

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: P589036

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589036
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-82-97-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

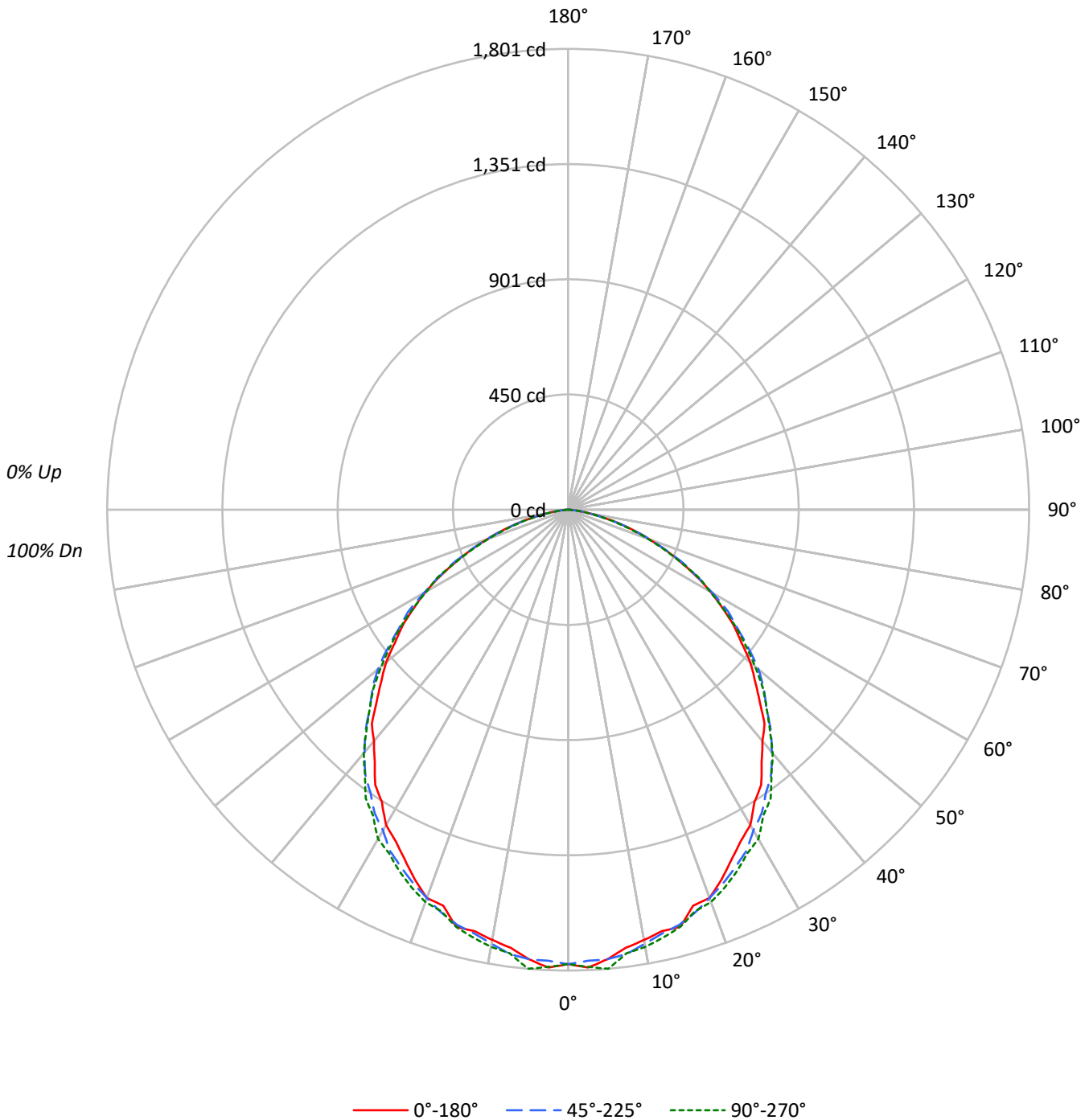
Lumens per Lamp: N/A
Luminaire Lumens: 4475.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4778	4778	4778
5°	4762	4764	4864
10°	4666	4706	4740
15°	4703	4677	4703
20°	4623	4623	4672
25°	4481	4579	4630
30°	4419	4497	4617
35°	4315	4428	4528
40°	4148	4347	4366
45°	4022	4165	4171
50°	3890	4065	3988
55°	3706	3779	3751
60°	3466	3500	3437
65°	3090	3169	3068
70°	2651	2660	2586
75°	2100	2095	2014
80°	1407	1368	1314
85°	766	756	707



