

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: P559591

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559591  
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-50-UNV-93-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

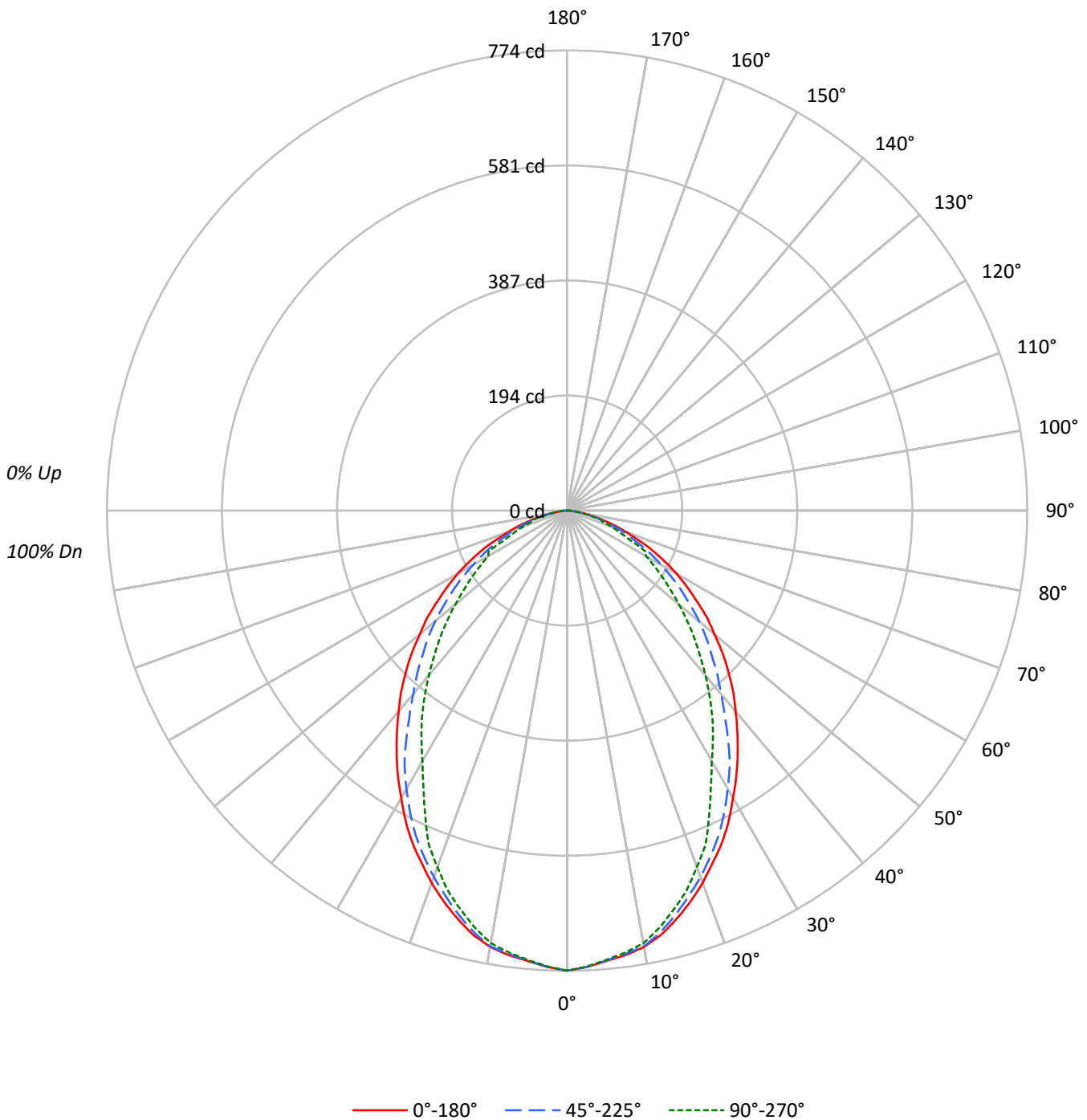
Lumens per Lamp: N/A  
Luminaire Lumens: 1519.0 lumens  
Efficiency: N/A  
Efficacy: 91.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8329	8329	8329
5°	8215	8205	8197
10°	8144	8134	8076
15°	7924	7845	7735
20°	7633	7511	7306
25°	7320	7160	6714
30°	6938	6715	6048
35°	6570	6206	5595
40°	6197	5656	5091
45°	5841	5229	4602
50°	5407	4853	4104
55°	5003	4399	3676
60°	4583	3929	3294
65°	4032	3441	2916
70°	3323	3012	2477
75°	2641	2308	2416
80°	1773	1661	1550
85°	1099	1321	1544

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5841 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.0	4.7
10°-20°	197.7	13.0
20°-30°	273.7	18.0
30°-40°	291.8	19.2
40°-50°	266.2	17.5
50°-60°	208.6	13.7
60°-70°	135.9	8.9
70°-80°	60.2	4.0
80°-90°	12.9	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°	543.4	35.8
0°-40°	835.2	55.0
0°-60°	1309.9	86.2
0°-90°	1519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1519.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	760	759	759	759	759	72
15°	711	711	704	697	694	200
25°	616	613	603	581	565	283
35°	500	496	472	436	426	313
45°	384	376	344	315	302	296
55°	267	258	234	207	196	239
65°	158	149	135	138	114	156
75°	64	59	56	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	773.8	773.8	773.8	773.8	773.8
2.5°	768.4	768.4	768.4	767.5	767.5
5°	760.3	759.4	759.4	758.6	758.6
7.5°	754.1	753.2	752.3	751.4	749.6
10°	745.1	745.1	744.2	739.8	738.9
12.5°	730.8	729.9	726.3	720.1	718.3
15°	711.1	711.1	704.0	696.8	694.1
17.5°	689.7	688.8	679.8	672.7	669.1
20°	666.4	664.6	655.7	644.1	637.8
22.5°	640.5	640.5	629.7	614.5	608.3
25°	616.3	612.7	602.9	581.4	565.3
27.5°	588.6	583.2	572.5	542.1	523.3
30°	558.2	555.5	540.3	500.9	486.6
32.5°	529.6	525.1	509.0	467.8	456.2
35°	500.0	496.5	472.3	436.5	425.8
37.5°	470.5	466.0	435.6	407.0	393.6
40°	441.0	435.6	402.5	376.6	362.3
42.5°	413.3	406.1	373.9	346.2	330.1
45°	383.7	375.7	343.5	314.9	302.3
47.5°	354.2	347.1	317.6	288.0	273.7
50°	322.9	316.7	289.8	260.3	245.1
52.5°	297.0	287.1	261.2	231.7	219.2
55°	266.6	258.5	234.4	206.6	195.9
57.5°	238.8	230.8	208.4	182.5	173.5
60°	212.9	201.3	182.5	160.1	153.0
62.5°	184.3	175.3	159.2	140.4	149.4
65°	158.3	149.4	135.1	137.8	114.5
67.5°	129.7	125.2	112.7	100.2	96.6
70°	105.6	100.2	95.7	82.3	78.7
72.5°	84.1	78.7	72.5	65.3	62.6
75°	63.5	59.0	55.5	52.8	58.1
77.5°	43.8	42.0	39.4	36.7	35.8
80°	28.6	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.3	7.2	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)