

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: P590008

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-80-87-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590008  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-1LO-50-UNV-80-87-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

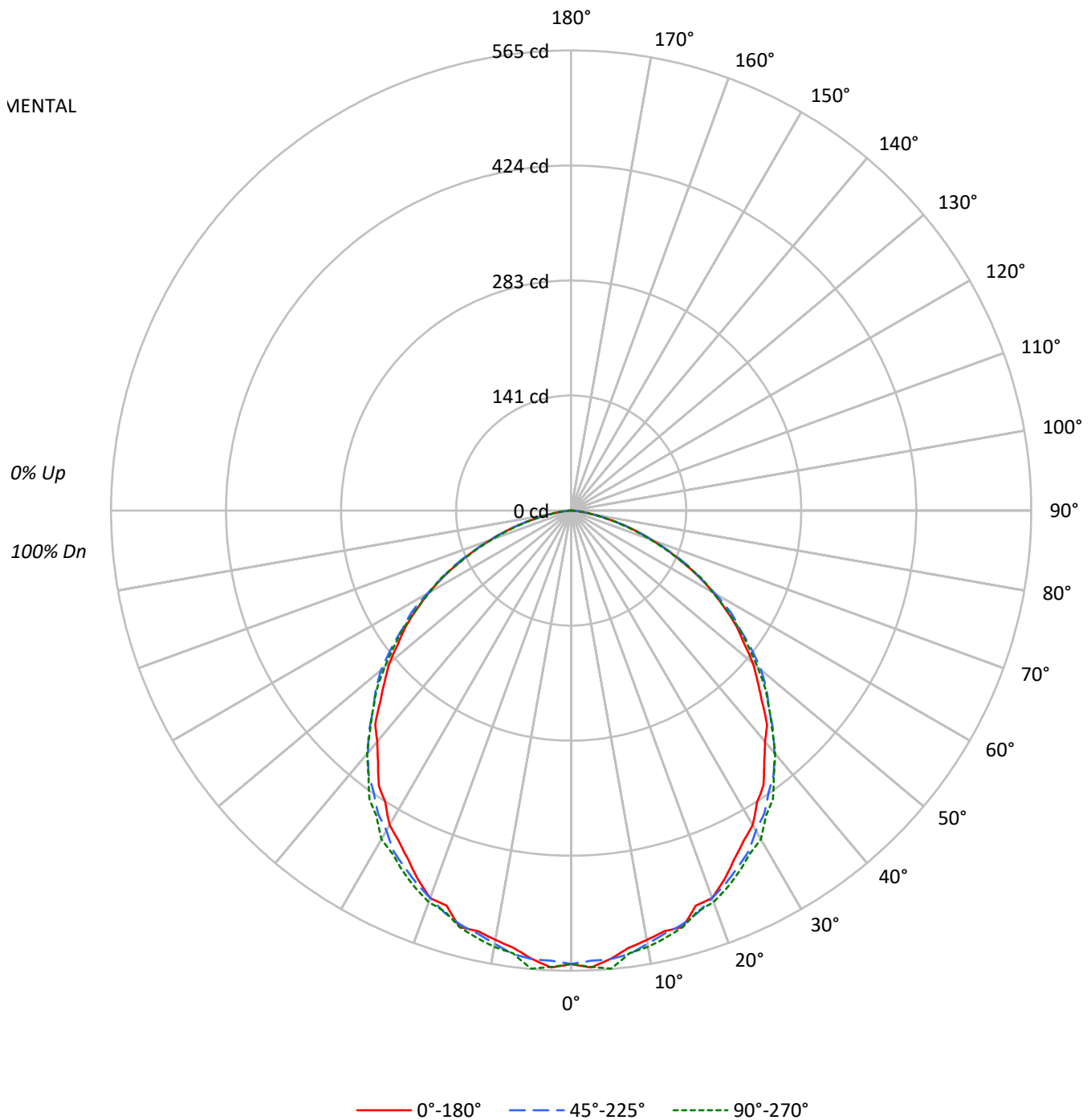
Lumens per Lamp: N/A  
Luminaire Lumens: 1403.0 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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

	0°	45°	90°
0°	1498	1498	1498
5°	1493	1494	1525
10°	1463	1476	1486
15°	1474	1466	1475
20°	1449	1449	1465
25°	1405	1436	1451
30°	1386	1410	1447
35°	1353	1388	1419
40°	1300	1363	1369
45°	1261	1306	1308
50°	1220	1275	1250
55°	1162	1185	1176
60°	1087	1097	1077
65°	969	993	962
70°	832	834	811
75°	658	657	631
80°	442	429	412
85°	241	238	222

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 1340 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.4	3.7
10°-20°	148.4	10.6
20°-30°	222.3	15.8
30°-40°	263.5	18.8
40°-50°	264.0	18.8
50°-60°	224.1	16.0
60°-70°	151.1	10.8
70°-80°	66.4	4.7
80°-90°	10.8	0.8
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°	423.1	30.2
0°-40°	686.6	48.9
0°-60°	1174.7	83.7
0°-90°	1403.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1403.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	553	551	553	551	565	52
15°	529	523	526	529	529	147
25°	473	476	484	490	489	219
35°	412	413	423	432	432	256
45°	331	338	343	352	344	256
55°	248	246	252	251	251	220
65°	152	150	156	150	151	151
75°	63	62	63	59	61	68
85°	8	8	8	8	7	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	556.7	556.7	556.7	556.7	556.7
2.5°	561.5	557.2	553.3	557.9	560.7
5°	552.7	551.4	552.9	551.3	564.6
7.5°	541.4	546.3	549.2	547.4	548.2
10°	535.3	533.6	540.0	544.5	543.8
12.5°	528.9	531.4	531.8	536.6	537.1
15°	529.2	523.1	526.3	529.1	529.3
17.5°	508.7	515.3	517.5	523.8	516.0
20°	506.1	501.3	506.1	512.5	511.5
22.5°	490.7	485.3	495.7	501.3	501.0
25°	473.2	475.7	483.5	489.8	488.8
27.5°	457.8	460.8	471.9	480.6	475.0
30°	445.9	444.4	453.7	461.5	465.8
32.5°	424.7	430.2	441.1	448.8	444.7
35°	411.8	413.1	422.6	432.4	432.1
37.5°	389.3	395.0	408.5	411.2	408.7
40°	370.2	375.8	388.0	390.9	389.7
42.5°	356.0	357.0	367.4	370.8	365.4
45°	331.3	337.5	343.1	352.0	343.6
47.5°	310.4	313.2	325.3	327.7	323.3
50°	291.3	292.3	304.5	301.5	298.6
52.5°	267.4	271.6	278.4	277.9	274.5
55°	247.7	246.0	252.5	250.8	250.7
57.5°	224.0	226.9	232.2	229.5	225.1
60°	201.9	202.0	203.9	200.8	200.2
62.5°	177.2	178.1	178.5	174.7	180.9
65°	152.2	150.1	156.0	150.1	151.1
67.5°	129.1	130.1	129.5	125.8	127.2
70°	105.7	107.0	106.0	101.8	103.1
72.5°	84.2	82.7	83.7	78.3	80.8
75°	63.3	62.0	63.2	58.7	60.7
77.5°	43.1	44.1	43.4	41.0	42.4
80°	28.5	27.7	27.7	26.3	26.6
82.5°	16.6	15.8	15.6	15.2	15.8
85°	7.8	7.5	7.7	7.5	7.2
87.5°	2.8	2.9	2.9	2.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)