

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: P562491

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562491  
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-LD4-2HI-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

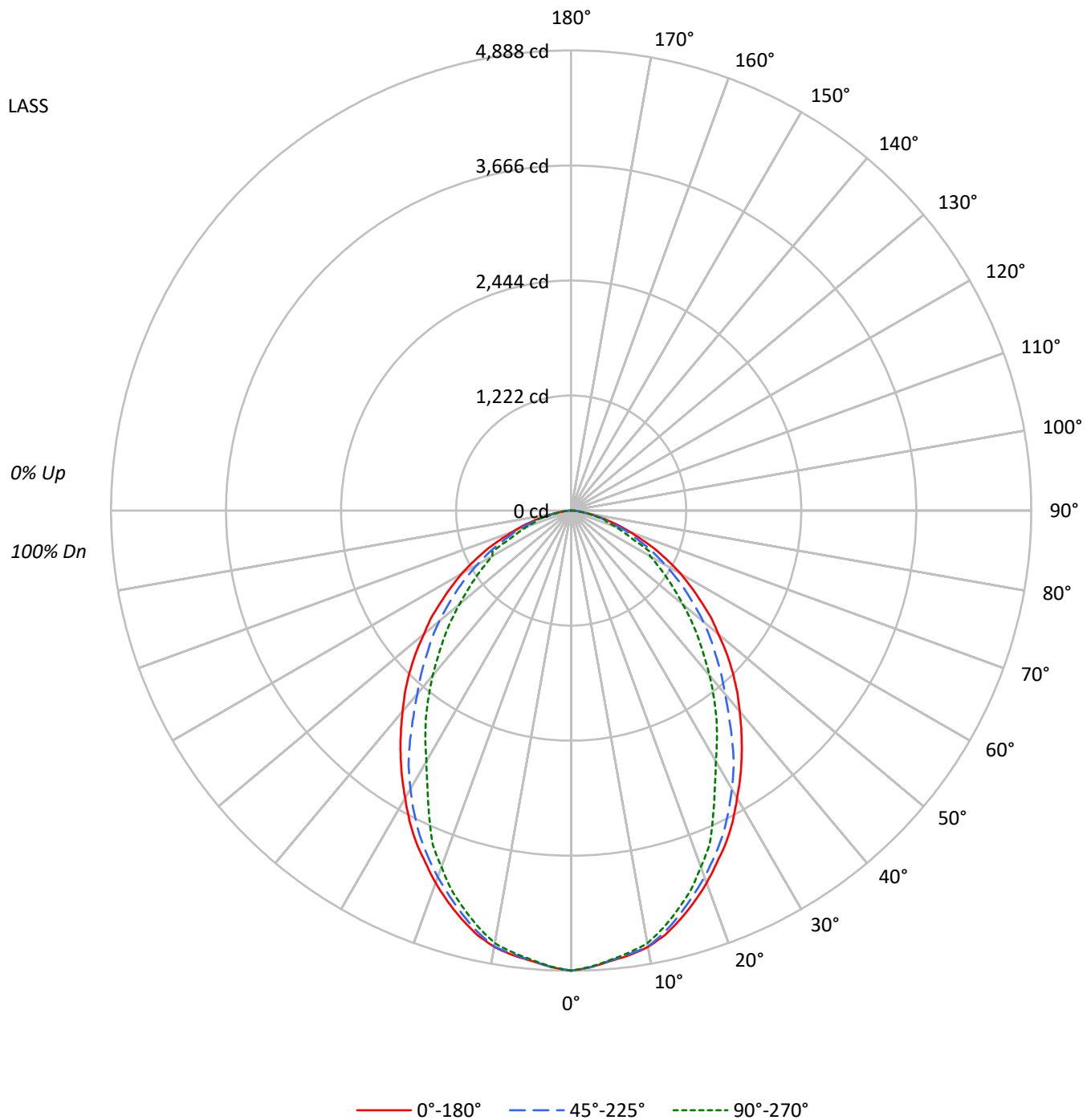
Lumens per Lamp: N/A  
Luminaire Lumens: 9595.0 lumens  
Efficiency: N/A  
Efficacy: 111.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 86.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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### Luminous Intensity Polar Plot





