

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: P561492

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561492
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-LD4-2HI-50-UNV-82-86-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6562.0 lumens
Efficiency: N/A
Efficacy: 75.9 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

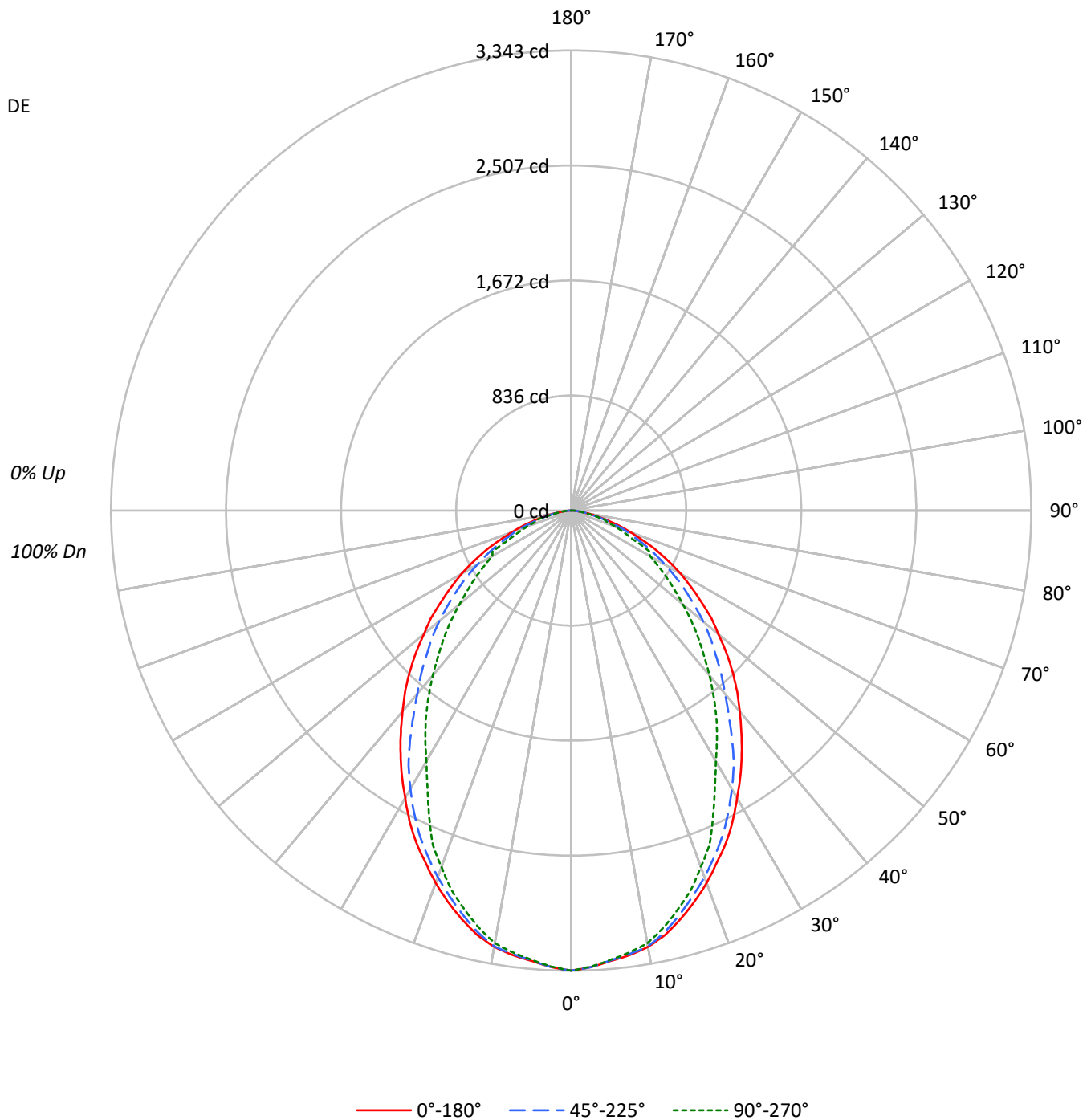
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561492

