

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: P589057

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589057
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-50-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

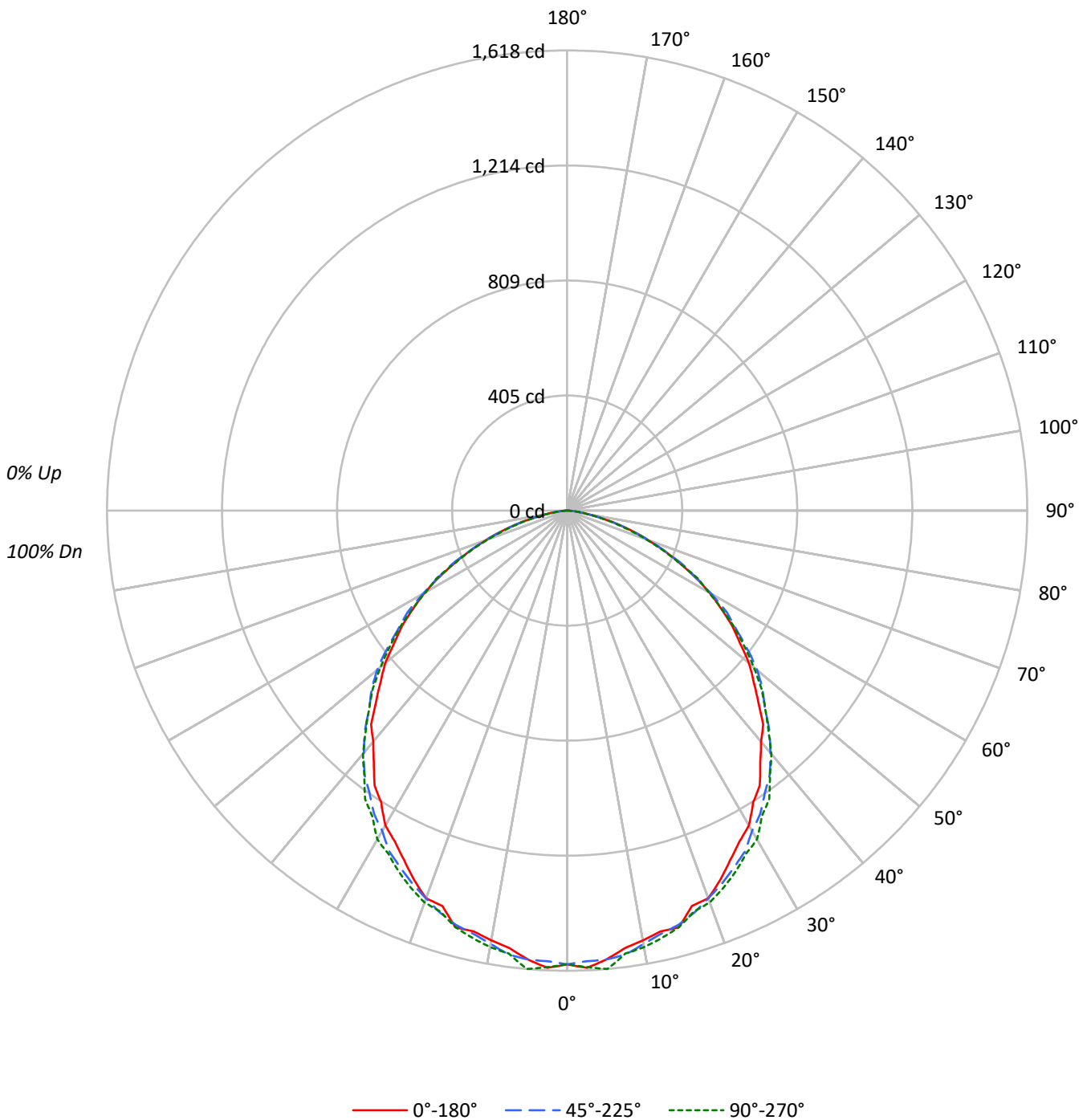
Lumens per Lamp: N/A
Luminaire Lumens: 4021.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4293	4293	4293
5°	4279	4281	4371
10°	4192	4229	4259
15°	4225	4203	4226
20°	4154	4154	4198
25°	4026	4114	4160
30°	3971	4041	4149
35°	3878	3979	4068
40°	3727	3906	3923
45°	3614	3742	3748
50°	3495	3653	3583
55°	3331	3395	3371
60°	3114	3145	3089
65°	2777	2848	2757
70°	2382	2390	2324
75°	1887	1883	1810
80°	1265	1229	1181
85°	685	679	636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	3.7
10°-20°	425.3	10.6
20°-30°	637.2	15.8
30°-40°	755.3	18.8
40°-50°	756.6	18.8
50°-60°	642.3	16.0
60°-70°	433.0	10.8
70°-80°	190.3	4.7
80°-90°	30.9	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°	1212.6	30.2
0°-40°	1967.9	48.9
0°-60°	3366.8	83.7
0°-90°	4021.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4021.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1595	1595	1595	1595	1595	
5°	1584	1580	1585	1580	1618	149
15°	1517	1499	1508	1516	1517	423
25°	1356	1364	1386	1404	1401	627
35°	1180	1184	1211	1239	1238	733
45°	950	967	983	1009	985	735
55°	710	705	724	719	718	631
65°	436	430	447	430	433	434
75°	182	178	181	168	174	194
