

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: P560741

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-93-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560741  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-12-2-LD4-2STD-50-UNV-93-86-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

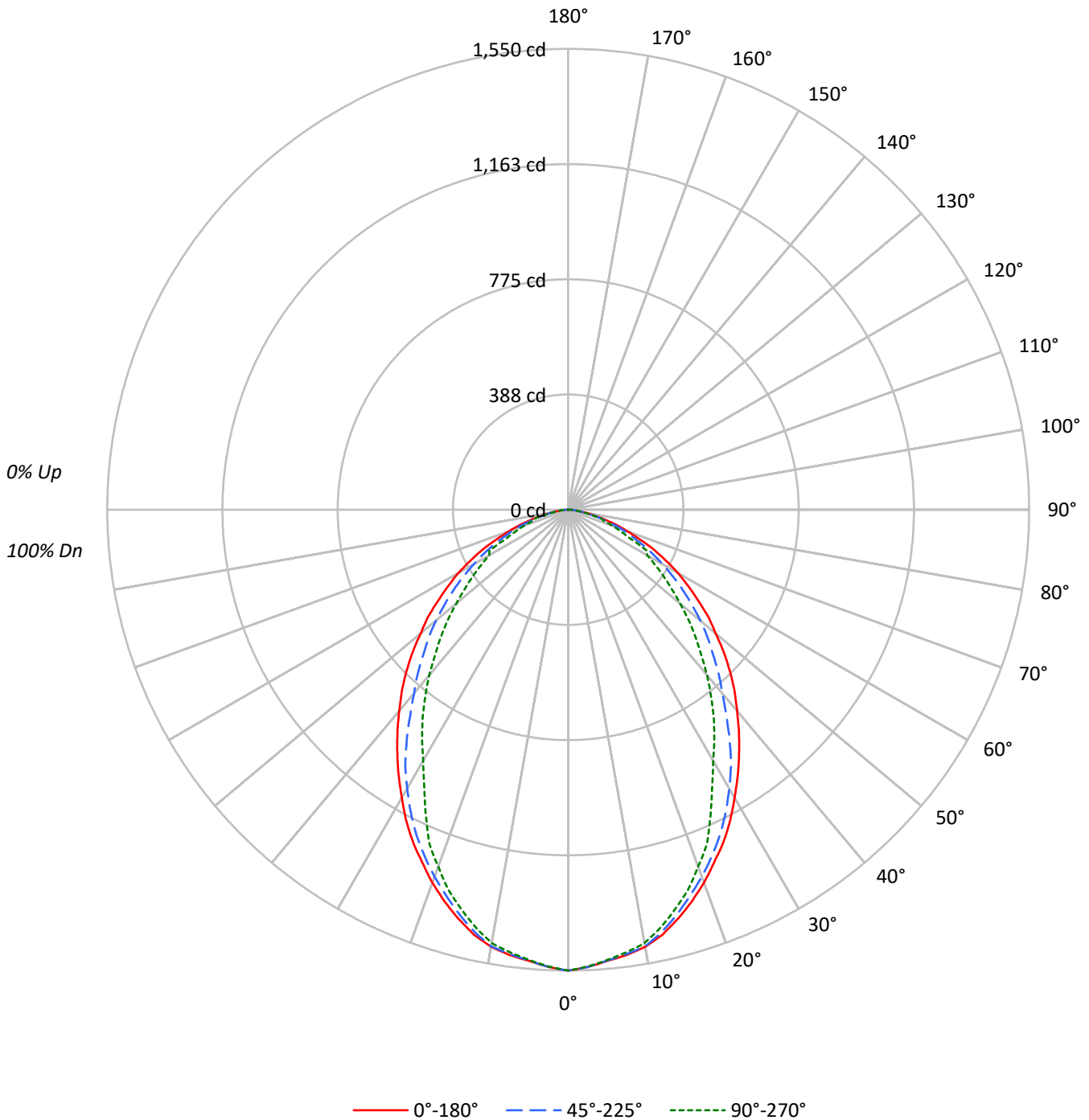
Lumens per Lamp: N/A  
Luminaire Lumens: 3043.0 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P560741

CATALOG NUMBER: FSR-12-2-LD4-2STD-50-UNV-93-86-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P560741

