

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: P590897

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590897
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-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5065.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

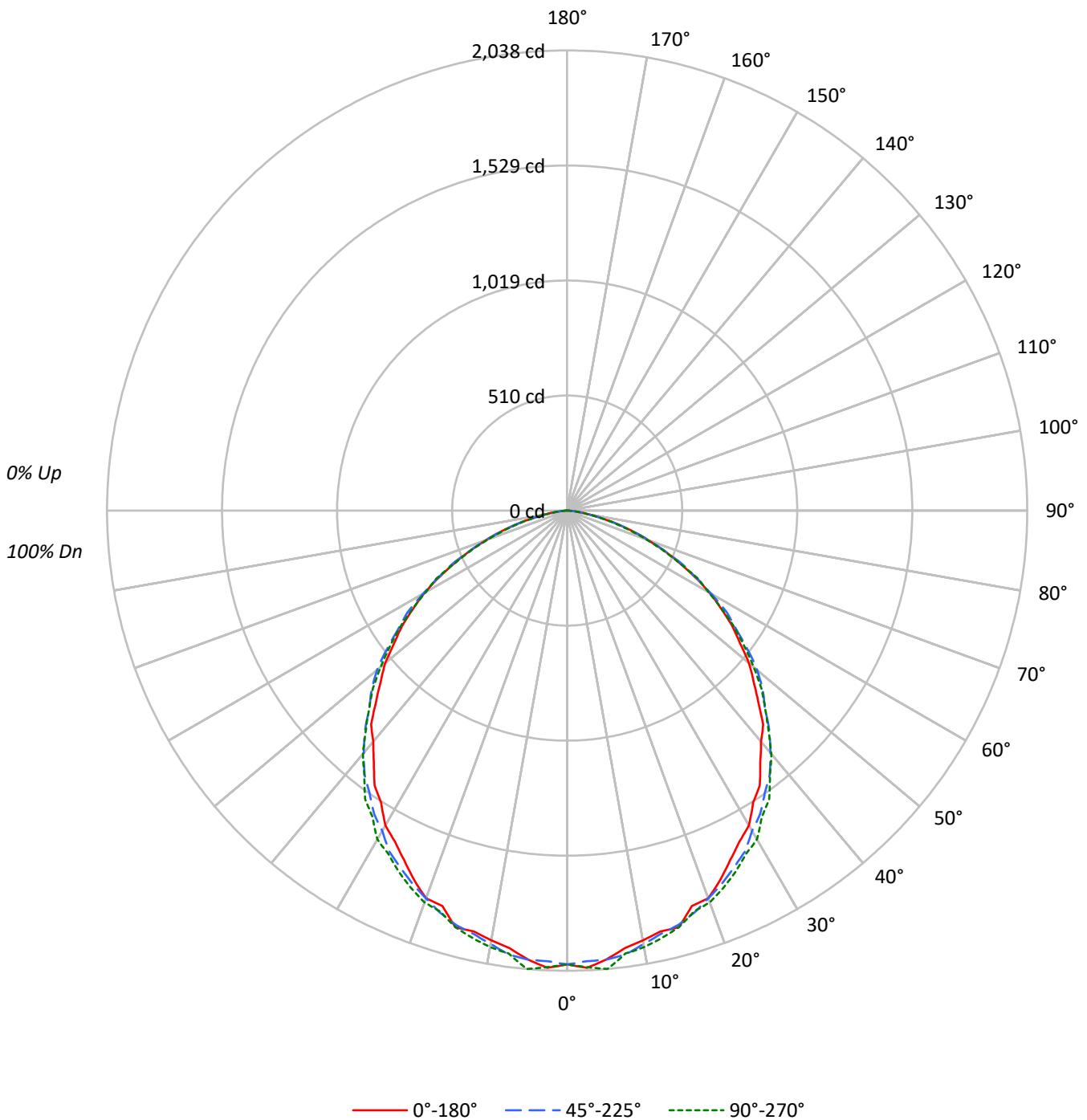
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590897

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-93-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590897

