

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: P589699

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589699
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-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

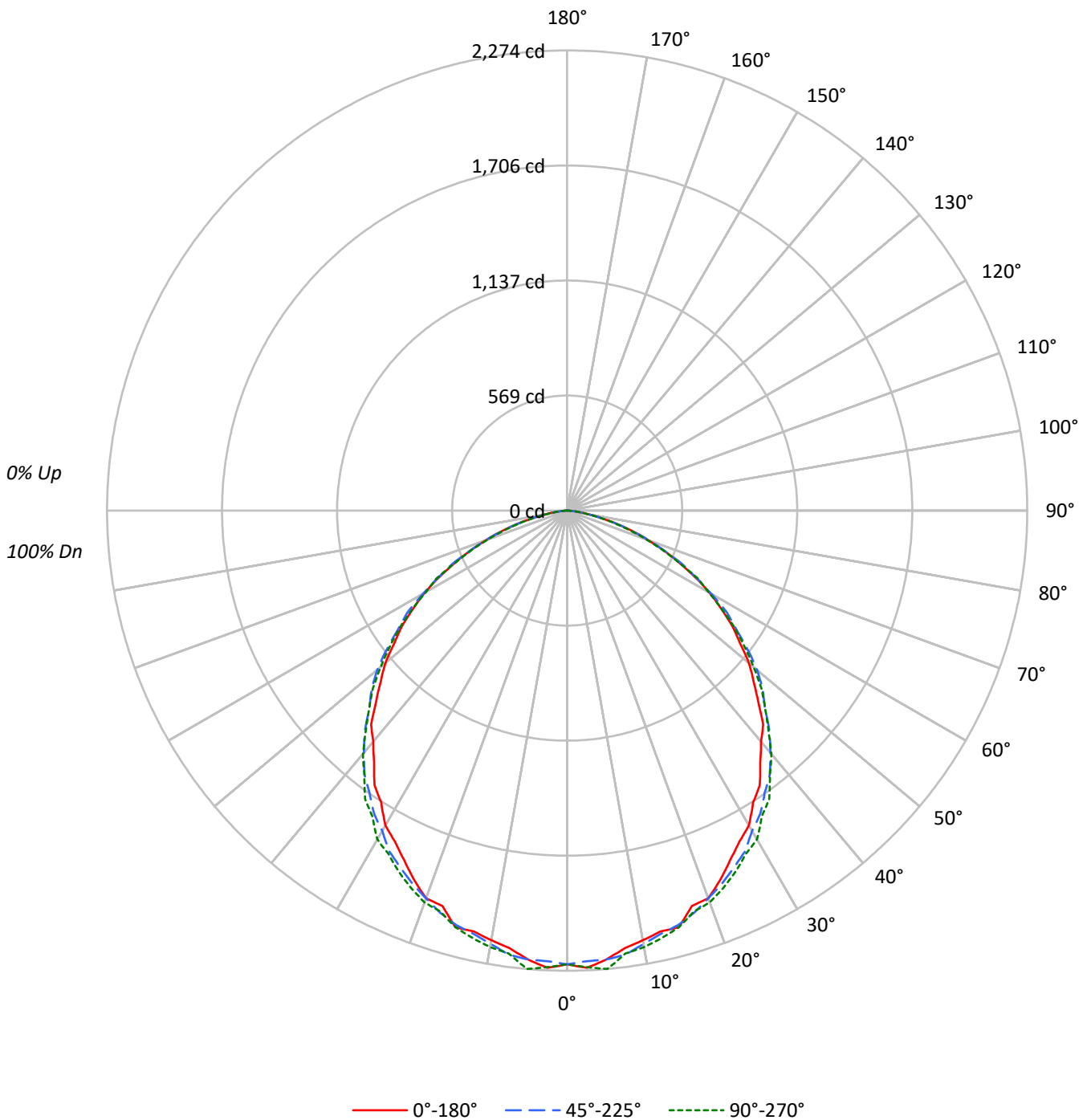
Lumens per Lamp: N/A
Luminaire Lumens: 5651.0 lumens
Efficiency: N/A
Efficacy: 120.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	6034	6034	6034
5°	6014	6016	6143
10°	5892	5943	5985
15°	5938	5906	5939
20°	5838	5838	5900
25°	5659	5782	5846
30°	5581	5679	5830
35°	5449	5592	5718
40°	5237	5489	5514
45°	5079	5260	5267
50°	4912	5134	5036
55°	4680	4771	4738
60°	4377	4420	4341
65°	3903	4002	3875
70°	3349	3360	3266
75°	2651	2646	2543
80°	1776	1728	1660
85°	966	957	892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.9	3.7
10°-20°	597.7	10.6
20°-30°	895.6	15.8
30°-40°	1061.4	18.8
40°-50°	1063.4	18.8
50°-60°	902.6	16.0
60°-70°	608.6	10.8
70°-80°	267.4	4.7
80°-90°	43.5	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°	1704.2	30.2
0°-40°	2765.6	48.9
0°-60°	4731.6	83.7
0°-90°	5651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2242	2242	2242	2242	2242	
5°	2226	2221	2227	2220	2274	210
15°	2132	2107	2120	2131	2132	594
25°	1906	1916	1948	1973	1969	881
35°	1659	1664	1702	1742	1740	1030
45°	1335	1360	1382	1418	1384	1032
55°	998	991	1017	1010	1010	887
65°	613	605	628	604	608	610
75°	255	250	254	236	245	273
