

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: P589459

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-93-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589459
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-LD4-3LO-50-UNV-93-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

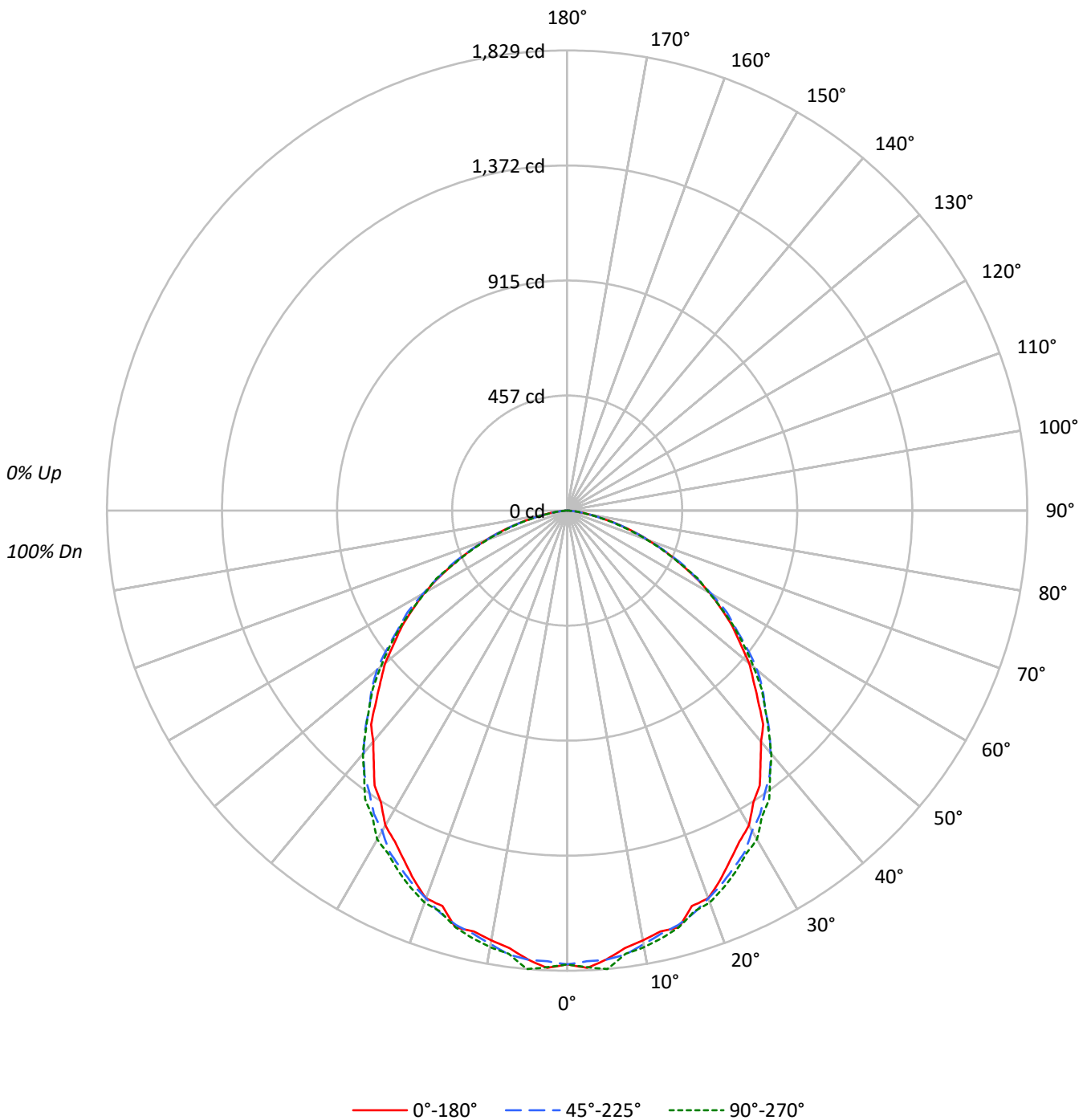
Lumens per Lamp: N/A
Luminaire Lumens: 4546.0 lumens
Efficiency: N/A
Efficacy: 129.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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	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					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°	4854	4854	4854
5°	4838	4840	4942
10°	4740	4781	4815
15°	4777	4751	4778
20°	4696	4696	4747
25°	4552	4652	4703
30°	4490	4568	4690
35°	4384	4499	4599
40°	4213	4416	4436
45°	4086	4231	4238
50°	3952	4130	4051
55°	3765	3838	3811
60°	3521	3556	3492
65°	3139	3219	3117
70°	2693	2703	2628
75°	2133	2128	2046
80°	1429	1390	1336
85°	778	769	719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.7	3.7
10°-20°	480.9	10.6
20°-30°	720.4	15.8
30°-40°	853.9	18.8
40°-50°	855.4	18.8
50°-60°	726.1	16.0
60°-70°	489.6	10.8
70°-80°	215.1	4.7
80°-90°	34.9	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°	1371.0	30.2
0°-40°	2224.8	48.9
0°-60°	3806.4	83.7
0°-90°	4546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1804	1804	1804	1804	1804	
5°	1791	1787	1792	1786	1829	169
15°	1715	1695	1706	1714	1715	478
25°	1533	1542	1567	1587	1584	709
35°	1334	1338	1369	1401	1400	829
