

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: P590399

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590399
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-LD4-2STD-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: 3690.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

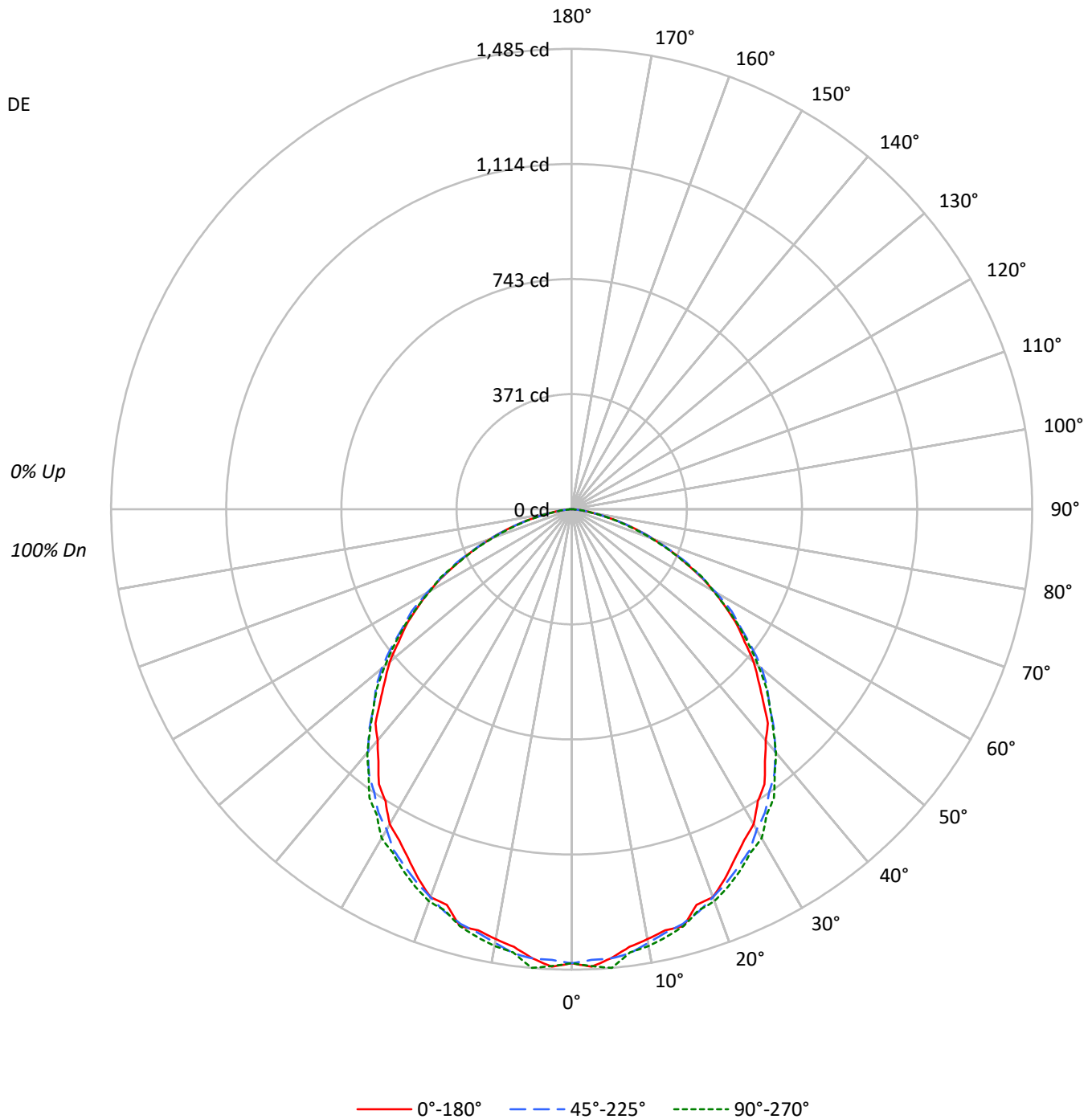
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590399

