

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: P589439

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589439
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-50-UNV-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

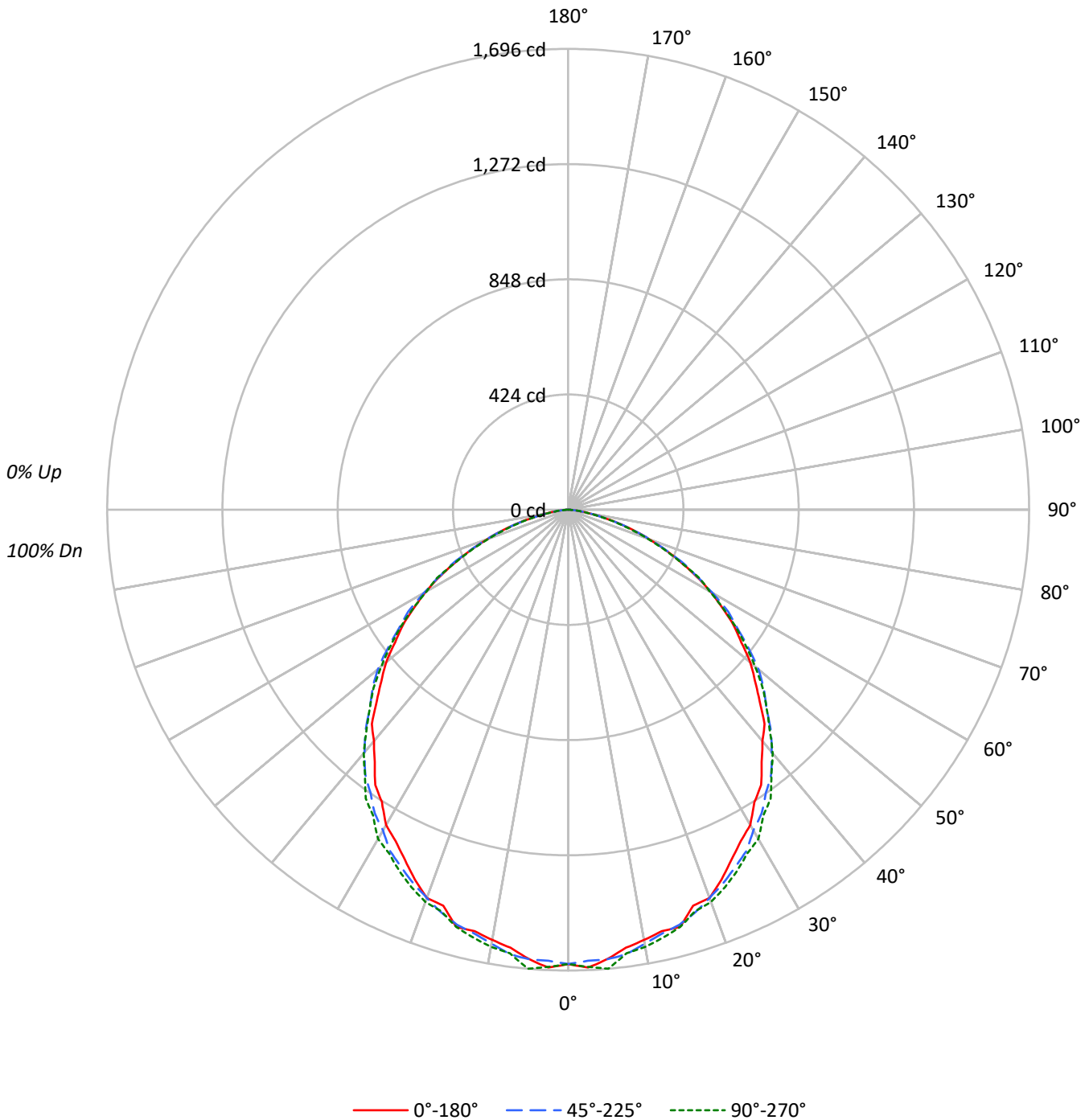
Lumens per Lamp: N/A
Luminaire Lumens: 4214.0 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4499	4499	4499
5°	4484	4486	4581
10°	4394	4432	4463
15°	4428	4404	4429
20°	4353	4353	4400
25°	4220	4312	4359
30°	4162	4235	4347
35°	4064	4170	4264
40°	3906	4093	4112
45°	3787	3922	3928
50°	3663	3828	3755
55°	3490	3558	3533
60°	3264	3296	3237
65°	2910	2984	2890
70°	2496	2505	2436
75°	1978	1973	1896
80°	1325	1288	1238
85°	719	713	667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.3	3.7
10°-20°	445.7	10.6
20°-30°	667.8	15.8
30°-40°	791.5	18.8
40°-50°	793.0	18.8
50°-60°	673.1	16.0
60°-70°	453.8	10.8
70°-80°	199.4	4.7
80°-90°	32.4	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°	1270.8	30.2
0°-40°	2062.3	48.9
0°-60°	3528.4	83.7
0°-90°	4214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4214.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1672	1672	1672	1672	1672	
5°	1660	1656	1661	1656	1696	157
15°	1590	1571	1581	1589	1590	443
25°	1421	1429	1452	1471	1468	657
35°	1237	1241	1269	1299	1298	768
45°	995	1014	1031	1057	1032	770
55°	744	739	758	753	753	662
65°	457	451	469	451	454	455
75°	190	186	190	176	182	204
