

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: P560022

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560022  
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-LD4-1STD-35-UNV-82-87-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

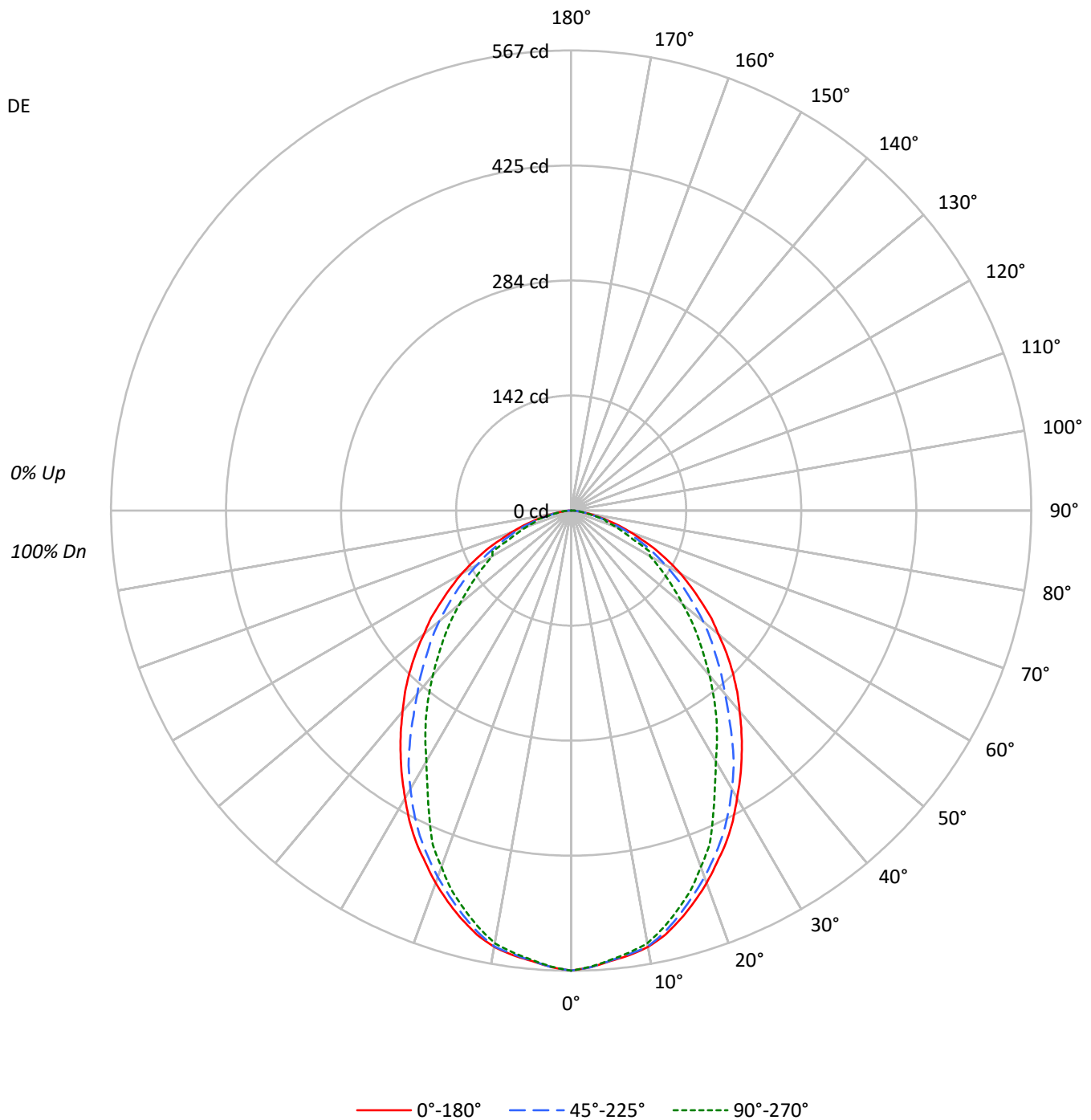
Lumens per Lamp: N/A  
Luminaire Lumens: 1113.0 lumens  
Efficiency: N/A  
Efficacy: 67.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3051	3051	3051
5°	3010	3007	3003
10°	2984	2980	2959
15°	2903	2874	2834
20°	2797	2751	2676
25°	2682	2624	2460
30°	2542	2460	2216
35°	2407	2274	2050
40°	2270	2072	1865
45°	2140	1916	1686
50°	1981	1778	1504
55°	1833	1611	1346
60°	1679	1439	1207
65°	1477	1261	1068
70°	1216	1103	908
75°	967	844	886
80°	651	611	570
85°	408	488	568

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2140 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.8	4.7
10°-20°	144.8	13.0
20°-30°	200.5	18.0
30°-40°	213.8	19.2
40°-50°	195.1	17.5
50°-60°	152.8	13.7
60°-70°	99.6	8.9
70°-80°	44.1	4.0
80°-90°	9.5	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°	398.1	35.8
0°-40°	611.9	55.0
0°-60°	959.8	86.2
0°-90°	1113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1113.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	557	556	556	556	556	53
15°	521	521	516	511	509	146
25°	452	449	442	426	414	207
35°	366	364	346	320	312	229
45°	281	275	252	231	222	217
55°	195	189	172	151	144	175
65°	116	110	99	101	84	114
75°	46	43	41	39	43	50
85°	7	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	566.9	566.9	566.9	566.9	566.9
2.5°	563.0	563.0	563.0	562.4	562.4
5°	557.1	556.5	556.5	555.8	555.8
7.5°	552.5	551.9	551.2	550.6	549.3
10°	546.0	546.0	545.3	542.0	541.4
12.5°	535.5	534.8	532.2	527.6	526.3
15°	521.1	521.1	515.8	510.6	508.6
17.5°	505.3	504.7	498.1	492.9	490.3
20°	488.3	487.0	480.4	471.9	467.3
22.5°	469.3	469.3	461.4	450.3	445.7
25°	451.6	449.0	441.8	426.0	414.2
27.5°	431.3	427.3	419.5	397.2	383.4
30°	409.0	407.0	395.9	367.0	356.6
32.5°	388.0	384.7	372.9	342.8	334.3
35°	366.4	363.8	346.1	319.9	312.0
37.5°	344.8	341.5	319.2	298.2	288.4
40°	323.1	319.2	294.9	275.9	265.4
42.5°	302.8	297.6	274.0	253.7	241.9
45°	281.2	275.3	251.7	230.7	221.5
47.5°	259.6	254.3	232.7	211.0	200.6
50°	236.6	232.0	212.4	190.7	179.6
52.5°	217.6	210.4	191.4	169.8	160.6
55°	195.3	189.4	171.7	151.4	143.5
57.5°	175.0	169.1	152.7	133.7	127.2
60°	156.0	147.5	133.7	117.3	112.1
62.5°	135.0	128.5	116.7	102.9	109.5
65°	116.0	109.5	99.0	100.9	83.9
67.5°	95.0	91.8	82.6	73.4	70.8
70°	77.3	73.4	70.1	60.3	57.7
72.5°	61.6	57.7	53.1	47.8	45.9
75°	46.5	43.3	40.6	38.7	42.6
77.5°	32.1	30.8	28.8	26.9	26.2
80°	21.0	20.3	19.7	19.0	18.4
82.5°	12.5	12.5	12.5	12.5	12.5
85°	6.6	7.2	7.9	8.5	9.2
87.5°	3.9	3.9	4.6	5.2	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)