

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: P589405

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-81-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589405
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-81-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

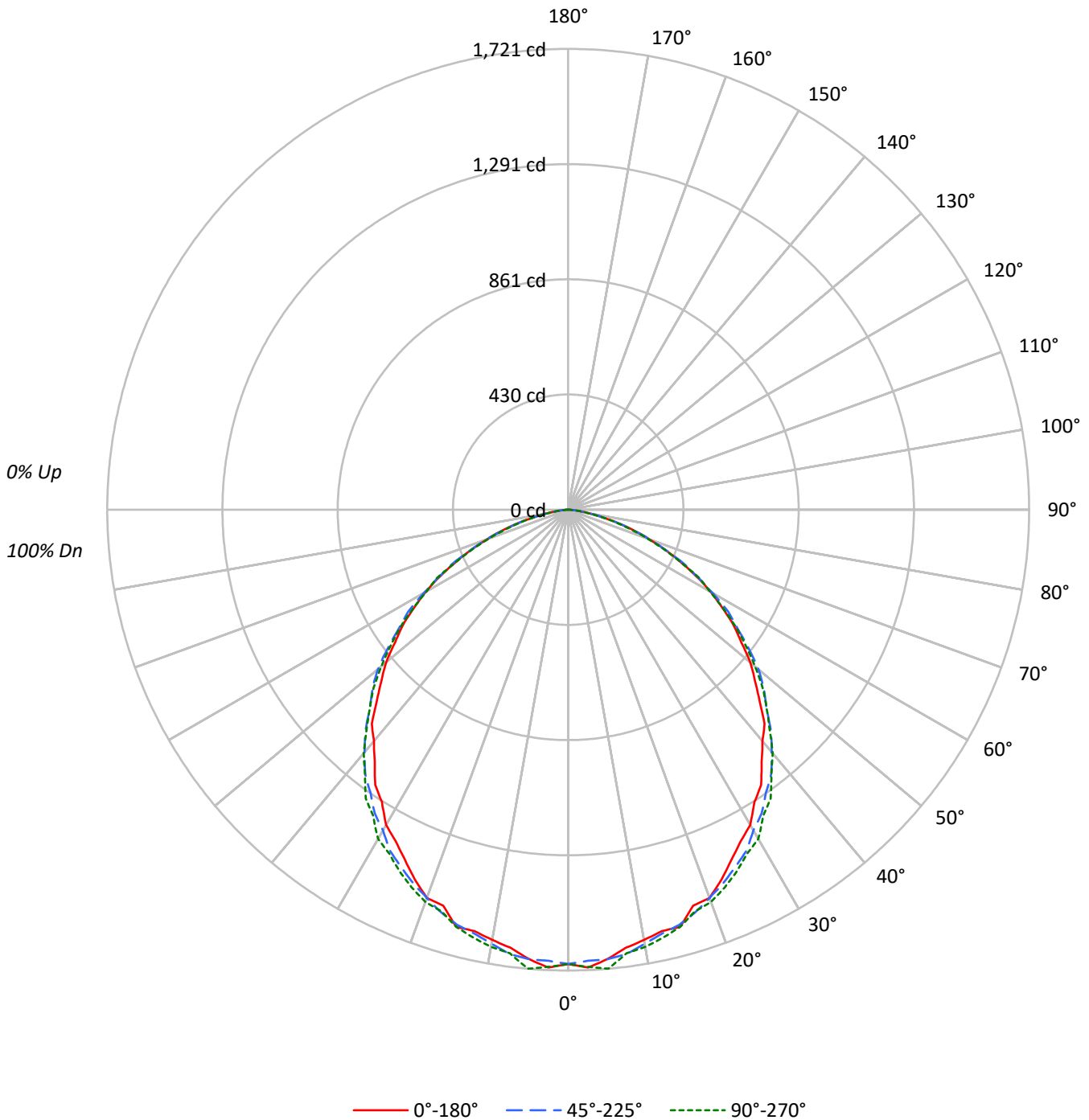
Lumens per Lamp: N/A
Luminaire Lumens: 4276.0 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4566	4566	4566
5°	4551	4552	4648
10°	4458	4497	4529
15°	4493	4469	4494
20°	4418	4418	4464
25°	4282	4375	4423
30°	4223	4297	4411
35°	4123	4232	4326
40°	3963	4154	4172
45°	3843	3980	3986
50°	3717	3885	3810
55°	3542	3611	3585
60°	3312	3345	3285
65°	2953	3028	2932
70°	2533	2542	2471
75°	2007	2002	1925
80°	1344	1306	1257
85°	732	722	676



