

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: P589534

Luminaire Tested: **FMR-24-2-LD4-3STD-50-UNV-81-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589534  
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-81-85-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

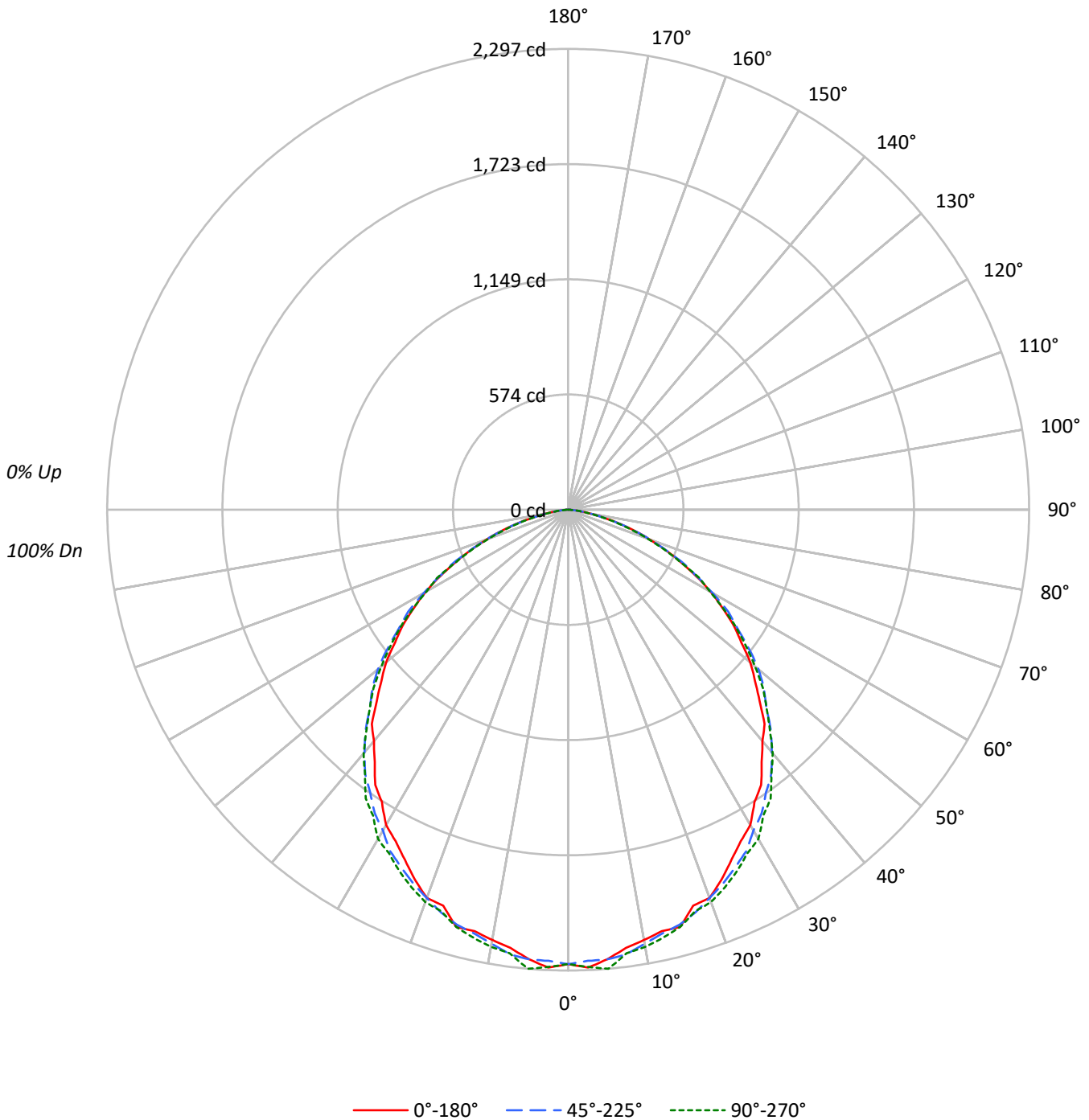
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5708.0 lumens  
Efficiency: N/A  
Efficacy: 114.2 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°	6095	6095	6095
5°	6074	6077	6205
10°	5951	6003	6045
15°	5998	5966	5999
20°	5897	5897	5960
25°	5716	5841	5905
30°	5637	5736	5889
35°	5504	5648	5775
40°	5290	5545	5570
45°	5130	5313	5321
50°	4962	5186	5087
55°	4728	4820	4785
60°	4421	4465	4385
65°	3942	4042	3914
70°	3382	3393	3299
75°	2678	2672	2569
80°	1795	1745	1677
85°	976	966	902



