

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: P559046

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559046
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-LD4-2HI-35-UNV-81-87-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1439.0 lumens
Efficiency: N/A
Efficacy: 66.6 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

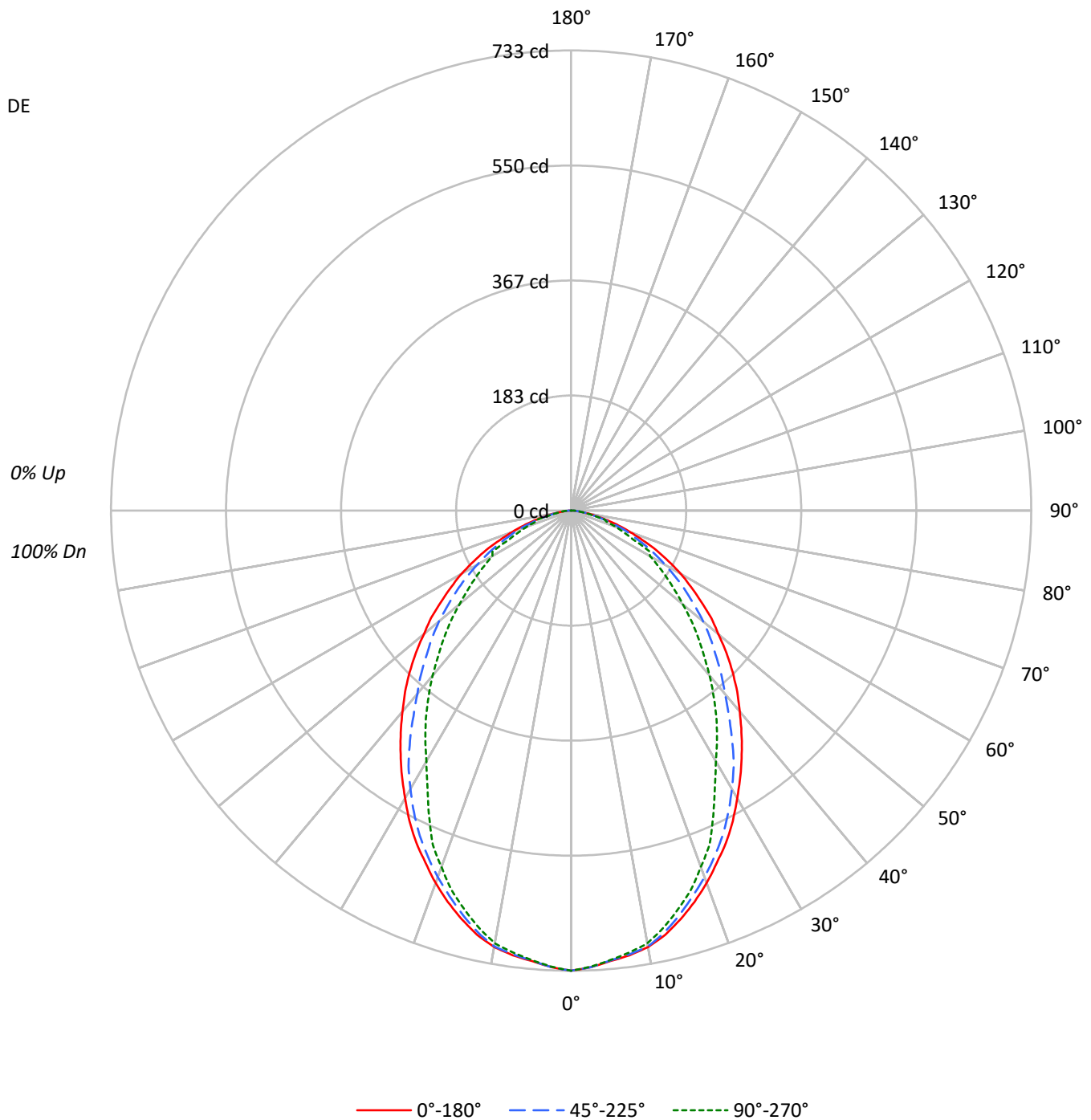
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7890	7890	7890
5°	7783	7773	7764
10°	7715	7706	7651
15°	7507	7432	7328
20°	7231	7115	6921
25°	6935	6784	6361
30°	6573	6361	5730
35°	6225	5879	5301
40°	5871	5358	4822
45°	5533	4953	4360
50°	5123	4598	3888
55°	4738	4166	3483
60°	4342	3722	3119
65°	3820	3260	2763
70°	3147	2854	2348
75°	2504	2183	2292
80°	1680	1574	1469
85°	1050	1260	1470

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5533 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	4.7
10°-20°	187.3	13.0
20°-30°	259.2	18.0
30°-40°	276.4	19.2
40°-50°	252.2	17.5
50°-60°	197.6	13.7
60°-70°	128.8	8.9
70°-80°	57.0	4.0
80°-90°	12.3	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°	514.7	35.8
0°-40°	791.2	55.0
0°-60°	1240.9	86.2
0°-90°	1439.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1439.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	733	733	733	733	733	
5°	720	719	719	719	719	68
15°	674	674	667	660	658	189
25°	584	580	571	551	536	268
35°	474	470	447	414	403	296
45°	364	356	325	298	286	280
55°	252	245	222	196	186	226
65°	150	142	128	130	108	148
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.0	733.0	733.0	733.0	733.0
2.5°	727.9	727.9	727.9	727.1	727.1
5°	720.3	719.4	719.4	718.6	718.6
7.5°	714.4	713.5	712.7	711.8	710.1
10°	705.9	705.9	705.0	700.8	700.0
12.5°	692.3	691.5	688.1	682.2	680.5
15°	673.7	673.7	666.9	660.1	657.6
17.5°	653.4	652.5	644.0	637.3	633.9
20°	631.3	629.6	621.1	610.1	604.2
22.5°	606.7	606.7	596.6	582.2	576.2
25°	583.9	580.5	571.2	550.8	535.6
27.5°	557.6	552.5	542.3	513.5	495.7
30°	528.8	526.2	511.8	474.5	461.0
32.5°	501.7	497.4	482.2	443.2	432.2
35°	473.7	470.3	447.4	413.5	403.4
37.5°	445.7	441.5	412.7	385.6	372.9
40°	417.8	412.7	381.3	356.8	343.2
42.5°	391.5	384.7	354.2	327.9	312.7
45°	363.5	355.9	325.4	298.3	286.4
47.5°	335.6	328.8	300.8	272.9	259.3
50°	305.9	300.0	274.6	246.6	232.2
52.5°	281.3	272.0	247.4	219.5	207.6
55°	252.5	244.9	222.0	195.8	185.6
57.5°	226.3	218.6	197.4	172.9	164.4
60°	201.7	190.7	172.9	151.7	144.9
62.5°	174.6	166.1	150.8	133.0	141.5
65°	150.0	141.5	128.0	130.5	108.5
67.5°	122.9	118.6	106.8	94.9	91.5
70°	100.0	94.9	90.7	78.0	74.6
72.5°	79.7	74.6	68.6	61.9	59.3
75°	60.2	55.9	52.5	50.0	55.1
77.5°	41.5	39.8	37.3	34.7	33.9
80°	27.1	26.3	25.4	24.6	23.7
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.2	11.0	11.9
87.5°	5.1	5.1	5.9	6.8	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)