

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: P589694

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589694
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-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

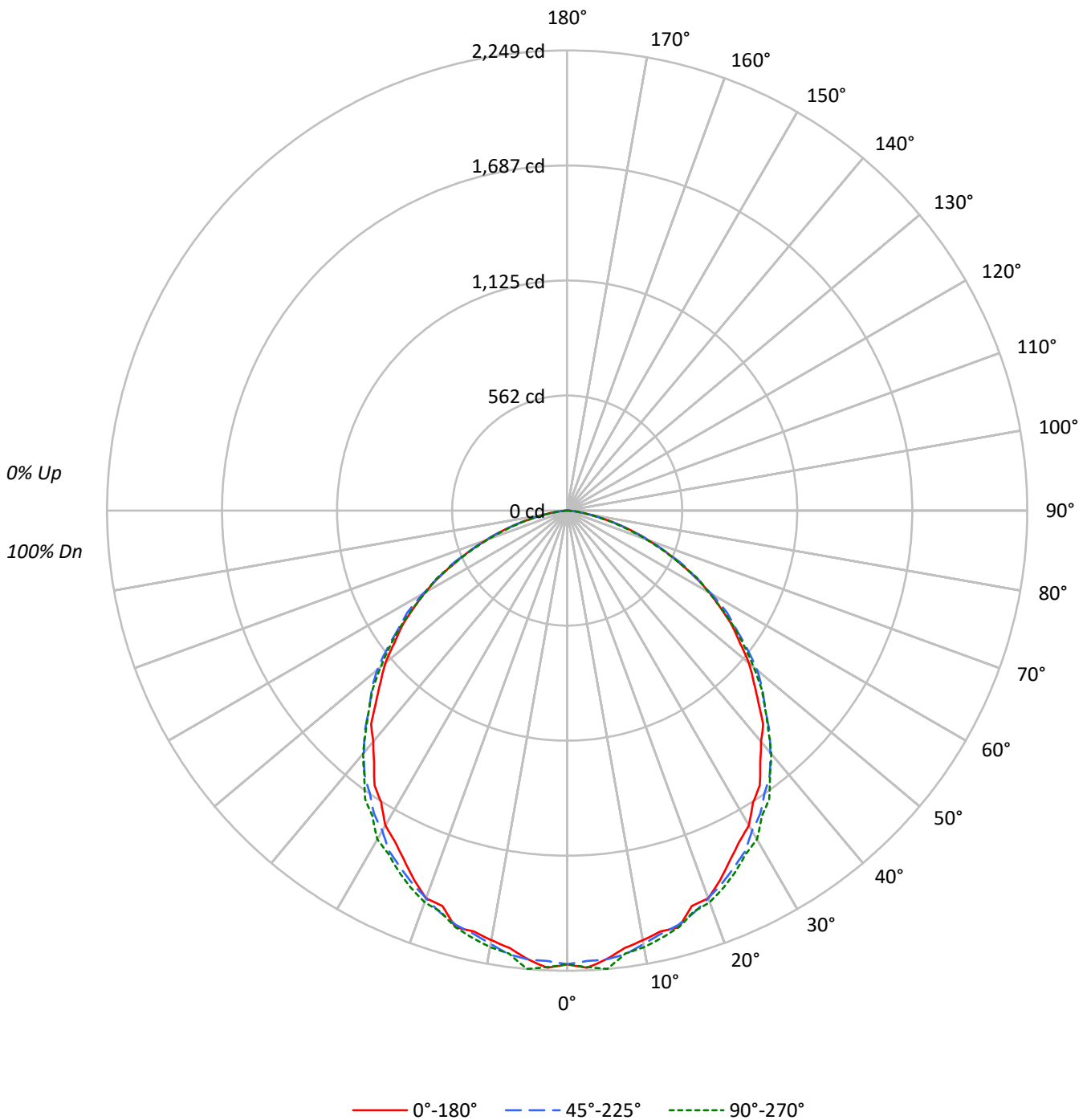
Lumens per Lamp: N/A
Luminaire Lumens: 5588.0 lumens
Efficiency: N/A
Efficacy: 119.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5966	5966	5966
5°	5947	5949	6074
10°	5826	5877	5918
15°	5872	5840	5873
20°	5773	5773	5834
25°	5595	5718	5781
30°	5519	5615	5765
35°	5389	5530	5654
40°	5179	5428	5453
45°	5022	5201	5209
50°	4858	5076	4980
55°	4628	4718	4685
60°	4328	4371	4293
65°	3859	3957	3831
70°	3311	3323	3230
75°	2622	2616	2515
80°	1757	1708	1641
85°	954	945	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.6	3.7
10°-20°	591.1	10.6
20°-30°	885.6	15.8
30°-40°	1049.6	18.8
40°-50°	1051.5	18.8
50°-60°	892.6	16.0
60°-70°	601.8	10.8
70°-80°	264.4	4.7
80°-90°	43.0	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°	1685.2	30.2
0°-40°	2734.8	48.9
0°-60°	4678.8	83.7
0°-90°	5588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5588.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2217	2217	2217	2217	2217	
5°	2201	2196	2202	2196	2249	208
15°	2108	2084	2096	2107	2108	587
25°	1884	1895	1926	1951	1947	871
35°	1640	1645	1683	1722	1721	1018
45°	1320	1344	1367	1402	1369	1021
55°	986	980	1006	999	998	878
65°	606	598	622	598	602	603
75°	252	247	252	234	242	270
