

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: P589039

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-93-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589039
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-93-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

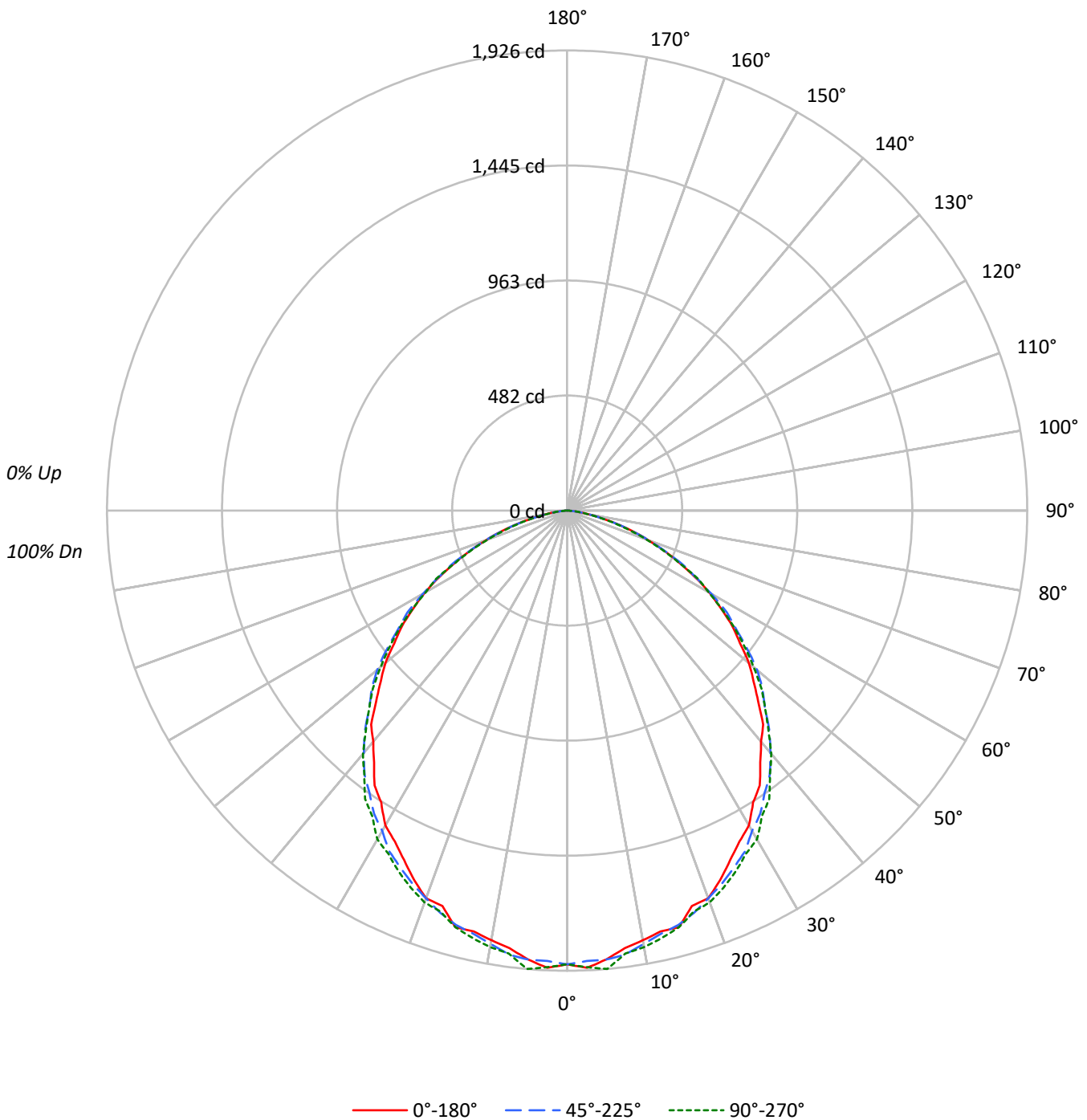
Lumens per Lamp: N/A
Luminaire Lumens: 4786.0 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5110	5110	5110
5°	5093	5095	5202
10°	4990	5034	5069
15°	5029	5002	5030
20°	4944	4944	4997
25°	4793	4897	4951
30°	4726	4810	4937
35°	4615	4736	4843
40°	4436	4649	4670
45°	4301	4454	4461
50°	4160	4348	4265
55°	3964	4041	4012
60°	3707	3744	3676
65°	3305	3389	3282
70°	2836	2845	2766
75°	2246	2241	2154
80°	1505	1463	1406
85°	818	809	756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.6	3.7
10°-20°	506.2	10.6
20°-30°	758.5	15.8
30°-40°	898.9	18.8
40°-50°	900.6	18.8
50°-60°	764.5	16.0
60°-70°	515.4	10.8
70°-80°	226.5	4.7
80°-90°	36.8	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°	1443.3	30.2
0°-40°	2342.3	48.9
0°-60°	4007.3	83.7
0°-90°	4786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4786.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1899	1899	1899	1899	1899	
5°	1886	1881	1886	1881	1926	178
15°	1805	1784	1796	1805	1806	503
25°	1614	1623	1649	1671	1668	746
35°	1405	1409	1442	1475	1474	872
45°	1130	1151	1170	1201	1172	874
55°	845	839	861	856	855	752
65°	519	512	532	512	515	516
75°	216	212	216	200	207	231
