

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: P559051

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559051  
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-LD4-2HI-35-UNV-81-94-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

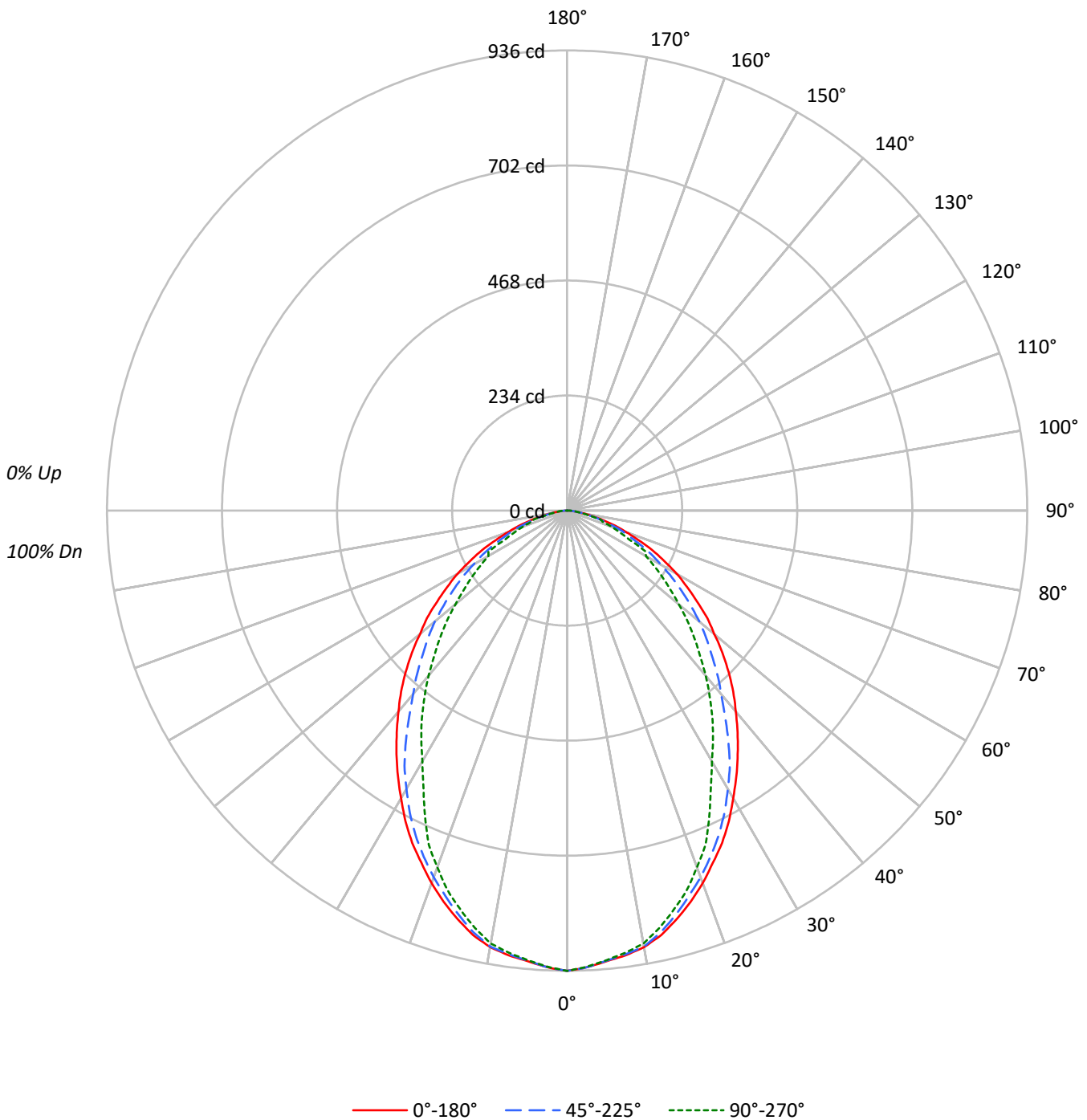
Lumens per Lamp: N/A  
Luminaire Lumens: 1838.0 lumens  
Efficiency: N/A  
Efficacy: 85.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																		
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°	10078	10078	10078
5°	9941	9929	9918
10°	9854	9842	9771
15°	9589	9492	9360
20°	9237	9088	8840
25°	8858	8664	8125
30°	8395	8126	7318
35°	7950	7510	6770
40°	7498	6844	6160
45°	7068	6326	5568
50°	6543	5873	4967
55°	6052	5322	4448
60°	5546	4753	3985
65°	4880	4162	3528
70°	4019	3644	2996
75°	3194	2791	2928
80°	2145	2015	1878
85°	1334	1606	1877

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7068 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.2	4.7
10°-20°	239.2	13.0
20°-30°	331.1	18.0
30°-40°	353.1	19.2
40°-50°	322.1	17.5
50°-60°	252.3	13.7
60°-70°	164.5	8.9
70°-80°	72.9	4.0
80°-90°	15.7	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°	657.5	35.8
0°-40°	1010.6	55.0
0°-60°	1585.0	86.2
0°-90°	1838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1838.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	920	919	919	918	918	87
15°	860	860	852	843	840	242
25°	746	741	730	704	684	342
35°	605	601	572	528	515	378
45°	464	455	416	381	366	358
55°	322	313	284	250	237	289
65°	192	181	163	167	138	189
75°	77	71	67	64	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	936.3	936.3	936.3	936.3	936.3
2.5°	929.8	929.8	929.8	928.7	928.7
5°	920.0	918.9	918.9	917.9	917.9
7.5°	912.4	911.4	910.3	909.2	907.0
10°	901.6	901.6	900.5	895.1	894.0
12.5°	884.3	883.2	878.9	871.3	869.1
15°	860.5	860.5	851.8	843.2	839.9
17.5°	834.5	833.4	822.6	813.9	809.6
20°	806.4	804.2	793.4	779.3	771.7
22.5°	775.0	775.0	762.0	743.6	736.0
25°	745.8	741.4	729.5	703.5	684.1
27.5°	712.2	705.7	692.7	655.9	633.2
30°	675.4	672.2	653.8	606.1	588.8
32.5°	640.8	635.4	615.9	566.1	552.0
35°	605.0	600.7	571.5	528.2	515.2
37.5°	569.3	563.9	527.1	492.5	476.2
40°	533.6	527.1	487.1	455.7	438.4
42.5°	500.1	491.4	452.4	418.9	399.4
45°	464.3	454.6	415.6	381.0	365.8
47.5°	428.6	420.0	384.2	348.5	331.2
50°	390.7	383.2	350.7	315.0	296.6
52.5°	359.3	347.4	316.1	280.3	265.2
55°	322.5	312.8	283.6	250.0	237.0
57.5°	289.0	279.3	252.2	220.8	210.0
60°	257.6	243.5	220.8	193.7	185.1
62.5°	223.0	212.1	192.7	169.9	180.8
65°	191.6	180.8	163.4	166.7	138.5
67.5°	156.9	151.5	136.4	121.2	116.9
70°	127.7	121.2	115.8	99.6	95.2
72.5°	101.7	95.2	87.7	79.0	75.8
75°	76.8	71.4	67.1	63.9	70.4
77.5°	53.0	50.9	47.6	44.4	43.3
80°	34.6	33.6	32.5	31.4	30.3
82.5°	20.6	20.6	20.6	20.6	20.6
85°	10.8	11.9	13.0	14.1	15.2
87.5°	6.5	6.5	7.6	8.7	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)