

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: P560282

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560282  
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-40-UNV-82-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

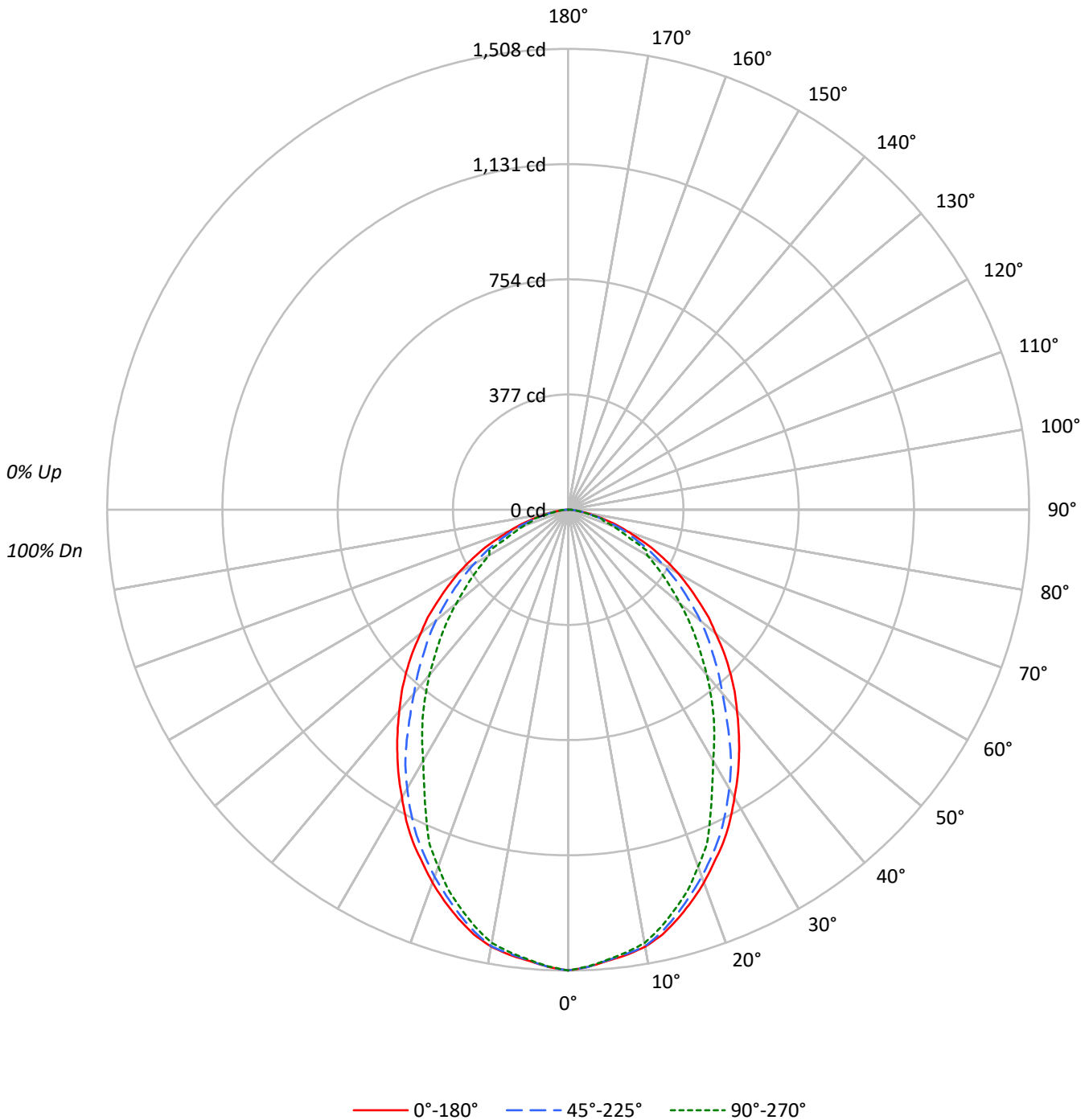
Lumens per Lamp: N/A  
Luminaire Lumens: 2960.0 lumens  
Efficiency: N/A  
Efficacy: 68.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8115	8115	8115
5°	8004	7995	7986
10°	7935	7926	7868
15°	7721	7643	7536
20°	7438	7318	7118
25°	7132	6977	6542
30°	6760	6543	5893
35°	6402	6047	5451
40°	6037	5511	4960
45°	5692	5095	4485
50°	5269	4729	3999
55°	4874	4285	3582
60°	4466	3828	3209
65°	3929	3352	2841
70°	3237	2935	2414
75°	2574	2248	2356
80°	1729	1621	1512
85°	1074	1291	1507

