

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: P559882

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559882  
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-12-2-LD4-1LO-40-UNV-81-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

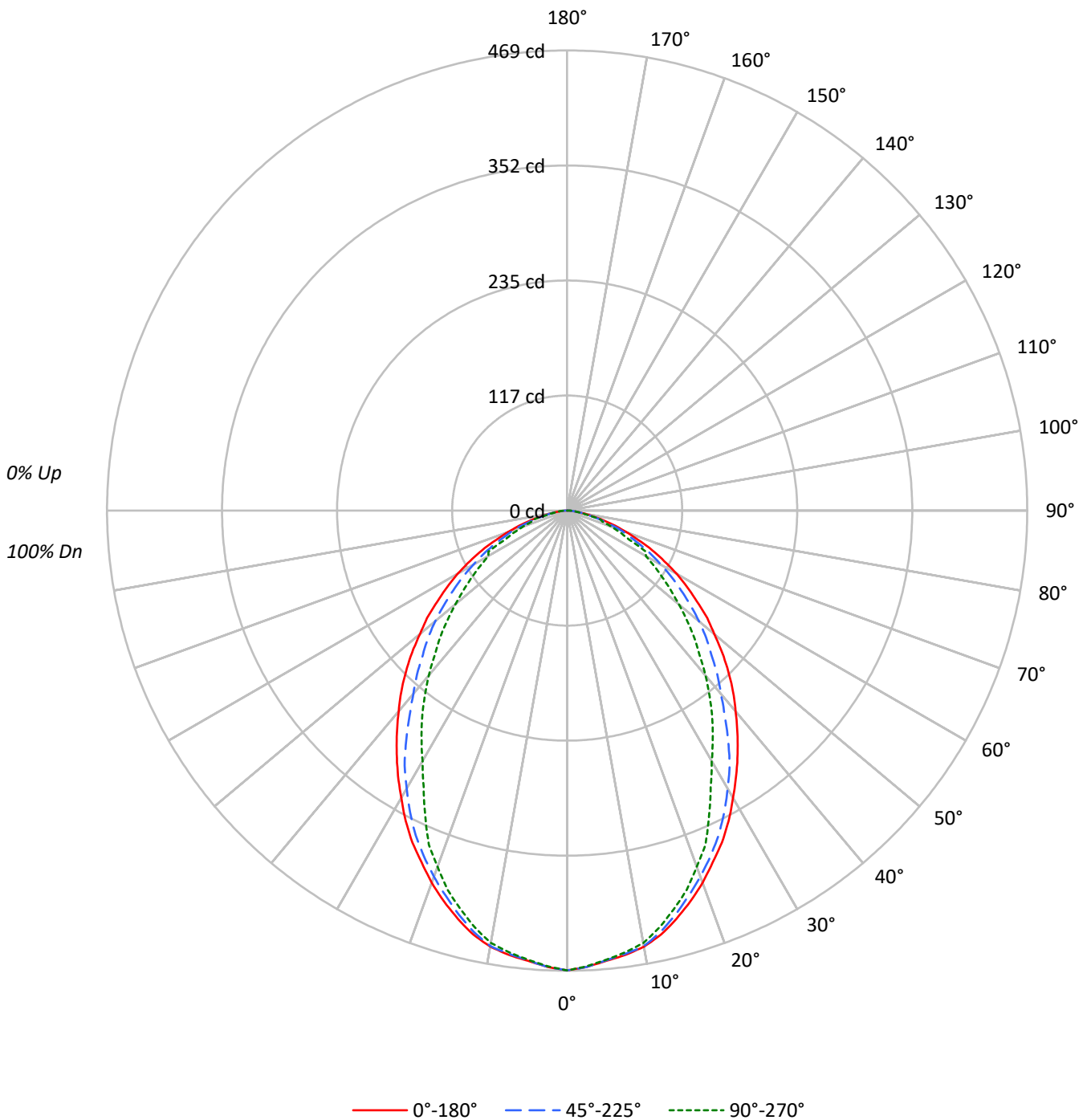
Lumens per Lamp: N/A  
Luminaire Lumens: 920.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2522	2522	2522
5°	2488	2485	2482
10°	2466	2464	2446
15°	2400	2376	2342
20°	2312	2274	2212
25°	2217	2169	2033
30°	2101	2033	1831
35°	1990	1880	1694
40°	1877	1713	1541
45°	1769	1583	1394
50°	1638	1469	1243
55°	1514	1331	1113
60°	1387	1189	997
65°	1221	1042	883
70°	1006	913	751
75°	801	699	732
80°	536	505	471
85°	333	401	469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1769 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.6	4.7
10°-20°	119.7	13.0
20°-30°	165.7	18.0
30°-40°	176.7	19.2
40°-50°	161.2	17.5
50°-60°	126.3	13.7
60°-70°	82.3	8.9
70°-80°	36.5	4.0
80°-90°	7.8	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°	329.1	35.8
0°-40°	505.8	55.0
0°-60°	793.4	86.2
0°-90°	920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	920.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	469	469	469	469	469	
5°	460	460	460	459	459	44
15°	431	431	426	422	420	121
25°	373	371	365	352	342	171
35°	303	301	286	264	258	189
45°	232	228	208	191	183	179
55°	161	157	142	125	119	145
65°	96	90	82	83	69	95
75°	38	36	34	32	35	41
85°	5	6	6	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	468.6	468.6	468.6	468.6	468.6
2.5°	465.4	465.4	465.4	464.8	464.8
5°	460.5	460.0	460.0	459.4	459.4
7.5°	456.7	456.2	455.6	455.1	454.0
10°	451.3	451.3	450.8	448.0	447.5
12.5°	442.6	442.1	439.9	436.1	435.0
15°	430.7	430.7	426.4	422.0	420.4
17.5°	417.7	417.2	411.7	407.4	405.2
20°	403.6	402.5	397.1	390.1	386.3
22.5°	387.9	387.9	381.4	372.2	368.4
25°	373.3	371.1	365.2	352.2	342.4
27.5°	356.5	353.2	346.7	328.3	316.9
30°	338.1	336.4	327.2	303.4	294.7
32.5°	320.7	318.0	308.3	283.3	276.3
35°	302.9	300.7	286.1	264.4	257.9
37.5°	285.0	282.3	263.8	246.5	238.4
40°	267.1	263.8	243.8	228.1	219.4
42.5°	250.3	246.0	226.5	209.7	199.9
45°	232.4	227.5	208.0	190.7	183.1
47.5°	214.5	210.2	192.3	174.5	165.8
50°	195.6	191.8	175.5	157.7	148.4
52.5°	179.9	173.9	158.2	140.3	132.7
55°	161.4	156.6	141.9	125.2	118.6
57.5°	144.7	139.8	126.2	110.5	105.1
60°	128.9	121.9	110.5	97.0	92.6
62.5°	111.6	106.2	96.4	85.1	90.5
65°	95.9	90.5	81.8	83.4	69.3
67.5°	78.6	75.8	68.3	60.7	58.5
70°	63.9	60.7	58.0	49.8	47.7
72.5°	50.9	47.7	43.9	39.5	37.9
75°	38.5	35.8	33.6	32.0	35.2
77.5°	26.5	25.5	23.8	22.2	21.7
80°	17.3	16.8	16.3	15.7	15.2
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	6.0	6.5	7.0	7.6
87.5°	3.3	3.3	3.8	4.3	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)