

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: P590199

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590199
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-LD4-2HI-50-UNV-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4764.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

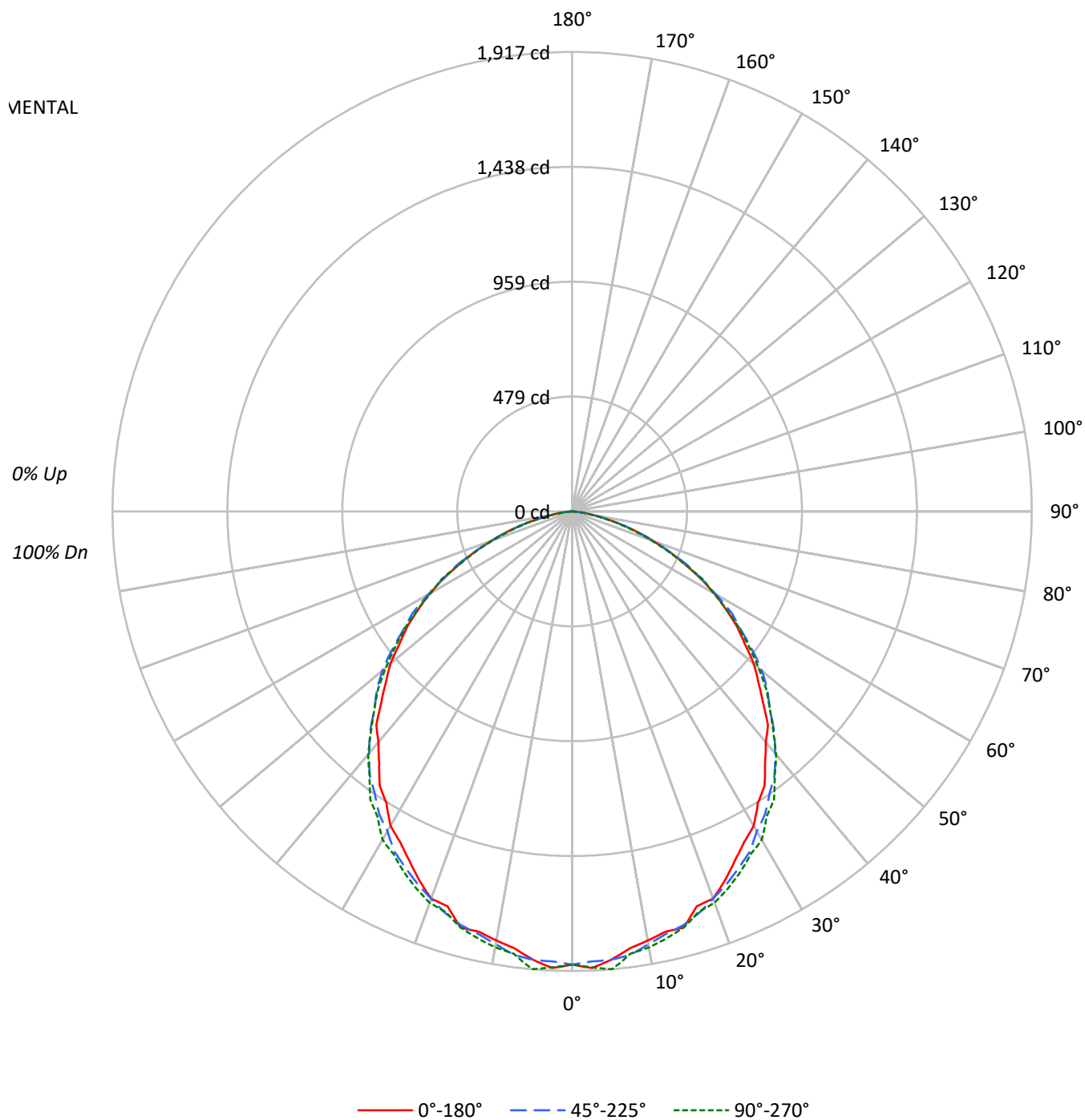
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590199

CATALOG NUMBER: FSR-24-2-LD4-2HI-50-UNV-80-86-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P590199

