

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: P560440

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560440  
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-40-UNV-80-88-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

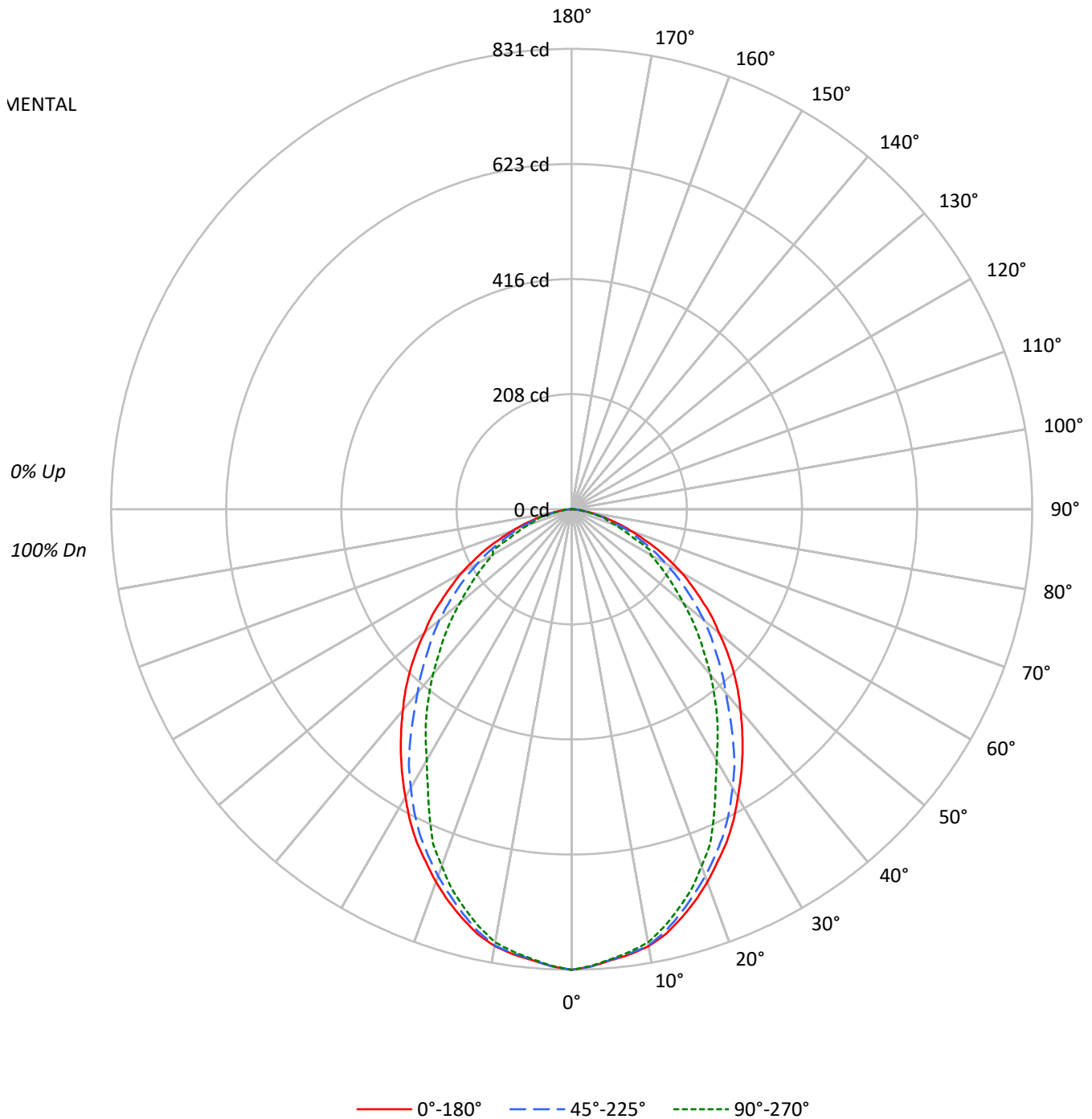
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1632.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 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				
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°	4474	4474	4474
5°	4413	4408	4403
10°	4375	4370	4338
15°	4257	4215	4155
20°	4101	4035	3924
25°	3932	3847	3607
30°	3727	3608	3249
35°	3529	3334	3006
40°	3329	3039	2734
45°	3138	2809	2472
50°	2905	2607	2205
55°	2687	2363	1975
60°	2462	2111	1769
65°	2166	1848	1566
70°	1784	1618	1331
75°	1418	1239	1300
80°	955	893	834
85°	593	710	834

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3138 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.4	4.7
10°-20°	212.4	13.0
20°-30°	294.0	18.0
30°-40°	313.5	19.2
40°-50°	286.0	17.5
50°-60°	224.1	13.7
60°-70°	146.0	8.9
70°-80°	64.7	4.0
80°-90°	13.9	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°	583.8	35.8
0°-40°	897.3	55.0
0°-60°	1407.4	86.2
0°-90°	1632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1632.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	817	816	816	815	815	78
15°	764	764	756	749	746	215
25°	662	658	648	625	607	304
35°	537	533	507	469	458	336
45°	412	404	369	338	325	318
55°	286	278	252	222	210	257
65°	170	160	145	148	123	168
75°	68	63	60	57	62	73
85°	10	11	12	12	14	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	831.3	831.3	831.3	831.3	831.3
2.5°	825.6	825.6	825.6	824.6	824.6
5°	816.9	815.9	815.9	815.0	815.0
7.5°	810.2	809.2	808.3	807.3	805.4
10°	800.6	800.6	799.6	794.8	793.8
12.5°	785.2	784.2	780.4	773.7	771.7
15°	764.0	764.0	756.4	748.7	745.8
17.5°	741.0	740.0	730.4	722.7	718.9
20°	716.0	714.1	704.5	692.0	685.2
22.5°	688.1	688.1	676.6	660.2	653.5
25°	662.2	658.3	647.8	624.7	607.4
27.5°	632.4	626.6	615.1	582.4	562.2
30°	599.7	596.8	580.5	538.2	522.8
32.5°	568.9	564.1	546.8	502.6	490.1
35°	537.2	533.4	507.4	469.0	457.5
37.5°	505.5	500.7	468.0	437.3	422.9
40°	473.8	468.0	432.5	404.6	389.2
42.5°	444.0	436.3	401.7	371.9	354.6
45°	412.3	403.6	369.0	338.3	324.8
47.5°	380.6	372.9	341.2	309.5	294.1
50°	346.9	340.2	311.4	279.7	263.3
52.5°	319.1	308.5	280.6	248.9	235.5
55°	286.4	277.7	251.8	222.0	210.5
57.5°	256.6	248.0	223.9	196.1	186.4
60°	228.7	216.2	196.1	172.0	164.3
62.5°	198.0	188.4	171.1	150.9	160.5
65°	170.1	160.5	145.1	148.0	123.0
67.5°	139.4	134.5	121.1	107.6	103.8
70°	113.4	107.6	102.8	88.4	84.6
72.5°	90.3	84.6	77.8	70.2	67.3
75°	68.2	63.4	59.6	56.7	62.5
77.5°	47.1	45.2	42.3	39.4	38.4
80°	30.8	29.8	28.8	27.9	26.9
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.6	10.6	11.5	12.5	13.5
87.5°	5.8	5.8	6.7	7.7	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)