

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: P563994

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563994
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-24-4-LD4-4LO-50-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9709.0 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

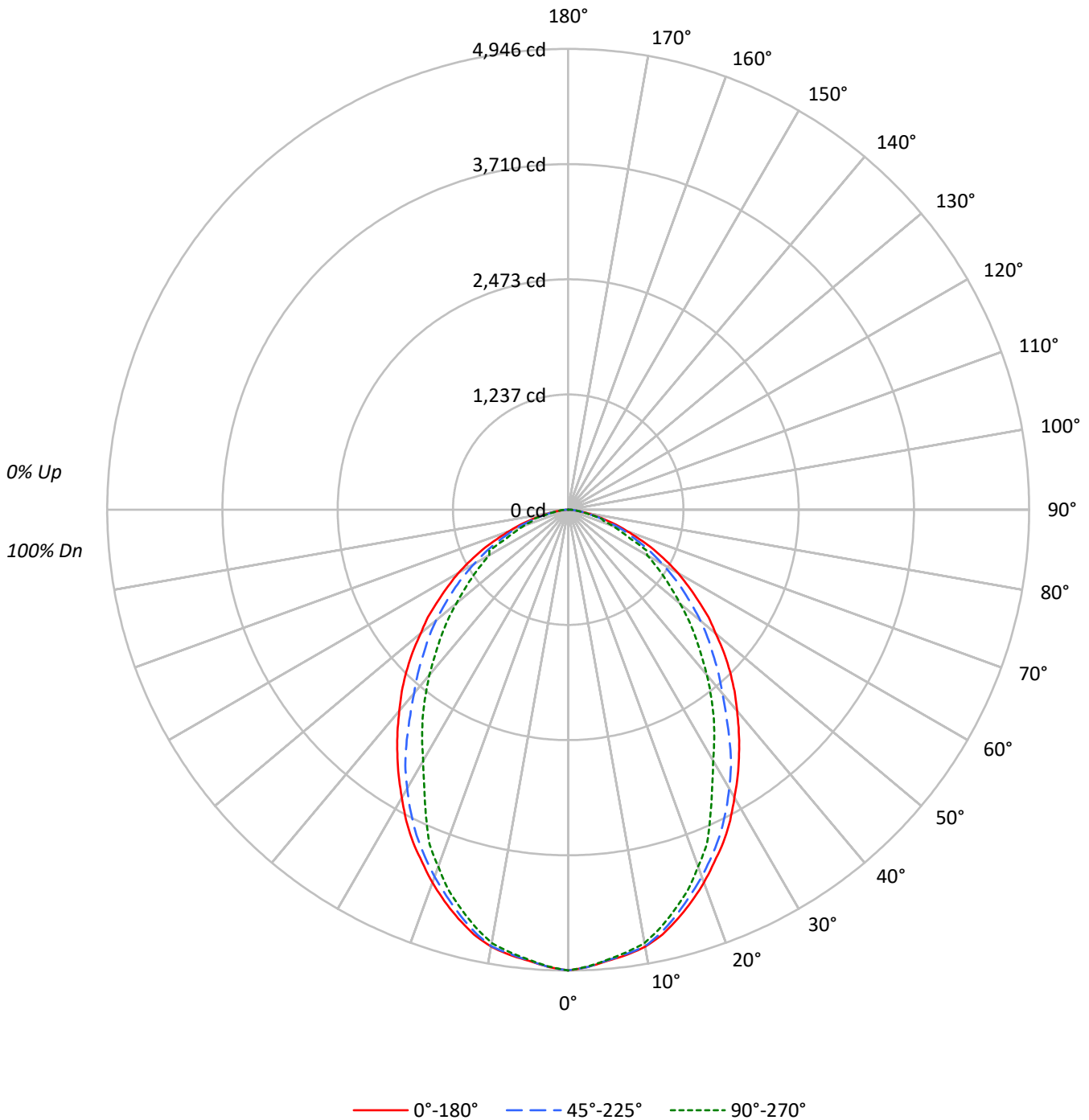
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563994

