

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: P589419

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589419
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-LD4-3LO-40-UNV-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

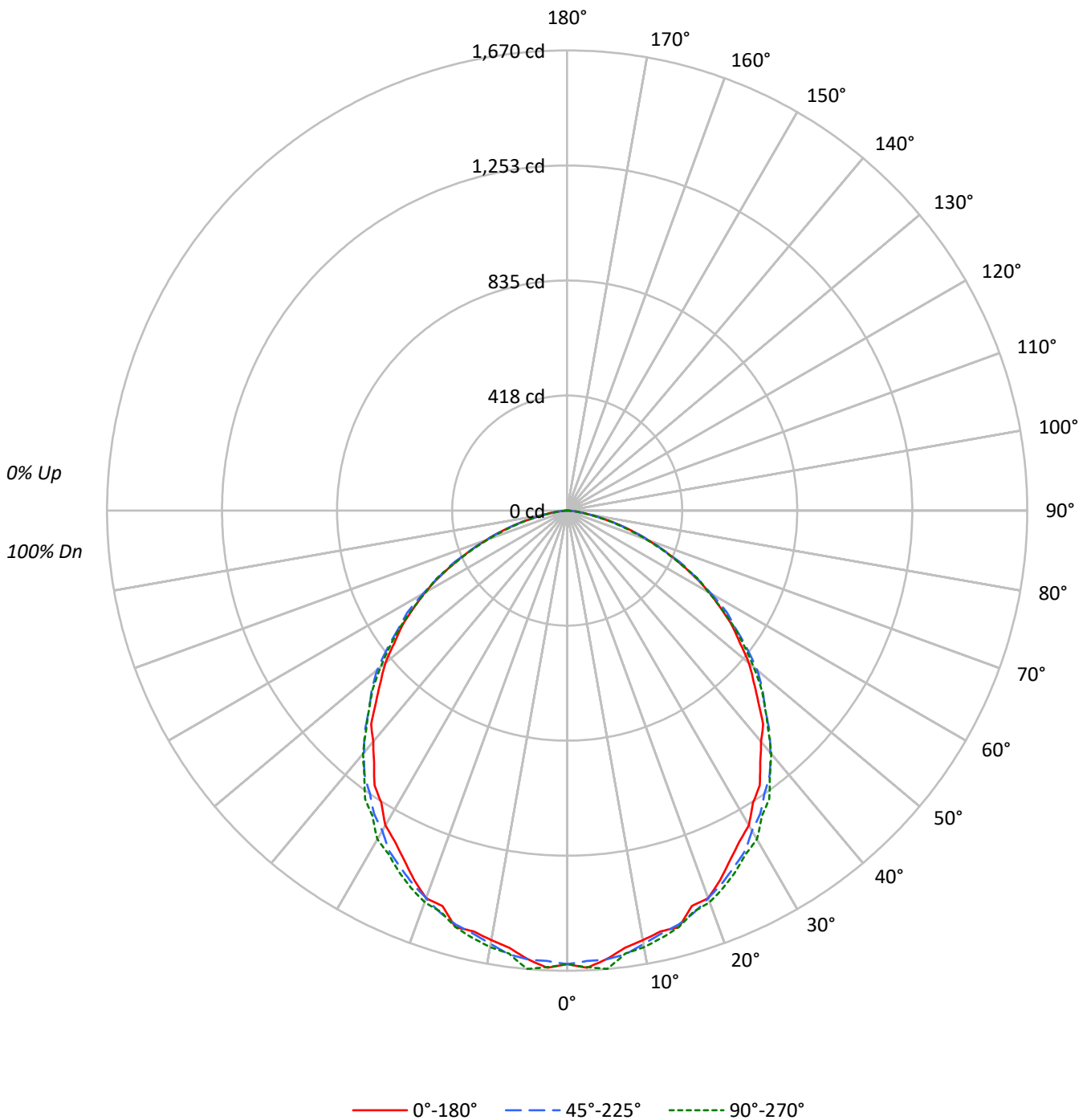
Lumens per Lamp: N/A
Luminaire Lumens: 4149.0 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	4430	4430	4430
5°	4415	4417	4510
10°	4326	4364	4394
15°	4360	4336	4361
20°	4286	4286	4332
25°	4154	4245	4292
30°	4098	4169	4281
35°	4001	4106	4198
40°	3845	4031	4049
45°	3729	3862	3867
50°	3607	3769	3697
55°	3437	3503	3478
60°	3214	3245	3187
65°	2865	2939	2845
70°	2459	2467	2398
75°	1947	1942	1867
80°	1305	1268	1218
85°	710	701	658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	3.7
10°-20°	438.9	10.6
20°-30°	657.5	15.8
30°-40°	779.3	18.8
40°-50°	780.7	18.8
50°-60°	662.7	16.0
60°-70°	446.8	10.8
70°-80°	196.3	4.7
80°-90°	31.9	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°	1251.2	30.2
0°-40°	2030.5	48.9
0°-60°	3474.0	83.7
0°-90°	4149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4149.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1646	1646	1646	1646	1646	
5°	1634	1631	1635	1630	1670	154
15°	1565	1547	1556	1565	1565	436
25°	1399	1407	1430	1448	1446	647
35°	1218	1222	1250	1279	1278	756
45°	980	998	1015	1041	1016	758
55°	732	728	747	742	741	652
65°	450	444	462	444	447	448
75°	187	183	187	174	180	201
