

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: P558901

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-80-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558901  
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-LD4-1STD-40-UNV-80-86-EDD  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

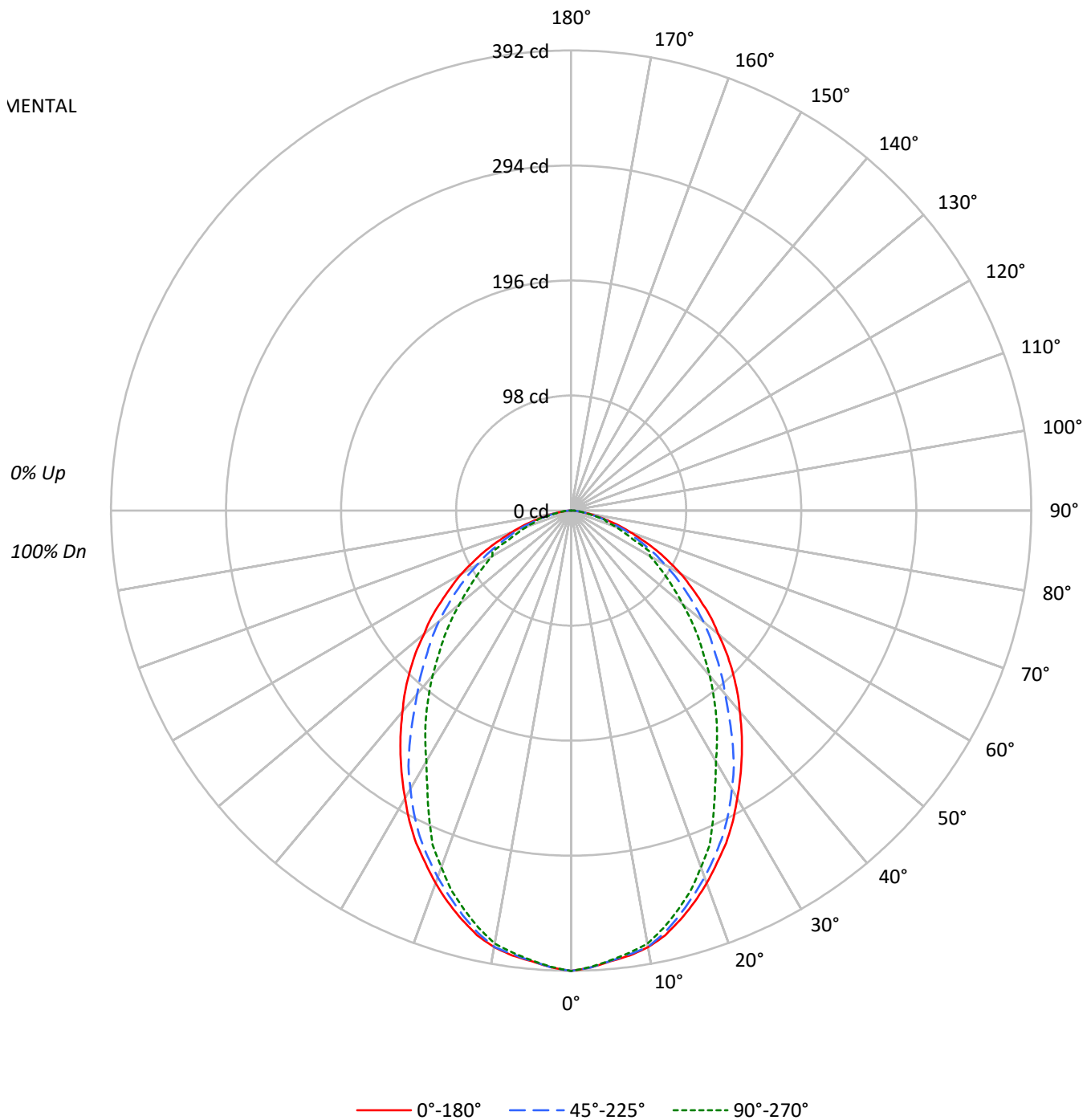
Lumens per Lamp: N/A  
Luminaire Lumens: 770.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4222	4222	4222
5°	4164	4160	4155
10°	4128	4124	4093
15°	4017	3977	3921
20°	3869	3808	3703
25°	3710	3630	3404
30°	3516	3404	3066
35°	3331	3146	2836
40°	3140	2866	2580
45°	2961	2650	2334
50°	2741	2460	2080
55°	2535	2229	1863
60°	2323	1991	1668
65°	2045	1745	1477
70°	1684	1526	1256
75°	1339	1169	1227
80°	899	843	787
85°	556	667	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2961 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.5	4.7
10°-20°	100.2	13.0
20°-30°	138.7	18.0
30°-40°	147.9	19.2
40°-50°	134.9	17.5
50°-60°	105.7	13.7
60°-70°	68.9	8.9
70°-80°	30.5	4.0
80°-90°	6.5	0.8
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°	275.4	35.8
0°-40°	423.4	55.0
0°-60°	664.0	86.2
0°-90°	770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	770.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	392	392	392	392	392	
5°	385	385	385	384	384	37
15°	360	360	357	353	352	101
25°	312	311	306	295	287	143
35°	254	252	239	221	216	158
45°	194	190	174	160	153	150
55°	135	131	119	105	99	121
65°	80	76	68	70	58	79
75°	32	30	28	27	30	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	392.2	392.2	392.2	392.2	392.2
2.5°	389.5	389.5	389.5	389.1	389.1
5°	385.4	385.0	385.0	384.5	384.5
7.5°	382.3	381.8	381.3	380.9	380.0
10°	377.7	377.7	377.3	375.0	374.5
12.5°	370.5	370.0	368.2	365.0	364.1
15°	360.5	360.5	356.9	353.2	351.9
17.5°	349.6	349.2	344.6	341.0	339.2
20°	337.8	336.9	332.4	326.5	323.3
22.5°	324.7	324.7	319.2	311.5	308.3
25°	312.4	310.6	305.6	294.7	286.6
27.5°	298.4	295.6	290.2	274.8	265.3
30°	282.9	281.6	273.9	253.9	246.7
32.5°	268.4	266.2	258.0	237.2	231.3
35°	253.5	251.7	239.4	221.3	215.8
37.5°	238.5	236.2	220.8	206.3	199.5
40°	223.5	220.8	204.0	190.9	183.6
42.5°	209.5	205.9	189.5	175.5	167.3
45°	194.5	190.4	174.1	159.6	153.3
47.5°	179.6	175.9	161.0	146.0	138.8
50°	163.7	160.5	146.9	132.0	124.2
52.5°	150.5	145.6	132.4	117.4	111.1
55°	135.1	131.0	118.8	104.7	99.3
57.5°	121.1	117.0	105.7	92.5	88.0
60°	107.9	102.0	92.5	81.2	77.5
62.5°	93.4	88.9	80.7	71.2	75.7
65°	80.3	75.7	68.5	69.8	58.0
67.5°	65.7	63.5	57.1	50.8	49.0
70°	53.5	50.8	48.5	41.7	39.9
72.5°	42.6	39.9	36.7	33.1	31.7
75°	32.2	29.9	28.1	26.8	29.5
77.5°	22.2	21.3	20.0	18.6	18.1
80°	14.5	14.1	13.6	13.1	12.7
82.5°	8.6	8.6	8.6	8.6	8.6
85°	4.5	5.0	5.4	5.9	6.3
87.5°	2.7	2.7	3.2	3.6	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)