45°	1074	1094	1112	1140	1114	831
55°	802	797	818	813	812	714
65°	493	486	506	486	490	490
75°	205	201	205	190	197	220
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1803.7	1803.7	1803.7	1803.7	1803.7
2.5°	1819.3	1805.6	1792.8	1807.7	1816.8
5°	1790.9	1786.7	1791.6	1786.3	1829.4
7.5°	1754.1	1770.2	1779.5	1773.7	1776.3
10°	1734.6	1729.0	1749.7	1764.1	1762.1
12.5°	1713.6	1722.0	1723.2	1738.8	1740.2
15°	1714.8	1695.0	1705.5	1714.3	1715.0
17.5°	1648.2	1669.6	1676.8	1697.1	1671.9
20°	1640.0	1624.4	1640.0	1660.7	1657.5
22.5°	1589.9	1572.5	1606.0	1624.4	1623.2
25°	1533.1	1541.5	1566.7	1587.1	1583.9
27.5°	1483.3	1493.1	1528.9	1557.1	1538.9
30°	1444.9	1440.0	1470.2	1495.4	1509.4
32.5°	1376.2	1393.9	1429.2	1454.2	1440.9
35°	1334.5	1338.4	1369.4	1401.1	1400.1
37.5°	1261.6	1280.0	1323.5	1332.4	1324.2
40°	1199.4	1217.8	1257.1	1266.7	1262.7
42.5°	1153.5	1156.8	1190.5	1201.5	1184.0
45°	1073.6	1093.7	1111.8	1140.5	1113.5
47.5°	1005.6	1014.9	1054.1	1061.7	1047.5
50°	943.9	947.2	986.5	977.0	967.7
52.5°	866.4	880.1	902.2	900.4	889.4
55°	802.5	797.2	818.1	812.6	812.3
57.5°	725.9	735.2	752.5	743.6	729.4
60°	654.2	654.4	660.7	650.7	648.8
62.5°	574.3	577.1	578.5	566.2	586.2
65°	493.0	486.5	505.6	486.3	489.5
67.5°	418.3	421.5	419.7	407.6	412.2
70°	342.3	346.5	343.5	329.8	334.0
72.5°	272.9	267.8	271.1	253.9	261.8
75°	205.2	201.0	204.7	190.3	196.8
77.5°	139.7	143.0	140.7	133.0	137.4
80°	92.2	89.7	89.7	85.2	86.2
82.5°	53.8	51.2	50.5	49.1	51.2
85°	25.2	24.5	24.9	24.2	23.3
87.5°	9.1	9.3	9.3	8.8	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)