

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: P558933

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558933  
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-82-86-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

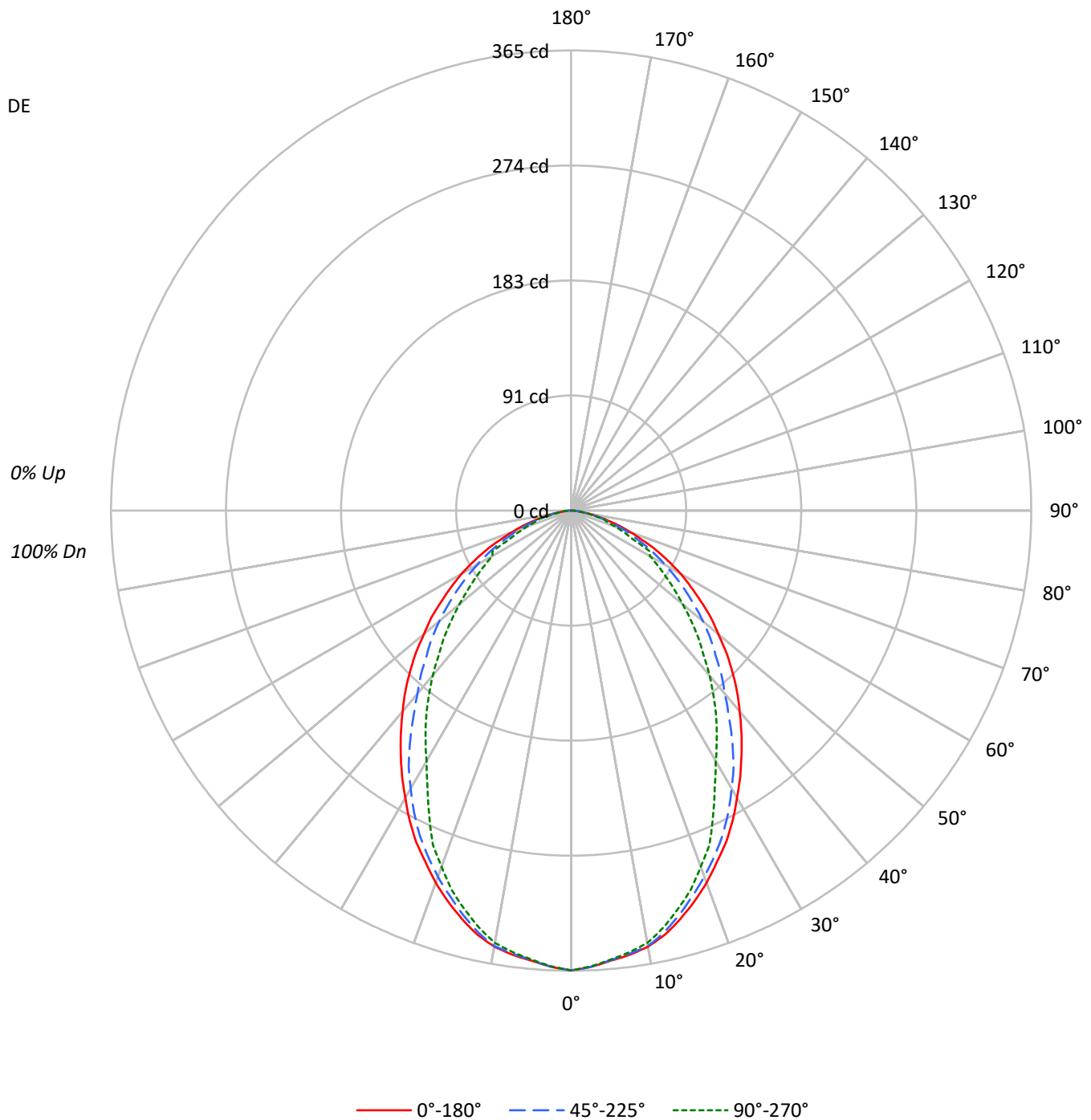
Lumens per Lamp: N/A  
Luminaire Lumens: 716.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3926	3926	3926
5°	3873	3868	3864
10°	3839	3834	3807
15°	3735	3697	3646
20°	3598	3541	3443
25°	3450	3375	3165
30°	3270	3166	2851
35°	3097	2925	2637
40°	2921	2666	2400
45°	2754	2465	2169
50°	2549	2287	1934
55°	2357	2074	1732
60°	2161	1851	1552
65°	1900	1622	1375
70°	1567	1419	1168
75°	1243	1085	1140
80°	837	781	731
85°	519	630	729

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2754 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.0	4.7
10°-20°	93.2	13.0
20°-30°	129.0	18.0
30°-40°	137.5	19.2
40°-50°	125.5	17.5
50°-60°	98.3	13.7
60°-70°	64.1	8.9
70°-80°	28.4	4.0
80°-90°	6.1	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°	256.1	35.8
0°-40°	393.7	55.0
0°-60°	617.4	86.2
0°-90°	716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	716.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	365	365	365	365	365	
5°	358	358	358	358	358	34
15°	335	335	332	328	327	94
25°	290	289	284	274	266	133
35°	236	234	223	206	201	147
45°	181	177	162	148	142	139
55°	126	122	110	97	92	113
65°	75	70	64	65	54	74
75°	30	28	26	25	27	32
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°	364.7	364.7	364.7	364.7	364.7
2.5°	362.2	362.2	362.2	361.8	361.8
5°	358.4	358.0	358.0	357.6	357.6
7.5°	355.4	355.0	354.6	354.2	353.3
10°	351.2	351.2	350.8	348.7	348.3
12.5°	344.5	344.1	342.4	339.4	338.6
15°	335.2	335.2	331.8	328.5	327.2
17.5°	325.1	324.7	320.4	317.1	315.4
20°	314.1	313.3	309.1	303.6	300.6
22.5°	301.9	301.9	296.8	289.7	286.7
25°	290.5	288.8	284.2	274.1	266.5
27.5°	277.4	274.9	269.9	255.5	246.7
30°	263.1	261.8	254.7	236.1	229.4
32.5°	249.6	247.5	239.9	220.5	215.0
35°	235.7	234.0	222.6	205.8	200.7
37.5°	221.8	219.7	205.3	191.8	185.5
40°	207.9	205.3	189.7	177.5	170.8
42.5°	194.8	191.4	176.2	163.2	155.6
45°	180.9	177.1	161.9	148.4	142.5
47.5°	167.0	163.6	149.7	135.8	129.0
50°	152.2	149.3	136.6	122.7	115.5
52.5°	140.0	135.3	123.1	109.2	103.3
55°	125.6	121.9	110.5	97.4	92.3
57.5°	112.6	108.8	98.2	86.0	81.8
60°	100.4	94.9	86.0	75.5	72.1
62.5°	86.9	82.6	75.1	66.2	70.4
65°	74.6	70.4	63.7	64.9	54.0
67.5°	61.1	59.0	53.1	47.2	45.5
70°	49.8	47.2	45.1	38.8	37.1
72.5°	39.6	37.1	34.2	30.8	29.5
75°	29.9	27.8	26.1	24.9	27.4
77.5°	20.7	19.8	18.6	17.3	16.9
80°	13.5	13.1	12.6	12.2	11.8
82.5°	8.0	8.0	8.0	8.0	8.0
85°	4.2	4.6	5.1	5.5	5.9
87.5°	2.5	2.5	3.0	3.4	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)