

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: P588964

Luminaire Tested: **FMR-24-2-LD4-1STD-50-UNV-81-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588964  
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-LD4-1STD-50-UNV-81-97-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

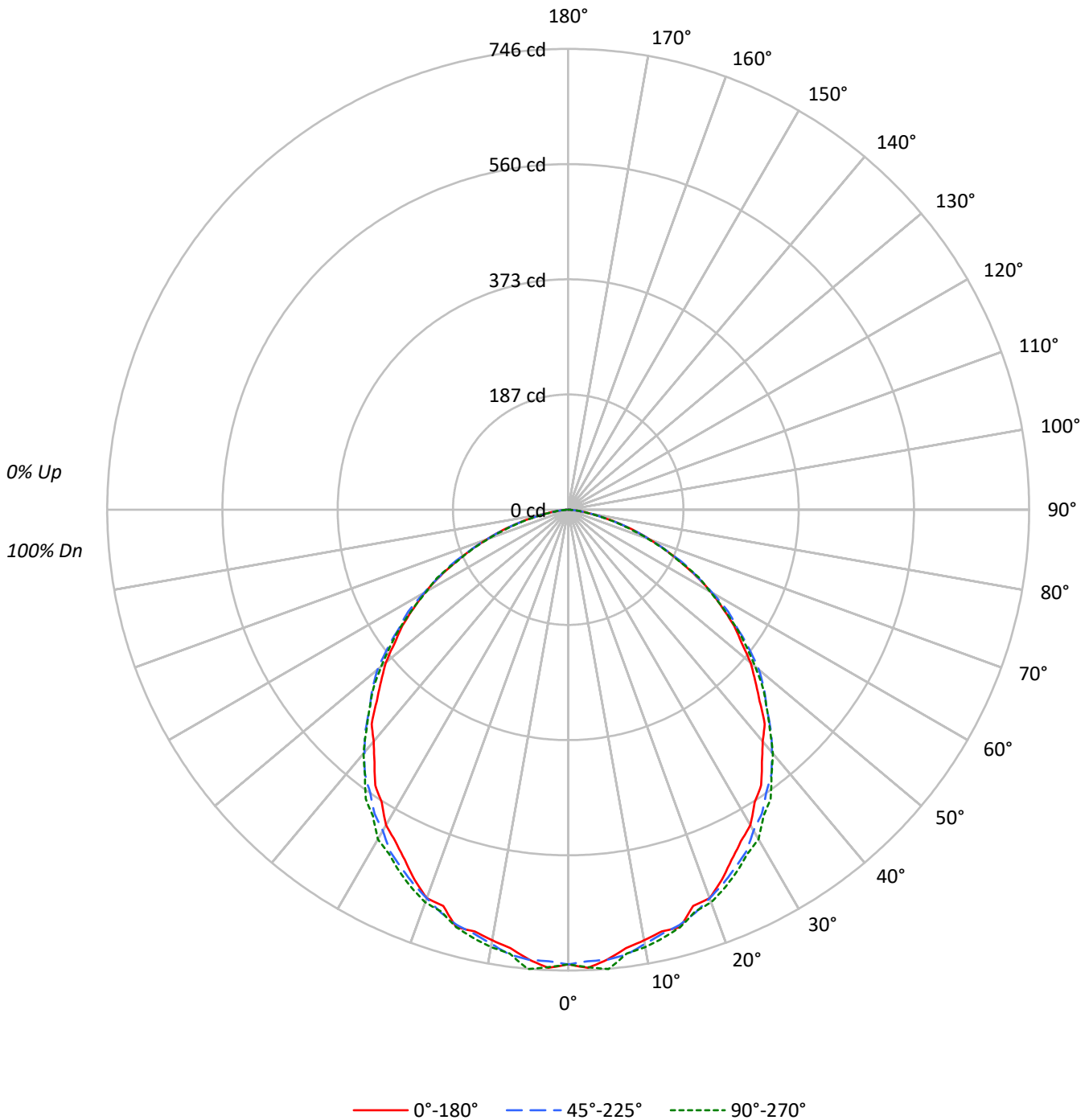
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1855.0 lumens  
Efficiency: N/A  
Efficacy: 111.7 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): 16.6  
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°	1981	1981	1981
5°	1974	1975	2016
10°	1934	1951	1965
15°	1949	1939	1950
20°	1916	1916	1937
25°	1858	1898	1919
30°	1832	1864	1914
35°	1789	1836	1877
40°	1719	1802	1810
45°	1667	1727	1729
50°	1613	1685	1653
55°	1536	1566	1555
60°	1436	1451	1425
65°	1281	1314	1272
70°	1099	1103	1072
75°	870	868	835
80°	583	567	545
85°	318	315	293



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.2	3.7
10°-20°	196.2	10.6
20°-30°	294.0	15.8
30°-40°	348.4	18.8
40°-50°	349.1	18.8
50°-60°	296.3	16.0
60°-70°	199.8	10.8
70°-80°	87.8	4.7
80°-90°	14.3	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°	559.4	30.2
0°-40°	907.8	48.9
0°-60°	1553.2	83.7
0°-90°	1855.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1855.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	731	729	731	729	746	69
15°	700	692	696	700	700	195
25°	626	629	639	648	646	289
35°	544	546	559	572	571	338
45°	438	446	454	465	454	339
55°	328	325	334	332	332	291
65°	201	198	206	198	200	200
75°	84	82	84	78	80	90
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	736.0	736.0	736.0	736.0	736.0
2.5°	742.4	736.8	731.6	737.6	741.3
5°	730.8	729.1	731.1	728.9	746.5
7.5°	715.8	722.3	726.1	723.8	724.8
10°	707.8	705.5	714.0	719.9	719.0
12.5°	699.2	702.7	703.1	709.5	710.1
15°	699.7	691.6	695.9	699.5	699.8
17.5°	672.5	681.3	684.2	692.5	682.2
20°	669.2	662.8	669.2	677.7	676.3
22.5°	648.8	641.7	655.3	662.8	662.4
25°	625.6	629.0	639.3	647.6	646.3
27.5°	605.3	609.2	623.9	635.4	628.0
30°	589.6	587.6	599.9	610.2	615.9
32.5°	561.5	568.8	583.2	593.4	588.0
35°	544.5	546.1	558.8	571.7	571.3
37.5°	514.8	522.3	540.1	543.7	540.3
40°	489.4	496.9	513.0	516.9	515.3
42.5°	470.7	472.0	485.8	490.3	483.1
45°	438.1	446.3	453.7	465.4	454.3
47.5°	410.3	414.1	430.1	433.2	427.5
50°	385.2	386.5	402.6	398.7	394.9
52.5°	353.5	359.1	368.2	367.4	362.9
55°	327.5	325.3	333.8	331.6	331.5
57.5°	296.2	300.0	307.0	303.4	297.6
60°	266.9	267.0	269.6	265.5	264.8
62.5°	234.3	235.5	236.1	231.0	239.2
65°	201.2	198.5	206.3	198.4	199.8
67.5°	170.7	172.0	171.2	166.3	168.2
70°	139.7	141.4	140.2	134.6	136.3
72.5°	111.4	109.3	110.6	103.6	106.8
75°	83.7	82.0	83.5	77.6	80.3
77.5°	57.0	58.3	57.4	54.3	56.1
80°	37.6	36.6	36.6	34.8	35.2
82.5°	22.0	20.9	20.6	20.1	20.9
85°	10.3	10.0	10.2	9.9	9.5
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)