CATALOG NUMBER: FSR-12-2-LD4-2STD-50-UNV-93-86-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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8343	8343	8343
5°	8229	8219	8210
10°	8158	8148	8089
15°	7938	7858	7748
20°	7646	7523	7318
25°	7332	7172	6725
30°	6949	6727	6058
35°	6581	6217	5604
40°	6206	5665	5099
45°	5852	5237	4610
50°	5416	4861	4111
55°	5011	4405	3682
60°	4591	3935	3298
65°	4039	3446	2921
70°	3328	3017	2482
75°	2645	2310	2423
80°	1776	1667	1556
85°	1105	1328	1550

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5852 cd/sqm



TEST NUMBER: P560741

CATALOG NUMBER: FSR-12-2-LD4-2STD-50-UNV-93-86-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.3	4.7
10°-20°	396.0	13.0
20°-30°	548.2	18.0
30°-40°	584.6	19.2
40°-50°	533.3	17.5
50°-60°	417.8	13.7
60°-70°	272.3	8.9
70°-80°	120.6	4.0
80°-90°	25.9	0.9
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°	1088.5	35.8
0°-40°	1673.1	55.0
0°-60°	2624.2	86.2
0°-90°	3043.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3043.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1550	1550	1550	1550	1550	
5°	1523	1521	1521	1520	1520	145
15°	1425	1425	1410	1396	1391	400
25°	1235	1228	1208	1165	1132	567
35°	1002	994	946	874	853	626
45°	769	753	688	631	606	592
55°	534	518	470	414	392	479
65°	317	299	271	276	229	313
75°	127	118	111	106	116	136
85°	18	20	22	23	25	25
90°	0	0	0	0	0	



TEST NUMBER: P560741

CATALOG NUMBER: FSR-12-2-LD4-2STD-50-UNV-93-86-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1550.1	1550.1	1550.1	1550.1	1550.1
2.5°	1539.3	1539.3	1539.3	1537.5	1537.5
5°	1523.2	1521.4	1521.4	1519.6	1519.6
7.5°	1510.6	1508.8	1507.1	1505.3	1501.7
10°	1492.7	1492.7	1490.9	1482.0	1480.2
12.5°	1464.0	1462.3	1455.1	1442.5	1439.0
15°	1424.6	1424.6	1410.3	1396.0	1390.6
17.5°	1381.6	1379.8	1361.9	1347.6	1340.4
20°	1335.0	1331.4	1313.5	1290.2	1277.7
22.5°	1283.1	1283.1	1261.6	1231.1	1218.5
25°	1234.7	1227.5	1207.8	1164.8	1132.5
27.5°	1179.1	1168.4	1146.9	1085.9	1048.3
30°	1118.2	1112.8	1082.4	1003.5	974.8
32.5°	1060.9	1051.9	1019.6	937.2	913.9
35°	1001.7	994.5	946.2	874.5	853.0
37.5°	942.6	933.6	872.7	815.4	788.5
40°	883.4	872.7	806.4	754.4	725.8
42.5°	827.9	813.6	749.0	693.5	661.2
45°	768.8	752.6	688.1	630.8	605.7
47.5°	709.6	695.3	636.2	577.0	548.3
50°	646.9	634.4	580.6	521.5	491.0
52.5°	594.9	575.2	523.3	464.1	439.0
55°	534.0	517.9	469.5	413.9	392.4
57.5°	478.5	462.3	417.5	365.6	347.6
60°	426.5	403.2	365.6	320.8	306.4
62.5°	369.1	351.2	319.0	281.3	299.3
65°	317.2	299.3	270.6	276.0	229.4
67.5°	259.8	250.9	225.8	200.7	193.5
70°	211.5	200.7	191.7	164.9	157.7
72.5°	168.4	157.7	145.2	130.8	125.4
75°	127.2	118.3	111.1	105.7	116.5
77.5°	87.8	84.2	78.8	73.5	71.7
80°	57.3	55.6	53.8	52.0	50.2
82.5°	34.0	34.0	34.0	34.0	34.0
85°	17.9	19.7	21.5	23.3	25.1
87.5°	10.8	10.8	12.5	14.3	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)