

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: P589713

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-93-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589713
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-93-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

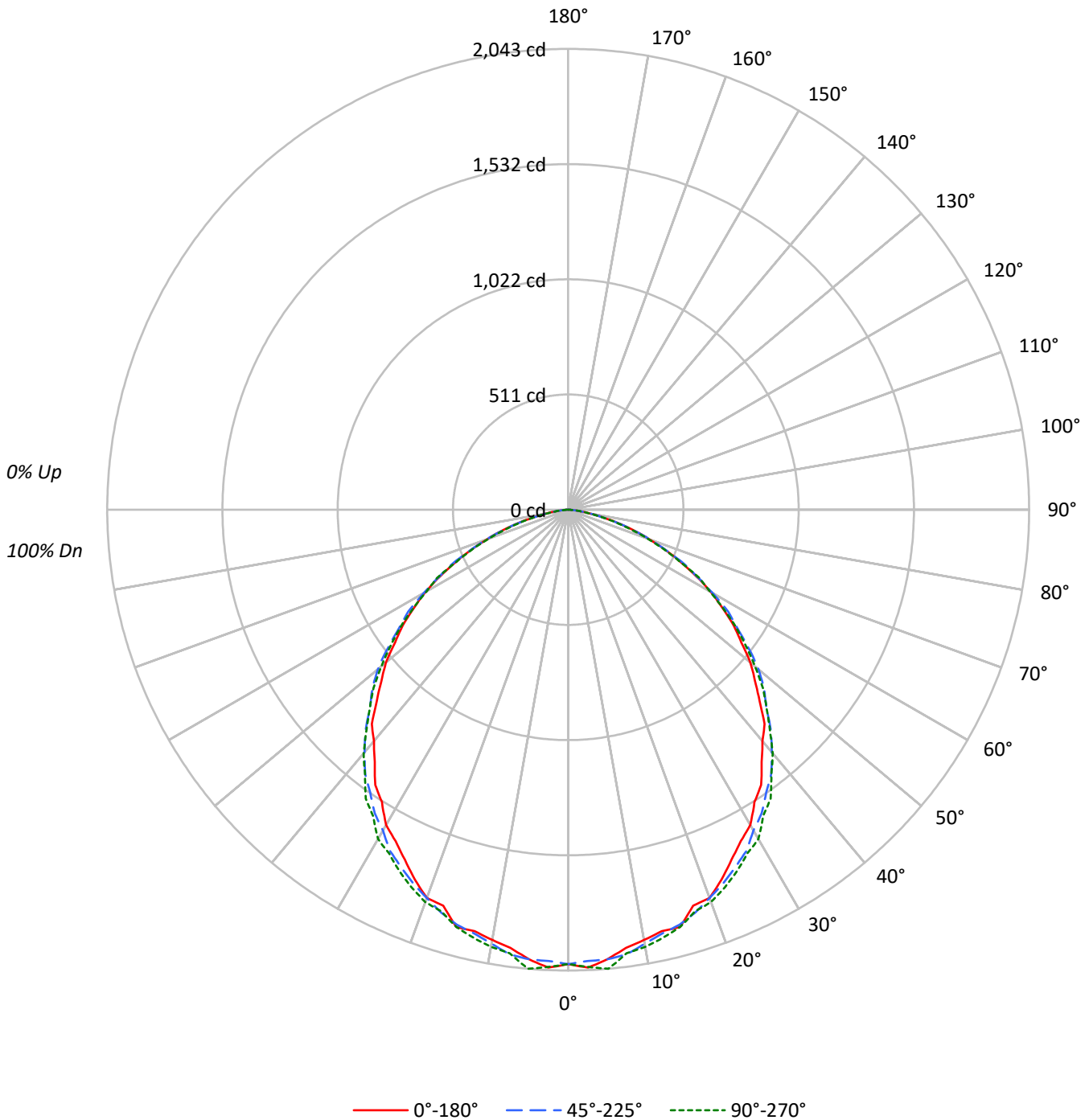
Lumens per Lamp: N/A
Luminaire Lumens: 5077.0 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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°	5421	5421	5421
5°	5403	5405	5519
10°	5293	5340	5377
15°	5335	5306	5336
20°	5245	5245	5301
25°	5084	5195	5252
30°	5014	5102	5238
35°	4896	5024	5137
40°	4705	4932	4954
45°	4563	4725	4732
50°	4413	4613	4524
55°	4205	4287	4256
60°	3932	3971	3900
65°	3506	3596	3481
70°	3008	3018	2935
75°	2382	2377	2285
80°	1596	1551	1491
85°	868	858	803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.5	3.7
10°-20°	537.0	10.6
20°-30°	804.6	15.8
30°-40°	953.6	18.8
40°-50°	955.4	18.8
50°-60°	810.9	16.0
60°-70°	546.7	10.8
70°-80°	240.2	4.7
80°-90°	39.0	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°	1531.1	30.2
0°-40°	2484.7	48.9
0°-60°	4251.0	83.7
0°-90°	5077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5077.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2014	2014	2014	2014	2014	
5°	2000	1995	2001	1995	2043	189
15°	1915	1893	1905	1914	1915	534
25°	1712	1722	1750	1772	1769	792
35°	1490	1495	1529	1565	1564	925
45°	1199	1221	1242	1274	1244	928
55°	896	890	914	908	907	797
65°	551	543	565	543	547	548
