

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: P588719

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-93-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588719  
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-93-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

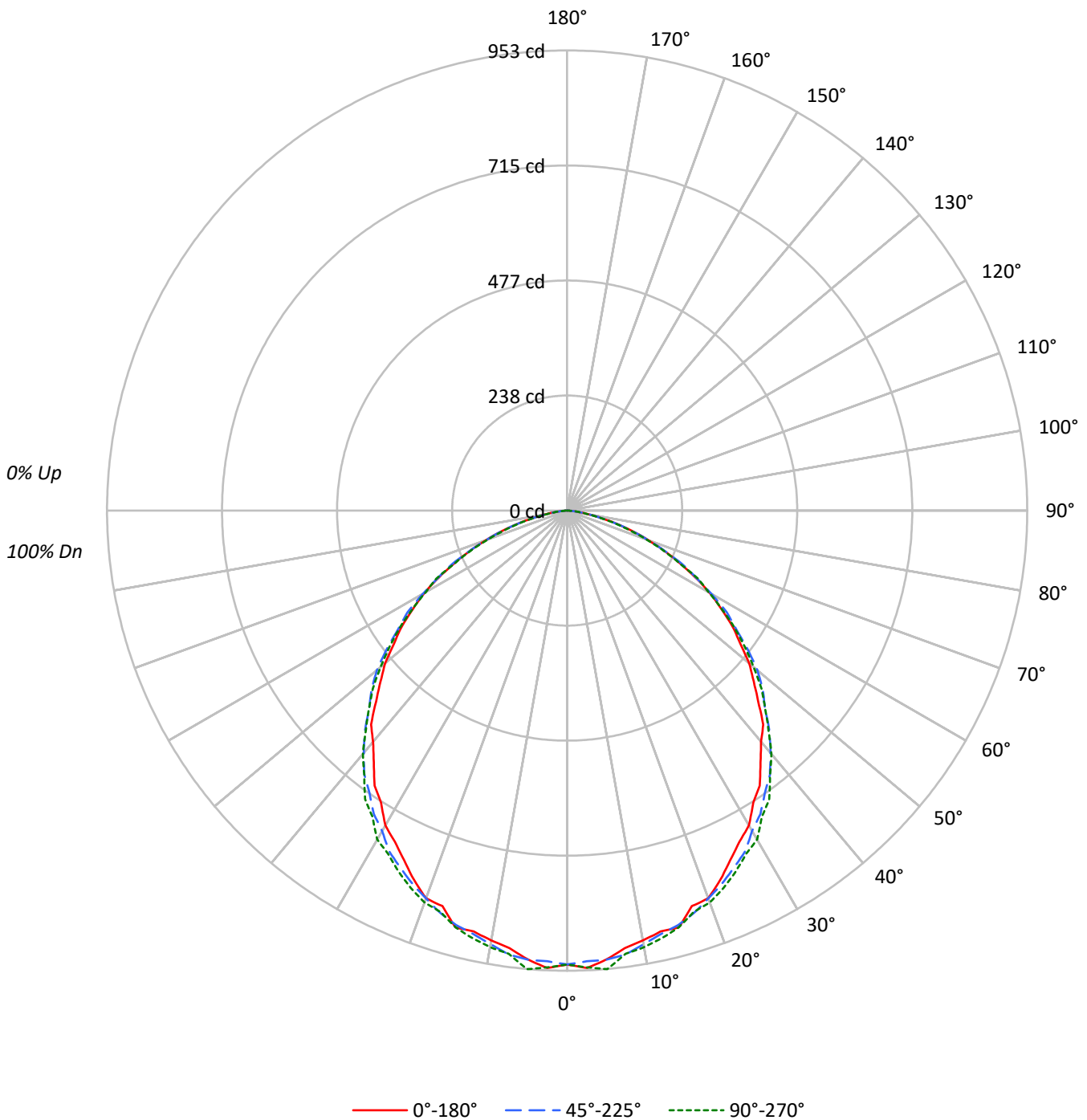
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2369.0 lumens  
Efficiency: N/A  
Efficacy: 109.7 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	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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2530	2530	2530
5°	2521	2522	2575
10°	2470	2491	2509
15°	2489	2476	2490
20°	2447	2447	2473
25°	2372	2424	2451
30°	2339	2381	2444
35°	2284	2344	2397
40°	2196	2301	2311
45°	2129	2205	2208
50°	2059	2152	2111
55°	1962	2000	1986
60°	1835	1853	1820
65°	1636	1678	1624
70°	1404	1408	1369
75°	1111	1109	1067
80°	745	724	696
85°	404	401	374



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.4	3.7
10°-20°	250.6	10.6
20°-30°	375.4	15.8
30°-40°	445.0	18.8
40°-50°	445.8	18.8
50°-60°	378.4	16.0
60°-70°	255.1	10.8
70°-80°	112.1	4.7
80°-90°	18.2	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°	714.4	30.2
0°-40°	1159.4	48.9
0°-60°	1983.6	83.7
0°-90°	2369.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2369.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	933	931	934	931	953	88
15°	894	883	889	893	894	249
25°	799	803	816	827	825	369
35°	695	698	714	730	730	432
45°	560	570	579	594	580	433
55°	418	415	426	423	423	372
65°	257	254	264	253	255	256
75°	107	105	107	99	103	115
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	940.0	940.0	940.0	940.0	940.0
2.5°	948.1	940.9	934.3	942.0	946.8
5°	933.3	931.1	933.6	930.9	953.3
7.5°	914.1	922.5	927.3	924.3	925.6
10°	903.9	901.0	911.8	919.3	918.2
12.5°	893.0	897.4	898.0	906.1	906.8
15°	893.6	883.3	888.7	893.4	893.7
17.5°	858.9	870.1	873.8	884.4	871.3
20°	854.6	846.5	854.6	865.4	863.7
22.5°	828.5	819.4	836.9	846.5	845.9
25°	798.9	803.3	816.4	827.1	825.4
27.5°	773.0	778.1	796.8	811.4	802.0
30°	752.9	750.4	766.2	779.3	786.6
32.5°	717.1	726.4	744.8	757.8	750.9
35°	695.4	697.5	713.6	730.1	729.6
37.5°	657.4	667.0	689.7	694.3	690.1
40°	625.0	634.6	655.1	660.1	658.0
42.5°	601.1	602.8	620.4	626.1	617.0
45°	559.5	569.9	579.4	594.3	580.2
47.5°	524.0	528.9	549.3	553.3	545.9
50°	491.9	493.6	514.1	509.1	504.3
52.5°	451.5	458.6	470.2	469.2	463.5
55°	418.2	415.4	426.3	423.4	423.3
57.5°	378.3	383.1	392.1	387.5	380.1
60°	340.9	341.0	344.3	339.1	338.1
62.5°	299.3	300.7	301.5	295.0	305.5
65°	256.9	253.5	263.5	253.4	255.1
67.5°	218.0	219.7	218.7	212.4	214.8
70°	178.4	180.6	179.0	171.9	174.0
72.5°	142.2	139.6	141.3	132.3	136.4
75°	106.9	104.7	106.7	99.2	102.6
77.5°	72.8	74.5	73.3	69.3	71.6
80°	48.1	46.7	46.7	44.4	44.9
82.5°	28.0	26.7	26.3	25.6	26.7
85°	13.1	12.7	13.0	12.6	12.1
87.5°	4.7	4.9	4.9	4.6	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)