

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: P589016

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-80-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589016
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-LD4-2HI-40-UNV-80-87-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

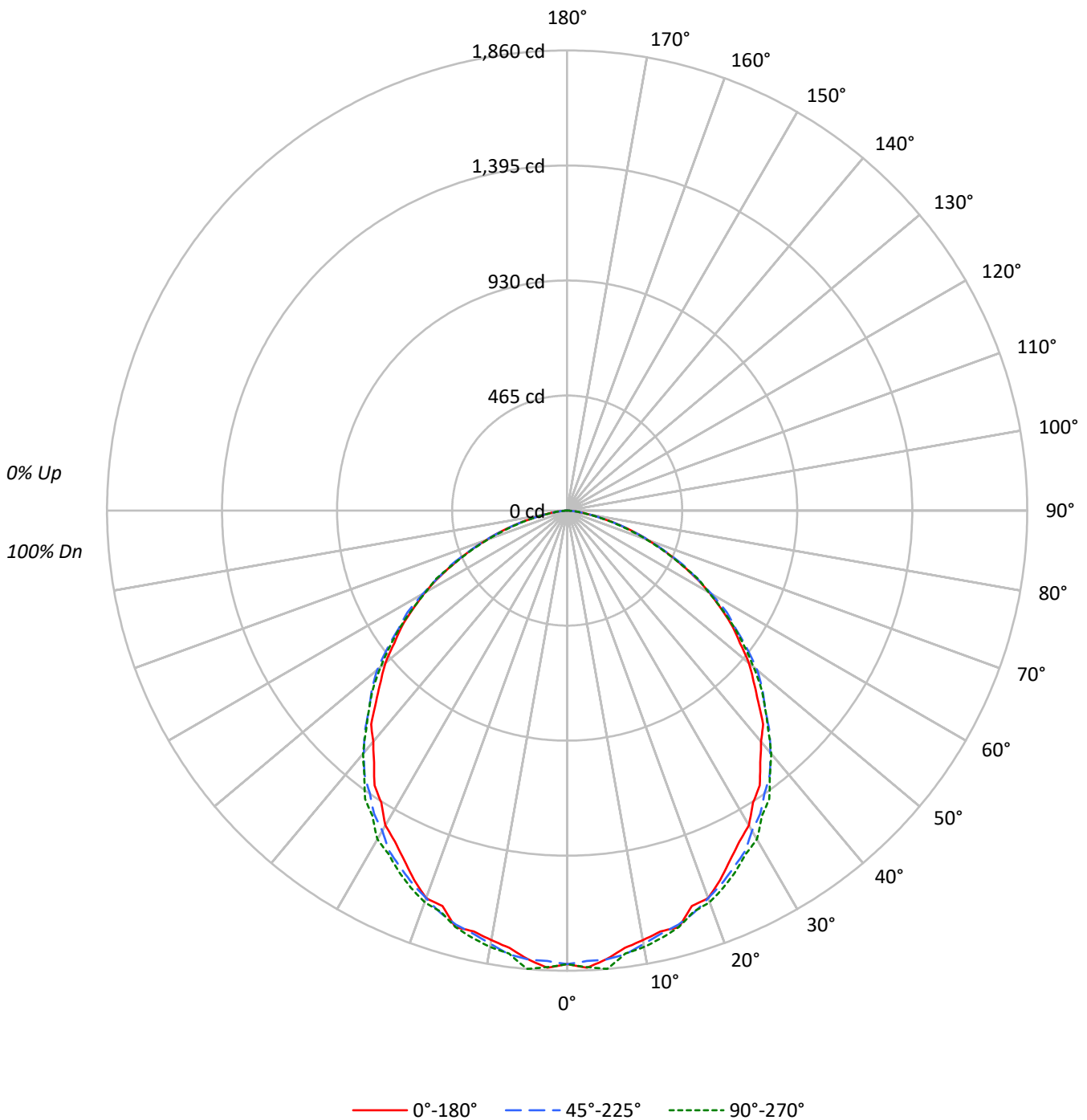
Lumens per Lamp: N/A
Luminaire Lumens: 4621.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4934	4934	4934
5°	4918	4920	5023
10°	4818	4860	4894
15°	4856	4830	4857
20°	4774	4774	4825
25°	4627	4728	4780
30°	4564	4644	4767
35°	4456	4573	4675
40°	4283	4489	4509
45°	4153	4301	4307
50°	4017	4198	4118
55°	3827	3902	3874
60°	3579	3615	3549
65°	3191	3272	3168
70°	2738	2747	2671
75°	2169	2164	2079
80°	1452	1412	1358
85°	790	781	732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.5	3.7
10°-20°	488.8	10.6
20°-30°	732.3	15.8
30°-40°	867.9	18.8
40°-50°	869.6	18.8
50°-60°	738.1	16.0
60°-70°	497.6	10.8
70°-80°	218.7	4.7
80°-90°	35.5	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°	1393.6	30.2
0°-40°	2261.5	48.9
0°-60°	3869.2	83.7
0°-90°	4621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1834	1834	1834	1834	1834	
5°	1820	1816	1821	1816	1860	172
15°	1743	1723	1734	1743	1743	486
25°	1558	1567	1592	1613	1610	720
35°	1356	1360	1392	1424	1423	842
45°	1091	1112	1130	1159	1132	844
55°	816	810	832	826	826	726
65°	501	494	514	494	498	498
75°	209	204	208	193	200	224
