

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: P559340

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559340
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-12-1-LD4-2LO-40-UNV-93-96-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 991.0 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

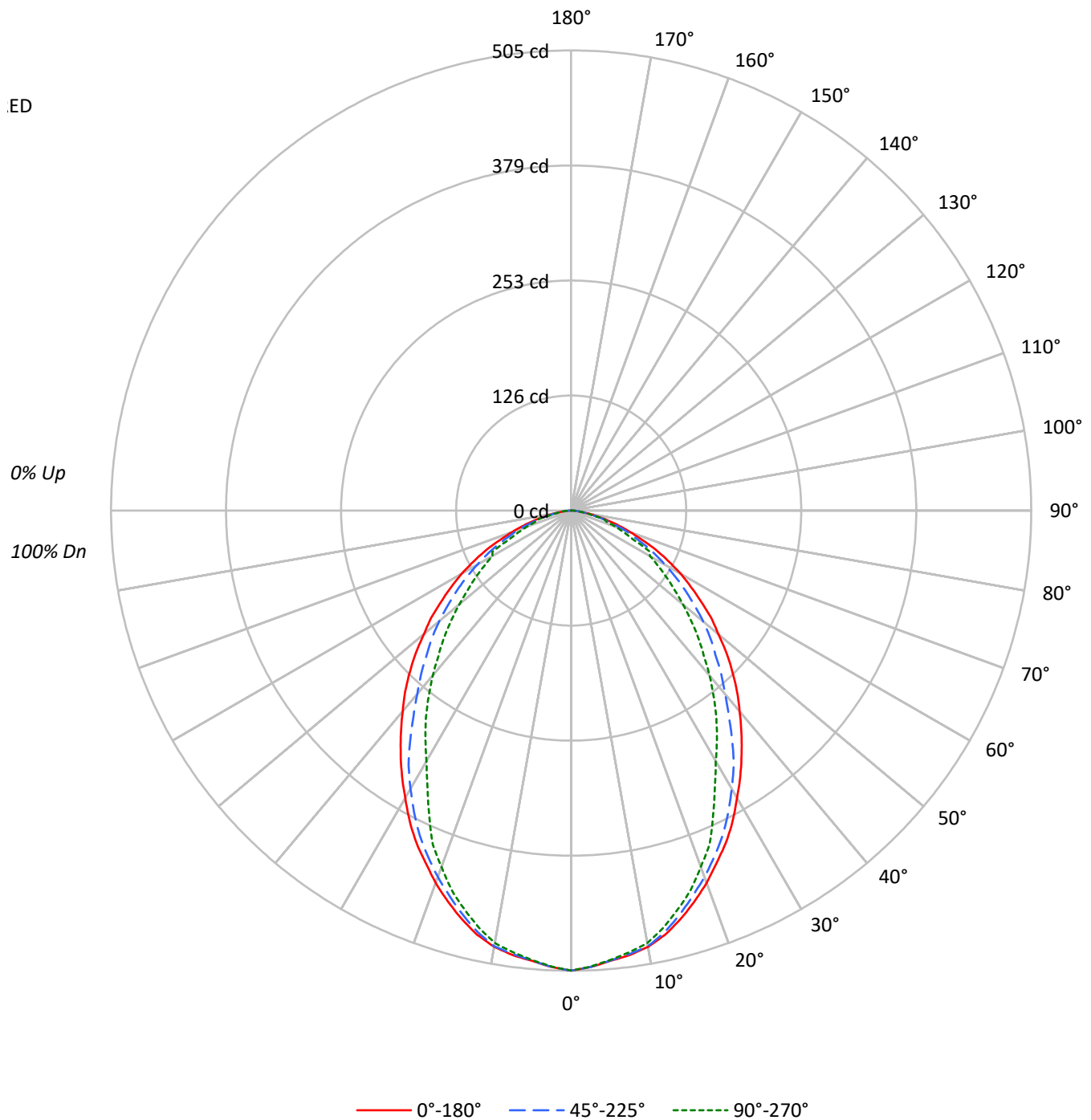
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P559340

