

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: P559924

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559924  
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-50-UNV-80-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

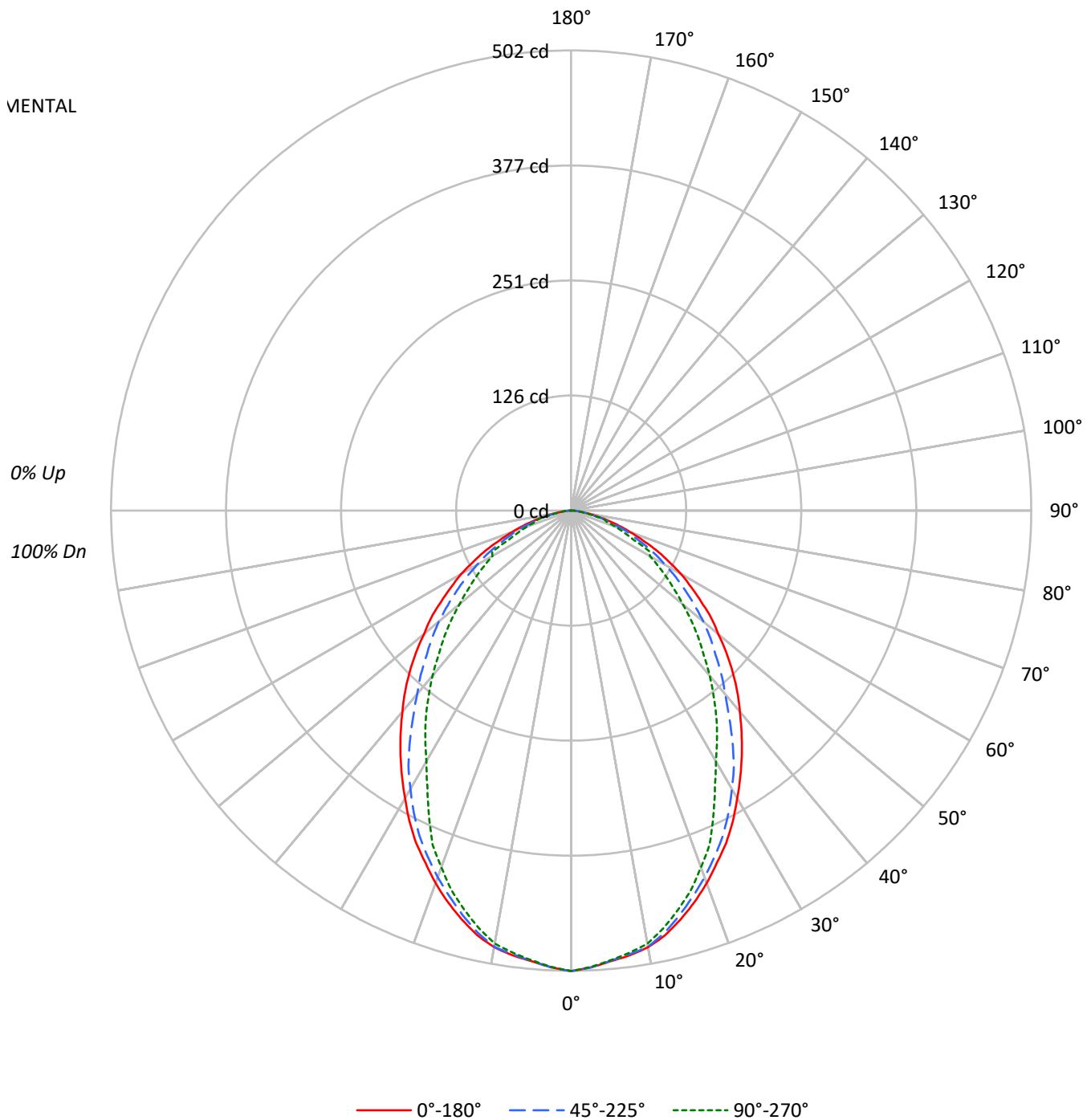
Lumens per Lamp: N/A  
Luminaire Lumens: 986.0 lumens  
Efficiency: N/A  
Efficacy: 84.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2703	2703	2703
5°	2666	2663	2660
10°	2643	2640	2621
15°	2572	2546	2511
20°	2478	2438	2371
25°	2376	2324	2179
30°	2252	2179	1963
35°	2133	2014	1816
40°	2011	1836	1652
45°	1896	1697	1494
50°	1755	1575	1332
55°	1623	1427	1194
60°	1488	1276	1069
65°	1309	1117	946
70°	1078	977	804
75°	857	749	784
80°	576	539	505
85°	358	432	500

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1896 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.8	4.7
10°-20°	128.3	13.0
20°-30°	177.6	18.0
30°-40°	189.4	19.2
40°-50°	172.8	17.5
50°-60°	135.4	13.7
60°-70°	88.2	8.9
70°-80°	39.1	4.0
80°-90°	8.4	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°	352.7	35.8
0°-40°	542.1	55.0
0°-60°	850.3	86.2
0°-90°	986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	986.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	494	493	493	492	492	47
15°	462	462	457	452	451	130
25°	400	398	391	377	367	184
35°	325	322	307	283	276	203
45°	249	244	223	204	196	192
55°	173	168	152	134	127	155
65°	103	97	88	89	74	101
75°	41	38	36	34	38	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	502.3	502.3	502.3	502.3	502.3
2.5°	498.8	498.8	498.8	498.2	498.2
5°	493.5	493.0	493.0	492.4	492.4
7.5°	489.5	488.9	488.3	487.7	486.6
10°	483.7	483.7	483.1	480.2	479.6
12.5°	474.4	473.8	471.5	467.4	466.3
15°	461.6	461.6	457.0	452.3	450.6
17.5°	447.7	447.1	441.3	436.6	434.3
20°	432.6	431.4	425.6	418.1	414.0
22.5°	415.7	415.7	408.8	398.9	394.8
25°	400.1	397.7	391.4	377.4	367.0
27.5°	382.1	378.6	371.6	351.9	339.7
30°	362.3	360.6	350.7	325.2	315.9
32.5°	343.7	340.8	330.4	303.7	296.1
35°	324.6	322.3	306.6	283.4	276.4
37.5°	305.4	302.5	282.8	264.2	255.5
40°	286.3	282.8	261.3	244.5	235.2
42.5°	268.3	263.6	242.7	224.7	214.3
45°	249.1	243.9	223.0	204.4	196.3
47.5°	229.9	225.3	206.1	187.0	177.7
50°	209.6	205.5	188.1	169.0	159.1
52.5°	192.8	186.4	169.5	150.4	142.3
55°	173.0	167.8	152.1	134.1	127.2
57.5°	155.0	149.8	135.3	118.5	112.6
60°	138.2	130.6	118.5	103.9	99.3
62.5°	119.6	113.8	103.4	91.2	97.0
65°	102.8	97.0	87.7	89.4	74.3
67.5°	84.2	81.3	73.2	65.0	62.7
70°	68.5	65.0	62.1	53.4	51.1
72.5°	54.6	51.1	47.0	42.4	40.6
75°	41.2	38.3	36.0	34.3	37.7
77.5°	28.5	27.3	25.5	23.8	23.2
80°	18.6	18.0	17.4	16.8	16.3
82.5°	11.0	11.0	11.0	11.0	11.0
85°	5.8	6.4	7.0	7.5	8.1
87.5°	3.5	3.5	4.1	4.6	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)