

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: P559330

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559330
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-93-85-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 979.0 lumens
Efficiency: N/A
Efficacy: 83.7 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

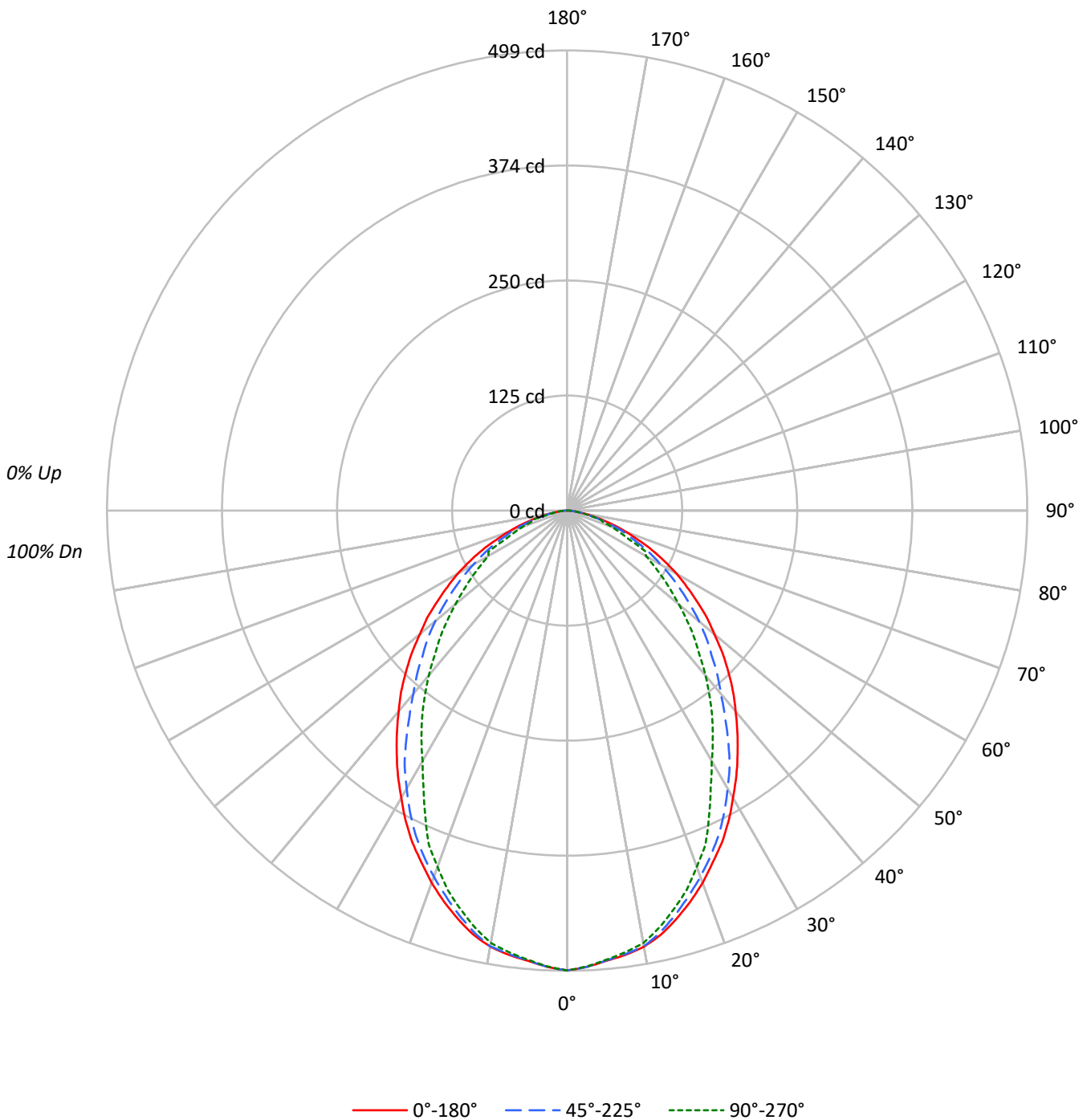
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5368	5368	5368
5°	5294	5289	5283
10°	5249	5243	5205
15°	5107	5056	4986
20°	4920	4841	4709
25°	4717	4615	4328
30°	4471	4328	3898
35°	4235	4000	3606
40°	3993	3645	3281
45°	3765	3370	2967
50°	3485	3128	2646
55°	3224	2834	2370
60°	2954	2532	2123
65°	2598	2218	1880
70°	2140	1942	1596
75°	1701	1485	1560
80°	1141	1072	998
85°	716	852	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3765 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.4	4.7
10°-20°	127.4	13.0
20°-30°	176.4	18.0
30°-40°	188.1	19.2
40°-50°	171.6	17.5
50°-60°	134.4	13.7
60°-70°	87.6	8.9
70°-80°	38.8	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°	350.2	35.8
0°-40°	538.3	55.0
0°-60°	844.2	86.2
0°-90°	979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	499	499	499	499	499	
5°	490	490	490	489	489	47
15°	458	458	454	449	447	129
25°	397	395	389	375	364	182
35°	322	320	304	281	274	201
45°	247	242	221	203	195	191
55°	172	167	151	133	126	154
65°	102	96	87	89	74	101
75°	41	38	36	34	38	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°	498.7	498.7	498.7	498.7	498.7
2.5°	495.2	495.2	495.2	494.7	494.7
5°	490.0	489.5	489.5	488.9	488.9
7.5°	486.0	485.4	484.9	484.3	483.1
10°	480.2	480.2	479.7	476.8	476.2
12.5°	471.0	470.4	468.1	464.1	462.9
15°	458.3	458.3	453.7	449.1	447.4
17.5°	444.5	443.9	438.2	433.5	431.2
20°	429.5	428.4	422.6	415.1	411.1
22.5°	412.8	412.8	405.9	396.1	392.0
25°	397.2	394.9	388.6	374.7	364.4
27.5°	379.3	375.9	369.0	349.4	337.3
30°	359.7	358.0	348.2	322.9	313.6
32.5°	341.3	338.4	328.0	301.5	294.0
35°	322.3	320.0	304.4	281.3	274.4
37.5°	303.2	300.4	280.8	262.3	253.7
40°	284.2	280.8	259.4	242.7	233.5
42.5°	266.4	261.7	241.0	223.1	212.7
45°	247.3	242.1	221.4	202.9	194.9
47.5°	228.3	223.7	204.7	185.6	176.4
50°	208.1	204.1	186.8	167.8	158.0
52.5°	191.4	185.1	168.3	149.3	141.2
55°	171.8	166.6	151.0	133.2	126.3
57.5°	153.9	148.7	134.3	117.6	111.8
60°	137.2	129.7	117.6	103.2	98.6
62.5°	118.8	113.0	102.6	90.5	96.3
65°	102.0	96.3	87.1	88.8	73.8
67.5°	83.6	80.7	72.6	64.6	62.3
70°	68.0	64.6	61.7	53.0	50.7
72.5°	54.2	50.7	46.7	42.1	40.4
75°	40.9	38.1	35.7	34.0	37.5
77.5°	28.2	27.1	25.4	23.6	23.1
80°	18.4	17.9	17.3	16.7	16.1
82.5°	11.0	11.0	11.0	11.0	11.0
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)