85°	31	30	31	30	29	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2242.2	2242.2	2242.2	2242.2	2242.2
2.5°	2261.6	2244.5	2228.6	2247.1	2258.4
5°	2226.3	2221.0	2227.1	2220.5	2274.0
7.5°	2180.5	2200.5	2212.1	2204.8	2208.0
10°	2156.2	2149.2	2175.0	2193.0	2190.4
12.5°	2130.1	2140.6	2142.0	2161.4	2163.1
15°	2131.6	2107.0	2120.0	2131.0	2131.9
17.5°	2048.8	2075.4	2084.4	2109.6	2078.3
20°	2038.7	2019.3	2038.7	2064.4	2060.4
22.5°	1976.4	1954.7	1996.4	2019.3	2017.8
25°	1905.8	1916.2	1947.5	1972.9	1968.9
27.5°	1843.8	1856.0	1900.6	1935.6	1913.0
30°	1796.1	1790.0	1827.6	1858.9	1876.2
32.5°	1710.7	1732.7	1776.7	1807.6	1791.1
35°	1658.8	1663.8	1702.3	1741.6	1740.5
37.5°	1568.2	1591.1	1645.2	1656.2	1646.1
40°	1490.9	1513.8	1562.7	1574.6	1569.7
42.5°	1433.9	1437.9	1479.9	1493.5	1471.8
45°	1334.6	1359.5	1382.1	1417.7	1384.1
47.5°	1250.1	1261.6	1310.3	1319.8	1302.2
50°	1173.3	1177.4	1226.3	1214.5	1202.9
52.5°	1076.9	1094.0	1121.5	1119.2	1105.6
55°	997.6	991.0	1017.0	1010.1	1009.8
57.5°	902.4	914.0	935.4	924.4	906.7
60°	813.2	813.5	821.3	808.9	806.5
62.5°	713.9	717.4	719.1	703.8	728.7
65°	612.9	604.8	628.5	604.5	608.5
67.5°	519.9	524.0	521.7	506.6	512.4
70°	425.6	430.8	427.0	409.9	415.1
72.5°	339.3	332.9	337.0	315.6	325.4
75°	255.0	249.8	254.5	236.5	244.6
77.5°	173.7	177.8	174.9	165.3	170.8
80°	114.6	111.5	111.5	106.0	107.1
82.5°	66.9	63.7	62.8	61.1	63.7
85°	31.3	30.4	31.0	30.1	28.9
87.5°	11.3	11.6	11.6	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)