

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P590888

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590888
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
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4LO-50-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5220.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

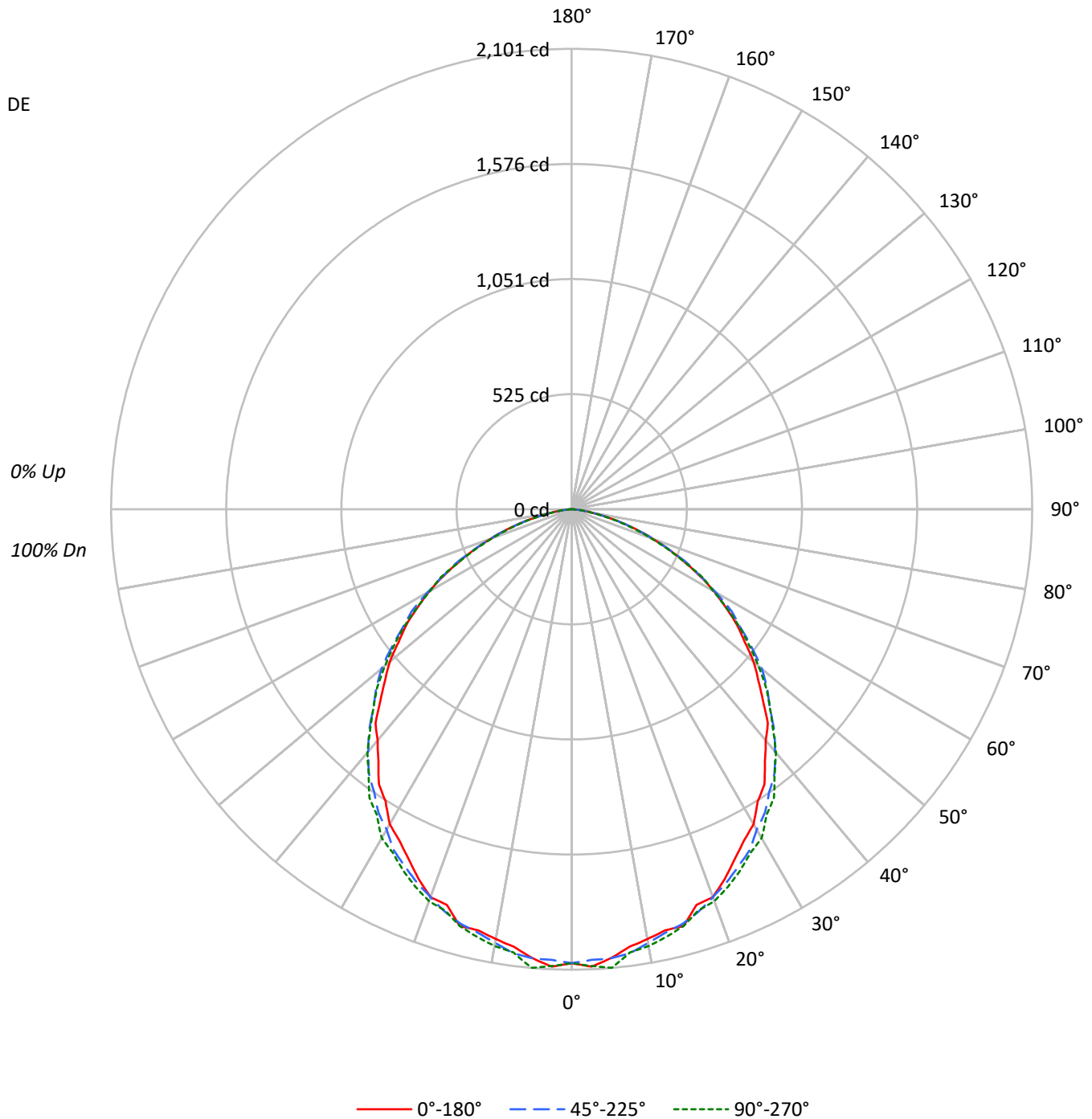
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590888

