

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: P589019

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589019  
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-LD4-2HI-40-UNV-80-96-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

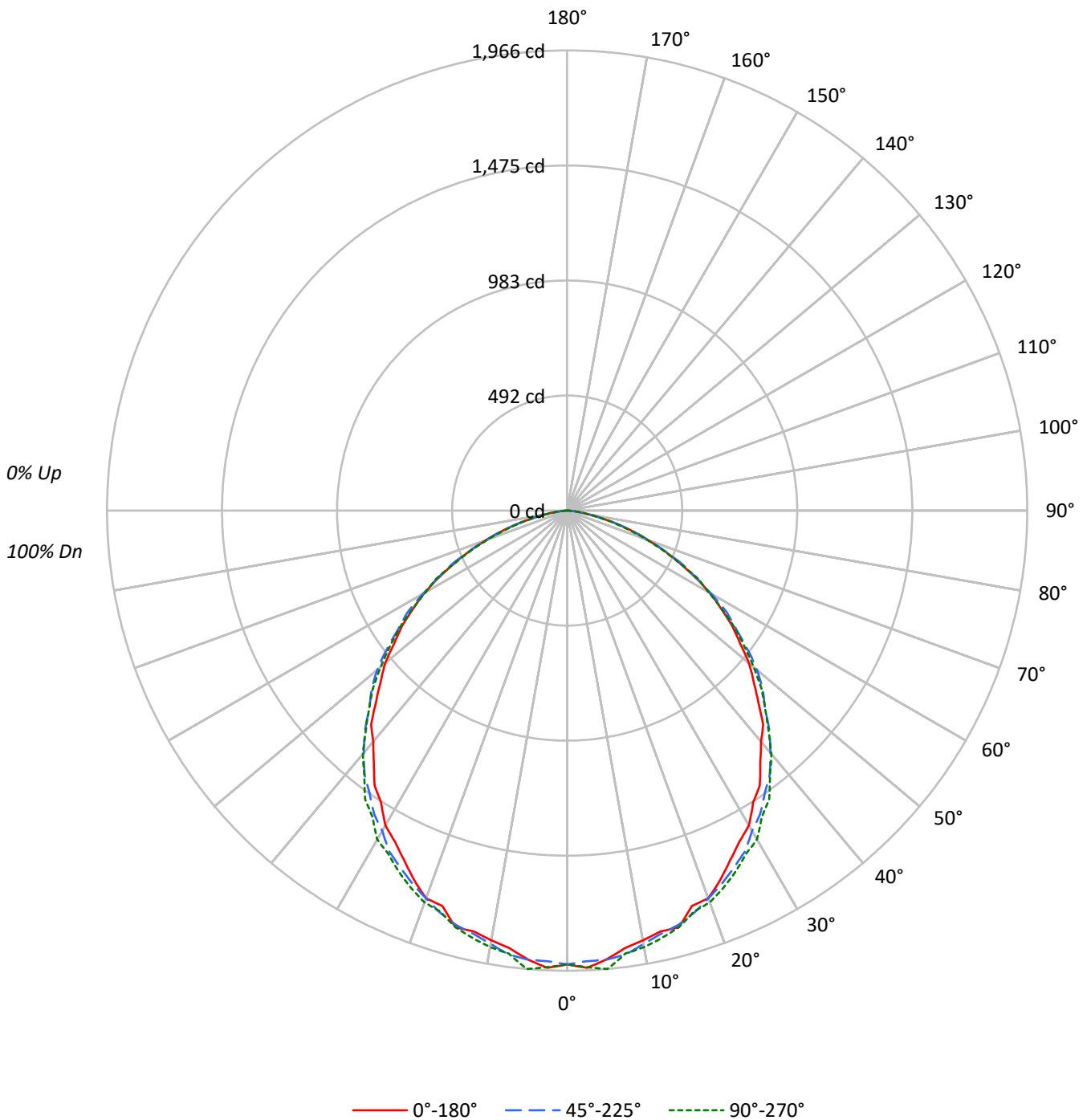
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4886.0 lumens  
Efficiency: N/A  
Efficacy: 113.1 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): 43.2  
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°	5217	5217	5217
5°	5200	5202	5311
10°	5094	5139	5175
15°	5134	5107	5135
20°	5048	5048	5101
25°	4893	4999	5054
30°	4825	4910	5041
35°	4712	4835	4944
40°	4528	4747	4768
45°	4391	4548	4554
50°	4247	4439	4354
55°	4047	4125	4096
60°	3784	3822	3753
65°	3374	3460	3350
70°	2895	2905	2824
75°	2293	2287	2199
80°	1536	1494	1435
85°	834	827	772