85°	22	22	22	21	21	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1595.4	1595.4	1595.4	1595.4	1595.4
2.5°	1609.2	1597.1	1585.7	1598.9	1607.0
5°	1584.1	1580.4	1584.7	1580.0	1618.1
7.5°	1551.6	1565.8	1574.0	1568.9	1571.1
10°	1534.3	1529.3	1547.6	1560.4	1558.6
12.5°	1515.7	1523.1	1524.2	1538.0	1539.2
15°	1516.7	1499.2	1508.5	1516.3	1516.9
17.5°	1457.8	1476.8	1483.2	1501.1	1478.8
20°	1450.6	1436.8	1450.6	1469.0	1466.1
22.5°	1406.3	1390.9	1420.5	1436.8	1435.8
25°	1356.1	1363.5	1385.7	1403.9	1401.0
27.5°	1312.0	1320.6	1352.4	1377.3	1361.2
30°	1278.0	1273.7	1300.4	1322.7	1335.1
32.5°	1217.2	1232.9	1264.2	1286.2	1274.5
35°	1180.4	1183.9	1211.3	1239.3	1238.4
37.5°	1115.9	1132.1	1170.7	1178.5	1171.3
40°	1060.9	1077.1	1112.0	1120.4	1116.9
42.5°	1020.3	1023.2	1053.0	1062.7	1047.3
45°	949.6	967.4	983.4	1008.8	984.9
47.5°	889.5	897.7	932.3	939.1	926.6
50°	834.9	837.8	872.6	864.1	855.9
52.5°	766.3	778.5	798.0	796.4	786.7
55°	709.9	705.1	723.7	718.7	718.5
57.5°	642.1	650.3	665.6	657.7	645.2
60°	578.6	578.8	584.4	575.6	573.9
62.5°	508.0	510.5	511.7	500.8	518.5
65°	436.1	430.3	447.2	430.1	433.0
67.5°	370.0	372.9	371.2	360.5	364.6
70°	302.8	306.5	303.8	291.7	295.4
72.5°	241.4	236.9	239.8	224.5	231.5
75°	181.5	177.8	181.1	168.3	174.1
77.5°	123.6	126.5	124.4	117.6	121.5
80°	81.6	79.3	79.3	75.4	76.2
82.5°	47.6	45.3	44.7	43.5	45.3
85°	22.2	21.6	22.0	21.4	20.6
87.5°	8.0	8.2	8.2	7.8	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)