CATALOG NUMBER: FSR-24-2-LD4-2HI-50-UNV-80-86-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	5086	5086	5086
5°	5070	5072	5179
10°	4967	5010	5046
15°	5006	4979	5007
20°	4922	4922	4974
25°	4770	4875	4928
30°	4705	4787	4915
35°	4594	4714	4820
40°	4415	4628	4649
45°	4282	4434	4440
50°	4141	4328	4245
55°	3946	4023	3994
60°	3690	3726	3659
65°	3290	3374	3266
70°	2823	2832	2754
75°	2235	2230	2144
80°	1497	1457	1399
85°	815	806	753

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 4548 cd/sqm

TEST NUMBER: P590199

CATALOG NUMBER: FSR-24-2-LD4-2HI-50-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.8	3.7
10°-20°	503.9	10.6
20°-30°	755.0	15.8
30°-40°	894.8	18.8
40°-50°	896.5	18.8
50°-60°	760.9	16.0
60°-70°	513.0	10.8
70°-80°	225.4	4.7
80°-90°	36.6	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°	1436.7	30.2
0°-40°	2331.5	48.9
0°-60°	3988.9	83.7
0°-90°	4764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4764.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1890	1890	1890	1890	1890	
5°	1877	1872	1878	1872	1917	177
15°	1797	1776	1787	1796	1797	501
25°	1607	1615	1642	1663	1660	743
35°	1398	1403	1435	1468	1467	868
45°	1125	1146	1165	1195	1167	870
55°	841	835	857	852	851	748
65°	517	510	530	510	513	514
75°	215	211	214	199	206	230
85°	26	26	26	25	24	38
90°	0	0	0	0	0	

TEST NUMBER: P590199

CATALOG NUMBER: FSR-24-2-LD4-2HI-50-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1890.2	1890.2	1890.2	1890.2	1890.2
2.5°	1906.6	1892.2	1878.8	1894.4	1903.9
5°	1876.8	1872.4	1877.5	1871.9	1917.1
7.5°	1838.3	1855.1	1864.9	1858.8	1861.4
10°	1817.7	1811.9	1833.6	1848.7	1846.5
12.5°	1795.8	1804.6	1805.8	1822.1	1823.6
15°	1797.0	1776.3	1787.2	1796.5	1797.2
17.5°	1727.2	1749.7	1757.2	1778.5	1752.1
20°	1718.7	1702.3	1718.7	1740.4	1737.0
22.5°	1666.2	1647.9	1683.0	1702.3	1701.1
25°	1606.6	1615.4	1641.8	1663.3	1659.8
27.5°	1554.4	1564.7	1602.2	1631.8	1612.7
30°	1514.1	1509.0	1540.7	1567.1	1581.7
32.5°	1442.1	1460.7	1497.8	1523.9	1510.0
35°	1398.5	1402.6	1435.1	1468.3	1467.3
37.5°	1322.1	1341.3	1387.0	1396.3	1387.7
40°	1256.9	1276.2	1317.4	1327.4	1323.3
42.5°	1208.8	1212.2	1247.6	1259.1	1240.8
45°	1125.1	1146.1	1165.1	1195.2	1166.8
47.5°	1053.8	1063.6	1104.6	1112.7	1097.8
50°	989.2	992.6	1033.8	1023.8	1014.1
52.5°	907.9	922.3	945.5	943.5	932.1
55°	841.0	835.4	857.4	851.5	851.3
57.5°	760.7	770.5	788.6	779.3	764.4
60°	685.6	685.8	692.4	681.9	679.9
62.5°	601.8	604.8	606.2	593.3	614.3
65°	516.7	509.8	529.9	509.6	513.0
67.5°	438.3	441.7	439.8	427.1	432.0
70°	358.8	363.2	360.0	345.6	350.0
72.5°	286.0	280.7	284.1	266.0	274.3
75°	215.0	210.6	214.5	199.4	206.2
77.5°	146.4	149.9	147.4	139.4	144.0
80°	96.6	94.0	94.0	89.3	90.3
82.5°	56.4	53.7	53.0	51.5	53.7
85°	26.4	25.6	26.1	25.4	24.4
87.5°	9.5	9.8	9.8	9.3	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)