

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: P560328

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560328
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-50-UNV-81-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2682.0 lumens
Efficiency: N/A
Efficacy: 62.1 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

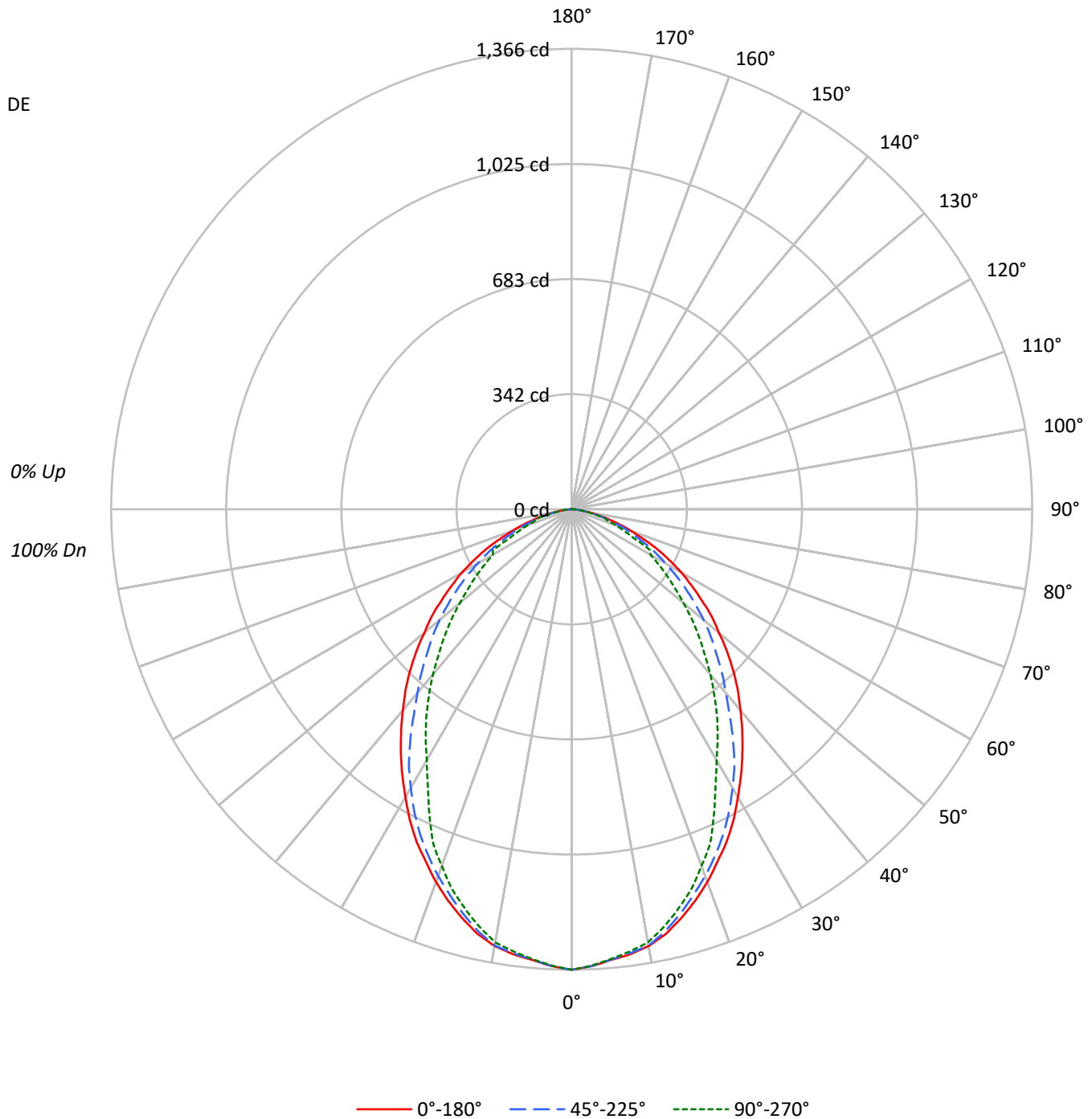
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7353	7353	7353
5°	7253	7244	7236
10°	7190	7182	7130
15°	6996	6926	6829
20°	6739	6631	6450
25°	6462	6321	5928
30°	6124	5929	5340
35°	5801	5479	4939
40°	5470	4993	4494
45°	5157	4616	4063
50°	4774	4284	3624
55°	4417	3883	3246
60°	4046	3468	2907
65°	3561	3037	2575
70°	2933	2659	2187
75°	2331	2036	2136
80°	1565	1469	1370
85°	976	1173	1365

