

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: P589040

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-93-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589040
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-93-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

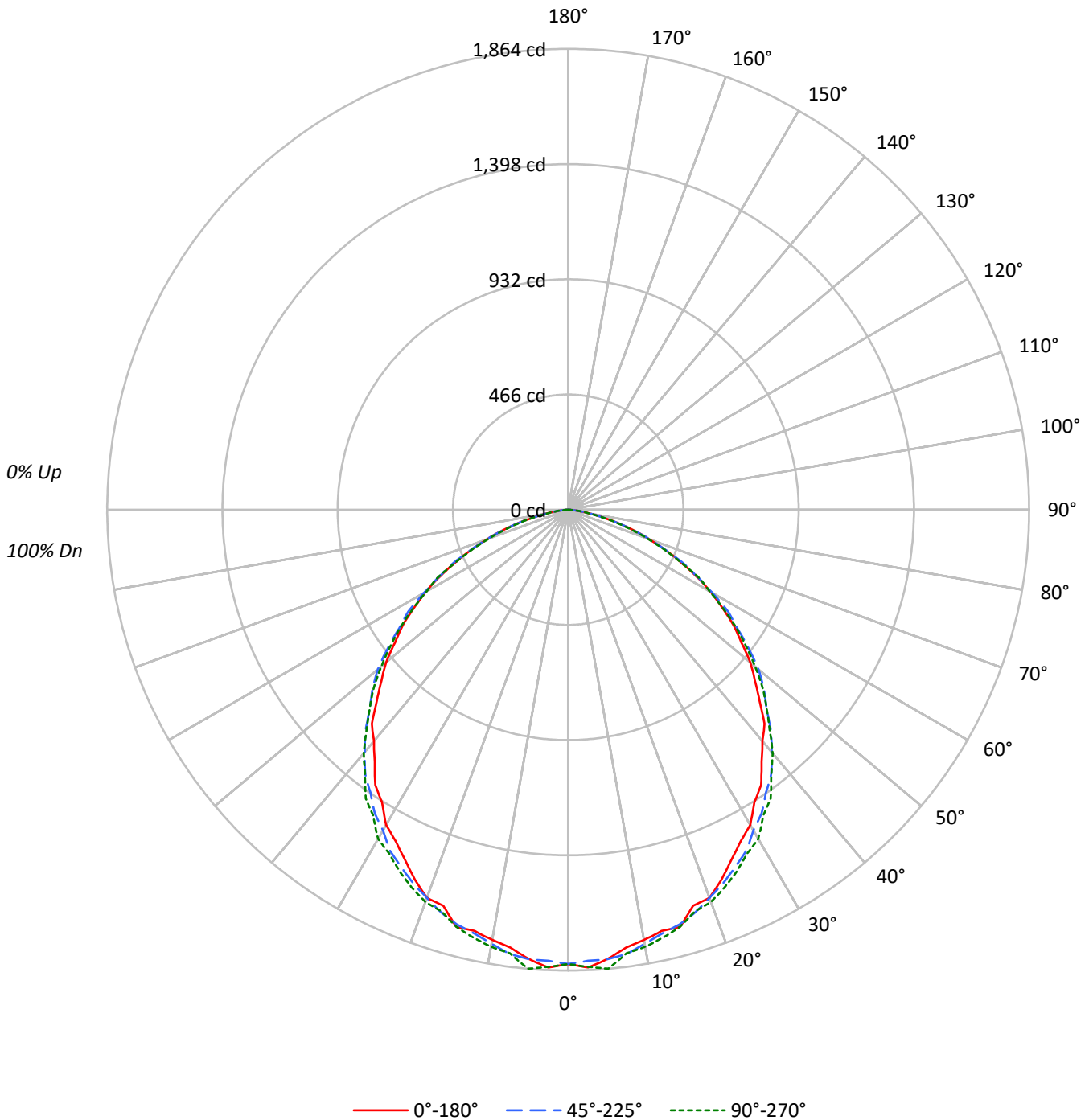
Lumens per Lamp: N/A
Luminaire Lumens: 4631.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4945	4945	4945
5°	4928	4930	5034
10°	4828	4870	4905
15°	4866	4840	4867
20°	4784	4784	4835
25°	4637	4738	4791
30°	4574	4654	4778
35°	4466	4583	4686
40°	4292	4499	4519
45°	4162	4310	4317
50°	4026	4207	4127
55°	3835	3910	3882
60°	3587	3623	3557
65°	3198	3280	3175
70°	2744	2753	2677
75°	2173	2168	2085
80°	1455	1415	1361
85°	790	784	732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.8	3.7
10°-20°	489.9	10.6
20°-30°	733.9	15.8
30°-40°	869.8	18.8
40°-50°	871.4	18.8
50°-60°	739.7	16.0
60°-70°	498.7	10.8
70°-80°	219.1	4.7
80°-90°	35.6	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°	1396.6	30.2
0°-40°	2266.4	48.9
0°-60°	3877.6	83.7
0°-90°	4631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4631.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1838	1838	1838	1838	1838	
5°	1824	1820	1825	1820	1864	172
15°	1747	1727	1737	1746	1747	487
25°	1562	1570	1596	1617	1614	722
35°	1359	1363	1395	1427	1426	844
45°	1094	1114	1133	1162	1134	846
55°	818	812	833	828	828	727
65°	502	496	515	495	499	499