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.6	3.7
10°-20°	452.3	10.6
20°-30°	677.6	15.8
30°-40°	803.1	18.8
40°-50°	804.6	18.8
50°-60°	683.0	16.0
60°-70°	460.5	10.8
70°-80°	202.3	4.7
80°-90°	32.9	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°	1289.5	30.2
0°-40°	2092.7	48.9
0°-60°	3580.3	83.7
0°-90°	4276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1697	1697	1697	1697	1697	
5°	1685	1681	1685	1680	1721	159
15°	1613	1594	1604	1612	1613	449
25°	1442	1450	1474	1493	1490	667
35°	1255	1259	1288	1318	1317	779
45°	1010	1029	1046	1073	1047	781
55°	755	750	770	764	764	671
65°	464	458	476	457	460	461
75°	193	189	193	179	185	207
85°	24	23	23	23	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1696.6	1696.6	1696.6	1696.6	1696.6
2.5°	1711.3	1698.4	1686.3	1700.3	1708.9
5°	1684.6	1680.6	1685.2	1680.2	1720.7
7.5°	1649.9	1665.1	1673.8	1668.4	1670.8
10°	1631.5	1626.3	1645.8	1659.4	1657.4
12.5°	1611.8	1619.7	1620.8	1635.5	1636.8
15°	1612.9	1594.3	1604.2	1612.5	1613.1
17.5°	1550.3	1570.4	1577.2	1596.3	1572.6
20°	1542.6	1527.9	1542.6	1562.1	1559.0
22.5°	1495.5	1479.1	1510.6	1527.9	1526.8
25°	1442.1	1449.9	1473.6	1492.9	1489.8
27.5°	1395.2	1404.4	1438.1	1464.6	1447.5
30°	1359.0	1354.4	1382.9	1406.6	1419.7
32.5°	1294.4	1311.1	1344.4	1367.8	1355.3
35°	1255.2	1258.9	1288.1	1317.9	1317.0
37.5°	1186.6	1203.9	1244.9	1253.2	1245.6
40°	1128.2	1145.5	1182.5	1191.5	1187.7
42.5°	1085.0	1088.1	1119.8	1130.1	1113.7
45°	1009.9	1028.7	1045.8	1072.7	1047.3
47.5°	945.9	954.7	991.5	998.7	985.3
50°	887.8	890.9	927.9	919.0	910.2
52.5°	814.9	827.8	848.6	846.9	836.6
55°	754.9	749.8	769.6	764.3	764.1
57.5°	682.8	691.6	707.8	699.5	686.1
60°	615.3	615.6	621.5	612.0	610.3
62.5°	540.2	542.8	544.1	532.5	551.4
65°	463.7	457.6	475.6	457.4	460.5
67.5°	393.4	396.5	394.7	383.4	387.7
70°	322.0	326.0	323.1	310.2	314.1
72.5°	256.7	251.9	255.0	238.8	246.2
75°	193.0	189.0	192.6	179.0	185.1
77.5°	131.4	134.5	132.3	125.1	129.2
80°	86.7	84.3	84.3	80.2	81.1
82.5°	50.6	48.2	47.5	46.2	48.2
85°	23.7	23.0	23.4	22.8	21.9
87.5°	8.5	8.8	8.8	8.3	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)