

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: P560210

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560210  
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-35-UNV-82-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

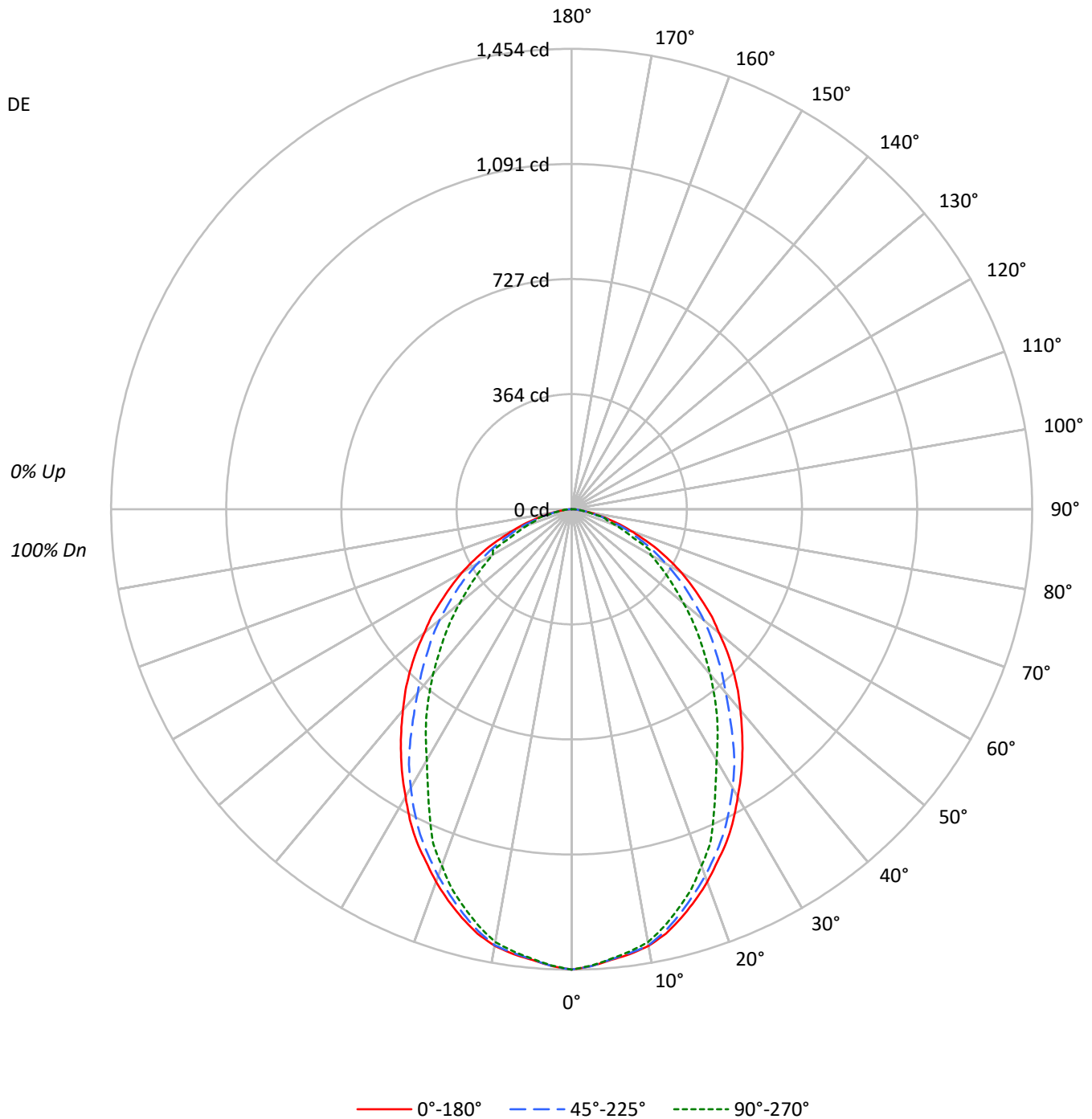
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2854.0 lumens  
Efficiency: N/A  
Efficacy: 66.1 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	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°	7824	7824	7824
5°	7718	7709	7700
10°	7651	7642	7586
15°	7444	7370	7267
20°	7171	7056	6863
25°	6877	6727	6308
30°	6517	6308	5682
35°	6173	5830	5256
40°	5821	5313	4782
45°	5488	4912	4324
50°	5080	4559	3856
55°	4699	4131	3454
60°	4306	3691	3094
65°	3789	3232	2739
70°	3120	2829	2327
75°	2481	2167	2271
80°	1667	1562	1460
85°	1037	1247	1451

