

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: P560899

Luminaire Tested: FSR-12-4-LD4-1HI-50-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560899
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1HI-50-UNV-81-85-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3896.0 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

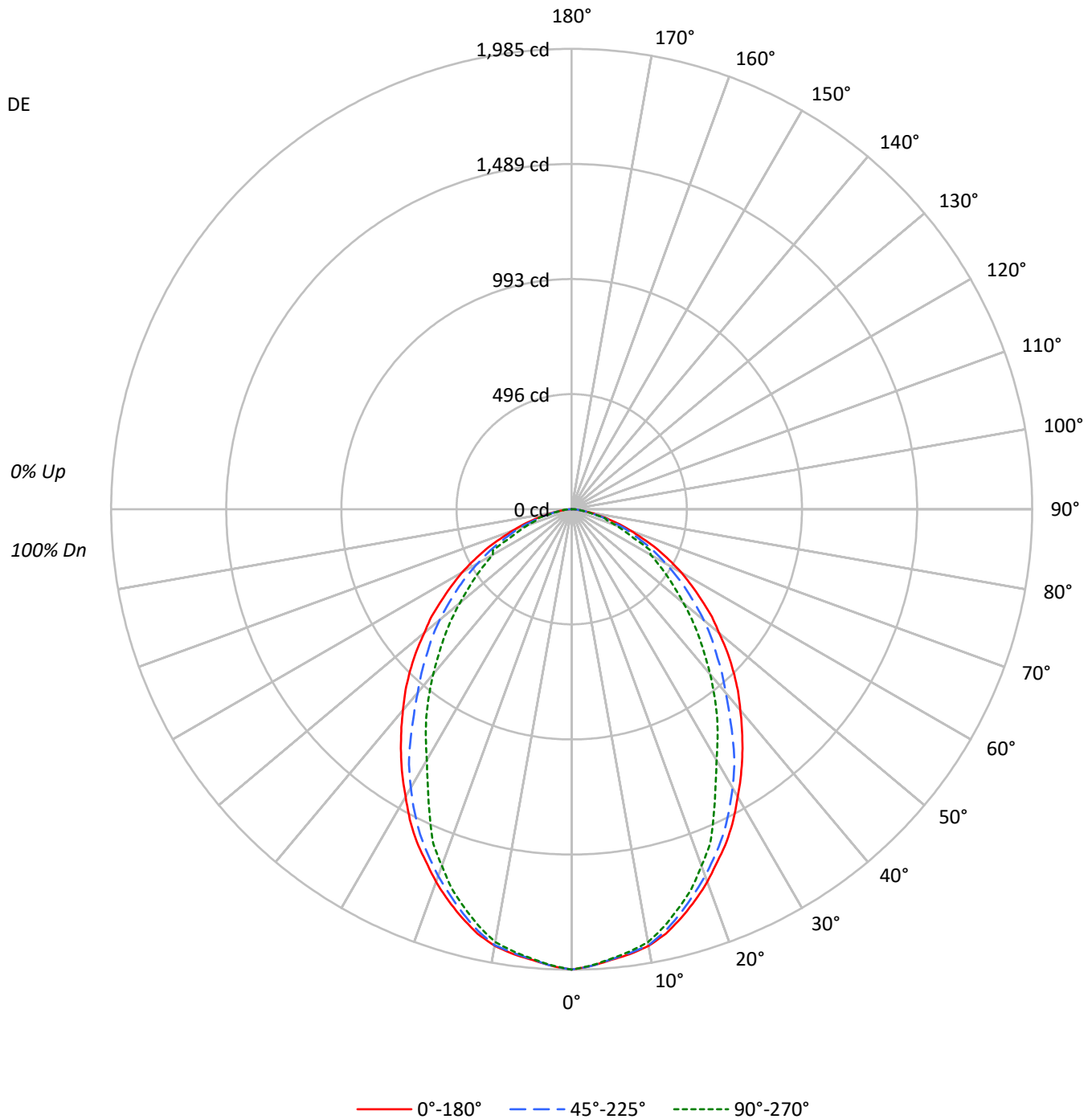
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P560899

