

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: P590015

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590015
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-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

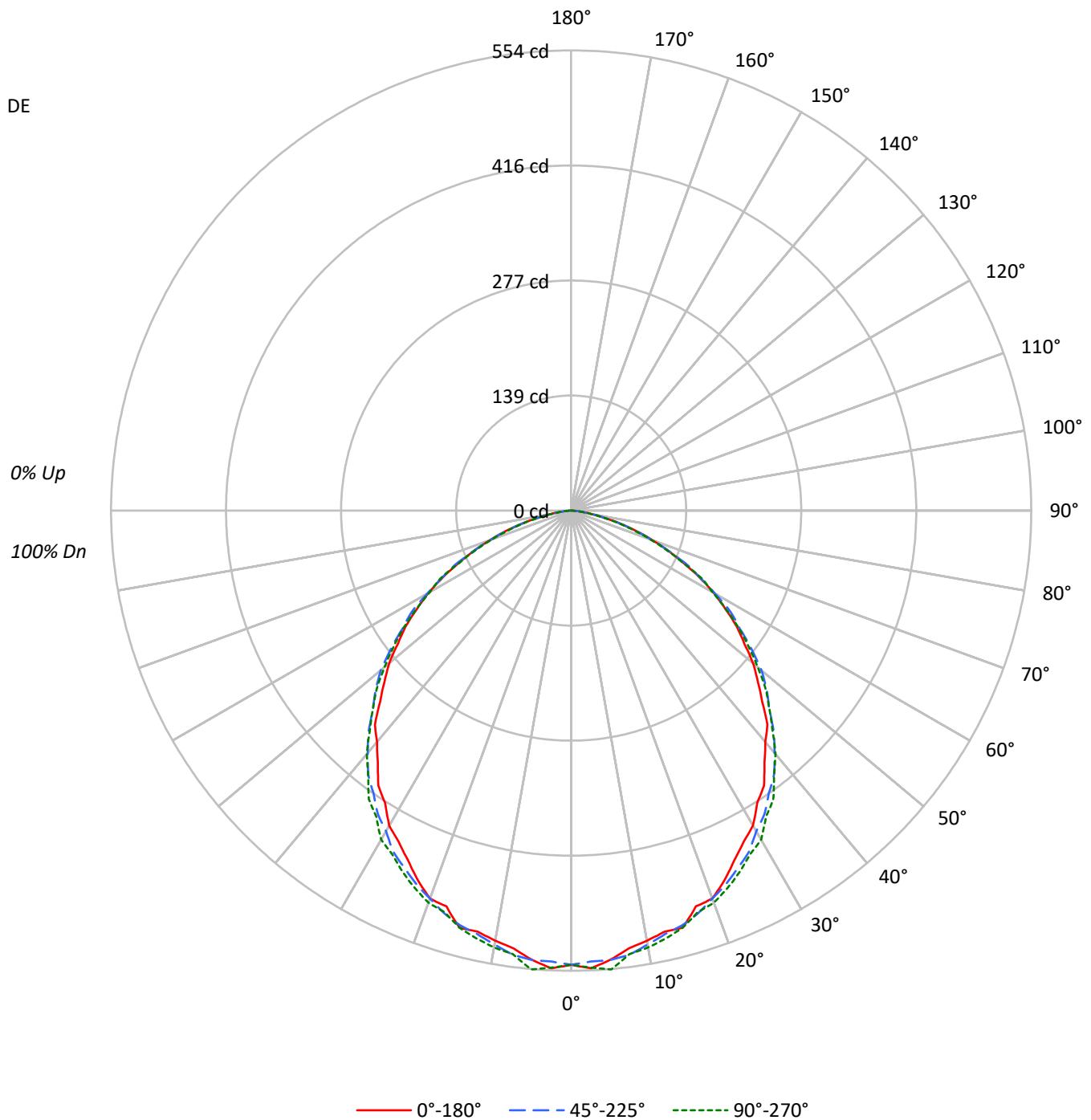
Lumens per Lamp: N/A
Luminaire Lumens: 1378.0 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P590015
CATALOG NUMBER: FSR-24-2-LD4-1LO-50-UNV-81-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590015

