

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: P559067

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-82-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559067  
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-82-94-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

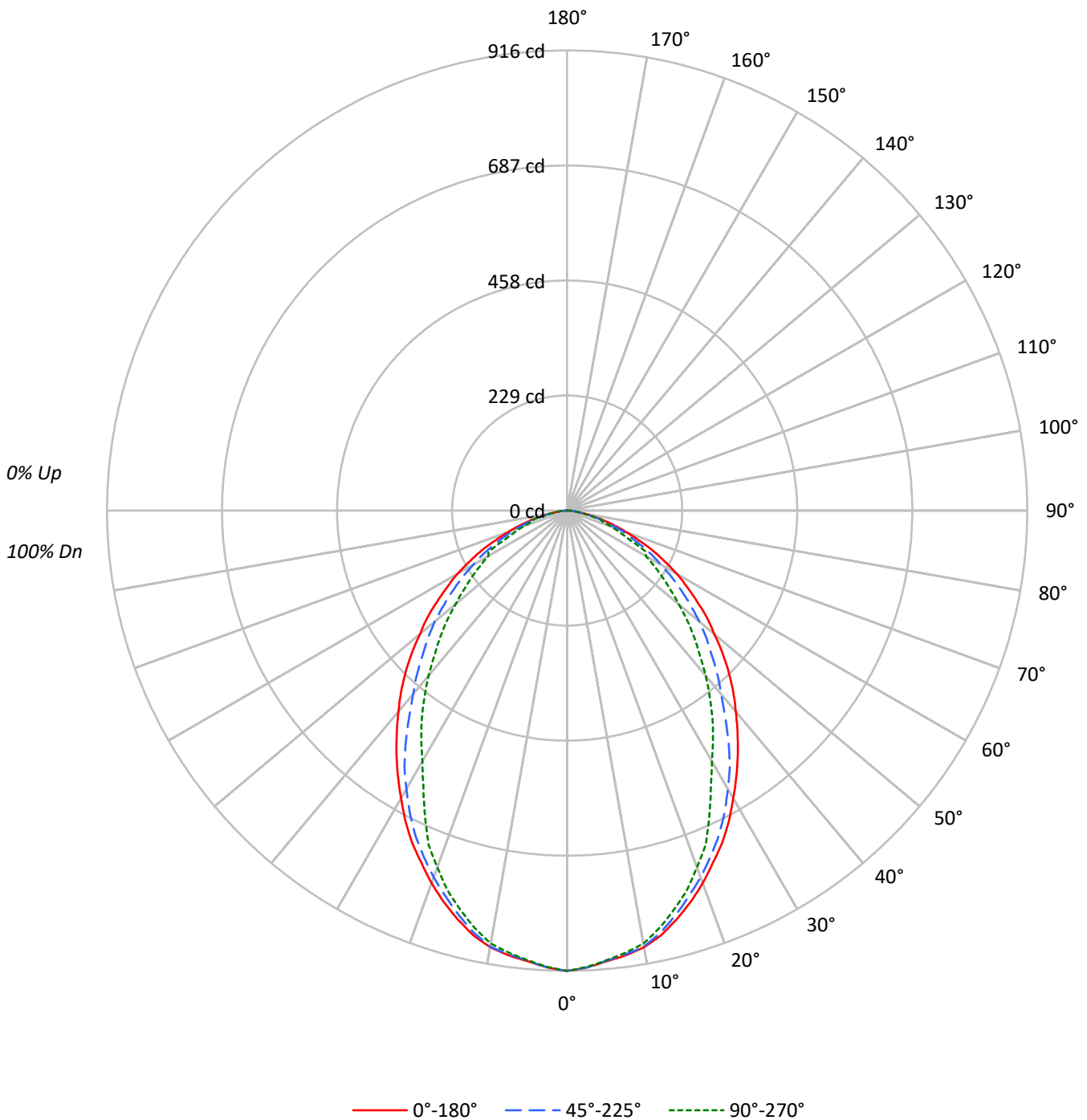
Lumens per Lamp: N/A  
Luminaire Lumens: 1799.0 lumens  
Efficiency: N/A  
Efficacy: 83.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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									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°	9864	9864	9864
5°	9730	9718	9707
10°	9646	9634	9565
15°	9385	9292	9161
20°	9041	8895	8653
25°	8669	8480	7951
30°	8217	7953	7163
35°	7782	7351	6627
40°	7339	6698	6029
45°	6919	6193	5451
50°	6404	5747	4861
55°	5925	5210	4354
60°	5427	4652	3901
65°	4776	4075	3454
70°	3934	3569	2933
75°	3127	2732	2865
80°	2101	1971	1841
85°	1309	1568	1828

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6919 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	4.7
10°-20°	234.1	13.0
20°-30°	324.1	18.0
30°-40°	345.6	19.2
40°-50°	315.3	17.5
50°-60°	247.0	13.7
60°-70°	161.0	8.9
70°-80°	71.3	4.0
80°-90°	15.3	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°	643.5	35.8
0°-40°	989.1	55.0
0°-60°	1551.4	86.2
0°-90°	1799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1799.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	900	899	899	898	898	85
15°	842	842	834	825	822	237
25°	730	726	714	689	670	335
35°	592	588	559	517	504	370
45°	454	445	407	373	358	350
55°	316	306	278	245	232	283
65°	188	177	160	163	136	185
75°	75	70	66	62	69	81
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°	916.4	916.4	916.4	916.4	916.4
2.5°	910.0	910.0	910.0	909.0	909.0
5°	900.5	899.4	899.4	898.4	898.4
7.5°	893.1	892.0	891.0	889.9	887.8
10°	882.5	882.5	881.4	876.1	875.1
12.5°	865.5	864.5	860.2	852.8	850.7
15°	842.2	842.2	833.8	825.3	822.1
17.5°	816.8	815.7	805.1	796.7	792.4
20°	789.3	787.1	776.5	762.8	755.4
22.5°	758.5	758.5	745.8	727.8	720.4
25°	729.9	725.7	714.0	688.6	669.5
27.5°	697.1	690.7	678.0	642.0	619.8
30°	661.1	657.9	639.9	593.3	576.3
32.5°	627.2	621.9	602.8	554.1	540.3
35°	592.2	588.0	559.4	517.0	504.3
37.5°	557.2	552.0	515.9	482.0	466.1
40°	522.3	515.9	476.7	446.0	429.1
42.5°	489.4	481.0	442.8	410.0	390.9
45°	454.5	445.0	406.8	372.9	358.1
47.5°	419.5	411.0	376.1	341.1	324.2
50°	382.4	375.0	343.2	308.3	290.3
52.5°	351.7	340.1	309.3	274.4	259.6
55°	315.7	306.2	277.6	244.7	232.0
57.5°	282.9	273.3	246.8	216.1	205.5
60°	252.1	238.4	216.1	189.6	181.2
62.5°	218.2	207.6	188.6	166.3	176.9
65°	187.5	176.9	160.0	163.1	135.6
67.5°	153.6	148.3	133.5	118.7	114.4
70°	125.0	118.7	113.4	97.5	93.2
72.5°	99.6	93.2	85.8	77.3	74.2
75°	75.2	69.9	65.7	62.5	68.9
77.5°	51.9	49.8	46.6	43.4	42.4
80°	33.9	32.8	31.8	30.7	29.7
82.5°	20.1	20.1	20.1	20.1	20.1
85°	10.6	11.7	12.7	13.8	14.8
87.5°	6.4	6.4	7.4	8.5	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)