

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: P589731

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589731
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-LD4-4LO-50-UNV-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

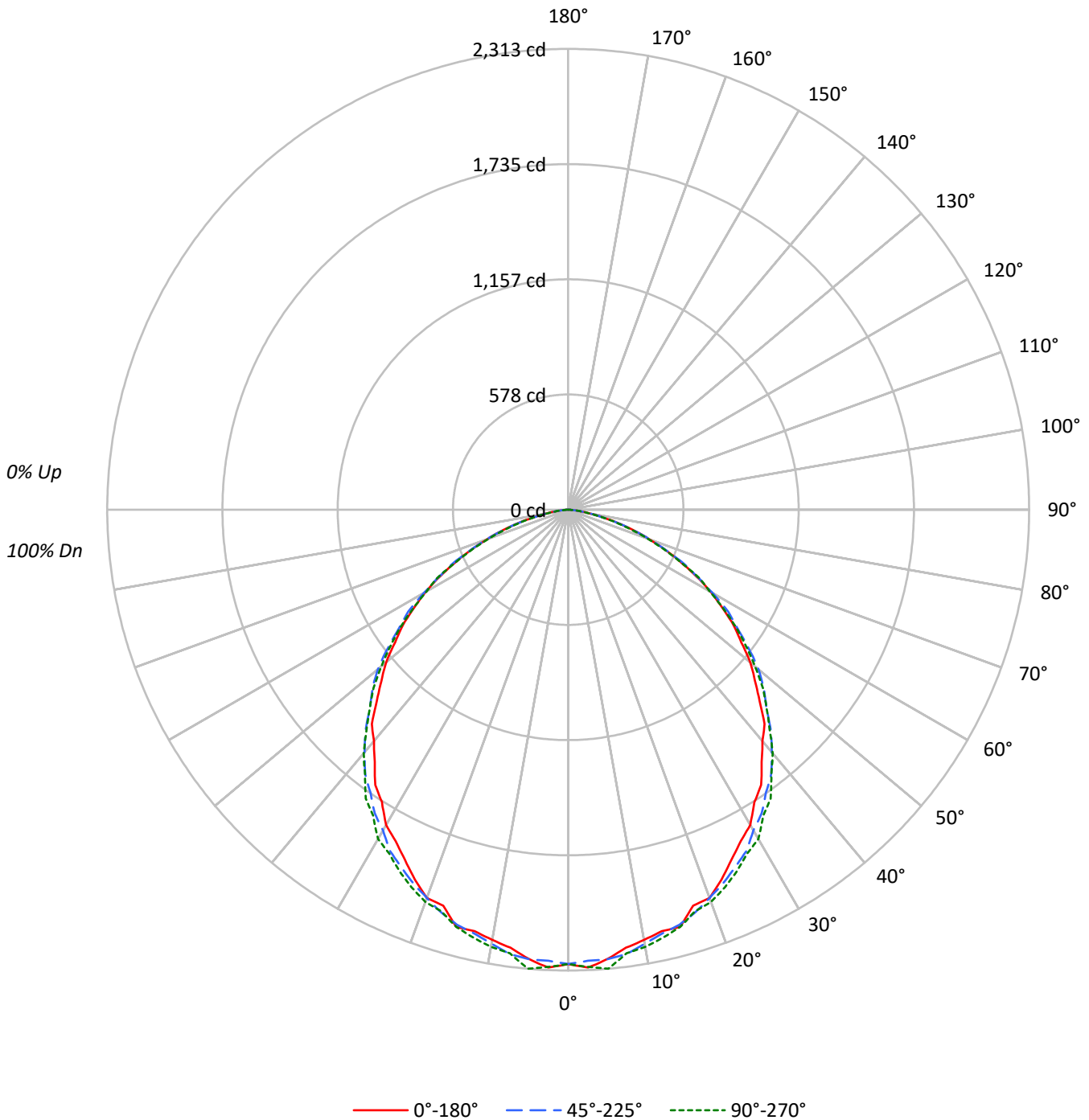
Lumens per Lamp: N/A
Luminaire Lumens: 5747.0 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P589731

CATALOG NUMBER: FMR-24-2-LD4-4LO-50-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589731