CATALOG NUMBER: FSR-12-1-LD4-2LO-40-UNV-93-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P559340

CATALOG NUMBER: FSR-12-1-LD4-2LO-40-UNV-93-96-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°	5434	5434	5434
5°	5359	5354	5347
10°	5313	5306	5268
15°	5171	5118	5047
20°	4981	4900	4766
25°	4776	4671	4380
30°	4527	4381	3946
35°	4286	4049	3650
40°	4043	3690	3322
45°	3812	3411	3003
50°	3528	3167	2678
55°	3263	2869	2398
60°	2990	2564	2148
65°	2631	2244	1903
70°	2168	1964	1618
75°	1722	1506	1576
80°	1159	1085	1010
85°	716	865	1013

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3812 cd/sqm



TEST NUMBER: P559340

CATALOG NUMBER: FSR-12-1-LD4-2LO-40-UNV-93-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.0	4.7
10°-20°	129.0	13.0
20°-30°	178.5	18.0
30°-40°	190.4	19.2
40°-50°	173.7	17.5
50°-60°	136.1	13.7
60°-70°	88.7	8.9
70°-80°	39.3	4.0
80°-90°	8.4	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°	354.5	35.8
0°-40°	544.9	55.0
0°-60°	854.6	86.2
0°-90°	991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	505	505	505	505	505	
5°	496	496	496	495	495	47
15°	464	464	459	455	453	130
25°	402	400	393	379	369	185
35°	326	324	308	285	278	204
45°	250	245	224	205	197	193
55°	174	169	153	135	128	156
65°	103	98	88	90	75	102
75°	41	38	36	34	38	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



TEST NUMBER: P559340

CATALOG NUMBER: FSR-12-1-LD4-2LO-40-UNV-93-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	504.8	504.8	504.8	504.8	504.8
2.5°	501.3	501.3	501.3	500.7	500.7
5°	496.0	495.5	495.5	494.9	494.9
7.5°	492.0	491.4	490.8	490.2	489.0
10°	486.1	486.1	485.5	482.6	482.0
12.5°	476.8	476.2	473.9	469.8	468.6
15°	464.0	464.0	459.3	454.6	452.9
17.5°	449.9	449.4	443.5	438.9	436.5
20°	434.8	433.6	427.8	420.2	416.1
22.5°	417.8	417.8	410.8	400.9	396.8
25°	402.1	399.8	393.3	379.3	368.8
27.5°	384.0	380.5	373.5	353.7	341.4
30°	364.2	362.4	352.5	326.8	317.5
32.5°	345.5	342.6	332.1	305.2	297.6
35°	326.2	323.9	308.1	284.8	277.8
37.5°	307.0	304.0	284.2	265.5	256.8
40°	287.7	284.2	262.6	245.7	236.4
42.5°	269.6	264.9	243.9	225.8	215.3
45°	250.4	245.1	224.1	205.4	197.3
47.5°	231.1	226.4	207.2	187.9	178.6
50°	210.7	206.6	189.1	169.8	159.9
52.5°	193.8	187.3	170.4	151.1	143.0
55°	173.9	168.7	152.9	134.8	127.8
57.5°	155.8	150.6	136.0	119.1	113.2
60°	138.9	131.3	119.1	104.5	99.8
62.5°	120.2	114.4	103.9	91.6	97.5
65°	103.3	97.5	88.1	89.9	74.7
67.5°	84.6	81.7	73.5	65.4	63.0
70°	68.9	65.4	62.4	53.7	51.4
72.5°	54.9	51.4	47.3	42.6	40.9
75°	41.4	38.5	36.2	34.4	37.9
77.5°	28.6	27.4	25.7	23.9	23.3
80°	18.7	18.1	17.5	16.9	16.3
82.5°	11.1	11.1	11.1	11.1	11.1
85°	5.8	6.4	7.0	7.6	8.2
87.5°	3.5	3.5	4.1	4.7	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)