

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: P560178

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560178  
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-80-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

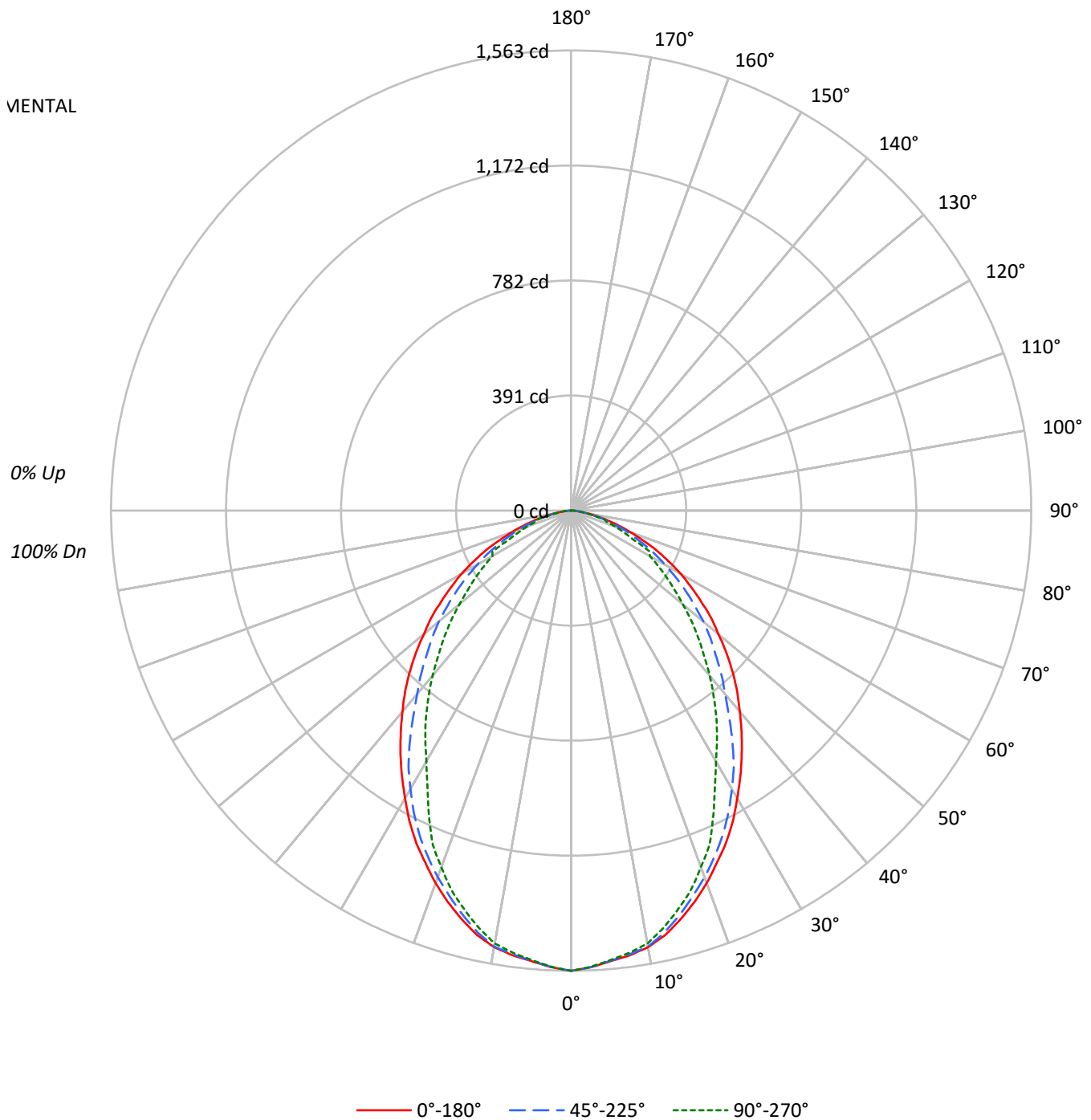
Lumens per Lamp: N/A  
Luminaire Lumens: 3069.0 lumens  
Efficiency: N/A  
Efficacy: 71.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8414	8414	8414
5°	8299	8290	8280
10°	8228	8218	8158
15°	8006	7925	7814
20°	7711	7587	7380
25°	7394	7233	6783
30°	7009	6784	6110
35°	6638	6270	5652
40°	6260	5714	5143
45°	5901	5282	4650
50°	5462	4903	4146
55°	5054	4443	3714
60°	4630	3969	3326
65°	4074	3475	2946
70°	3356	3043	2502
75°	2668	2331	2443
80°	1791	1680	1568
85°	1118	1340	1562