85°	23	23	23	22	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1672.0	1672.0	1672.0	1672.0	1672.0
2.5°	1686.5	1673.7	1661.9	1675.7	1684.1
5°	1660.1	1656.2	1660.8	1655.8	1695.8
7.5°	1626.0	1640.9	1649.6	1644.2	1646.5
10°	1607.9	1602.7	1621.9	1635.3	1633.4
12.5°	1588.5	1596.2	1597.3	1611.8	1613.1
15°	1589.5	1571.2	1580.9	1589.1	1589.8
17.5°	1527.8	1547.7	1554.4	1573.1	1549.8
20°	1520.2	1505.8	1520.2	1539.5	1536.4
22.5°	1473.8	1457.6	1488.7	1505.8	1504.7
25°	1421.2	1428.9	1452.2	1471.2	1468.2
27.5°	1375.0	1384.0	1417.3	1443.4	1426.6
30°	1339.3	1334.8	1362.9	1386.2	1399.1
32.5°	1275.6	1292.1	1324.9	1348.0	1335.7
35°	1237.0	1240.7	1269.4	1298.7	1297.9
37.5°	1169.4	1186.5	1226.9	1235.1	1227.5
40°	1111.8	1128.8	1165.3	1174.2	1170.5
42.5°	1069.3	1072.3	1103.6	1113.7	1097.5
45°	995.2	1013.8	1030.6	1057.2	1032.1
47.5°	932.2	940.8	977.1	984.2	971.0
50°	875.0	878.0	914.5	905.6	897.0
52.5°	803.1	815.8	836.3	834.6	824.5
55°	743.9	739.0	758.4	753.2	753.0
57.5°	672.9	681.5	697.5	689.3	676.1
60°	606.4	606.6	612.5	603.2	601.4
62.5°	532.4	535.0	536.3	524.8	543.4
65°	457.0	451.0	468.7	450.8	453.8
67.5°	387.7	390.7	389.0	377.8	382.1
70°	317.3	321.2	318.4	305.7	309.6
72.5°	253.0	248.3	251.3	235.3	242.7
75°	190.2	186.3	189.8	176.4	182.4
77.5°	129.5	132.6	130.4	123.3	127.4
80°	85.5	83.1	83.1	79.0	79.9
82.5°	49.9	47.5	46.8	45.6	47.5
85°	23.3	22.7	23.1	22.5	21.6
87.5°	8.4	8.6	8.6	8.2	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)