

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: P558951

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558951  
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-93-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

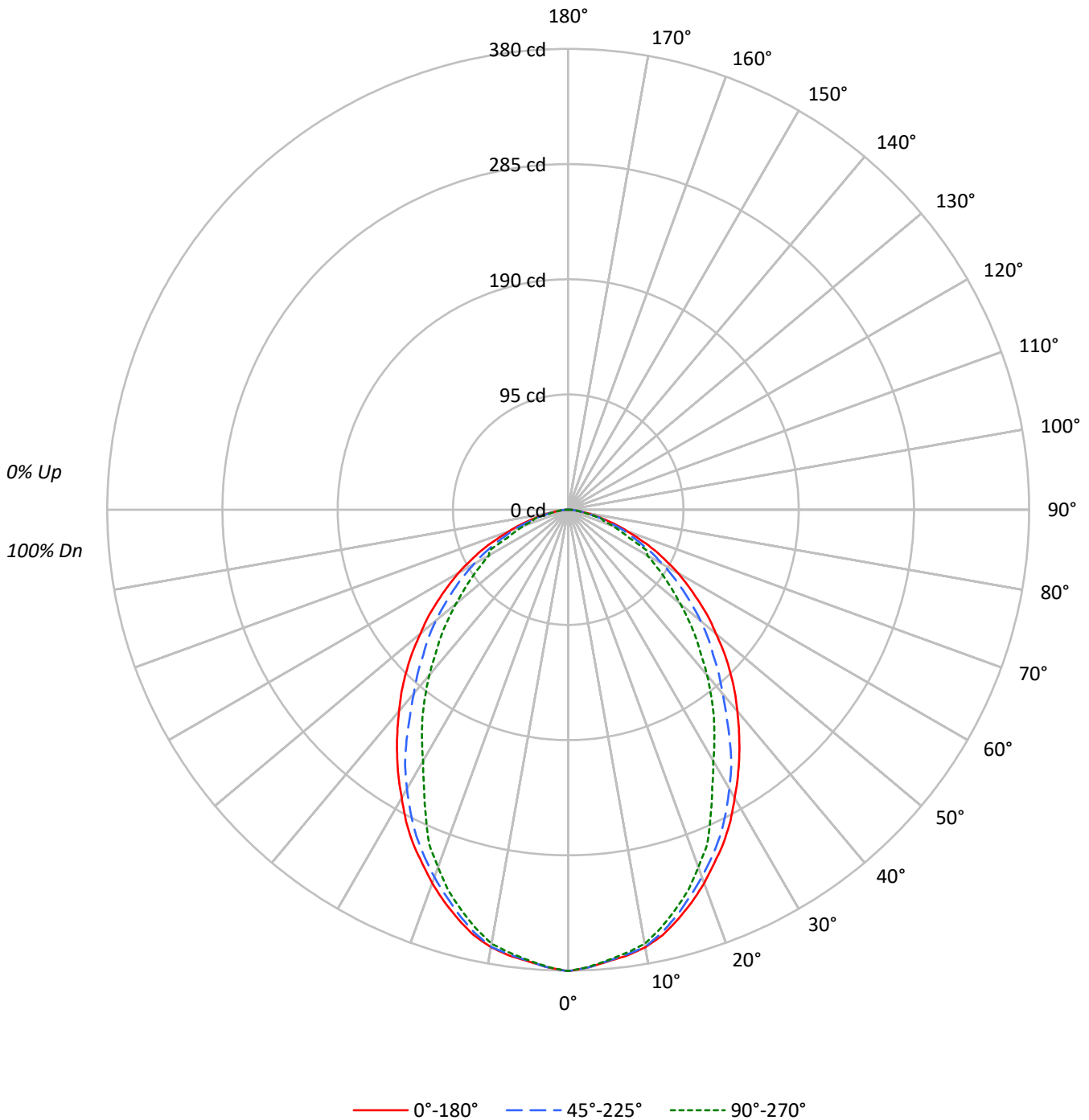
Lumens per Lamp: N/A  
Luminaire Lumens: 747.0 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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			
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°	4096	4096	4096
5°	4040	4036	4030
10°	4005	4000	3972
15°	3897	3858	3804
20°	3754	3693	3592
25°	3600	3521	3302
30°	3412	3302	2974
35°	3231	3052	2752
40°	3048	2782	2504
45°	2872	2571	2264
50°	2659	2386	2018
55°	2460	2164	1807
60°	2254	1931	1619
65°	1984	1691	1434
70°	1633	1482	1218
75°	1298	1135	1189
80°	874	818	762
85°	543	655	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2872 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.4	4.7
10°-20°	97.2	13.0
20°-30°	134.6	18.0
30°-40°	143.5	19.2
40°-50°	130.9	17.5
50°-60°	102.6	13.7
60°-70°	66.8	8.9
70°-80°	29.6	4.0
80°-90°	6.4	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°	267.2	35.8
0°-40°	410.7	55.0
0°-60°	644.2	86.2
0°-90°	747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	747.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	380	380	380	380	380	
5°	374	374	374	373	373	35
15°	350	350	346	343	341	98
25°	303	301	296	286	278	139
35°	246	244	232	215	209	154
45°	189	185	169	155	149	145
55°	131	127	115	102	96	118
65°	78	74	66	68	56	77
75°	31	29	27	26	29	33
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°	380.5	380.5	380.5	380.5	380.5
2.5°	377.9	377.9	377.9	377.4	377.4
5°	373.9	373.5	373.5	373.0	373.0
7.5°	370.8	370.4	370.0	369.5	368.6
10°	366.4	366.4	366.0	363.8	363.4
12.5°	359.4	359.0	357.2	354.1	353.2
15°	349.7	349.7	346.2	342.7	341.4
17.5°	339.2	338.7	334.3	330.8	329.0
20°	327.7	326.8	322.4	316.7	313.6
22.5°	315.0	315.0	309.7	302.2	299.1
25°	303.1	301.3	296.5	285.9	278.0
27.5°	289.5	286.8	281.5	266.6	257.3
30°	274.5	273.2	265.7	246.3	239.3
32.5°	260.4	258.2	250.3	230.1	224.3
35°	245.9	244.1	232.3	214.7	209.4
37.5°	231.4	229.2	214.2	200.2	193.6
40°	216.9	214.2	198.0	185.2	178.2
42.5°	203.2	199.7	183.9	170.2	162.3
45°	188.7	184.8	168.9	154.8	148.7
47.5°	174.2	170.7	156.2	141.6	134.6
50°	158.8	155.7	142.5	128.0	120.5
52.5°	146.0	141.2	128.5	113.9	107.8
55°	131.1	127.1	115.3	101.6	96.3
57.5°	117.5	113.5	102.5	89.7	85.3
60°	104.7	99.0	89.7	78.7	75.2
62.5°	90.6	86.2	78.3	69.1	73.5
65°	77.9	73.5	66.4	67.7	56.3
67.5°	63.8	61.6	55.4	49.3	47.5
70°	51.9	49.3	47.1	40.5	38.7
72.5°	41.4	38.7	35.6	32.1	30.8
75°	31.2	29.0	27.3	26.0	28.6
77.5°	21.6	20.7	19.4	18.0	17.6
80°	14.1	13.6	13.2	12.8	12.3
82.5°	8.4	8.4	8.4	8.4	8.4
85°	4.4	4.8	5.3	5.7	6.2
87.5°	2.6	2.6	3.1	3.5	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)