

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: P559438

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-81-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559438  
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-35-UNV-81-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

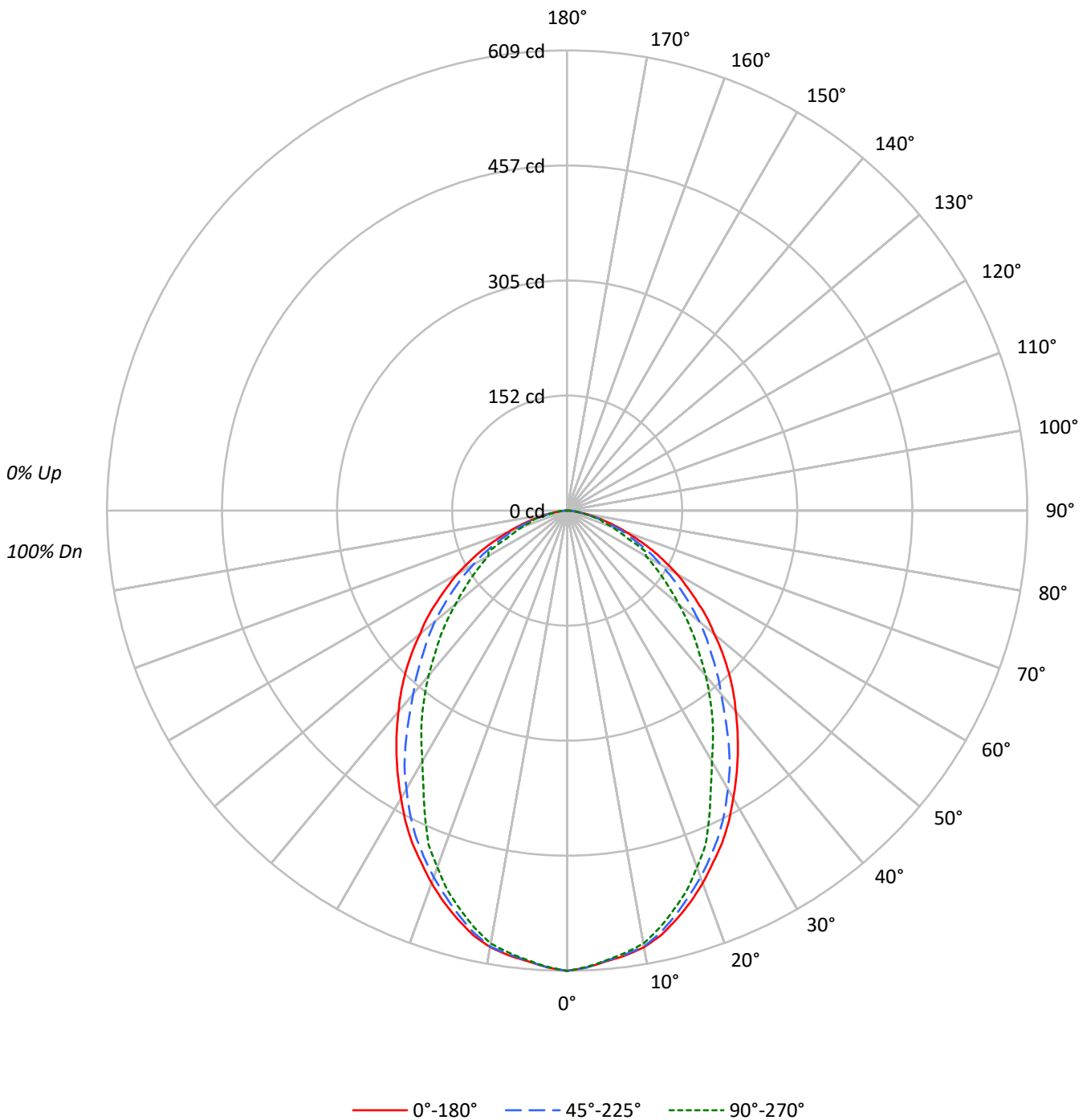
Lumens per Lamp: N/A  
Luminaire Lumens: 1196.0 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6557	6557	6557
5°	6469	6461	6454
10°	6413	6405	6359
15°	6239	6177	6090
20°	6010	5914	5753
25°	5764	5638	5286
30°	5463	5287	4762
35°	5173	4887	4406
40°	4879	4453	4007
45°	4599	4118	3624
50°	4258	3821	3232
55°	3939	3462	2894
60°	3608	3094	2592
65°	3176	2710	2297
70°	2615	2373	1951
75°	2079	1817	1905
80°	1395	1308	1221
85°	865	1050	1223

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4599 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	4.7
10°-20°	155.6	13.0
20°-30°	215.5	18.0
30°-40°	229.8	19.2
40°-50°	209.6	17.5
50°-60°	164.2	13.7
60°-70°	107.0	8.9
70°-80°	47.4	4.0
80°-90°	10.2	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°	427.8	35.8
0°-40°	657.6	55.0
0°-60°	1031.4	86.2
0°-90°	1196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1196.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	599	598	598	597	597	57
15°	560	560	554	549	546	157
25°	485	482	475	458	445	223
35°	394	391	372	344	335	246
45°	302	296	270	248	238	233
55°	210	204	184	163	154	188
65°	125	118	106	108	90	123
75°	50	46	44	42	46	54
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	609.2	609.2	609.2	609.2	609.2
2.5°	605.0	605.0	605.0	604.3	604.3
5°	598.7	598.0	598.0	597.3	597.3
7.5°	593.7	593.0	592.3	591.6	590.2
10°	586.7	586.7	586.0	582.5	581.8
12.5°	575.4	574.7	571.9	567.0	565.6
15°	559.9	559.9	554.3	548.7	546.5
17.5°	543.0	542.3	535.3	529.6	526.8
20°	524.7	523.3	516.3	507.1	502.2
22.5°	504.3	504.3	495.8	483.9	478.9
25°	485.3	482.5	474.7	457.8	445.1
27.5°	463.4	459.2	450.8	426.8	412.0
30°	439.5	437.4	425.4	394.4	383.1
32.5°	417.0	413.4	400.8	368.4	359.2
35°	393.7	390.9	371.9	343.7	335.3
37.5°	370.5	366.9	343.0	320.5	309.9
40°	347.2	343.0	316.9	296.5	285.2
42.5°	325.4	319.8	294.4	272.6	259.9
45°	302.1	295.8	270.5	247.9	238.1
47.5°	278.9	273.3	250.0	226.8	215.5
50°	254.3	249.3	228.2	205.0	193.0
52.5°	233.8	226.1	205.7	182.4	172.6
55°	209.9	203.5	184.5	162.7	154.2
57.5°	188.1	181.7	164.1	143.7	136.6
60°	167.6	158.5	143.7	126.1	120.4
62.5°	145.1	138.0	125.4	110.6	117.6
65°	124.7	117.6	106.4	108.5	90.2
67.5°	102.1	98.6	88.7	78.9	76.1
70°	83.1	78.9	75.4	64.8	62.0
72.5°	66.2	62.0	57.0	51.4	49.3
75°	50.0	46.5	43.7	41.6	45.8
77.5°	34.5	33.1	31.0	28.9	28.2
80°	22.5	21.8	21.1	20.4	19.7
82.5°	13.4	13.4	13.4	13.4	13.4
85°	7.0	7.7	8.5	9.2	9.9
87.5°	4.2	4.2	4.9	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)