CATALOG NUMBER: FSR-24-2-LD4-1LO-50-UNV-81-86-EDD

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°	1471	1471	1471
5°	1467	1467	1498
10°	1437	1449	1459
15°	1448	1440	1448
20°	1424	1424	1439
25°	1380	1410	1425
30°	1361	1385	1422
35°	1329	1364	1394
40°	1277	1339	1345
45°	1238	1282	1284
50°	1198	1252	1228
55°	1141	1164	1155
60°	1067	1078	1059
65°	951	976	945
70°	817	819	796
75°	647	646	621
80°	434	422	404
85°	235	235	219

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1316 cd/sqm



TEST NUMBER: P590015

CATALOG NUMBER: FSR-24-2-LD4-1LO-50-UNV-81-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	3.7
10°-20°	145.8	10.6
20°-30°	218.4	15.8
30°-40°	258.8	18.8
40°-50°	259.3	18.8
50°-60°	220.1	16.0
60°-70°	148.4	10.8
70°-80°	65.2	4.7
80°-90°	10.6	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°	415.6	30.2
0°-40°	674.4	48.9
0°-60°	1153.8	83.7
0°-90°	1378.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1378.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	547	547	547	547	547	
5°	543	542	543	542	554	51
15°	520	514	517	520	520	145
25°	465	467	475	481	480	215
35°	404	406	415	425	424	251
45°	325	332	337	346	338	252
55°	243	242	248	246	246	216
65°	149	148	153	147	148	149
75°	62	61	62	58	60	67
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



TEST NUMBER: P590015

CATALOG NUMBER: FSR-24-2-LD4-1LO-50-UNV-81-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	546.8	546.8	546.8	546.8	546.8
2.5°	551.5	547.3	543.4	548.0	550.7
5°	542.9	541.6	543.1	541.5	554.5
7.5°	531.7	536.6	539.4	537.6	538.4
10°	525.8	524.1	530.4	534.8	534.1
12.5°	519.4	522.0	522.3	527.1	527.5
15°	519.8	513.8	517.0	519.6	519.9
17.5°	499.6	506.1	508.3	514.4	506.8
20°	497.1	492.4	497.1	503.4	502.4
22.5°	481.9	476.7	486.8	492.4	492.0
25°	464.7	467.3	474.9	481.1	480.1
27.5°	449.6	452.6	463.5	472.0	466.5
30°	438.0	436.5	445.7	453.3	457.5
32.5°	417.1	422.5	433.2	440.8	436.8
35°	404.5	405.7	415.1	424.7	424.4
37.5°	382.4	388.0	401.2	403.9	401.4
40°	363.6	369.1	381.1	384.0	382.8
42.5°	349.7	350.6	360.9	364.2	358.9
45°	325.4	331.5	337.0	345.7	337.5
47.5°	304.8	307.7	319.5	321.8	317.5
50°	286.1	287.1	299.0	296.1	293.3
52.5°	262.6	266.8	273.5	272.9	269.6
55°	243.3	241.6	248.0	246.3	246.2
57.5°	220.0	222.9	228.1	225.4	221.1
60°	198.3	198.4	200.3	197.2	196.7
62.5°	174.1	174.9	175.4	171.6	177.7
65°	149.4	147.5	153.3	147.4	148.4
67.5°	126.8	127.8	127.2	123.5	125.0
70°	103.8	105.0	104.1	100.0	101.2
72.5°	82.7	81.2	82.2	76.9	79.3
75°	62.2	60.9	62.1	57.7	59.7
77.5°	42.4	43.3	42.6	40.3	41.7
80°	28.0	27.2	27.2	25.8	26.1
82.5°	16.3	15.5	15.3	14.9	15.5
85°	7.6	7.4	7.6	7.3	7.1
87.5°	2.8	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)