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.2	4.7
10°-20°	349.0	13.0
20°-30°	483.2	18.0
30°-40°	515.2	19.2
40°-50°	470.0	17.5
50°-60°	368.2	13.7
60°-70°	240.0	8.9
70°-80°	106.3	4.0
80°-90°	22.8	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
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0°-30°	959.4	35.8
0°-40°	1474.6	55.0
0°-60°	2312.9	86.2
0°-90°	2682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2682.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1366	1366	1366	1366	1366	
5°	1342	1341	1341	1339	1339	127
15°	1256	1256	1243	1230	1226	353
25°	1088	1082	1064	1027	998	500
35°	883	877	834	771	752	552
45°	678	663	606	556	534	522
55°	471	456	414	365	346	422
65°	280	264	238	243	202	276
75°	112	104	98	93	103	120
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1366.2	1366.2	1366.2	1366.2	1366.2
2.5°	1356.7	1356.7	1356.7	1355.1	1355.1
5°	1342.5	1340.9	1340.9	1339.3	1339.3
7.5°	1331.4	1329.8	1328.3	1326.7	1323.5
10°	1315.6	1315.6	1314.1	1306.2	1304.6
12.5°	1290.4	1288.8	1282.5	1271.4	1268.3
15°	1255.6	1255.6	1243.0	1230.3	1225.6
17.5°	1217.7	1216.1	1200.3	1187.7	1181.4
20°	1176.6	1173.5	1157.7	1137.2	1126.1
22.5°	1130.8	1130.8	1111.9	1085.0	1074.0
25°	1088.2	1081.9	1064.5	1026.6	998.2
27.5°	1039.2	1029.8	1010.8	957.1	923.9
30°	985.5	980.8	954.0	884.5	859.2
32.5°	935.0	927.1	898.7	826.0	805.5
35°	882.9	876.6	833.9	770.7	751.8
37.5°	830.8	822.9	769.2	718.6	694.9
40°	778.6	769.2	710.7	664.9	639.7
42.5°	729.7	717.0	660.2	611.2	582.8
45°	677.6	663.3	606.5	555.9	533.8
47.5°	625.4	612.8	560.7	508.6	483.3
50°	570.2	559.1	511.7	459.6	432.8
52.5°	524.4	507.0	461.2	409.1	387.0
55°	470.7	456.4	413.8	364.8	345.9
57.5°	421.7	407.5	368.0	322.2	306.4
60°	375.9	355.4	322.2	282.7	270.1
62.5°	325.4	309.6	281.1	248.0	263.8
65°	279.6	263.8	238.5	243.2	202.2
67.5°	229.0	221.1	199.0	176.9	170.6
70°	186.4	176.9	169.0	145.3	139.0
72.5°	148.5	139.0	127.9	115.3	110.6
75°	112.1	104.2	97.9	93.2	102.7
77.5°	77.4	74.2	69.5	64.8	63.2
80°	50.5	49.0	47.4	45.8	44.2
82.5°	30.0	30.0	30.0	30.0	30.0
85°	15.8	17.4	19.0	20.5	22.1
87.5°	9.5	9.5	11.1	12.6	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)