

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: P589513

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589513
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-LD4-3STD-40-UNV-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

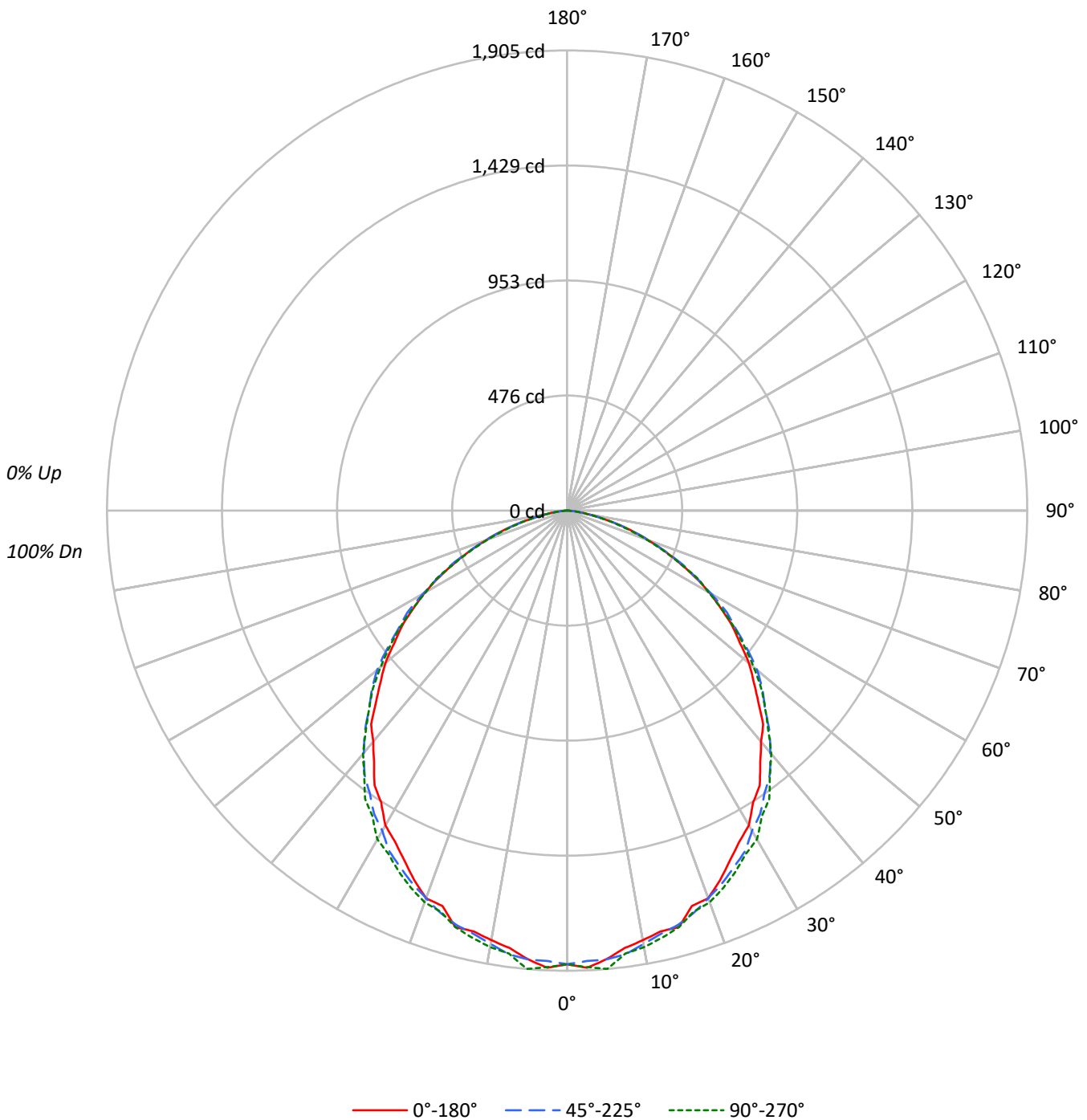
Lumens per Lamp: N/A
Luminaire Lumens: 4733.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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°	5053	5053	5053
5°	5037	5039	5145
10°	4935	4978	5013
15°	4974	4947	4975
20°	4890	4890	4942
25°	4739	4843	4896
30°	4674	4756	4883
35°	4564	4684	4789
40°	4386	4598	4618
45°	4254	4405	4412
50°	4114	4300	4218
55°	3920	3996	3968
60°	3666	3702	3636
65°	3268	3352	3245
70°	2804	2814	2736
75°	2221	2216	2130
80°	1488	1447	1390
85°	809	800	747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.6	3.7
10°-20°	500.6	10.6
20°-30°	750.1	15.8
30°-40°	889.0	18.8
40°-50°	890.6	18.8
50°-60°	756.0	16.0
60°-70°	509.7	10.8
70°-80°	224.0	4.7
80°-90°	36.4	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°	1427.4	30.2
0°-40°	2316.3	48.9
0°-60°	3963.0	83.7
0°-90°	4733.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4733.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1878	1878	1878	1878	1878	
5°	1865	1860	1865	1860	1905	176
15°	1785	1765	1776	1785	1786	497
25°	1596	1605	1631	1652	1649	738
35°	1389	1394	1426	1459	1458	863
45°	1118	1139	1158	1187	1159	865
55°	836	830	852	846	846	743
65°	513	506	526	506	510	510
