

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: P560609

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-93-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560609  
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-LD4-2STD-35-UNV-93-84-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

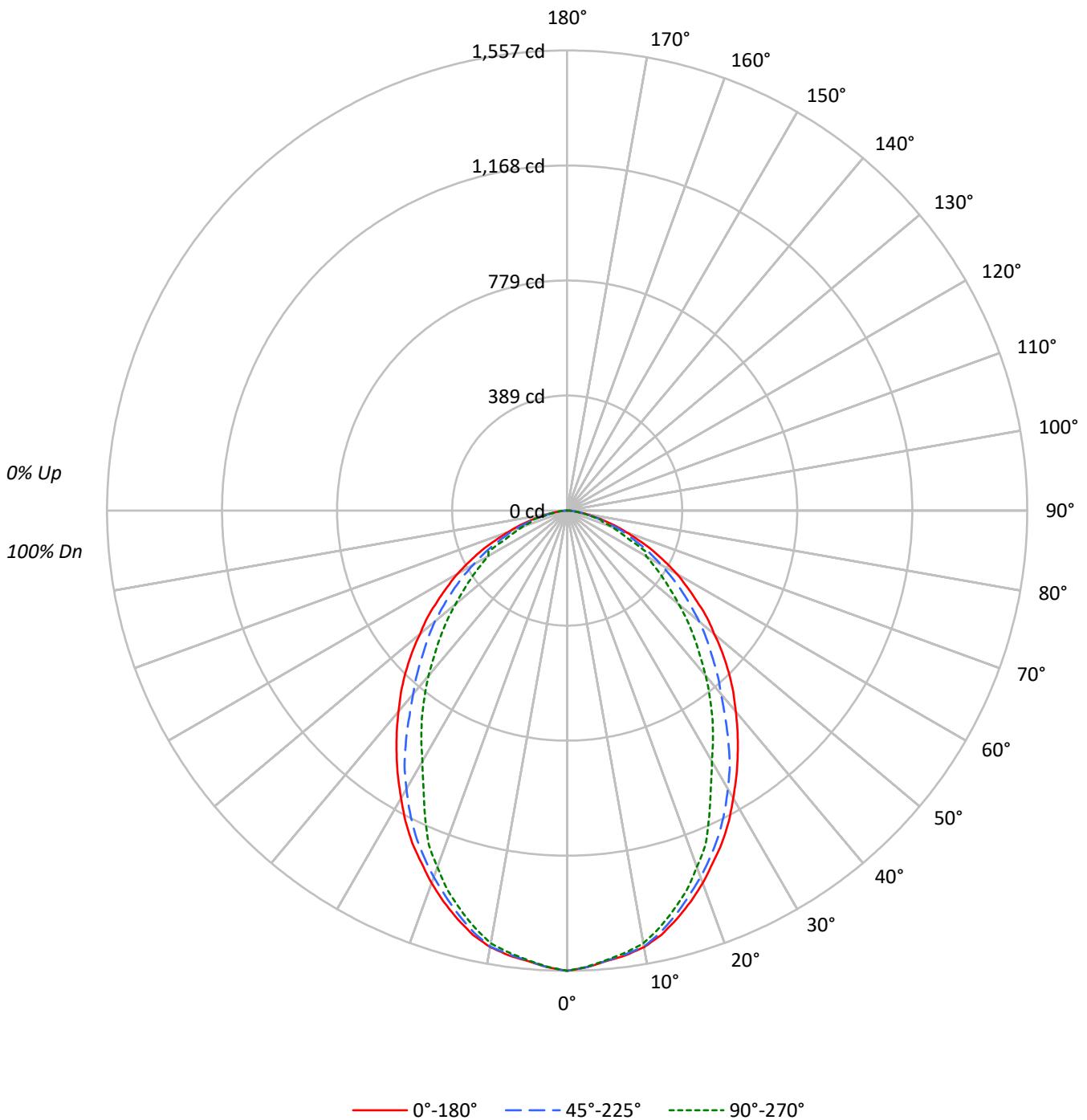
Lumens per Lamp: N/A  
Luminaire Lumens: 3057.0 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8381	8381	8381
5°	8267	8257	8247
10°	8195	8185	8126
15°	7974	7894	7784
20°	7682	7558	7352
25°	7366	7206	6756
30°	6981	6757	6086
35°	6612	6245	5630
40°	6235	5691	5122
45°	5878	5262	4631
50°	5442	4884	4130
55°	5034	4426	3699
60°	4612	3953	3313
65°	4057	3461	2934
70°	3342	3031	2493
75°	2658	2321	2433
80°	1785	1674	1562
85°	1112	1334	1556

