

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: P588831

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588831
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-LD4-1LO-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

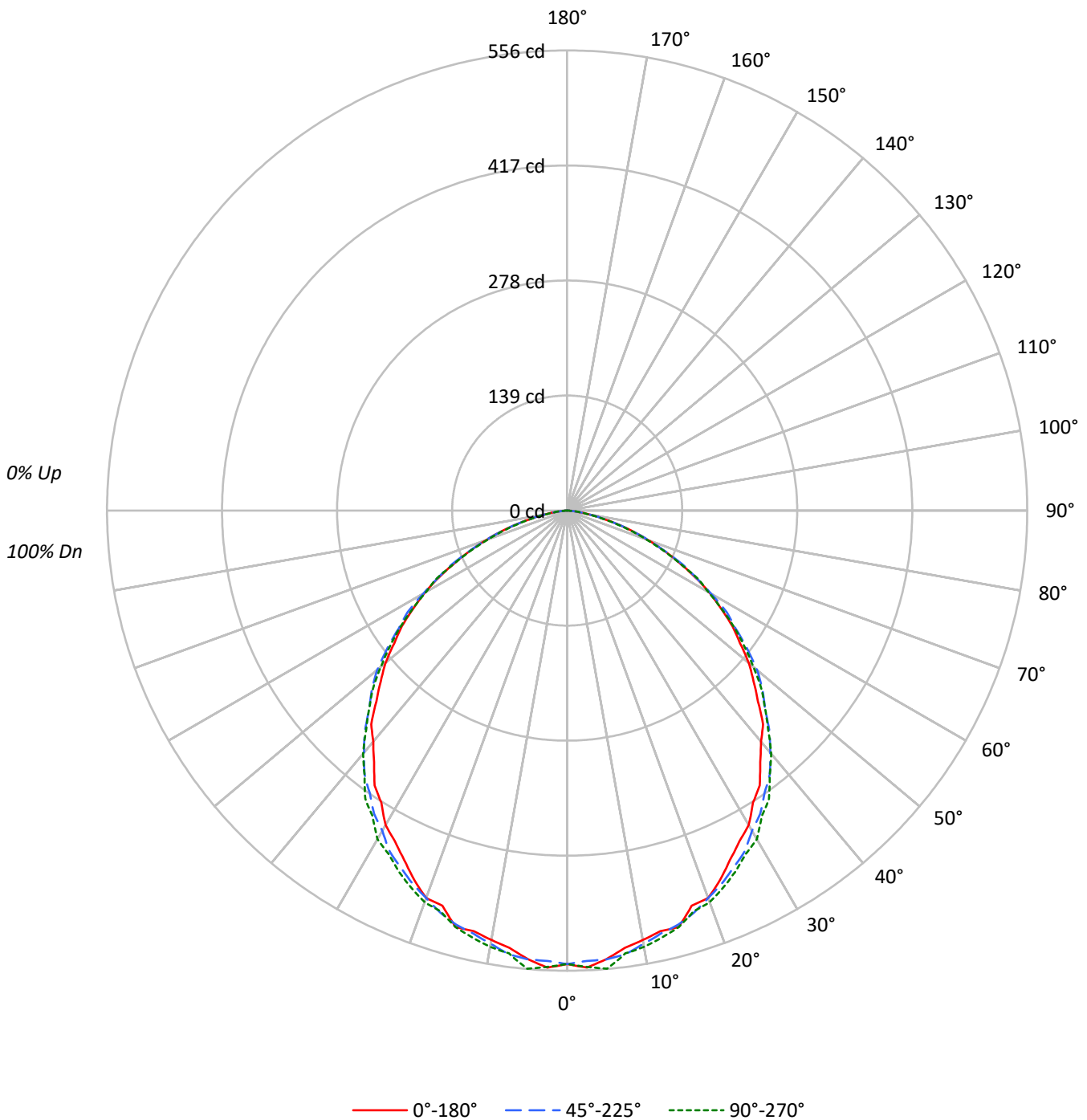
Lumens per Lamp: N/A
Luminaire Lumens: 1381.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P588831

CATALOG NUMBER: FMR-24-2-LD4-1LO-40-UNV-81-86-EDD

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°	1474	1474	1474
5°	1470	1470	1501
10°	1440	1452	1463
15°	1451	1443	1451
20°	1427	1427	1442
25°	1383	1413	1429
30°	1364	1388	1425
35°	1332	1367	1397
40°	1280	1342	1348
45°	1241	1286	1287
50°	1200	1255	1231
55°	1144	1166	1158
60°	1069	1080	1061
65°	954	978	947
70°	818	821	799
75°	648	647	622
80°	434	422	406
85°	235	235	219



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	3.7
10°-20°	146.1	10.6
20°-30°	218.9	15.8
30°-40°	259.4	18.8
40°-50°	259.9	18.8
50°-60°	220.6	16.0
60°-70°	148.7	10.8
70°-80°	65.3	4.7
80°-90°	10.6	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°	416.5	30.2
0°-40°	675.9	48.9
0°-60°	1156.3	83.7
0°-90°	1381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1381.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	548	548	548	548	548	
5°	544	543	544	543	556	51
15°	521	515	518	521	521	145
25°	466	468	476	482	481	215
35°	405	407	416	426	425	252
45°	326	332	338	346	338	252
55°	244	242	248	247	247	217
65°	150	148	154	148	149	149
75°	62	61	62	58	60	67
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	547.9	547.9	547.9	547.9	547.9
2.5°	552.7	548.5	544.6	549.1	551.9
5°	544.1	542.8	544.3	542.6	555.7
7.5°	532.9	537.8	540.6	538.8	539.6
10°	526.9	525.2	531.5	535.9	535.3
12.5°	520.6	523.1	523.5	528.2	528.6
15°	520.9	514.9	518.1	520.8	521.0
17.5°	500.7	507.2	509.4	515.5	507.9
20°	498.2	493.5	498.2	504.5	503.5
22.5°	483.0	477.7	487.9	493.5	493.1
25°	465.7	468.3	475.9	482.1	481.2
27.5°	450.6	453.6	464.5	473.0	467.5
30°	438.9	437.4	446.6	454.3	458.5
32.5°	418.1	423.4	434.2	441.8	437.7
35°	405.4	406.6	416.0	425.6	425.3
37.5°	383.2	388.8	402.1	404.8	402.3
40°	364.4	369.9	381.9	384.8	383.6
42.5°	350.4	351.4	361.7	365.0	359.7
45°	326.1	332.2	337.8	346.5	338.2
47.5°	305.5	308.3	320.2	322.5	318.2
50°	286.7	287.7	299.7	296.8	294.0
52.5°	263.2	267.4	274.1	273.5	270.2
55°	243.8	242.2	248.5	246.8	246.8
57.5°	220.5	223.4	228.6	225.9	221.6
60°	198.7	198.8	200.7	197.7	197.1
62.5°	174.5	175.3	175.7	172.0	178.1
65°	149.8	147.8	153.6	147.7	148.7
67.5°	127.1	128.1	127.5	123.8	125.2
70°	104.0	105.3	104.4	100.2	101.5
72.5°	82.9	81.4	82.4	77.1	79.5
75°	62.3	61.1	62.2	57.8	59.8
77.5°	42.4	43.4	42.7	40.4	41.7
80°	28.0	27.2	27.2	25.9	26.2
82.5°	16.3	15.6	15.4	14.9	15.6
85°	7.6	7.4	7.6	7.4	7.1
87.5°	2.8	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)