

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: P590021

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590021
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1392.0 lumens
Efficiency: N/A
Efficacy: 119.0 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

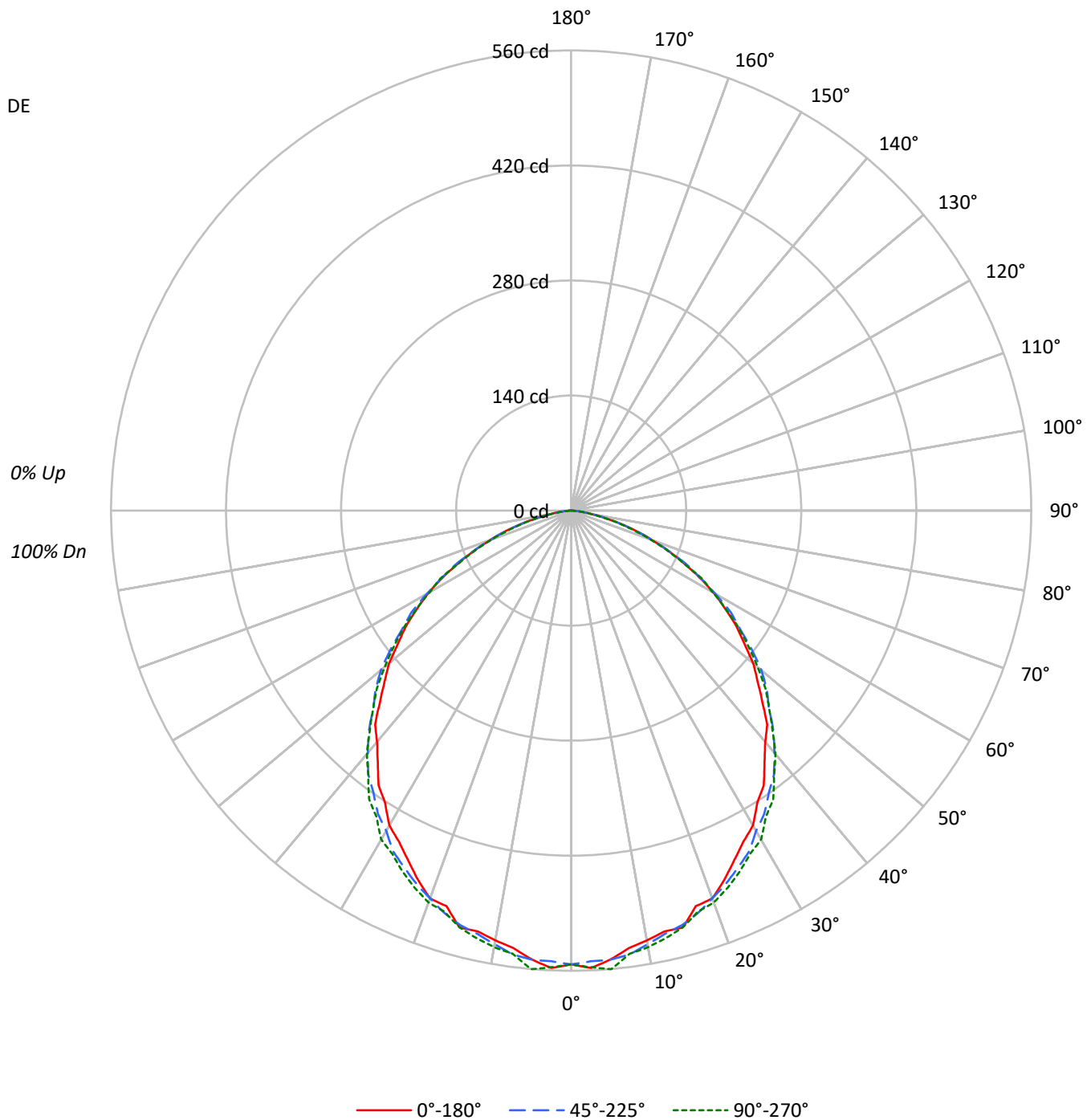
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590021

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1486	1486	1486
5°	1481	1482	1513
10°	1451	1464	1474
15°	1463	1455	1463
20°	1438	1438	1453
25°	1394	1424	1440
30°	1375	1399	1436
35°	1342	1377	1408
40°	1290	1352	1358
45°	1251	1295	1297
50°	1210	1265	1240
55°	1153	1175	1167
60°	1078	1089	1069
65°	961	986	954
70°	825	828	805
75°	653	652	627
80°	437	426	409
85°	238	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1329 cd/sqm

TEST NUMBER: P590021

CATALOG NUMBER: FSR-24-2-LD4-1LO-50-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	3.7
10°-20°	147.2	10.6
20°-30°	220.6	15.8
30°-40°	261.5	18.8
40°-50°	261.9	18.8
50°-60°	222.3	16.0
60°-70°	149.9	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°	419.8	30.2
0°-40°	681.2	48.9
0°-60°	1165.5	83.7
0°-90°	1392.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1392.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	552	552	552	552	552	
5°	548	547	549	547	560	52
15°	525	519	522	525	525	146
25°	469	472	480	486	485	217
35°	409	410	419	429	429	254
45°	329	335	340	349	341	254
55°	246	244	250	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°	552.3	552.3	552.3	552.3	552.3
2.5°	557.1	552.9	549.0	553.5	556.3
5°	548.4	547.1	548.6	547.0	560.2
7.5°	537.1	542.0	544.9	543.1	543.9
10°	531.1	529.4	535.8	540.2	539.5
12.5°	524.7	527.3	527.6	532.4	532.8
15°	525.1	519.0	522.2	524.9	525.1
17.5°	504.7	511.2	513.4	519.6	511.9
20°	502.2	497.4	502.2	508.5	507.5
22.5°	486.8	481.5	491.8	497.4	497.0
25°	469.4	472.0	479.7	486.0	485.0
27.5°	454.2	457.2	468.2	476.8	471.2
30°	442.4	440.9	450.2	457.9	462.2
32.5°	421.4	426.8	437.6	445.3	441.2
35°	408.6	409.8	419.3	429.0	428.7
37.5°	386.3	391.9	405.3	408.0	405.5
40°	367.3	372.9	384.9	387.9	386.7
42.5°	353.2	354.2	364.5	367.9	362.5
45°	328.7	334.9	340.4	349.2	340.9
47.5°	307.9	310.8	322.8	325.1	320.8
50°	289.0	290.0	302.1	299.2	296.3
52.5°	265.3	269.5	276.3	275.7	272.3
55°	245.7	244.1	250.5	248.8	248.7
57.5°	222.3	225.1	230.4	227.7	223.3
60°	200.3	200.4	202.3	199.2	198.7
62.5°	175.9	176.7	177.1	173.4	179.5
65°	151.0	149.0	154.8	148.9	149.9
67.5°	128.1	129.1	128.5	124.8	126.2
70°	104.8	106.1	105.2	101.0	102.3
72.5°	83.6	82.0	83.0	77.7	80.2
75°	62.8	61.5	62.7	58.3	60.3
77.5°	42.8	43.8	43.1	40.7	42.1
80°	28.2	27.5	27.5	26.1	26.4
82.5°	16.5	15.7	15.5	15.0	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)