

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: P559425

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-81-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559425  
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-LD4-2STD-35-UNV-81-84-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

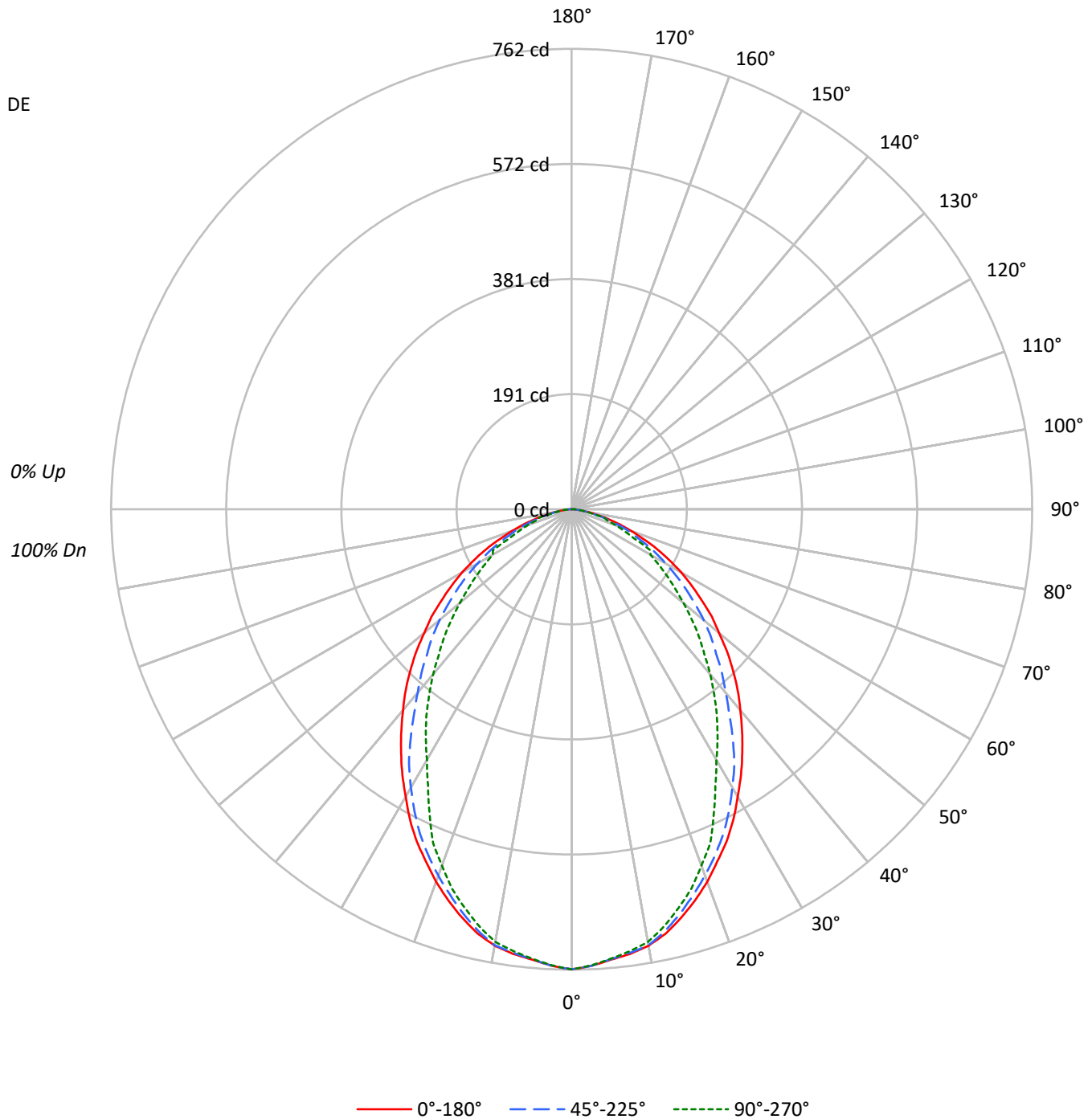
Lumens per Lamp: N/A  
Luminaire Lumens: 1495.0 lumens  
Efficiency: N/A  
Efficacy: 90.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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			
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°	8197	8197	8197
5°	8085	8076	8067
10°	8016	8006	7948
15°	7799	7721	7613
20°	7513	7392	7190
25°	7204	7048	6608
30°	6829	6610	5952
35°	6466	6108	5507
40°	6098	5567	5011
45°	5750	5147	4530
50°	5322	4776	4039
55°	4924	4329	3618
60°	4510	3866	3240
65°	3968	3385	2870
70°	3270	2965	2439
75°	2599	2271	2379
80°	1748	1636	1531
85°	1087	1309	1519

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5750 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.9	4.7
10°-20°	194.5	13.0
20°-30°	269.3	18.0
30°-40°	287.2	19.2
40°-50°	262.0	17.5
50°-60°	205.3	13.7
60°-70°	133.8	8.9
70°-80°	59.3	4.0
80°-90°	12.7	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°	534.8	35.8
0°-40°	822.0	55.0
0°-60°	1289.2	86.2
0°-90°	1495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1495.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	748	747	747	747	747	71
15°	700	700	693	686	683	197
25°	607	603	593	572	556	278
35°	492	489	465	430	419	308
45°	378	370	338	310	298	291
55°	262	254	231	203	193	235
65°	156	147	133	136	113	154
75°	62	58	55	52	57	67
85°	9	10	11	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	761.5	761.5	761.5	761.5	761.5
2.5°	756.3	756.3	756.3	755.4	755.4
5°	748.3	747.4	747.4	746.6	746.6
7.5°	742.2	741.3	740.4	739.5	737.8
10°	733.4	733.4	732.5	728.1	727.2
12.5°	719.3	718.4	714.9	708.7	706.9
15°	699.9	699.9	692.9	685.8	683.2
17.5°	678.8	677.9	669.1	662.0	658.5
20°	655.9	654.1	645.3	633.9	627.7
22.5°	630.4	630.4	619.8	604.8	598.7
25°	606.6	603.1	593.4	572.3	556.4
27.5°	579.3	574.0	563.4	533.5	515.0
30°	549.4	546.7	531.8	493.0	478.9
32.5°	521.2	516.8	500.9	460.4	449.0
35°	492.1	488.6	464.8	429.6	419.1
37.5°	463.1	458.7	428.7	400.6	387.4
40°	434.0	428.7	396.2	370.6	356.6
42.5°	406.7	399.7	368.0	340.7	324.9
45°	377.7	369.8	338.1	309.9	297.6
47.5°	348.6	341.6	312.5	283.5	269.4
50°	317.8	311.7	285.2	256.2	241.2
52.5°	292.3	282.6	257.1	228.0	215.7
55°	262.4	254.4	230.7	203.4	192.8
57.5°	235.1	227.1	205.1	179.6	170.8
60°	209.5	198.1	179.6	157.6	150.5
62.5°	181.4	172.6	156.7	138.2	147.0
65°	155.8	147.0	132.9	135.6	112.7
67.5°	127.7	123.3	110.9	98.6	95.1
70°	103.9	98.6	94.2	81.0	77.5
72.5°	82.8	77.5	71.3	64.3	61.6
75°	62.5	58.1	54.6	51.9	57.2
77.5°	43.1	41.4	38.7	36.1	35.2
80°	28.2	27.3	26.4	25.5	24.7
82.5°	16.7	16.7	16.7	16.7	16.7
85°	8.8	9.7	10.6	11.4	12.3
87.5°	5.3	5.3	6.2	7.0	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)