

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: P559120

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559120  
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-LD4-2HI-40-UNV-82-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

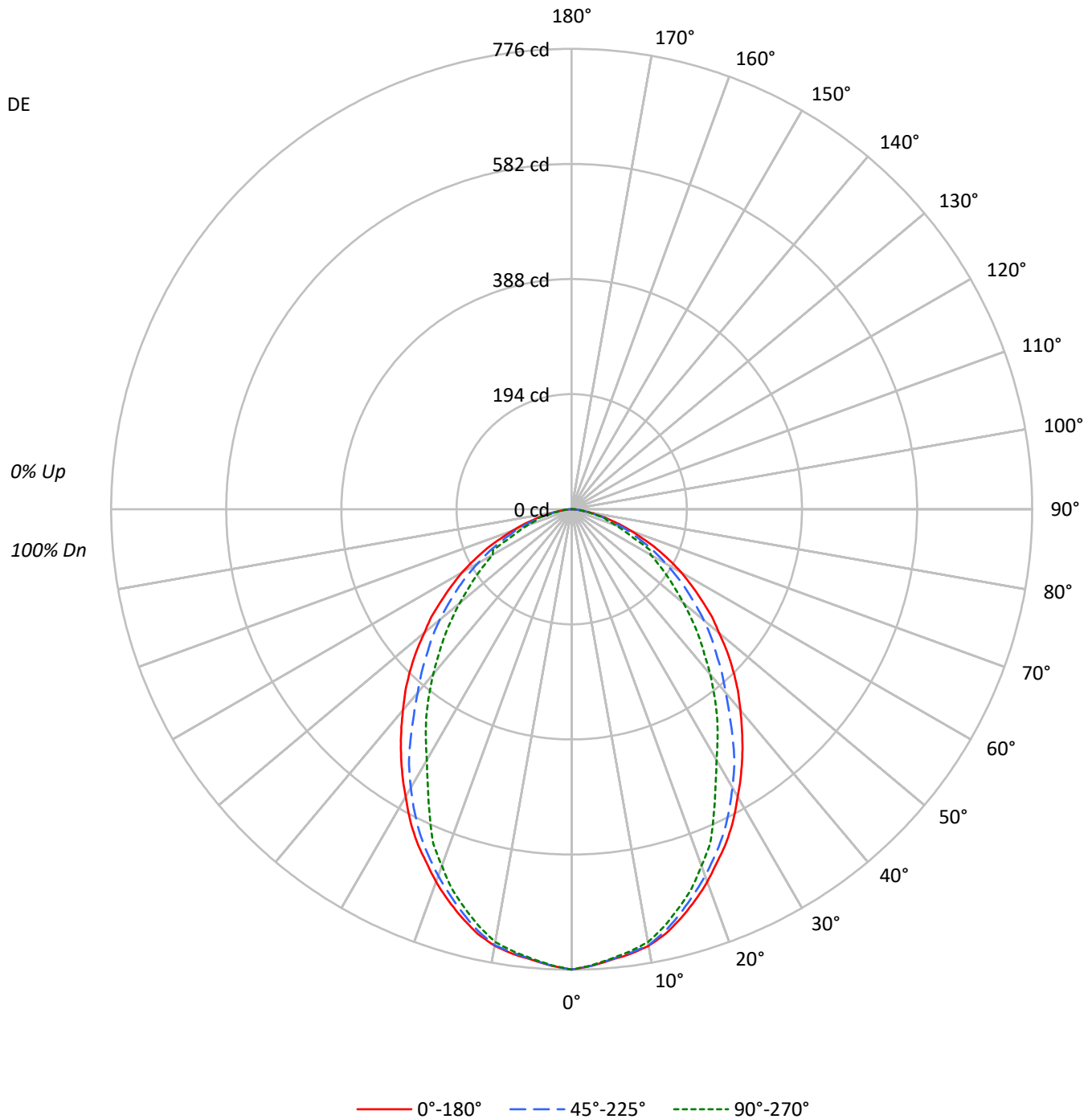
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1523.0 lumens  
Efficiency: N/A  
Efficacy: 70.5 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): 21.6  
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	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	48	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°	8351	8351	8351
5°	8237	8227	8217
10°	8166	8156	8097
15°	7945	7865	7756
20°	7654	7530	7325
25°	7339	7179	6732
30°	6955	6733	6064
35°	6589	6222	5610
40°	6213	5671	5103
45°	5858	5243	4614
50°	5422	4866	4114
55°	5016	4410	3686
60°	4596	3940	3302
65°	4042	3449	2924
70°	3330	3021	2483
75°	2649	2312	2425
80°	1779	1667	1556
85°	1112	1334	1556

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5858 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	4.7
10°-20°	198.2	13.0
20°-30°	274.4	18.0
30°-40°	292.6	19.2
40°-50°	266.9	17.5
50°-60°	209.1	13.7
60°-70°	136.3	8.9
70°-80°	60.4	4.0
80°-90°	13.0	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°	544.8	35.8
0°-40°	837.4	55.0
0°-60°	1313.4	86.2
0°-90°	1523.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1523.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	762	761	761	760	760	72
15°	713	713	706	699	696	200
25°	618	614	604	583	567	284
35°	501	498	474	438	427	313
45°	385	377	344	316	303	296
55°	267	259	235	207	196	240
65°	159	150	135	138	115	156
75°	64	59	56	53	58	68
85°	9	10	11	12	13	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	775.8	775.8	775.8	775.8	775.8
2.5°	770.4	770.4	770.4	769.5	769.5
5°	762.3	761.4	761.4	760.5	760.5
7.5°	756.1	755.2	754.3	753.4	751.6
10°	747.1	747.1	746.2	741.7	740.8
12.5°	732.7	731.8	728.3	722.0	720.2
15°	713.0	713.0	705.8	698.7	696.0
17.5°	691.5	690.6	681.6	674.4	670.9
20°	668.2	666.4	657.4	645.7	639.5
22.5°	642.2	642.2	631.4	616.2	609.9
25°	617.9	614.4	604.5	583.0	566.8
27.5°	590.1	584.8	574.0	543.5	524.7
30°	559.6	557.0	541.7	502.2	487.9
32.5°	530.9	526.5	510.3	469.1	457.4
35°	501.4	497.8	473.5	437.7	426.9
37.5°	471.8	467.3	436.8	408.1	394.6
40°	442.2	436.8	403.6	377.6	363.2
42.5°	414.4	407.2	374.9	347.1	330.9
45°	384.8	376.7	344.4	315.7	303.1
47.5°	355.2	348.0	318.4	288.8	274.4
50°	323.8	317.5	290.6	261.0	245.7
52.5°	297.8	287.9	261.9	232.3	219.7
55°	267.3	259.2	235.0	207.2	196.4
57.5°	239.5	231.4	209.0	183.0	174.0
60°	213.5	201.8	183.0	160.5	153.4
62.5°	184.8	175.8	159.6	140.8	149.8
65°	158.7	149.8	135.4	138.1	114.8
67.5°	130.0	125.6	113.0	100.4	96.9
70°	105.8	100.4	96.0	82.5	78.9
72.5°	84.3	78.9	72.6	65.5	62.8
75°	63.7	59.2	55.6	52.9	58.3
77.5°	43.9	42.2	39.5	36.8	35.9
80°	28.7	27.8	26.9	26.0	25.1
82.5°	17.0	17.0	17.0	17.0	17.0
85°	9.0	9.9	10.8	11.7	12.6
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)