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5878 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.0	4.7
10°-20°	397.8	13.0
20°-30°	550.7	18.0
30°-40°	587.2	19.2
40°-50°	535.8	17.5
50°-60°	419.7	13.7
60°-70°	273.5	8.9
70°-80°	121.2	4.0
80°-90°	26.0	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°	1093.5	35.8
0°-40°	1680.8	55.0
0°-60°	2636.3	86.2
0°-90°	3057.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3057.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1530	1528	1528	1527	1527	145
15°	1431	1431	1417	1402	1397	402
25°	1240	1233	1213	1170	1138	569
35°	1006	999	950	878	857	629
45°	772	756	691	634	608	595
55°	536	520	472	416	394	481
65°	319	301	272	277	230	314
75°	128	119	112	106	117	137
85°	18	20	22	23	25	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1557.2	1557.2	1557.2	1557.2	1557.2
2.5°	1546.4	1546.4	1546.4	1544.6	1544.6
5°	1530.2	1528.4	1528.4	1526.6	1526.6
7.5°	1517.6	1515.8	1514.0	1512.2	1508.6
10°	1499.6	1499.6	1497.8	1488.8	1487.0
12.5°	1470.8	1469.0	1461.8	1449.2	1445.6
15°	1431.2	1431.2	1416.8	1402.4	1397.0
17.5°	1388.0	1386.2	1368.2	1353.8	1346.6
20°	1341.2	1337.6	1319.6	1296.2	1283.6
22.5°	1289.0	1289.0	1267.4	1236.8	1224.2
25°	1240.4	1233.2	1213.4	1170.1	1137.7
27.5°	1184.5	1173.7	1152.1	1090.9	1053.1
30°	1123.3	1117.9	1087.3	1008.1	979.3
32.5°	1065.7	1056.7	1024.3	941.5	918.1
35°	1006.3	999.1	950.5	878.5	856.9
37.5°	946.9	937.9	876.7	819.1	792.1
40°	887.5	876.7	810.1	757.9	729.1
42.5°	831.7	817.3	752.5	696.7	664.3
45°	772.3	756.1	691.3	633.7	608.5
47.5°	712.9	698.5	639.1	579.7	550.9
50°	649.9	637.3	583.3	523.9	493.3
52.5°	597.7	577.9	525.7	466.3	441.1
55°	536.5	520.3	471.7	415.9	394.2
57.5°	480.7	464.5	419.5	367.2	349.2
60°	428.5	405.1	367.2	322.2	307.8
62.5°	370.8	352.8	320.4	282.6	300.6
65°	318.6	300.6	271.8	277.2	230.4
67.5°	261.0	252.0	226.8	201.6	194.4
70°	212.4	201.6	192.6	165.6	158.4
72.5°	169.2	158.4	145.8	131.4	126.0
75°	127.8	118.8	111.6	106.2	117.0
77.5°	88.2	84.6	79.2	73.8	72.0
80°	57.6	55.8	54.0	52.2	50.4
82.5°	34.2	34.2	34.2	34.2	34.2
85°	18.0	19.8	21.6	23.4	25.2
87.5°	10.8	10.8	12.6	14.4	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)