

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: P589013

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-80-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589013
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-80-84-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

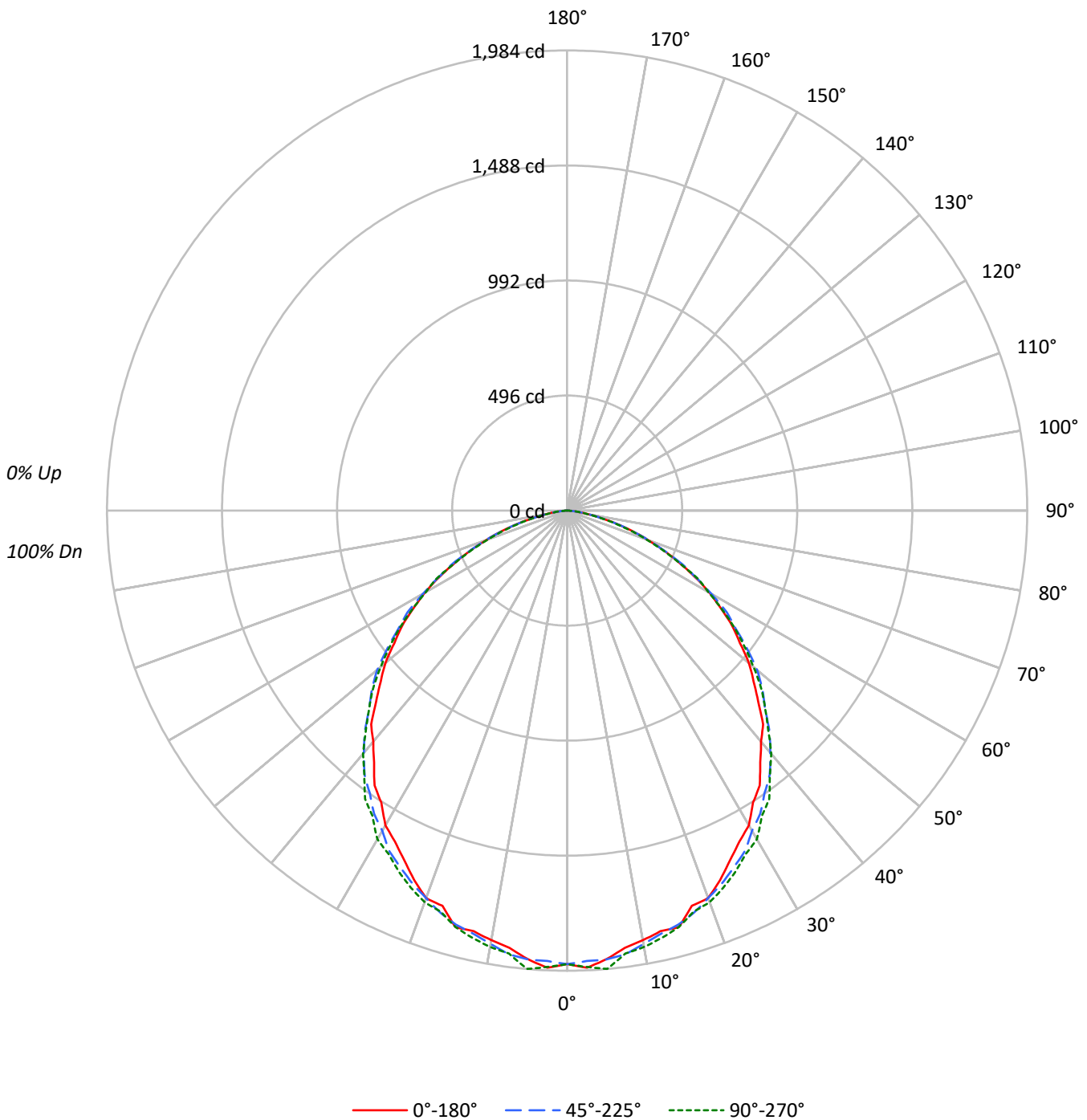
Lumens per Lamp: N/A
Luminaire Lumens: 4929.0 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5263	5263	5263
5°	5245	5247	5358
10°	5139	5184	5220
15°	5180	5151	5180
20°	5092	5092	5146
25°	4936	5043	5099
30°	4868	4953	5085
35°	4753	4878	4987
40°	4568	4788	4809
45°	4430	4588	4595
50°	4284	4478	4392
55°	4083	4162	4132
60°	3817	3856	3786
65°	3404	3491	3380
70°	2921	2931	2849
75°	2313	2308	2219
80°	1550	1506	1447
85°	843	834	781