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**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°	6576	6576	6576
5°	6487	6479	6472
10°	6431	6423	6377
15°	6257	6194	6108
20°	6027	5930	5768
25°	5780	5654	5301
30°	5478	5302	4776
35°	5188	4900	4418
40°	4893	4466	4019
45°	4612	4129	3634
50°	4270	3832	3241
55°	3950	3473	2903
60°	3619	3102	2600
65°	3184	2716	2302
70°	2623	2378	1956
75°	2086	1821	1909
80°	1401	1313	1226
85°	872	1047	1221

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4612 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	455.0	4.7
10°-20°	1248.6	13.0
20°-30°	1728.6	18.0
30°-40°	1843.2	19.2
40°-50°	1681.6	17.5
50°-60°	1317.4	13.7
60°-70°	858.6	8.9
70°-80°	380.4	4.0
80°-90°	81.7	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°	3432.2	35.8
0°-40°	5275.4	55.0
0°-60°	8274.3	86.2
0°-90°	9595.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9595.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4888	4888	4888	4888	4888	
5°	4803	4797	4797	4792	4792	456
15°	4492	4492	4447	4402	4385	1263
25°	3893	3870	3808	3673	3571	1787
35°	3159	3136	2983	2757	2690	1975
45°	2424	2373	2170	1989	1910	1867
55°	1684	1633	1480	1305	1237	1510
65°	1000	944	853	870	723	986
75°	401	373	350	333	367	430
85°	56	62	68	74	79	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4887.6	4887.6	4887.6	4887.6	4887.6
2.5°	4853.7	4853.7	4853.7	4848.0	4848.0
5°	4802.8	4797.2	4797.2	4791.5	4791.5
7.5°	4763.3	4757.6	4752.0	4746.3	4735.0
10°	4706.8	4706.8	4701.1	4672.9	4667.2
12.5°	4616.3	4610.7	4588.1	4548.5	4537.2
15°	4492.0	4492.0	4446.8	4401.6	4384.7
17.5°	4356.4	4350.8	4294.3	4249.1	4226.5
20°	4209.5	4198.2	4141.7	4068.3	4028.7
22.5°	4045.7	4045.7	3977.9	3881.8	3842.2
25°	3893.1	3870.5	3808.3	3672.7	3571.0
27.5°	3717.9	3684.0	3616.2	3424.1	3305.5
30°	3525.8	3508.9	3412.8	3164.2	3073.8
32.5°	3345.0	3316.8	3215.1	2955.1	2881.7
35°	3158.6	3136.0	2983.4	2757.4	2689.6
37.5°	2972.1	2943.8	2751.7	2570.9	2486.2
40°	2785.6	2751.7	2542.7	2378.8	2288.4
42.5°	2610.5	2565.3	2361.9	2186.7	2085.0
45°	2424.0	2373.2	2169.7	1988.9	1909.8
47.5°	2237.5	2192.3	2005.9	1819.4	1729.0
50°	2039.8	2000.2	1830.7	1644.3	1548.2
52.5°	1875.9	1813.8	1649.9	1463.4	1384.3
55°	1683.8	1633.0	1480.4	1305.2	1237.4
57.5°	1508.6	1457.8	1316.5	1152.7	1096.2
60°	1344.8	1271.3	1152.7	1011.4	966.2
62.5°	1164.0	1107.5	1005.8	887.1	943.6
65°	1000.1	943.6	853.2	870.2	723.2
67.5°	819.3	791.1	711.9	632.8	610.2
70°	666.7	632.8	604.6	519.8	497.2
72.5°	531.1	497.2	457.7	412.5	395.5
75°	401.2	372.9	350.3	333.4	367.3
77.5°	276.9	265.6	248.6	231.7	226.0
80°	180.8	175.2	169.5	163.9	158.2
82.5°	107.4	107.4	107.4	107.4	107.4
85°	56.5	62.2	67.8	73.5	79.1
87.5°	33.9	33.9	39.6	45.2	50.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)