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563994

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-94-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	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					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6654	6654	6654
5°	6564	6556	6548
10°	6507	6499	6452
15°	6332	6268	6180
20°	6099	6001	5837
25°	5848	5721	5365
30°	5543	5365	4832
35°	5250	4958	4470
40°	4951	4519	4067
45°	4667	4178	3677
50°	4320	3878	3279
55°	3997	3514	2937
60°	3662	3139	2631
65°	3222	2748	2330
70°	2654	2407	1979
75°	2110	1843	1932
80°	1418	1329	1241
85°	883	1059	1235

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4667 cd/sqm



TEST NUMBER: P563994

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	460.4	4.7
10°-20°	1263.5	13.0
20°-30°	1749.2	18.0
30°-40°	1865.1	19.2
40°-50°	1701.5	17.5
50°-60°	1333.0	13.7
60°-70°	868.8	8.9
70°-80°	384.9	4.0
80°-90°	82.6	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°	3473.0	35.8
0°-40°	5338.1	55.0
0°-60°	8372.7	86.2
0°-90°	9709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9709.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4946	4946	4946	4946	4946	
5°	4860	4854	4854	4848	4848	461
15°	4545	4545	4500	4454	4437	1278
25°	3939	3916	3854	3716	3614	1809
35°	3196	3173	3019	2790	2722	1998
45°	2453	2401	2196	2013	1932	1889
55°	1704	1652	1498	1321	1252	1528
65°	1012	955	863	880	732	997
75°	406	377	354	337	372	435
85°	57	63	69	74	80	79
90°	0	0	0	0	0	



TEST NUMBER: P563994

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4945.6	4945.6	4945.6	4945.6	4945.6
2.5°	4911.3	4911.3	4911.3	4905.6	4905.6
5°	4859.9	4854.2	4854.2	4848.4	4848.4
7.5°	4819.8	4814.1	4808.4	4802.7	4791.3
10°	4762.7	4762.7	4757.0	4728.4	4722.7
12.5°	4671.2	4665.5	4642.6	4602.6	4591.2
15°	4545.4	4545.4	4499.7	4453.9	4436.8
17.5°	4408.2	4402.5	4345.3	4299.6	4276.7
20°	4259.5	4248.1	4190.9	4116.6	4076.6
22.5°	4093.7	4093.7	4025.1	3927.9	3887.9
25°	3939.4	3916.5	3853.6	3716.4	3613.5
27.5°	3762.1	3727.8	3659.2	3464.8	3344.7
30°	3567.7	3550.6	3453.4	3201.8	3110.3
32.5°	3384.8	3356.2	3253.3	2990.3	2915.9
35°	3196.1	3173.2	3018.8	2790.1	2721.5
37.5°	3007.4	2978.8	2784.4	2601.5	2515.7
40°	2818.7	2784.4	2572.9	2407.1	2315.6
42.5°	2641.5	2595.7	2389.9	2212.7	2109.8
45°	2452.8	2401.3	2195.5	2012.6	1932.5
47.5°	2264.1	2218.4	2029.7	1841.0	1749.6
50°	2064.0	2024.0	1852.5	1663.8	1566.6
52.5°	1898.2	1835.3	1669.5	1480.8	1400.8
55°	1703.8	1652.4	1498.0	1320.7	1252.1
57.5°	1526.6	1475.1	1332.2	1166.4	1109.2
60°	1360.8	1286.4	1166.4	1023.4	977.7
62.5°	1177.8	1120.6	1017.7	897.6	954.8
65°	1012.0	954.8	863.3	880.5	731.8
67.5°	829.0	800.4	720.4	640.4	617.5
70°	674.7	640.4	611.8	526.0	503.1
72.5°	537.4	503.1	463.1	417.4	400.2
75°	405.9	377.4	354.5	337.3	371.6
77.5°	280.2	268.7	251.6	234.4	228.7
80°	183.0	177.2	171.5	165.8	160.1
82.5°	108.6	108.6	108.6	108.6	108.6
85°	57.2	62.9	68.6	74.3	80.0
87.5°	34.3	34.3	40.0	45.7	51.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)