

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: P588882

Luminaire Tested: **FMR-24-2-LD4-1LO-50-UNV-93-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588882  
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-50-UNV-93-94-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

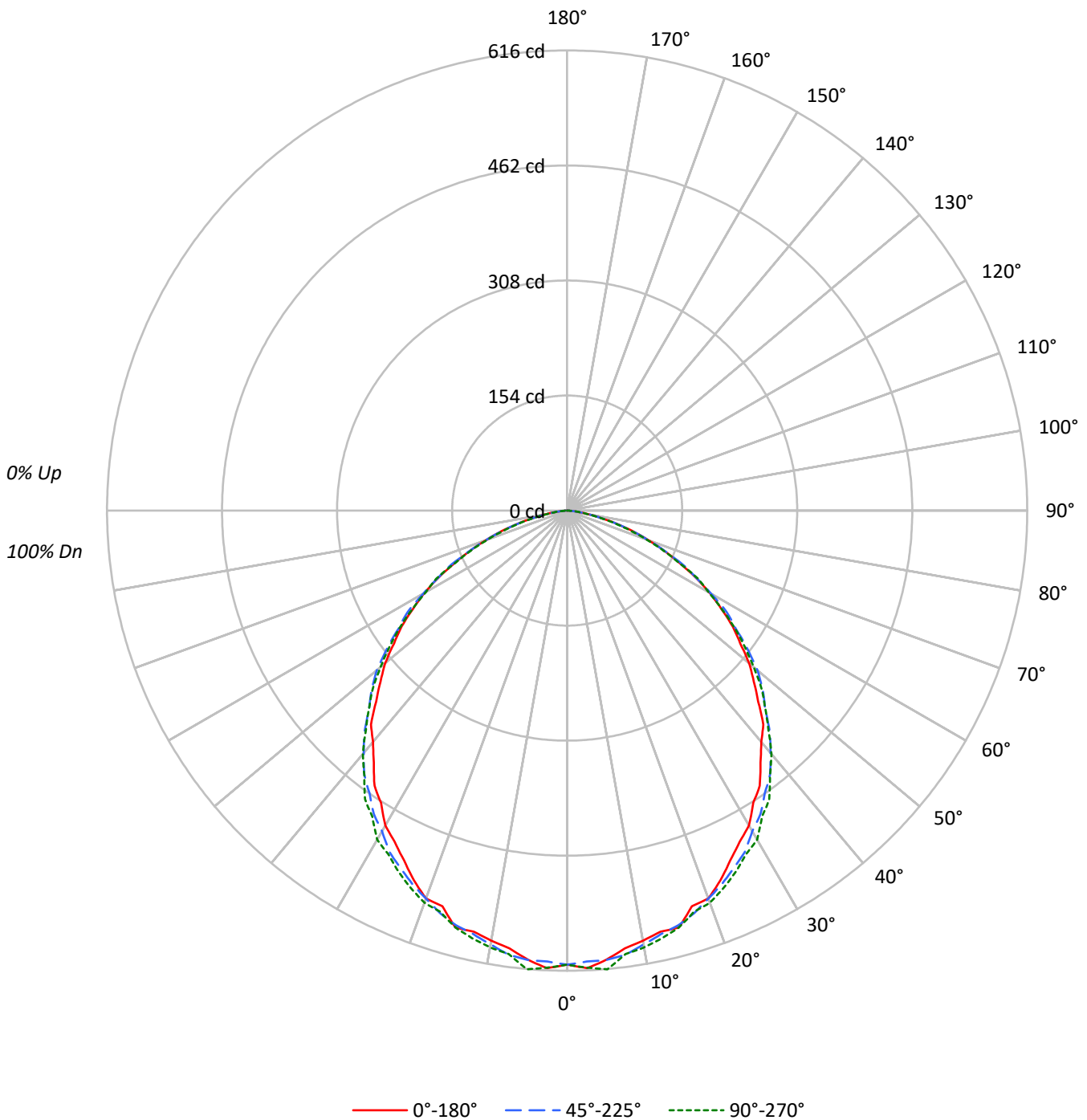
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1532.0 lumens  
Efficiency: N/A  
Efficacy: 130.9 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 (A<sub>in</sub>): 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°	1636	1636	1636
5°	1630	1631	1665
10°	1597	1611	1623
15°	1610	1601	1610
20°	1583	1583	1600
25°	1534	1568	1585
30°	1513	1540	1581
35°	1477	1516	1550
40°	1420	1488	1495
45°	1377	1426	1428
50°	1332	1392	1365
55°	1269	1293	1285
60°	1187	1199	1177
65°	1058	1085	1051
70°	908	911	885
75°	718	717	689
80°	482	468	449
85°	262	259	241



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.2	3.7
10°-20°	162.1	10.6
20°-30°	242.8	15.8
30°-40°	287.7	18.8
40°-50°	288.3	18.8
50°-60°	244.7	16.0
60°-70°	165.0	10.8
70°-80°	72.5	4.7
80°-90°	11.8	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°	462.0	30.2
0°-40°	749.8	48.9
0°-60°	1282.7	83.7
0°-90°	1532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1532.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	608	608	608	608	608	
5°	604	602	604	602	616	57
15°	578	571	575	578	578	161
25°	517	520	528	535	534	239
35°	450	451	462	472	472	279
45°	362	369	375	384	375	280
55°	270	269	276	274	274	241
65°	166	164	170	164	165	165
75°	69	68	69	64	66	74
85°	8	8	8	8	8	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	607.9	607.9	607.9	607.9	607.9
2.5°	613.1	608.5	604.2	609.2	612.3
5°	603.5	602.1	603.8	602.0	616.5
7.5°	591.1	596.6	599.7	597.7	598.6
10°	584.5	582.7	589.7	594.5	593.8
12.5°	577.5	580.3	580.7	586.0	586.4
15°	577.9	571.2	574.7	577.7	578.0
17.5°	555.4	562.7	565.1	571.9	563.4
20°	552.7	547.4	552.7	559.7	558.6
22.5°	535.8	529.9	541.2	547.4	547.0
25°	516.7	519.5	528.0	534.9	533.8
27.5°	499.9	503.2	515.2	524.7	518.6
30°	486.9	485.3	495.5	503.9	508.7
32.5°	463.8	469.7	481.7	490.1	485.6
35°	449.7	451.0	461.5	472.2	471.8
37.5°	425.1	431.3	446.0	449.0	446.3
40°	404.2	410.4	423.7	426.9	425.5
42.5°	388.7	389.8	401.2	404.9	399.0
45°	361.8	368.6	374.7	384.3	375.2
47.5°	338.9	342.0	355.2	357.8	353.0
50°	318.1	319.2	332.5	329.2	326.1
52.5°	292.0	296.6	304.0	303.4	299.7
55°	270.5	268.7	275.7	273.8	273.8
57.5°	244.6	247.8	253.6	250.6	245.8
60°	220.5	220.5	222.7	219.3	218.7
62.5°	193.5	194.5	195.0	190.8	197.5
65°	166.2	164.0	170.4	163.9	165.0
67.5°	141.0	142.1	141.4	137.3	138.9
70°	115.4	116.8	115.8	111.1	112.5
72.5°	92.0	90.3	91.4	85.5	88.2
75°	69.1	67.7	69.0	64.1	66.3
77.5°	47.1	48.2	47.4	44.8	46.3
80°	31.1	30.2	30.2	28.7	29.0
82.5°	18.1	17.3	17.0	16.6	17.3
85°	8.5	8.2	8.4	8.2	7.8
87.5°	3.1	3.1	3.1	3.0	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)