

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: P590416

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590416
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3766.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

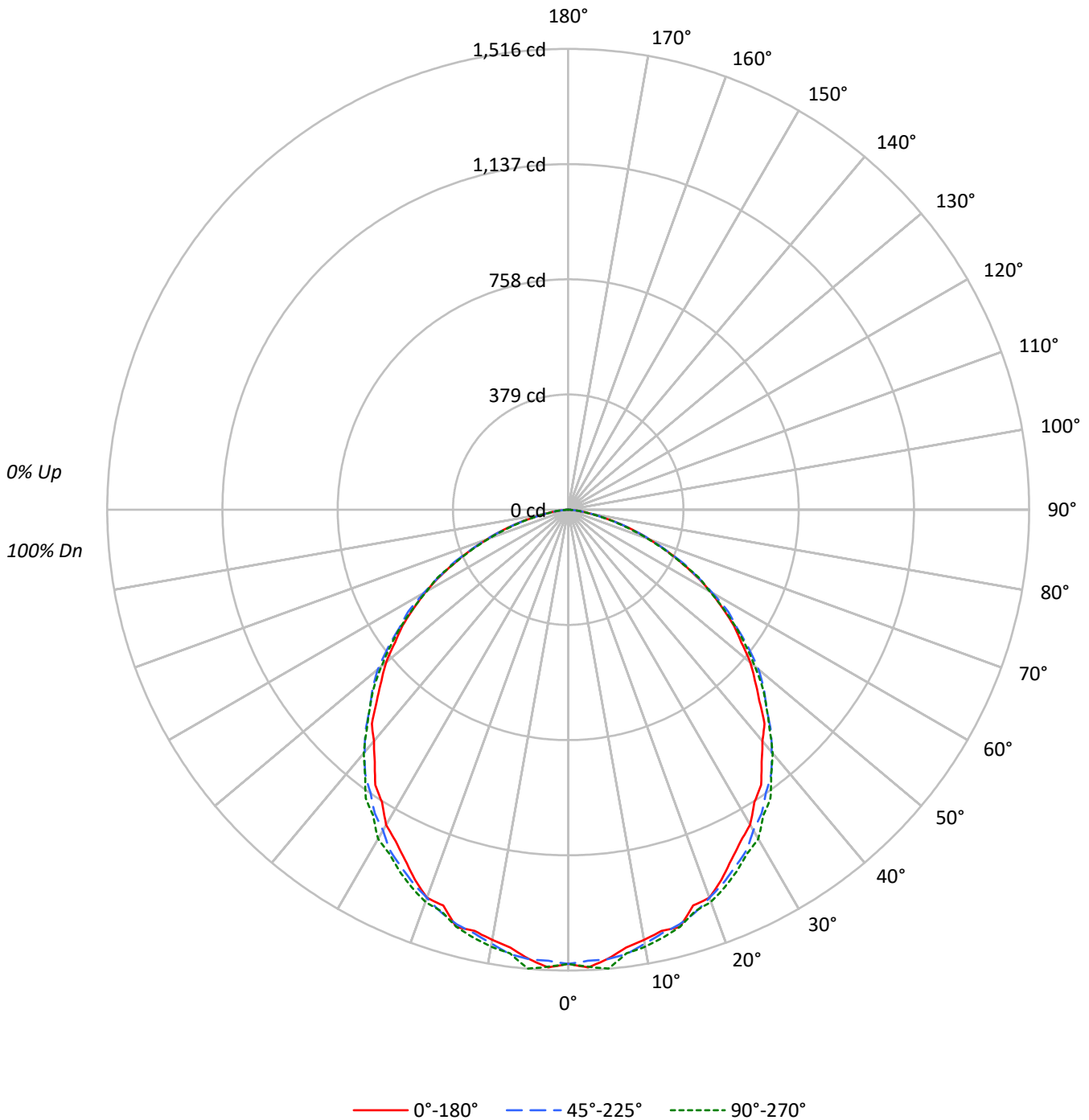
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590416

CATALOG NUMBER: FSR-24-2-LD4-2STD-50-UNV-93-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590416