75°	209	205	208	194	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°	1837.5	1837.5	1837.5	1837.5	1837.5
2.5°	1853.4	1839.4	1826.3	1841.5	1850.7
5°	1824.4	1820.1	1825.1	1819.7	1863.6
7.5°	1786.9	1803.3	1812.8	1806.9	1809.5
10°	1767.0	1761.3	1782.4	1797.1	1795.0
12.5°	1745.6	1754.2	1755.4	1771.3	1772.7
15°	1746.8	1726.7	1737.3	1746.4	1747.1
17.5°	1679.0	1700.8	1708.2	1728.8	1703.2
20°	1670.7	1654.8	1670.7	1691.8	1688.5
22.5°	1619.7	1601.9	1636.0	1654.8	1653.6
25°	1561.8	1570.3	1595.9	1616.8	1613.5
27.5°	1511.0	1521.0	1557.5	1586.2	1567.7
30°	1471.9	1466.9	1497.7	1523.4	1537.6
32.5°	1401.9	1419.9	1456.0	1481.4	1467.8
35°	1359.4	1363.4	1395.0	1427.3	1426.3
37.5°	1285.2	1303.9	1348.3	1357.3	1349.0
40°	1221.8	1240.6	1280.6	1290.4	1286.3
42.5°	1175.1	1178.4	1212.8	1223.9	1206.2
45°	1093.7	1114.1	1132.6	1161.8	1134.3
47.5°	1024.4	1033.9	1073.8	1081.6	1067.1
50°	961.6	964.9	1005.0	995.2	985.8
52.5°	882.6	896.5	919.1	917.2	906.0
55°	817.5	812.1	833.4	827.7	827.5
57.5°	739.5	749.0	766.5	757.5	743.1
60°	666.4	666.7	673.1	662.9	661.0
62.5°	585.0	587.9	589.3	576.7	597.1
65°	502.2	495.6	515.1	495.4	498.7
67.5°	426.1	429.4	427.5	415.2	419.9
70°	348.8	353.0	349.9	335.9	340.2
72.5°	278.1	272.8	276.2	258.6	266.7
75°	209.0	204.7	208.5	193.8	200.5
77.5°	142.3	145.7	143.3	135.5	140.0
80°	93.9	91.3	91.3	86.8	87.8
82.5°	54.8	52.2	51.5	50.1	52.2
85°	25.6	24.9	25.4	24.7	23.7
87.5°	9.3	9.5	9.5	9.0	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)