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-93-88-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	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°	5408	5408	5408
5°	5390	5392	5506
10°	5281	5327	5364
15°	5322	5294	5323
20°	5233	5233	5288
25°	5072	5183	5240
30°	5002	5090	5226
35°	4884	5012	5125
40°	4694	4920	4942
45°	4552	4714	4721
50°	4403	4602	4513
55°	4195	4276	4246
60°	3923	3962	3891
65°	3498	3587	3473
70°	3001	3011	2928
75°	2377	2372	2280
80°	1593	1548	1488
85°	865	858	800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4836 cd/sqm



TEST NUMBER: P590897

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-93-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	3.7
10°-20°	535.8	10.6
20°-30°	802.7	15.8
30°-40°	951.3	18.8
40°-50°	953.1	18.8
50°-60°	809.0	16.0
60°-70°	545.4	10.8
70°-80°	239.7	4.7
80°-90°	39.0	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°	1527.5	30.2
0°-40°	2478.8	48.9
0°-60°	4240.9	83.7
0°-90°	5065.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2010	2010	2010	2010	2010	
5°	1995	1991	1996	1990	2038	188
15°	1910	1888	1900	1910	1911	532
25°	1708	1718	1746	1768	1765	790
35°	1487	1491	1526	1561	1560	923
45°	1196	1218	1239	1271	1241	925
55°	894	888	912	905	905	795
65°	549	542	563	542	545	546
75°	229	224	228	212	219	245
85°	28	27	28	27	26	41
90°	0	0	0	0	0	



TEST NUMBER: P590897

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-93-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2009.7	2009.7	2009.7	2009.7	2009.7
2.5°	2027.0	2011.7	1997.5	2014.1	2024.2
5°	1995.4	1990.7	1996.2	1990.2	2038.2
7.5°	1954.4	1972.3	1982.7	1976.2	1979.0
10°	1932.6	1926.4	1949.5	1965.6	1963.2
12.5°	1909.2	1918.6	1919.9	1937.3	1938.8
15°	1910.5	1888.5	1900.2	1910.0	1910.8
17.5°	1836.3	1860.2	1868.2	1890.8	1862.8
20°	1827.3	1809.9	1827.3	1850.3	1846.7
22.5°	1771.5	1752.0	1789.4	1809.9	1808.6
25°	1708.1	1717.5	1745.5	1768.3	1764.7
27.5°	1652.6	1663.5	1703.5	1734.9	1714.6
30°	1609.8	1604.4	1638.1	1666.1	1681.7
32.5°	1533.3	1553.0	1592.4	1620.2	1605.4
35°	1486.8	1491.2	1525.7	1561.0	1560.0
37.5°	1405.6	1426.1	1474.6	1484.5	1475.4
40°	1336.3	1356.8	1400.7	1411.3	1406.9
42.5°	1285.2	1288.8	1326.5	1338.7	1319.2
45°	1196.2	1218.5	1238.8	1270.7	1240.6
47.5°	1120.4	1130.8	1174.4	1183.0	1167.1
50°	1051.7	1055.3	1099.2	1088.5	1078.1
52.5°	965.3	980.6	1005.2	1003.1	990.9
55°	894.2	888.2	911.5	905.3	905.1
57.5°	808.8	819.2	838.4	828.5	812.7
60°	728.9	729.1	736.1	725.0	722.9
62.5°	639.9	643.0	644.5	630.8	653.1
65°	549.3	542.1	563.3	541.8	545.4
67.5°	466.0	469.7	467.6	454.1	459.3
70°	381.4	386.1	382.7	367.4	372.1
72.5°	304.1	298.4	302.0	282.8	291.7
75°	228.6	223.9	228.1	212.0	219.3
77.5°	155.7	159.3	156.7	148.2	153.1
80°	102.8	99.9	99.9	95.0	96.0
82.5°	59.9	57.1	56.3	54.8	57.1
85°	28.0	27.2	27.8	27.0	25.9
87.5°	10.1	10.4	10.4	9.9	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)