

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: P559826

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559826  
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-LD4-1LO-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**

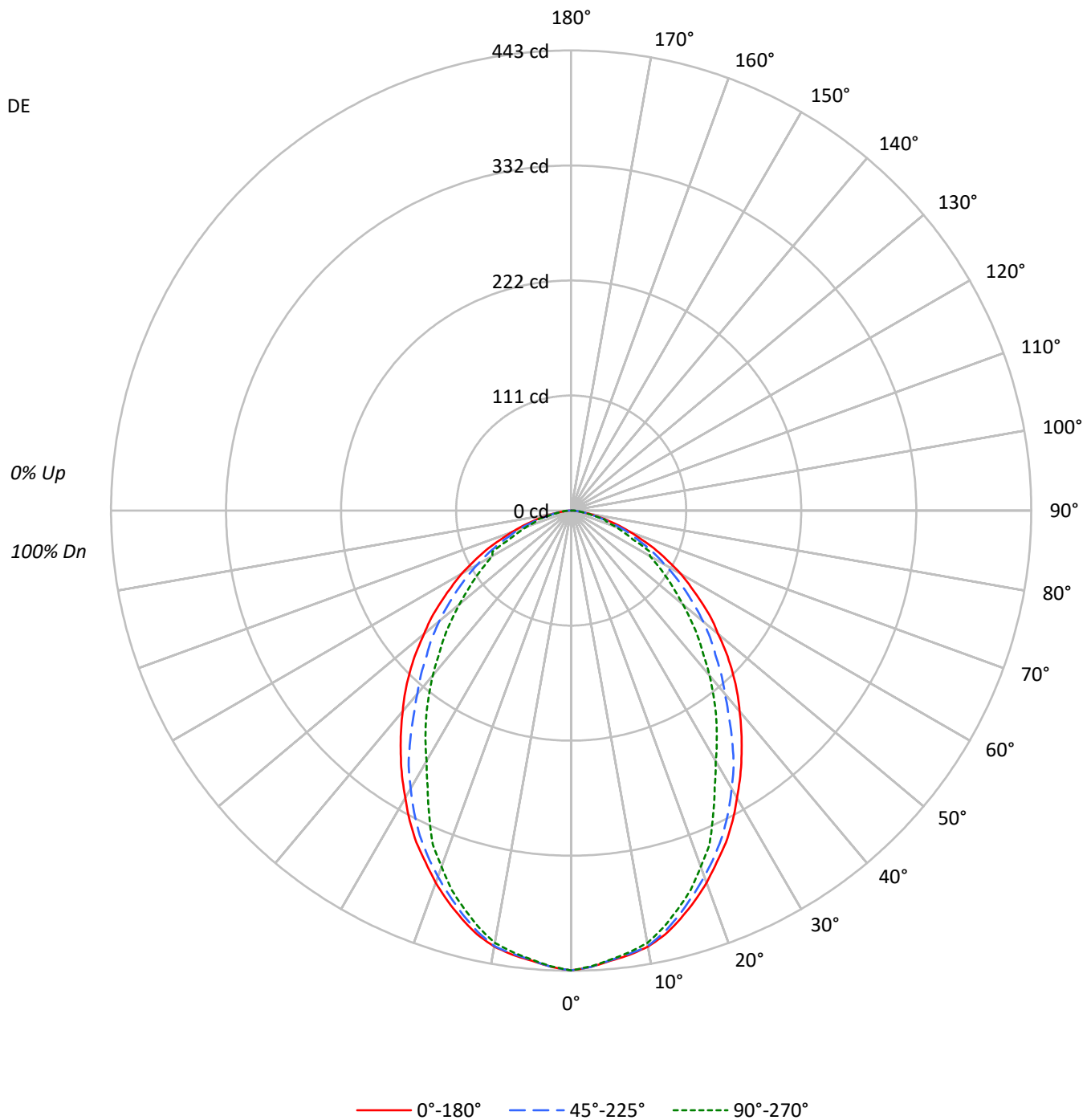
Lumens per Lamp: N/A  
Luminaire Lumens: 869.0 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P559826

