

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: P559558

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559558  
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-LD4-2STD-50-UNV-81-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

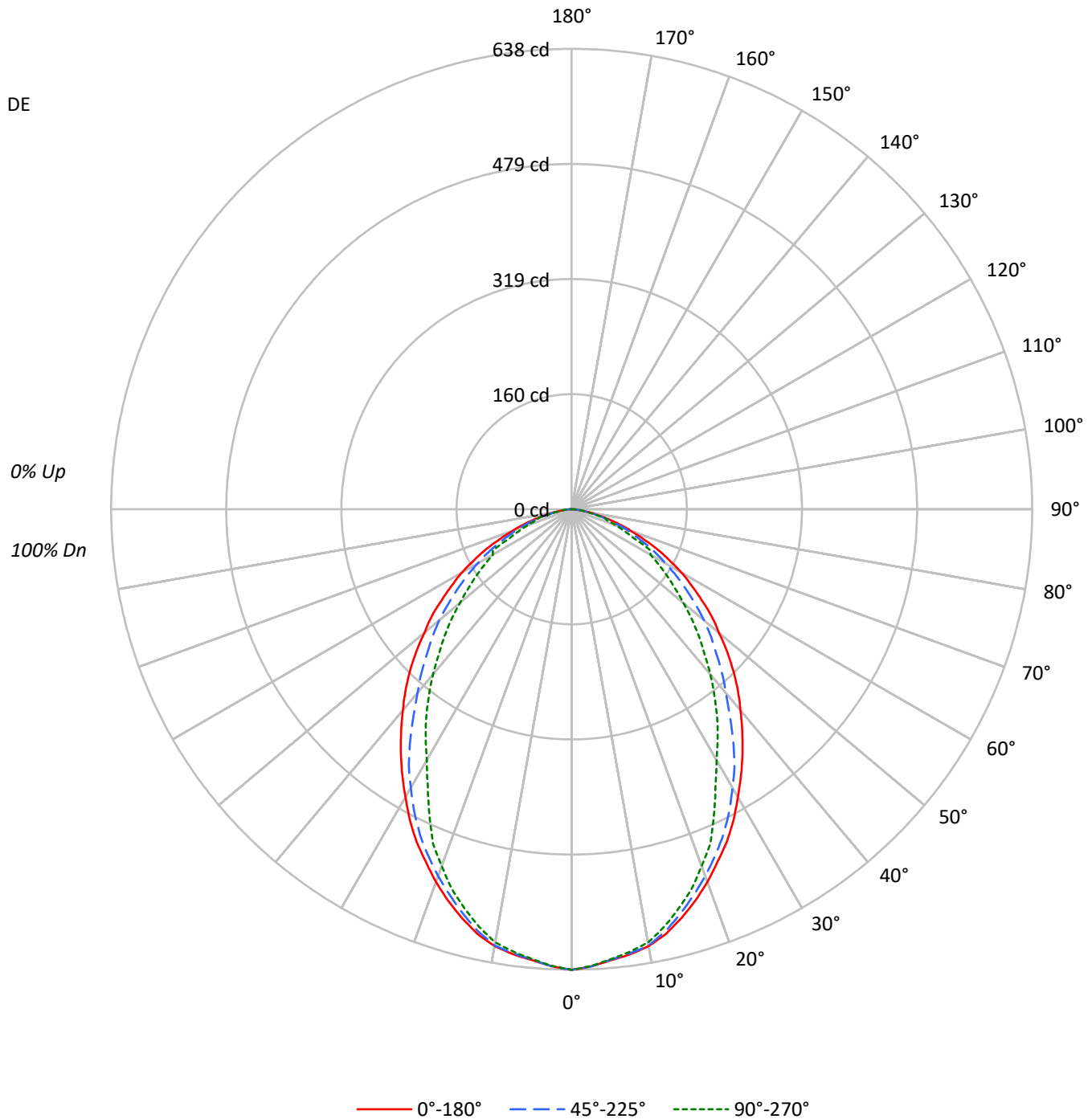
Lumens per Lamp: N/A  
Luminaire Lumens: 1253.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6871	6871	6871
5°	6777	6769	6761
10°	6718	6710	6662
15°	6537	6471	6381
20°	6297	6196	6026
25°	6038	5906	5538
30°	5722	5540	4989
35°	5420	5119	4615
40°	5112	4665	4199
45°	4818	4313	3796
50°	4461	4004	3386
55°	4127	3628	3033
60°	3780	3240	2717
65°	3326	2837	2404
70°	2741	2486	2043
75°	2179	1901	1996
80°	1463	1370	1283
85°	914	1099	1272

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4818 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.4	4.7
10°-20°	163.1	13.0
20°-30°	225.7	18.0
30°-40°	240.7	19.2
40°-50°	219.6	17.5
50°-60°	172.0	13.7
60°-70°	112.1	8.9
70°-80°	49.7	4.0
80°-90°	10.7	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°	448.2	35.8
0°-40°	688.9	55.0
0°-60°	1080.5	86.2
0°-90°	1253.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1253.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	627	626	626	626	626	60
15°	587	587	581	575	573	165
25°	508	505	497	480	466	233
35°	412	410	390	360	351	258
45°	316	310	283	260	249	244
55°	220	213	193	170	162	197
65°	131	123	111	114	94	129
75°	52	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	638.3	638.3	638.3	638.3	638.3
2.5°	633.8	633.8	633.8	633.1	633.1
5°	627.2	626.5	626.5	625.7	625.7
7.5°	622.0	621.3	620.6	619.8	618.3
10°	614.6	614.6	613.9	610.2	609.5
12.5°	602.8	602.1	599.2	594.0	592.5
15°	586.6	586.6	580.7	574.8	572.6
17.5°	568.9	568.2	560.8	554.9	551.9
20°	549.7	548.2	540.9	531.3	526.1
22.5°	528.3	528.3	519.5	506.9	501.8
25°	508.4	505.4	497.3	479.6	466.3
27.5°	485.5	481.1	472.2	447.2	431.7
30°	460.4	458.2	445.7	413.2	401.4
32.5°	436.8	433.1	419.9	385.9	376.3
35°	412.5	409.5	389.6	360.1	351.2
37.5°	388.1	384.4	359.3	335.7	324.7
40°	363.8	359.3	332.0	310.6	298.8
42.5°	340.9	335.0	308.4	285.6	272.3
45°	316.5	309.9	283.3	259.7	249.4
47.5°	292.2	286.3	261.9	237.6	225.8
50°	266.4	261.2	239.1	214.7	202.2
52.5°	245.0	236.9	215.5	191.1	180.8
55°	219.9	213.2	193.3	170.4	161.6
57.5°	197.0	190.4	171.9	150.5	143.1
60°	175.6	166.0	150.5	132.1	126.2
62.5°	152.0	144.6	131.3	115.8	123.2
65°	130.6	123.2	111.4	113.6	94.4
67.5°	107.0	103.3	93.0	82.6	79.7
70°	87.1	82.6	79.0	67.9	64.9
72.5°	69.4	64.9	59.8	53.9	51.7
75°	52.4	48.7	45.7	43.5	48.0
77.5°	36.2	34.7	32.5	30.3	29.5
80°	23.6	22.9	22.1	21.4	20.7
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.9	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)