

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: P560263

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-81-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560263  
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-LD4-2HI-40-UNV-81-87-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

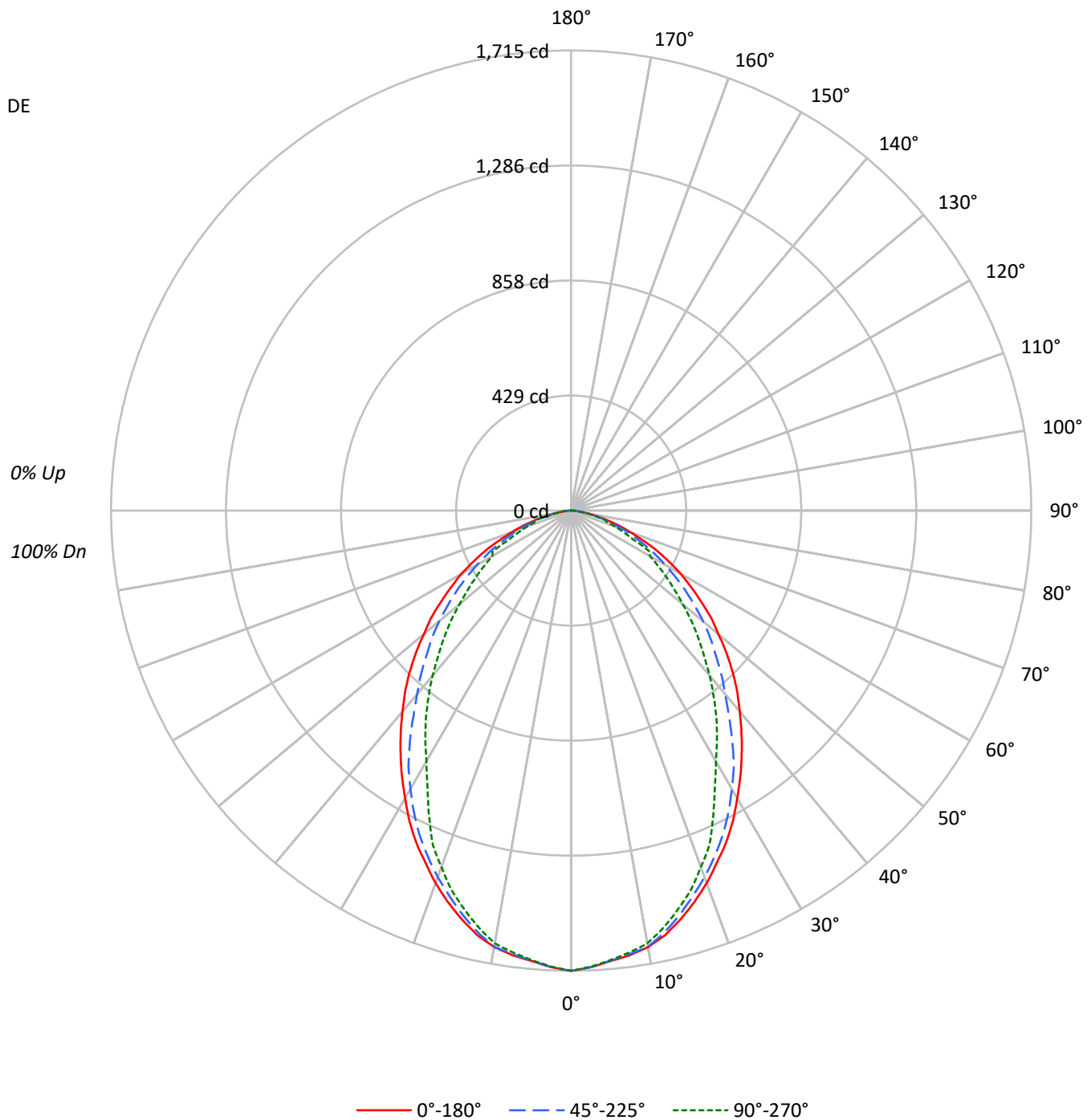
Lumens per Lamp: N/A  
Luminaire Lumens: 3367.0 lumens  
Efficiency: N/A  
Efficacy: 77.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9231	9231	9231
5°	9105	9095	9084
10°	9027	9016	8951
15°	8783	8694	8573
20°	8460	8324	8097
25°	8112	7936	7441
30°	7689	7443	6703
35°	7282	6878	6201
40°	6868	6269	5642
45°	6474	5795	5101
50°	5993	5379	4549
55°	5545	4875	4074
60°	5079	4354	3650
65°	4470	3813	3232
70°	3682	3339	2746
75°	2928	2556	2680
80°	1965	1844	1720
85°	1223	1470	1717

