

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: P558959

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-93-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558959  
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-LD4-1STD-40-UNV-93-97-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

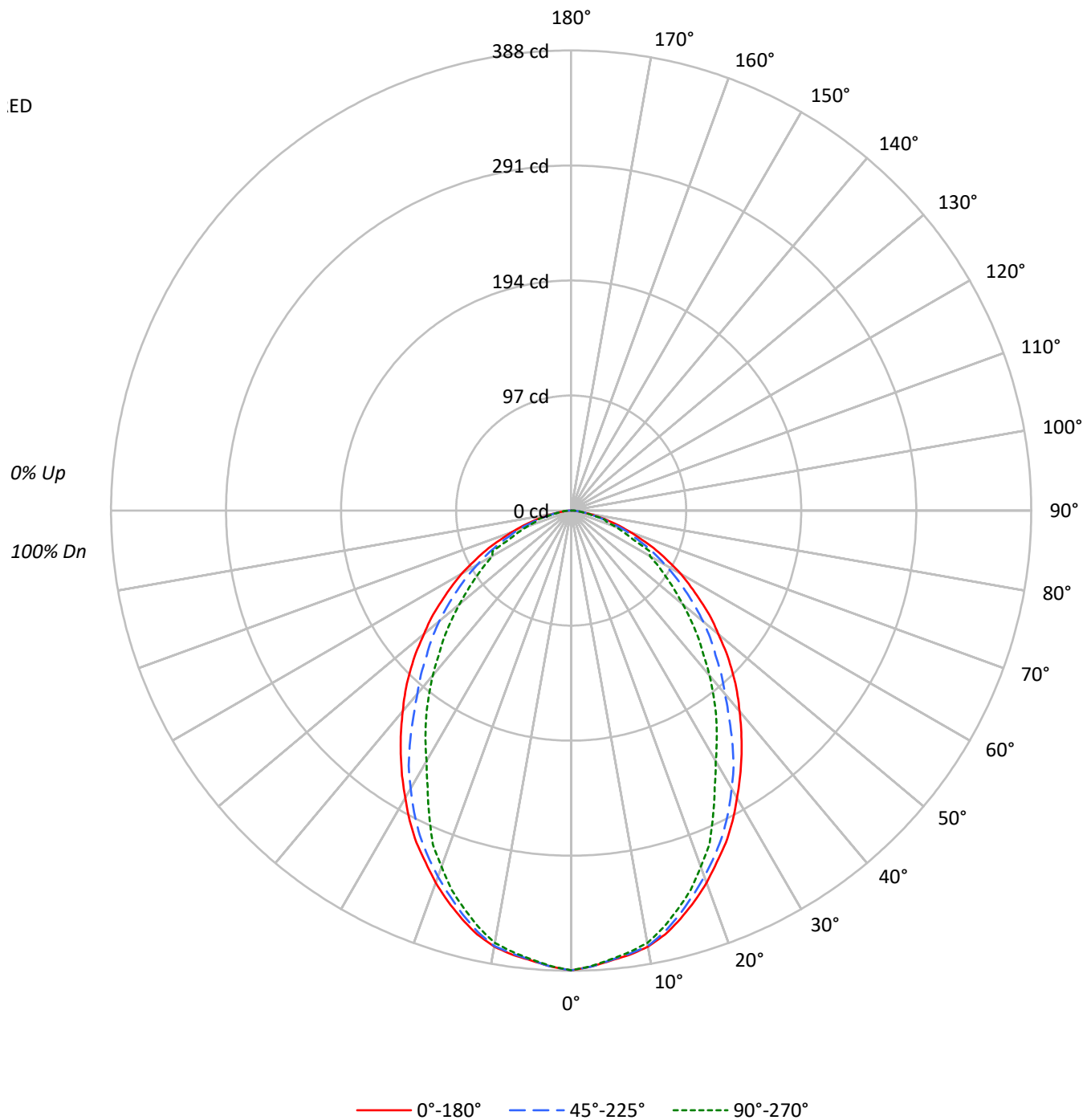
Lumens per Lamp: N/A  
Luminaire Lumens: 761.0 lumens  
Efficiency: N/A  
Efficacy: 91.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4172	4172	4172
5°	4116	4111	4106
10°	4080	4076	4046
15°	3970	3930	3876
20°	3825	3763	3660
25°	3668	3587	3363
30°	3475	3365	3030
35°	3292	3109	2803
40°	3104	2834	2550
45°	2927	2620	2306
50°	2709	2431	2056
55°	2505	2203	1841
60°	2297	1968	1649
65°	2020	1724	1462
70°	1665	1511	1240
75°	1323	1156	1210
80°	886	831	775
85°	556	667	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2927 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.1	4.7
10°-20°	99.0	13.0
20°-30°	137.1	18.0
30°-40°	146.2	19.2
40°-50°	133.4	17.5
50°-60°	104.5	13.7
60°-70°	68.1	8.9
70°-80°	30.2	4.0
80°-90°	6.5	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°	272.2	35.8
0°-40°	418.4	55.0
0°-60°	656.3	86.2
0°-90°	761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	761.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	388	388	388	388	388	
5°	381	380	380	380	380	36
15°	356	356	353	349	348	100
25°	309	307	302	291	283	142
35°	250	249	237	219	213	157
45°	192	188	172	158	152	148
55°	134	130	117	104	98	120
65°	79	75	68	69	57	78
75°	32	30	28	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	387.6	387.6	387.6	387.6	387.6
2.5°	385.0	385.0	385.0	384.5	384.5
5°	380.9	380.5	380.5	380.0	380.0
7.5°	377.8	377.3	376.9	376.4	375.5
10°	373.3	373.3	372.9	370.6	370.2
12.5°	366.1	365.7	363.9	360.8	359.9
15°	356.3	356.3	352.7	349.1	347.8
17.5°	345.5	345.1	340.6	337.0	335.2
20°	333.9	333.0	328.5	322.7	319.5
22.5°	320.9	320.9	315.5	307.9	304.7
25°	308.8	307.0	302.0	291.3	283.2
27.5°	294.9	292.2	286.8	271.6	262.2
30°	279.6	278.3	270.7	251.0	243.8
32.5°	265.3	263.1	255.0	234.4	228.6
35°	250.5	248.7	236.6	218.7	213.3
37.5°	235.7	233.5	218.2	203.9	197.2
40°	220.9	218.2	201.7	188.7	181.5
42.5°	207.0	203.5	187.3	173.4	165.4
45°	192.3	188.2	172.1	157.7	151.5
47.5°	177.5	173.9	159.1	144.3	137.1
50°	161.8	158.6	145.2	130.4	122.8
52.5°	148.8	143.9	130.9	116.1	109.8
55°	133.5	129.5	117.4	103.5	98.1
57.5°	119.7	115.6	104.4	91.4	86.9
60°	106.7	100.8	91.4	80.2	76.6
62.5°	92.3	87.8	79.8	70.4	74.8
65°	79.3	74.8	67.7	69.0	57.4
67.5°	65.0	62.7	56.5	50.2	48.4
70°	52.9	50.2	48.0	41.2	39.4
72.5°	42.1	39.4	36.3	32.7	31.4
75°	31.8	29.6	27.8	26.4	29.1
77.5°	22.0	21.1	19.7	18.4	17.9
80°	14.3	13.9	13.4	13.0	12.5
82.5°	8.5	8.5	8.5	8.5	8.5
85°	4.5	4.9	5.4	5.8	6.3
87.5°	2.7	2.7	3.1	3.6	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)