

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: P559240

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559240  
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-LD4-2LO-35-UNV-81-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

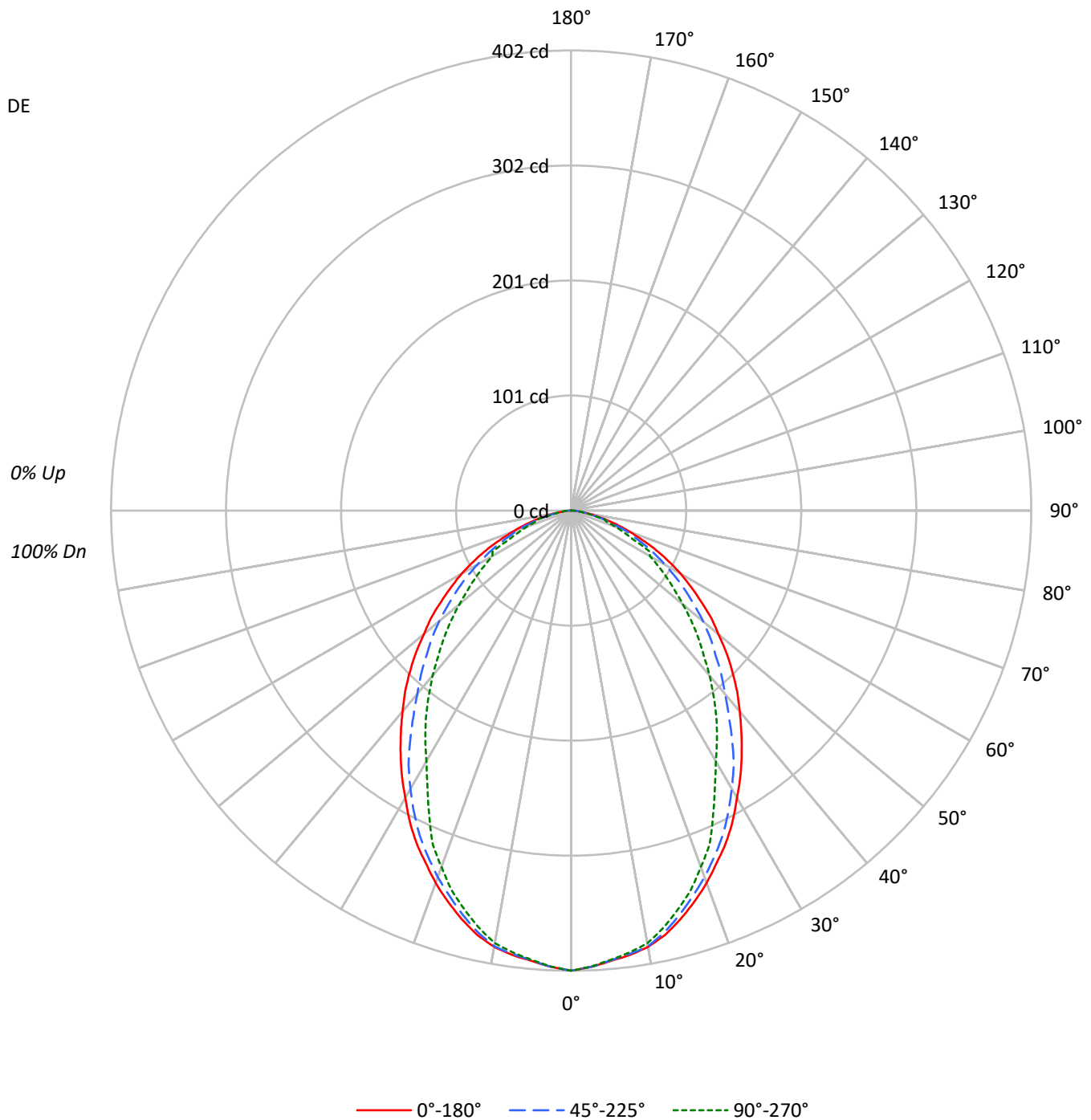
Lumens per Lamp: N/A  
Luminaire Lumens: 789.0 lumens  
Efficiency: N/A  
Efficacy: 67.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4326	4326	4326
5°	4267	4263	4257
10°	4230	4226	4195
15°	4116	4075	4018
20°	3966	3901	3795
25°	3802	3720	3487
30°	3603	3488	3142
35°	3413	3223	2907
40°	3219	2938	2644
45°	3034	2716	2390
50°	2808	2520	2132
55°	2599	2284	1910
60°	2381	2041	1711
65°	2094	1788	1515
70°	1725	1564	1287
75°	1372	1198	1256
80°	924	862	806
85°	568	692	803

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3034 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.4	4.7
10°-20°	102.7	13.0
20°-30°	142.1	18.0
30°-40°	151.6	19.2
40°-50°	138.3	17.5
50°-60°	108.3	13.7
60°-70°	70.6	8.9
70°-80°	31.3	4.0
80°-90°	6.7	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°	282.2	35.8
0°-40°	433.8	55.0
0°-60°	680.4	86.2
0°-90°	789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	789.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	402	402	402	402	402	
5°	395	394	394	394	394	37
15°	369	369	366	362	361	104
25°	320	318	313	302	294	147
35°	260	258	245	227	221	162
45°	199	195	178	164	157	154
55°	138	134	122	107	102	124
65°	82	78	70	72	60	81
75°	33	31	29	27	30	35
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	401.9	401.9	401.9	401.9	401.9
2.5°	399.1	399.1	399.1	398.7	398.7
5°	394.9	394.5	394.5	394.0	394.0
7.5°	391.7	391.2	390.8	390.3	389.4
10°	387.0	387.0	386.6	384.3	383.8
12.5°	379.6	379.1	377.3	374.0	373.1
15°	369.4	369.4	365.7	361.9	360.6
17.5°	358.2	357.8	353.1	349.4	347.5
20°	346.2	345.2	340.6	334.5	331.3
22.5°	332.7	332.7	327.1	319.2	315.9
25°	320.1	318.3	313.2	302.0	293.6
27.5°	305.7	302.9	297.4	281.6	271.8
30°	289.9	288.5	280.6	260.2	252.8
32.5°	275.1	272.7	264.4	243.0	237.0
35°	259.7	257.9	245.3	226.7	221.2
37.5°	244.4	242.1	226.3	211.4	204.4
40°	229.1	226.3	209.1	195.6	188.2
42.5°	214.7	210.9	194.2	179.8	171.4
45°	199.3	195.1	178.4	163.6	157.0
47.5°	184.0	180.3	164.9	149.6	142.2
50°	167.7	164.5	150.5	135.2	127.3
52.5°	154.3	149.1	135.7	120.3	113.8
55°	138.5	134.3	121.7	107.3	101.8
57.5°	124.1	119.9	108.3	94.8	90.1
60°	110.6	104.5	94.8	83.2	79.5
62.5°	95.7	91.1	82.7	72.9	77.6
65°	82.2	77.6	70.2	71.6	59.5
67.5°	67.4	65.0	58.5	52.0	50.2
70°	54.8	52.0	49.7	42.7	40.9
72.5°	43.7	40.9	37.6	33.9	32.5
75°	33.0	30.7	28.8	27.4	30.2
77.5°	22.8	21.8	20.4	19.0	18.6
80°	14.9	14.4	13.9	13.5	13.0
82.5°	8.8	8.8	8.8	8.8	8.8
85°	4.6	5.1	5.6	6.0	6.5
87.5°	2.8	2.8	3.3	3.7	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)