

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: P559863

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-80-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559863  
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-40-UNV-80-87-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

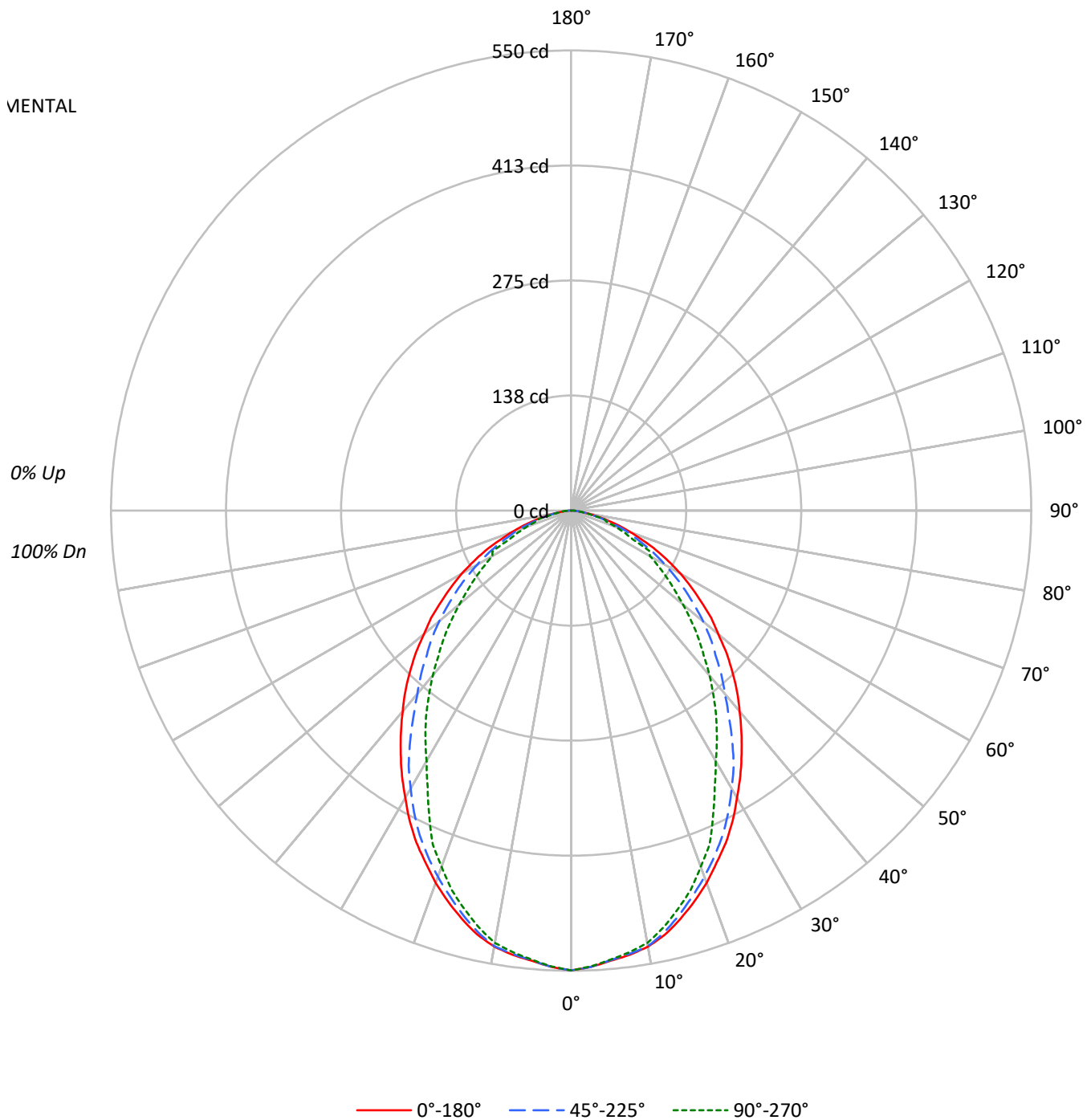
Lumens per Lamp: N/A  
Luminaire Lumens: 1079.0 lumens  
Efficiency: N/A  
Efficacy: 92.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2958	2958	2958
5°	2918	2915	2911
10°	2893	2889	2868
15°	2814	2786	2747
20°	2711	2668	2594
25°	2600	2543	2385
30°	2464	2385	2148
35°	2334	2204	1987
40°	2201	2009	1808
45°	2075	1857	1635
50°	1921	1724	1458
55°	1777	1562	1306
60°	1628	1395	1170
65°	1433	1221	1035
70°	1180	1070	880
75°	938	819	859
80°	629	592	552
85°	395	469	550

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2075 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.2	4.7
10°-20°	140.4	13.0
20°-30°	194.4	18.0
30°-40°	207.3	19.2
40°-50°	189.1	17.5
50°-60°	148.2	13.7
60°-70°	96.6	8.9
70°-80°	42.8	4.0
80°-90°	9.2	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°	386.0	35.8
0°-40°	593.3	55.0
0°-60°	930.5	86.2
0°-90°	1079.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1079.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	540	540	540	539	539	51
15°	505	505	500	495	493	142
25°	438	435	428	413	402	201
35°	355	353	336	310	302	222
45°	273	267	244	224	215	210
55°	189	184	166	147	139	170
65°	112	106	96	98	81	111
75°	45	42	39	38	41	48
85°	6	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°	549.6	549.6	549.6	549.6	549.6
2.5°	545.8	545.8	545.8	545.2	545.2
5°	540.1	539.5	539.5	538.8	538.8
7.5°	535.6	535.0	534.4	533.7	532.5
10°	529.3	529.3	528.7	525.5	524.8
12.5°	519.1	518.5	516.0	511.5	510.2
15°	505.1	505.1	500.1	495.0	493.1
17.5°	489.9	489.3	482.9	477.8	475.3
20°	473.4	472.1	465.8	457.5	453.0
22.5°	455.0	455.0	447.3	436.5	432.1
25°	437.8	435.3	428.3	413.0	401.6
27.5°	418.1	414.3	406.7	385.1	371.7
30°	396.5	394.6	383.8	355.8	345.7
32.5°	376.2	373.0	361.5	332.3	324.1
35°	355.2	352.7	335.5	310.1	302.5
37.5°	334.2	331.0	309.4	289.1	279.6
40°	313.3	309.4	285.9	267.5	257.3
42.5°	293.6	288.5	265.6	245.9	234.5
45°	272.6	266.9	244.0	223.7	214.8
47.5°	251.6	246.5	225.6	204.6	194.4
50°	229.4	224.9	205.9	184.9	174.1
52.5°	211.0	204.0	185.5	164.6	155.7
55°	189.4	183.6	166.5	146.8	139.2
57.5°	169.7	163.9	148.1	129.6	123.3
60°	151.2	143.0	129.6	113.7	108.7
62.5°	130.9	124.5	113.1	99.8	106.1
65°	112.5	106.1	95.9	97.9	81.3
67.5°	92.1	89.0	80.1	71.2	68.6
70°	75.0	71.2	68.0	58.5	55.9
72.5°	59.7	55.9	51.5	46.4	44.5
75°	45.1	41.9	39.4	37.5	41.3
77.5°	31.1	29.9	28.0	26.1	25.4
80°	20.3	19.7	19.1	18.4	17.8
82.5°	12.1	12.1	12.1	12.1	12.1
85°	6.4	7.0	7.6	8.3	8.9
87.5°	3.8	3.8	4.4	5.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)