

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: P559336

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559336
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-93-88-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 844.0 lumens
Efficiency: N/A
Efficacy: 72.1 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

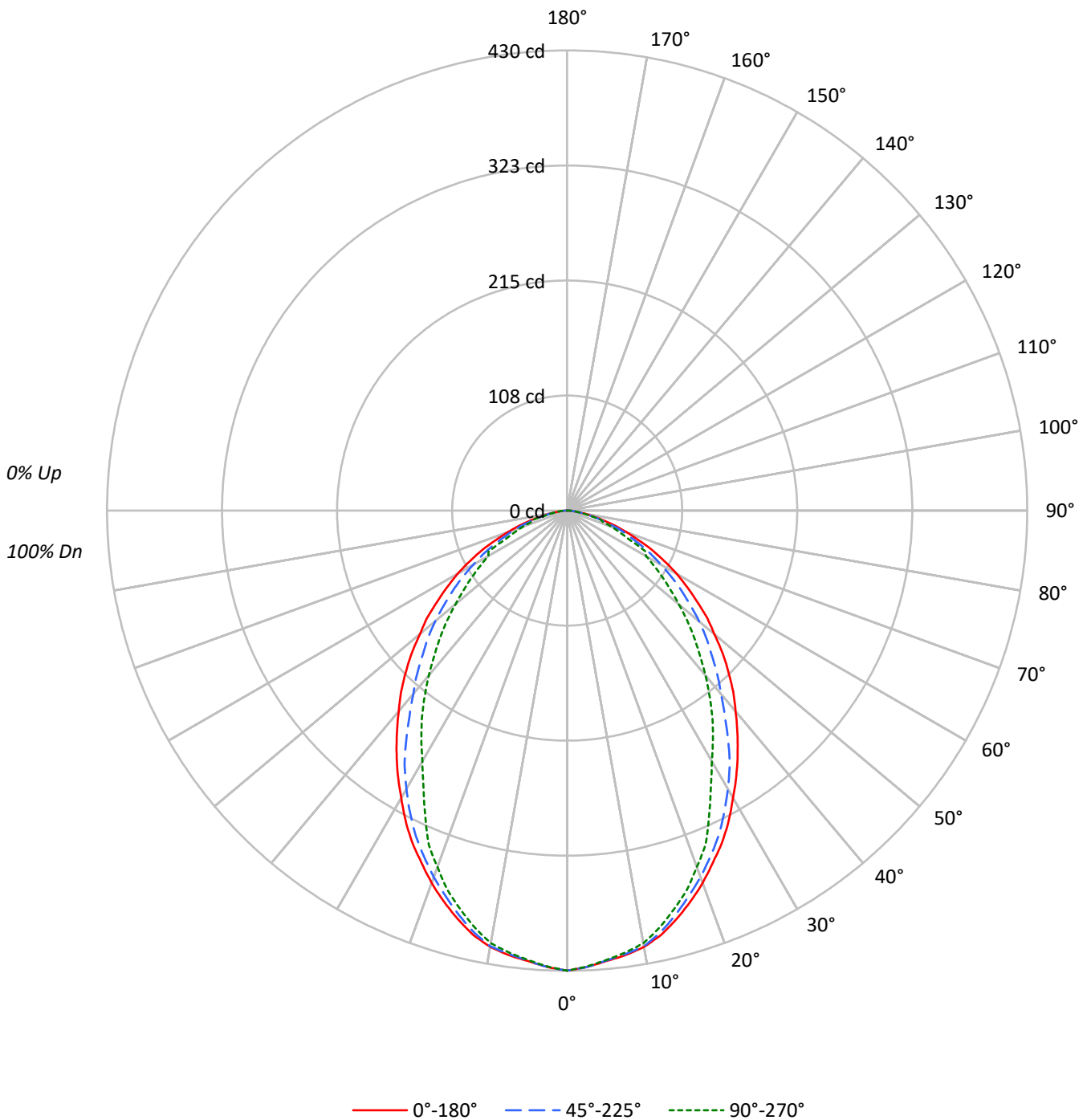
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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°	4627	4627	4627
5°	4565	4560	4554
10°	4525	4520	4487
15°	4403	4359	4298
20°	4242	4173	4060
25°	4067	3979	3730
30°	3854	3731	3361
35°	3650	3448	3109
40°	3443	3143	2829
45°	3245	2906	2557
50°	3004	2696	2281
55°	2779	2443	2042
60°	2547	2183	1830
65°	2241	1913	1620
70°	1844	1674	1375
75°	1468	1281	1343
80°	986	924	862
85°	618	741	865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3245 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	4.7
10°-20°	109.8	13.0
20°-30°	152.1	18.0
30°-40°	162.1	19.2
40°-50°	147.9	17.5
50°-60°	115.9	13.7
60°-70°	75.5	8.9
70°-80°	33.5	4.0
80°-90°	7.2	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°	301.9	35.8
0°-40°	464.0	55.0
0°-60°	727.8	86.2
0°-90°	844.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	844.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	430	430	430	430	430	
5°	422	422	422	422	422	40
15°	395	395	391	387	386	111
25°	342	340	335	323	314	157
35°	278	276	262	242	237	174
45°	213	209	191	175	168	164
55°	148	144	130	115	109	133
65°	88	83	75	76	64	87
75°	35	33	31	29	32	38
85°	5	6	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	429.9	429.9	429.9	429.9	429.9
2.5°	426.9	426.9	426.9	426.4	426.4
5°	422.5	422.0	422.0	421.5	421.5
7.5°	419.0	418.5	418.0	417.5	416.5
10°	414.0	414.0	413.5	411.0	410.5
12.5°	406.1	405.6	403.6	400.1	399.1
15°	395.1	395.1	391.2	387.2	385.7
17.5°	383.2	382.7	377.7	373.8	371.8
20°	370.3	369.3	364.3	357.9	354.4
22.5°	355.9	355.9	349.9	341.5	338.0
25°	342.4	340.5	335.0	323.1	314.1
27.5°	327.0	324.1	318.1	301.2	290.8
30°	310.1	308.6	300.2	278.3	270.4
32.5°	294.2	291.8	282.8	259.9	253.5
35°	277.8	275.8	262.4	242.5	236.6
37.5°	261.4	258.9	242.0	226.1	218.7
40°	245.0	242.0	223.7	209.2	201.3
42.5°	229.6	225.6	207.8	192.3	183.4
45°	213.2	208.7	190.9	175.0	168.0
47.5°	196.8	192.8	176.4	160.0	152.1
50°	179.4	175.9	161.0	144.6	136.2
52.5°	165.0	159.5	145.1	128.7	121.8
55°	148.1	143.6	130.2	114.8	108.8
57.5°	132.7	128.2	115.8	101.4	96.4
60°	118.3	111.8	101.4	89.0	85.0
62.5°	102.4	97.4	88.5	78.0	83.0
65°	88.0	83.0	75.1	76.5	63.6
67.5°	72.1	69.6	62.6	55.7	53.7
70°	58.6	55.7	53.2	45.7	43.7
72.5°	46.7	43.7	40.3	36.3	34.8
75°	35.3	32.8	30.8	29.3	32.3
77.5°	24.4	23.4	21.9	20.4	19.9
80°	15.9	15.4	14.9	14.4	13.9
82.5°	9.4	9.4	9.4	9.4	9.4
85°	5.0	5.5	6.0	6.5	7.0
87.5°	3.0	3.0	3.5	4.0	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)