

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: P589689

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-80-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589689
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-80-88-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

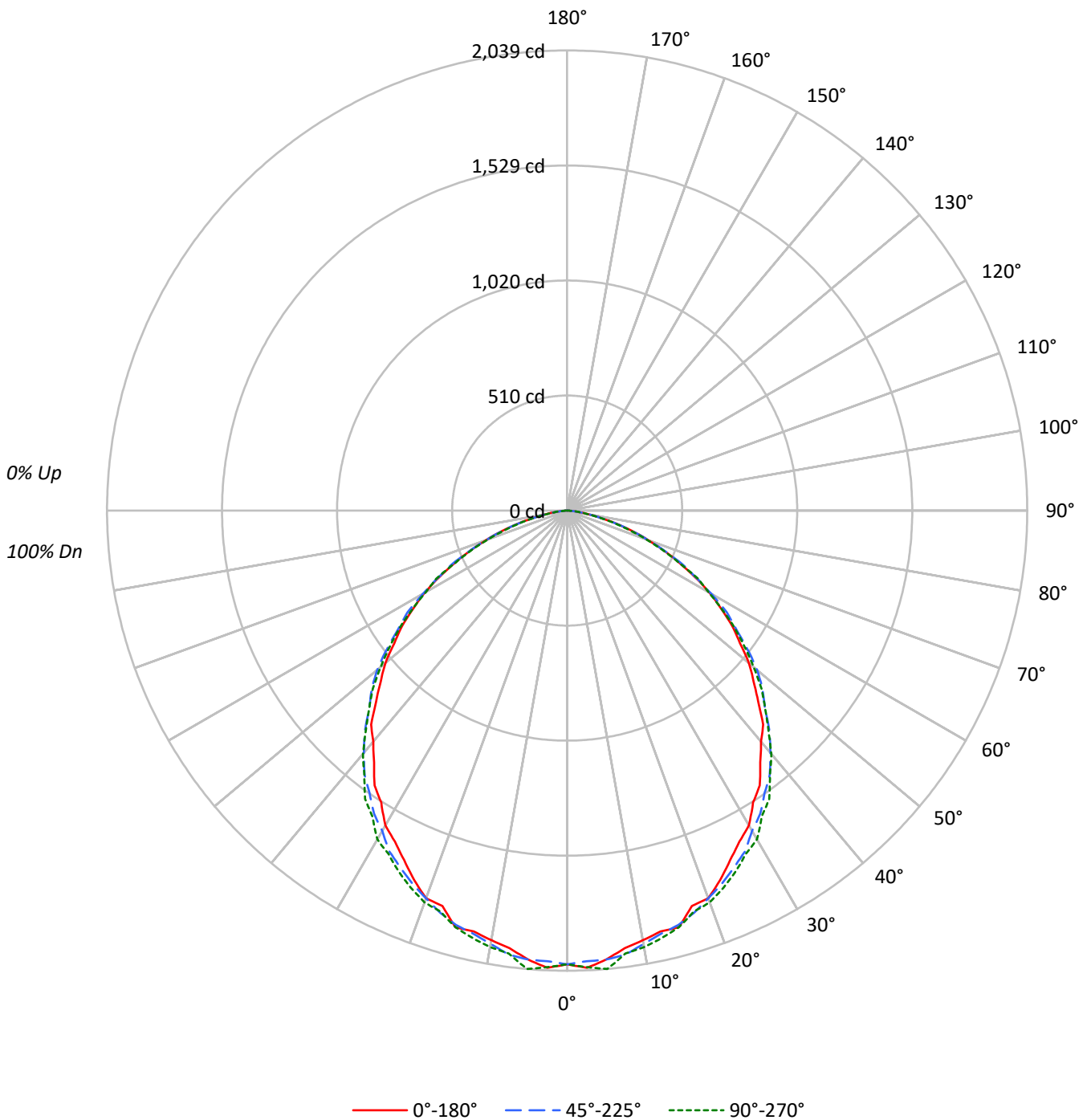
Lumens per Lamp: N/A
Luminaire Lumens: 5067.0 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5410	5410	5410
5°	5392	5394	5508
10°	5283	5329	5367
15°	5325	5296	5326
20°	5235	5235	5290
25°	5074	5185	5242
30°	5004	5092	5227
35°	4886	5014	5127
40°	4696	4922	4944
45°	4554	4716	4723
50°	4405	4603	4515
55°	4197	4278	4248
60°	3925	3963	3892
65°	3499	3589	3474
70°	3002	3013	2928
75°	2378	2373	2280
80°	1593	1548	1488
85°	865	858	803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.1	3.7
10°-20°	536.0	10.6
20°-30°	803.0	15.8
30°-40°	951.7	18.8
40°-50°	953.5	18.8
50°-60°	809.3	16.0
60°-70°	545.7	10.8
70°-80°	239.8	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°	1528.1	30.2
0°-40°	2479.8	48.9
0°-60°	4242.6	83.7
0°-90°	5067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5067.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2010	2010	2010	2010	2010	
5°	1996	1992	1997	1991	2039	188
15°	1911	1889	1901	1911	1912	533
25°	1709	1718	1746	1769	1765	790
35°	1487	1492	1526	1562	1561	924
45°	1197	1219	1239	1271	1241	926
55°	894	888	912	906	905	796
65°	550	542	564	542	546	547
75°	229	224	228	212	219	245
