

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: P589707

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589707
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

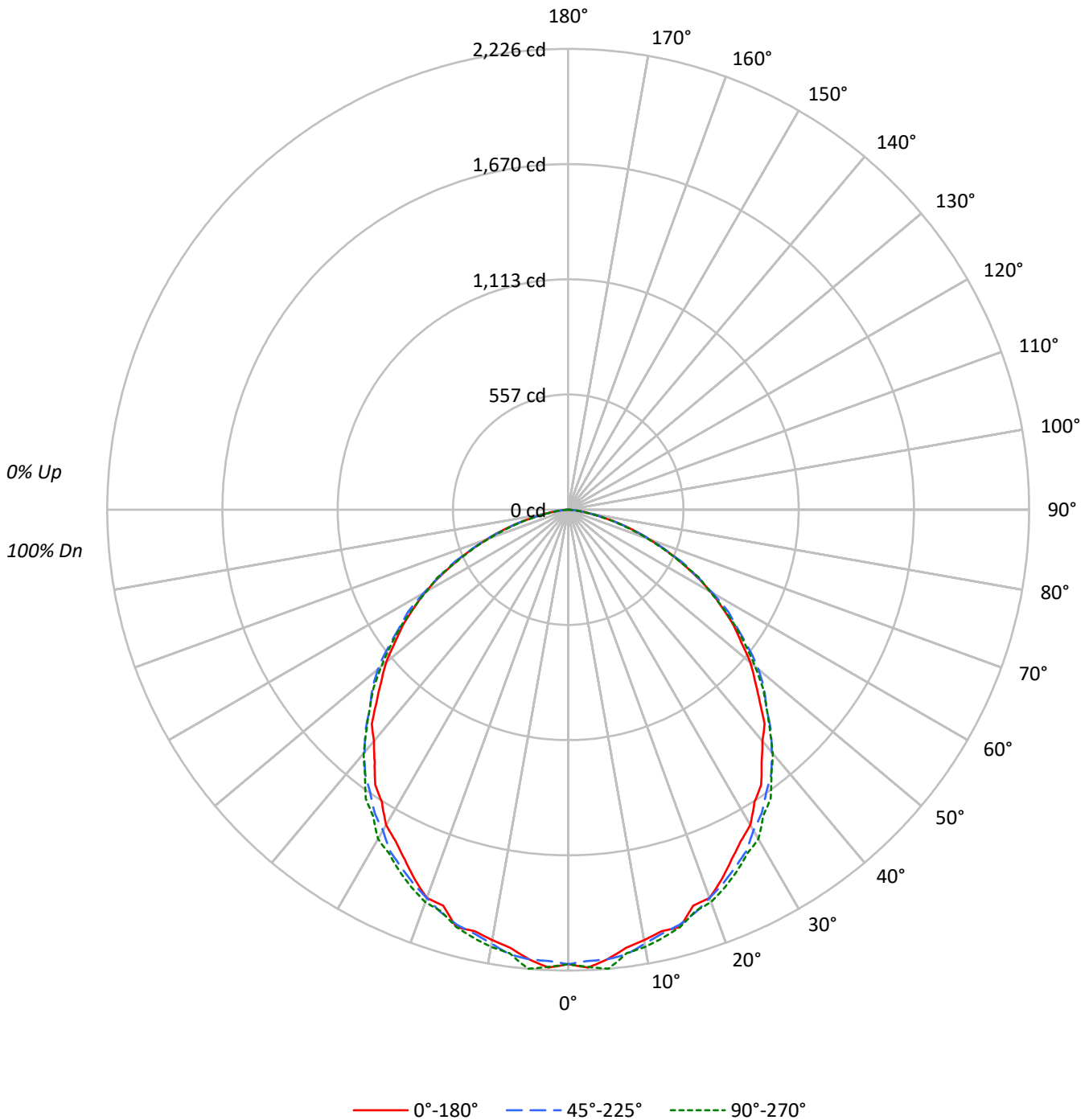
Lumens per Lamp: N/A
Luminaire Lumens: 5532.0 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5907	5907	5907
5°	5887	5889	6013
10°	5768	5818	5859
15°	5813	5782	5814
20°	5715	5715	5776
25°	5539	5661	5723
30°	5463	5559	5707
35°	5335	5474	5597
40°	5127	5374	5398
45°	4972	5149	5157
50°	4809	5026	4930
55°	4582	4671	4638
60°	4285	4327	4250
65°	3820	3918	3793
70°	3278	3289	3198
75°	2596	2590	2490
80°	1739	1691	1626
85°	945	936	874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.5	3.7
10°-20°	585.2	10.6
20°-30°	876.7	15.8
30°-40°	1039.0	18.8
40°-50°	1041.0	18.8
50°-60°	883.6	16.0
60°-70°	595.7	10.8
70°-80°	261.8	4.7
80°-90°	42.5	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°	1668.3	30.2
0°-40°	2707.4	48.9
0°-60°	4632.0	83.7
0°-90°	5532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2195	2195	2195	2195	2195	
5°	2179	2174	2180	2174	2226	205
15°	2087	2063	2075	2086	2087	581
25°	1866	1876	1906	1931	1927	862
35°	1624	1629	1666	1705	1704	1008
45°	1306	1331	1353	1388	1355	1011
55°	977	970	996	989	988	869
65°	600	592	615	592	596	597
75°	250	245	249	232	240	268
85°	31	30	30	30	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2195.0	2195.0	2195.0	2195.0	2195.0