CATALOG NUMBER: FSR-24-2-LD4-2STD-50-UNV-93-87-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	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°	4021	4021	4021
5°	4008	4009	4094
10°	3927	3961	3989
15°	3958	3936	3958
20°	3891	3891	3932
25°	3771	3853	3896
30°	3719	3785	3885
35°	3632	3727	3810
40°	3490	3658	3675
45°	3385	3505	3510
50°	3274	3422	3356
55°	3119	3180	3157
60°	2916	2946	2893
65°	2600	2667	2582
70°	2231	2239	2177
75°	1768	1763	1695
80°	1184	1151	1106
85°	642	636	596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3596 cd/sqm



TEST NUMBER: P590416

CATALOG NUMBER: FSR-24-2-LD4-2STD-50-UNV-93-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.6	3.7
10°-20°	398.4	10.6
20°-30°	596.8	15.8
30°-40°	707.4	18.8
40°-50°	708.7	18.8
50°-60°	601.5	16.0
60°-70°	405.6	10.8
70°-80°	178.2	4.7
80°-90°	29.0	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°	1135.7	30.2
0°-40°	1843.1	48.9
0°-60°	3153.3	83.7
0°-90°	3766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1484	1480	1484	1480	1516	140
15°	1421	1404	1413	1420	1421	396
25°	1270	1277	1298	1315	1312	587
35°	1106	1109	1134	1161	1160	686
45°	889	906	921	945	922	688
55°	665	660	678	673	673	591
65°	408	403	419	403	406	406
75°	170	166	170	158	163	182
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



TEST NUMBER: P590416

CATALOG NUMBER: FSR-24-2-LD4-2STD-50-UNV-93-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1494.3	1494.3	1494.3	1494.3	1494.3
2.5°	1507.2	1495.8	1485.2	1497.5	1505.1
5°	1483.6	1480.2	1484.2	1479.8	1515.5
7.5°	1453.2	1466.5	1474.2	1469.4	1471.5
10°	1437.0	1432.3	1449.5	1461.5	1459.7
12.5°	1419.6	1426.5	1427.5	1440.4	1441.6
15°	1420.6	1404.2	1412.8	1420.2	1420.7
17.5°	1365.4	1383.1	1389.1	1405.9	1385.1
20°	1358.6	1345.7	1358.6	1375.8	1373.1
22.5°	1317.1	1302.7	1330.5	1345.7	1344.7
25°	1270.1	1277.0	1297.8	1314.8	1312.1
27.5°	1228.8	1236.9	1266.6	1289.9	1274.9
30°	1196.9	1192.9	1218.0	1238.8	1250.4
32.5°	1140.0	1154.7	1184.0	1204.7	1193.7
35°	1105.5	1108.8	1134.4	1160.7	1159.9
37.5°	1045.1	1060.4	1096.4	1103.8	1097.0
40°	993.6	1008.8	1041.4	1049.4	1046.1
42.5°	955.6	958.3	986.3	995.3	980.9
45°	889.4	906.0	921.1	944.8	922.4
47.5°	833.1	840.8	873.2	879.6	867.8
50°	782.0	784.7	817.3	809.3	801.6
52.5°	717.7	729.1	747.4	745.9	736.8
55°	664.8	660.4	677.8	673.1	672.9
57.5°	601.4	609.1	623.4	616.0	604.3
60°	541.9	542.1	547.3	539.1	537.5
62.5°	475.8	478.1	479.2	469.0	485.6
65°	408.4	403.0	418.9	402.8	405.5
67.5°	346.5	349.2	347.7	337.6	341.5
70°	283.6	287.1	284.6	273.2	276.7
72.5°	226.1	221.9	224.6	210.3	216.9
75°	170.0	166.5	169.6	157.6	163.0
77.5°	115.8	118.5	116.5	110.2	113.8
80°	76.4	74.3	74.3	70.6	71.4
82.5°	44.6	42.4	41.9	40.7	42.4
85°	20.8	20.3	20.6	20.1	19.3
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)