

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: P558924

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558924  
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-81-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

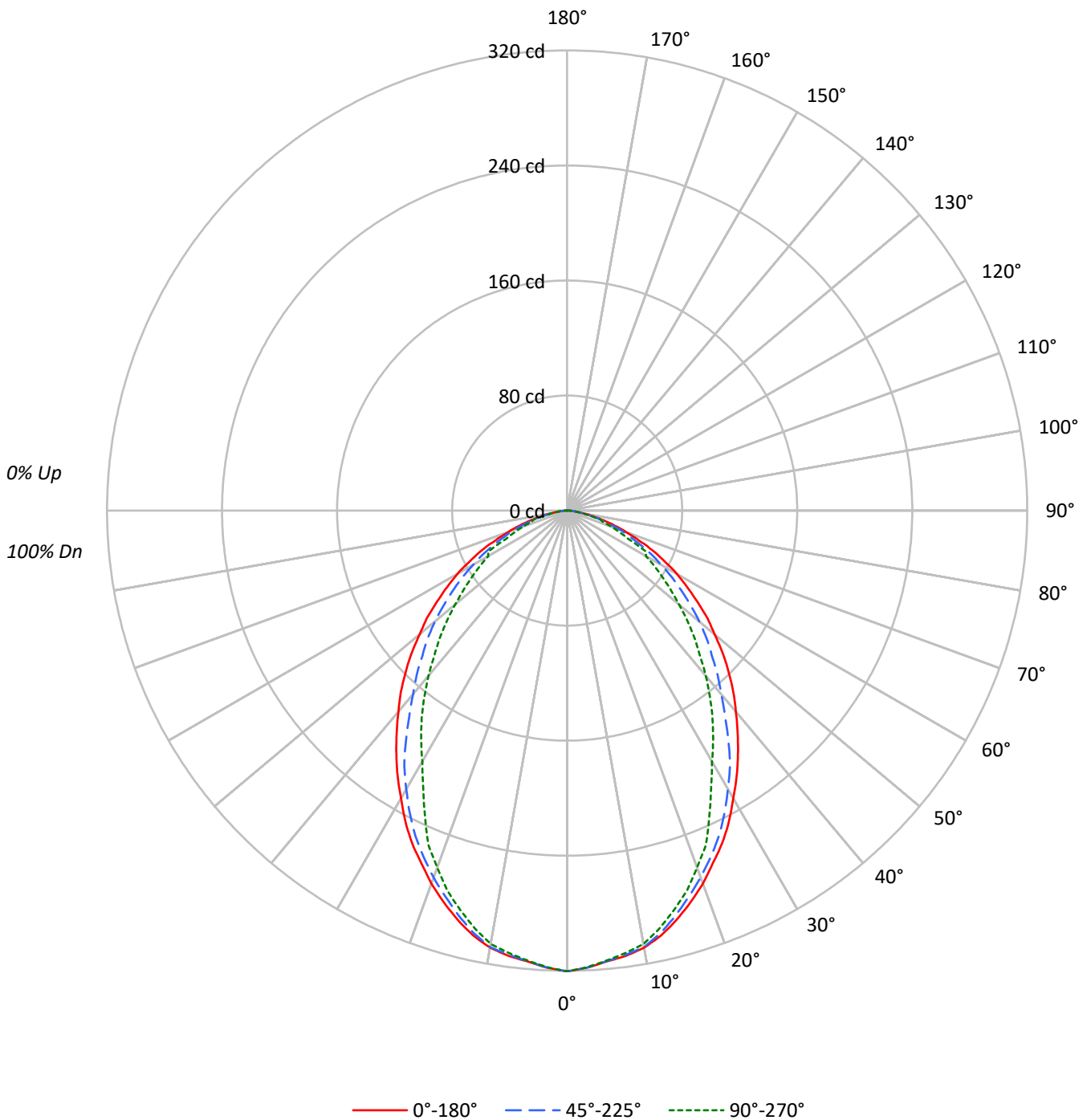
Lumens per Lamp: N/A  
Luminaire Lumens: 629.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	3449	3449	3449
5°	3401	3398	3394
10°	3373	3369	3345
15°	3282	3248	3203
20°	3162	3110	3025
25°	3031	2966	2780
30°	2872	2780	2504
35°	2721	2570	2317
40°	2566	2342	2108
45°	2419	2165	1906
50°	2239	2009	1700
55°	2072	1820	1522
60°	1899	1628	1363
65°	1671	1424	1207
70°	1375	1246	1026
75°	1094	957	1002
80°	738	688	645
85°	457	543	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2419 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.8	4.7
10°-20°	81.9	13.0
20°-30°	113.3	18.0
30°-40°	120.8	19.2
40°-50°	110.2	17.5
50°-60°	86.4	13.7
60°-70°	56.3	8.9
70°-80°	24.9	4.0
80°-90°	5.3	0.8
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°	225.0	35.8
0°-40°	345.8	55.0
0°-60°	542.4	86.2
0°-90°	629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	629.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	320	320	320	320	320	
5°	315	314	314	314	314	30
15°	294	294	292	288	287	83
25°	255	254	250	241	234	117
35°	207	206	196	181	176	129
45°	159	156	142	130	125	122
55°	110	107	97	86	81	99
65°	66	62	56	57	47	65
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	320.4	320.4	320.4	320.4	320.4
2.5°	318.2	318.2	318.2	317.8	317.8
5°	314.8	314.5	314.5	314.1	314.1
7.5°	312.3	311.9	311.5	311.1	310.4
10°	308.6	308.6	308.2	306.3	306.0
12.5°	302.6	302.3	300.8	298.2	297.4
15°	294.5	294.5	291.5	288.5	287.4
17.5°	285.6	285.2	281.5	278.5	277.1
20°	276.0	275.2	271.5	266.7	264.1
22.5°	265.2	265.2	260.8	254.5	251.9
25°	255.2	253.7	249.7	240.8	234.1
27.5°	243.7	241.5	237.1	224.5	216.7
30°	231.1	230.0	223.7	207.4	201.5
32.5°	219.3	217.4	210.8	193.7	188.9
35°	207.1	205.6	195.6	180.8	176.3
37.5°	194.8	193.0	180.4	168.5	163.0
40°	182.6	180.4	166.7	155.9	150.0
42.5°	171.1	168.2	154.8	143.3	136.7
45°	158.9	155.6	142.2	130.4	125.2
47.5°	146.7	143.7	131.5	119.3	113.3
50°	133.7	131.1	120.0	107.8	101.5
52.5°	123.0	118.9	108.2	95.9	90.8
55°	110.4	107.0	97.0	85.6	81.1
57.5°	98.9	95.6	86.3	75.6	71.9
60°	88.2	83.3	75.6	66.3	63.3
62.5°	76.3	72.6	65.9	58.2	61.9
65°	65.6	61.9	55.9	57.0	47.4
67.5°	53.7	51.9	46.7	41.5	40.0
70°	43.7	41.5	39.6	34.1	32.6
72.5°	34.8	32.6	30.0	27.0	25.9
75°	26.3	24.4	23.0	21.9	24.1
77.5°	18.2	17.4	16.3	15.2	14.8
80°	11.9	11.5	11.1	10.7	10.4
82.5°	7.0	7.0	7.0	7.0	7.0
85°	3.7	4.1	4.4	4.8	5.2
87.5°	2.2	2.2	2.6	3.0	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)