

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: P560597

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-82-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560597  
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-82-86-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

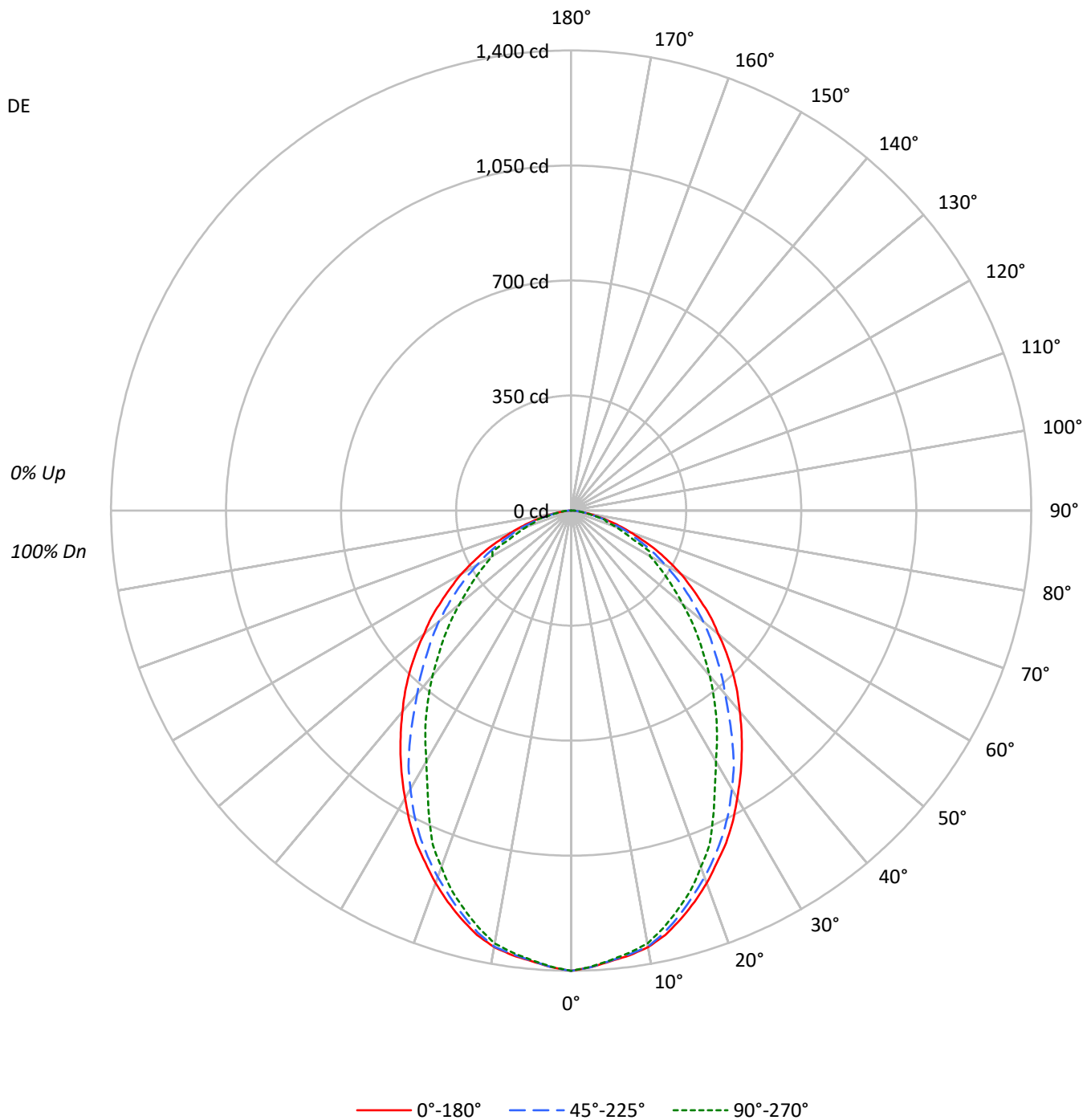
Lumens per Lamp: N/A  
Luminaire Lumens: 2749.0 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7536	7536	7536
5°	7434	7425	7417
10°	7370	7361	7308
15°	7171	7098	6999
20°	6907	6796	6611
25°	6624	6479	6076
30°	6278	6077	5473
35°	5945	5616	5063
40°	5607	5118	4606
45°	5286	4731	4165
50°	4893	4392	3714
55°	4526	3979	3326
60°	4147	3554	2979
65°	3649	3112	2639
70°	3006	2725	2242
75°	2389	2088	2188
80°	1605	1506	1404
85°	1000	1198	1402