CATALOG NUMBER: FMR-24-2-LD4-4LO-50-UNV-81-96-EDD

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°	6136	6136	6136
5°	6116	6118	6247
10°	5992	6044	6087
15°	6039	6006	6040
20°	5937	5937	6001
25°	5755	5880	5945
30°	5676	5775	5929
35°	5542	5687	5815
40°	5326	5583	5608
45°	5165	5349	5357
50°	4996	5221	5121
55°	4760	4852	4818
60°	4451	4496	4414
65°	3969	4070	3941
70°	3405	3417	3322
75°	2697	2691	2587
80°	1807	1757	1688
85°	982	973	908



TEST NUMBER: P589731

CATALOG NUMBER: FMR-24-2-LD4-4LO-50-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.5	3.7
10°-20°	607.9	10.6
20°-30°	910.8	15.8
30°-40°	1079.4	18.8
40°-50°	1081.4	18.8
50°-60°	918.0	16.0
60°-70°	618.9	10.8
70°-80°	271.9	4.7
80°-90°	44.2	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°	1733.2	30.2
0°-40°	2812.6	48.9
0°-60°	4812.0	83.7
0°-90°	5747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2280	2280	2280	2280	2280	
5°	2264	2259	2265	2258	2313	213
15°	2168	2143	2156	2167	2168	604
25°	1938	1949	1980	2006	2002	896
35°	1687	1692	1731	1771	1770	1047
45°	1357	1383	1406	1442	1408	1050
55°	1015	1008	1034	1027	1027	903
65°	623	615	639	615	619	620
75°	259	254	259	240	249	278
85°	32	31	32	31	29	46
90°	0	0	0	0	0	



TEST NUMBER: P589731

CATALOG NUMBER: FMR-24-2-LD4-4LO-50-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2280.3	2280.3	2280.3	2280.3	2280.3
2.5°	2300.0	2282.6	2266.4	2285.3	2296.8
5°	2264.1	2258.8	2265.0	2258.2	2312.7
7.5°	2217.6	2237.9	2249.6	2242.3	2245.5
10°	2192.8	2185.8	2212.0	2230.2	2227.6
12.5°	2166.3	2176.9	2178.4	2198.1	2199.9
15°	2167.8	2142.8	2156.0	2167.2	2168.1
17.5°	2083.6	2110.7	2119.8	2145.4	2113.6
20°	2073.3	2053.6	2073.3	2099.5	2095.4
22.5°	2010.0	1987.9	2030.3	2053.6	2052.1
25°	1938.2	1948.8	1980.5	2006.5	2002.3
27.5°	1875.1	1887.5	1932.9	1968.5	1945.5
30°	1826.6	1820.4	1858.7	1890.5	1908.1
32.5°	1739.7	1762.1	1806.8	1838.3	1821.6
35°	1687.0	1692.0	1731.2	1771.2	1770.0
37.5°	1594.9	1618.1	1673.2	1684.4	1674.1
40°	1516.3	1539.5	1589.3	1601.3	1596.3
42.5°	1458.3	1462.4	1505.1	1518.9	1496.8
45°	1357.3	1382.6	1405.5	1441.8	1407.6
47.5°	1271.3	1283.1	1332.5	1342.2	1324.3
50°	1193.3	1197.4	1247.2	1235.1	1223.3
52.5°	1095.2	1112.6	1140.6	1138.2	1124.4
55°	1014.6	1007.8	1034.3	1027.2	1026.9
57.5°	917.7	929.5	951.3	940.1	922.1
60°	827.0	827.3	835.3	822.6	820.2
62.5°	726.0	729.6	731.3	715.7	741.0
65°	623.3	615.0	639.2	614.7	618.9
67.5°	528.8	532.9	530.5	515.2	521.1
70°	432.8	438.1	434.3	416.9	422.2
72.5°	345.1	338.6	342.7	320.9	330.9
75°	259.4	254.1	258.8	240.5	248.8
77.5°	176.7	180.8	177.8	168.1	173.7
80°	116.6	113.4	113.4	107.8	108.9
82.5°	68.0	64.8	63.9	62.1	64.8
85°	31.8	30.9	31.5	30.6	29.4
87.5°	11.5	11.8	11.8	11.2	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)