

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: P558561

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558561
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-LD4-1HI-40-UNV-93-84-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 977.0 lumens
Efficiency: N/A
Efficacy: 90.5 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

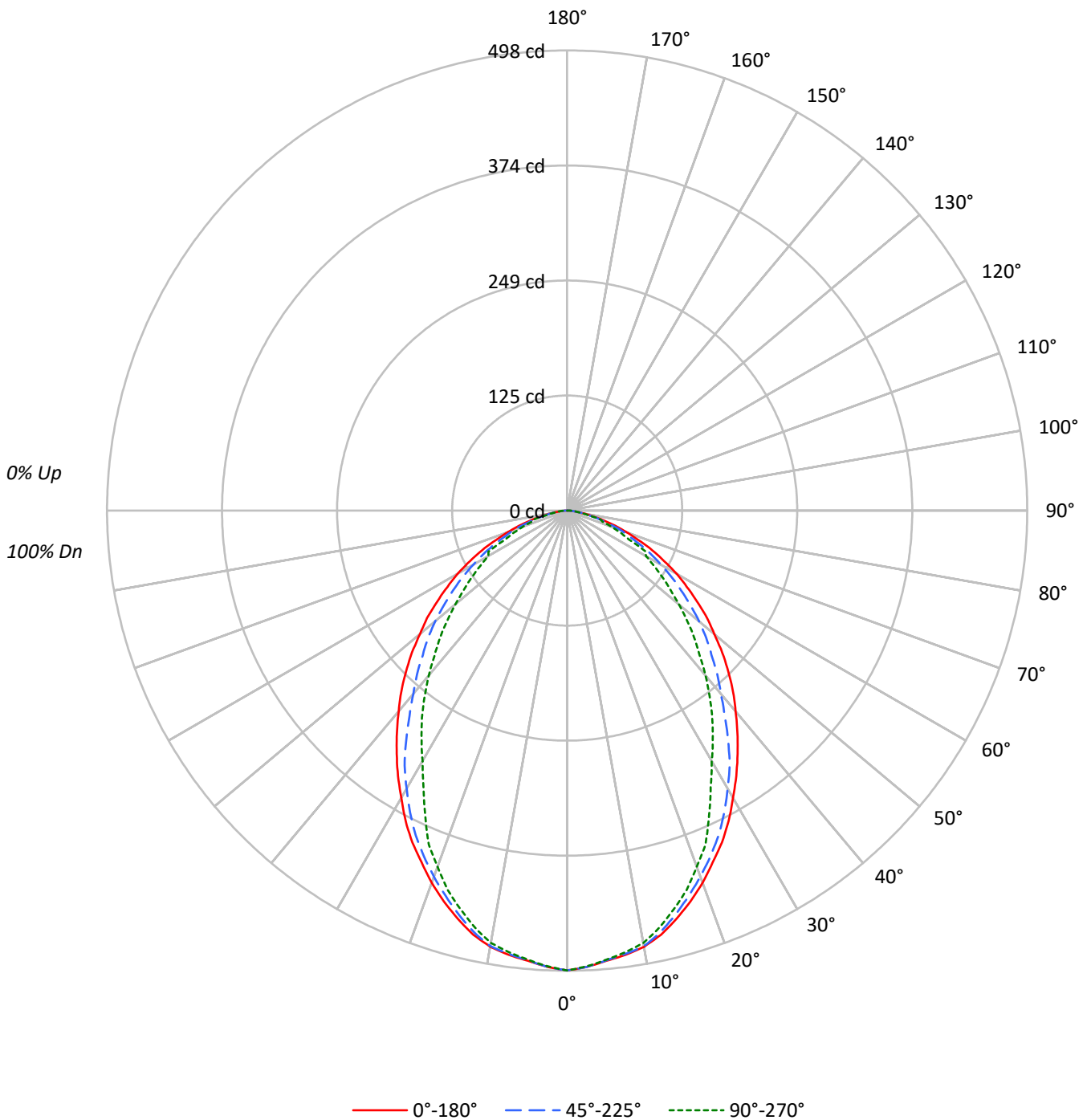
Input Watts (W): 10.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5357	5357	5357
5°	5284	5278	5272
10°	5239	5232	5194
15°	5097	5046	4976
20°	4909	4830	4699
25°	4708	4606	4318
30°	4462	4319	3890
35°	4226	3992	3599
40°	3985	3638	3274
45°	3757	3363	2961
50°	3478	3121	2639
55°	3218	2828	2365
60°	2947	2527	2118
65°	2593	2213	1875
70°	2137	1939	1592
75°	1697	1485	1555
80°	1141	1072	998
85°	716	852	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3757 cd/sqm

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CATALOG NUMBER: FSR-12-1-LD4-1HI-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.3	4.7
10°-20°	127.1	13.0
20°-30°	176.0	18.0
30°-40°	187.7	19.2
40°-50°	171.2	17.5
50°-60°	134.1	13.7
60°-70°	87.4	8.9
70°-80°	38.7	4.0
80°-90°	8.3	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°	349.5	35.8
0°-40°	537.2	55.0
0°-60°	842.5	86.2
0°-90°	977.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	977.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	498	498	498	498	498	
5°	489	488	488	488	488	46
15°	457	457	453	448	446	129
25°	396	394	388	374	364	182
35°	322	319	304	281	274	201
45°	247	242	221	202	194	190
55°	172	166	151	133	126	154
65°	102	96	87	89	74	100
75°	41	38	36	34	37	44
85°	6	6	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°	497.7	497.7	497.7	497.7	497.7
2.5°	494.2	494.2	494.2	493.6	493.6
5°	489.0	488.5	488.5	487.9	487.9
7.5°	485.0	484.4	483.9	483.3	482.1
10°	479.3	479.3	478.7	475.8	475.2
12.5°	470.1	469.5	467.2	463.2	462.0
15°	457.4	457.4	452.8	448.2	446.5
17.5°	443.6	443.0	437.3	432.7	430.4
20°	428.6	427.5	421.7	414.2	410.2
22.5°	411.9	411.9	405.0	395.3	391.2
25°	396.4	394.1	387.8	374.0	363.6
27.5°	378.6	375.1	368.2	348.7	336.6
30°	359.0	357.3	347.5	322.2	313.0
32.5°	340.6	337.7	327.4	300.9	293.4
35°	321.6	319.3	303.8	280.8	273.9
37.5°	302.6	299.8	280.2	261.8	253.2
40°	283.6	280.2	258.9	242.2	233.0
42.5°	265.8	261.2	240.5	222.7	212.3
45°	246.8	241.6	220.9	202.5	194.5
47.5°	227.8	223.2	204.2	185.3	176.1
50°	207.7	203.7	186.4	167.4	157.6
52.5°	191.0	184.7	168.0	149.0	141.0
55°	171.5	166.3	150.7	132.9	126.0
57.5°	153.6	148.4	134.1	117.4	111.6
60°	136.9	129.5	117.4	103.0	98.4
62.5°	118.5	112.8	102.4	90.3	96.1
65°	101.8	96.1	86.9	88.6	73.6
67.5°	83.4	80.5	72.5	64.4	62.1
70°	67.9	64.4	61.6	52.9	50.6
72.5°	54.1	50.6	46.6	42.0	40.3
75°	40.8	38.0	35.7	33.9	37.4
77.5°	28.2	27.0	25.3	23.6	23.0
80°	18.4	17.8	17.3	16.7	16.1
82.5°	10.9	10.9	10.9	10.9	10.9
85°	5.8	6.3	6.9	7.5	8.1
87.5°	3.5	3.5	4.0	4.6	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)