

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: P562939

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-80-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562939  
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-24-4-LD4-2STD-40-UNV-80-94-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

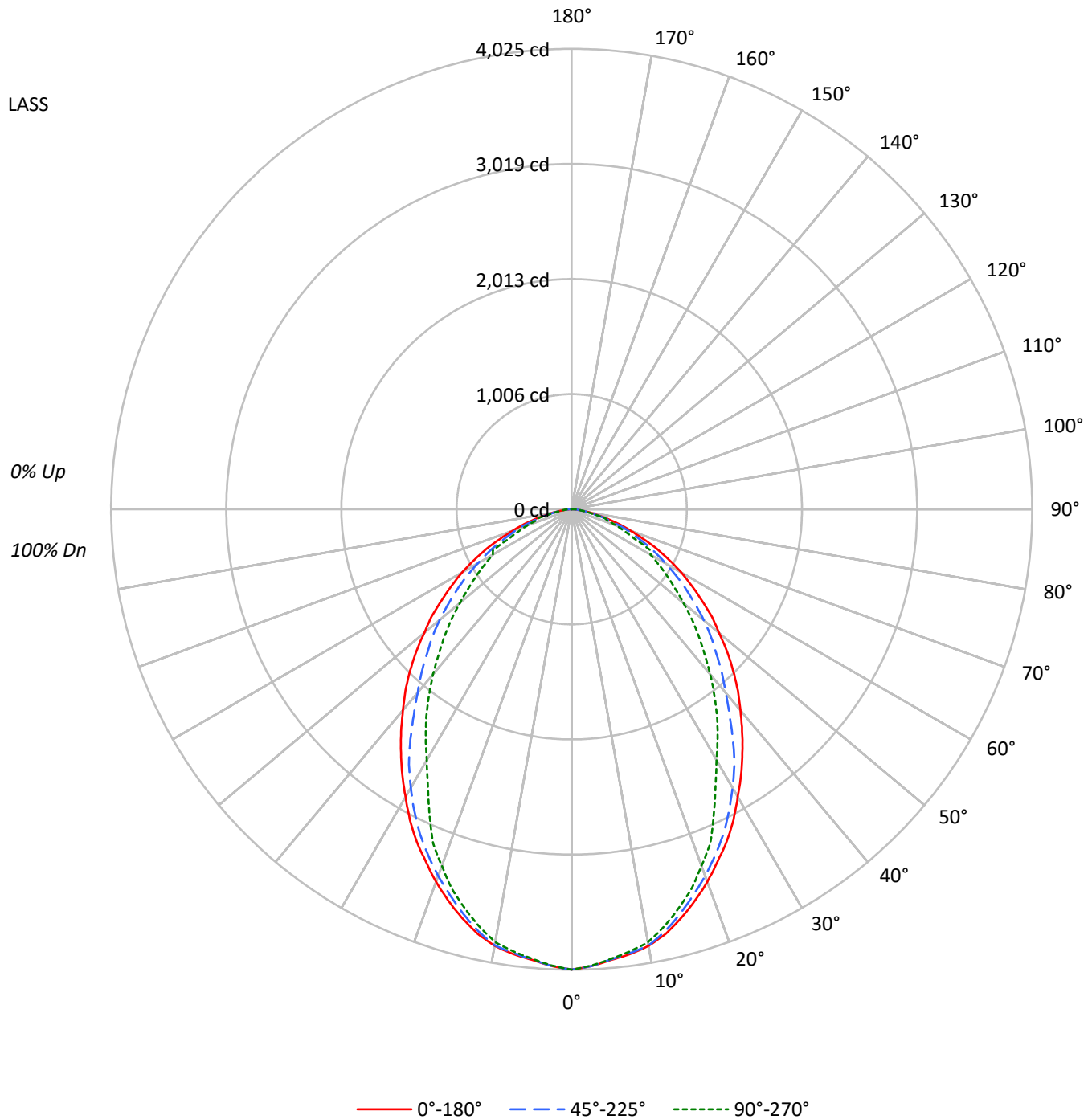
Lumens per Lamp: N/A  
Luminaire Lumens: 7901.0 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P562939

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-80-94-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P562939