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5488 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.3	4.7
10°-20°	371.4	13.0
20°-30°	514.2	18.0
30°-40°	548.3	19.2
40°-50°	500.2	17.5
50°-60°	391.8	13.7
60°-70°	255.4	8.9
70°-80°	113.1	4.0
80°-90°	24.3	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°	1020.9	35.8
0°-40°	1569.2	55.0
0°-60°	2461.2	86.2
0°-90°	2854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2854.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1454	1454	1454	1454	1454	
5°	1429	1427	1427	1425	1425	136
15°	1336	1336	1323	1309	1304	376
25°	1158	1151	1133	1092	1062	532
35°	940	933	887	820	800	587
45°	721	706	645	592	568	555
55°	501	486	440	388	368	449
65°	298	281	254	259	215	293
75°	119	111	104	99	109	128
85°	17	18	20	22	24	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1453.8	1453.8	1453.8	1453.8	1453.8
2.5°	1443.7	1443.7	1443.7	1442.0	1442.0
5°	1428.6	1426.9	1426.9	1425.2	1425.2
7.5°	1416.8	1415.1	1413.5	1411.8	1408.4
10°	1400.0	1400.0	1398.3	1389.9	1388.2
12.5°	1373.1	1371.4	1364.7	1352.9	1349.6
15°	1336.1	1336.1	1322.7	1309.3	1304.2
17.5°	1295.8	1294.1	1277.3	1263.9	1257.1
20°	1252.1	1248.7	1231.9	1210.1	1198.3
22.5°	1203.4	1203.4	1183.2	1154.6	1142.9
25°	1158.0	1151.3	1132.8	1092.4	1062.2
27.5°	1105.9	1095.8	1075.6	1018.5	983.2
30°	1048.7	1043.7	1015.1	941.2	914.3
32.5°	995.0	986.6	956.3	879.0	857.1
35°	939.5	932.8	887.4	820.2	800.0
37.5°	884.0	875.6	818.5	764.7	739.5
40°	828.6	818.5	756.3	707.6	680.7
42.5°	776.5	763.0	702.5	650.4	620.2
45°	721.0	705.9	645.4	591.6	568.1
47.5°	665.5	652.1	596.6	541.2	514.3
50°	606.7	595.0	544.5	489.1	460.5
52.5°	558.0	539.5	490.8	435.3	411.8
55°	500.8	485.7	440.3	388.2	368.1
57.5°	448.7	433.6	391.6	342.9	326.1
60°	400.0	378.2	342.9	300.8	287.4
62.5°	346.2	329.4	299.2	263.9	280.7
65°	297.5	280.7	253.8	258.8	215.1
67.5°	243.7	235.3	211.8	188.2	181.5
70°	198.3	188.2	179.8	154.6	147.9
72.5°	158.0	147.9	136.1	122.7	117.6
75°	119.3	110.9	104.2	99.2	109.2
77.5°	82.4	79.0	73.9	68.9	67.2
80°	53.8	52.1	50.4	48.7	47.1
82.5°	31.9	31.9	31.9	31.9	31.9
85°	16.8	18.5	20.2	21.8	23.5
87.5°	10.1	10.1	11.8	13.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)