2.5°	2213.9	2197.2	2181.6	2199.8	2210.8
5°	2179.4	2174.3	2180.2	2173.7	2226.1
7.5°	2134.6	2154.1	2165.5	2158.4	2161.5
10°	2110.8	2104.0	2129.2	2146.8	2144.2
12.5°	2085.3	2095.5	2096.9	2115.9	2117.6
15°	2086.7	2062.6	2075.4	2086.1	2087.0
17.5°	2005.6	2031.7	2040.5	2065.2	2034.6
20°	1995.7	1976.7	1995.7	2020.9	2017.0
22.5°	1934.8	1913.5	1954.3	1976.7	1975.3
25°	1865.6	1875.8	1906.5	1931.4	1927.4
27.5°	1805.0	1816.9	1860.5	1894.8	1872.7
30°	1758.2	1752.3	1789.1	1819.7	1836.7
32.5°	1674.6	1696.2	1739.2	1769.6	1753.4
35°	1623.9	1628.7	1666.4	1705.0	1703.8
37.5°	1535.2	1557.6	1610.6	1621.3	1611.4
40°	1459.5	1481.9	1529.8	1541.4	1536.6
42.5°	1403.7	1407.7	1448.8	1462.1	1440.8
45°	1306.5	1330.9	1353.0	1387.8	1355.0
47.5°	1223.7	1235.1	1282.7	1292.0	1274.7
50°	1148.6	1152.6	1200.5	1188.9	1177.5
52.5°	1054.3	1071.0	1097.9	1095.6	1082.3
55°	976.6	970.1	995.6	988.8	988.5
57.5°	883.4	894.7	915.7	904.9	887.6
60°	796.1	796.4	804.0	791.8	789.6
62.5°	698.9	702.3	704.0	689.0	713.3
65°	600.0	592.0	615.3	591.7	595.7
67.5°	509.0	513.0	510.7	496.0	501.6
70°	416.6	421.7	418.0	401.3	406.4
72.5°	332.1	325.9	329.9	308.9	318.5
75°	249.7	244.6	249.1	231.5	239.5
77.5°	170.0	174.0	171.2	161.8	167.2
80°	112.2	109.1	109.1	103.7	104.9
82.5°	65.5	62.3	61.5	59.8	62.3
85°	30.6	29.8	30.3	29.5	28.3
87.5°	11.1	11.3	11.3	10.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)