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590888

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-87-EDD

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	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°	5574	5574	5574
5°	5555	5557	5674
10°	5442	5490	5529
15°	5485	5456	5486
20°	5393	5393	5450
25°	5227	5341	5400
30°	5155	5246	5385
35°	5034	5165	5281
40°	4838	5071	5093
45°	4692	4859	4865
50°	4538	4742	4652
55°	4323	4407	4376
60°	4043	4083	4010
65°	3605	3697	3579
70°	3093	3103	3017
75°	2450	2444	2350
80°	1641	1596	1533
85°	892	883	824

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4984 cd/sqm



TEST NUMBER: P590888

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.8	3.7
10°-20°	552.2	10.6
20°-30°	827.2	15.8
30°-40°	980.4	18.8
40°-50°	982.3	18.8
50°-60°	833.8	16.0
60°-70°	562.1	10.8
70°-80°	247.0	4.7
80°-90°	40.1	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°	1574.2	30.2
0°-40°	2554.7	48.9
0°-60°	4370.7	83.7
0°-90°	5220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5220.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2071	2071	2071	2071	2071	
5°	2056	2052	2057	2051	2101	194
15°	1969	1946	1958	1968	1969	549
25°	1760	1770	1799	1822	1819	814
35°	1532	1537	1572	1609	1608	951
45°	1233	1256	1277	1310	1278	954
55°	922	915	939	933	933	820
65°	566	559	581	558	562	563
75°	236	231	235	218	226	252
85°	29	28	29	28	27	42
90°	0	0	0	0	0	



TEST NUMBER: P590888

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2071.2	2071.2	2071.2	2071.2	2071.2
2.5°	2089.1	2073.3	2058.6	2075.7	2086.1
5°	2056.5	2051.6	2057.3	2051.1	2100.6
7.5°	2014.2	2032.7	2043.4	2036.7	2039.6
10°	1991.7	1985.3	2009.1	2025.7	2023.3
12.5°	1967.7	1977.3	1978.6	1996.6	1998.2
15°	1969.0	1946.3	1958.3	1968.5	1969.3
17.5°	1892.5	1917.1	1925.4	1948.7	1919.8
20°	1883.2	1865.3	1883.2	1907.0	1903.2
22.5°	1825.7	1805.6	1844.1	1865.3	1863.9
25°	1760.4	1770.0	1798.9	1822.5	1818.7
27.5°	1703.2	1714.4	1755.6	1788.0	1767.1
30°	1659.1	1653.5	1688.2	1717.1	1733.1
32.5°	1580.2	1600.5	1641.2	1669.8	1654.5
35°	1532.3	1536.9	1572.4	1608.8	1607.7
37.5°	1448.6	1469.7	1519.7	1529.9	1520.5
40°	1377.2	1398.3	1443.5	1454.5	1449.9
42.5°	1324.5	1328.3	1367.0	1379.6	1359.6
45°	1232.8	1255.8	1276.7	1309.6	1278.5
47.5°	1154.7	1165.4	1210.3	1219.2	1202.9
50°	1083.9	1087.6	1132.8	1121.8	1111.1
52.5°	994.8	1010.6	1036.0	1033.8	1021.3
55°	921.5	915.4	939.4	933.0	932.8
57.5°	833.5	844.2	864.0	853.9	837.6
60°	751.2	751.4	758.7	747.2	745.0
62.5°	659.5	662.7	664.3	650.1	673.1
65°	566.1	558.6	580.6	558.4	562.1
67.5°	480.3	484.0	481.9	468.0	473.3
70°	393.1	397.9	394.4	378.7	383.5
72.5°	313.4	307.5	311.3	291.5	300.6
75°	235.6	230.8	235.1	218.5	226.0
77.5°	160.5	164.2	161.5	152.7	157.8
80°	105.9	103.0	103.0	97.9	98.9
82.5°	61.8	58.8	58.0	56.4	58.8
85°	28.9	28.1	28.6	27.8	26.7
87.5°	10.4	10.7	10.7	10.2	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)