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.0	3.7
10°-20°	521.4	10.6
20°-30°	781.1	15.8
30°-40°	925.8	18.8
40°-50°	927.5	18.8
50°-60°	787.3	16.0
60°-70°	530.8	10.8
70°-80°	233.2	4.7
80°-90°	37.9	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°	1486.5	30.2
0°-40°	2412.3	48.9
0°-60°	4127.1	83.7
0°-90°	4929.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4929.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1956	1956	1956	1956	1956	
5°	1942	1937	1943	1937	1984	183
15°	1859	1838	1849	1859	1860	518
25°	1662	1671	1699	1721	1717	768
35°	1447	1451	1485	1519	1518	898
45°	1164	1186	1206	1236	1207	900
55°	870	864	887	881	881	774
65°	535	528	548	527	531	532
75°	222	218	222	206	213	238
85°	27	26	27	26	25	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1955.7	1955.7	1955.7	1955.7	1955.7
2.5°	1972.6	1957.7	1943.8	1960.0	1969.8
5°	1941.8	1937.3	1942.6	1936.8	1983.5
7.5°	1901.9	1919.3	1929.4	1923.1	1925.9
10°	1880.7	1874.6	1897.1	1912.8	1910.5
12.5°	1858.0	1867.1	1868.3	1885.3	1886.8
15°	1859.2	1837.8	1849.1	1858.7	1859.5
17.5°	1787.0	1810.3	1818.1	1840.1	1812.8
20°	1778.2	1761.3	1778.2	1800.7	1797.1
22.5°	1723.9	1705.0	1741.3	1761.3	1760.0
25°	1662.3	1671.4	1698.6	1720.9	1717.3
27.5°	1608.2	1618.9	1657.7	1688.3	1668.6
30°	1566.6	1561.3	1594.1	1621.4	1636.5
32.5°	1492.1	1511.3	1549.7	1576.7	1562.3
35°	1446.9	1451.2	1484.8	1519.1	1518.1
37.5°	1367.9	1387.8	1435.0	1444.6	1435.8
40°	1300.4	1320.4	1363.1	1373.4	1369.1
42.5°	1250.7	1254.2	1290.8	1302.7	1283.8
45°	1164.1	1185.8	1205.5	1236.5	1207.3
47.5°	1090.3	1100.4	1142.9	1151.2	1135.8
50°	1023.4	1027.0	1069.6	1059.3	1049.2
52.5°	939.3	954.2	978.2	976.2	964.3
55°	870.2	864.3	887.1	881.0	880.8
57.5°	787.1	797.2	815.9	806.3	790.9
60°	709.3	709.6	716.4	705.5	703.5
62.5°	622.7	625.7	627.2	613.9	635.6
65°	534.6	527.5	548.2	527.2	530.8
67.5°	453.5	457.0	455.0	441.9	446.9
70°	371.2	375.7	372.5	357.6	362.1
72.5°	295.9	290.4	293.9	275.2	283.8
75°	222.5	217.9	222.0	206.3	213.4
77.5°	151.5	155.0	152.5	144.2	149.0
80°	100.0	97.2	97.2	92.4	93.4
82.5°	58.3	55.6	54.8	53.3	55.6
85°	27.3	26.5	27.0	26.3	25.3
87.5°	9.8	10.1	10.1	9.6	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)