75°	214	209	213	198	205	229
85°	26	26	26	25	24	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1877.9	1877.9	1877.9	1877.9	1877.9
2.5°	1894.2	1879.9	1866.5	1882.1	1891.5
5°	1864.6	1860.2	1865.3	1859.7	1904.6
7.5°	1826.3	1843.0	1852.7	1846.7	1849.3
10°	1805.9	1800.1	1821.7	1836.7	1834.5
12.5°	1784.1	1792.8	1794.0	1810.3	1811.7
15°	1785.3	1764.7	1775.6	1784.8	1785.6
17.5°	1716.0	1738.3	1745.8	1766.9	1740.7
20°	1707.5	1691.2	1707.5	1729.1	1725.7
22.5°	1655.3	1637.2	1672.1	1691.2	1690.0
25°	1596.2	1604.9	1631.1	1652.4	1649.0
27.5°	1544.3	1554.5	1591.8	1621.2	1602.2
30°	1504.3	1499.2	1530.7	1556.9	1571.5
32.5°	1432.8	1451.2	1488.0	1514.0	1500.2
35°	1389.4	1393.5	1425.7	1458.7	1457.7
37.5°	1313.5	1332.6	1378.0	1387.2	1378.7
40°	1248.7	1267.9	1308.9	1318.8	1314.7
42.5°	1201.0	1204.4	1239.5	1250.9	1232.7
45°	1117.8	1138.6	1157.6	1187.4	1159.3
47.5°	1047.0	1056.7	1097.4	1105.4	1090.6
50°	982.7	986.1	1027.1	1017.2	1007.5
52.5°	902.0	916.3	939.3	937.4	926.0
55°	835.6	830.0	851.8	846.0	845.7
57.5°	755.8	765.5	783.4	774.2	759.4
60°	681.1	681.3	687.9	677.5	675.5
62.5°	597.9	600.8	602.3	589.4	610.3
65°	513.3	506.5	526.4	506.3	509.7
67.5°	435.5	438.9	436.9	424.3	429.2
70°	356.4	360.8	357.6	343.3	347.7
72.5°	284.2	278.8	282.2	264.3	272.5
75°	213.6	209.3	213.1	198.1	204.9
77.5°	145.5	148.9	146.5	138.5	143.1
80°	96.0	93.4	93.4	88.7	89.7
82.5°	56.0	53.3	52.6	51.2	53.3
85°	26.2	25.5	25.9	25.2	24.2
87.5°	9.5	9.7	9.7	9.2	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)