

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: P560342

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560342  
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-50-UNV-82-87-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

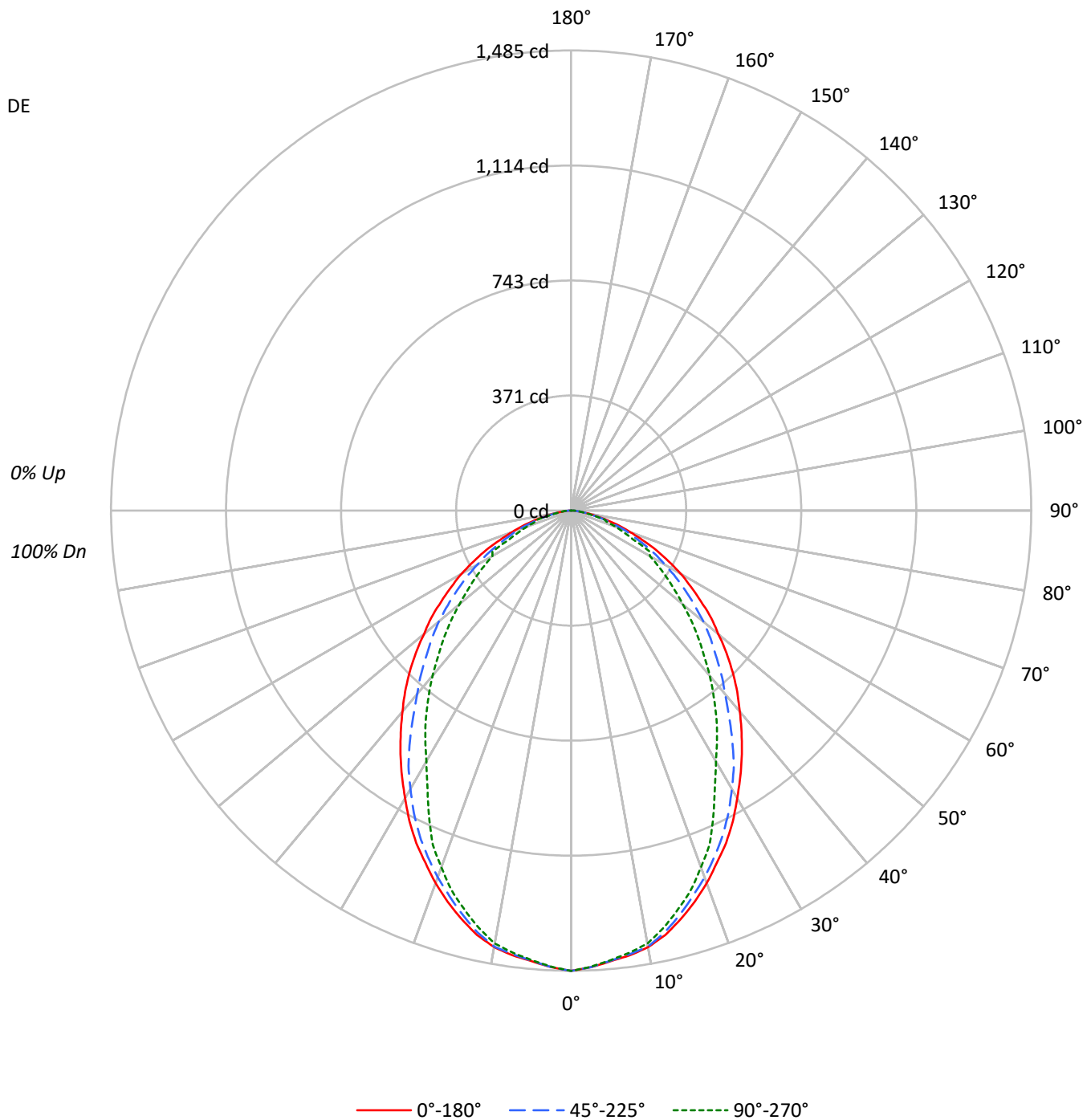
Lumens per Lamp: N/A  
Luminaire Lumens: 2916.0 lumens  
Efficiency: N/A  
Efficacy: 67.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7994	7994	7994
5°	7886	7876	7867
10°	7817	7808	7752
15°	7607	7530	7424
20°	7327	7209	7013
25°	7026	6873	6445
30°	6659	6446	5806
35°	6307	5957	5370
40°	5948	5429	4886
45°	5607	5019	4418
50°	5190	4659	3939
55°	4801	4221	3529
60°	4399	3771	3160
65°	3870	3302	2799
70°	3188	2891	2378
75°	2535	2215	2321
80°	1705	1596	1491
85°	1062	1272	1482