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-82-86-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561492

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-82-86-EDD-90

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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	8995	8995	8995
5°	8873	8862	8852
10°	8796	8785	8722
15°	8559	8472	8354
20°	8244	8111	7890
25°	7905	7733	7251
30°	7493	7252	6532
35°	7096	6703	6043
40°	6692	6108	5498
45°	6309	5647	4971
50°	5840	5241	4433
55°	5403	4750	3970
60°	4950	4243	3556
65°	4355	3715	3149
70°	3588	3253	2676
75°	2853	2491	2612
80°	1917	1796	1677
85°	1192	1433	1670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6309 cd/sqm



TEST NUMBER: P561492

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-82-86-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.2	4.7
10°-20°	853.9	13.0
20°-30°	1182.2	18.0
30°-40°	1260.6	19.2
40°-50°	1150.0	17.5
50°-60°	900.9	13.7
60°-70°	587.2	8.9
70°-80°	260.1	4.0
80°-90°	55.8	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°	2347.3	35.8
0°-40°	3607.9	55.0
0°-60°	5658.8	86.2
0°-90°	6562.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6562.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3343	3343	3343	3343	3343	
5°	3285	3281	3281	3277	3277	312
15°	3072	3072	3041	3010	2999	864
25°	2662	2647	2604	2512	2442	1222
35°	2160	2145	2040	1886	1839	1350
45°	1658	1623	1484	1360	1306	1277
55°	1152	1117	1012	893	846	1033
65°	684	645	584	595	495	674
75°	274	255	240	228	251	294
85°	39	42	46	50	54	54
90°	0	0	0	0	0	



TEST NUMBER: P561492

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-82-86-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3342.6	3342.6	3342.6	3342.6	3342.6
2.5°	3319.4	3319.4	3319.4	3315.5	3315.5
5°	3284.6	3280.8	3280.8	3276.9	3276.9
7.5°	3257.6	3253.7	3249.9	3246.0	3238.3
10°	3218.9	3218.9	3215.1	3195.8	3191.9
12.5°	3157.1	3153.2	3137.8	3110.7	3103.0
15°	3072.1	3072.1	3041.2	3010.3	2998.7
17.5°	2979.4	2975.5	2936.8	2905.9	2890.5
20°	2878.9	2871.2	2832.5	2782.3	2755.2
22.5°	2766.8	2766.8	2720.4	2654.8	2627.7
25°	2662.5	2647.0	2604.5	2511.8	2442.2
27.5°	2542.7	2519.5	2473.1	2341.7	2260.6
30°	2411.3	2399.7	2334.0	2164.0	2102.2
32.5°	2287.6	2268.3	2198.8	2021.0	1970.8
35°	2160.1	2144.7	2040.3	1885.8	1839.4
37.5°	2032.6	2013.3	1881.9	1758.2	1700.3
40°	1905.1	1881.9	1738.9	1626.9	1565.0
42.5°	1785.3	1754.4	1615.3	1495.5	1425.9
45°	1657.8	1623.0	1483.9	1360.2	1306.1
47.5°	1530.3	1499.3	1371.8	1244.3	1182.5
50°	1395.0	1368.0	1252.0	1124.5	1058.8
52.5°	1282.9	1240.4	1128.4	1000.8	946.7
55°	1151.6	1116.8	1012.4	892.6	846.3
57.5°	1031.8	997.0	900.4	788.3	749.7
60°	919.7	869.5	788.3	691.7	660.8
62.5°	796.0	757.4	687.8	606.7	645.3
65°	684.0	645.3	583.5	595.1	494.6
67.5°	560.3	541.0	486.9	432.8	417.3
70°	456.0	432.8	413.5	355.5	340.1
72.5°	363.2	340.1	313.0	282.1	270.5
75°	274.4	255.0	239.6	228.0	251.2
77.5°	189.3	181.6	170.0	158.4	154.6
80°	123.7	119.8	115.9	112.1	108.2
82.5°	73.4	73.4	73.4	73.4	73.4
85°	38.6	42.5	46.4	50.2	54.1
87.5°	23.2	23.2	27.0	30.9	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)