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P560899

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-81-85-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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5341	5341	5341
5°	5268	5262	5256
10°	5222	5216	5178
15°	5081	5030	4960
20°	4895	4816	4684
25°	4694	4592	4305
30°	4448	4306	3878
35°	4213	3980	3588
40°	3973	3627	3264
45°	3746	3353	2951
50°	3467	3112	2632
55°	3208	2820	2358
60°	2939	2519	2111
65°	2586	2206	1870
70°	2130	1932	1589
75°	1694	1478	1550
80°	1137	1066	995
85°	707	849	991

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3746 cd/sqm



TEST NUMBER: P560899

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.7	4.7
10°-20°	507.0	13.0
20°-30°	701.9	18.0
30°-40°	748.4	19.2
40°-50°	682.8	17.5
50°-60°	534.9	13.7
60°-70°	348.6	8.9
70°-80°	154.4	4.0
80°-90°	33.2	0.9
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°	1393.6	35.8
0°-40°	2142.1	55.0
0°-60°	3359.8	86.2
0°-90°	3896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1985	1985	1985	1985	1985	
5°	1950	1948	1948	1946	1946	185
15°	1824	1824	1806	1787	1780	513
25°	1581	1572	1546	1491	1450	726
35°	1282	1273	1211	1120	1092	802
45°	984	964	881	808	776	758
55°	684	663	601	530	502	613
65°	406	383	346	353	294	400
75°	163	151	142	135	149	175
85°	23	25	28	30	32	32
90°	0	0	0	0	0	



TEST NUMBER: P560899

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1984.6	1984.6	1984.6	1984.6	1984.6
2.5°	1970.8	1970.8	1970.8	1968.5	1968.5
5°	1950.2	1947.9	1947.9	1945.6	1945.6
7.5°	1934.1	1931.8	1929.5	1927.2	1922.6
10°	1911.2	1911.2	1908.9	1897.4	1895.1
12.5°	1874.4	1872.1	1863.0	1846.9	1842.3
15°	1824.0	1824.0	1805.6	1787.3	1780.4
17.5°	1768.9	1766.6	1743.7	1725.3	1716.1
20°	1709.3	1704.7	1681.7	1651.9	1635.8
22.5°	1642.7	1642.7	1615.2	1576.2	1560.1
25°	1580.8	1571.6	1546.4	1491.3	1450.0
27.5°	1509.7	1495.9	1468.4	1390.3	1342.2
30°	1431.6	1424.8	1385.8	1284.8	1248.1
32.5°	1358.2	1346.8	1305.5	1199.9	1170.1
35°	1282.5	1273.3	1211.4	1119.6	1092.1
37.5°	1206.8	1195.3	1117.3	1043.9	1009.5
40°	1131.1	1117.3	1032.4	965.9	929.2
42.5°	1060.0	1041.6	959.0	887.9	846.6
45°	984.3	963.6	881.0	807.6	775.5
47.5°	908.5	890.2	814.5	738.8	702.1
50°	828.2	812.2	743.4	667.6	628.6
52.5°	761.7	736.5	669.9	594.2	562.1
55°	683.7	663.1	601.1	530.0	502.5
57.5°	612.6	591.9	534.6	468.0	445.1
60°	546.0	516.2	468.0	410.7	392.3
62.5°	472.6	449.7	408.4	360.2	383.1
65°	406.1	383.1	346.4	353.3	293.7
67.5°	332.7	321.2	289.1	257.0	247.8
70°	270.7	257.0	245.5	211.1	201.9
72.5°	215.7	201.9	185.8	167.5	160.6
75°	162.9	151.4	142.2	135.4	149.1
77.5°	112.4	107.8	100.9	94.1	91.8
80°	73.4	71.1	68.8	66.5	64.2
82.5°	43.6	43.6	43.6	43.6	43.6
85°	22.9	25.2	27.5	29.8	32.1
87.5°	13.8	13.8	16.1	18.4	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)