

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: P560085

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560085  
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-12-2-LD4-1STD-40-UNV-82-86-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

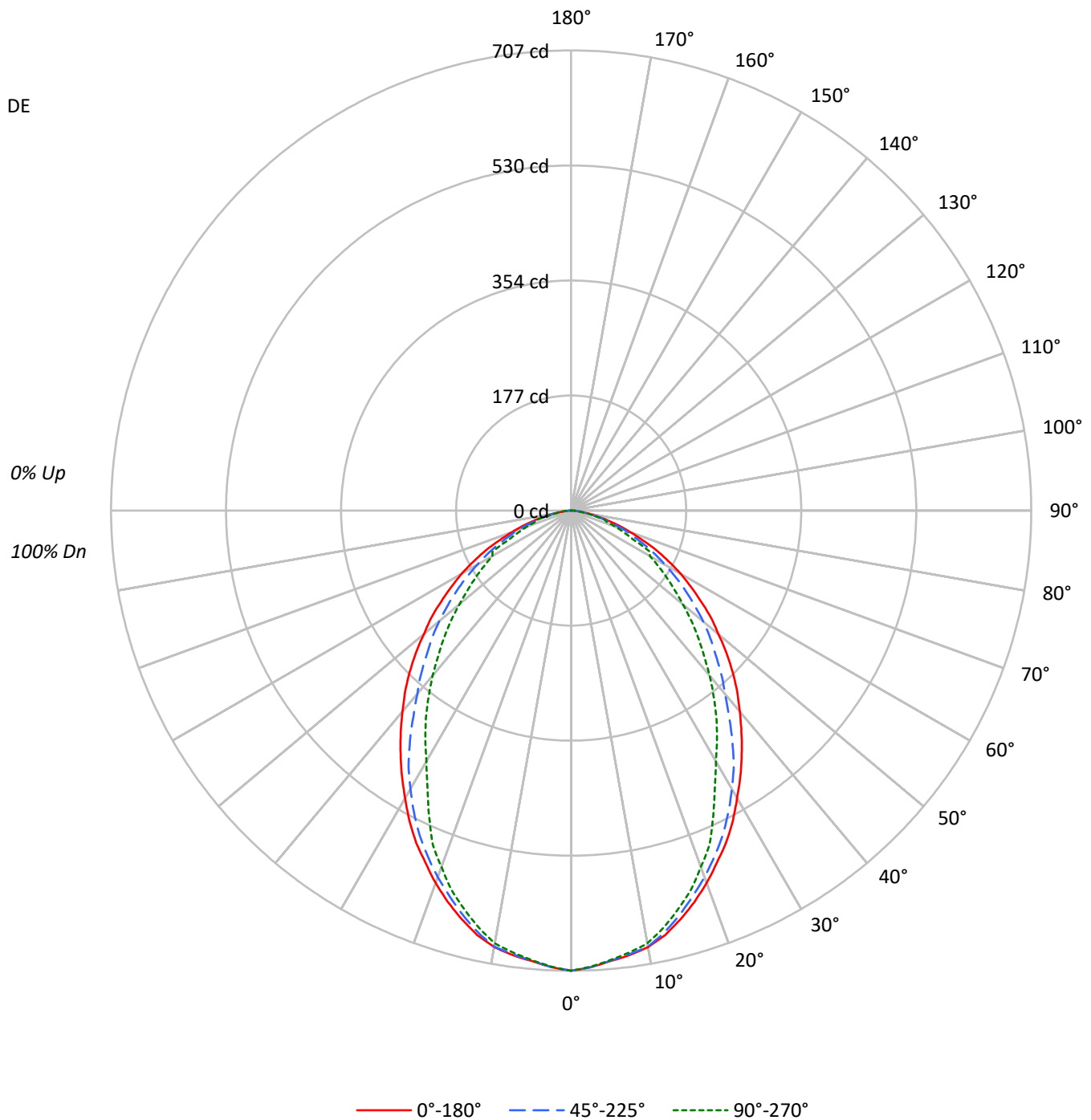
Lumens per Lamp: N/A  
Luminaire Lumens: 1388.0 lumens  
Efficiency: N/A  
Efficacy: 83.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3805	3805	3805
5°	3754	3749	3744
10°	3721	3717	3690
15°	3621	3584	3534
20°	3487	3431	3338
25°	3344	3271	3068
30°	3169	3068	2764
35°	3002	2836	2556
40°	2831	2584	2325
45°	2669	2389	2103
50°	2471	2217	1876
55°	2286	2010	1680
60°	2094	1794	1505
65°	1843	1571	1332
70°	1519	1377	1131
75°	1206	1054	1104
80°	812	759	710
85°	506	605	704

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2669 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	4.7
10°-20°	180.6	13.0
20°-30°	250.1	18.0
30°-40°	266.6	19.2
40°-50°	243.3	17.5
50°-60°	190.6	13.7
60°-70°	124.2	8.9
70°-80°	55.0	4.0
80°-90°	11.8	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°	496.5	35.8
0°-40°	763.1	55.0
0°-60°	1197.0	86.2
0°-90°	1388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1388.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	707	707	707	707	707	
5°	695	694	694	693	693	66
15°	650	650	643	637	634	183
25°	563	560	551	531	517	259
35°	457	454	432	399	389	286
45°	351	343	314	288	276	270
55°	244	236	214	189	179	218
65°	145	136	123	126	105	143
75°	58	54	51	48	53	62
85°	8	9	10	11	11	11
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	707.0	707.0	707.0	707.0	707.0
2.5°	702.1	702.1	702.1	701.3	701.3
5°	694.8	694.0	694.0	693.1	693.1
7.5°	689.0	688.2	687.4	686.6	685.0
10°	680.9	680.9	680.1	676.0	675.2
12.5°	667.8	667.0	663.7	658.0	656.4
15°	649.8	649.8	643.3	636.7	634.3
17.5°	630.2	629.4	621.2	614.7	611.4
20°	608.9	607.3	599.1	588.5	582.8
22.5°	585.2	585.2	575.4	561.5	555.8
25°	563.2	559.9	550.9	531.3	516.6
27.5°	537.8	532.9	523.1	495.3	478.2
30°	510.0	507.6	493.7	457.7	444.7
32.5°	483.9	479.8	465.1	427.5	416.9
35°	456.9	453.6	431.6	398.9	389.1
37.5°	429.9	425.9	398.1	371.9	359.6
40°	403.0	398.1	367.8	344.1	331.0
42.5°	377.6	371.1	341.7	316.3	301.6
45°	350.7	343.3	313.9	287.7	276.3
47.5°	323.7	317.1	290.2	263.2	250.1
50°	295.1	289.4	264.8	237.9	224.0
52.5°	271.4	262.4	238.7	211.7	200.3
55°	243.6	236.2	214.2	188.8	179.0
57.5°	218.2	210.9	190.4	166.7	158.6
60°	194.5	183.9	166.7	146.3	139.8
62.5°	168.4	160.2	145.5	128.3	136.5
65°	144.7	136.5	123.4	125.9	104.6
67.5°	118.5	114.4	103.0	91.5	88.3
70°	96.5	91.5	87.5	75.2	71.9
72.5°	76.8	71.9	66.2	59.7	57.2
75°	58.0	53.9	50.7	48.2	53.1
77.5°	40.1	38.4	36.0	33.5	32.7
80°	26.2	25.3	24.5	23.7	22.9
82.5°	15.5	15.5	15.5	15.5	15.5
85°	8.2	9.0	9.8	10.6	11.4
87.5°	4.9	4.9	5.7	6.5	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)