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5286 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.4	4.7
10°-20°	357.7	13.0
20°-30°	495.3	18.0
30°-40°	528.1	19.2
40°-50°	481.8	17.5
50°-60°	377.4	13.7
60°-70°	246.0	8.9
70°-80°	109.0	4.0
80°-90°	23.4	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°	983.3	35.8
0°-40°	1511.4	55.0
0°-60°	2370.6	86.2
0°-90°	2749.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2749.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1400	1400	1400	1400	1400	
5°	1376	1374	1374	1373	1373	131
15°	1287	1287	1274	1261	1256	362
25°	1115	1109	1091	1052	1023	512
35°	905	898	855	790	771	566
45°	694	680	622	570	547	535
55°	482	468	424	374	354	433
65°	286	270	244	249	207	282
75°	115	107	100	96	105	123
85°	16	18	19	21	23	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1400.3	1400.3	1400.3	1400.3	1400.3
2.5°	1390.6	1390.6	1390.6	1389.0	1389.0
5°	1376.0	1374.4	1374.4	1372.8	1372.8
7.5°	1364.7	1363.1	1361.5	1359.8	1356.6
10°	1348.5	1348.5	1346.9	1338.8	1337.2
12.5°	1322.6	1321.0	1314.5	1303.2	1299.9
15°	1287.0	1287.0	1274.0	1261.1	1256.2
17.5°	1248.1	1246.5	1230.3	1217.4	1210.9
20°	1206.0	1202.8	1186.6	1165.6	1154.2
22.5°	1159.1	1159.1	1139.7	1112.1	1100.8
25°	1115.4	1108.9	1091.1	1052.3	1023.1
27.5°	1065.2	1055.5	1036.1	981.0	947.0
30°	1010.2	1005.3	977.8	906.6	880.7
32.5°	958.4	950.3	921.1	846.7	825.6
35°	904.9	898.5	854.8	790.0	770.6
37.5°	851.5	843.4	788.4	736.6	712.3
40°	798.1	788.4	728.5	681.5	655.6
42.5°	747.9	735.0	676.7	626.5	597.4
45°	694.5	679.9	621.6	569.8	547.2
47.5°	641.1	628.1	574.7	521.3	495.4
50°	584.4	573.1	524.5	471.1	443.6
52.5°	537.5	519.7	472.7	419.3	396.6
55°	482.4	467.8	424.1	374.0	354.5
57.5°	432.2	417.7	377.2	330.2	314.1
60°	385.3	364.2	330.2	289.8	276.8
62.5°	333.5	317.3	288.2	254.2	270.3
65°	286.5	270.3	244.4	249.3	207.2
67.5°	234.7	226.6	204.0	181.3	174.8
70°	191.0	181.3	173.2	148.9	142.5
72.5°	152.2	142.5	131.1	118.2	113.3
75°	114.9	106.8	100.4	95.5	105.2
77.5°	79.3	76.1	71.2	66.4	64.8
80°	51.8	50.2	48.6	46.9	45.3
82.5°	30.8	30.8	30.8	30.8	30.8
85°	16.2	17.8	19.4	21.0	22.7
87.5°	9.7	9.7	11.3	13.0	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)