

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: P588774

Luminaire Tested: **FMR-24-2-LD4-1HI-50-UNV-82-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588774  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

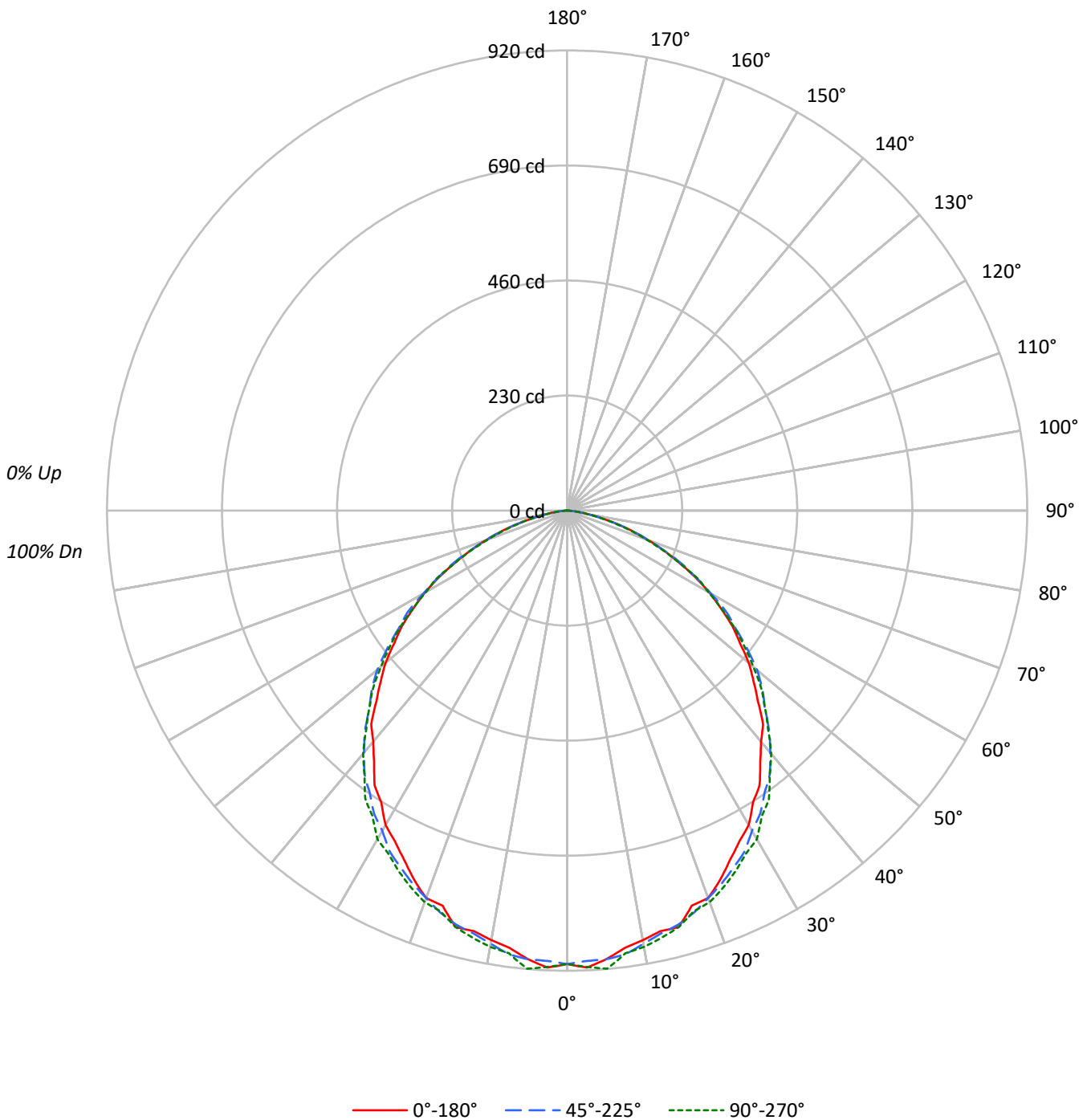
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2285.0 lumens  
Efficiency: N/A  
Efficacy: 105.8 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°	2440	2440	2440
5°	2432	2432	2484
10°	2382	2403	2420
15°	2401	2388	2401
20°	2361	2361	2386
25°	2288	2338	2364
30°	2257	2296	2357
35°	2204	2261	2312
40°	2118	2220	2230
45°	2054	2127	2130
50°	1986	2076	2036
55°	1893	1929	1916
60°	1770	1787	1755
65°	1578	1618	1567
70°	1354	1359	1321
75°	1072	1070	1028
80°	719	699	671
85°	389	386	361



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	3.7
10°-20°	241.7	10.6
20°-30°	362.1	15.8
30°-40°	429.2	18.8
40°-50°	430.0	18.8
50°-60°	365.0	16.0
60°-70°	246.1	10.8
70°-80°	108.1	4.7
80°-90°	17.6	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°	689.1	30.2
0°-40°	1118.3	48.9
0°-60°	1913.2	83.7
0°-90°	2285.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2285.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	907	907	907	907	907	
5°	900	898	900	898	920	85
15°	862	852	857	862	862	240
25°	771	775	788	798	796	356
35°	671	673	688	704	704	416
45°	540	550	559	573	560	417
55°	403	401	411	408	408	359
65°	248	244	254	244	246	246
75°	103	101	103	96	99	111
85°	13	12	12	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	906.6	906.6	906.6	906.6	906.6
2.5°	914.5	907.6	901.1	908.6	913.2
5°	900.2	898.1	900.5	897.9	919.5
7.5°	881.7	889.8	894.5	891.5	892.8
10°	871.9	869.1	879.5	886.7	885.7
12.5°	861.3	865.5	866.1	874.0	874.7
15°	861.9	852.0	857.2	861.7	862.0
17.5°	828.4	839.2	842.8	853.0	840.4
20°	824.3	816.5	824.3	834.8	833.1
22.5°	799.2	790.4	807.2	816.5	815.9
25°	770.6	774.8	787.5	797.8	796.1
27.5°	745.6	750.5	768.5	782.7	773.5
30°	726.2	723.8	739.0	751.6	758.7
32.5°	691.7	700.6	718.4	730.9	724.3
35°	670.8	672.7	688.3	704.2	703.8
37.5°	634.1	643.4	665.3	669.7	665.6
40°	602.9	612.1	631.9	636.7	634.7
42.5°	579.8	581.4	598.4	603.9	595.1
45°	539.6	549.7	558.8	573.2	559.7
47.5°	505.5	510.1	529.8	533.7	526.5
50°	474.4	476.1	495.9	491.1	486.4
52.5°	435.5	442.4	453.5	452.6	447.1
55°	403.4	400.7	411.2	408.4	408.3
57.5°	364.9	369.6	378.2	373.8	366.6
60°	328.8	328.9	332.1	327.1	326.1
62.5°	288.7	290.1	290.8	284.6	294.6
65°	247.8	244.5	254.1	244.4	246.1
67.5°	210.2	211.9	210.9	204.9	207.2
70°	172.1	174.2	172.7	165.8	167.9
72.5°	137.2	134.6	136.3	127.6	131.6
75°	103.1	101.0	102.9	95.6	98.9
77.5°	70.2	71.9	70.7	66.8	69.1
80°	46.4	45.1	45.1	42.8	43.3
82.5°	27.0	25.8	25.4	24.7	25.8
85°	12.6	12.3	12.5	12.2	11.7
87.5°	4.6	4.7	4.7	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)