

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: P559812

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-81-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559812  
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-LD4-1LO-35-UNV-81-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

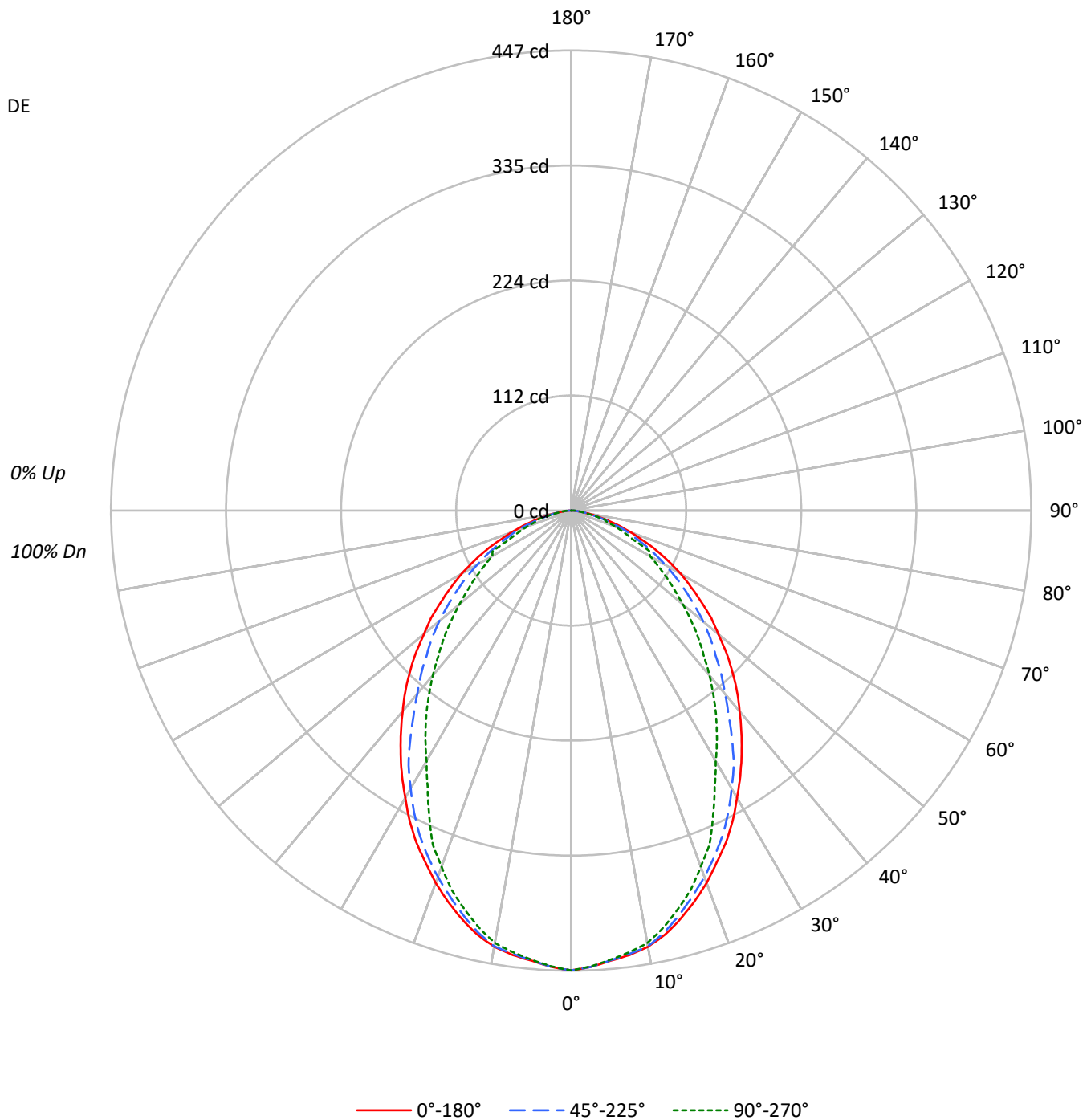
Lumens per Lamp: N/A  
Luminaire Lumens: 877.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2404	2404	2404
5°	2372	2369	2366
10°	2351	2348	2331
15°	2288	2264	2233
20°	2204	2168	2109
25°	2113	2067	1938
30°	2003	1938	1746
35°	1897	1792	1615
40°	1789	1633	1470
45°	1687	1509	1329
50°	1561	1401	1185
55°	1444	1270	1061
60°	1323	1135	950
65°	1164	993	842
70°	958	870	714
75°	763	665	699
80°	511	480	449
85°	321	383	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1687 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.6	4.7
10°-20°	114.1	13.0
20°-30°	158.0	18.0
30°-40°	168.5	19.2
40°-50°	153.7	17.5
50°-60°	120.4	13.7
60°-70°	78.5	8.9
70°-80°	34.8	4.0
80°-90°	7.5	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°	313.7	35.8
0°-40°	482.2	55.0
0°-60°	756.3	86.2
0°-90°	877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	877.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	447	447	447	447	447	
5°	439	438	438	438	438	42
15°	411	411	406	402	401	115
25°	356	354	348	336	326	163
35°	289	287	273	252	246	180
45°	222	217	198	182	175	171
55°	154	149	135	119	113	138
65°	91	86	78	80	66	90
75°	37	34	32	30	34	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	446.7	446.7	446.7	446.7	446.7
2.5°	443.6	443.6	443.6	443.1	443.1
5°	439.0	438.5	438.5	438.0	438.0
7.5°	435.4	434.9	434.3	433.8	432.8
10°	430.2	430.2	429.7	427.1	426.6
12.5°	421.9	421.4	419.4	415.7	414.7
15°	410.6	410.6	406.4	402.3	400.8
17.5°	398.2	397.7	392.5	388.4	386.3
20°	384.8	383.7	378.6	371.8	368.2
22.5°	369.8	369.8	363.6	354.8	351.2
25°	355.8	353.8	348.1	335.7	326.4
27.5°	339.8	336.7	330.5	313.0	302.1
30°	322.3	320.7	311.9	289.2	281.0
32.5°	305.7	303.2	293.9	270.1	263.4
35°	288.7	286.6	272.7	252.0	245.8
37.5°	271.7	269.1	251.5	235.0	227.2
40°	254.6	251.5	232.4	217.4	209.2
42.5°	238.6	234.5	215.9	199.9	190.6
45°	221.6	216.9	198.3	181.8	174.6
47.5°	204.5	200.4	183.3	166.3	158.0
50°	186.4	182.8	167.3	150.3	141.5
52.5°	171.5	165.8	150.8	133.8	126.5
55°	153.9	149.3	135.3	119.3	113.1
57.5°	137.9	133.2	120.3	105.4	100.2
60°	122.9	116.2	105.4	92.4	88.3
62.5°	106.4	101.2	91.9	81.1	86.2
65°	91.4	86.2	78.0	79.5	66.1
67.5°	74.9	72.3	65.1	57.8	55.8
70°	60.9	57.8	55.3	47.5	45.4
72.5°	48.5	45.4	41.8	37.7	36.2
75°	36.7	34.1	32.0	30.5	33.6
77.5°	25.3	24.3	22.7	21.2	20.7
80°	16.5	16.0	15.5	15.0	14.5
82.5°	9.8	9.8	9.8	9.8	9.8
85°	5.2	5.7	6.2	6.7	7.2
87.5°	3.1	3.1	3.6	4.1	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)