

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: P589549

Luminaire Tested: **FMR-24-2-LD4-3STD-50-UNV-93-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589549  
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-LD4-3STD-50-UNV-93-84-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

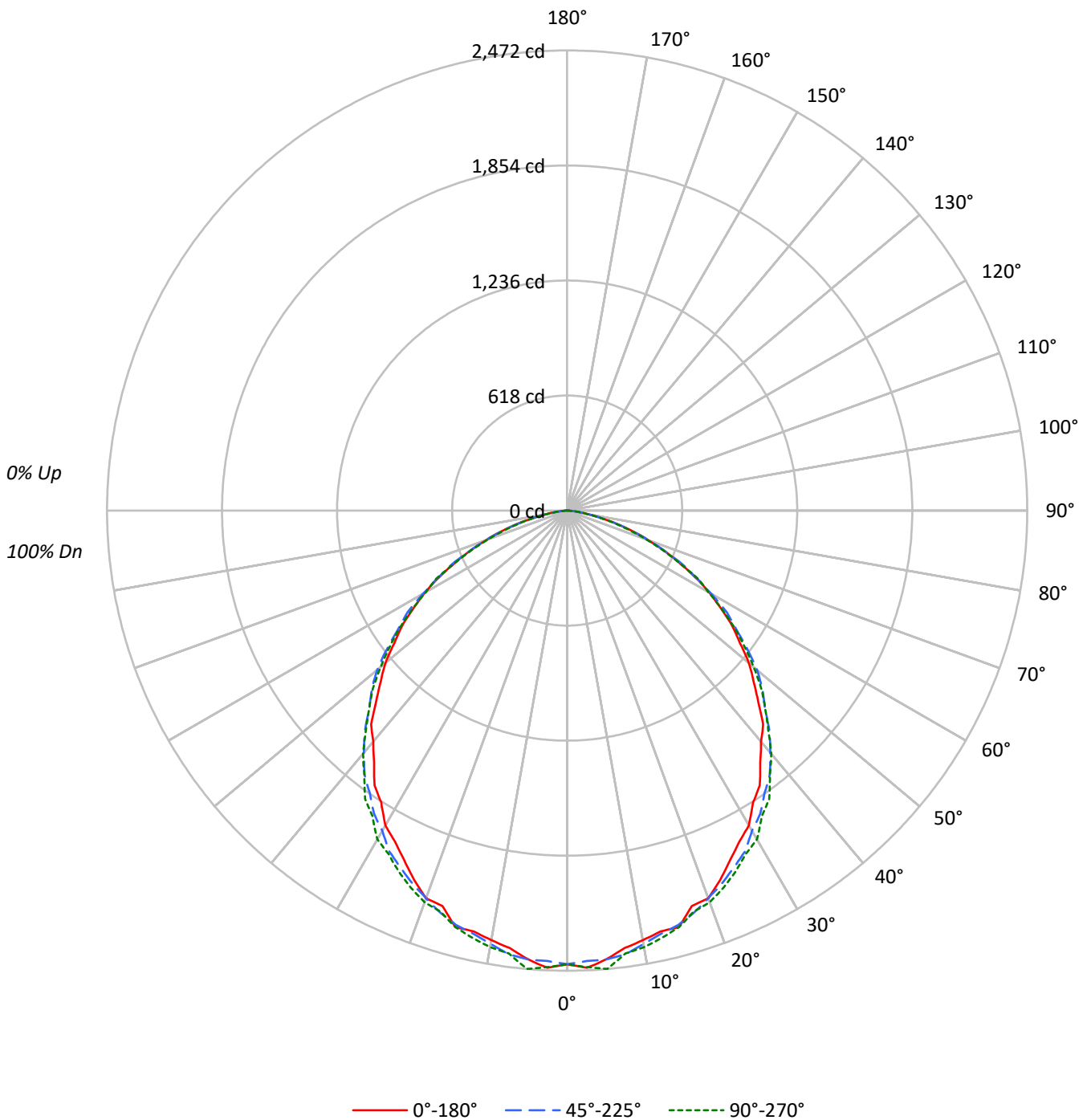
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6142.0 lumens  
Efficiency: N/A  
Efficacy: 122.8 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): 50  
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°	6558	6558	6558
5°	6536	6539	6676
10°	6404	6460	6505
15°	6454	6419	6455
20°	6345	6345	6413
25°	6150	6285	6354
30°	6066	6172	6337
35°	5923	6078	6214
40°	5693	5967	5993
45°	5520	5717	5725
50°	5339	5580	5473
55°	5087	5186	5149
60°	4757	4804	4718
65°	4241	4350	4211
70°	3639	3651	3550
75°	2882	2876	2765
80°	1931	1877	1804
85°	1050	1041	973



