

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: P558696

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558696  
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-LD4-1LO-35-UNV-93-88-EDD-90  
Description: 1X1 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**

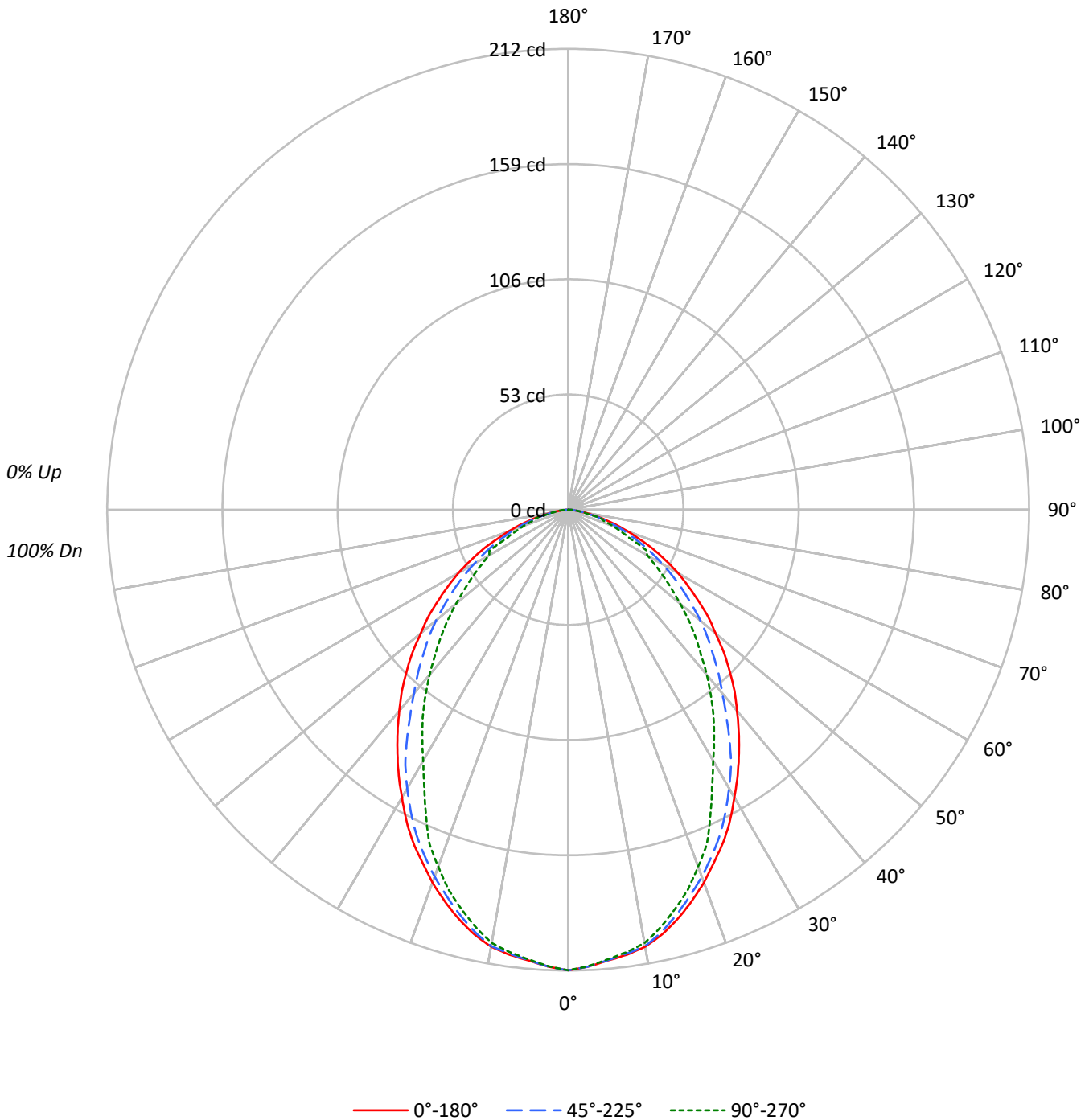
Lumens per Lamp: N/A  
Luminaire Lumens: 416.0 lumens  
Efficiency: N/A  
Efficacy: 71.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2281	2281	2281
5°	2250	2247	2244
10°	2231	2228	2212
15°	2171	2148	2118
20°	2090	2057	2001
25°	2005	1961	1839
30°	1900	1840	1657
35°	1799	1699	1532
40°	1697	1548	1394
45°	1600	1432	1260
50°	1480	1330	1124
55°	1370	1205	1006
60°	1255	1076	902
65°	1105	942	800
70°	910	825	680
75°	724	632	661
80°	483	453	428
85°	296	358	420

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1600 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.7	4.7
10°-20°	54.1	13.0
20°-30°	74.9	18.0
30°-40°	79.9	19.2
40°-50°	72.9	17.5
50°-60°	57.1	13.7
60°-70°	37.2	8.9
70°-80°	16.5	4.0
80°-90°	3.6	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°	148.8	35.8
0°-40°	228.7	55.0
0°-60°	358.7	86.2
0°-90°	416.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	416.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	212	212	212	212	212	
5°	208	208	208	208	208	20
15°	195	195	193	191	190	55
25°	169	168	165	159	155	77
35°	137	136	129	120	117	86
45°	105	103	94	86	83	81
55°	73	71	64	57	54	65
65°	43	41	37	38	31	43
75°	17	16	15	14	16	19
85°	2	3	3	3	3	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	211.9	211.9	211.9	211.9	211.9
2.5°	210.4	210.4	210.4	210.2	210.2
5°	208.2	208.0	208.0	207.7	207.7
7.5°	206.5	206.3	206.0	205.8	205.3
10°	204.1	204.1	203.8	202.6	202.4
12.5°	200.1	199.9	198.9	197.2	196.7
15°	194.8	194.8	192.8	190.8	190.1
17.5°	188.9	188.6	186.2	184.2	183.2
20°	182.5	182.0	179.6	176.4	174.7
22.5°	175.4	175.4	172.5	168.3	166.6
25°	168.8	167.8	165.1	159.2	154.8
27.5°	161.2	159.7	156.8	148.5	143.3
30°	152.9	152.1	148.0	137.2	133.3
32.5°	145.0	143.8	139.4	128.1	124.9
35°	136.9	136.0	129.3	119.5	116.6
37.5°	128.9	127.6	119.3	111.5	107.8
40°	120.8	119.3	110.2	103.1	99.2
42.5°	113.2	111.2	102.4	94.8	90.4
45°	105.1	102.9	94.1	86.2	82.8
47.5°	97.0	95.1	87.0	78.9	75.0
50°	88.4	86.7	79.4	71.3	67.1
52.5°	81.3	78.6	71.5	63.4	60.0
55°	73.0	70.8	64.2	56.6	53.6
57.5°	65.4	63.2	57.1	50.0	47.5
60°	58.3	55.1	50.0	43.9	41.9
62.5°	50.5	48.0	43.6	38.5	40.9
65°	43.4	40.9	37.0	37.7	31.4
67.5°	35.5	34.3	30.9	27.4	26.5
70°	28.9	27.4	26.2	22.5	21.6
72.5°	23.0	21.6	19.8	17.9	17.1
75°	17.4	16.2	15.2	14.5	15.9
77.5°	12.0	11.5	10.8	10.0	9.8
80°	7.8	7.6	7.3	7.1	6.9
82.5°	4.7	4.7	4.7	4.7	4.7
85°	2.4	2.7	2.9	3.2	3.4
87.5°	1.5	1.5	1.7	2.0	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)