

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: P563190

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563190  
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-LD4-3HI-50-UNV-80-87-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

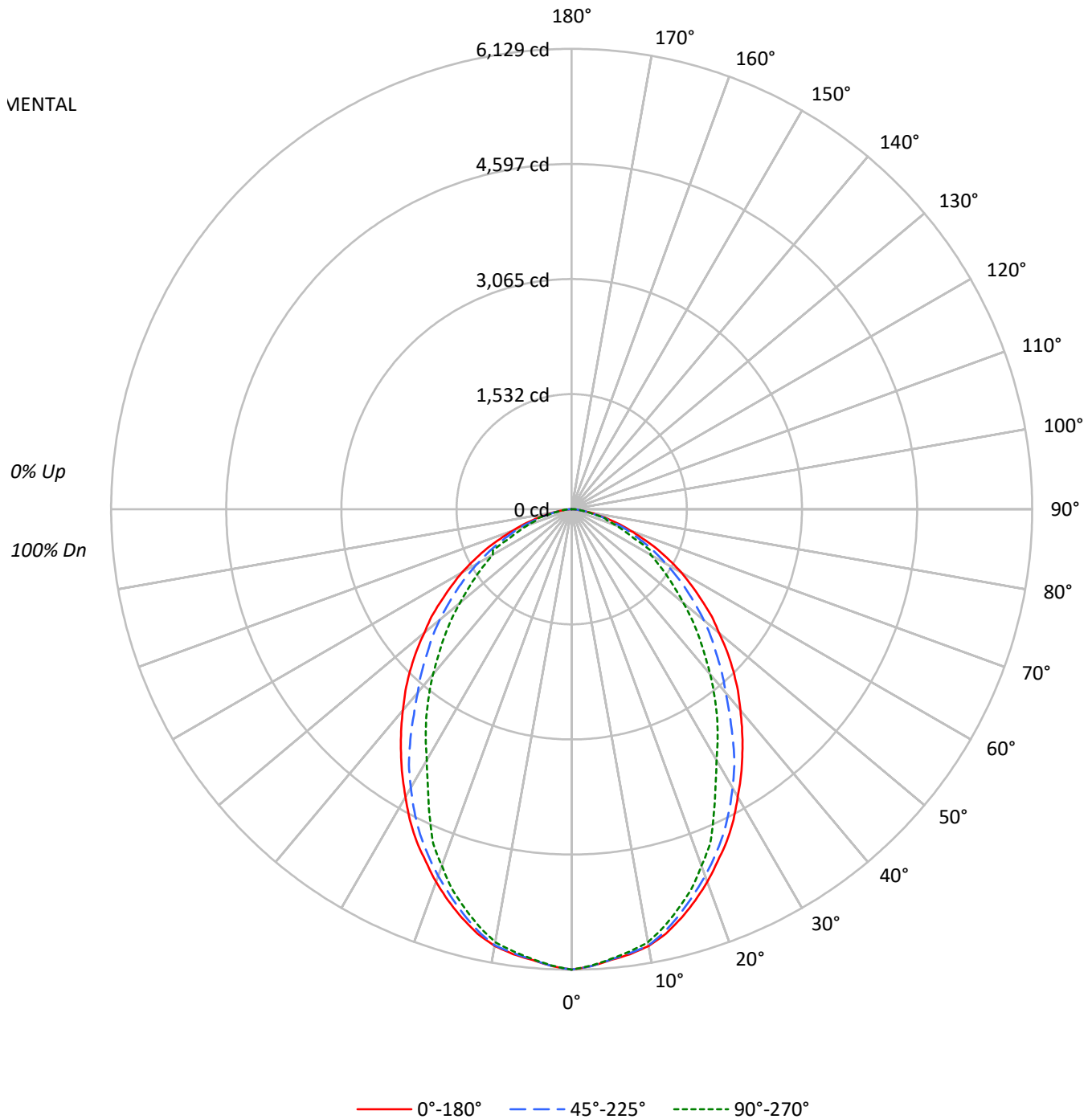
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12032.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 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): 129.6  
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