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.0	3.7
10°-20°	473.3	10.6
20°-30°	709.2	15.8
30°-40°	840.5	18.8
40°-50°	842.1	18.8
50°-60°	714.8	16.0
60°-70°	481.9	10.8
70°-80°	211.8	4.7
80°-90°	34.4	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°	1349.5	30.2
0°-40°	2190.1	48.9
0°-60°	3746.9	83.7
0°-90°	4475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1776	1776	1776	1776	1776	
5°	1763	1759	1764	1758	1801	166
15°	1688	1668	1679	1688	1688	470
25°	1509	1517	1542	1562	1559	698
35°	1314	1318	1348	1379	1378	816
45°	1057	1077	1094	1123	1096	818
55°	790	785	805	800	800	703
65°	485	479	498	479	482	483
75°	202	198	202	187	194	216
85°	25	24	24	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1775.6	1775.6	1775.6	1775.6	1775.6
2.5°	1790.9	1777.4	1764.8	1779.5	1788.4
5°	1763.0	1758.8	1763.6	1758.4	1800.8
7.5°	1726.7	1742.6	1751.7	1746.0	1748.5
10°	1707.5	1702.0	1722.4	1736.6	1734.5
12.5°	1686.8	1695.1	1696.2	1711.6	1713.0
15°	1688.0	1668.5	1678.8	1687.5	1688.2
17.5°	1622.4	1643.5	1650.6	1670.6	1645.8
20°	1614.4	1599.0	1614.4	1634.8	1631.6
22.5°	1565.1	1547.9	1580.9	1599.0	1597.9
25°	1509.2	1517.4	1542.2	1562.4	1559.2
27.5°	1460.1	1469.7	1505.0	1532.8	1514.9
30°	1422.3	1417.5	1447.3	1472.0	1485.8
32.5°	1354.7	1372.1	1406.9	1431.5	1418.4
35°	1313.6	1317.5	1348.0	1379.2	1378.3
37.5°	1241.9	1260.0	1302.8	1311.6	1303.5
40°	1180.7	1198.8	1237.5	1246.9	1243.0
42.5°	1135.5	1138.7	1171.9	1182.7	1165.5
45°	1056.9	1076.6	1094.5	1122.7	1096.1
47.5°	989.9	999.1	1037.6	1045.2	1031.2
50°	929.2	932.4	971.1	961.7	952.5
52.5°	852.8	866.3	888.1	886.3	875.5
55°	790.0	784.7	805.4	799.9	799.6
57.5°	714.6	723.8	740.7	732.0	718.0
60°	644.0	644.2	650.4	640.5	638.7
62.5°	565.3	568.1	569.5	557.3	577.0
65°	485.3	478.9	497.7	478.7	481.9
67.5°	411.7	414.9	413.1	401.2	405.8
70°	337.0	341.1	338.1	324.6	328.7
72.5°	268.7	263.6	266.9	249.9	257.7
75°	202.0	197.8	201.5	187.3	193.7
77.5°	137.6	140.8	138.5	130.9	135.3
80°	90.8	88.3	88.3	83.9	84.8
82.5°	53.0	50.4	49.7	48.4	50.4
85°	24.8	24.1	24.5	23.8	22.9
87.5°	8.9	9.2	9.2	8.7	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)