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°	2010.5	2010.5	2010.5	2010.5	2010.5
2.5°	2027.8	2012.5	1998.3	2014.9	2025.0
5°	1996.2	1991.5	1997.0	1991.0	2039.0
7.5°	1955.2	1973.1	1983.5	1977.0	1979.8
10°	1933.4	1927.1	1950.2	1966.3	1964.0
12.5°	1910.0	1919.3	1920.6	1938.0	1939.6
15°	1911.3	1889.2	1900.9	1910.8	1911.6
17.5°	1837.1	1860.9	1869.0	1891.6	1863.5
20°	1828.0	1810.6	1828.0	1851.1	1847.4
22.5°	1772.2	1752.7	1790.1	1810.6	1809.3
25°	1708.8	1718.2	1746.2	1769.0	1765.4
27.5°	1653.3	1664.2	1704.2	1735.6	1715.3
30°	1610.4	1605.0	1638.7	1666.8	1682.3
32.5°	1533.9	1553.6	1593.1	1620.8	1606.0
35°	1487.4	1491.8	1526.3	1561.6	1560.6
37.5°	1406.2	1426.7	1475.2	1485.1	1476.0
40°	1336.8	1357.4	1401.2	1411.9	1407.5
42.5°	1285.7	1289.3	1327.0	1339.2	1319.7
45°	1196.7	1219.0	1239.2	1271.2	1241.1
47.5°	1120.9	1131.3	1174.9	1183.4	1167.6
50°	1052.1	1055.7	1099.6	1088.9	1078.6
52.5°	965.6	981.0	1005.6	1003.5	991.3
55°	894.5	888.5	911.9	905.7	905.4
57.5°	809.1	819.5	838.7	828.8	813.0
60°	729.2	729.4	736.4	725.3	723.2
62.5°	640.1	643.2	644.8	631.0	653.4
65°	549.5	542.3	563.6	542.0	545.6
67.5°	466.2	469.8	467.8	454.3	459.5
70°	381.6	386.3	382.9	367.6	372.2
72.5°	304.2	298.5	302.2	282.9	291.8
75°	228.7	224.0	228.2	212.1	219.3
77.5°	155.7	159.4	156.8	148.2	153.2
80°	102.8	99.9	99.9	95.0	96.0
82.5°	60.0	57.1	56.3	54.8	57.1
85°	28.0	27.3	27.8	27.0	26.0
87.5°	10.1	10.4	10.4	9.9	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)