85°	23	22	23	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1646.2	1646.2	1646.2	1646.2	1646.2
2.5°	1660.5	1647.9	1636.2	1649.8	1658.1
5°	1634.5	1630.7	1635.2	1630.3	1669.6
7.5°	1600.9	1615.6	1624.1	1618.8	1621.1
10°	1583.1	1578.0	1596.9	1610.1	1608.2
12.5°	1564.0	1571.6	1572.7	1586.9	1588.2
15°	1565.0	1547.0	1556.5	1564.6	1565.2
17.5°	1504.2	1523.8	1530.4	1548.9	1525.9
20°	1496.8	1482.6	1496.8	1515.7	1512.7
22.5°	1451.1	1435.2	1465.8	1482.6	1481.5
25°	1399.2	1406.9	1429.8	1448.5	1445.6
27.5°	1353.7	1362.7	1395.4	1421.1	1404.5
30°	1318.7	1314.2	1341.8	1364.8	1377.6
32.5°	1256.0	1272.1	1304.4	1327.2	1315.1
35°	1217.9	1221.5	1249.8	1278.7	1277.9
37.5°	1151.4	1168.2	1207.9	1216.0	1208.6
40°	1094.6	1111.4	1147.4	1156.1	1152.5
42.5°	1052.8	1055.7	1086.6	1096.6	1080.6
45°	979.9	998.1	1014.7	1040.9	1016.2
47.5°	917.8	926.3	962.0	969.0	956.1
50°	861.5	864.5	900.4	891.7	883.2
52.5°	790.7	803.2	823.4	821.7	811.7
55°	732.5	727.6	746.7	741.6	741.4
57.5°	662.5	671.0	686.8	678.7	665.7
60°	597.1	597.3	603.0	593.9	592.2
62.5°	524.2	526.7	528.0	516.7	535.0
65°	450.0	444.0	461.5	443.8	446.8
67.5°	381.7	384.7	383.0	372.0	376.2
70°	312.5	316.3	313.5	301.0	304.8
72.5°	249.1	244.4	247.4	231.7	238.9
75°	187.3	183.4	186.8	173.7	179.6
77.5°	127.5	130.5	128.4	121.4	125.4
80°	84.2	81.8	81.8	77.8	78.6
82.5°	49.1	46.8	46.1	44.8	46.8
85°	23.0	22.3	22.7	22.1	21.3
87.5°	8.3	8.5	8.5	8.1	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)