

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: P559396

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559396
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-50-UNV-93-86-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1020.0 lumens
Efficiency: N/A
Efficacy: 87.2 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

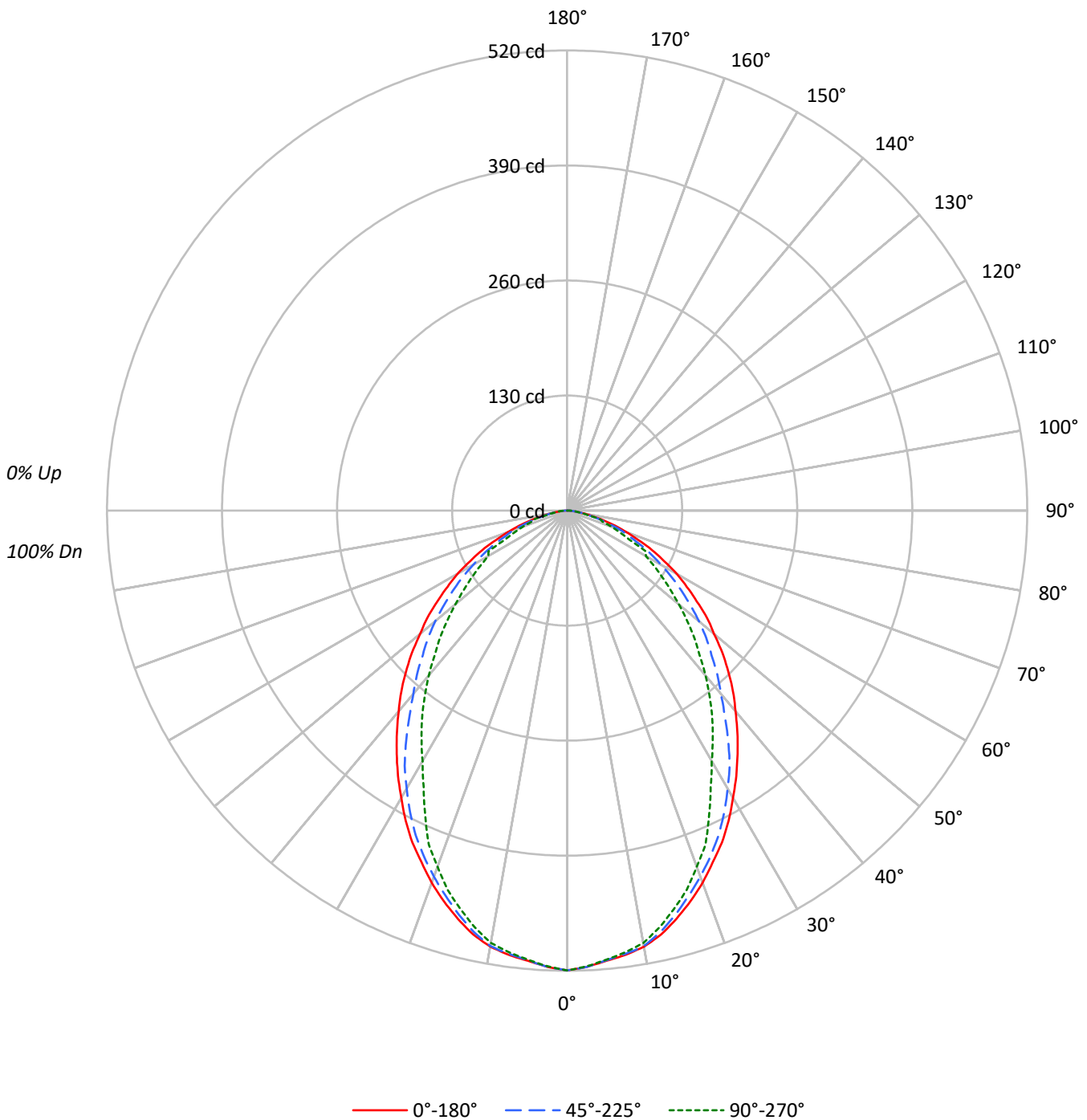
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5593	5593	5593
5°	5517	5511	5504
10°	5469	5463	5422
15°	5321	5268	5194
20°	5126	5044	4906
25°	4916	4808	4508
30°	4658	4509	4062
35°	4413	4168	3757
40°	4161	3798	3419
45°	3923	3512	3090
50°	3630	3259	2756
55°	3359	2954	2468
60°	3078	2637	2211
65°	2707	2310	1959
70°	2231	2024	1665
75°	1772	1547	1622
80°	1190	1116	1041
85°	741	889	1037

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3923 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	4.7
10°-20°	132.7	13.0
20°-30°	183.8	18.0
30°-40°	195.9	19.2
40°-50°	178.8	17.5
50°-60°	140.0	13.7
60°-70°	91.3	8.9
70°-80°	40.4	4.0
80°-90°	8.7	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°	364.9	35.8
0°-40°	560.8	55.0
0°-60°	879.6	86.2
0°-90°	1020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1020.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	511	510	510	509	509	48
15°	478	478	473	468	466	134
25°	414	412	405	390	380	190
35°	336	333	317	293	286	210
45°	258	252	231	211	203	198
55°	179	174	157	139	132	161
65°	106	100	91	92	77	105
75°	43	40	37	35	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	519.6	519.6	519.6	519.6	519.6
2.5°	516.0	516.0	516.0	515.4	515.4
5°	510.6	510.0	510.0	509.4	509.4
7.5°	506.4	505.8	505.2	504.6	503.4
10°	500.4	500.4	499.8	496.7	496.1
12.5°	490.7	490.1	487.7	483.5	482.3
15°	477.5	477.5	472.7	467.9	466.1
17.5°	463.1	462.5	456.5	451.7	449.3
20°	447.5	446.3	440.3	432.5	428.3
22.5°	430.1	430.1	422.9	412.7	408.5
25°	413.9	411.5	404.8	390.4	379.6
27.5°	395.2	391.6	384.4	364.0	351.4
30°	374.8	373.0	362.8	336.4	326.8
32.5°	355.6	352.6	341.8	314.1	306.3
35°	335.8	333.4	317.2	293.1	285.9
37.5°	315.9	312.9	292.5	273.3	264.3
40°	296.1	292.5	270.3	252.9	243.3
42.5°	277.5	272.7	251.1	232.5	221.6
45°	257.7	252.3	230.7	211.4	203.0
47.5°	237.9	233.1	213.2	193.4	183.8
50°	216.8	212.6	194.6	174.8	164.6
52.5°	199.4	192.8	175.4	155.6	147.2
55°	179.0	173.6	157.4	138.8	131.5
57.5°	160.4	155.0	140.0	122.5	116.5
60°	143.0	135.1	122.5	107.5	102.7
62.5°	123.7	117.7	106.9	94.3	100.3
65°	106.3	100.3	90.7	92.5	76.9
67.5°	87.1	84.1	75.7	67.3	64.9
70°	70.9	67.3	64.3	55.3	52.9
72.5°	56.5	52.9	48.7	43.8	42.0
75°	42.6	39.6	37.2	35.4	39.0
77.5°	29.4	28.2	26.4	24.6	24.0
80°	19.2	18.6	18.0	17.4	16.8
82.5°	11.4	11.4	11.4	11.4	11.4
85°	6.0	6.6	7.2	7.8	8.4
87.5°	3.6	3.6	4.2	4.8	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)