85°	26	25	25	25	24	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1833.5	1833.5	1833.5	1833.5	1833.5
2.5°	1849.4	1835.4	1822.4	1837.5	1846.8
5°	1820.5	1816.2	1821.2	1815.7	1859.5
7.5°	1783.1	1799.4	1808.9	1803.0	1805.6
10°	1763.2	1757.5	1778.6	1793.3	1791.1
12.5°	1741.9	1750.4	1751.6	1767.4	1768.9
15°	1743.1	1722.9	1733.6	1742.6	1743.3
17.5°	1675.4	1697.1	1704.5	1725.1	1699.5
20°	1667.1	1651.2	1667.1	1688.1	1684.8
22.5°	1616.2	1598.4	1632.5	1651.2	1650.0
25°	1558.4	1566.9	1592.5	1613.3	1610.0
27.5°	1507.8	1517.7	1554.2	1582.8	1564.3
30°	1468.7	1463.7	1494.5	1520.1	1534.3
32.5°	1398.9	1416.8	1452.8	1478.2	1464.7
35°	1356.5	1360.5	1392.0	1424.2	1423.2
37.5°	1282.4	1301.1	1345.4	1354.3	1346.1
40°	1219.2	1237.9	1277.9	1287.6	1283.6
42.5°	1172.5	1175.9	1210.2	1221.3	1203.5
45°	1091.3	1111.7	1130.2	1159.3	1131.8
47.5°	1022.2	1031.7	1071.5	1079.3	1064.8
50°	959.5	962.8	1002.8	993.1	983.6
52.5°	880.6	894.6	917.1	915.2	904.1
55°	815.8	810.3	831.6	826.0	825.7
57.5°	737.9	747.4	764.9	755.9	741.4
60°	665.0	665.2	671.6	661.4	659.5
62.5°	583.8	586.6	588.0	575.5	595.9
65°	501.2	494.5	513.9	494.3	497.6
67.5°	425.2	428.5	426.6	414.3	419.0
70°	348.0	352.3	349.2	335.2	339.5
72.5°	277.5	272.2	275.6	258.0	266.1
75°	208.6	204.3	208.1	193.4	200.0
77.5°	142.0	145.4	143.0	135.2	139.7
80°	93.7	91.1	91.1	86.6	87.6
82.5°	54.7	52.1	51.4	50.0	52.1
85°	25.6	24.9	25.3	24.6	23.7
87.5°	9.2	9.5	9.5	9.0	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)