

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: P560021

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560021  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

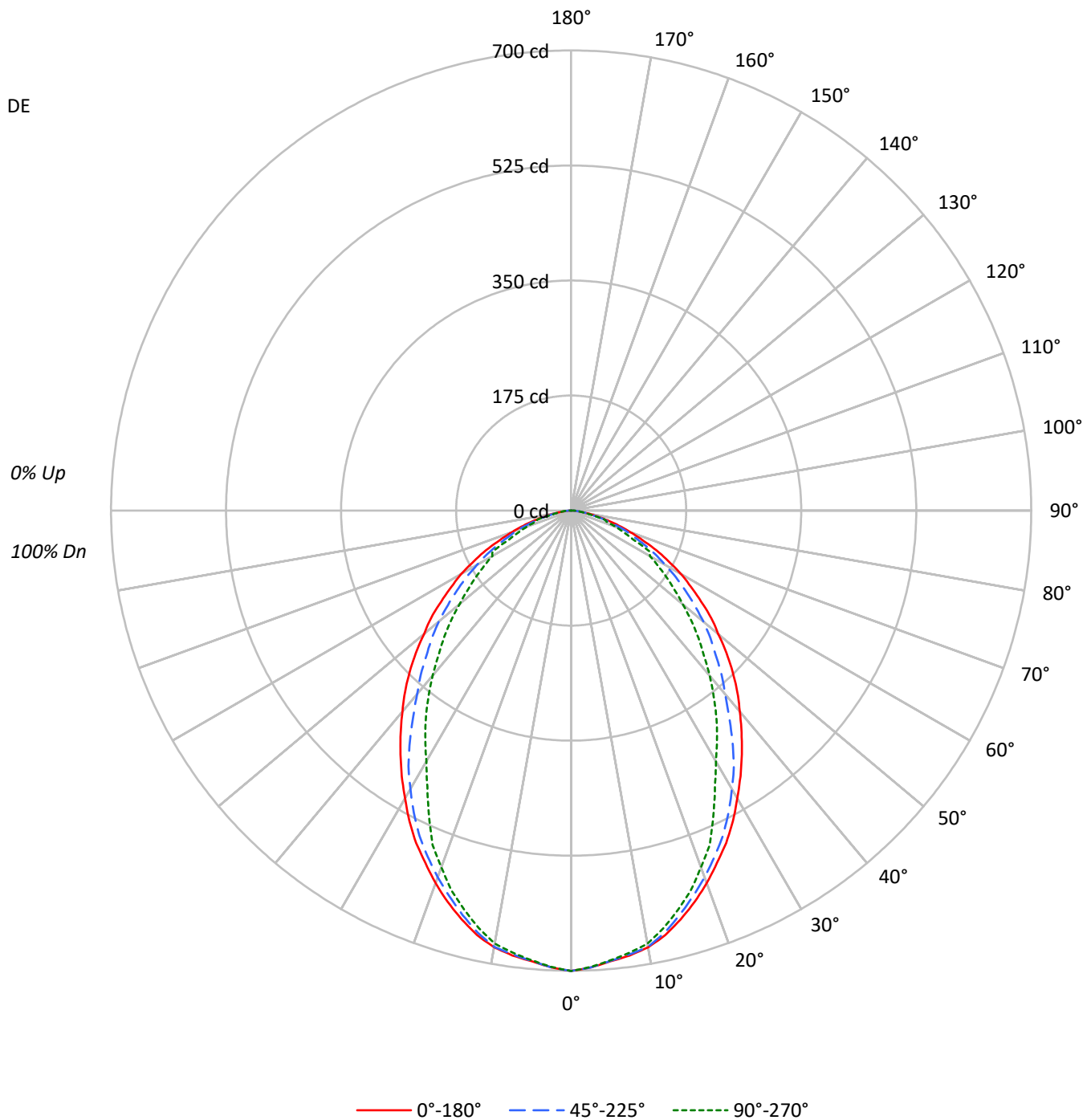
Lumens per Lamp: N/A  
Luminaire Lumens: 1375.0 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3770	3770	3770
5°	3719	3714	3709
10°	3686	3682	3655
15°	3587	3550	3501
20°	3455	3399	3306
25°	3313	3241	3039
30°	3140	3040	2738
35°	2974	2809	2532
40°	2805	2560	2304
45°	2644	2366	2083
50°	2447	2196	1858
55°	2264	1990	1664
60°	2074	1778	1491
65°	1825	1557	1319
70°	1503	1363	1122
75°	1196	1044	1094
80°	803	753	704
85°	500	599	698

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2644 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.2	4.7
10°-20°	178.9	13.0
20°-30°	247.7	18.0
30°-40°	264.1	19.2
40°-50°	241.0	17.5
50°-60°	188.8	13.7
60°-70°	123.0	8.9
70°-80°	54.5	4.0
80°-90°	11.7	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°	491.8	35.8
0°-40°	756.0	55.0
0°-60°	1185.7	86.2
0°-90°	1375.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1375.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	700	700	700	700	700	
5°	688	688	688	687	687	65
15°	644	644	637	631	628	181
25°	558	555	546	526	512	256
35°	453	449	428	395	385	283
45°	347	340	311	285	274	268
55°	241	234	212	187	177	216
65°	143	135	122	125	104	141
75°	58	53	50	48	53	62
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	700.4	700.4	700.4	700.4	700.4
2.5°	695.5	695.5	695.5	694.7	694.7
5°	688.3	687.5	687.5	686.6	686.6
7.5°	682.6	681.8	681.0	680.2	678.5
10°	674.5	674.5	673.7	669.6	668.8
12.5°	661.5	660.7	657.5	651.8	650.2
15°	643.7	643.7	637.2	630.8	628.3
17.5°	624.3	623.5	615.4	608.9	605.7
20°	603.2	601.6	593.5	583.0	577.3
22.5°	579.8	579.8	570.0	556.3	550.6
25°	557.9	554.7	545.8	526.3	511.7
27.5°	532.8	527.9	518.2	490.7	473.7
30°	505.3	502.8	489.1	453.4	440.5
32.5°	479.4	475.3	460.7	423.5	413.0
35°	452.6	449.4	427.5	395.1	385.4
37.5°	425.9	421.9	394.3	368.4	356.3
40°	399.2	394.3	364.4	340.9	327.9
42.5°	374.1	367.6	338.5	313.4	298.8
45°	347.4	340.1	310.9	285.0	273.7
47.5°	320.6	314.2	287.5	260.7	247.8
50°	292.3	286.6	262.3	235.6	221.9
52.5°	268.8	259.9	236.4	209.7	198.4
55°	241.3	234.0	212.1	187.0	177.3
57.5°	216.2	208.9	188.7	165.2	157.1
60°	192.7	182.2	165.2	144.9	138.5
62.5°	166.8	158.7	144.1	127.1	135.2
65°	143.3	135.2	122.3	124.7	103.6
67.5°	117.4	113.4	102.0	90.7	87.4
70°	95.5	90.7	86.6	74.5	71.3
72.5°	76.1	71.3	65.6	59.1	56.7
75°	57.5	53.4	50.2	47.8	52.6
77.5°	39.7	38.1	35.6	33.2	32.4
80°	25.9	25.1	24.3	23.5	22.7
82.5°	15.4	15.4	15.4	15.4	15.4
85°	8.1	8.9	9.7	10.5	11.3
87.5°	4.9	4.9	5.7	6.5	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)