

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: P559318

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559318
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-82-87-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 870.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

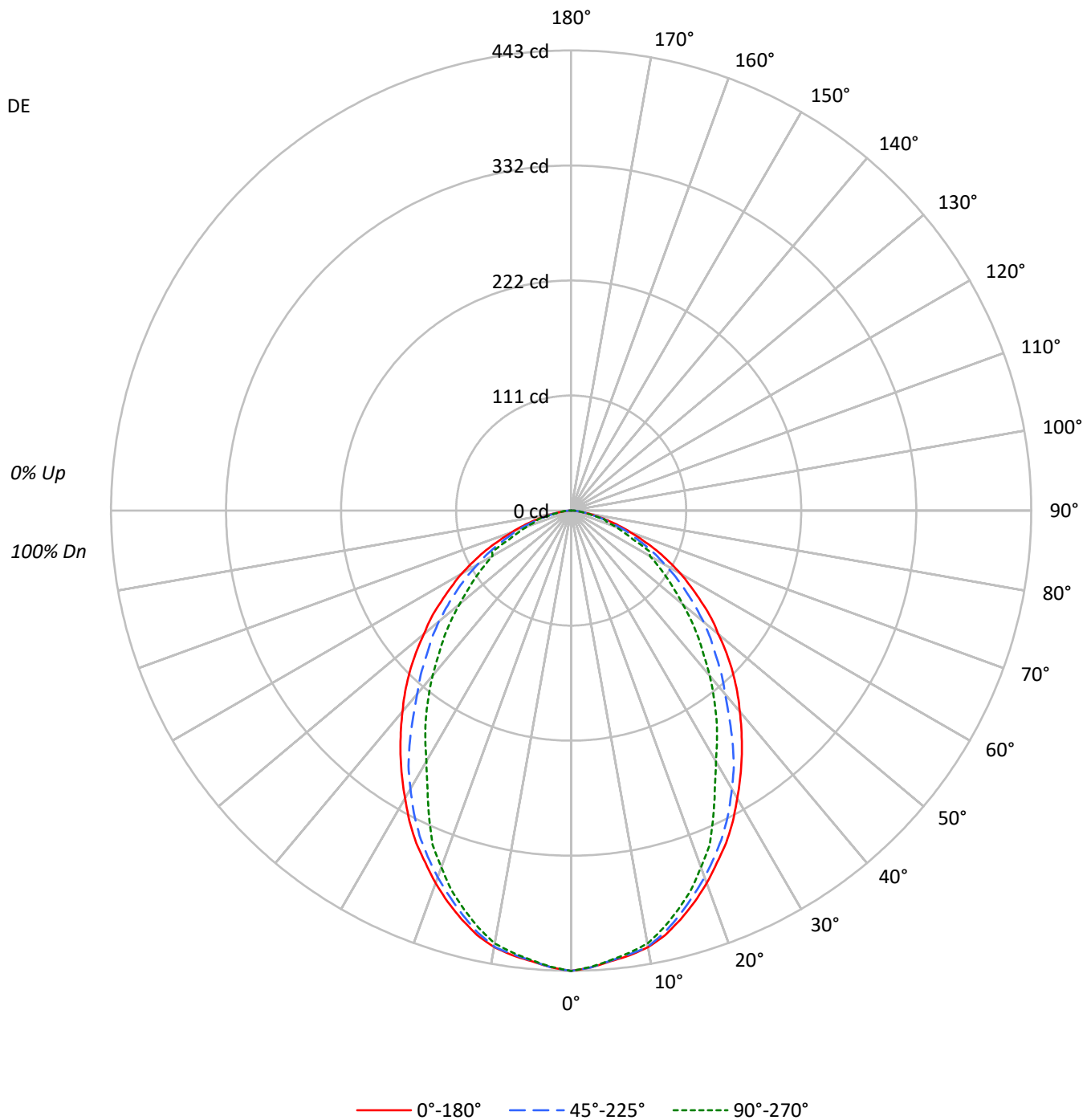
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4771	4771	4771
5°	4706	4700	4695
10°	4665	4659	4626
15°	4539	4493	4431
20°	4372	4301	4184
25°	4192	4101	3846
30°	3974	3846	3464
35°	3763	3554	3205
40°	3549	3239	2916
45°	3346	2994	2637
50°	3098	2780	2351
55°	2866	2518	2106
60°	2624	2250	1886
65°	2310	1971	1671
70°	1904	1725	1419
75°	1514	1323	1385
80°	1017	955	886
85°	630	753	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3346 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	4.7
10°-20°	113.2	13.0
20°-30°	156.7	18.0
30°-40°	167.1	19.2
40°-50°	152.5	17.5
50°-60°	119.5	13.7
60°-70°	77.9	8.9
70°-80°	34.5	4.0
80°-90°	7.4	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°	311.2	35.8
0°-40°	478.3	55.0
0°-60°	750.3	86.2
0°-90°	870.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	870.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	443	443	443	443	443	
5°	436	435	435	434	434	41
15°	407	407	403	399	398	115
25°	353	351	345	333	324	162
35°	286	284	270	250	244	179
45°	220	215	197	180	173	169
55°	153	148	134	118	112	137
65°	91	86	77	79	66	89
75°	36	34	32	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	443.2	443.2	443.2	443.2	443.2
2.5°	440.1	440.1	440.1	439.6	439.6
5°	435.5	435.0	435.0	434.5	434.5
7.5°	431.9	431.4	430.9	430.4	429.3
10°	426.8	426.8	426.3	423.7	423.2
12.5°	418.6	418.1	416.0	412.4	411.4
15°	407.3	407.3	403.2	399.1	397.6
17.5°	395.0	394.5	389.4	385.3	383.2
20°	381.7	380.7	375.5	368.9	365.3
22.5°	366.8	366.8	360.7	352.0	348.4
25°	353.0	350.9	345.3	333.0	323.8
27.5°	337.1	334.0	327.9	310.5	299.7
30°	319.7	318.2	309.4	286.9	278.7
32.5°	303.3	300.7	291.5	267.9	261.3
35°	286.4	284.3	270.5	250.0	243.9
37.5°	269.5	266.9	249.5	233.1	225.4
40°	252.6	249.5	230.5	215.7	207.5
42.5°	236.7	232.6	214.2	198.3	189.1
45°	219.8	215.2	196.7	180.3	173.2
47.5°	202.9	198.8	181.9	165.0	156.8
50°	185.0	181.4	166.0	149.1	140.4
52.5°	170.1	164.5	149.6	132.7	125.5
55°	152.7	148.1	134.2	118.3	112.2
57.5°	136.8	132.2	119.4	104.5	99.4
60°	121.9	115.3	104.5	91.7	87.6
62.5°	105.5	100.4	91.2	80.4	85.6
65°	90.7	85.6	77.4	78.9	65.6
67.5°	74.3	71.7	64.6	57.4	55.3
70°	60.5	57.4	54.8	47.1	45.1
72.5°	48.2	45.1	41.5	37.4	35.9
75°	36.4	33.8	31.8	30.2	33.3
77.5°	25.1	24.1	22.5	21.0	20.5
80°	16.4	15.9	15.4	14.9	14.3
82.5°	9.7	9.7	9.7	9.7	9.7
85°	5.1	5.6	6.1	6.7	7.2
87.5°	3.1	3.1	3.6	4.1	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)