

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: P559818

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559818  
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-35-UNV-81-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

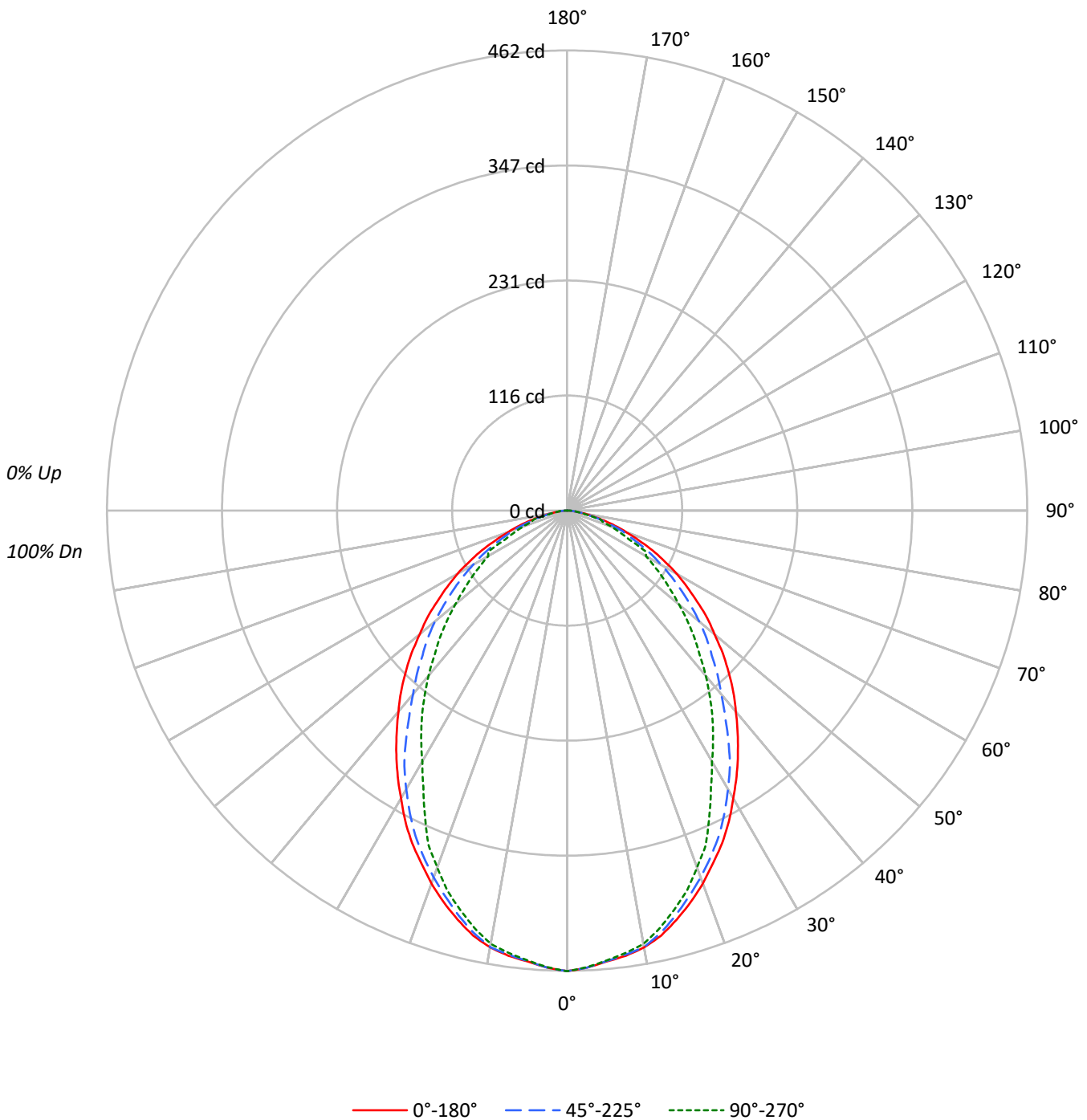
Lumens per Lamp: N/A  
Luminaire Lumens: 908.0 lumens  
Efficiency: N/A  
Efficacy: 77.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2489	2489	2489
5°	2455	2453	2450
10°	2434	2431	2414
15°	2369	2345	2312
20°	2282	2245	2183
25°	2188	2140	2007
30°	2074	2007	1808
35°	1964	1855	1672
40°	1852	1690	1522
45°	1746	1563	1375
50°	1616	1450	1227
55°	1495	1315	1099
60°	1370	1174	984
65°	1205	1028	871
70°	993	900	741
75°	790	690	724
80°	530	496	465
85°	327	395	463

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1746 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	4.7
10°-20°	118.2	13.0
20°-30°	163.6	18.0
30°-40°	174.4	19.2
40°-50°	159.1	17.5
50°-60°	124.7	13.7
60°-70°	81.2	8.9
70°-80°	36.0	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°	324.8	35.8
0°-40°	499.2	55.0
0°-60°	783.0	86.2
0°-90°	908.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	908.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	454	454	454	453	453	43
15°	425	425	421	416	415	120
25°	368	366	360	348	338	169
35°	299	297	282	261	254	187
45°	229	225	205	188	181	177
55°	159	154	140	124	117	143
65°	95	89	81	82	68	93
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	462.5	462.5	462.5	462.5	462.5
2.5°	459.3	459.3	459.3	458.8	458.8
5°	454.5	454.0	454.0	453.4	453.4
7.5°	450.8	450.2	449.7	449.2	448.1
10°	445.4	445.4	444.9	442.2	441.7
12.5°	436.9	436.3	434.2	430.4	429.4
15°	425.1	425.1	420.8	416.5	414.9
17.5°	412.3	411.7	406.4	402.1	400.0
20°	398.4	397.3	391.9	385.0	381.2
22.5°	382.9	382.9	376.4	367.3	363.6
25°	368.4	366.3	360.4	347.6	337.9
27.5°	351.8	348.6	342.2	324.0	312.8
30°	333.7	332.1	323.0	299.4	290.9
32.5°	316.5	313.9	304.2	279.7	272.7
35°	298.9	296.8	282.3	260.9	254.5
37.5°	281.3	278.6	260.4	243.3	235.3
40°	263.6	260.4	240.6	225.1	216.6
42.5°	247.0	242.8	223.5	206.9	197.3
45°	229.4	224.6	205.3	188.2	180.7
47.5°	211.7	207.5	189.8	172.2	163.6
50°	193.0	189.3	173.2	155.6	146.5
52.5°	177.5	171.6	156.1	138.5	131.0
55°	159.3	154.5	140.1	123.5	117.1
57.5°	142.8	138.0	124.6	109.1	103.7
60°	127.3	120.3	109.1	95.7	91.4
62.5°	110.2	104.8	95.2	83.9	89.3
65°	94.6	89.3	80.7	82.3	68.4
67.5°	77.5	74.9	67.4	59.9	57.7
70°	63.1	59.9	57.2	49.2	47.1
72.5°	50.3	47.1	43.3	39.0	37.4
75°	38.0	35.3	33.2	31.5	34.8
77.5°	26.2	25.1	23.5	21.9	21.4
80°	17.1	16.6	16.0	15.5	15.0
82.5°	10.2	10.2	10.2	10.2	10.2
85°	5.3	5.9	6.4	7.0	7.5
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)