

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: P559238

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559238
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-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: 876.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

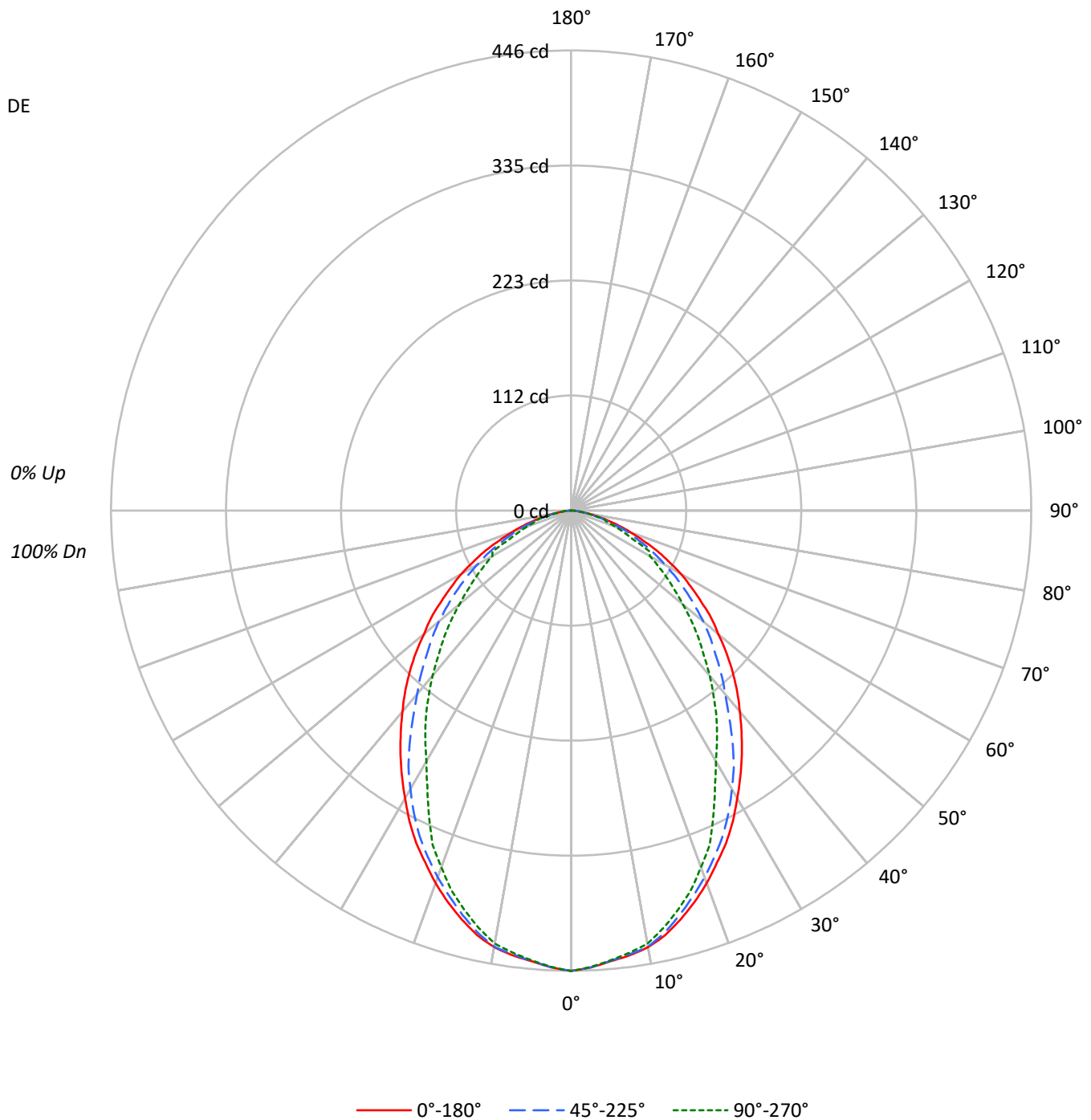
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4803	4803	4803
5°	4738	4733	4727
10°	4697	4691	4657
15°	4570	4524	4461
20°	4402	4331	4213
25°	4221	4130	3872
30°	4001	3873	3488
35°	3790	3579	3227
40°	3573	3261	2935
45°	3369	3016	2655
50°	3118	2798	2366
55°	2884	2537	2121
60°	2644	2265	1899
65°	2325	1984	1681
70°	1917	1737	1429
75°	1522	1331	1393
80°	1023	961	893
85°	642	766	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.5	4.7
10°-20°	114.0	13.0
20°-30°	157.8	18.0
30°-40°	168.3	19.2
40°-50°	153.5	17.5
50°-60°	120.3	13.7
60°-70°	78.4	8.9
70°-80°	34.7	4.0
80°-90°	7.5	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°	313.4	35.8
0°-40°	481.6	55.0
0°-60°	755.4	86.2
0°-90°	876.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	876.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	446	446	446	446	446	
5°	438	438	438	438	438	42
15°	410	410	406	402	400	115
25°	355	353	348	335	326	163
35°	288	286	272	252	246	180
45°	221	217	198	182	174	170
55°	154	149	135	119	113	138
65°	91	86	78	79	66	90
75°	37	34	32	30	34	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°	446.2	446.2	446.2	446.2	446.2
2.5°	443.1	443.1	443.1	442.6	442.6
5°	438.5	438.0	438.0	437.5	437.5
7.5°	434.9	434.4	433.8	433.3	432.3
10°	429.7	429.7	429.2	426.6	426.1
12.5°	421.5	420.9	418.9	415.3	414.2
15°	410.1	410.1	406.0	401.9	400.3
17.5°	397.7	397.2	392.1	387.9	385.9
20°	384.3	383.3	378.1	371.4	367.8
22.5°	369.4	369.4	363.2	354.4	350.8
25°	355.4	353.4	347.7	335.3	326.0
27.5°	339.4	336.3	330.2	312.6	301.8
30°	321.9	320.4	311.6	288.9	280.6
32.5°	305.4	302.8	293.5	269.8	263.1
35°	288.4	286.3	272.4	251.7	245.6
37.5°	271.3	268.8	251.2	234.7	227.0
40°	254.3	251.2	232.1	217.2	208.9
42.5°	238.3	234.2	215.6	199.6	190.4
45°	221.3	216.7	198.1	181.6	174.4
47.5°	204.3	200.2	183.1	166.1	157.9
50°	186.2	182.6	167.1	150.1	141.3
52.5°	171.3	165.6	150.6	133.6	126.4
55°	153.7	149.1	135.2	119.2	113.0
57.5°	137.7	133.1	120.2	105.2	100.1
60°	122.8	116.1	105.2	92.3	88.2
62.5°	106.3	101.1	91.8	81.0	86.1
65°	91.3	86.1	77.9	79.4	66.0
67.5°	74.8	72.2	65.0	57.8	55.7
70°	60.9	57.8	55.2	47.5	45.4
72.5°	48.5	45.4	41.8	37.7	36.1
75°	36.6	34.0	32.0	30.4	33.5
77.5°	25.3	24.2	22.7	21.2	20.6
80°	16.5	16.0	15.5	15.0	14.4
82.5°	9.8	9.8	9.8	9.8	9.8
85°	5.2	5.7	6.2	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)