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-80-94-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	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°	5415	5415	5415
5°	5342	5335	5329
10°	5295	5289	5251
15°	5153	5101	5029
20°	4963	4883	4750
25°	4759	4656	4366
30°	4511	4366	3932
35°	4272	4035	3638
40°	4029	3678	3310
45°	3798	3400	2992
50°	3516	3156	2669
55°	3252	2860	2390
60°	2980	2554	2141
65°	2622	2237	1896
70°	2160	1958	1611
75°	1717	1500	1572
80°	1154	1082	1010
85°	718	861	1005

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3798 cd/sqm

TEST NUMBER: P562939

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-80-94-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	374.6	4.7
10°-20°	1028.2	13.0
20°-30°	1423.4	18.0
30°-40°	1517.8	19.2
40°-50°	1384.7	17.5
50°-60°	1084.8	13.7
60°-70°	707.0	8.9
70°-80°	313.2	4.0
80°-90°	67.2	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°	2826.3	35.8
0°-40°	4344.1	55.0
0°-60°	6813.5	86.2
0°-90°	7901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7901.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4025	4025	4025	4025	4025	
5°	3955	3950	3950	3946	3946	375
15°	3699	3699	3662	3624	3611	1040
25°	3206	3187	3136	3024	2941	1472
35°	2601	2582	2457	2271	2215	1626
45°	1996	1954	1787	1638	1573	1538
55°	1386	1345	1219	1075	1019	1244
65°	824	777	703	716	596	812
75°	330	307	288	274	302	354
85°	46	51	56	60	65	65
90°	0	0	0	0	0	



TEST NUMBER: P562939

CATALOG NUMBER: FSR-24-4-LD4-2STD-40-UNV-80-94-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4024.7	4024.7	4024.7	4024.7	4024.7
2.5°	3996.7	3996.7	3996.7	3992.1	3992.1
5°	3954.9	3950.2	3950.2	3945.6	3945.6
7.5°	3922.3	3917.6	3913.0	3908.3	3899.0
10°	3875.8	3875.8	3871.1	3847.9	3843.2
12.5°	3801.3	3796.7	3778.1	3745.5	3736.2
15°	3699.0	3699.0	3661.7	3624.5	3610.6
17.5°	3587.3	3582.6	3536.1	3498.9	3480.3
20°	3466.3	3457.0	3410.5	3350.0	3317.4
22.5°	3331.4	3331.4	3275.6	3196.5	3163.9
25°	3205.8	3187.2	3136.0	3024.3	2940.6
27.5°	3061.5	3033.6	2977.8	2819.6	2721.9
30°	2903.3	2889.4	2810.3	2605.6	2531.1
32.5°	2754.5	2731.2	2647.4	2433.4	2372.9
35°	2600.9	2582.3	2456.7	2270.6	2214.7
37.5°	2447.4	2424.1	2265.9	2117.0	2047.2
40°	2293.8	2265.9	2093.8	1958.8	1884.4
42.5°	2149.6	2112.4	1944.9	1800.6	1716.9
45°	1996.0	1954.2	1786.7	1637.8	1572.6
47.5°	1842.5	1805.3	1651.7	1498.2	1423.8
50°	1679.7	1647.1	1507.5	1354.0	1274.9
52.5°	1544.7	1493.5	1358.6	1205.1	1139.9
55°	1386.5	1344.7	1219.0	1074.8	1019.0
57.5°	1242.3	1200.4	1084.1	949.2	902.6
60°	1107.4	1046.9	949.2	832.8	795.6
62.5°	958.5	911.9	828.2	730.5	777.0
65°	823.5	777.0	702.6	716.5	595.6
67.5°	674.7	651.4	586.3	521.1	502.5
70°	549.0	521.1	497.8	428.1	409.4
72.5°	437.4	409.4	376.9	339.7	325.7
75°	330.3	307.1	288.5	274.5	302.4
77.5°	228.0	218.7	204.7	190.8	186.1
80°	148.9	144.2	139.6	134.9	130.3
82.5°	88.4	88.4	88.4	88.4	88.4
85°	46.5	51.2	55.8	60.5	65.1
87.5°	27.9	27.9	32.6	37.2	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)