

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: P559705

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559705  
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-LD4-1HI-40-UNV-82-88-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

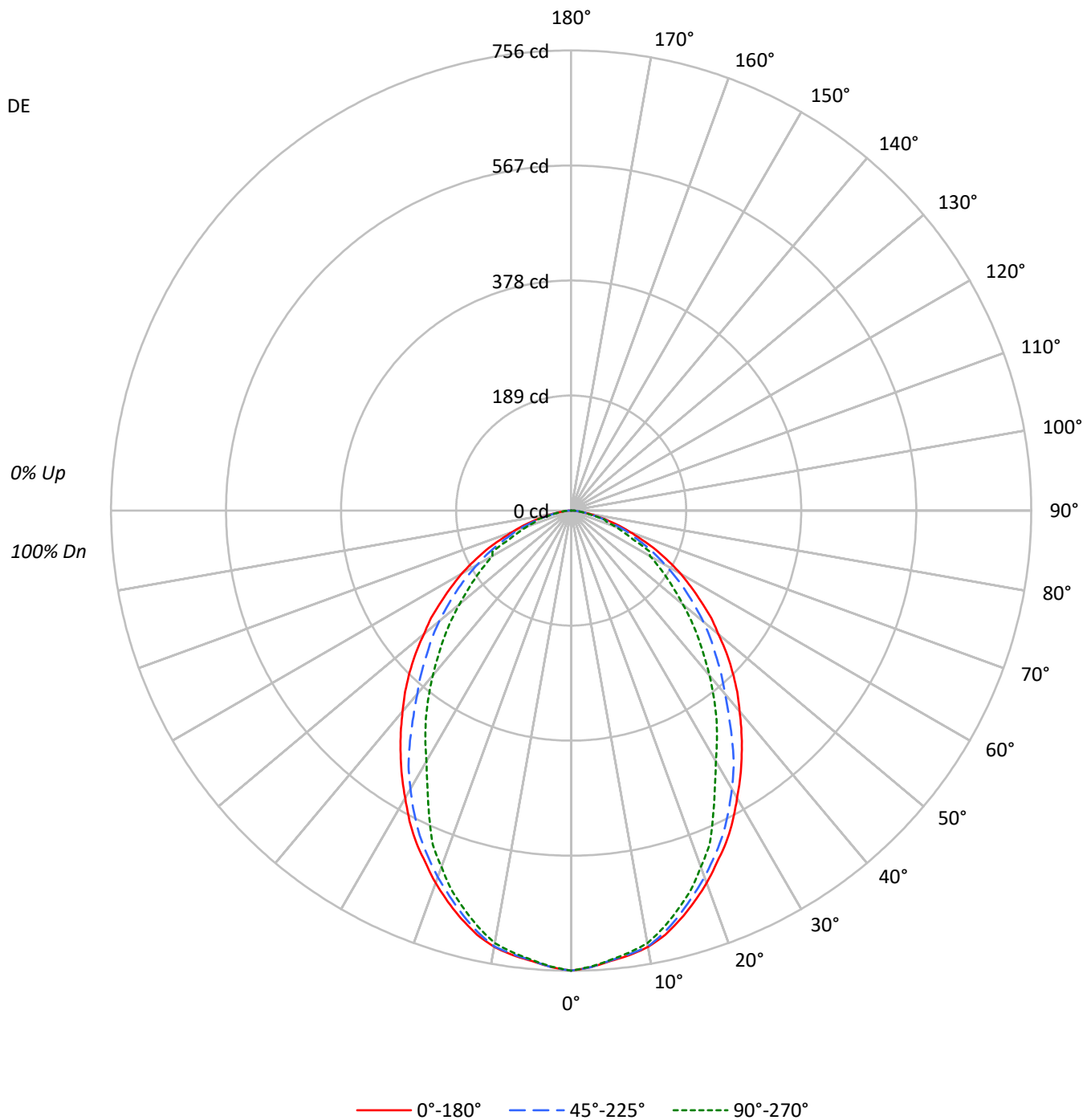
Lumens per Lamp: N/A  
Luminaire Lumens: 1484.0 lumens  
Efficiency: N/A  
Efficacy: 68.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4068	4068	4068
5°	4013	4008	4004
10°	3979	3974	3945
15°	3871	3832	3779
20°	3729	3669	3569
25°	3575	3498	3280
30°	3389	3280	2954
35°	3210	3031	2733
40°	3027	2763	2486
45°	2853	2554	2248
50°	2642	2370	2005
55°	2443	2149	1796
60°	2239	1919	1608
65°	1970	1681	1425
70°	1622	1471	1210
75°	1289	1127	1181
80°	868	812	759
85°	537	648	753

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2853 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.4	4.7
10°-20°	193.1	13.0
20°-30°	267.4	18.0
30°-40°	285.1	19.2
40°-50°	260.1	17.5
50°-60°	203.7	13.7
60°-70°	132.8	8.9
70°-80°	58.8	4.0
80°-90°	12.6	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°	530.8	35.8
0°-40°	815.9	55.0
0°-60°	1279.7	86.2
0°-90°	1484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1484.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	743	742	742	741	741	71
15°	695	695	688	681	678	195
25°	602	599	589	568	552	276
35°	488	485	461	426	416	305
45°	375	367	336	308	295	289
55°	260	253	229	202	191	234
65°	155	146	132	135	112	152
75°	62	58	54	52	57	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	755.9	755.9	755.9	755.9	755.9
2.5°	750.7	750.7	750.7	749.8	749.8
5°	742.8	741.9	741.9	741.1	741.1
7.5°	736.7	735.8	735.0	734.1	732.3
10°	728.0	728.0	727.1	722.7	721.8
12.5°	714.0	713.1	709.6	703.5	701.7
15°	694.8	694.8	687.8	680.8	678.2
17.5°	673.8	672.9	664.2	657.2	653.7
20°	651.1	649.3	640.6	629.2	623.1
22.5°	625.7	625.7	615.2	600.4	594.3
25°	602.1	598.6	589.0	568.0	552.3
27.5°	575.0	569.8	559.3	529.6	511.2
30°	545.3	542.7	527.8	489.4	475.4
32.5°	517.4	513.0	497.3	457.1	445.7
35°	488.5	485.0	461.4	426.5	416.0
37.5°	459.7	455.3	425.6	397.6	384.5
40°	430.8	425.6	393.3	367.9	353.9
42.5°	403.7	396.8	365.3	338.2	322.5
45°	374.9	367.0	335.6	307.6	295.4
47.5°	346.1	339.1	310.2	281.4	267.4
50°	315.5	309.4	283.1	254.3	239.5
52.5°	290.1	280.5	255.2	226.3	214.1
55°	260.4	252.6	229.0	201.9	191.4
57.5°	233.3	225.5	203.6	178.3	169.5
60°	208.0	196.6	178.3	156.4	149.4
62.5°	180.0	171.3	155.6	137.2	145.9
65°	154.7	145.9	132.0	134.6	111.9
67.5°	126.7	122.3	110.1	97.9	94.4
70°	103.1	97.9	93.5	80.4	76.9
72.5°	82.1	76.9	70.8	63.8	61.2
75°	62.0	57.7	54.2	51.6	56.8
77.5°	42.8	41.1	38.5	35.8	35.0
80°	28.0	27.1	26.2	25.3	24.5
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.7	9.6	10.5	11.4	12.2
87.5°	5.2	5.2	6.1	7.0	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)