

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: P589030

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-82-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589030
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-82-85-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

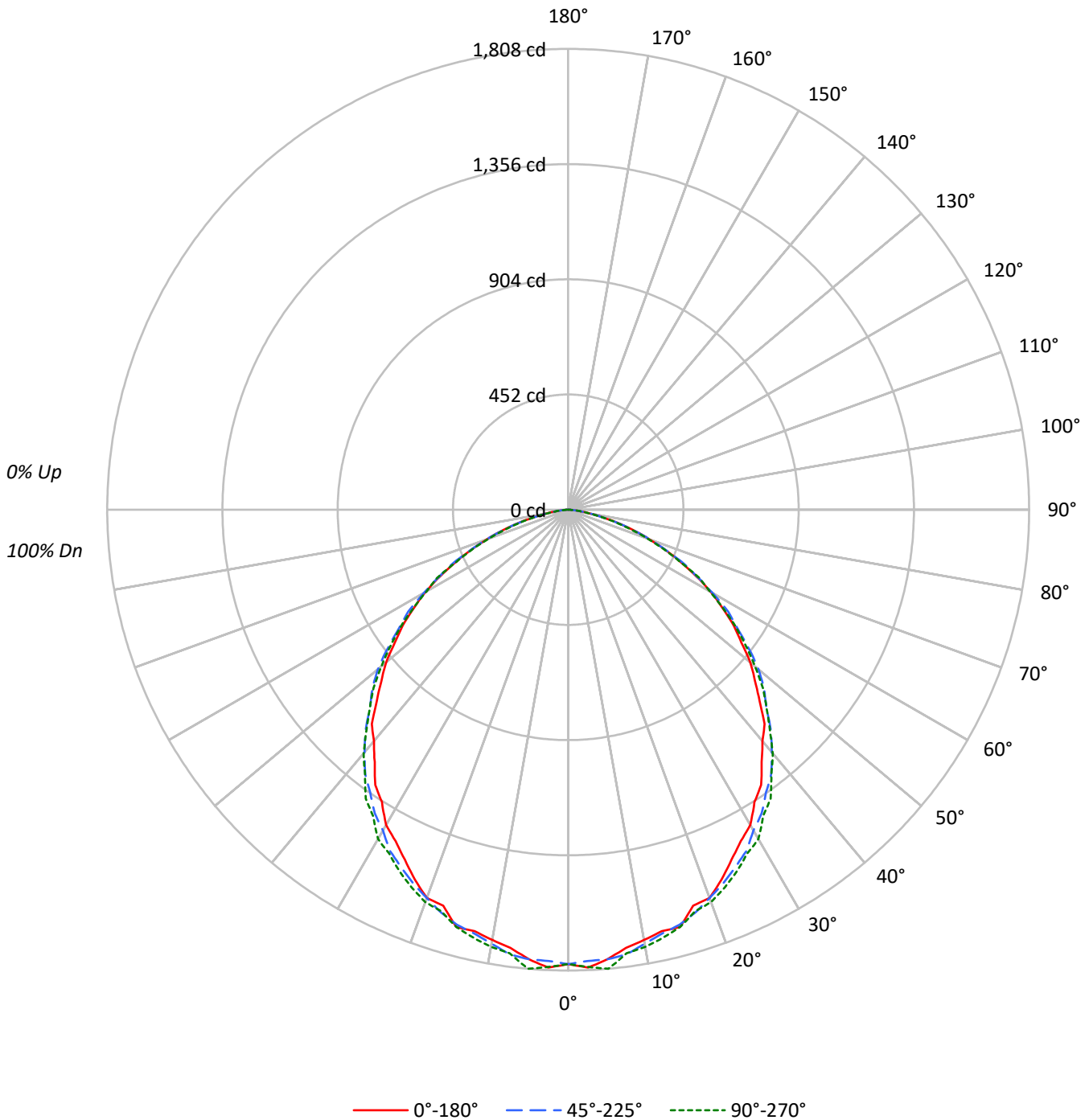
Lumens per Lamp: N/A
Luminaire Lumens: 4493.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	4797	4797	4797
5°	4781	4783	4884
10°	4684	4725	4759
15°	4722	4696	4722
20°	4642	4642	4691
25°	4499	4597	4648
30°	4437	4515	4635
35°	4333	4446	4546
40°	4164	4365	4384
45°	4038	4182	4188
50°	3906	4082	4004
55°	3721	3794	3767
60°	3480	3514	3451
65°	3103	3182	3081
70°	2662	2671	2597
75°	2109	2103	2022
80°	1412	1373	1320
85°	769	760	710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.7	3.7
10°-20°	475.3	10.6
20°-30°	712.0	15.8
30°-40°	843.9	18.8
40°-50°	845.5	18.8
50°-60°	717.7	16.0
60°-70°	483.9	10.8
70°-80°	212.6	4.7
80°-90°	34.5	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°	1355.0	30.2
0°-40°	2198.9	48.9
0°-60°	3762.0	83.7
0°-90°	4493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1783	1783	1783	1783	1783	
5°	1770	1766	1771	1765	1808	167
15°	1695	1675	1686	1694	1695	472
25°	1515	1524	1548	1569	1565	701
35°	1319	1323	1353	1385	1384	819
45°	1061	1081	1099	1127	1100	821
55°	793	788	809	803	803	706
65°	487	481	500	481	484	485
75°	203	199	202	188	194	217
