

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: P558936

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558936  
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-12-1-LD4-1STD-40-UNV-82-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

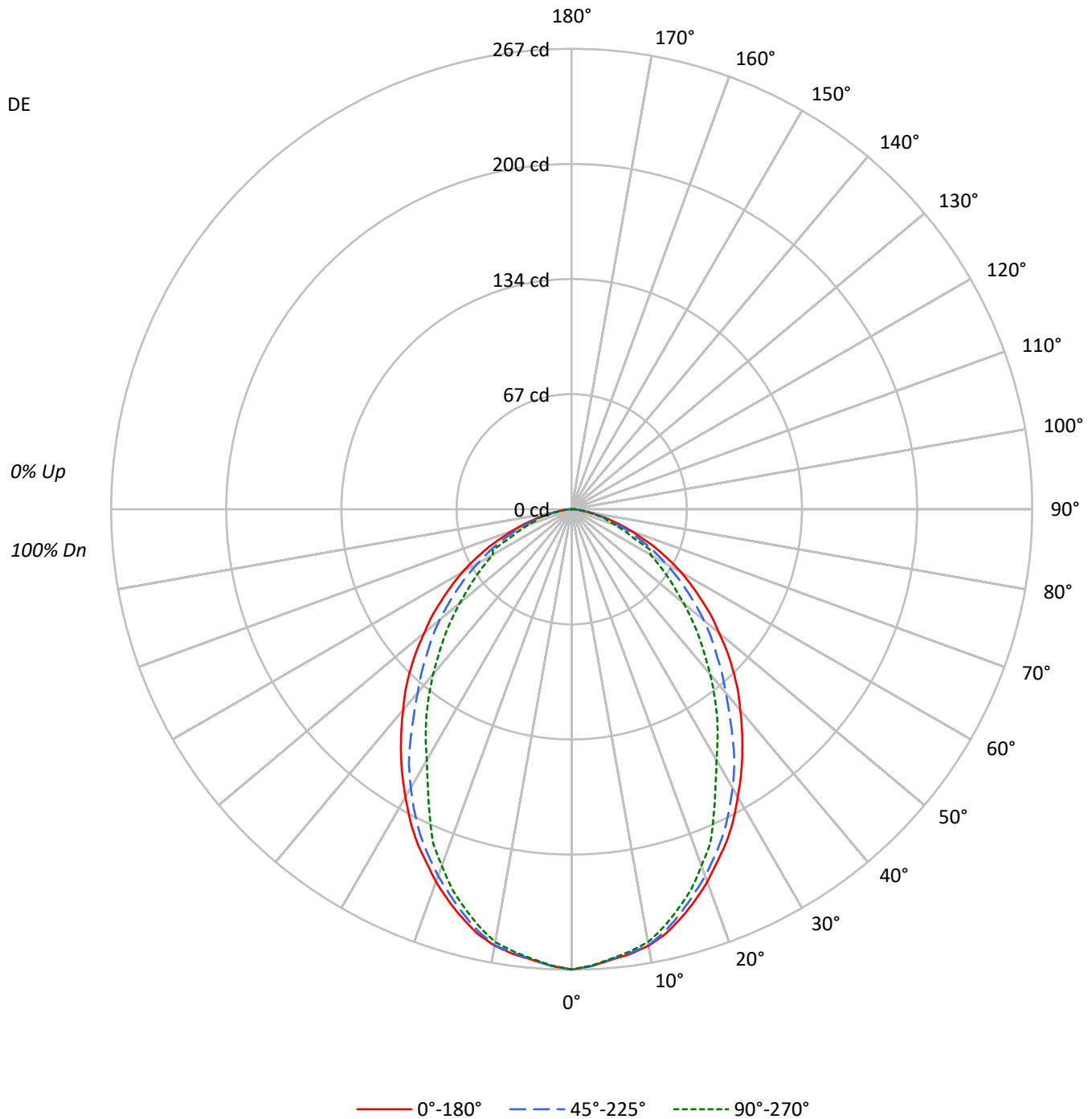
Lumens per Lamp: N/A  
Luminaire Lumens: 524.0 lumens  
Efficiency: N/A  
Efficacy: 63.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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	47	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°	2873	2873	2873
5°	2834	2831	2828
10°	2809	2806	2786
15°	2734	2706	2669
20°	2633	2591	2520
25°	2525	2470	2316
30°	2394	2317	2087
35°	2267	2141	1930
40°	2137	1952	1756
45°	2015	1804	1588
50°	1865	1675	1415
55°	1727	1516	1269
60°	1580	1354	1137
65°	1391	1187	1006
70°	1146	1039	856
75°	911	794	836
80°	614	576	533
85°	383	457	531

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2015 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.8	4.7
10°-20°	68.2	13.0
20°-30°	94.4	18.0
30°-40°	100.7	19.2
40°-50°	91.8	17.5
50°-60°	71.9	13.7
60°-70°	46.9	8.9
70°-80°	20.8	4.0
80°-90°	4.5	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°	187.4	35.8
0°-40°	288.1	55.0
0°-60°	451.9	86.2
0°-90°	524.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	524.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	267	267	267	267	267	
5°	262	262	262	262	262	25
15°	245	245	243	240	240	69
25°	213	211	208	201	195	98
35°	172	171	163	151	147	108
45°	132	130	118	109	104	102
55°	92	89	81	71	68	82
65°	55	52	47	48	40	54
75°	22	20	19	18	20	23
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	266.9	266.9	266.9	266.9	266.9
2.5°	265.1	265.1	265.1	264.8	264.8
5°	262.3	262.0	262.0	261.7	261.7
7.5°	260.1	259.8	259.5	259.2	258.6
10°	257.0	257.0	256.7	255.2	254.9
12.5°	252.1	251.8	250.6	248.4	247.8
15°	245.3	245.3	242.8	240.4	239.5
17.5°	237.9	237.6	234.5	232.0	230.8
20°	229.9	229.3	226.2	222.2	220.0
22.5°	220.9	220.9	217.2	212.0	209.8
25°	212.6	211.4	208.0	200.6	195.0
27.5°	203.0	201.2	197.5	187.0	180.5
30°	192.6	191.6	186.4	172.8	167.9
32.5°	182.7	181.1	175.6	161.4	157.4
35°	172.5	171.3	162.9	150.6	146.9
37.5°	162.3	160.8	150.3	140.4	135.8
40°	152.1	150.3	138.9	129.9	125.0
42.5°	142.6	140.1	129.0	119.4	113.9
45°	132.4	129.6	118.5	108.6	104.3
47.5°	122.2	119.7	109.5	99.4	94.4
50°	111.4	109.2	100.0	89.8	84.5
52.5°	102.4	99.1	90.1	79.9	75.6
55°	92.0	89.2	80.8	71.3	67.6
57.5°	82.4	79.6	71.9	62.9	59.9
60°	73.4	69.4	62.9	55.2	52.8
62.5°	63.6	60.5	54.9	48.4	51.5
65°	54.6	51.5	46.6	47.5	39.5
67.5°	44.7	43.2	38.9	34.6	33.3
70°	36.4	34.6	33.0	28.4	27.2
72.5°	29.0	27.2	25.0	22.5	21.6
75°	21.9	20.4	19.1	18.2	20.1
77.5°	15.1	14.5	13.6	12.7	12.3
80°	9.9	9.6	9.3	8.9	8.6
82.5°	5.9	5.9	5.9	5.9	5.9
85°	3.1	3.4	3.7	4.0	4.3
87.5°	1.9	1.9	2.2	2.5	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)