

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: P560688

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560688  
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-50-UNV-80-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

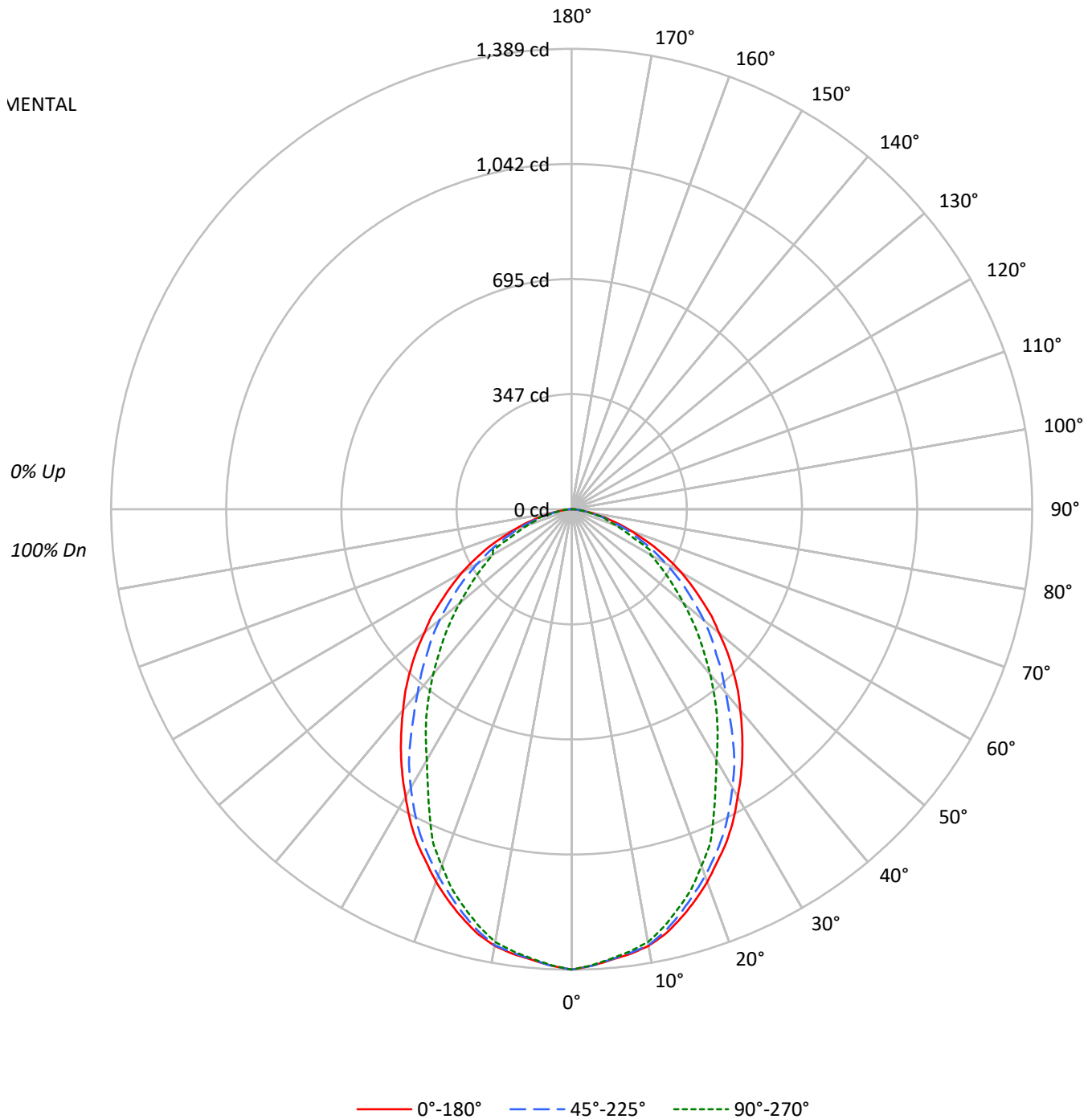
Lumens per Lamp: N/A  
Luminaire Lumens: 2726.0 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7473	7473	7473
5°	7372	7363	7354
10°	7308	7299	7247
15°	7111	7039	6941
20°	6850	6739	6556
25°	6568	6425	6025
30°	6225	6026	5427
35°	5896	5569	5020
40°	5560	5075	4567
45°	5242	4692	4130
50°	4852	4355	3683
55°	4489	3947	3299
60°	4113	3525	2955
65°	3618	3087	2617
70°	2980	2703	2223
75°	2371	2069	2169
80°	1593	1494	1392
85°	994	1192	1389

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5242 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.3	4.7
10°-20°	354.7	13.0
20°-30°	491.1	18.0
30°-40°	523.7	19.2
40°-50°	477.7	17.5
50°-60°	374.3	13.7
60°-70°	243.9	8.9
70°-80°	108.1	4.0
80°-90°	23.2	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°	975.1	35.8
0°-40°	1498.8	55.0
0°-60°	2350.8	86.2
0°-90°	2726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2726.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1364	1363	1363	1361	1361	130
15°	1276	1276	1263	1250	1246	359
25°	1106	1100	1082	1043	1015	508
35°	897	891	848	783	764	561
45°	689	674	616	565	543	530
55°	478	464	421	371	352	429
65°	284	268	242	247	206	280
75°	114	106	100	95	104	122
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1388.6	1388.6	1388.6	1388.6	1388.6
2.5°	1379.0	1379.0	1379.0	1377.4	1377.4
5°	1364.5	1362.9	1362.9	1361.3	1361.3
7.5°	1353.3	1351.7	1350.1	1348.5	1345.2
10°	1337.2	1337.2	1335.6	1327.6	1326.0
12.5°	1311.5	1309.9	1303.5	1292.3	1289.1
15°	1276.2	1276.2	1263.4	1250.5	1245.7
17.5°	1237.7	1236.1	1220.0	1207.2	1200.8
20°	1196.0	1192.7	1176.7	1155.8	1144.6
22.5°	1149.4	1149.4	1130.1	1102.8	1091.6
25°	1106.1	1099.6	1082.0	1043.4	1014.6
27.5°	1056.3	1046.7	1027.4	972.8	939.1
30°	1001.7	996.9	969.6	899.0	873.3
32.5°	950.3	942.3	913.4	839.6	818.7
35°	897.4	890.9	847.6	783.4	764.1
37.5°	844.4	836.4	781.8	730.4	706.3
40°	791.4	781.8	722.4	675.8	650.1
42.5°	741.7	728.8	671.0	621.3	592.4
45°	688.7	674.2	616.4	565.1	542.6
47.5°	635.7	622.9	569.9	516.9	491.2
50°	579.5	568.3	520.1	467.1	439.9
52.5°	533.0	515.3	468.7	415.8	393.3
55°	478.4	463.9	420.6	370.8	351.6
57.5°	428.6	414.2	374.0	327.5	311.4
60°	382.1	361.2	327.5	287.3	274.5
62.5°	330.7	314.6	285.7	252.0	268.1
65°	284.1	268.1	242.4	247.2	205.5
67.5°	232.8	224.7	202.3	179.8	173.4
70°	189.4	179.8	171.8	147.7	141.3
72.5°	150.9	141.3	130.0	117.2	112.4
75°	114.0	106.0	99.5	94.7	104.3
77.5°	78.7	75.4	70.6	65.8	64.2
80°	51.4	49.8	48.2	46.6	44.9
82.5°	30.5	30.5	30.5	30.5	30.5
85°	16.1	17.7	19.3	20.9	22.5
87.5°	9.6	9.6	11.2	12.8	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)