

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: P588710

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-82-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588710  
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-82-85-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

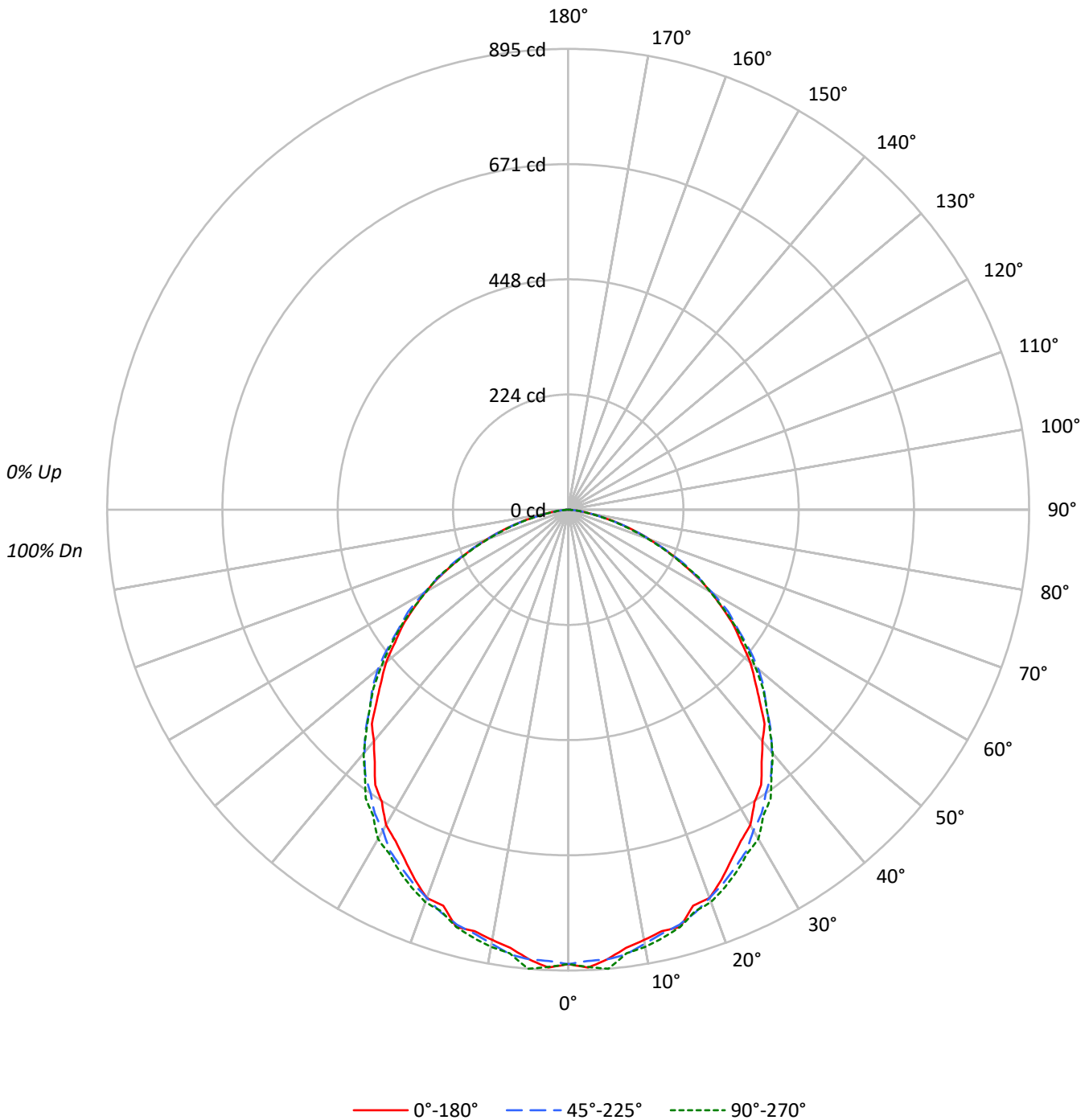
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2224.0 lumens  
Efficiency: N/A  
Efficacy: 103.0 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°	2375	2375	2375
5°	2367	2368	2418
10°	2319	2339	2355
15°	2337	2324	2337
20°	2298	2298	2322
25°	2227	2276	2301
30°	2197	2235	2294
35°	2144	2201	2250
40°	2061	2160	2170
45°	1999	2070	2073
50°	1933	2020	1982
55°	1842	1878	1864
60°	1722	1739	1708
65°	1536	1575	1525
70°	1318	1323	1286
75°	1044	1041	1001
80°	699	680	654
85°	380	377	352



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.0	3.7
10°-20°	235.2	10.6
20°-30°	352.5	15.8
30°-40°	417.7	18.8
40°-50°	418.5	18.8
50°-60°	355.2	16.0
60°-70°	239.5	10.8
70°-80°	105.2	4.7
80°-90°	17.1	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°	670.7	30.2
0°-40°	1088.4	48.9
0°-60°	1862.1	83.7
0°-90°	2224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	882	882	882	882	882	
5°	876	874	876	874	895	83
15°	839	829	834	839	839	234
25°	750	754	766	776	775	347
35°	653	655	670	685	685	405
45°	525	535	544	558	545	406
55°	393	390	400	398	397	349
65°	241	238	247	238	240	240
75°	100	98	100	93	96	108
85°	12	12	12	12	11	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	882.4	882.4	882.4	882.4	882.4
2.5°	890.1	883.3	877.1	884.4	888.8
5°	876.2	874.1	876.5	873.9	895.0
7.5°	858.2	866.0	870.6	867.7	869.0
10°	848.6	845.9	856.0	863.1	862.0
12.5°	838.3	842.4	843.0	850.6	851.3
15°	838.9	829.2	834.3	838.7	839.0
17.5°	806.3	816.8	820.3	830.2	817.9
20°	802.3	794.7	802.3	812.5	810.9
22.5°	777.8	769.3	785.7	794.7	794.1
25°	750.0	754.1	766.4	776.5	774.9
27.5°	725.7	730.4	748.0	761.8	752.9
30°	706.9	704.5	719.3	731.6	738.4
32.5°	673.2	681.9	699.2	711.4	704.9
35°	652.8	654.8	669.9	685.4	685.0
37.5°	617.2	626.2	647.5	651.8	647.8
40°	586.8	595.8	615.0	619.7	617.8
42.5°	564.3	565.9	582.4	587.8	579.2
45°	525.2	535.0	543.9	557.9	544.7
47.5°	492.0	496.5	515.7	519.4	512.5
50°	461.8	463.4	482.6	478.0	473.4
52.5°	423.8	430.6	441.4	440.5	435.1
55°	392.6	390.0	400.3	397.5	397.4
57.5°	355.1	359.7	368.1	363.8	356.8
60°	320.0	320.2	323.2	318.3	317.4
62.5°	281.0	282.3	283.0	277.0	286.8
65°	241.2	238.0	247.4	237.9	239.5
67.5°	204.6	206.2	205.3	199.4	201.7
70°	167.5	169.5	168.1	161.3	163.4
72.5°	133.5	131.0	132.6	124.2	128.1
75°	100.4	98.3	100.1	93.1	96.3
77.5°	68.4	70.0	68.8	65.1	67.2
80°	45.1	43.9	43.9	41.7	42.2
82.5°	26.3	25.1	24.7	24.0	25.1
85°	12.3	12.0	12.2	11.8	11.4
87.5°	4.4	4.6	4.6	4.3	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)