

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: P588734

Luminaire Tested: **FMR-24-2-LD4-1HI-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588734  
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-40-UNV-81-85-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

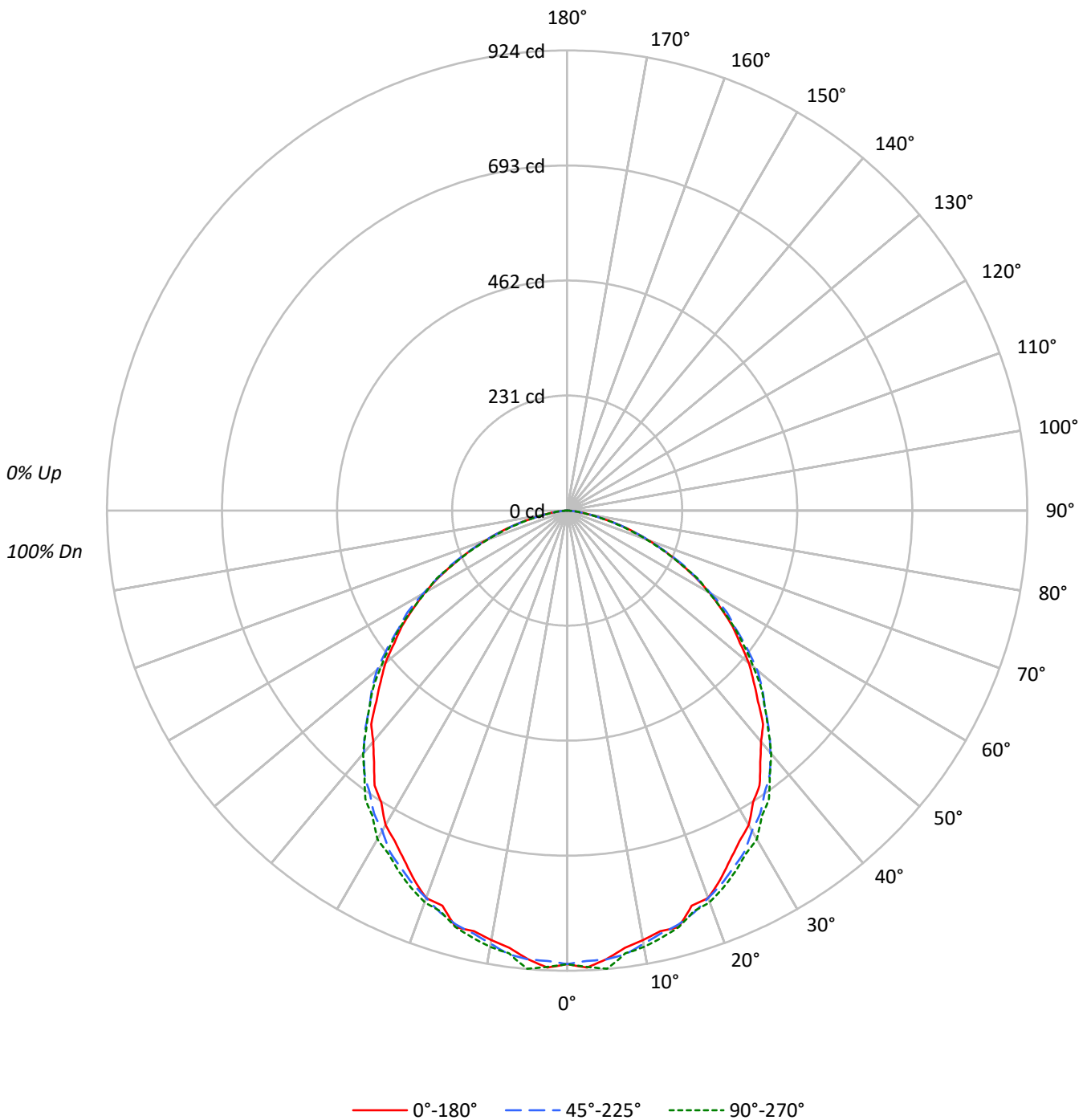
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2295.0 lumens  
Efficiency: N/A  
Efficacy: 106.3 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°	2450	2450	2450
5°	2442	2443	2495
10°	2393	2414	2431
15°	2412	2399	2412
20°	2371	2371	2396
25°	2298	2348	2374
30°	2266	2306	2368
35°	2213	2271	2322
40°	2127	2230	2239
45°	2063	2136	2139
50°	1995	2085	2045
55°	1901	1938	1924
60°	1778	1795	1763
65°	1585	1625	1573
70°	1360	1364	1327
75°	1077	1074	1032
80°	722	702	674
85°	392	389	364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.7	3.7
10°-20°	242.8	10.6
20°-30°	363.7	15.8
30°-40°	431.1	18.8
40°-50°	431.9	18.8
50°-60°	366.6	16.0
60°-70°	247.1	10.8
70°-80°	108.6	4.7
80°-90°	17.7	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°	692.1	30.2
0°-40°	1123.2	48.9
0°-60°	1921.6	83.7
0°-90°	2295.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2295.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	904	902	904	902	924	85
15°	866	856	861	866	866	241
25°	774	778	791	801	800	358
35°	674	676	691	707	707	418
45°	542	552	561	576	562	419
55°	405	402	413	410	410	360
65°	249	246	255	246	247	248
75°	104	102	103	96	99	111
85°	13	12	13	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	910.6	910.6	910.6	910.6	910.6
2.5°	918.5	911.5	905.1	912.6	917.2
5°	904.1	902.0	904.5	901.8	923.5
7.5°	885.6	893.7	898.4	895.4	896.7
10°	875.7	872.9	883.3	890.6	889.6
12.5°	865.1	869.3	869.9	877.8	878.5
15°	865.7	855.7	861.0	865.5	865.8
17.5°	832.1	842.9	846.5	856.7	844.1
20°	827.9	820.1	827.9	838.4	836.8
22.5°	802.7	793.8	810.8	820.1	819.5
25°	774.0	778.2	790.9	801.3	799.6
27.5°	748.8	753.8	771.9	786.1	776.9
30°	729.4	726.9	742.2	754.9	762.0
32.5°	694.7	703.7	721.5	734.1	727.4
35°	673.7	675.7	691.3	707.3	706.8
37.5°	636.9	646.2	668.2	672.6	668.5
40°	605.5	614.8	634.7	639.5	637.5
42.5°	582.3	584.0	601.0	606.6	597.7
45°	542.0	552.1	561.3	575.8	562.1
47.5°	507.7	512.4	532.1	536.0	528.8
50°	476.5	478.2	498.0	493.2	488.5
52.5°	437.4	444.3	455.5	454.5	449.0
55°	405.2	402.5	413.0	410.2	410.1
57.5°	366.5	371.2	379.9	375.4	368.2
60°	330.3	330.4	333.6	328.5	327.6
62.5°	289.9	291.3	292.0	285.8	295.9
65°	248.9	245.6	255.2	245.5	247.1
67.5°	211.2	212.8	211.9	205.8	208.1
70°	172.8	174.9	173.4	166.5	168.6
72.5°	137.8	135.2	136.9	128.2	132.2
75°	103.6	101.5	103.3	96.1	99.3
77.5°	70.5	72.2	71.0	67.1	69.4
80°	46.6	45.3	45.3	43.0	43.5
82.5°	27.2	25.9	25.5	24.8	25.9
85°	12.7	12.3	12.6	12.2	11.8
87.5°	4.6	4.7	4.7	4.5	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)