

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: P559522

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559522  
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-LD4-2STD-40-UNV-93-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

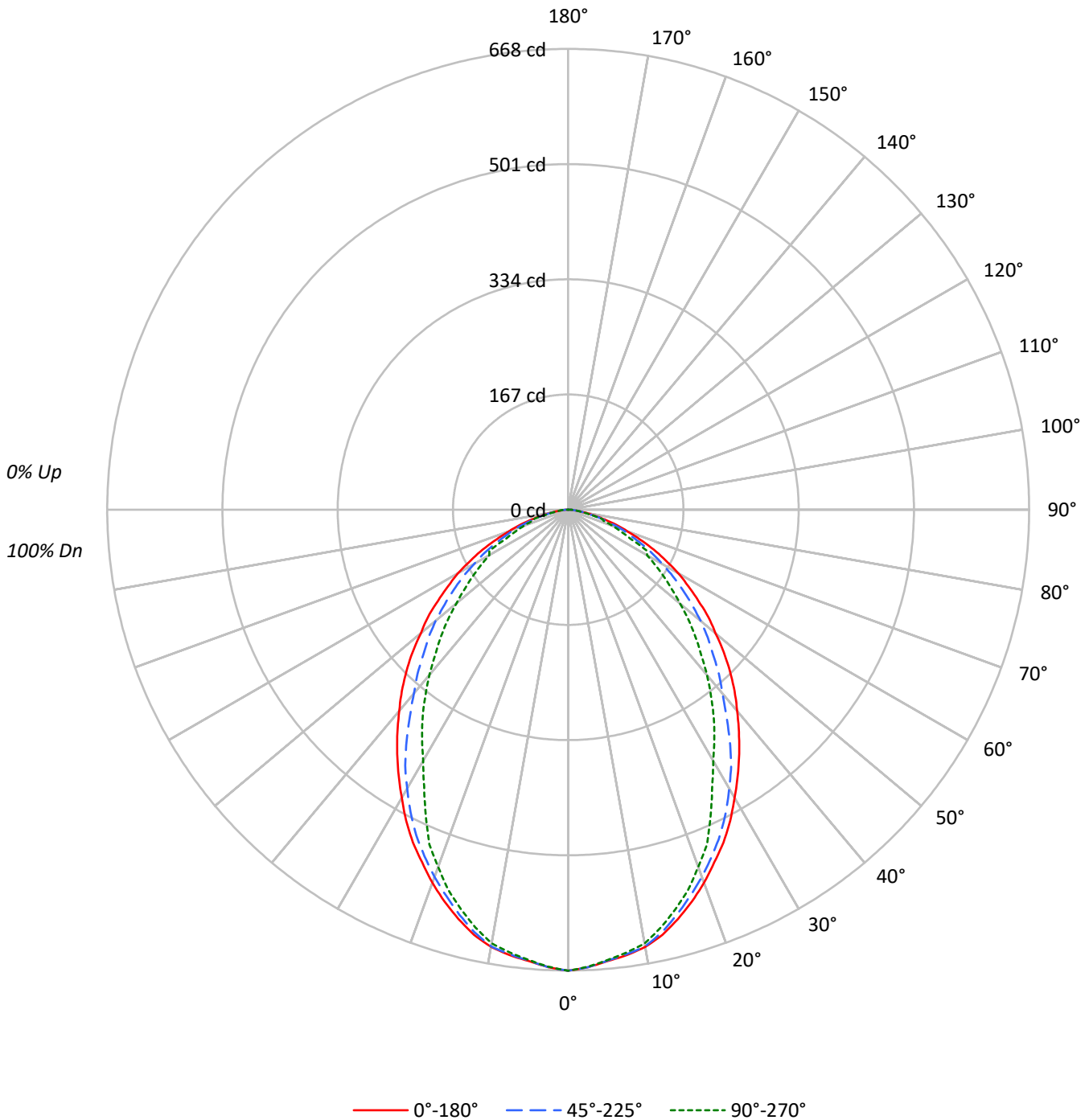
Lumens per Lamp: N/A  
Luminaire Lumens: 1312.0 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7194	7194	7194
5°	7096	7088	7079
10°	7035	7026	6976
15°	6844	6776	6682
20°	6593	6487	6310
25°	6322	6184	5799
30°	5992	5801	5224
35°	5675	5360	4833
40°	5352	4886	4397
45°	5046	4517	3975
50°	4670	4191	3545
55°	4320	3798	3175
60°	3959	3393	2844
65°	3484	2972	2519
70°	2870	2603	2140
75°	2283	1992	2088
80°	1531	1438	1339
85°	951	1149	1334

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5046 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.2	4.7
10°-20°	170.7	13.0
20°-30°	236.4	18.0
30°-40°	252.0	19.2
40°-50°	229.9	17.5
50°-60°	180.1	13.7
60°-70°	117.4	8.9
70°-80°	52.0	4.0
80°-90°	11.2	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°	469.3	35.8
0°-40°	721.4	55.0
0°-60°	1131.4	86.2
0°-90°	1312.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1312.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	668	668	668	668	668	
5°	657	656	656	655	655	62
15°	614	614	608	602	600	173
25°	532	529	521	502	488	244
35°	432	429	408	377	368	270
45°	332	324	297	272	261	255
55°	230	223	202	178	169	207
65°	137	129	117	119	99	135
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	668.3	668.3	668.3	668.3	668.3
2.5°	663.7	663.7	663.7	662.9	662.9
5°	656.7	656.0	656.0	655.2	655.2
7.5°	651.3	650.5	649.8	649.0	647.5
10°	643.6	643.6	642.8	639.0	638.2
12.5°	631.2	630.5	627.4	622.0	620.4
15°	614.2	614.2	608.1	601.9	599.6
17.5°	595.7	594.9	587.2	581.0	577.9
20°	575.6	574.1	566.3	556.3	550.9
22.5°	553.2	553.2	543.9	530.8	525.4
25°	532.3	529.2	520.7	502.2	488.3
27.5°	508.4	503.7	494.5	468.2	452.0
30°	482.1	479.8	466.7	432.7	420.3
32.5°	457.4	453.5	439.6	404.1	394.0
35°	431.9	428.8	407.9	377.0	367.8
37.5°	406.4	402.5	376.3	351.5	340.0
40°	380.9	376.3	347.7	325.3	312.9
42.5°	356.9	350.8	323.0	299.0	285.1
45°	331.5	324.5	296.7	272.0	261.1
47.5°	306.0	299.8	274.3	248.8	236.4
50°	278.9	273.5	250.3	224.8	211.7
52.5°	256.5	248.0	225.6	200.1	189.3
55°	230.2	223.3	202.4	178.5	169.2
57.5°	206.3	199.3	180.0	157.6	149.9
60°	183.9	173.8	157.6	138.3	132.1
62.5°	159.2	151.4	137.5	121.3	129.0
65°	136.8	129.0	116.7	119.0	98.9
67.5°	112.0	108.2	97.3	86.5	83.4
70°	91.2	86.5	82.7	71.1	68.0
72.5°	72.6	68.0	62.6	56.4	54.1
75°	54.9	51.0	47.9	45.6	50.2
77.5°	37.9	36.3	34.0	31.7	30.9
80°	24.7	24.0	23.2	22.4	21.6
82.5°	14.7	14.7	14.7	14.7	14.7
85°	7.7	8.5	9.3	10.0	10.8
87.5°	4.6	4.6	5.4	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)