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6474 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	4.7
10°-20°	438.2	13.0
20°-30°	606.6	18.0
30°-40°	646.8	19.2
40°-50°	590.1	17.5
50°-60°	462.3	13.7
60°-70°	301.3	8.9
70°-80°	133.5	4.0
80°-90°	28.7	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°	1204.4	35.8
0°-40°	1851.2	55.0
0°-60°	2903.6	86.2
0°-90°	3367.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3367.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1715	1715	1715	1715	1715	
5°	1685	1683	1683	1681	1681	160
15°	1576	1576	1560	1545	1539	443
25°	1366	1358	1336	1289	1253	627
35°	1108	1100	1047	968	944	693
45°	851	833	761	698	670	655
55°	591	573	520	458	434	530
65°	351	331	299	305	254	346
75°	141	131	123	117	129	151
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1715.1	1715.1	1715.1	1715.1	1715.1
2.5°	1703.2	1703.2	1703.2	1701.2	1701.2
5°	1685.4	1683.4	1683.4	1681.4	1681.4
7.5°	1671.5	1669.5	1667.5	1665.5	1661.6
10°	1651.7	1651.7	1649.7	1639.8	1637.8
12.5°	1619.9	1617.9	1610.0	1596.1	1592.2
15°	1576.3	1576.3	1560.4	1544.6	1538.6
17.5°	1528.7	1526.7	1506.9	1491.1	1483.1
20°	1477.2	1473.2	1453.4	1427.6	1413.7
22.5°	1419.7	1419.7	1395.9	1362.2	1348.3
25°	1366.1	1358.2	1336.4	1288.8	1253.1
27.5°	1304.7	1292.8	1269.0	1201.6	1159.9
30°	1237.3	1231.3	1197.6	1110.4	1078.6
32.5°	1173.8	1163.9	1128.2	1037.0	1011.2
35°	1108.4	1100.4	1046.9	967.6	943.8
37.5°	1042.9	1033.0	965.6	902.2	872.4
40°	977.5	965.6	892.3	834.8	803.0
42.5°	916.0	900.2	828.8	767.3	731.6
45°	850.6	832.8	761.4	697.9	670.2
47.5°	785.2	769.3	703.9	638.5	606.7
50°	715.8	701.9	642.4	577.0	543.3
52.5°	658.3	636.5	579.0	513.5	485.8
55°	590.9	573.0	519.5	458.0	434.2
57.5°	529.4	511.6	462.0	404.5	384.7
60°	471.9	446.1	404.5	354.9	339.1
62.5°	408.5	388.6	352.9	311.3	331.1
65°	351.0	331.1	299.4	305.3	253.8
67.5°	287.5	277.6	249.8	222.1	214.1
70°	234.0	222.1	212.2	182.4	174.5
72.5°	186.4	174.5	160.6	144.7	138.8
75°	140.8	130.9	122.9	117.0	128.9
77.5°	97.2	93.2	87.2	81.3	79.3
80°	63.4	61.5	59.5	57.5	55.5
82.5°	37.7	37.7	37.7	37.7	37.7
85°	19.8	21.8	23.8	25.8	27.8
87.5°	11.9	11.9	13.9	15.9	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)