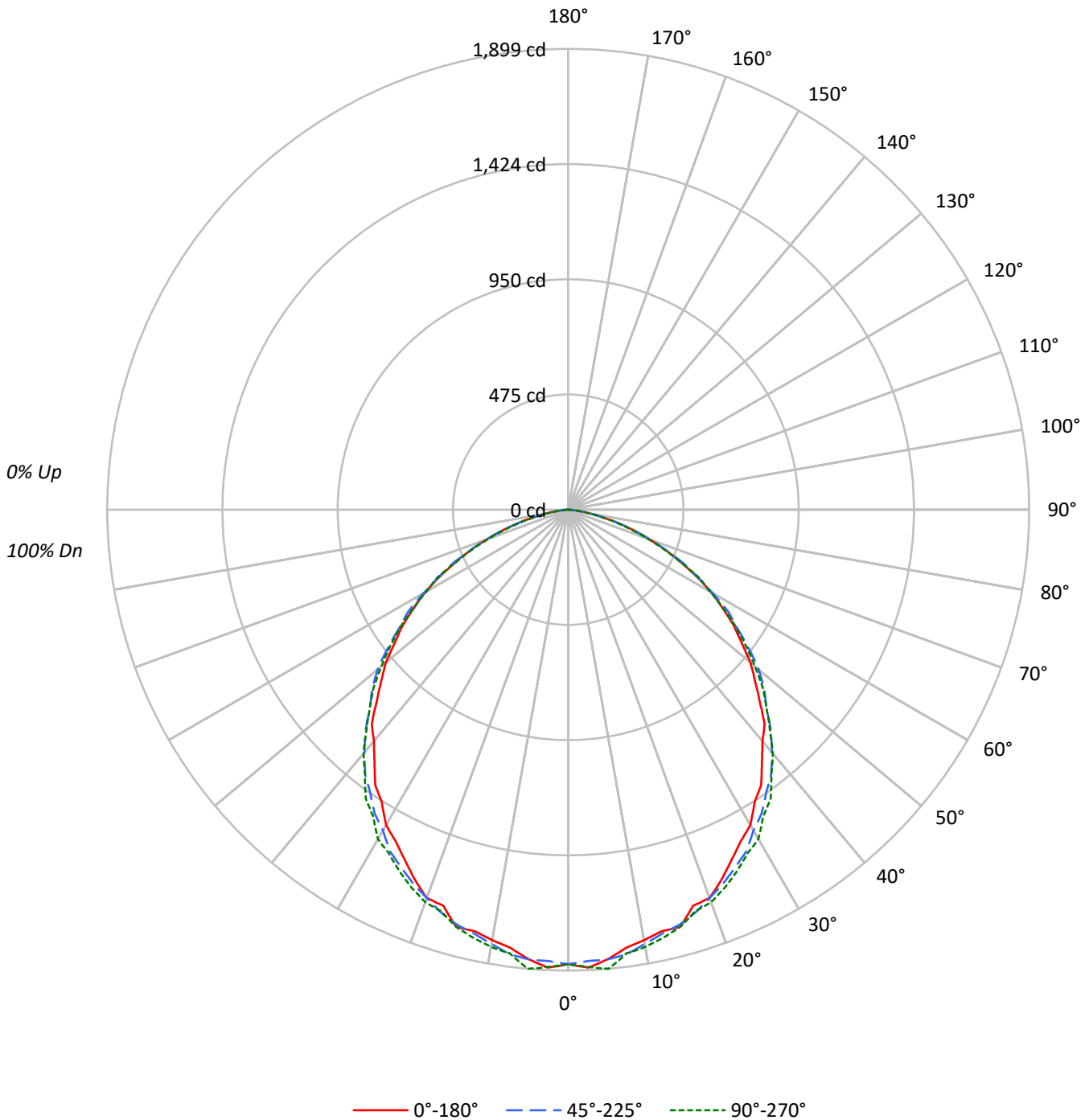
Lumens per Lamp: N/A
Luminaire Lumens: 4720.0 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	5040	5040	5040
5°	5023	5025	5131
10°	4921	4964	4999
15°	4960	4933	4961
20°	4876	4876	4928
25°	4726	4830	4883
30°	4662	4743	4869
35°	4551	4671	4776
40°	4375	4585	4606
45°	4242	4393	4400
50°	4103	4288	4206
55°	3909	3985	3957
60°	3655	3692	3626
65°	3259	3343	3237
70°	2797	2806	2728
75°	2215	2209	2124
80°	1485	1443	1387
85°	806	800	747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.2	3.7
10°-20°	499.3	10.6
20°-30°	748.0	15.8
30°-40°	886.5	18.8
40°-50°	888.2	18.8
50°-60°	753.9	16.0
60°-70°	508.3	10.8
70°-80°	223.4	4.7
80°-90°	36.3	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°	1423.4	30.2
0°-40°	2310.0	48.9
0°-60°	3952.1	83.7
0°-90°	4720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1873	1873	1873	1873	1873	
5°	1860	1855	1860	1855	1899	175
15°	1780	1760	1771	1780	1781	496
25°	1592	1600	1627	1648	1644	736
35°	1386	1390	1422	1455	1454	860
45°	1115	1136	1154	1184	1156	862
55°	833	828	850	844	843	741
65°	512	505	525	505	508	509
75°	213	209	212	198	204	228
85°	26	25	26	25	24	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1872.8	1872.8	1872.8	1872.8	1872.8
2.5°	1889.0	1874.7	1861.4	1876.9	1886.3