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°	2217.2	2217.2	2217.2	2217.2	2217.2
2.5°	2236.4	2219.5	2203.7	2222.0	2233.2
5°	2201.4	2196.3	2202.3	2195.7	2248.7
7.5°	2156.2	2176.0	2187.4	2180.2	2183.4
10°	2132.2	2125.3	2150.8	2168.5	2165.9
12.5°	2106.4	2116.7	2118.1	2137.3	2139.0
15°	2107.8	2083.5	2096.4	2107.2	2108.1
17.5°	2025.9	2052.3	2061.2	2086.1	2055.1
20°	2015.9	1996.7	2015.9	2041.4	2037.4
22.5°	1954.4	1932.9	1974.1	1996.7	1995.3
25°	1884.5	1894.8	1925.8	1950.9	1946.9
27.5°	1823.3	1835.3	1879.4	1914.0	1891.7
30°	1776.0	1770.0	1807.2	1838.2	1855.3
32.5°	1691.6	1713.3	1756.9	1787.5	1771.2
35°	1640.3	1645.2	1683.3	1722.2	1721.1
37.5°	1550.7	1573.4	1626.9	1637.8	1627.7
40°	1474.3	1496.9	1545.3	1557.0	1552.2
42.5°	1417.9	1421.9	1463.4	1476.9	1455.4
45°	1319.7	1344.3	1366.7	1401.9	1368.7
47.5°	1236.1	1247.6	1295.7	1305.1	1287.7
50°	1160.3	1164.3	1212.6	1200.9	1189.5
52.5°	1064.9	1081.8	1109.0	1106.7	1093.3
55°	986.5	979.9	1005.7	998.8	998.5
57.5°	892.3	903.8	924.9	914.1	896.6
60°	804.1	804.4	812.2	799.8	797.6
62.5°	705.9	709.4	711.1	695.9	720.5
65°	606.0	598.0	621.5	597.7	601.7
67.5°	514.1	518.2	515.9	501.0	506.7
70°	420.8	426.0	422.3	405.4	410.5
72.5°	335.5	329.2	333.2	312.0	321.8
75°	252.2	247.1	251.6	233.9	241.9
77.5°	171.8	175.8	172.9	163.5	168.9
80°	113.4	110.2	110.2	104.8	105.9
82.5°	66.1	63.0	62.1	60.4	63.0
85°	30.9	30.1	30.6	29.8	28.6
87.5°	11.2	11.5	11.5	10.9	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)