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5692 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.4	4.7
10°-20°	385.2	13.0
20°-30°	533.3	18.0
30°-40°	568.6	19.2
40°-50°	518.8	17.5
50°-60°	406.4	13.7
60°-70°	264.9	8.9
70°-80°	117.3	4.0
80°-90°	25.2	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°	1058.8	35.8
0°-40°	1627.4	55.0
0°-60°	2552.6	86.2
0°-90°	2960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2960.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1508	1508	1508	1508	1508	
5°	1482	1480	1480	1478	1478	141
15°	1386	1386	1372	1358	1353	390
25°	1201	1194	1175	1133	1102	551
35°	974	967	920	851	830	609
45°	748	732	669	614	589	576
55°	519	504	457	403	382	466
65°	308	291	263	268	223	304
75°	124	115	108	103	113	133
85°	17	19	21	23	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1507.8	1507.8	1507.8	1507.8	1507.8
2.5°	1497.3	1497.3	1497.3	1495.6	1495.6
5°	1481.6	1479.9	1479.9	1478.2	1478.2
7.5°	1469.4	1467.7	1465.9	1464.2	1460.7
10°	1452.0	1452.0	1450.3	1441.5	1439.8
12.5°	1424.1	1422.4	1415.4	1403.2	1399.7
15°	1385.8	1385.8	1371.8	1357.9	1352.6
17.5°	1343.9	1342.2	1324.8	1310.8	1303.8
20°	1298.6	1295.1	1277.7	1255.0	1242.8
22.5°	1248.1	1248.1	1227.1	1197.5	1185.3
25°	1201.0	1194.0	1174.9	1133.0	1101.6
27.5°	1147.0	1136.5	1115.6	1056.3	1019.7
30°	1087.7	1082.5	1052.8	976.1	948.2
32.5°	1031.9	1023.2	991.8	911.6	889.0
35°	974.4	967.4	920.4	850.6	829.7
37.5°	916.9	908.2	848.9	793.1	767.0
40°	859.3	848.9	784.4	733.8	706.0
42.5°	805.3	791.4	728.6	674.6	643.2
45°	747.8	732.1	669.4	613.6	589.2
47.5°	690.3	676.3	618.8	561.3	533.4
50°	629.3	617.1	564.8	507.2	477.6
52.5°	578.7	559.5	509.0	451.5	427.1
55°	519.4	503.8	456.7	402.7	381.7
57.5°	465.4	449.7	406.1	355.6	338.2
60°	414.9	392.2	355.6	312.0	298.1
62.5°	359.1	341.6	310.3	273.7	291.1
65°	308.5	291.1	263.2	268.4	223.1
67.5°	252.7	244.0	219.6	195.2	188.3
70°	205.7	195.2	186.5	160.4	153.4
72.5°	163.9	153.4	141.2	127.2	122.0
75°	123.8	115.0	108.1	102.8	113.3
77.5°	85.4	81.9	76.7	71.5	69.7
80°	55.8	54.0	52.3	50.5	48.8
82.5°	33.1	33.1	33.1	33.1	33.1
85°	17.4	19.2	20.9	22.7	24.4
87.5°	10.5	10.5	12.2	13.9	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)