

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: P589739

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589739
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

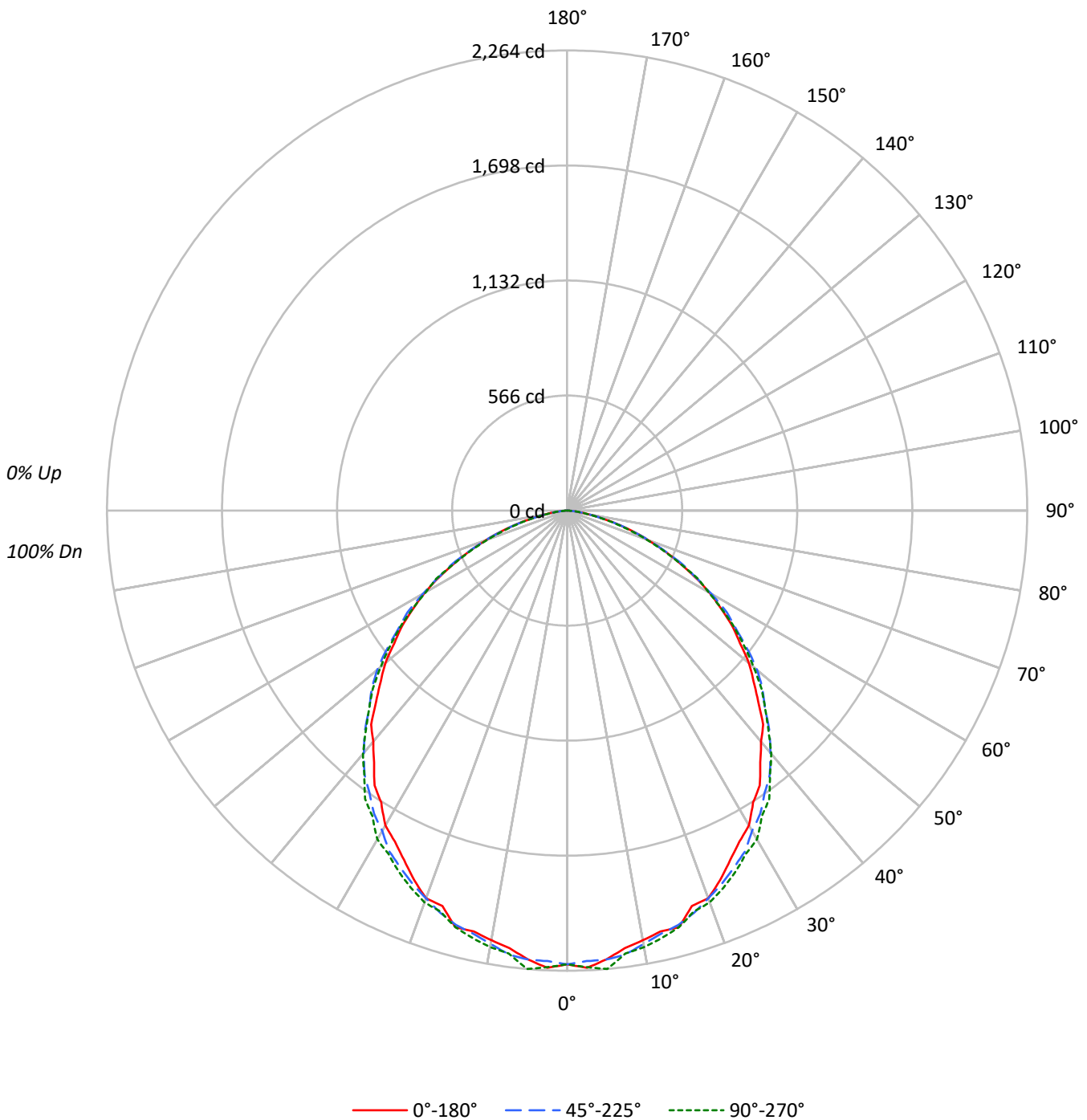
Lumens per Lamp: N/A
Luminaire Lumens: 5626.0 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6007	6007	6007
5°	5987	5989	6116
10°	5866	5917	5959
15°	5912	5880	5913
20°	5812	5812	5874
25°	5633	5757	5820
30°	5556	5654	5804
35°	5425	5567	5692
40°	5214	5465	5489
45°	5057	5237	5244
50°	4891	5111	5013
55°	4660	4750	4716
60°	4357	4401	4322
65°	3885	3984	3857
70°	3334	3345	3252
75°	2640	2634	2532
80°	1768	1720	1652
85°	960	951	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.0	3.7
10°-20°	595.1	10.6
20°-30°	891.6	15.8
30°-40°	1056.7	18.8
40°-50°	1058.7	18.8
50°-60°	898.6	16.0
60°-70°	605.9	10.8
70°-80°	266.2	4.7
80°-90°	43.3	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°	1696.7	30.2
0°-40°	2753.4	48.9
0°-60°	4710.7	83.7
0°-90°	5626.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5626.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2232	2232	2232	2232	2232	
5°	2216	2211	2217	2211	2264	209
15°	2122	2098	2111	2122	2122	591
25°	1897	1908	1939	1964	1960	877
35°	1652	1656	1695	1734	1733	1025
45°	1329	1354	1376	1411	1378	1028
55°	993	987	1012	1006	1005	884
65°	610	602	626	602	606	607
75°	254	249	253	236	244	272