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5607 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.3	4.7
10°-20°	379.5	13.0
20°-30°	525.3	18.0
30°-40°	560.2	19.2
40°-50°	511.0	17.5
50°-60°	400.4	13.7
60°-70°	260.9	8.9
70°-80°	115.6	4.0
80°-90°	24.8	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°	1043.1	35.8
0°-40°	1603.3	55.0
0°-60°	2514.7	86.2
0°-90°	2916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2916.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1485	1485	1485	1485	1485	
5°	1460	1458	1458	1456	1456	139
15°	1365	1365	1351	1338	1332	384
25°	1183	1176	1157	1116	1085	543
35°	960	953	907	838	817	600
45°	737	721	659	604	580	567
55°	512	496	450	397	376	459
65°	304	287	259	264	220	300
75°	122	113	106	101	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1485.4	1485.4	1485.4	1485.4	1485.4
2.5°	1475.1	1475.1	1475.1	1473.4	1473.4
5°	1459.6	1457.9	1457.9	1456.2	1456.2
7.5°	1447.6	1445.9	1444.2	1442.4	1439.0
10°	1430.4	1430.4	1428.7	1420.1	1418.4
12.5°	1402.9	1401.2	1394.4	1382.3	1378.9
15°	1365.2	1365.2	1351.4	1337.7	1332.5
17.5°	1324.0	1322.2	1305.1	1291.3	1284.5
20°	1279.3	1275.9	1258.7	1236.4	1224.4
22.5°	1229.5	1229.5	1208.9	1179.7	1167.7
25°	1183.1	1176.3	1157.4	1116.2	1085.3
27.5°	1129.9	1119.6	1099.0	1040.6	1004.6
30°	1071.5	1066.4	1037.2	961.6	934.2
32.5°	1016.6	1008.0	977.1	898.1	875.8
35°	959.9	953.0	906.7	838.0	817.4
37.5°	903.2	894.7	836.3	781.3	755.6
40°	846.6	836.3	772.7	722.9	695.5
42.5°	793.3	779.6	717.8	664.6	633.6
45°	736.7	721.2	659.4	604.5	580.4
47.5°	680.0	666.3	609.6	552.9	525.5
50°	619.9	607.9	556.4	499.7	470.5
52.5°	570.1	551.2	501.4	444.8	420.7
55°	511.7	496.3	449.9	396.7	376.1
57.5°	458.5	443.0	400.1	350.3	333.1
60°	408.7	386.4	350.3	307.4	293.6
62.5°	353.7	336.6	305.7	269.6	286.8
65°	303.9	286.8	259.3	264.4	219.8
67.5°	249.0	240.4	216.4	192.3	185.5
70°	202.6	192.3	183.7	158.0	151.1
72.5°	161.4	151.1	139.1	125.4	120.2
75°	121.9	113.3	106.5	101.3	111.6
77.5°	84.1	80.7	75.6	70.4	68.7
80°	55.0	53.2	51.5	49.8	48.1
82.5°	32.6	32.6	32.6	32.6	32.6
85°	17.2	18.9	20.6	22.3	24.0
87.5°	10.3	10.3	12.0	13.7	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)