

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: P559324

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559324
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-82-96-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 919.0 lumens
Efficiency: N/A
Efficacy: 78.5 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

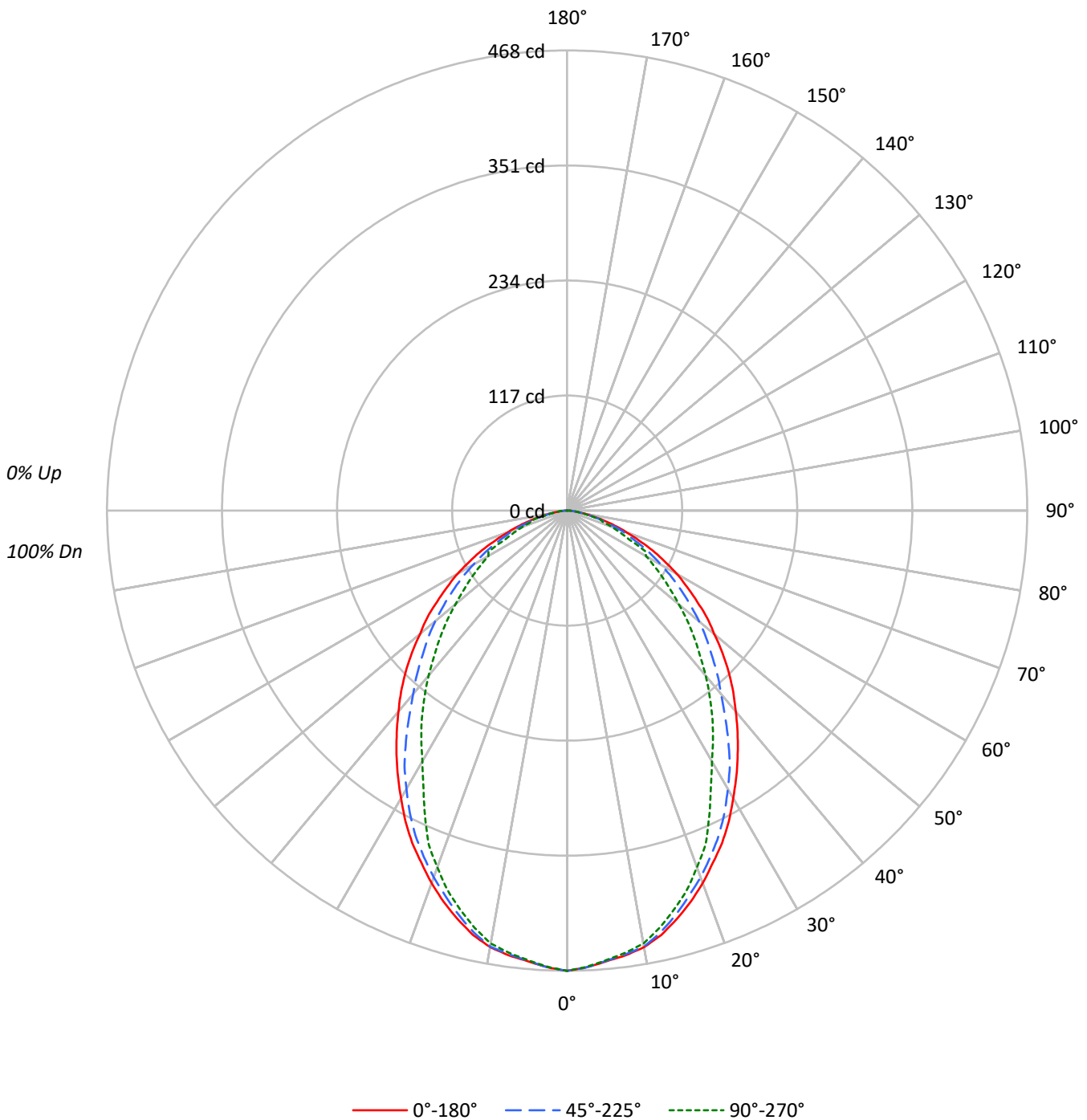
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5039	5039	5039
5°	4970	4965	4958
10°	4927	4922	4886
15°	4794	4746	4680
20°	4619	4544	4420
25°	4429	4333	4062
30°	4197	4063	3659
35°	3975	3754	3385
40°	3749	3421	3080
45°	3535	3163	2784
50°	3272	2936	2483
55°	3027	2661	2224
60°	2773	2377	1991
65°	2440	2081	1765
70°	2011	1822	1498
75°	1597	1397	1464
80°	1072	1004	942
85°	667	803	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3535 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	4.7
10°-20°	119.6	13.0
20°-30°	165.6	18.0
30°-40°	176.5	19.2
40°-50°	161.1	17.5
50°-60°	126.2	13.7
60°-70°	82.2	8.9
70°-80°	36.4	4.0
80°-90°	7.8	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°	328.7	35.8
0°-40°	505.3	55.0
0°-60°	792.5	86.2
0°-90°	919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	460	460	460	459	459	44
15°	430	430	426	422	420	121
25°	373	371	365	352	342	171
35°	302	300	286	264	258	189
45°	232	227	208	190	183	179
55°	161	156	142	125	118	145
65°	96	90	82	83	69	94
75°	38	36	34	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	468.1	468.1	468.1	468.1	468.1
2.5°	464.9	464.9	464.9	464.3	464.3
5°	460.0	459.5	459.5	458.9	458.9
7.5°	456.2	455.7	455.1	454.6	453.5
10°	450.8	450.8	450.3	447.6	447.0
12.5°	442.1	441.6	439.4	435.7	434.6
15°	430.2	430.2	425.9	421.6	420.0
17.5°	417.3	416.7	411.3	407.0	404.8
20°	403.2	402.1	396.7	389.7	385.9
22.5°	387.5	387.5	381.0	371.8	368.0
25°	372.9	370.7	364.8	351.8	342.0
27.5°	356.1	352.9	346.4	328.0	316.6
30°	337.7	336.1	326.9	303.1	294.4
32.5°	320.4	317.7	307.9	283.0	276.0
35°	302.5	300.4	285.7	264.1	257.6
37.5°	284.7	282.0	263.6	246.2	238.1
40°	266.8	263.6	243.5	227.8	219.2
42.5°	250.0	245.7	226.2	209.4	199.7
45°	232.2	227.3	207.8	190.5	182.9
47.5°	214.3	210.0	192.1	174.3	165.6
50°	195.4	191.6	175.3	157.5	148.3
52.5°	179.7	173.7	158.0	140.2	132.6
55°	161.3	156.4	141.8	125.0	118.5
57.5°	144.5	139.6	126.1	110.4	105.0
60°	128.8	121.8	110.4	96.9	92.5
62.5°	111.5	106.1	96.3	85.0	90.4
65°	95.8	90.4	81.7	83.3	69.3
67.5°	78.5	75.8	68.2	60.6	58.4
70°	63.9	60.6	57.9	49.8	47.6
72.5°	50.9	47.6	43.8	39.5	37.9
75°	38.4	35.7	33.6	31.9	35.2
77.5°	26.5	25.4	23.8	22.2	21.6
80°	17.3	16.8	16.2	15.7	15.2
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	6.0	6.5	7.0	7.6
87.5°	3.2	3.2	3.8	4.3	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)