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.4	3.7
10°-20°	516.8	10.6
20°-30°	774.3	15.8
30°-40°	917.7	18.8
40°-50°	919.4	18.8
50°-60°	780.4	16.0
60°-70°	526.2	10.8
70°-80°	231.2	4.7
80°-90°	37.6	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°	1473.5	30.2
0°-40°	2391.2	48.9
0°-60°	4091.1	83.7
0°-90°	4886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4886.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1939	1939	1939	1939	1939	
5°	1925	1920	1926	1920	1966	181
15°	1843	1822	1833	1842	1843	513
25°	1648	1657	1684	1706	1702	762
35°	1434	1438	1472	1506	1505	891
45°	1154	1175	1195	1226	1197	893
55°	863	857	879	873	873	767
65°	530	523	543	523	526	527
75°	220	216	220	204	212	236
85°	27	26	27	26	25	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1938.6	1938.6	1938.6	1938.6	1938.6
2.5°	1955.4	1940.6	1926.9	1942.9	1952.7
5°	1924.9	1920.4	1925.6	1919.9	1966.2
7.5°	1885.3	1902.6	1912.6	1906.4	1909.1
10°	1864.3	1858.3	1880.6	1896.1	1893.8
12.5°	1841.8	1850.8	1852.0	1868.8	1870.3
15°	1843.0	1821.7	1833.0	1842.5	1843.3
17.5°	1771.4	1794.5	1802.2	1824.0	1797.0
20°	1762.7	1745.9	1762.7	1785.0	1781.4
22.5°	1708.9	1690.1	1726.1	1745.9	1744.7
25°	1647.8	1656.8	1683.8	1705.9	1702.3
27.5°	1594.2	1604.7	1643.3	1673.6	1654.0
30°	1552.9	1547.7	1580.2	1607.2	1622.3
32.5°	1479.1	1498.1	1536.1	1562.9	1548.7
35°	1434.3	1438.5	1471.8	1505.9	1504.9
37.5°	1355.9	1375.7	1422.5	1432.0	1423.3
40°	1289.1	1308.9	1351.2	1361.4	1357.2
42.5°	1239.8	1243.3	1279.6	1291.3	1272.6
45°	1153.9	1175.4	1195.0	1225.8	1196.7
47.5°	1080.8	1090.8	1132.9	1141.2	1125.9
50°	1014.5	1018.0	1060.3	1050.0	1040.0
52.5°	931.1	945.9	969.7	967.7	955.9
55°	862.6	856.8	879.3	873.3	873.1
57.5°	780.2	790.2	808.7	799.2	784.0
60°	703.1	703.4	710.1	699.4	697.4
62.5°	617.3	620.3	621.8	608.5	630.0
65°	529.9	522.9	543.4	522.6	526.1
67.5°	449.6	453.1	451.1	438.0	443.0
70°	368.0	372.5	369.2	354.4	358.9
72.5°	293.4	287.9	291.4	272.8	281.3
75°	220.5	216.0	220.0	204.5	211.5
77.5°	150.2	153.7	151.2	142.9	147.7
80°	99.1	96.4	96.4	91.6	92.6
82.5°	57.8	55.1	54.3	52.8	55.1
85°	27.0	26.3	26.8	26.0	25.0
87.5°	9.8	10.0	10.0	9.5	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)