

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: P560005

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-81-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560005  
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-81-86-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

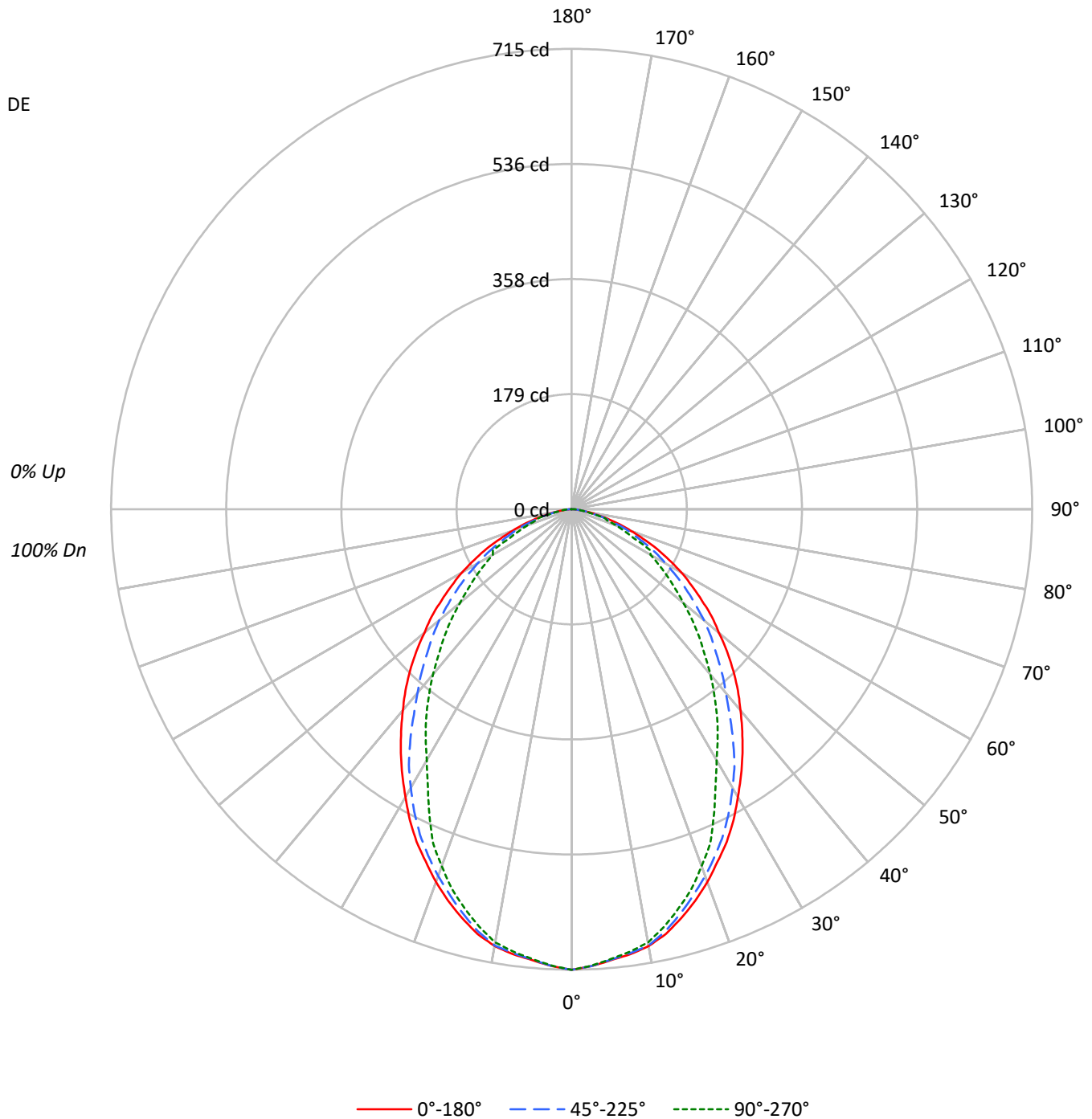
Lumens per Lamp: N/A  
Luminaire Lumens: 1404.0 lumens  
Efficiency: N/A  
Efficacy: 84.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3849	3849	3849
5°	3797	3793	3788
10°	3764	3759	3732
15°	3662	3626	3575
20°	3528	3471	3376
25°	3383	3309	3103
30°	3206	3104	2795
35°	3037	2868	2586
40°	2864	2614	2353
45°	2700	2417	2127
50°	2499	2243	1896
55°	2312	2032	1699
60°	2118	1816	1522
65°	1863	1589	1347
70°	1536	1393	1146
75°	1221	1067	1117
80°	821	769	719
85°	513	611	716

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2700 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.6	4.7
10°-20°	182.7	13.0
20°-30°	252.9	18.0
30°-40°	269.7	19.2
40°-50°	246.1	17.5
50°-60°	192.8	13.7
60°-70°	125.6	8.9
70°-80°	55.7	4.0
80°-90°	11.9	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°	502.2	35.8
0°-40°	771.9	55.0
0°-60°	1210.8	86.2
0°-90°	1404.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1404.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	715	715	715	715	715	
5°	703	702	702	701	701	67
15°	657	657	651	644	642	185
25°	570	566	557	537	522	262
35°	462	459	436	404	394	289
45°	355	347	318	291	280	273
55°	246	239	217	191	181	221
65°	146	138	125	127	106	144
75°	59	55	51	49	54	63
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	715.2	715.2	715.2	715.2	715.2
2.5°	710.2	710.2	710.2	709.4	709.4
5°	702.8	702.0	702.0	701.1	701.1
7.5°	697.0	696.2	695.3	694.5	692.9
10°	688.7	688.7	687.9	683.8	682.9
12.5°	675.5	674.7	671.4	665.6	663.9
15°	657.3	657.3	650.7	644.1	641.6
17.5°	637.5	636.6	628.4	621.8	618.4
20°	616.0	614.3	606.0	595.3	589.5
22.5°	592.0	592.0	582.1	568.0	562.2
25°	569.7	566.4	557.3	537.4	522.5
27.5°	544.0	539.1	529.1	501.0	483.7
30°	515.9	513.4	499.4	463.0	449.8
32.5°	489.5	485.3	470.4	432.4	421.7
35°	462.2	458.9	436.5	403.5	393.6
37.5°	434.9	430.8	402.6	376.2	363.8
40°	407.6	402.6	372.1	348.1	334.9
42.5°	382.0	375.4	345.6	320.0	305.1
45°	354.7	347.3	317.5	291.0	279.5
47.5°	327.4	320.8	293.5	266.2	253.0
50°	298.5	292.7	267.9	240.6	226.5
52.5°	274.5	265.4	241.4	214.1	202.6
55°	246.4	238.9	216.6	191.0	181.1
57.5°	220.8	213.3	192.6	168.7	160.4
60°	196.8	186.0	168.7	148.0	141.4
62.5°	170.3	162.1	147.2	129.8	138.1
65°	146.3	138.1	124.8	127.3	105.8
67.5°	119.9	115.8	104.2	92.6	89.3
70°	97.6	92.6	88.5	76.1	72.8
72.5°	77.7	72.8	67.0	60.4	57.9
75°	58.7	54.6	51.3	48.8	53.7
77.5°	40.5	38.9	36.4	33.9	33.1
80°	26.5	25.6	24.8	24.0	23.2
82.5°	15.7	15.7	15.7	15.7	15.7
85°	8.3	9.1	9.9	10.7	11.6
87.5°	5.0	5.0	5.8	6.6	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)