

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: P590014

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590014
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-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1394.0 lumens
Efficiency: N/A
Efficacy: 119.1 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

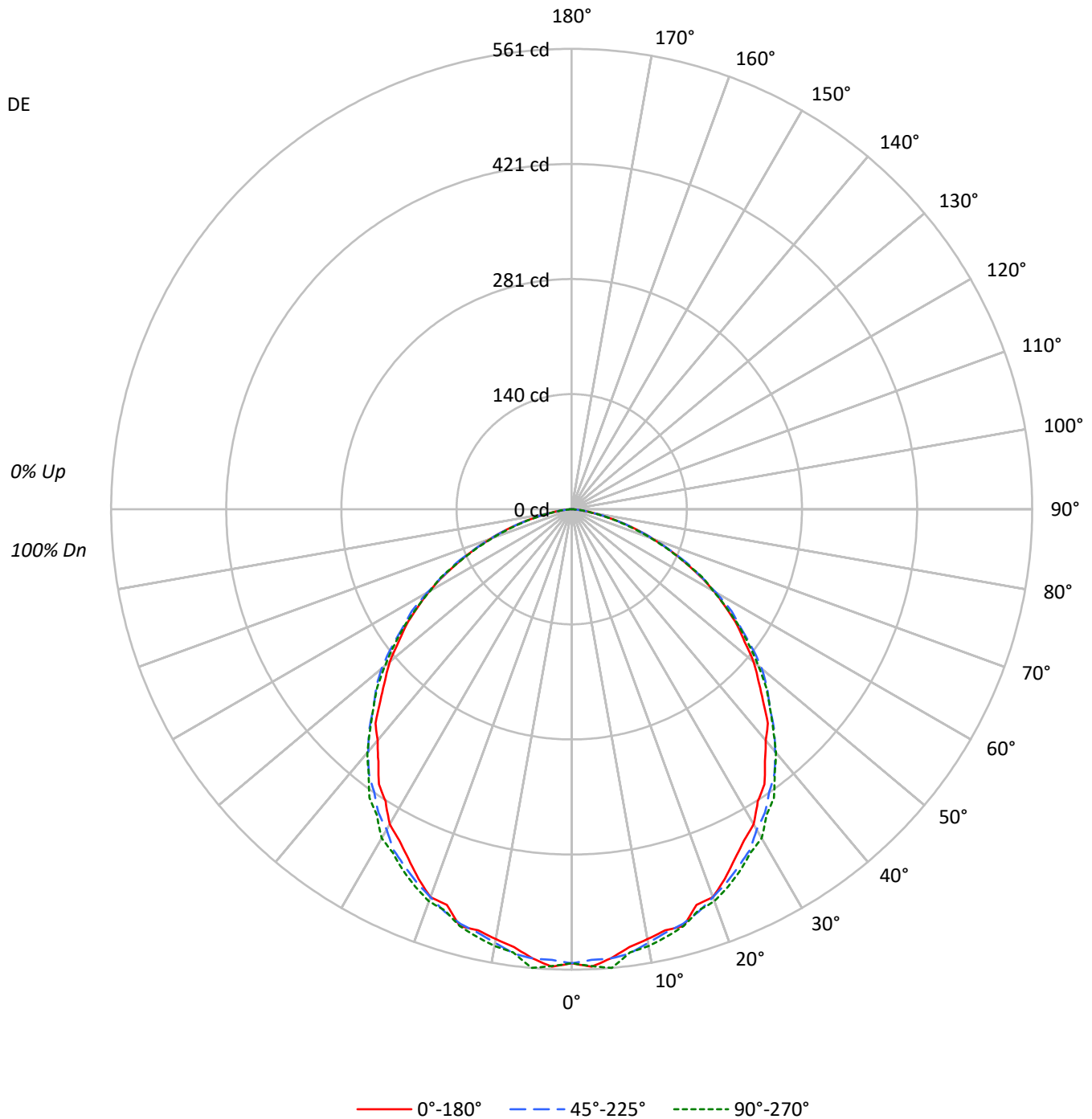
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1488	1488	1488
5°	1484	1484	1515
10°	1453	1466	1476
15°	1465	1457	1465
20°	1440	1440	1456
25°	1396	1426	1442
30°	1377	1401	1438
35°	1344	1379	1410
40°	1292	1354	1360
45°	1253	1297	1299
50°	1212	1266	1242
55°	1155	1177	1169
60°	1080	1090	1071
65°	963	987	956
70°	826	828	806
75°	654	653	627
80°	439	426	409
85°	238	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1331 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	3.7
10°-20°	147.5	10.6
20°-30°	220.9	15.8
30°-40°	261.8	18.8
40°-50°	262.3	18.8
50°-60°	222.7	16.0
60°-70°	150.1	10.8
70°-80°	65.9	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°	420.4	30.2
0°-40°	682.2	48.9
0°-60°	1167.2	83.7
0°-90°	1394.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1394.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	553	553	553	553	553	
5°	549	548	549	548	561	52
15°	526	520	523	526	526	147
25°	470	473	480	487	486	217
35°	409	410	420	430	429	254
45°	329	335	341	350	341	255
55°	246	244	251	249	249	219
65°	151	149	155	149	150	150
75°	63	62	63	58	60	67
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°	553.1	553.1	553.1	553.1	553.1
2.5°	557.9	553.7	549.7	554.3	557.1
5°	549.2	547.9	549.4	547.7	561.0
7.5°	537.9	542.8	545.7	543.9	544.7
10°	531.9	530.2	536.5	541.0	540.3
12.5°	525.5	528.0	528.4	533.2	533.6
15°	525.8	519.8	523.0	525.7	525.9
17.5°	505.4	512.0	514.2	520.4	512.7
20°	502.9	498.1	502.9	509.3	508.3
22.5°	487.5	482.2	492.5	498.1	497.8
25°	470.1	472.7	480.4	486.7	485.7
27.5°	454.8	457.8	468.8	477.5	471.9
30°	443.1	441.6	450.8	458.6	462.8
32.5°	422.0	427.4	438.3	445.9	441.8
35°	409.2	410.4	419.9	429.6	429.3
37.5°	386.9	392.5	405.8	408.6	406.1
40°	367.8	373.4	385.5	388.4	387.2
42.5°	353.7	354.7	365.1	368.4	363.1
45°	329.2	335.4	340.9	349.7	341.4
47.5°	308.4	311.2	323.2	325.6	321.2
50°	289.4	290.4	302.5	299.6	296.7
52.5°	265.7	269.9	276.7	276.1	272.7
55°	246.1	244.5	250.9	249.2	249.1
57.5°	222.6	225.5	230.7	228.0	223.7
60°	200.6	200.7	202.6	199.5	199.0
62.5°	176.1	177.0	177.4	173.6	179.7
65°	151.2	149.2	155.0	149.1	150.1
67.5°	128.3	129.3	128.7	125.0	126.4
70°	105.0	106.3	105.3	101.1	102.4
72.5°	83.7	82.1	83.1	77.8	80.3
75°	62.9	61.6	62.8	58.3	60.3
77.5°	42.8	43.8	43.1	40.8	42.1
80°	28.3	27.5	27.5	26.1	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)