

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: P562995

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562995  
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-50-UNV-80-85-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

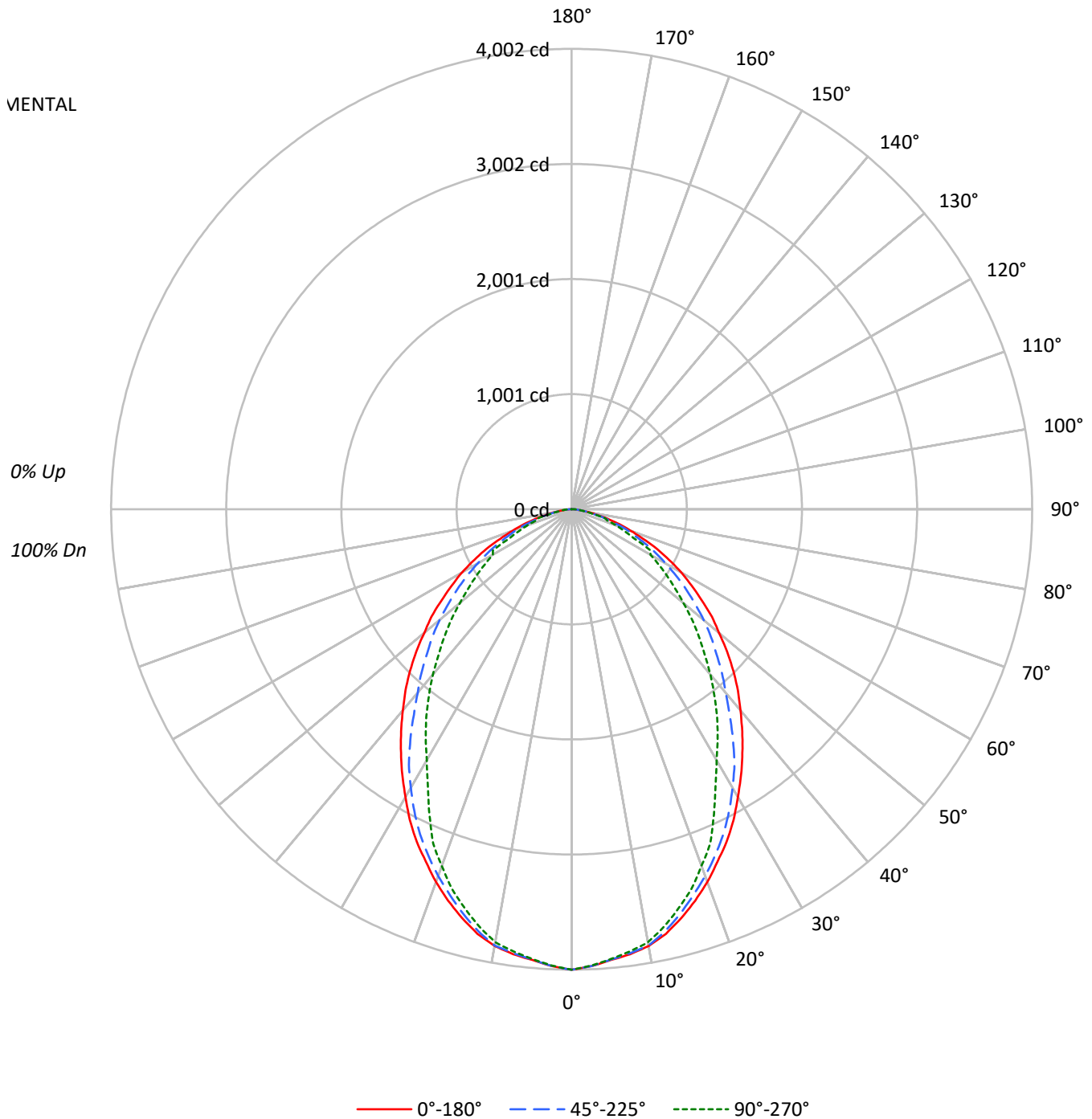
Lumens per Lamp: N/A  
Luminaire Lumens: 7857.0 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P562995

