

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: P589711

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-93-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589711
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-40-UNV-93-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

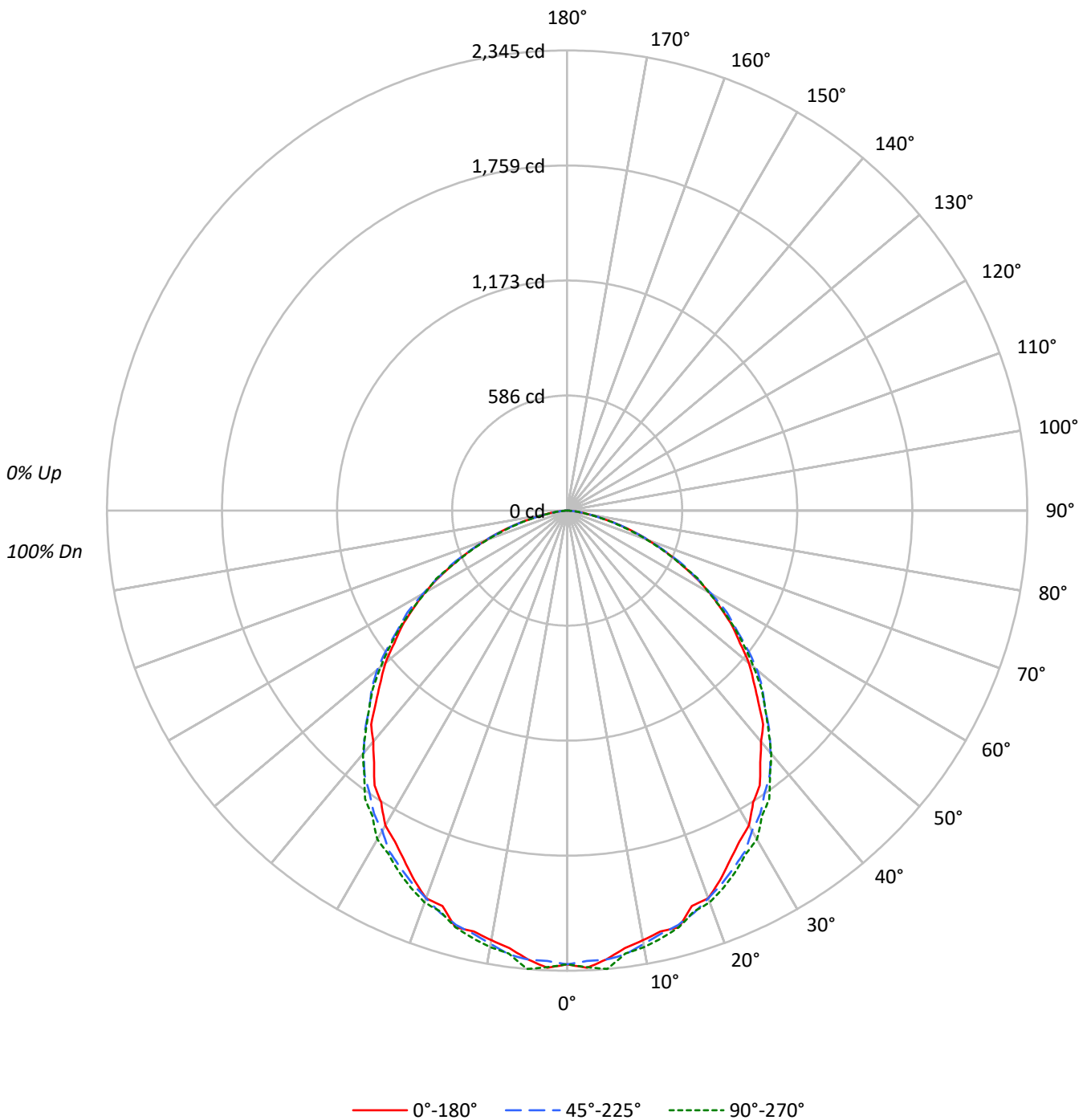
Lumens per Lamp: N/A
Luminaire Lumens: 5827.0 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6222	6222	6222
5°	6201	6203	6334
10°	6075	6128	6172
15°	6123	6090	6124
20°	6020	6020	6084
25°	5835	5962	6028
30°	5755	5856	6012
35°	5619	5766	5896
40°	5401	5661	5686
45°	5237	5423	5431
50°	5065	5294	5192
55°	4826	4920	4885
60°	4513	4558	4476
65°	4024	4127	3996
70°	3452	3464	3368
75°	2734	2728	2622
80°	1832	1781	1712
85°	994	985	923



