

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: P588706

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-81-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588706  
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-LD4-1HI-35-UNV-81-94-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

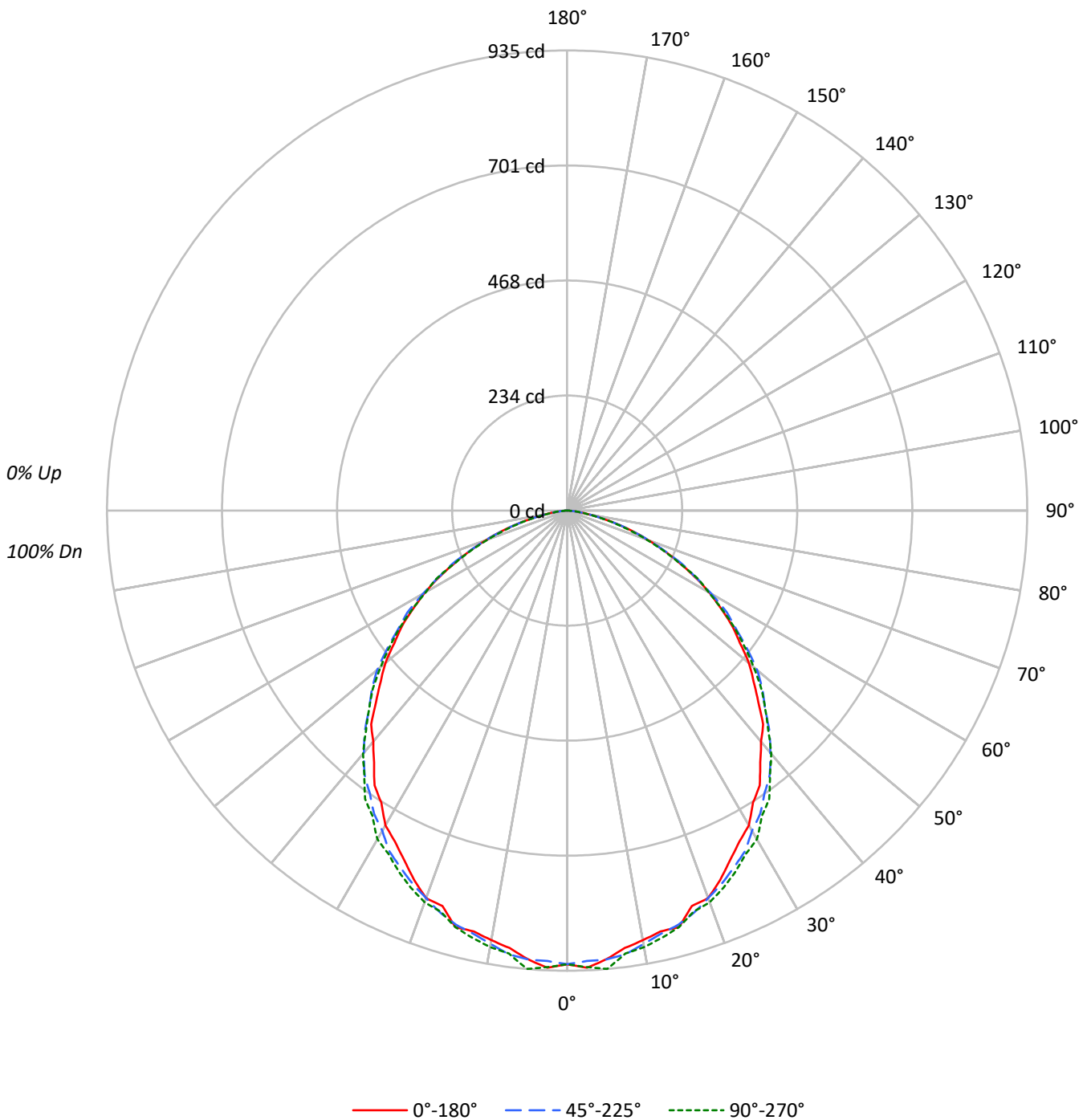
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2323.0 lumens  
Efficiency: N/A  
Efficacy: 107.5 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): 21.6  
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°	2480	2480	2480
5°	2472	2473	2525
10°	2422	2443	2460
15°	2441	2428	2442
20°	2400	2400	2426
25°	2326	2377	2403
30°	2294	2334	2397
35°	2240	2299	2350
40°	2153	2257	2267
45°	2088	2162	2165
50°	2019	2110	2070
55°	1924	1962	1947
60°	1799	1817	1785
65°	1604	1645	1593
70°	1376	1381	1343
75°	1090	1088	1046
80°	730	710	682
85°	398	392	367



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.7	3.7
10°-20°	245.7	10.6
20°-30°	368.1	15.8
30°-40°	436.3	18.8
40°-50°	437.1	18.8
50°-60°	371.0	16.0
60°-70°	250.2	10.8
70°-80°	109.9	4.7
80°-90°	17.9	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°	700.6	30.2
0°-40°	1136.9	48.9
0°-60°	1945.1	83.7
0°-90°	2323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2323.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	922	922	922	922	922	
5°	915	913	916	913	935	86
15°	876	866	872	876	876	244
25°	783	788	801	811	809	362
35°	682	684	700	716	716	423
45°	549	559	568	583	569	424
55°	410	407	418	415	415	365
65°	252	249	258	248	250	251
75°	105	103	105	97	101	112
85°	13	12	13	12	12	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	921.7	921.7	921.7	921.7	921.7
2.5°	929.7	922.7	916.1	923.7	928.4
5°	915.2	913.0	915.5	912.8	934.8
7.5°	896.4	904.6	909.3	906.4	907.7
10°	886.4	883.5	894.1	901.5	900.4
12.5°	875.7	879.9	880.5	888.5	889.2
15°	876.2	866.1	871.5	876.0	876.4
17.5°	842.2	853.2	856.8	867.2	854.3
20°	838.0	830.1	838.0	848.6	847.0
22.5°	812.5	803.5	820.7	830.1	829.5
25°	783.4	787.7	800.6	811.0	809.4
27.5°	758.0	763.0	781.3	795.7	786.4
30°	738.3	735.8	751.3	764.1	771.3
32.5°	703.2	712.3	730.3	743.1	736.3
35°	681.9	683.9	699.8	715.9	715.5
37.5°	644.7	654.1	676.3	680.8	676.7
40°	612.9	622.3	642.4	647.3	645.3
42.5°	589.4	591.1	608.4	614.0	605.0
45°	548.6	558.9	568.1	582.8	569.0
47.5°	513.9	518.6	538.6	542.6	535.3
50°	482.3	484.0	504.1	499.2	494.5
52.5°	442.7	449.7	461.0	460.1	454.5
55°	410.1	407.4	418.1	415.2	415.1
57.5°	370.9	375.7	384.5	380.0	372.7
60°	334.3	334.4	337.6	332.5	331.6
62.5°	293.5	294.9	295.6	289.3	299.5
65°	251.9	248.6	258.4	248.5	250.2
67.5°	213.7	215.4	214.5	208.3	210.6
70°	174.9	177.1	175.5	168.5	170.7
72.5°	139.5	136.9	138.5	129.7	133.8
75°	104.8	102.7	104.6	97.2	100.6
77.5°	71.4	73.1	71.9	68.0	70.2
80°	47.1	45.8	45.8	43.6	44.0
82.5°	27.5	26.2	25.8	25.1	26.2
85°	12.9	12.5	12.7	12.4	11.9
87.5°	4.6	4.8	4.8	4.5	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)