5°	1859.5	1855.1	1860.2	1854.6	1899.4
7.5°	1821.3	1838.0	1847.6	1841.6	1844.2
10°	1801.0	1795.2	1816.7	1831.7	1829.5
12.5°	1779.2	1787.9	1789.1	1805.3	1806.8
15°	1780.4	1759.9	1770.7	1779.9	1780.6
17.5°	1711.3	1733.5	1741.0	1762.0	1735.9
20°	1702.8	1686.6	1702.8	1724.3	1720.9
22.5°	1650.8	1632.7	1667.5	1686.6	1685.4
25°	1591.8	1600.5	1626.6	1647.9	1644.5
27.5°	1540.1	1550.2	1587.4	1616.7	1597.8
30°	1500.2	1495.1	1526.5	1552.6	1567.1
32.5°	1428.8	1447.2	1484.0	1509.8	1496.0
35°	1385.5	1389.7	1421.8	1454.7	1453.7
37.5°	1309.9	1329.0	1374.2	1383.4	1374.9
40°	1245.3	1264.4	1305.3	1315.2	1311.1
42.5°	1197.7	1201.0	1236.1	1247.5	1229.3
45°	1114.7	1135.5	1154.4	1184.1	1156.1
47.5°	1044.1	1053.8	1094.4	1102.4	1087.6
50°	980.0	983.4	1024.3	1014.4	1004.7
52.5°	899.5	913.8	936.8	934.8	923.5
55°	833.3	827.7	849.5	843.7	843.4
57.5°	753.7	763.4	781.3	772.1	757.3
60°	679.2	679.5	686.0	675.6	673.7
62.5°	596.3	599.2	600.6	587.8	608.6
65°	511.9	505.1	525.0	504.9	508.3
67.5°	434.3	437.7	435.7	423.2	428.0
70°	355.5	359.8	356.7	342.4	346.7
72.5°	283.4	278.1	281.5	263.6	271.8
75°	213.0	208.7	212.5	197.6	204.3
77.5°	145.1	148.5	146.0	138.1	142.7
80°	95.8	93.1	93.1	88.5	89.5
82.5°	55.9	53.2	52.5	51.0	53.2
85°	26.1	25.4	25.9	25.1	24.2
87.5°	9.4	9.7	9.7	9.2	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)