CATALOG NUMBER: FSR-12-2-LD4-1LO-35-UNV-82-85-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P559826

CATALOG NUMBER: FSR-12-2-LD4-1LO-35-UNV-82-85-EDD-90

**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°	2383	2383	2383
5°	2350	2347	2345
10°	2330	2327	2310
15°	2267	2244	2213
20°	2183	2148	2090
25°	2094	2048	1920
30°	1984	1921	1730
35°	1880	1775	1600
40°	1773	1618	1456
45°	1671	1496	1317
50°	1546	1388	1174
55°	1431	1258	1052
60°	1311	1124	942
65°	1154	984	834
70°	950	862	708
75°	755	659	692
80°	508	477	443
85°	315	377	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1671 cd/sqm



TEST NUMBER: P559826

CATALOG NUMBER: FSR-12-2-LD4-1LO-35-UNV-82-85-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.2	4.7
10°-20°	113.1	13.0
20°-30°	156.6	18.0
30°-40°	166.9	19.2
40°-50°	152.3	17.5
50°-60°	119.3	13.7
60°-70°	77.8	8.9
70°-80°	34.5	4.0
80°-90°	7.4	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°	310.8	35.8
0°-40°	477.8	55.0
0°-60°	749.4	86.2
0°-90°	869.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	869.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	443	443	443	443	443	
5°	435	434	434	434	434	41
15°	407	407	403	399	397	114
25°	353	350	345	333	323	162
35°	286	284	270	250	244	179
45°	220	215	196	180	173	169
55°	152	148	134	118	112	137
65°	91	86	77	79	66	89
75°	36	34	32	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



TEST NUMBER: P559826

CATALOG NUMBER: FSR-12-2-LD4-1LO-35-UNV-82-85-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	442.7	442.7	442.7	442.7	442.7
2.5°	439.6	439.6	439.6	439.1	439.1
5°	435.0	434.5	434.5	434.0	434.0
7.5°	431.4	430.9	430.4	429.9	428.8
10°	426.3	426.3	425.8	423.2	422.7
12.5°	418.1	417.6	415.5	412.0	410.9
15°	406.8	406.8	402.7	398.6	397.1
17.5°	394.6	394.0	388.9	384.8	382.8
20°	381.2	380.2	375.1	368.5	364.9
22.5°	366.4	366.4	360.3	351.6	348.0
25°	352.6	350.5	344.9	332.6	323.4
27.5°	336.7	333.7	327.5	310.1	299.4
30°	319.3	317.8	309.1	286.6	278.4
32.5°	303.0	300.4	291.2	267.6	261.0
35°	286.1	284.0	270.2	249.7	243.6
37.5°	269.2	266.6	249.2	232.8	225.2
40°	252.3	249.2	230.3	215.4	207.3
42.5°	236.4	232.3	213.9	198.0	188.8
45°	219.5	214.9	196.5	180.1	173.0
47.5°	202.6	198.6	181.7	164.8	156.6
50°	184.7	181.2	165.8	148.9	140.2
52.5°	169.9	164.3	149.4	132.5	125.4
55°	152.5	147.9	134.1	118.2	112.1
57.5°	136.6	132.0	119.2	104.4	99.3
60°	121.8	115.1	104.4	91.6	87.5
62.5°	105.4	100.3	91.1	80.3	85.5
65°	90.6	85.5	77.3	78.8	65.5
67.5°	74.2	71.6	64.5	57.3	55.3
70°	60.4	57.3	54.8	47.1	45.0
72.5°	48.1	45.0	41.5	37.4	35.8
75°	36.3	33.8	31.7	30.2	33.3
77.5°	25.1	24.1	22.5	21.0	20.5
80°	16.4	15.9	15.4	14.8	14.3
82.5°	9.7	9.7	9.7	9.7	9.7
85°	5.1	5.6	6.1	6.7	7.2
87.5°	3.1	3.1	3.6	4.1	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)