

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: P559304

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559304  
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-LD4-2LO-40-UNV-81-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

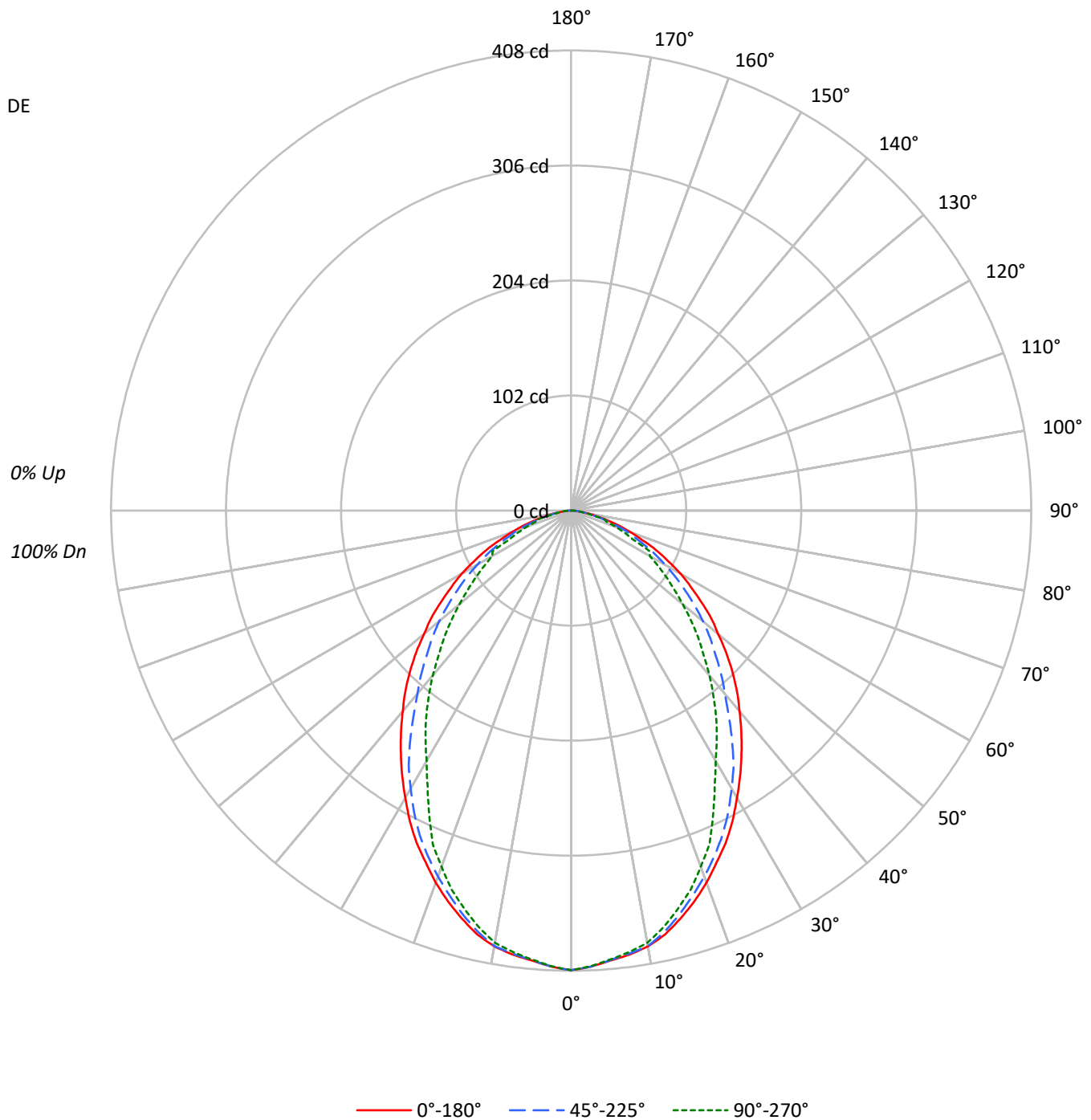
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 800.0 lumens  
Efficiency: N/A  
Efficacy: 68.4 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): 11.7  
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	47	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°	4386	4386	4386
5°	4326	4322	4317
10°	4289	4285	4253
15°	4173	4132	4074
20°	4021	3955	3848
25°	3855	3771	3536
30°	3654	3536	3186
35°	3460	3268	2946
40°	3264	2979	2681
45°	3076	2754	2423
50°	2848	2555	2162
55°	2635	2316	1937
60°	2413	2069	1735
65°	2124	1811	1536
70°	1750	1586	1306
75°	1389	1214	1273
80°	936	874	818
85°	580	704	815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3076 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.9	4.7
10°-20°	104.1	13.0
20°-30°	144.1	18.0
30°-40°	153.7	19.2
40°-50°	140.2	17.5
50°-60°	109.8	13.7
60°-70°	71.6	8.9
70°-80°	31.7	4.0
80°-90°	6.8	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°	286.2	35.8
0°-40°	439.8	55.0
0°-60°	689.9	86.2
0°-90°	800.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	800.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	400	400	400	400	400	38
15°	374	374	371	367	366	105
25°	325	323	318	306	298	149
35°	263	262	249	230	224	165
45°	202	198	181	166	159	156
55°	140	136	123	109	103	126
65°	83	79	71	73	60	82
75°	33	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	407.5	407.5	407.5	407.5	407.5
2.5°	404.7	404.7	404.7	404.2	404.2
5°	400.4	400.0	400.0	399.5	399.5
7.5°	397.1	396.7	396.2	395.7	394.8
10°	392.4	392.4	392.0	389.6	389.1
12.5°	384.9	384.4	382.5	379.2	378.3
15°	374.5	374.5	370.8	367.0	365.6
17.5°	363.2	362.8	358.0	354.3	352.4
20°	351.0	350.0	345.3	339.2	335.9
22.5°	337.3	337.3	331.7	323.7	320.4
25°	324.6	322.7	317.5	306.2	297.7
27.5°	310.0	307.2	301.5	285.5	275.6
30°	294.0	292.6	284.5	263.8	256.3
32.5°	278.9	276.5	268.1	246.4	240.3
35°	263.3	261.5	248.7	229.9	224.2
37.5°	247.8	245.4	229.4	214.4	207.3
40°	232.3	229.4	212.0	198.3	190.8
42.5°	217.7	213.9	196.9	182.3	173.8
45°	202.1	197.9	180.9	165.8	159.2
47.5°	186.6	182.8	167.2	151.7	144.2
50°	170.1	166.8	152.6	137.1	129.1
52.5°	156.4	151.2	137.6	122.0	115.4
55°	140.4	136.2	123.4	108.8	103.2
57.5°	125.8	121.5	109.8	96.1	91.4
60°	112.1	106.0	96.1	84.3	80.6
62.5°	97.0	92.3	83.9	74.0	78.7
65°	83.4	78.7	71.1	72.6	60.3
67.5°	68.3	66.0	59.4	52.8	50.9
70°	55.6	52.8	50.4	43.3	41.5
72.5°	44.3	41.5	38.2	34.4	33.0
75°	33.4	31.1	29.2	27.8	30.6
77.5°	23.1	22.1	20.7	19.3	18.8
80°	15.1	14.6	14.1	13.7	13.2
82.5°	9.0	9.0	9.0	9.0	9.0
85°	4.7	5.2	5.7	6.1	6.6
87.5°	2.8	2.8	3.3	3.8	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)