

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: P559433

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559433  
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-81-88-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

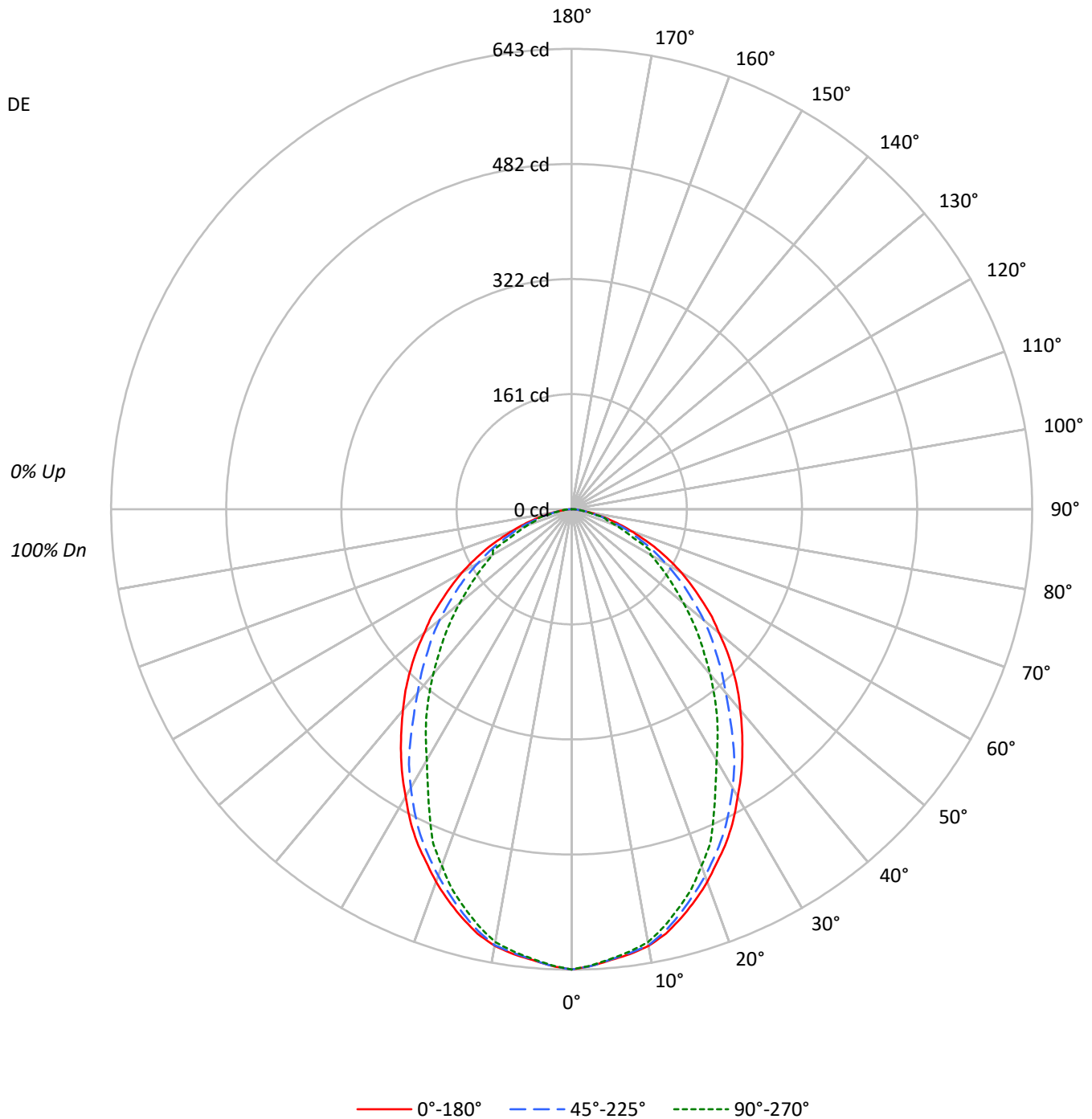
Lumens per Lamp: N/A  
Luminaire Lumens: 1262.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6919	6919	6919
5°	6826	6818	6809
10°	6767	6758	6710
15°	6584	6518	6427
20°	6342	6239	6070
25°	6081	5949	5578
30°	5763	5579	5025
35°	5458	5156	4649
40°	5148	4699	4229
45°	4853	4344	3824
50°	4493	4032	3409
55°	4157	3654	3055
60°	3808	3264	2736
65°	3349	2858	2422
70°	2760	2502	2058
75°	2196	1917	2009
80°	1475	1382	1289
85°	914	1099	1284

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4853 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.8	4.7
10°-20°	164.2	13.0
20°-30°	227.4	18.0
30°-40°	242.4	19.2
40°-50°	221.2	17.5
50°-60°	173.3	13.7
60°-70°	112.9	8.9
70°-80°	50.0	4.0
80°-90°	10.7	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°	451.4	35.8
0°-40°	693.9	55.0
0°-60°	1088.3	86.2
0°-90°	1262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1262.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	632	631	631	630	630	60
15°	591	591	585	579	577	166
25°	512	509	501	483	470	235
35°	415	412	392	363	354	260
45°	319	312	285	262	251	246
55°	222	215	195	172	163	199
65°	132	124	112	114	95	130
75°	53	49	46	44	48	57
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	642.8	642.8	642.8	642.8	642.8
2.5°	638.4	638.4	638.4	637.6	637.6
5°	631.7	631.0	631.0	630.2	630.2
7.5°	626.5	625.8	625.0	624.3	622.8
10°	619.1	619.1	618.3	614.6	613.9
12.5°	607.2	606.4	603.5	598.3	596.8
15°	590.8	590.8	584.9	578.9	576.7
17.5°	573.0	572.2	564.8	558.9	555.9
20°	553.7	552.2	544.7	535.1	529.9
22.5°	532.1	532.1	523.2	510.6	505.4
25°	512.0	509.1	500.9	483.1	469.7
27.5°	489.0	484.5	475.6	450.4	434.8
30°	463.7	461.5	448.9	416.2	404.3
32.5°	440.0	436.2	422.9	388.7	379.0
35°	415.4	412.5	392.4	362.7	353.8
37.5°	390.9	387.2	361.9	338.1	327.0
40°	366.4	361.9	334.4	312.9	301.0
42.5°	343.3	337.4	310.6	287.6	274.2
45°	318.8	312.1	285.4	261.6	251.2
47.5°	294.3	288.4	263.8	239.3	227.4
50°	268.3	263.1	240.8	216.3	203.6
52.5°	246.7	238.6	217.0	192.5	182.1
55°	221.5	214.8	194.7	171.7	162.8
57.5°	198.4	191.7	173.2	151.6	144.2
60°	176.9	167.2	151.6	133.0	127.1
62.5°	153.1	145.7	132.3	116.7	124.1
65°	131.5	124.1	112.2	114.4	95.1
67.5°	107.8	104.0	93.6	83.2	80.3
70°	87.7	83.2	79.5	68.4	65.4
72.5°	69.9	65.4	60.2	54.3	52.0
75°	52.8	49.0	46.1	43.8	48.3
77.5°	36.4	34.9	32.7	30.5	29.7
80°	23.8	23.0	22.3	21.6	20.8
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.2	8.9	9.7	10.4
87.5°	4.5	4.5	5.2	5.9	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)