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

Luminous Intensity Polar Plot





TEST NUMBER: P590399

CATALOG NUMBER: FSR-24-2-LD4-2STD-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°	3940	3940	3940
5°	3927	3928	4011
10°	3847	3881	3908
15°	3878	3857	3878
20°	3812	3812	3853
25°	3695	3776	3817
30°	3644	3708	3807
35°	3558	3651	3733
40°	3420	3584	3601
45°	3317	3435	3440
50°	3208	3352	3288
55°	3056	3116	3094
60°	2858	2886	2835
65°	2548	2613	2530
70°	2186	2194	2133
75°	1731	1728	1660
80°	1161	1128	1083
85°	630	624	584

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3523 cd/sqm



TEST NUMBER: P590399

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.7	3.7
10°-20°	390.3	10.6
20°-30°	584.8	15.8
30°-40°	693.1	18.8
40°-50°	694.4	18.8
50°-60°	589.4	16.0
60°-70°	397.4	10.8
70°-80°	174.6	4.7
80°-90°	28.4	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°	1112.8	30.2
0°-40°	1805.9	48.9
0°-60°	3089.7	83.7
0°-90°	3690.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3690.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1464	1464	1464	1464	1464	
5°	1454	1450	1454	1450	1485	137
15°	1392	1376	1384	1392	1392	388
25°	1244	1251	1272	1288	1286	575
35°	1083	1086	1112	1137	1136	673
45°	872	888	902	926	904	674
55°	651	647	664	660	659	579
65°	400	395	410	395	397	398
75°	166	163	166	154	160	178
85°	20	20	20	20	19	30
90°	0	0	0	0	0	

TEST NUMBER: P590399

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1464.1	1464.1	1464.1	1464.1	1464.1
2.5°	1476.8	1465.6	1455.2	1467.3	1474.7
5°	1453.7	1450.3	1454.3	1449.9	1484.9
7.5°	1423.8	1436.9	1444.4	1439.7	1441.8
10°	1408.0	1403.4	1420.2	1432.0	1430.3
12.5°	1390.9	1397.7	1398.7	1411.4	1412.5
15°	1391.9	1375.8	1384.3	1391.5	1392.1
17.5°	1337.8	1355.2	1361.1	1377.5	1357.1
20°	1331.2	1318.5	1331.2	1348.0	1345.4
22.5°	1290.6	1276.4	1303.6	1318.5	1317.6
25°	1244.4	1251.2	1271.7	1288.3	1285.6
27.5°	1204.0	1211.9	1241.0	1263.9	1249.2
30°	1172.8	1168.8	1193.4	1213.8	1225.2
32.5°	1117.0	1131.4	1160.1	1180.4	1169.6
35°	1083.2	1086.4	1111.5	1137.3	1136.5
37.5°	1024.0	1039.0	1074.3	1081.5	1074.9
40°	973.5	988.5	1020.4	1028.2	1025.0
42.5°	936.3	939.0	966.4	975.2	961.1
45°	871.5	887.7	902.5	925.7	903.8
47.5°	816.3	823.8	855.6	861.8	850.3
50°	766.2	768.8	800.8	793.0	785.5
52.5°	703.2	714.4	732.3	730.8	721.9
55°	651.4	647.1	664.1	659.6	659.4
57.5°	589.2	596.8	610.8	603.6	592.1
60°	531.0	531.2	536.3	528.2	526.7
62.5°	466.2	468.4	469.6	459.6	475.8
65°	400.2	394.9	410.4	394.7	397.4
67.5°	339.5	342.2	340.6	330.8	334.6
70°	277.9	281.3	278.8	267.7	271.1
72.5°	221.6	217.4	220.0	206.1	212.5
75°	166.5	163.1	166.2	154.4	159.7
77.5°	113.4	116.1	114.2	107.9	111.5
80°	74.9	72.8	72.8	69.2	69.9
82.5°	43.7	41.6	41.0	39.9	41.6
85°	20.4	19.8	20.2	19.7	18.9
87.5°	7.4	7.6	7.6	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)