

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: P560400

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560400  
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-12-2-LD4-2LO-35-UNV-82-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

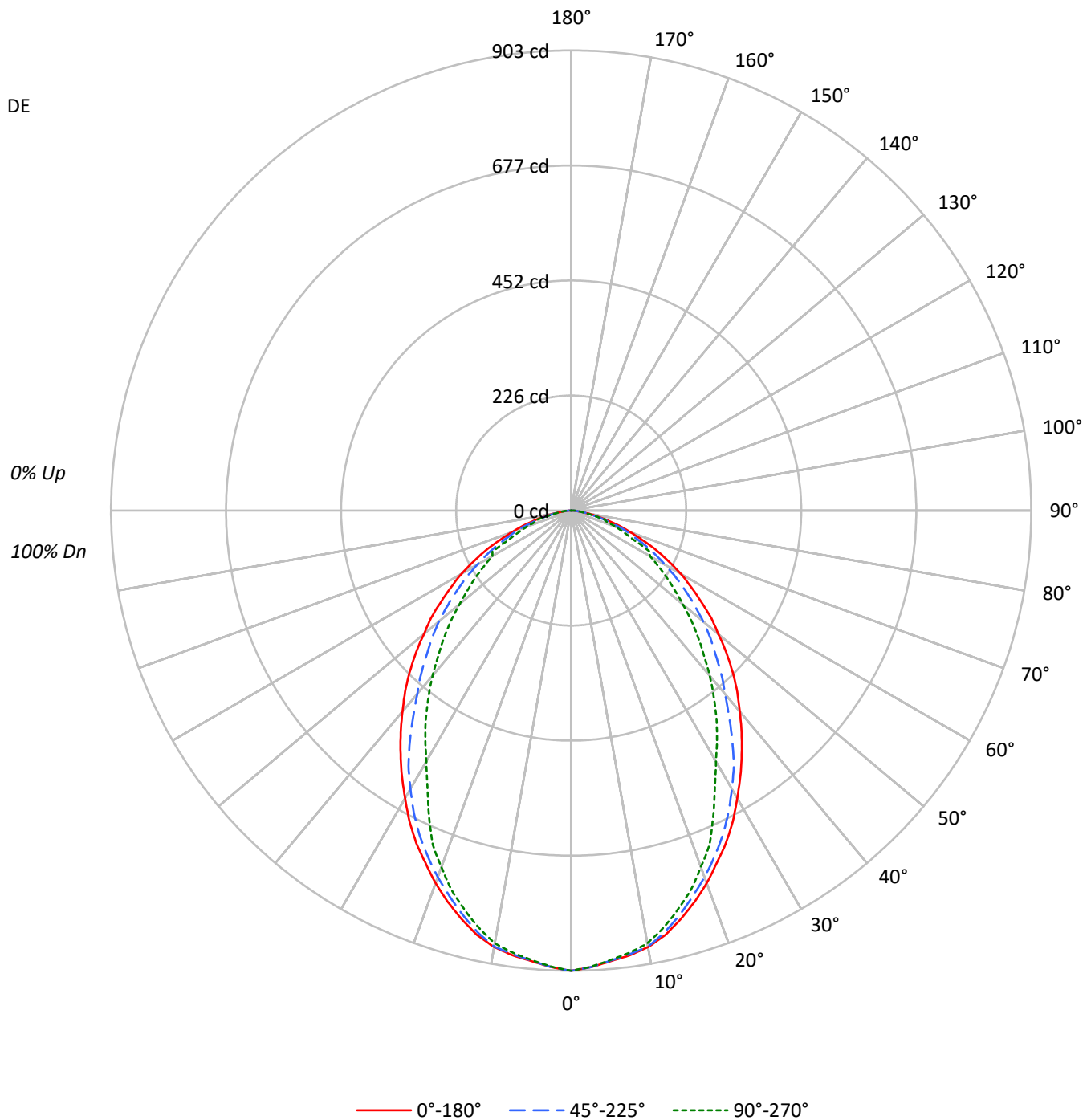
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1773.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
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°	4860	4860	4860
5°	4795	4789	4783
10°	4753	4747	4713
15°	4625	4578	4514
20°	4455	4383	4263
25°	4272	4179	3919
30°	4049	3919	3530
35°	3834	3622	3265
40°	3616	3301	2971
45°	3409	3051	2686
50°	3156	2833	2395
55°	2919	2567	2146
60°	2675	2293	1921
65°	2353	2008	1701
70°	1939	1758	1446
75°	1541	1345	1412
80°	1035	970	905
85°	642	772	902

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3409 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.1	4.7
10°-20°	230.7	13.0
20°-30°	319.4	18.0
30°-40°	340.6	19.2
40°-50°	310.7	17.5
50°-60°	243.4	13.7
60°-70°	158.7	8.9
70°-80°	70.3	4.0
80°-90°	15.1	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°	634.2	35.8
0°-40°	974.8	55.0
0°-60°	1529.0	86.2
0°-90°	1773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1773.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	888	886	886	885	885	84
15°	830	830	822	813	810	233
25°	719	715	704	679	660	330
35°	584	580	551	510	497	365
45°	448	438	401	368	353	345
55°	311	302	274	241	229	279
65°	185	174	158	161	134	182
75°	74	69	65	62	68	79
85°	10	12	12	14	15	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	903.1	903.1	903.1	903.1	903.1
2.5°	896.9	896.9	896.9	895.8	895.8
5°	887.5	886.4	886.4	885.4	885.4
7.5°	880.2	879.1	878.1	877.0	875.0
10°	869.7	869.7	868.7	863.5	862.4
12.5°	853.0	852.0	847.8	840.5	838.4
15°	830.1	830.1	821.7	813.4	810.2
17.5°	805.0	804.0	793.5	785.2	781.0
20°	777.9	775.8	765.3	751.7	744.4
22.5°	747.6	747.6	735.0	717.3	710.0
25°	719.4	715.2	703.7	678.7	659.9
27.5°	687.0	680.8	668.2	632.7	610.8
30°	651.5	648.4	630.6	584.7	568.0
32.5°	618.1	612.9	594.1	546.1	532.5
35°	583.6	579.5	551.3	509.5	497.0
37.5°	549.2	544.0	508.5	475.1	459.4
40°	514.7	508.5	469.8	439.6	422.9
42.5°	482.4	474.0	436.4	404.1	385.3
45°	447.9	438.5	400.9	367.5	352.9
47.5°	413.5	405.1	370.7	336.2	319.5
50°	376.9	369.6	338.3	303.8	286.1
52.5°	346.6	335.2	304.9	270.4	255.8
55°	311.1	301.7	273.6	241.2	228.7
57.5°	278.8	269.4	243.3	213.0	202.6
60°	248.5	234.9	213.0	186.9	178.5
62.5°	215.1	204.6	185.8	163.9	174.4
65°	184.8	174.4	157.7	160.8	133.6
67.5°	151.4	146.2	131.6	116.9	112.8
70°	123.2	116.9	111.7	96.1	91.9
72.5°	98.1	91.9	84.6	76.2	73.1
75°	74.1	68.9	64.7	61.6	67.9
77.5°	51.2	49.1	45.9	42.8	41.8
80°	33.4	32.4	31.3	30.3	29.2
82.5°	19.8	19.8	19.8	19.8	19.8
85°	10.4	11.5	12.5	13.6	14.6
87.5°	6.3	6.3	7.3	8.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)