

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: P588942

Luminaire Tested: **FMR-24-2-LD4-1STD-40-UNV-93-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588942  
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-40-UNV-93-85-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

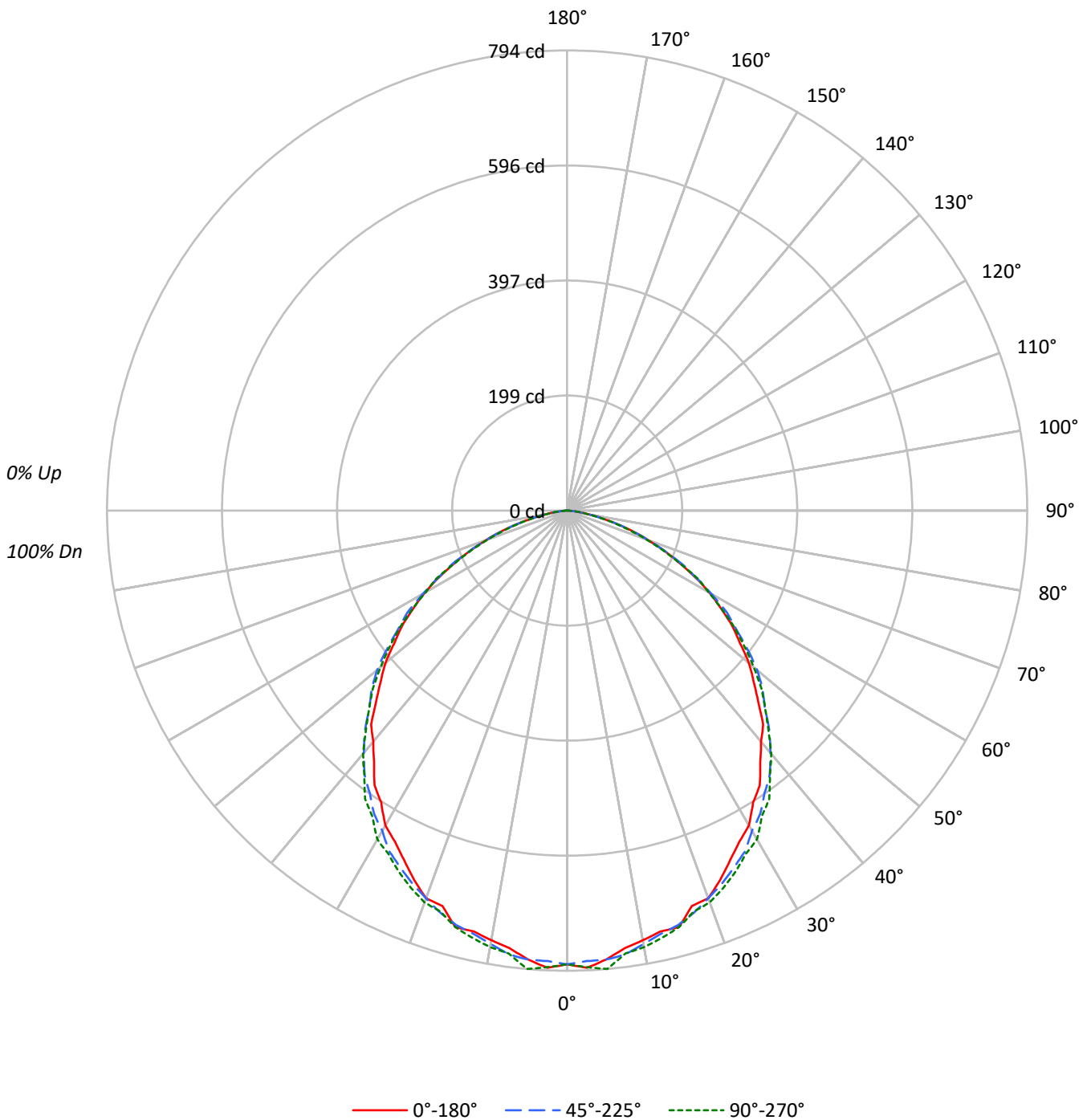
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1973.0 lumens  
Efficiency: N/A  
Efficacy: 118.9 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): 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	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°	2106	2106	2106
5°	2100	2100	2145
10°	2057	2075	2090
15°	2073	2062	2074
20°	2038	2038	2060
25°	1976	2019	2041
30°	1949	1983	2036
35°	1903	1952	1996
40°	1828	1917	1925
45°	1773	1836	1839
50°	1715	1793	1758
55°	1634	1666	1654
60°	1528	1544	1516
65°	1363	1397	1353
70°	1169	1173	1140
75°	925	923	888
80°	620	603	580
85°	337	333	312



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.6	3.7
10°-20°	208.7	10.6
20°-30°	312.7	15.8
30°-40°	370.6	18.8
40°-50°	371.3	18.8
50°-60°	315.2	16.0
60°-70°	212.5	10.8
70°-80°	93.4	4.7
80°-90°	15.1	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°	595.0	30.2
0°-40°	965.6	48.9
0°-60°	1652.0	83.7
0°-90°	1973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1973.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	777	776	778	775	794	73
15°	744	736	740	744	744	207
25°	665	669	680	689	687	308
35°	579	581	594	608	608	360
45°	466	475	482	495	483	360
55°	348	346	355	353	353	310
65°	214	211	219	211	212	213
75°	89	87	89	83	85	95
85°	11	11	11	10	10	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	782.8	782.8	782.8	782.8	782.8
2.5°	789.6	783.6	778.1	784.6	788.5
5°	777.3	775.5	777.6	775.3	794.0
7.5°	761.3	768.3	772.3	769.8	770.9
10°	752.8	750.4	759.4	765.7	764.7
12.5°	743.7	747.4	747.9	754.6	755.2
15°	744.2	735.6	740.2	744.0	744.3
17.5°	715.3	724.6	727.7	736.5	725.6
20°	711.8	705.0	711.8	720.8	719.4
22.5°	690.0	682.5	697.0	705.0	704.5
25°	665.4	669.0	679.9	688.8	687.4
27.5°	643.8	648.0	663.6	675.8	667.9
30°	627.1	625.0	638.1	649.0	655.1
32.5°	597.3	604.9	620.3	631.1	625.4
35°	579.2	580.9	594.3	608.1	607.7
37.5°	547.5	555.5	574.4	578.3	574.7
40°	520.5	528.5	545.6	549.8	548.0
42.5°	500.6	502.0	516.7	521.5	513.9
45°	466.0	474.7	482.5	495.0	483.2
47.5°	436.4	440.5	457.5	460.8	454.6
50°	409.7	411.1	428.2	424.0	420.0
52.5°	376.0	382.0	391.6	390.8	386.0
55°	348.3	346.0	355.1	352.7	352.6
57.5°	315.1	319.1	326.6	322.7	316.6
60°	283.9	284.0	286.8	282.4	281.6
62.5°	249.3	250.5	251.1	245.7	254.4
65°	214.0	211.1	219.4	211.0	212.5
67.5°	181.5	182.9	182.1	176.9	178.9
70°	148.6	150.4	149.1	143.1	144.9
72.5°	118.5	116.2	117.7	110.2	113.6
75°	89.0	87.2	88.8	82.6	85.4
77.5°	60.6	62.1	61.1	57.7	59.6
80°	40.0	38.9	38.9	37.0	37.4
82.5°	23.3	22.2	21.9	21.3	22.2
85°	10.9	10.6	10.8	10.5	10.1
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)