

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: P588908

Luminaire Tested: **FMR-24-2-LD4-1STD-35-UNV-82-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588908  
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-LD4-1STD-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

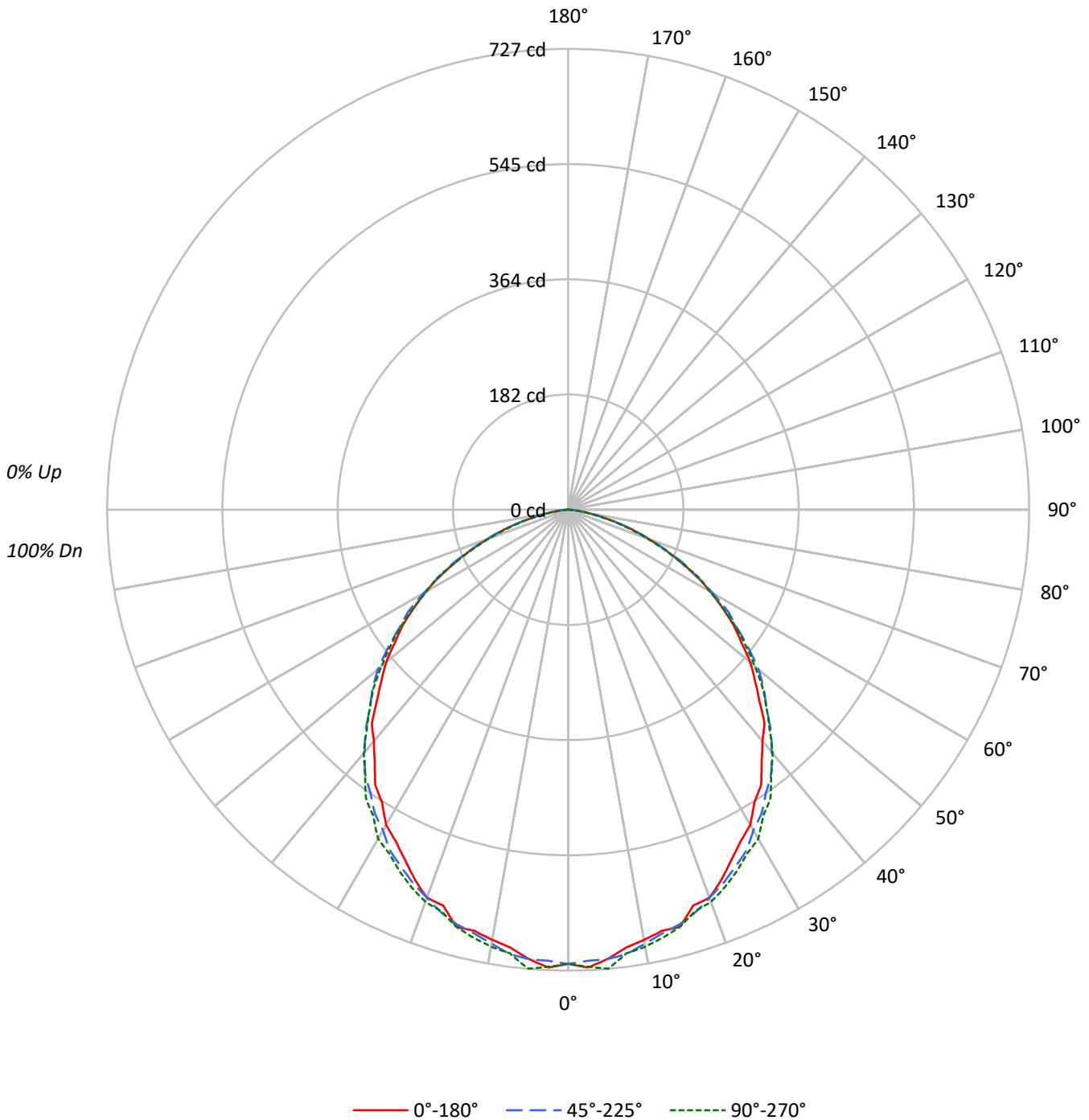
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1806.0 lumens  
Efficiency: N/A  
Efficacy: 108.8 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): 16.6  
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	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					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°	1928	1928	1928
5°	1922	1923	1963
10°	1883	1899	1913
15°	1898	1887	1898
20°	1866	1866	1886
25°	1809	1848	1868
30°	1784	1815	1863
35°	1741	1787	1827
40°	1674	1754	1762
45°	1623	1681	1683
50°	1570	1641	1609
55°	1496	1525	1514
60°	1399	1413	1387
65°	1247	1279	1238
70°	1070	1074	1044
75°	847	845	813
80°	567	552	530
85°	309	306	287



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	3.7
10°-20°	191.0	10.6
20°-30°	286.2	15.8
30°-40°	339.2	18.8
40°-50°	339.8	18.8
50°-60°	288.5	16.0
60°-70°	194.5	10.8
70°-80°	85.4	4.7
80°-90°	13.9	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°	544.6	30.2
0°-40°	883.9	48.9
0°-60°	1512.2	83.7
0°-90°	1806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1806.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	712	710	712	710	727	67
15°	681	673	678	681	681	190
25°	609	612	622	630	629	282
35°	530	532	544	557	556	329
45°	426	434	442	453	442	330
55°	319	317	325	323	323	284
65°	196	193	201	193	194	195
75°	82	80	81	76	78	87
85°	10	10	10	10	9	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	716.6	716.6	716.6	716.6	716.6
2.5°	722.8	717.3	712.2	718.1	721.8
5°	711.5	709.8	711.8	709.6	726.8
7.5°	696.9	703.3	707.0	704.6	705.7
10°	689.1	686.9	695.1	700.8	700.0
12.5°	680.8	684.1	684.6	690.8	691.3
15°	681.2	673.4	677.5	681.0	681.3
17.5°	654.8	663.3	666.2	674.2	664.2
20°	651.5	645.3	651.5	659.8	658.5
22.5°	631.6	624.7	638.0	645.3	644.9
25°	609.1	612.4	622.4	630.5	629.2
27.5°	589.3	593.2	607.4	618.6	611.4
30°	574.0	572.1	584.1	594.1	599.6
32.5°	546.7	553.7	567.8	577.7	572.4
35°	530.1	531.7	544.0	556.6	556.2
37.5°	501.2	508.5	525.8	529.3	526.1
40°	476.5	483.8	499.4	503.2	501.6
42.5°	458.3	459.6	473.0	477.3	470.4
45°	426.5	434.5	441.7	453.1	442.3
47.5°	399.5	403.2	418.8	421.8	416.2
50°	375.0	376.3	391.9	388.1	384.4
52.5°	344.2	349.6	358.4	357.7	353.3
55°	318.8	316.7	325.0	322.8	322.7
57.5°	288.4	292.1	298.9	295.4	289.8
60°	259.9	260.0	262.5	258.5	257.8
62.5°	228.2	229.3	229.8	224.9	232.9
65°	195.9	193.3	200.9	193.2	194.5
67.5°	166.2	167.5	166.7	161.9	163.8
70°	136.0	137.7	136.5	131.0	132.7
72.5°	108.4	106.4	107.7	100.8	104.0
75°	81.5	79.8	81.3	75.6	78.2
77.5°	55.5	56.8	55.9	52.8	54.6
80°	36.6	35.6	35.6	33.9	34.2
82.5°	21.4	20.4	20.1	19.5	20.4
85°	10.0	9.7	9.9	9.6	9.3
87.5°	3.6	3.7	3.7	3.5	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)