

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: P558856

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558856  
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-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**

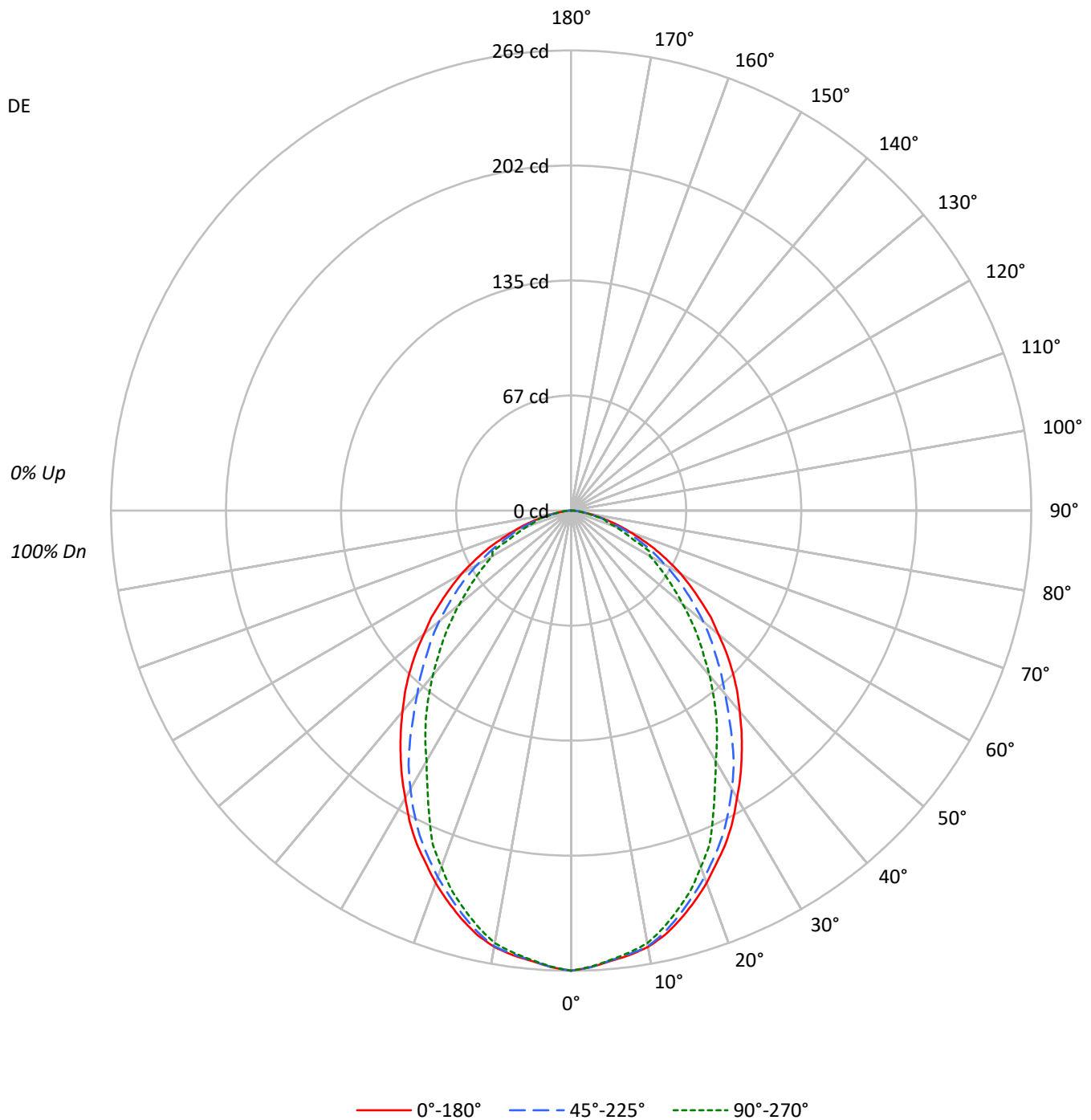
Lumens per Lamp: N/A  
Luminaire Lumens: 528.0 lumens  
Efficiency: N/A  
Efficacy: 63.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2895	2895	2895
5°	2856	2853	2849
10°	2831	2828	2807
15°	2755	2727	2689
20°	2653	2611	2540
25°	2544	2489	2334
30°	2411	2334	2102
35°	2284	2158	1945
40°	2154	1966	1769
45°	2031	1818	1600
50°	1879	1686	1427
55°	1740	1529	1278
60°	1593	1365	1145
65°	1401	1197	1014
70°	1155	1048	862
75°	919	803	840
80°	614	576	539
85°	383	457	543

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2031 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.0	4.7
10°-20°	68.7	13.0
20°-30°	95.1	18.0
30°-40°	101.4	19.2
40°-50°	92.5	17.5
50°-60°	72.5	13.7
60°-70°	47.2	8.9
70°-80°	20.9	4.0
80°-90°	4.5	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°	188.9	35.8
0°-40°	290.3	55.0
0°-60°	455.3	86.2
0°-90°	528.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	528.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	269	269	269	269	269	
5°	264	264	264	264	264	25
15°	247	247	245	242	241	69
25°	214	213	210	202	196	98
35°	174	173	164	152	148	109
45°	133	131	119	109	105	103
55°	93	90	82	72	68	83
65°	55	52	47	48	40	54
75°	22	20	19	18	20	24
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	269.0	269.0	269.0	269.0	269.0
2.5°	267.1	267.1	267.1	266.8	266.8
5°	264.3	264.0	264.0	263.7	263.7
7.5°	262.1	261.8	261.5	261.2	260.6
10°	259.0	259.0	258.7	257.1	256.8
12.5°	254.0	253.7	252.5	250.3	249.7
15°	247.2	247.2	244.7	242.2	241.3
17.5°	239.7	239.4	236.3	233.8	232.6
20°	231.6	231.0	227.9	223.9	221.7
22.5°	222.6	222.6	218.9	213.6	211.4
25°	214.2	213.0	209.6	202.1	196.5
27.5°	204.6	202.7	199.0	188.4	181.9
30°	194.0	193.1	187.8	174.1	169.1
32.5°	184.1	182.5	176.9	162.6	158.6
35°	173.8	172.6	164.2	151.7	148.0
37.5°	163.6	162.0	151.4	141.5	136.8
40°	153.3	151.4	139.9	130.9	125.9
42.5°	143.7	141.2	130.0	120.3	114.7
45°	133.4	130.6	119.4	109.4	105.1
47.5°	123.1	120.6	110.4	100.1	95.1
50°	112.2	110.1	100.7	90.5	85.2
52.5°	103.2	99.8	90.8	80.5	76.2
55°	92.7	89.9	81.5	71.8	68.1
57.5°	83.0	80.2	72.4	63.4	60.3
60°	74.0	70.0	63.4	55.7	53.2
62.5°	64.1	60.9	55.3	48.8	51.9
65°	55.0	51.9	47.0	47.9	39.8
67.5°	45.1	43.5	39.2	34.8	33.6
70°	36.7	34.8	33.3	28.6	27.4
72.5°	29.2	27.4	25.2	22.7	21.8
75°	22.1	20.5	19.3	18.3	20.2
77.5°	15.2	14.6	13.7	12.7	12.4
80°	9.9	9.6	9.3	9.0	8.7
82.5°	5.9	5.9	5.9	5.9	5.9
85°	3.1	3.4	3.7	4.0	4.4
87.5°	1.9	1.9	2.2	2.5	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)