

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: P590026

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590026
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1LO-50-UNV-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1395.0 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

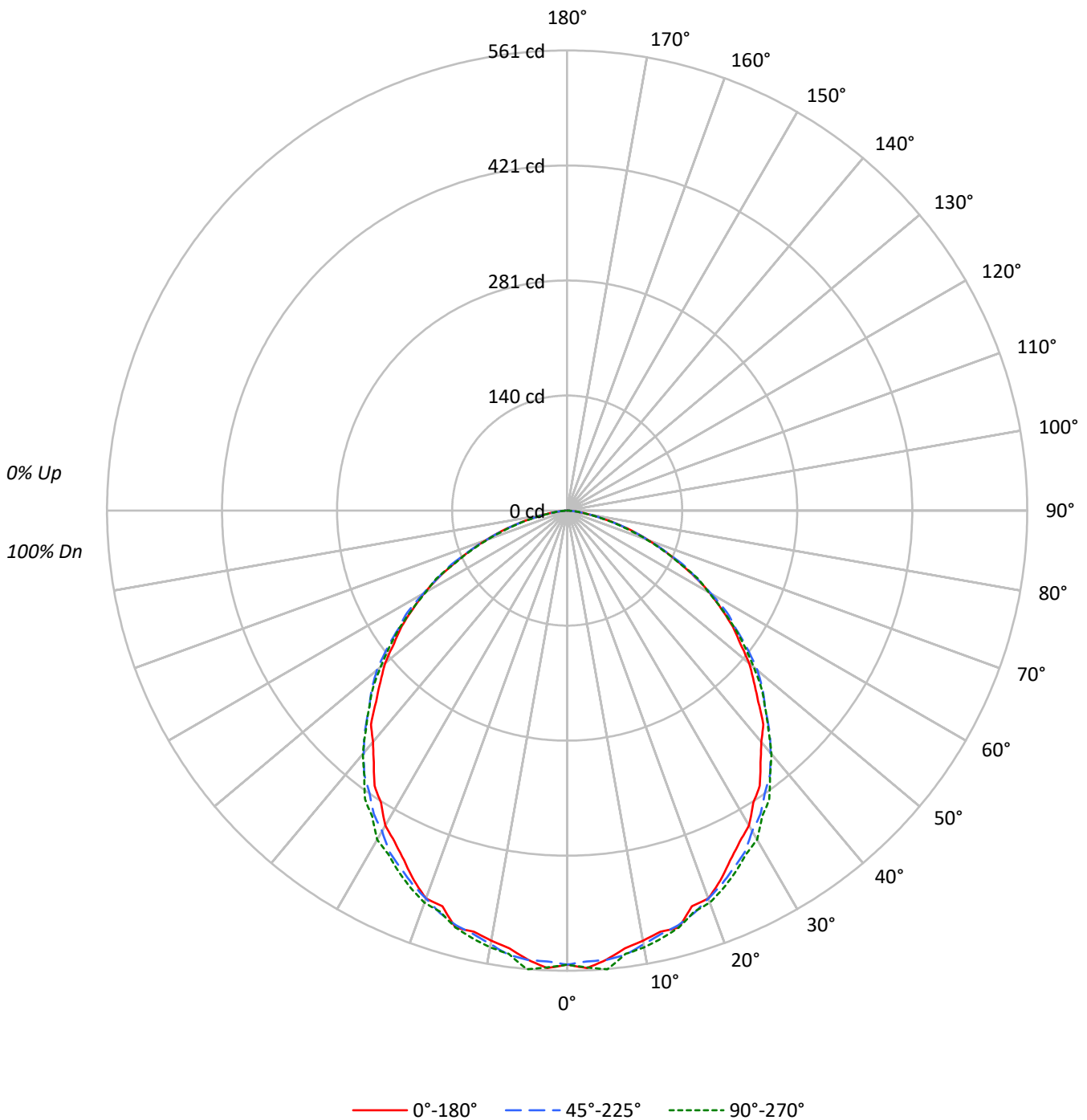
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1489	1489	1489
5°	1485	1485	1516
10°	1455	1467	1477
15°	1466	1458	1466
20°	1441	1441	1456
25°	1397	1427	1443
30°	1378	1402	1439
35°	1345	1380	1412
40°	1293	1355	1361
45°	1254	1298	1300
50°	1212	1267	1243
55°	1156	1178	1170
60°	1080	1091	1072
65°	963	988	956
70°	827	829	806
75°	655	653	628
80°	439	426	409
85°	238	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1332 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	3.7
10°-20°	147.6	10.6
20°-30°	221.1	15.8
30°-40°	262.0	18.8
40°-50°	262.5	18.8
50°-60°	222.8	16.0
60°-70°	150.2	10.8
70°-80°	66.0	4.7
80°-90°	10.7	0.8
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°	420.7	30.2
0°-40°	682.7	48.9
0°-60°	1168.1	83.7
0°-90°	1395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	550	548	550	548	561	52
15°	526	520	523	526	526	147
25°	470	473	481	487	486	218
35°	410	411	420	430	430	254
45°	330	336	341	350	342	255
55°	246	245	251	249	249	219
65°	151	149	155	149	150	150
75°	63	62	63	58	60	68
85°	8	8	8	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	553.5	553.5	553.5	553.5	553.5
2.5°	558.3	554.1	550.1	554.7	557.5
5°	549.6	548.3	549.8	548.1	561.4
7.5°	538.3	543.2	546.1	544.3	545.1
10°	532.3	530.6	536.9	541.4	540.7
12.5°	525.8	528.4	528.8	533.6	534.0
15°	526.2	520.1	523.3	526.1	526.3
17.5°	505.8	512.3	514.6	520.8	513.1
20°	503.3	498.5	503.3	509.6	508.6
22.5°	487.9	482.5	492.8	498.5	498.1
25°	470.5	473.0	480.7	487.0	486.0
27.5°	455.2	458.2	469.2	477.8	472.2
30°	443.4	441.9	451.2	458.9	463.2
32.5°	422.3	427.7	438.6	446.2	442.2
35°	409.5	410.7	420.2	429.9	429.7
37.5°	387.1	392.8	406.1	408.9	406.4
40°	368.0	373.7	385.8	388.7	387.5
42.5°	354.0	355.0	365.3	368.7	363.3
45°	329.5	335.6	341.2	350.0	341.7
47.5°	308.6	311.4	323.5	325.8	321.5
50°	289.6	290.7	302.7	299.8	296.9
52.5°	265.9	270.1	276.9	276.3	272.9
55°	246.3	244.6	251.1	249.3	249.3
57.5°	222.8	225.6	230.9	228.2	223.8
60°	200.7	200.8	202.7	199.7	199.1
62.5°	176.2	177.1	177.5	173.7	179.9
65°	151.3	149.3	155.2	149.2	150.2
67.5°	128.4	129.4	128.8	125.1	126.5
70°	105.1	106.3	105.4	101.2	102.5
72.5°	83.8	82.2	83.2	77.9	80.3
75°	63.0	61.7	62.8	58.4	60.4
77.5°	42.9	43.9	43.2	40.8	42.2
80°	28.3	27.5	27.5	26.2	26.4
82.5°	16.5	15.7	15.5	15.1	15.7
85°	7.7	7.5	7.6	7.4	7.1
87.5°	2.8	2.9	2.9	2.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)