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5901 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.5	4.7
10°-20°	399.4	13.0
20°-30°	552.9	18.0
30°-40°	589.6	19.2
40°-50°	537.9	17.5
50°-60°	421.4	13.7
60°-70°	274.6	8.9
70°-80°	121.7	4.0
80°-90°	26.1	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°	1097.8	35.8
0°-40°	1687.4	55.0
0°-60°	2646.6	86.2
0°-90°	3069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3069.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1563	1563	1563	1563	1563	
5°	1536	1534	1534	1533	1533	146
15°	1437	1437	1422	1408	1402	404
25°	1245	1238	1218	1175	1142	572
35°	1010	1003	954	882	860	632
45°	775	759	694	636	611	597
55°	539	522	474	418	396	483
65°	320	302	273	278	231	315
75°	128	119	112	107	118	138
85°	18	20	22	24	25	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1563.3	1563.3	1563.3	1563.3	1563.3
2.5°	1552.5	1552.5	1552.5	1550.7	1550.7
5°	1536.2	1534.4	1534.4	1532.6	1532.6
7.5°	1523.5	1521.7	1519.9	1518.1	1514.5
10°	1505.5	1505.5	1503.7	1494.6	1492.8
12.5°	1476.6	1474.8	1467.5	1454.9	1451.3
15°	1436.8	1436.8	1422.3	1407.9	1402.5
17.5°	1393.4	1391.6	1373.5	1359.1	1351.9
20°	1346.4	1342.8	1324.7	1301.3	1288.6
22.5°	1294.0	1294.0	1272.3	1241.6	1229.0
25°	1245.2	1238.0	1218.1	1174.7	1142.2
27.5°	1189.2	1178.4	1156.7	1095.2	1057.3
30°	1127.8	1122.3	1091.6	1012.1	983.2
32.5°	1069.9	1060.9	1028.3	945.2	921.7
35°	1010.3	1003.0	954.3	882.0	860.3
37.5°	950.6	941.6	880.2	822.3	795.2
40°	891.0	880.2	813.3	760.9	732.0
42.5°	835.0	820.5	755.4	699.4	666.9
45°	775.3	759.1	694.0	636.2	610.9
47.5°	715.7	701.2	641.6	581.9	553.0
50°	652.4	639.8	585.6	525.9	495.2
52.5°	600.0	580.1	527.7	468.1	442.8
55°	538.6	522.3	473.5	417.5	395.8
57.5°	482.5	466.3	421.1	368.7	350.6
60°	430.1	406.6	368.7	323.5	309.0
62.5°	372.3	354.2	321.7	283.7	301.8
65°	319.9	301.8	272.9	278.3	231.3
67.5°	262.1	253.0	227.7	202.4	195.2
70°	213.3	202.4	193.4	166.3	159.0
72.5°	169.9	159.0	146.4	131.9	126.5
75°	128.3	119.3	112.1	106.6	117.5
77.5°	88.6	84.9	79.5	74.1	72.3
80°	57.8	56.0	54.2	52.4	50.6
82.5°	34.3	34.3	34.3	34.3	34.3
85°	18.1	19.9	21.7	23.5	25.3
87.5°	10.8	10.8	12.7	14.5	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)