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	229.2	3.7
10°-20°	649.7	10.6
20°-30°	973.4	15.8
30°-40°	1153.6	18.8
40°-50°	1155.8	18.8
50°-60°	981.1	16.0
60°-70°	661.4	10.8
70°-80°	290.6	4.7
80°-90°	47.2	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°	1852.3	30.2
0°-40°	3005.9	48.9
0°-60°	5142.7	83.7
0°-90°	6142.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6142.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2437	2437	2437	2437	2437	
5°	2420	2414	2421	2413	2472	228
15°	2317	2290	2304	2316	2317	645
25°	2071	2083	2117	2144	2140	958
35°	1803	1808	1850	1893	1892	1119
45°	1451	1478	1502	1541	1504	1122
55°	1084	1077	1105	1098	1098	965
65°	666	657	683	657	661	662
75°	277	272	277	257	266	297
85°	34	33	34	33	32	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2437.0	2437.0	2437.0	2437.0	2437.0
2.5°	2458.1	2439.5	2422.2	2442.3	2454.6
5°	2419.7	2414.0	2420.6	2413.4	2471.6
7.5°	2370.0	2391.7	2404.3	2396.4	2399.9
10°	2343.5	2336.0	2364.0	2383.5	2380.7
12.5°	2315.2	2326.5	2328.1	2349.2	2351.1
15°	2316.8	2290.0	2304.2	2316.2	2317.1
17.5°	2226.8	2255.8	2265.5	2292.9	2258.9
20°	2215.8	2194.7	2215.8	2243.8	2239.4
22.5°	2148.1	2124.5	2169.8	2194.7	2193.1
25°	2071.4	2082.7	2116.7	2144.4	2140.0
27.5°	2004.0	2017.2	2065.7	2103.8	2079.2
30°	1952.1	1945.5	1986.4	2020.4	2039.3
32.5°	1859.3	1883.2	1931.0	1964.7	1946.8
35°	1803.0	1808.3	1850.2	1893.0	1891.7
37.5°	1704.5	1729.3	1788.2	1800.1	1789.1
40°	1620.5	1645.3	1698.5	1711.4	1706.1
42.5°	1558.5	1562.9	1608.5	1623.3	1599.7
45°	1450.6	1477.6	1502.2	1540.9	1504.4
47.5°	1358.7	1371.3	1424.1	1434.5	1415.3
50°	1275.3	1279.7	1332.9	1320.0	1307.4
52.5°	1170.5	1189.1	1219.0	1216.4	1201.7
55°	1084.3	1077.1	1105.4	1097.8	1097.5
57.5°	980.8	993.4	1016.6	1004.7	985.5
60°	883.9	884.2	892.7	879.1	876.6
62.5°	775.9	779.7	781.6	764.9	792.0
65°	666.1	657.3	683.1	657.0	661.4
67.5°	565.1	569.5	567.0	550.6	556.9
70°	462.5	468.2	464.1	445.5	451.2
72.5°	368.8	361.9	366.3	343.0	353.7
75°	277.2	271.5	276.6	257.1	265.9
77.5°	188.8	193.2	190.1	179.7	185.6
80°	124.6	121.1	121.1	115.2	116.4
82.5°	72.7	69.2	68.3	66.4	69.2
85°	34.0	33.0	33.7	32.7	31.5
87.5°	12.3	12.6	12.6	12.0	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)