

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: P588844

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588844  
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-82-97-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

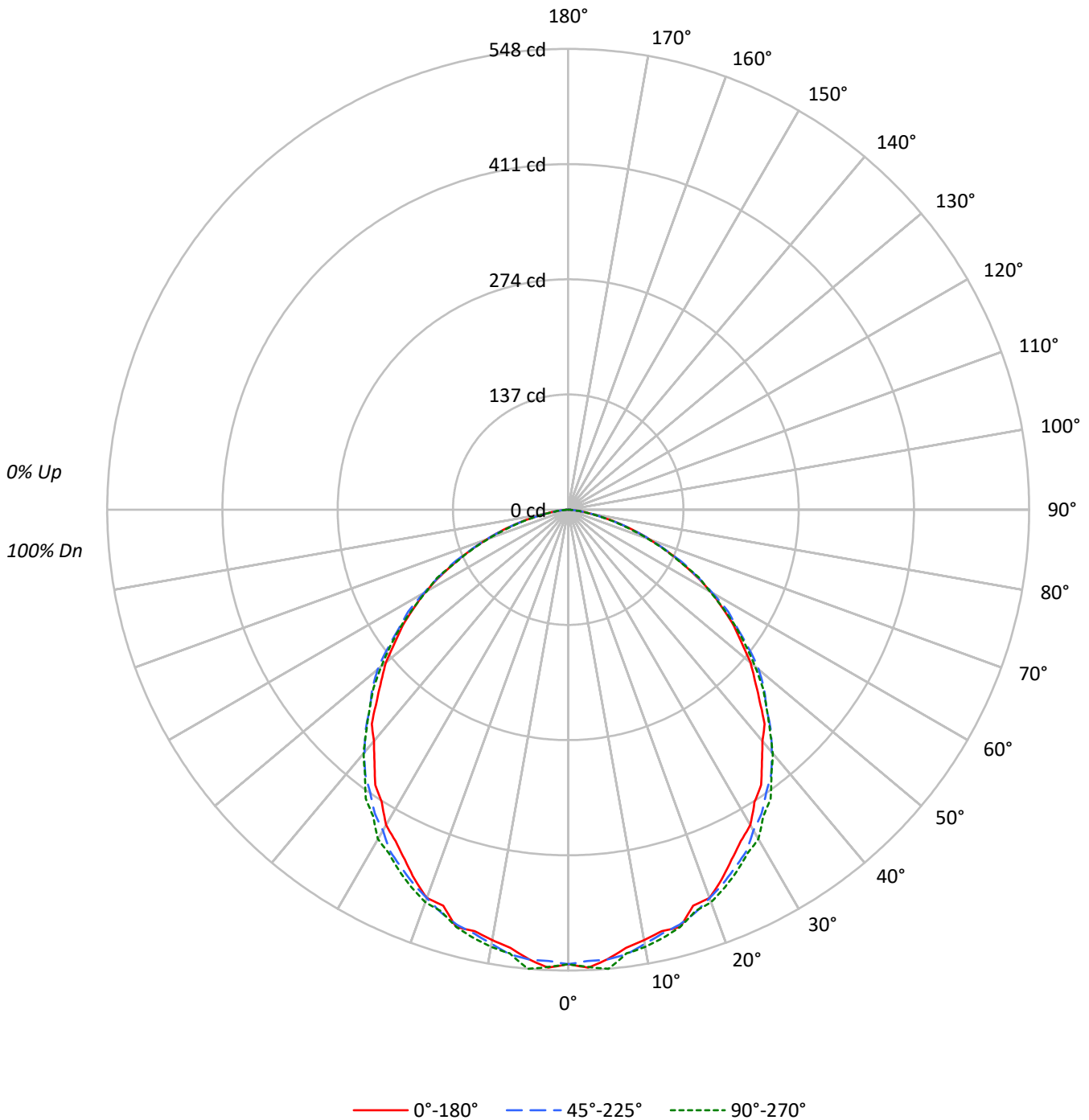
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1362.0 lumens  
Efficiency: N/A  
Efficacy: 116.4 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

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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°	1454	1454	1454
5°	1449	1450	1481
10°	1420	1432	1442
15°	1431	1424	1431
20°	1407	1407	1422
25°	1364	1394	1409
30°	1345	1369	1405
35°	1313	1348	1378
40°	1262	1323	1329
45°	1224	1268	1270
50°	1184	1238	1214
55°	1128	1150	1142
60°	1055	1066	1046
65°	940	965	934
70°	807	810	788
75°	639	637	613
80°	428	417	400
85°	232	232	216



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.8	3.7
10°-20°	144.1	10.6
20°-30°	215.8	15.8
30°-40°	255.8	18.8
40°-50°	256.3	18.8
50°-60°	217.6	16.0
60°-70°	146.7	10.8
70°-80°	64.4	4.7
80°-90°	10.5	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°	410.7	30.2
0°-40°	666.6	48.9
0°-60°	1140.4	83.7
0°-90°	1362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1362.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	540	540	540	540	540	
5°	537	535	537	535	548	51
15°	514	508	511	514	514	143
25°	459	462	469	476	474	212
35°	400	401	410	420	420	248
45°	322	328	333	342	334	249
55°	240	239	245	243	243	214
65°	148	146	152	146	147	147
75°	62	60	61	57	59	66
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°	540.4	540.4	540.4	540.4	540.4
2.5°	545.1	541.0	537.1	541.6	544.3
5°	536.6	535.3	536.8	535.2	548.1
7.5°	525.5	530.4	533.2	531.4	532.2
10°	519.7	518.0	524.2	528.5	527.9
12.5°	513.4	515.9	516.3	520.9	521.4
15°	513.8	507.8	511.0	513.6	513.8
17.5°	493.8	500.2	502.4	508.5	500.9
20°	491.4	486.7	491.4	497.6	496.6
22.5°	476.4	471.1	481.2	486.7	486.3
25°	459.3	461.8	469.4	475.5	474.5
27.5°	444.4	447.3	458.1	466.5	461.1
30°	432.9	431.4	440.5	448.0	452.2
32.5°	412.3	417.6	428.2	435.7	431.7
35°	399.8	401.0	410.3	419.8	419.5
37.5°	378.0	383.5	396.5	399.2	396.7
40°	359.3	364.9	376.6	379.5	378.3
42.5°	345.6	346.6	356.7	360.0	354.7
45°	321.7	327.7	333.1	341.7	333.6
47.5°	301.3	304.1	315.8	318.1	313.8
50°	282.8	283.8	295.6	292.7	289.9
52.5°	259.6	263.7	270.3	269.8	266.5
55°	240.4	238.8	245.1	243.4	243.4
57.5°	217.5	220.3	225.4	222.8	218.5
60°	196.0	196.1	198.0	195.0	194.4
62.5°	172.1	172.9	173.3	169.6	175.6
65°	147.7	145.8	151.5	145.7	146.7
67.5°	125.3	126.3	125.7	122.1	123.5
70°	102.6	103.8	102.9	98.8	100.1
72.5°	81.8	80.2	81.2	76.1	78.4
75°	61.5	60.2	61.3	57.0	59.0
77.5°	41.9	42.8	42.1	39.8	41.2
80°	27.6	26.9	26.9	25.5	25.8
82.5°	16.1	15.4	15.1	14.7	15.4
85°	7.5	7.3	7.5	7.3	7.0
87.5°	2.7	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)