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°	2232.3	2232.3	2232.3	2232.3	2232.3
2.5°	2251.6	2234.6	2218.7	2237.2	2248.4
5°	2216.4	2211.2	2217.3	2210.6	2264.0
7.5°	2170.9	2190.8	2202.3	2195.1	2198.2
10°	2146.7	2139.7	2165.4	2183.3	2180.7
12.5°	2120.7	2131.1	2132.5	2151.8	2153.6
15°	2122.2	2097.7	2110.6	2121.6	2122.4
17.5°	2039.7	2066.2	2075.2	2100.3	2069.1
20°	2029.6	2010.3	2029.6	2055.3	2051.3
22.5°	1967.7	1946.1	1987.6	2010.3	2008.9
25°	1897.3	1907.7	1938.8	1964.2	1960.2
27.5°	1835.7	1847.8	1892.2	1927.0	1904.5
30°	1788.1	1782.1	1819.5	1850.7	1867.9
32.5°	1703.1	1725.0	1768.8	1799.6	1783.2
35°	1651.5	1656.4	1694.7	1733.9	1732.8
37.5°	1561.3	1584.1	1637.9	1648.9	1638.8
40°	1484.3	1507.1	1555.8	1567.6	1562.7
42.5°	1427.5	1431.6	1473.4	1486.9	1465.3
45°	1328.7	1353.5	1376.0	1411.4	1378.0
47.5°	1244.5	1256.1	1304.5	1314.0	1296.4
50°	1168.2	1172.2	1220.9	1209.1	1197.5
52.5°	1072.2	1089.2	1116.6	1114.3	1100.7
55°	993.2	986.6	1012.5	1005.6	1005.3
57.5°	898.4	909.9	931.2	920.3	902.7
60°	809.6	809.9	817.7	805.3	803.0
62.5°	710.7	714.2	715.9	700.7	725.4
65°	610.2	602.1	625.7	601.8	605.8
67.5°	517.6	521.7	519.4	504.4	510.1
70°	423.7	428.9	425.1	408.1	413.3
72.5°	337.8	331.5	335.5	314.2	324.0
75°	253.9	248.7	253.3	235.5	243.5
77.5°	172.9	177.0	174.1	164.6	170.0
80°	114.1	111.0	111.0	105.5	106.6
82.5°	66.6	63.4	62.5	60.8	63.4
85°	31.1	30.3	30.8	30.0	28.8
87.5°	11.2	11.5	11.5	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)