

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: P559897

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559897  
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-82-88-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

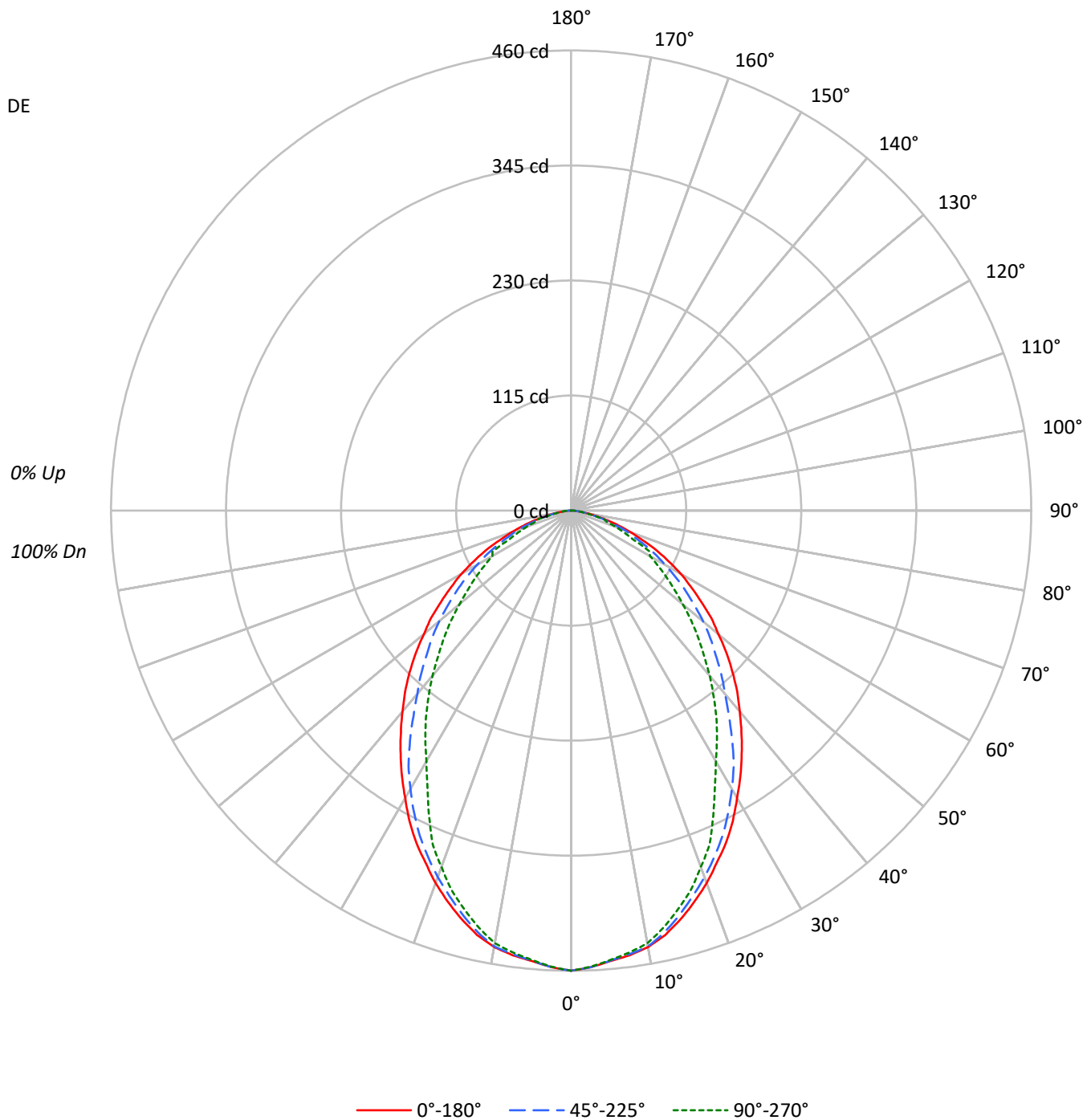
Lumens per Lamp: N/A  
Luminaire Lumens: 903.0 lumens  
Efficiency: N/A  
Efficacy: 77.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2476	2476	2476
5°	2442	2439	2436
10°	2421	2418	2400
15°	2356	2332	2299
20°	2269	2233	2171
25°	2176	2128	1996
30°	2062	1996	1798
35°	1953	1845	1663
40°	1842	1681	1513
45°	1736	1554	1368
50°	1608	1443	1220
55°	1487	1307	1093
60°	1363	1168	978
65°	1198	1023	867
70°	987	895	736
75°	786	686	719
80°	527	496	462
85°	327	395	457

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1736 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.8	4.7
10°-20°	117.5	13.0
20°-30°	162.7	18.0
30°-40°	173.5	19.2
40°-50°	158.3	17.5
50°-60°	124.0	13.7
60°-70°	80.8	8.9
70°-80°	35.8	4.0
80°-90°	7.7	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°	323.0	35.8
0°-40°	496.5	55.0
0°-60°	778.7	86.2
0°-90°	903.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	903.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	452	452	452	451	451	43
15°	423	423	418	414	413	119
25°	366	364	358	346	336	168
35°	297	295	281	260	253	186
45°	228	223	204	187	180	176
55°	158	154	139	123	116	142
65°	94	89	80	82	68	93
75°	38	35	33	31	35	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	460.0	460.0	460.0	460.0	460.0
2.5°	456.8	456.8	456.8	456.3	456.3
5°	452.0	451.5	451.5	450.9	450.9
7.5°	448.3	447.7	447.2	446.7	445.6
10°	443.0	443.0	442.4	439.8	439.2
12.5°	434.5	433.9	431.8	428.1	427.0
15°	422.8	422.8	418.5	414.2	412.6
17.5°	410.0	409.5	404.1	399.9	397.8
20°	396.2	395.1	389.8	382.9	379.1
22.5°	380.7	380.7	374.4	365.3	361.6
25°	366.4	364.3	358.4	345.6	336.1
27.5°	349.9	346.7	340.3	322.2	311.1
30°	331.8	330.2	321.2	297.8	289.3
32.5°	314.8	312.1	302.6	278.1	271.2
35°	297.3	295.1	280.8	259.5	253.1
37.5°	279.7	277.0	259.0	242.0	234.0
40°	262.2	259.0	239.3	223.9	215.4
42.5°	245.7	241.4	222.3	205.8	196.2
45°	228.1	223.3	204.2	187.2	179.7
47.5°	210.6	206.3	188.8	171.2	162.7
50°	192.0	188.2	172.3	154.7	145.7
52.5°	176.5	170.7	155.3	137.7	130.3
55°	158.5	153.7	139.3	122.8	116.5
57.5°	142.0	137.2	123.9	108.5	103.2
60°	126.6	119.6	108.5	95.2	90.9
62.5°	109.5	104.2	94.7	83.5	88.8
65°	94.1	88.8	80.3	81.9	68.1
67.5°	77.1	74.4	67.0	59.6	57.4
70°	62.7	59.6	56.9	48.9	46.8
72.5°	50.0	46.8	43.1	38.8	37.2
75°	37.8	35.1	33.0	31.4	34.6
77.5°	26.1	25.0	23.4	21.8	21.3
80°	17.0	16.5	16.0	15.4	14.9
82.5°	10.1	10.1	10.1	10.1	10.1
85°	5.3	5.8	6.4	6.9	7.4
87.5°	3.2	3.2	3.7	4.3	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)