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1782.7	1782.7	1782.7	1782.7	1782.7
2.5°	1798.1	1784.6	1771.9	1786.6	1795.6
5°	1770.0	1765.9	1770.7	1765.4	1808.0
7.5°	1733.7	1749.6	1758.8	1753.0	1755.5
10°	1714.3	1708.8	1729.3	1743.6	1741.5
12.5°	1693.6	1701.9	1703.1	1718.5	1719.9
15°	1694.8	1675.2	1685.6	1694.3	1695.0
17.5°	1629.0	1650.1	1657.3	1677.3	1652.4
20°	1620.9	1605.5	1620.9	1641.4	1638.2
22.5°	1571.4	1554.1	1587.3	1605.5	1604.3
25°	1515.2	1523.5	1548.4	1568.6	1565.4
27.5°	1466.0	1475.7	1511.1	1539.0	1521.0
30°	1428.0	1423.2	1453.1	1478.0	1491.8
32.5°	1360.1	1377.6	1412.6	1437.2	1424.1
35°	1318.9	1322.8	1353.4	1384.7	1383.8
37.5°	1246.9	1265.0	1308.1	1316.8	1308.8
40°	1185.4	1203.6	1242.5	1251.9	1248.0
42.5°	1140.1	1143.3	1176.7	1187.5	1170.2
45°	1061.1	1080.9	1098.9	1127.2	1100.5
47.5°	993.9	1003.1	1041.8	1049.4	1035.3
50°	932.9	936.1	975.0	965.6	956.4
52.5°	856.3	869.8	891.7	889.9	879.0
55°	793.2	787.9	808.6	803.1	802.9
57.5°	717.5	726.7	743.7	735.0	720.9
60°	646.6	646.8	653.0	643.1	641.3
62.5°	567.6	570.4	571.8	559.6	579.4
65°	487.3	480.8	499.7	480.6	483.8
67.5°	413.4	416.6	414.8	402.8	407.4
70°	338.4	342.5	339.5	325.9	330.1
72.5°	269.8	264.7	267.9	250.9	258.7
75°	202.8	198.6	202.3	188.1	194.5
77.5°	138.1	141.3	139.0	131.4	135.8
80°	91.1	88.6	88.6	84.2	85.2
82.5°	53.2	50.6	49.9	48.6	50.6
85°	24.9	24.2	24.6	23.9	23.0
87.5°	9.0	9.2	9.2	8.7	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)