

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: P560088

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560088  
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-82-88-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

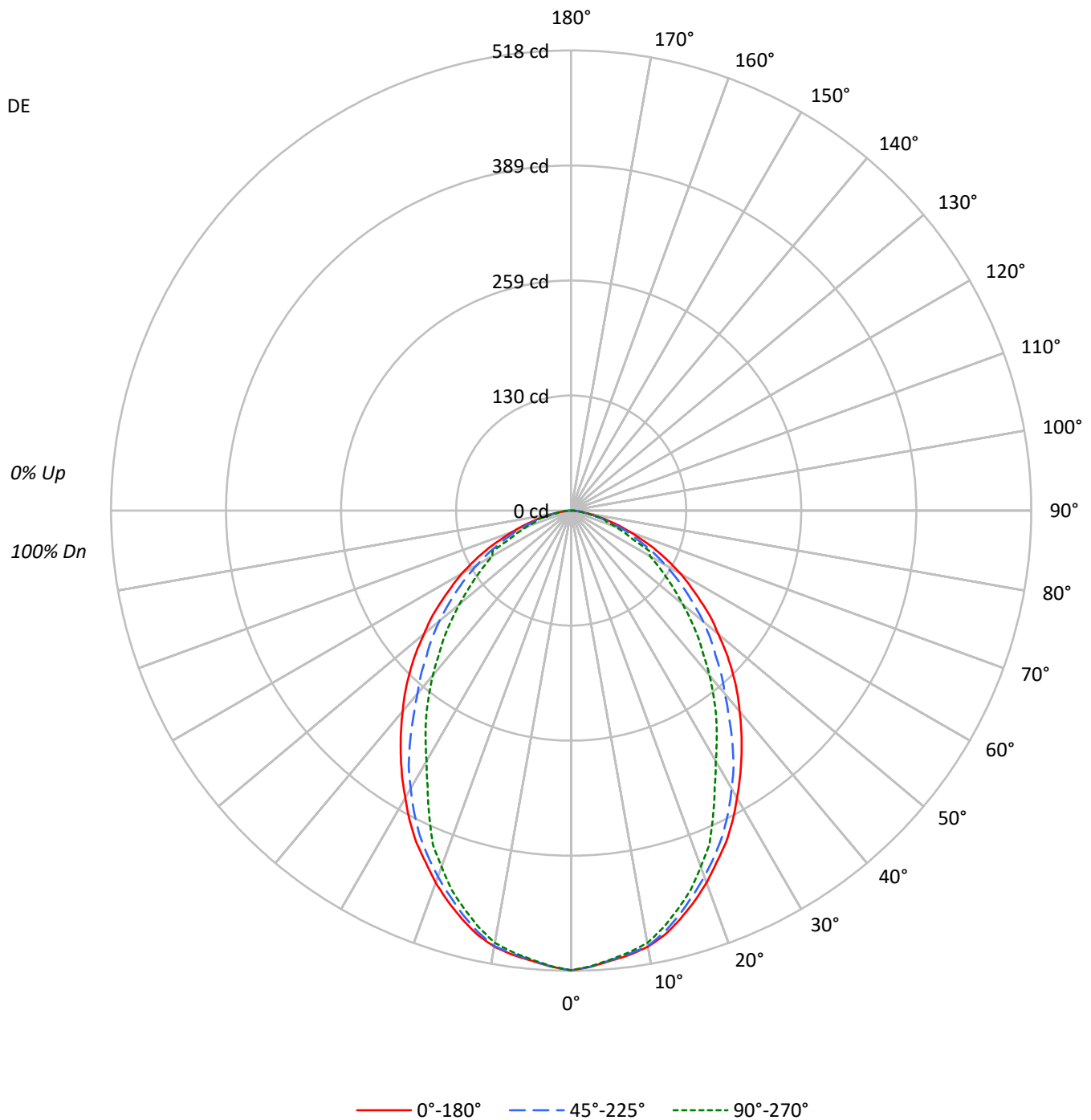
Lumens per Lamp: N/A  
Luminaire Lumens: 1016.0 lumens  
Efficiency: N/A  
Efficacy: 61.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2785	2785	2785
5°	2748	2744	2741
10°	2724	2720	2701
15°	2651	2624	2587
20°	2553	2512	2443
25°	2448	2395	2245
30°	2320	2246	2023
35°	2198	2076	1871
40°	2073	1891	1702
45°	1954	1749	1539
50°	1809	1623	1372
55°	1673	1471	1229
60°	1533	1314	1101
65°	1349	1150	975
70°	1111	1007	829
75°	884	771	809
80°	592	555	521
85°	371	445	519

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1954 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.2	4.7
10°-20°	132.2	13.0
20°-30°	183.0	18.0
30°-40°	195.2	19.2
40°-50°	178.1	17.5
50°-60°	139.5	13.7
60°-70°	90.9	8.9
70°-80°	40.3	4.0
80°-90°	8.7	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°	363.4	35.8
0°-40°	558.6	55.0
0°-60°	876.2	86.2
0°-90°	1016.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1016.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	509	508	508	507	507	48
15°	476	476	471	466	464	134
25°	412	410	403	389	378	189
35°	334	332	316	292	285	209
45°	257	251	230	211	202	198
55°	178	173	157	138	131	160
65°	106	100	90	92	77	104
75°	42	40	37	35	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	517.5	517.5	517.5	517.5	517.5
2.5°	513.9	513.9	513.9	513.3	513.3
5°	508.6	508.0	508.0	507.4	507.4
7.5°	504.4	503.8	503.2	502.6	501.4
10°	498.4	498.4	497.8	494.8	494.2
12.5°	488.8	488.2	485.8	481.6	480.4
15°	475.7	475.7	470.9	466.1	464.3
17.5°	461.3	460.7	454.7	449.9	447.5
20°	445.7	444.5	438.6	430.8	426.6
22.5°	428.4	428.4	421.2	411.0	406.8
25°	412.2	409.8	403.3	388.9	378.1
27.5°	393.7	390.1	382.9	362.6	350.0
30°	373.3	371.5	361.4	335.1	325.5
32.5°	354.2	351.2	340.4	312.9	305.1
35°	334.5	332.1	315.9	292.0	284.8
37.5°	314.7	311.7	291.4	272.2	263.3
40°	295.0	291.4	269.2	251.9	242.3
42.5°	276.4	271.6	250.1	231.5	220.8
45°	256.7	251.3	229.8	210.6	202.2
47.5°	236.9	232.1	212.4	192.7	183.1
50°	216.0	211.8	193.9	174.1	163.9
52.5°	198.6	192.1	174.7	155.0	146.6
55°	178.3	172.9	156.8	138.2	131.0
57.5°	159.7	154.4	139.4	122.1	116.1
60°	142.4	134.6	122.1	107.1	102.3
62.5°	123.3	117.3	106.5	93.9	99.9
65°	105.9	99.9	90.3	92.1	76.6
67.5°	86.8	83.8	75.4	67.0	64.6
70°	70.6	67.0	64.0	55.0	52.7
72.5°	56.2	52.7	48.5	43.7	41.9
75°	42.5	39.5	37.1	35.3	38.9
77.5°	29.3	28.1	26.3	24.5	23.9
80°	19.1	18.5	17.9	17.4	16.8
82.5°	11.4	11.4	11.4	11.4	11.4
85°	6.0	6.6	7.2	7.8	8.4
87.5°	3.6	3.6	4.2	4.8	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)