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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°	8246	8246	8246
5°	8134	8125	8115
10°	8064	8054	7996
15°	7847	7768	7659
20°	7558	7437	7234
25°	7248	7090	6648
30°	6869	6649	5988
35°	6506	6145	5540
40°	6135	5600	5040
45°	5784	5177	4557
50°	5354	4805	4064
55°	4953	4355	3640
60°	4538	3890	3260
65°	3993	3406	2887
70°	3289	2982	2453
75°	2615	2284	2394
80°	1757	1647	1537
85°	1095	1312	1531

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5784 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	570.5	4.7
10°-20°	1565.7	13.0
20°-30°	2167.7	18.0
30°-40°	2311.4	19.2
40°-50°	2108.6	17.5
50°-60°	1651.9	13.7
60°-70°	1076.7	8.9
70°-80°	477.0	4.0
80°-90°	102.4	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°	4303.9	35.8
0°-40°	6615.3	55.0
0°-60°	10375.9	86.2
0°-90°	12032.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12032.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6129	6129	6129	6129	6129	
5°	6023	6016	6016	6008	6008	572
15°	5633	5633	5576	5520	5498	1584
25°	4882	4854	4776	4606	4478	2241
35°	3961	3932	3741	3458	3373	2476
45°	3040	2976	2721	2494	2395	2341
55°	2112	2048	1856	1637	1552	1894
65°	1254	1183	1070	1091	907	1236
75°	503	468	439	418	461	539
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6128.9	6128.9	6128.9	6128.9	6128.9
2.5°	6086.4	6086.4	6086.4	6079.3	6079.3
5°	6022.7	6015.6	6015.6	6008.5	6008.5
7.5°	5973.1	5966.0	5958.9	5951.8	5937.6
10°	5902.2	5902.2	5895.1	5859.7	5852.6
12.5°	5788.8	5781.8	5753.4	5703.8	5689.6
15°	5633.0	5633.0	5576.3	5519.6	5498.3
17.5°	5462.9	5455.8	5385.0	5328.3	5299.9
20°	5278.7	5264.5	5193.7	5101.5	5051.9
22.5°	5073.2	5073.2	4988.2	4867.7	4818.1
25°	4881.9	4853.6	4775.6	4605.6	4478.0
27.5°	4662.2	4619.7	4534.7	4293.8	4145.0
30°	4421.3	4400.1	4279.6	3967.9	3854.5
32.5°	4194.6	4159.2	4031.6	3705.7	3613.6
35°	3960.8	3932.4	3741.1	3457.7	3372.7
37.5°	3727.0	3691.5	3450.6	3223.9	3117.6
40°	3493.1	3450.6	3188.5	2983.0	2869.6
42.5°	3273.5	3216.8	2961.7	2742.1	2614.5
45°	3039.7	2975.9	2720.8	2494.1	2394.9
47.5°	2805.9	2749.2	2515.3	2281.5	2168.2
50°	2557.9	2508.3	2295.7	2061.9	1941.4
52.5°	2352.4	2274.4	2069.0	1835.1	1735.9
55°	2111.5	2047.7	1856.4	1636.7	1551.7
57.5°	1891.8	1828.1	1650.9	1445.4	1374.6
60°	1686.3	1594.2	1445.4	1268.3	1211.6
62.5°	1459.6	1388.8	1261.2	1112.4	1183.3
65°	1254.1	1183.3	1069.9	1091.2	906.9
67.5°	1027.4	992.0	892.8	793.6	765.2
70°	836.1	793.6	758.1	651.9	623.5
72.5°	666.0	623.5	573.9	517.2	496.0
75°	503.1	467.6	439.3	418.0	460.6
77.5°	347.2	333.0	311.8	290.5	283.4
80°	226.7	219.6	212.6	205.5	198.4
82.5°	134.6	134.6	134.6	134.6	134.6
85°	70.9	77.9	85.0	92.1	99.2
87.5°	42.5	42.5	49.6	56.7	63.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)