

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: P559848

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-93-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559848  
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-93-88-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

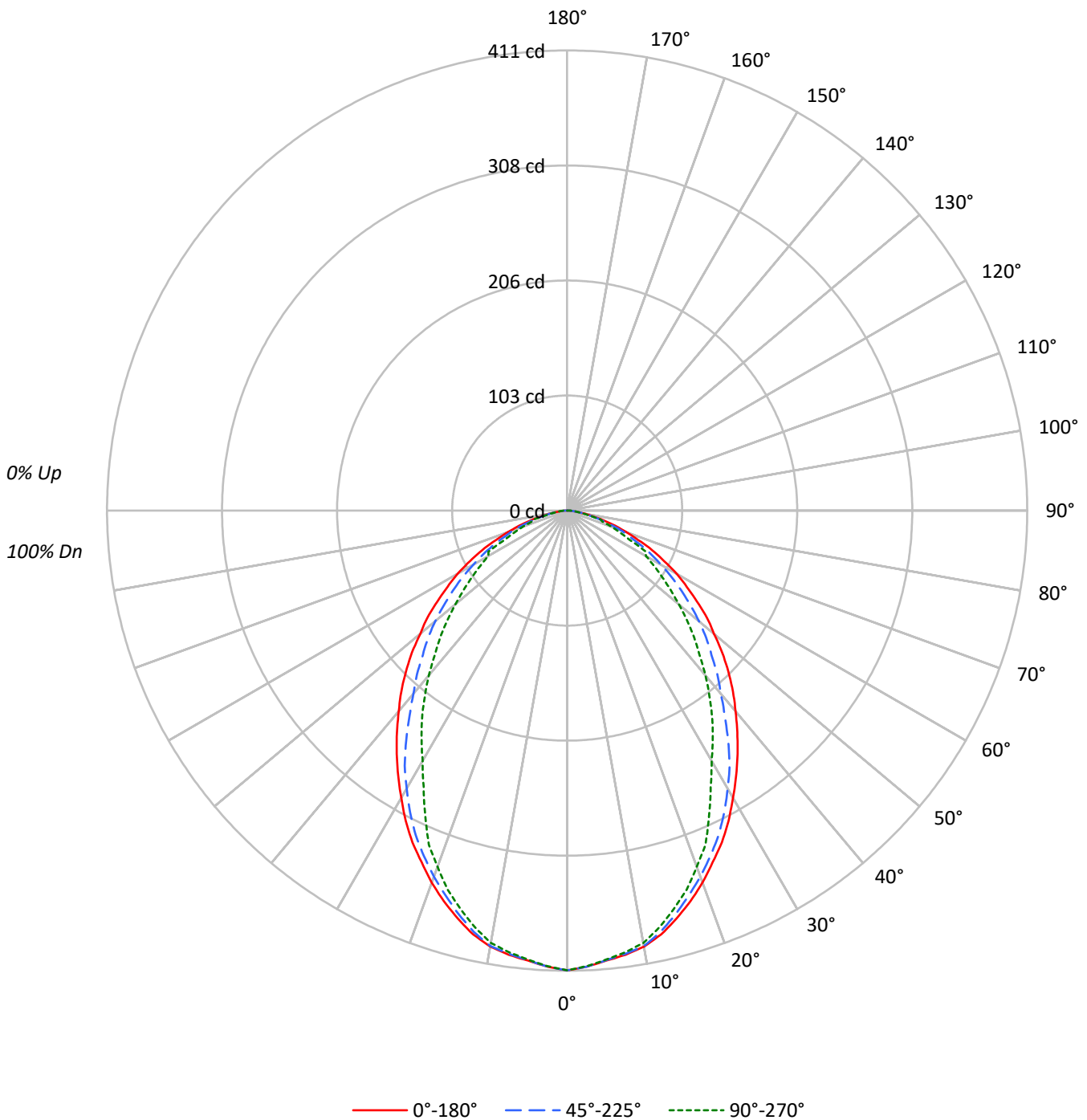
Lumens per Lamp: N/A  
Luminaire Lumens: 806.0 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2210	2210	2210
5°	2179	2177	2175
10°	2161	2158	2143
15°	2102	2081	2052
20°	2025	1993	1938
25°	1942	1900	1781
30°	1841	1782	1605
35°	1743	1646	1484
40°	1644	1501	1350
45°	1550	1388	1221
50°	1434	1288	1089
55°	1327	1167	975
60°	1216	1042	874
65°	1070	913	774
70°	881	799	658
75°	701	611	643
80°	471	440	412
85°	290	352	408

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1550 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.2	4.7
10°-20°	104.9	13.0
20°-30°	145.2	18.0
30°-40°	154.8	19.2
40°-50°	141.3	17.5
50°-60°	110.7	13.7
60°-70°	72.1	8.9
70°-80°	32.0	4.0
80°-90°	6.8	0.8
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°	288.3	35.8
0°-40°	443.1	55.0
0°-60°	695.1	86.2
0°-90°	806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	806.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	411	411	411	411	411	
5°	403	403	403	402	402	38
15°	377	377	374	370	368	106
25°	327	325	320	308	300	150
35°	265	263	251	232	226	166
45°	204	199	182	167	160	157
55°	141	137	124	110	104	127
65°	84	79	72	73	61	83
75°	34	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	410.6	410.6	410.6	410.6	410.6
2.5°	407.7	407.7	407.7	407.2	407.2
5°	403.4	403.0	403.0	402.5	402.5
7.5°	400.1	399.6	399.2	398.7	397.8
10°	395.4	395.4	394.9	392.5	392.1
12.5°	387.8	387.3	385.4	382.1	381.1
15°	377.3	377.3	373.5	369.7	368.3
17.5°	365.9	365.5	360.7	356.9	355.0
20°	353.6	352.7	347.9	341.7	338.4
22.5°	339.8	339.8	334.1	326.1	322.8
25°	327.0	325.1	319.9	308.5	300.0
27.5°	312.3	309.5	303.8	287.6	277.7
30°	296.2	294.8	286.7	265.8	258.2
32.5°	281.0	278.6	270.1	248.2	242.1
35°	265.3	263.4	250.6	231.6	225.9
37.5°	249.7	247.3	231.2	216.0	208.8
40°	234.0	231.2	213.6	199.8	192.2
42.5°	219.3	215.5	198.4	183.7	175.1
45°	203.6	199.3	182.3	167.1	160.4
47.5°	188.0	184.2	168.5	152.8	145.2
50°	171.3	168.0	153.8	138.1	130.1
52.5°	157.6	152.4	138.6	122.9	116.3
55°	141.4	137.2	124.4	109.6	103.9
57.5°	126.7	122.5	110.6	96.8	92.1
60°	113.0	106.8	96.8	85.0	81.2
62.5°	97.8	93.0	84.5	74.5	79.3
65°	84.0	79.3	71.7	73.1	60.8
67.5°	68.8	66.4	59.8	53.2	51.3
70°	56.0	53.2	50.8	43.7	41.8
72.5°	44.6	41.8	38.4	34.6	33.2
75°	33.7	31.3	29.4	28.0	30.9
77.5°	23.3	22.3	20.9	19.5	19.0
80°	15.2	14.7	14.2	13.8	13.3
82.5°	9.0	9.0	9.0	9.0	9.0
85°	4.7	5.2	5.7	6.2	6.6
87.5°	2.8	2.8	3.3	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)