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-85-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P562995

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-85-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												100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

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

	0°	45°	90°
0°	5385	5385	5385
5°	5312	5306	5299
10°	5266	5259	5222
15°	5124	5072	5001
20°	4936	4856	4724
25°	4733	4630	4341
30°	4486	4342	3911
35°	4248	4013	3618
40°	4007	3657	3291
45°	3777	3381	2976
50°	3496	3138	2654
55°	3234	2844	2377
60°	2963	2540	2129
65°	2607	2224	1885
70°	2148	1948	1602
75°	1708	1491	1563
80°	1148	1075	1004
85°	715	857	1000

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3777 cd/sqm

TEST NUMBER: P562995

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-85-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	372.6	4.7
10°-20°	1022.4	13.0
20°-30°	1415.5	18.0
30°-40°	1509.3	19.2
40°-50°	1377.0	17.5
50°-60°	1078.7	13.7
60°-70°	703.1	8.9
70°-80°	311.5	4.0
80°-90°	66.9	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°	2810.5	35.8
0°-40°	4319.9	55.0
0°-60°	6775.6	86.2
0°-90°	7857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7857.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4002	4002	4002	4002	4002	
5°	3933	3928	3928	3924	3924	373
15°	3678	3678	3641	3604	3590	1034
25°	3188	3169	3118	3008	2924	1464
35°	2586	2568	2443	2258	2202	1617
45°	1985	1943	1777	1629	1564	1529
55°	1379	1337	1212	1069	1013	1237
65°	819	773	699	712	592	807
75°	328	305	287	273	301	352
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



TEST NUMBER: P562995

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-80-85-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4002.3	4002.3	4002.3	4002.3	4002.3
2.5°	3974.5	3974.5	3974.5	3969.9	3969.9
5°	3932.8	3928.2	3928.2	3923.6	3923.6
7.5°	3900.5	3895.8	3891.2	3886.6	3877.3
10°	3854.2	3854.2	3849.6	3826.4	3821.8
12.5°	3780.2	3775.5	3757.0	3724.6	3715.4
15°	3678.4	3678.4	3641.4	3604.3	3590.5
17.5°	3567.3	3562.7	3516.4	3479.4	3460.9
20°	3447.0	3437.8	3391.5	3331.4	3299.0
22.5°	3312.8	3312.8	3257.3	3178.7	3146.3
25°	3187.9	3169.4	3118.5	3007.5	2924.2
27.5°	3044.5	3016.7	2961.2	2803.9	2706.7
30°	2887.2	2873.3	2794.6	2591.1	2517.0
32.5°	2739.1	2716.0	2632.7	2419.9	2359.7
35°	2586.4	2567.9	2443.0	2257.9	2202.4
37.5°	2433.7	2410.6	2253.3	2105.2	2035.8
40°	2281.1	2253.3	2082.1	1947.9	1873.9
42.5°	2137.6	2100.6	1934.0	1790.6	1707.3
45°	1984.9	1943.3	1776.7	1628.7	1563.9
47.5°	1832.2	1795.2	1642.5	1489.9	1415.8
50°	1670.3	1637.9	1499.1	1346.4	1267.8
52.5°	1536.1	1485.2	1351.0	1198.4	1133.6
55°	1378.8	1337.2	1212.2	1068.8	1013.3
57.5°	1235.4	1193.7	1078.1	943.9	897.6
60°	1101.2	1041.0	943.9	828.2	791.2
62.5°	953.1	906.9	823.6	726.4	772.7
65°	819.0	772.7	698.7	712.5	592.2
67.5°	670.9	647.8	583.0	518.2	499.7
70°	546.0	518.2	495.1	425.7	407.2
72.5°	434.9	407.2	374.8	337.8	323.9
75°	328.5	305.4	286.9	273.0	300.7
77.5°	226.7	217.5	203.6	189.7	185.1
80°	148.1	143.4	138.8	134.2	129.6
82.5°	87.9	87.9	87.9	87.9	87.9
85°	46.3	50.9	55.5	60.1	64.8
87.5°	27.8	27.8	32.4	37.0	41.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)