

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: P558931

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558931  
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-82-85-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

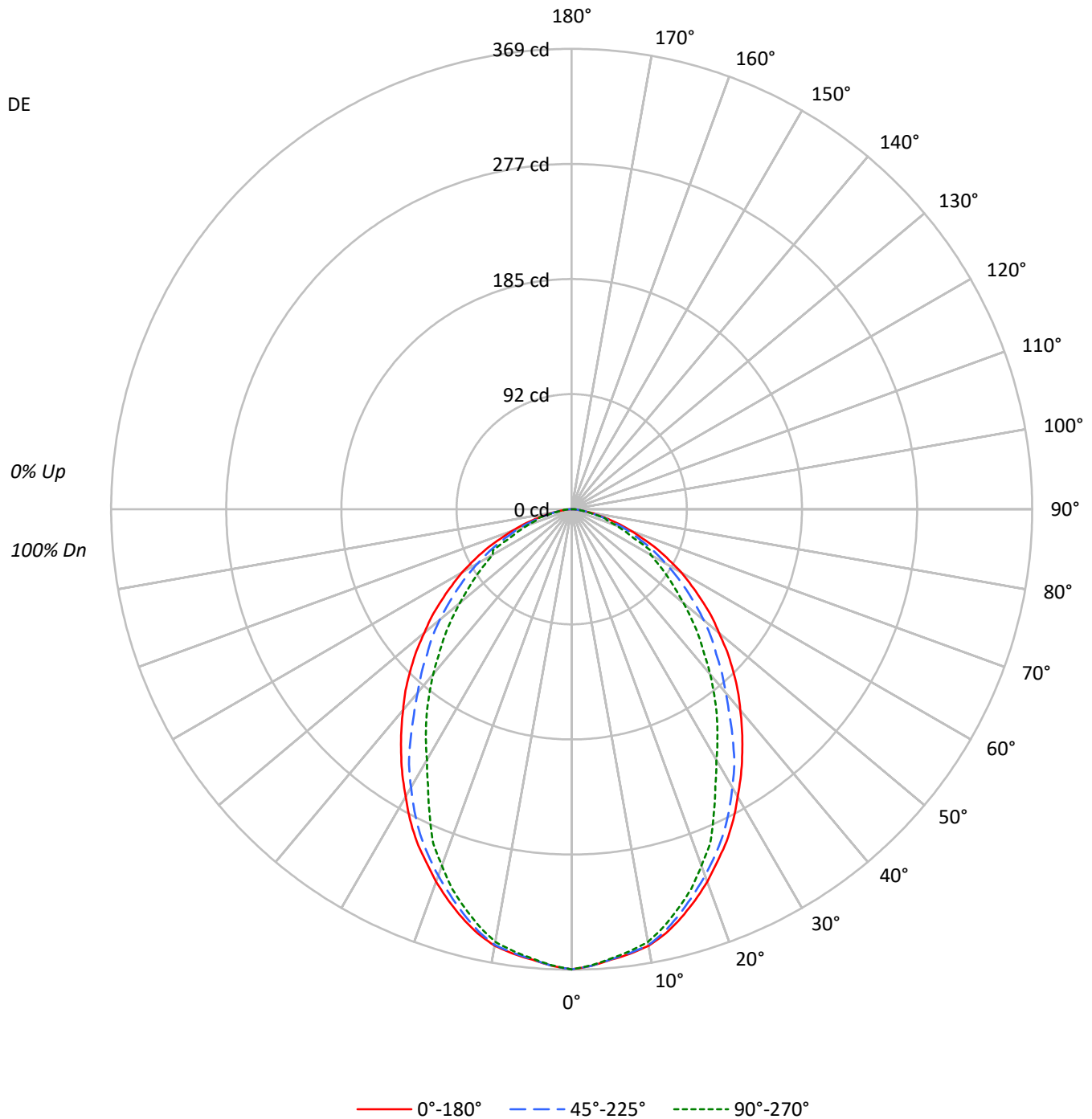
Lumens per Lamp: N/A  
Luminaire Lumens: 724.0 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3970	3970	3970
5°	3916	3911	3906
10°	3882	3877	3850
15°	3778	3739	3687
20°	3638	3580	3482
25°	3489	3413	3201
30°	3306	3200	2882
35°	3131	2958	2666
40°	2954	2696	2427
45°	2784	2492	2194
50°	2577	2313	1956
55°	2385	2096	1753
60°	2185	1873	1569
65°	1923	1640	1391
70°	1583	1435	1180
75°	1260	1098	1152
80°	843	793	738
85°	531	630	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2784 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.3	4.7
10°-20°	94.2	13.0
20°-30°	130.4	18.0
30°-40°	139.1	19.2
40°-50°	126.9	17.5
50°-60°	99.4	13.7
60°-70°	64.8	8.9
70°-80°	28.7	4.0
80°-90°	6.2	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°	259.0	35.8
0°-40°	398.1	55.0
0°-60°	624.4	86.2
0°-90°	724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	724.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	369	369	369	369	369	
5°	362	362	362	362	362	34
15°	339	339	336	332	331	95
25°	294	292	287	277	270	135
35°	238	237	225	208	203	149
45°	183	179	164	150	144	141
55°	127	123	112	98	93	114
65°	76	71	64	66	55	74
75°	30	28	26	25	28	32
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	368.8	368.8	368.8	368.8	368.8
2.5°	366.2	366.2	366.2	365.8	365.8
5°	362.4	362.0	362.0	361.5	361.5
7.5°	359.4	359.0	358.6	358.1	357.3
10°	355.2	355.2	354.7	352.6	352.2
12.5°	348.3	347.9	346.2	343.2	342.4
15°	339.0	339.0	335.5	332.1	330.9
17.5°	328.7	328.3	324.0	320.6	318.9
20°	317.6	316.8	312.5	307.0	304.0
22.5°	305.3	305.3	300.2	292.9	289.9
25°	293.8	292.1	287.4	277.1	269.5
27.5°	280.5	278.0	272.9	258.4	249.4
30°	266.0	264.8	257.5	238.8	231.9
32.5°	252.4	250.3	242.6	223.0	217.4
35°	238.3	236.6	225.1	208.1	202.9
37.5°	224.3	222.1	207.6	194.0	187.6
40°	210.2	207.6	191.9	179.5	172.7
42.5°	197.0	193.6	178.2	165.0	157.3
45°	182.9	179.1	163.7	150.1	144.1
47.5°	168.8	165.4	151.4	137.3	130.5
50°	153.9	150.9	138.1	124.1	116.8
52.5°	141.5	136.9	124.5	110.4	104.5
55°	127.1	123.2	111.7	98.5	93.4
57.5°	113.8	110.0	99.3	87.0	82.7
60°	101.5	95.9	87.0	76.3	72.9
62.5°	87.8	83.6	75.9	66.9	71.2
65°	75.5	71.2	64.4	65.7	54.6
67.5°	61.8	59.7	53.7	47.8	46.0
70°	50.3	47.8	45.6	39.2	37.5
72.5°	40.1	37.5	34.5	31.1	29.8
75°	30.3	28.1	26.4	25.2	27.7
77.5°	20.9	20.0	18.8	17.5	17.1
80°	13.6	13.2	12.8	12.4	11.9
82.5°	8.1	8.1	8.1	8.1	8.1
85°	4.3	4.7	5.1	5.5	6.0
87.5°	2.6	2.6	3.0	3.4	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)