

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: P559408

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559408  
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-LD4-2STD-35-UNV-80-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

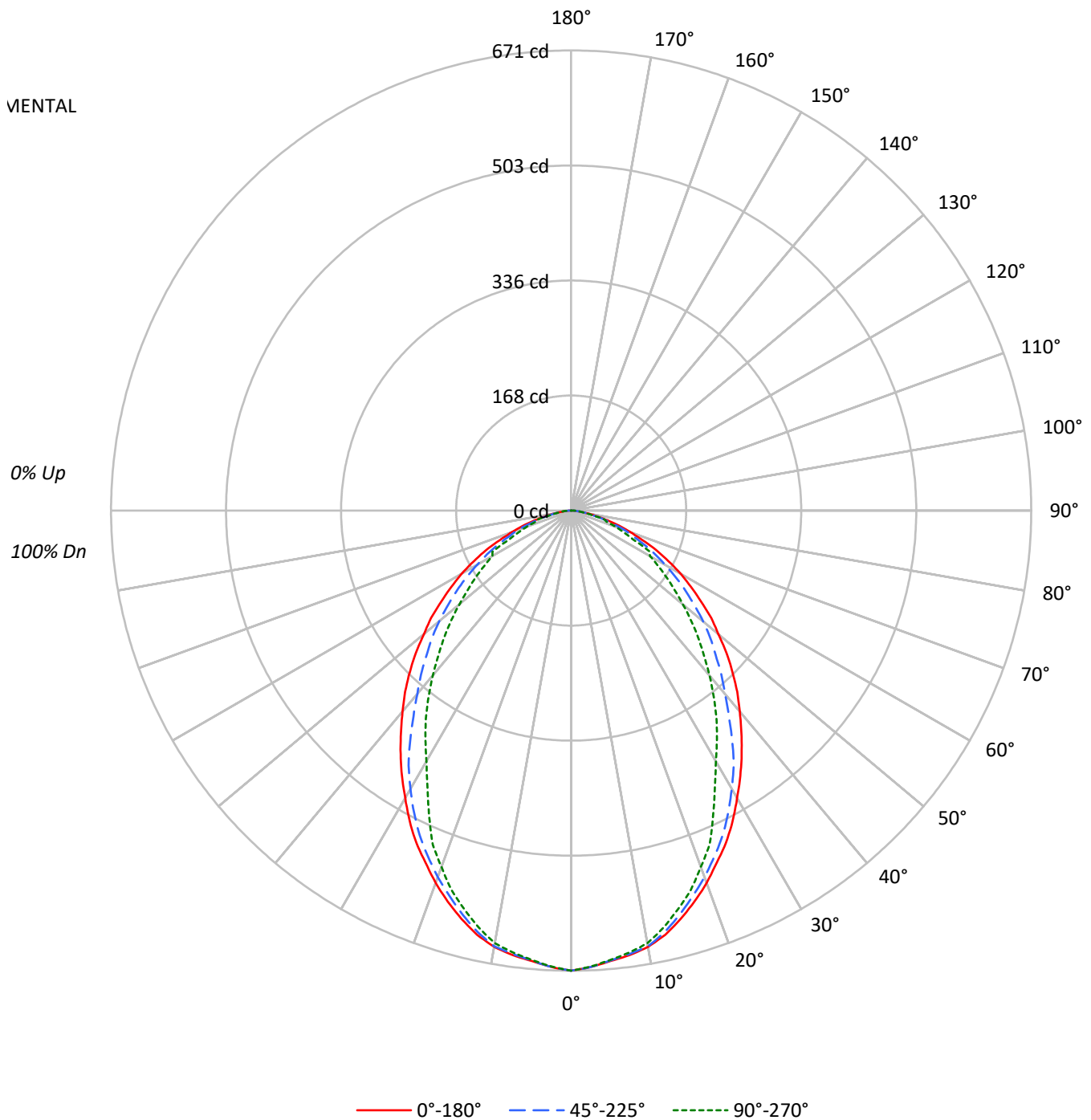
Lumens per Lamp: N/A  
Luminaire Lumens: 1317.0 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7222	7222	7222
5°	7123	7115	7106
10°	7061	7053	7002
15°	6871	6802	6706
20°	6619	6512	6334
25°	6347	6208	5822
30°	6016	5822	5244
35°	5696	5381	4851
40°	5373	4904	4414
45°	5065	4533	3990
50°	4689	4208	3558
55°	4337	3813	3187
60°	3974	3406	2855
65°	3497	2982	2529
70°	2880	2612	2146
75°	2292	2000	2096
80°	1537	1444	1345
85°	963	1149	1346

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5065 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.4	4.7
10°-20°	171.4	13.0
20°-30°	237.3	18.0
30°-40°	253.0	19.2
40°-50°	230.8	17.5
50°-60°	180.8	13.7
60°-70°	117.9	8.9
70°-80°	52.2	4.0
80°-90°	11.2	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°	471.1	35.8
0°-40°	724.1	55.0
0°-60°	1135.7	86.2
0°-90°	1317.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1317.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	671	671	671	671	671	
5°	659	658	658	658	658	63
15°	617	617	610	604	602	173
25°	534	531	523	504	490	245
35°	434	430	410	378	369	271
45°	333	326	298	273	262	256
55°	231	224	203	179	170	207
65°	137	130	117	119	99	135
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	670.9	670.9	670.9	670.9	670.9
2.5°	666.2	666.2	666.2	665.4	665.4
5°	659.2	658.5	658.5	657.7	657.7
7.5°	653.8	653.0	652.2	651.5	649.9
10°	646.0	646.0	645.3	641.4	640.6
12.5°	633.6	632.9	629.8	624.3	622.8
15°	616.6	616.6	610.4	604.2	601.8
17.5°	598.0	597.2	589.4	583.2	580.1
20°	577.8	576.2	568.5	558.4	553.0
22.5°	555.3	555.3	546.0	532.8	527.4
25°	534.4	531.3	522.7	504.1	490.2
27.5°	510.3	505.7	496.4	470.0	453.7
30°	484.0	481.6	468.4	434.3	421.9
32.5°	459.1	455.3	441.3	405.6	395.5
35°	433.5	430.4	409.5	378.5	369.2
37.5°	407.9	404.1	377.7	352.9	341.2
40°	382.4	377.7	349.0	326.5	314.1
42.5°	358.3	352.1	324.2	300.1	286.2
45°	332.7	325.7	297.8	273.0	262.1
47.5°	307.1	300.9	275.3	249.7	237.3
50°	280.0	274.5	251.3	225.7	212.5
52.5°	257.5	249.0	226.5	200.9	190.0
55°	231.1	224.1	203.2	179.2	169.8
57.5°	207.1	200.1	180.7	158.2	150.5
60°	184.6	174.5	158.2	138.8	132.6
62.5°	159.8	152.0	138.1	121.8	129.5
65°	137.3	129.5	117.1	119.4	99.3
67.5°	112.5	108.6	97.7	86.9	83.8
70°	91.5	86.9	83.0	71.4	68.2
72.5°	72.9	68.2	62.8	56.6	54.3
75°	55.1	51.2	48.1	45.8	50.4
77.5°	38.0	36.5	34.1	31.8	31.0
80°	24.8	24.0	23.3	22.5	21.7
82.5°	14.7	14.7	14.7	14.7	14.7
85°	7.8	8.5	9.3	10.1	10.9
87.5°	4.7	4.7	5.4	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)