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.5	3.7
10°-20°	616.4	10.6
20°-30°	923.4	15.8
30°-40°	1094.5	18.8
40°-50°	1096.5	18.8
50°-60°	930.7	16.0
60°-70°	627.5	10.8
70°-80°	275.7	4.7
80°-90°	44.8	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°	1757.3	30.2
0°-40°	2851.7	48.9
0°-60°	4879.0	83.7
0°-90°	5827.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5827.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2312	2312	2312	2312	2312	
5°	2296	2290	2296	2290	2345	216
15°	2198	2173	2186	2197	2198	612
25°	1965	1976	2008	2034	2030	908
35°	1710	1716	1755	1796	1795	1062
45°	1376	1402	1425	1462	1427	1065
55°	1029	1022	1049	1042	1041	915
65°	632	624	648	623	628	628
75°	263	258	262	244	252	282
85°	32	31	32	31	30	47
90°	0	0	0	0	0	



TEST NUMBER: P589711

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2312.0	2312.0	2312.0	2312.0	2312.0
2.5°	2332.0	2314.4	2298.0	2317.1	2328.7
5°	2295.6	2290.2	2296.5	2289.6	2344.8
7.5°	2248.4	2269.0	2281.0	2273.5	2276.8
10°	2223.3	2216.2	2242.8	2261.3	2258.6
12.5°	2196.5	2207.2	2208.7	2228.7	2230.5
15°	2198.0	2172.6	2186.0	2197.4	2198.3
17.5°	2112.6	2140.1	2149.3	2175.3	2143.0
20°	2102.1	2082.1	2102.1	2128.7	2124.5
22.5°	2038.0	2015.6	2058.6	2082.1	2080.7
25°	1965.1	1975.9	2008.1	2034.4	2030.2
27.5°	1901.2	1913.8	1959.8	1995.9	1972.6
30°	1852.0	1845.7	1884.5	1916.8	1934.7
32.5°	1763.9	1786.6	1832.0	1863.9	1846.9
35°	1710.5	1715.6	1755.3	1795.9	1794.7
37.5°	1617.1	1640.6	1696.5	1707.8	1697.4
40°	1537.4	1560.9	1611.4	1623.6	1618.6
42.5°	1478.5	1482.7	1526.0	1540.0	1517.7
45°	1376.2	1401.8	1425.1	1461.8	1427.2
47.5°	1289.0	1300.9	1351.1	1360.9	1342.7
50°	1209.9	1214.1	1264.5	1252.3	1240.3
52.5°	1110.5	1128.1	1156.5	1154.1	1140.0
55°	1028.7	1021.8	1048.7	1041.5	1041.2
57.5°	930.5	942.4	964.5	953.2	935.0
60°	838.5	838.8	846.9	834.1	831.7
62.5°	736.1	739.7	741.5	725.7	751.4
65°	632.0	623.6	648.1	623.3	627.5
67.5°	536.1	540.3	537.9	522.4	528.4
70°	438.8	444.2	440.3	422.7	428.1
72.5°	349.9	343.3	347.5	325.4	335.5
75°	263.0	257.6	262.4	243.9	252.2
77.5°	179.1	183.3	180.3	170.5	176.1
80°	118.2	114.9	114.9	109.3	110.5
82.5°	69.0	65.7	64.8	63.0	65.7
85°	32.2	31.3	31.9	31.0	29.9
87.5°	11.6	11.9	11.9	11.3	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)