75°	229	224	229	212	220	246
85°	28	27	28	27	26	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2014.4	2014.4	2014.4	2014.4	2014.4
2.5°	2031.9	2016.5	2002.2	2018.8	2029.0
5°	2000.1	1995.4	2000.9	1994.9	2043.0
7.5°	1959.0	1977.0	1987.4	1980.9	1983.7
10°	1937.2	1930.9	1954.1	1970.2	1967.9
12.5°	1913.8	1923.1	1924.4	1941.9	1943.4
15°	1915.1	1893.0	1904.7	1914.5	1915.3
17.5°	1840.7	1864.6	1872.7	1895.3	1867.2
20°	1831.6	1814.2	1831.6	1854.7	1851.1
22.5°	1775.7	1756.2	1793.6	1814.2	1812.9
25°	1712.2	1721.6	1749.7	1772.5	1768.9
27.5°	1656.5	1667.5	1707.5	1739.0	1718.7
30°	1613.6	1608.2	1642.0	1670.1	1685.7
32.5°	1536.9	1556.7	1596.2	1624.0	1609.2
35°	1490.3	1494.8	1529.4	1564.7	1563.7
37.5°	1408.9	1429.5	1478.1	1488.0	1478.9
40°	1339.5	1360.0	1404.0	1414.6	1410.2
42.5°	1288.2	1291.9	1329.6	1341.8	1322.3
45°	1199.0	1221.4	1241.7	1273.7	1243.5
47.5°	1123.1	1133.5	1177.2	1185.8	1169.9
50°	1054.2	1057.8	1101.8	1091.1	1080.7
52.5°	967.5	982.9	1007.6	1005.5	993.3
55°	896.3	890.3	913.7	907.5	907.2
57.5°	810.7	821.1	840.4	830.5	814.6
60°	730.6	730.9	737.9	726.7	724.6
62.5°	641.4	644.5	646.1	632.3	654.7
65°	550.6	543.3	564.7	543.1	546.7
67.5°	467.1	470.8	468.7	455.2	460.4
70°	382.3	387.0	383.6	368.3	373.0
72.5°	304.8	299.1	302.7	283.5	292.3
75°	229.1	224.5	228.6	212.5	219.8
77.5°	156.1	159.7	157.1	148.5	153.5
80°	103.0	100.1	100.1	95.2	96.2
82.5°	60.1	57.2	56.4	54.9	57.2
85°	28.1	27.3	27.8	27.0	26.0
87.5°	10.1	10.4	10.4	9.9	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)