85°	26	26	26	26	24	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1899.0	1899.0	1899.0	1899.0	1899.0
2.5°	1915.4	1900.9	1887.4	1903.1	1912.7
5°	1885.5	1881.1	1886.2	1880.6	1925.9
7.5°	1846.7	1863.7	1873.5	1867.3	1870.0
10°	1826.1	1820.3	1842.1	1857.3	1855.1
12.5°	1804.1	1812.9	1814.1	1830.6	1832.0
15°	1805.3	1784.5	1795.5	1804.8	1805.5
17.5°	1735.2	1757.7	1765.3	1786.7	1760.2
20°	1726.6	1710.2	1726.6	1748.4	1745.0
22.5°	1673.9	1655.5	1690.8	1710.2	1708.9
25°	1614.1	1622.9	1649.4	1670.9	1667.5
27.5°	1561.6	1571.9	1609.6	1639.3	1620.2
30°	1521.1	1516.0	1547.9	1574.3	1589.0
32.5°	1448.8	1467.4	1504.7	1530.9	1517.0
35°	1404.9	1409.1	1441.7	1475.0	1474.1
37.5°	1328.2	1347.5	1393.4	1402.7	1394.1
40°	1262.7	1282.1	1323.5	1333.6	1329.4
42.5°	1214.4	1217.8	1253.4	1264.9	1246.5
45°	1130.3	1151.4	1170.5	1200.7	1172.2
47.5°	1058.7	1068.5	1109.7	1117.8	1102.8
50°	993.7	997.2	1038.6	1028.6	1018.7
52.5°	912.1	926.6	949.8	947.9	936.4
55°	844.9	839.3	861.3	855.5	855.2
57.5°	764.2	774.1	792.2	782.9	767.9
60°	688.7	689.0	695.6	685.0	683.1
62.5°	604.6	607.6	609.0	596.0	617.1
65°	519.1	512.2	532.3	511.9	515.4
67.5°	440.4	443.8	441.8	429.1	434.0
70°	360.4	364.8	361.6	347.2	351.6
72.5°	287.4	282.0	285.4	267.3	275.6
75°	216.0	211.6	215.5	200.3	207.2
77.5°	147.1	150.5	148.1	140.0	144.7
80°	97.1	94.4	94.4	89.7	90.7
82.5°	56.6	53.9	53.2	51.7	53.9
85°	26.5	25.7	26.2	25.5	24.5
87.5°	9.6	9.8	9.8	9.3	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)