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.0	3.7
10°-20°	603.8	10.6
20°-30°	904.6	15.8
30°-40°	1072.1	18.8
40°-50°	1074.1	18.8
50°-60°	911.7	16.0
60°-70°	614.7	10.8
70°-80°	270.1	4.7
80°-90°	43.9	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°	1721.4	30.2
0°-40°	2793.5	48.9
0°-60°	4779.3	83.7
0°-90°	5708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5708.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2265	2265	2265	2265	2265	
5°	2249	2243	2250	2243	2297	212
15°	2153	2128	2141	2152	2153	600
25°	1925	1936	1967	1993	1989	890
35°	1676	1680	1719	1759	1758	1040
45°	1348	1373	1396	1432	1398	1043
55°	1008	1001	1027	1020	1020	896
65°	619	611	635	611	615	616
75°	258	252	257	239	247	276
85°	32	31	31	30	29	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2264.8	2264.8	2264.8	2264.8	2264.8
2.5°	2284.4	2267.1	2251.0	2269.8	2281.2
5°	2248.7	2243.4	2249.6	2242.9	2297.0
7.5°	2202.5	2222.7	2234.4	2227.1	2230.3
10°	2177.9	2170.9	2196.9	2215.1	2212.4
12.5°	2151.6	2162.2	2163.6	2183.2	2185.0
15°	2153.1	2128.2	2141.4	2152.5	2153.4
17.5°	2069.5	2096.4	2105.4	2130.9	2099.3
20°	2059.2	2039.6	2059.2	2085.2	2081.2
22.5°	1996.3	1974.4	2016.5	2039.6	2038.2
25°	1925.0	1935.5	1967.1	1992.8	1988.7
27.5°	1862.4	1874.7	1919.7	1955.1	1932.3
30°	1814.2	1808.0	1846.0	1877.6	1895.2
32.5°	1727.9	1750.1	1794.6	1825.9	1809.2
35°	1675.6	1680.5	1719.4	1759.2	1758.0
37.5°	1584.0	1607.1	1661.8	1672.9	1662.7
40°	1506.0	1529.1	1578.5	1590.5	1585.5
42.5°	1448.4	1452.4	1494.8	1508.6	1486.7
45°	1348.1	1373.2	1396.0	1432.0	1398.1
47.5°	1262.7	1274.4	1323.5	1333.1	1315.3
50°	1185.2	1189.3	1238.7	1226.7	1215.0
52.5°	1087.8	1105.1	1132.8	1130.5	1116.8
55°	1007.7	1001.0	1027.3	1020.3	1020.0
57.5°	911.5	923.2	944.8	933.7	915.9
60°	821.4	821.7	829.6	817.0	814.7
62.5°	721.1	724.6	726.4	710.9	736.0
65°	619.1	610.9	634.8	610.6	614.7
67.5°	525.2	529.3	526.9	511.7	517.6
70°	429.9	435.1	431.3	414.1	419.3
72.5°	342.7	336.3	340.4	318.7	328.7
75°	257.6	252.4	257.0	238.9	247.1
77.5°	175.5	179.5	176.6	167.0	172.5
80°	115.8	112.6	112.6	107.0	108.2
82.5°	67.5	64.3	63.5	61.7	64.3
85°	31.6	30.7	31.3	30.4	29.2
87.5°	11.4	11.7	11.7	11.1	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)