

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: P558934

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558934  
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-82-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

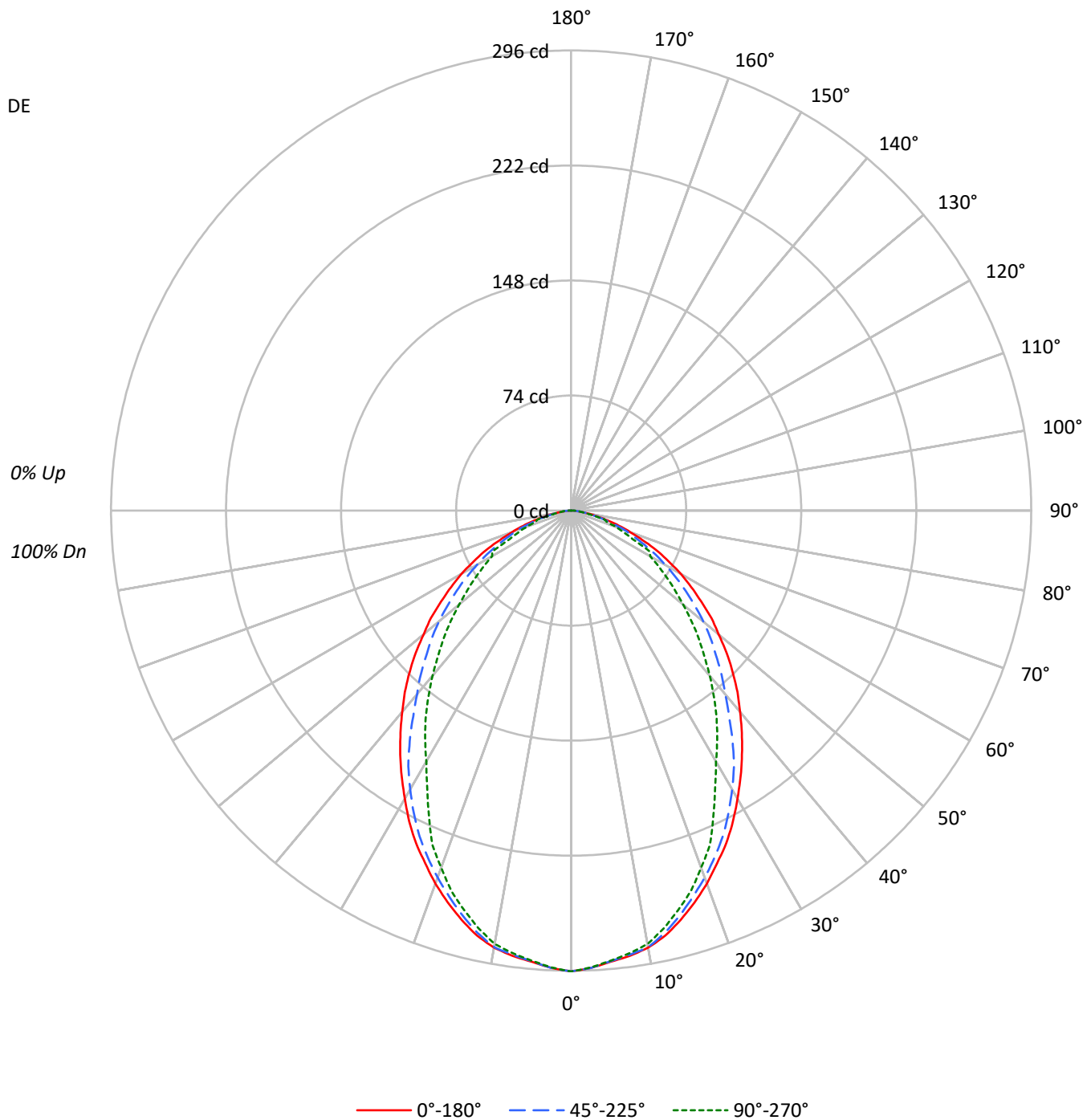
Lumens per Lamp: N/A  
Luminaire Lumens: 582.0 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3192	3192	3192
5°	3148	3144	3140
10°	3121	3117	3094
15°	3037	3005	2964
20°	2924	2877	2800
25°	2804	2744	2572
30°	2659	2573	2317
35°	2518	2378	2143
40°	2375	2167	1950
45°	2238	2003	1763
50°	2071	1859	1572
55°	1916	1685	1409
60°	1757	1505	1262
65°	1546	1319	1118
70°	1271	1155	950
75°	1011	882	927
80°	682	638	595
85°	420	506	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2238 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.6	4.7
10°-20°	75.7	13.0
20°-30°	104.9	18.0
30°-40°	111.8	19.2
40°-50°	102.0	17.5
50°-60°	79.9	13.7
60°-70°	52.1	8.9
70°-80°	23.1	4.0
80°-90°	5.0	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°	208.2	35.8
0°-40°	320.0	55.0
0°-60°	501.9	86.2
0°-90°	582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	582.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	296	296	296	296	296	
5°	291	291	291	291	291	28
15°	272	272	270	267	266	77
25°	236	235	231	223	217	108
35°	192	190	181	167	163	120
45°	147	144	132	121	116	113
55°	102	99	90	79	75	92
65°	61	57	52	53	44	60
75°	24	23	21	20	22	26
85°	3	4	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	296.5	296.5	296.5	296.5	296.5
2.5°	294.4	294.4	294.4	294.1	294.1
5°	291.3	291.0	291.0	290.6	290.6
7.5°	288.9	288.6	288.2	287.9	287.2
10°	285.5	285.5	285.2	283.4	283.1
12.5°	280.0	279.7	278.3	275.9	275.2
15°	272.5	272.5	269.7	267.0	266.0
17.5°	264.2	263.9	260.5	257.7	256.4
20°	255.3	254.6	251.2	246.8	244.4
22.5°	245.4	245.4	241.3	235.5	233.1
25°	236.1	234.8	231.0	222.8	216.6
27.5°	225.5	223.5	219.3	207.7	200.5
30°	213.9	212.8	207.0	191.9	186.4
32.5°	202.9	201.2	195.0	179.2	174.8
35°	191.6	190.2	181.0	167.3	163.1
37.5°	180.3	178.6	166.9	155.9	150.8
40°	169.0	166.9	154.2	144.3	138.8
42.5°	158.3	155.6	143.3	132.6	126.5
45°	147.0	143.9	131.6	120.6	115.8
47.5°	135.7	133.0	121.7	110.4	104.9
50°	123.7	121.3	111.0	99.7	93.9
52.5°	113.8	110.0	100.1	88.8	84.0
55°	102.1	99.0	89.8	79.2	75.1
57.5°	91.5	88.4	79.9	69.9	66.5
60°	81.6	77.1	69.9	61.3	58.6
62.5°	70.6	67.2	61.0	53.8	57.2
65°	60.7	57.2	51.8	52.8	43.9
67.5°	49.7	48.0	43.2	38.4	37.0
70°	40.4	38.4	36.7	31.5	30.2
72.5°	32.2	30.2	27.8	25.0	24.0
75°	24.3	22.6	21.2	20.2	22.3
77.5°	16.8	16.1	15.1	14.1	13.7
80°	11.0	10.6	10.3	9.9	9.6
82.5°	6.5	6.5	6.5	6.5	6.5
85°	3.4	3.8	4.1	4.5	4.8
87.5°	2.1	2.1	2.4	2.7	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)