

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: P561322

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561322
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-12-4-LD4-1STD-50-UNV-93-94-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2981.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

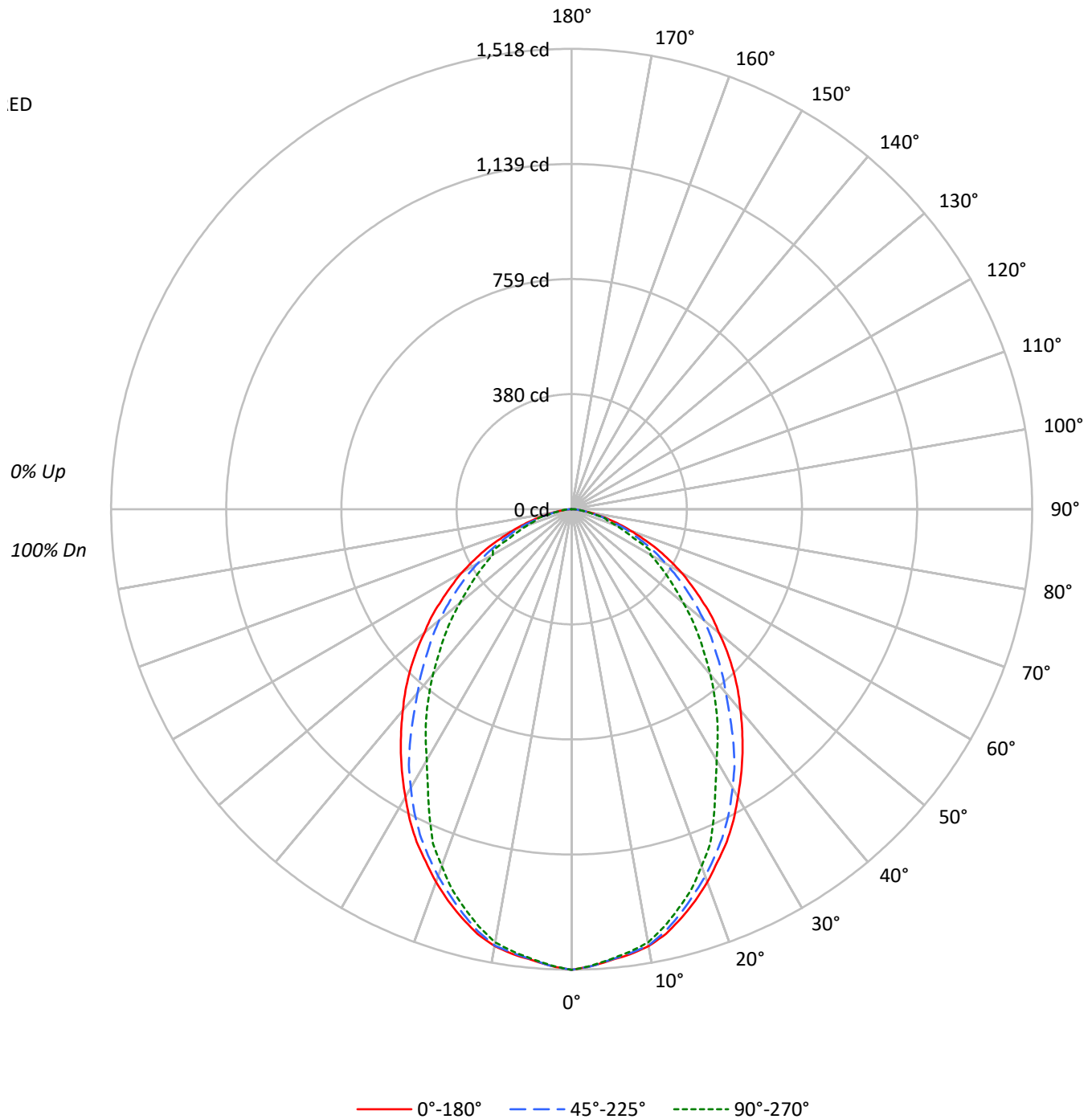
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4086	4086	4086
5°	4031	4026	4021
10°	3996	3991	3962
15°	3888	3849	3795
20°	3745	3685	3584
25°	3591	3513	3294
30°	3404	3295	2967
35°	3224	3045	2745
40°	3040	2775	2498
45°	2866	2565	2258
50°	2653	2381	2014
55°	2454	2158	1803
60°	2249	1927	1616
65°	1978	1688	1431
70°	1629	1478	1216
75°	1295	1131	1186
80°	871	817	762
85°	543	651	760

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2866 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.4	4.7
10°-20°	387.9	13.0
20°-30°	537.1	18.0
30°-40°	572.7	19.2
40°-50°	522.4	17.5
50°-60°	409.3	13.7
60°-70°	266.8	8.9
70°-80°	118.2	4.0
80°-90°	25.4	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°	1066.3	35.8
0°-40°	1639.0	55.0
0°-60°	2570.7	86.2
0°-90°	2981.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2981.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1518	1518	1518	1518	1518	
5°	1492	1490	1490	1489	1489	142
15°	1396	1396	1382	1368	1362	392
25°	1210	1202	1183	1141	1110	555
35°	981	974	927	857	836	613
45°	753	737	674	618	593	580
55°	523	507	460	406	384	469
65°	311	293	265	270	225	306
75°	125	116	109	104	114	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1518.5	1518.5	1518.5	1518.5	1518.5
2.5°	1507.9	1507.9	1507.9	1506.2	1506.2
5°	1492.1	1490.4	1490.4	1488.6	1488.6
7.5°	1479.9	1478.1	1476.4	1474.6	1471.1
10°	1462.3	1462.3	1460.6	1451.8	1450.0
12.5°	1434.2	1432.5	1425.4	1413.2	1409.6
15°	1395.6	1395.6	1381.6	1367.5	1362.2
17.5°	1353.5	1351.7	1334.2	1320.1	1313.1
20°	1307.8	1304.3	1286.8	1263.9	1251.7
22.5°	1256.9	1256.9	1235.9	1206.0	1193.7
25°	1209.5	1202.5	1183.2	1141.1	1109.5
27.5°	1155.1	1144.6	1123.5	1063.8	1026.9
30°	1095.4	1090.1	1060.3	983.1	955.0
32.5°	1039.2	1030.5	998.9	918.1	895.3
35°	981.3	974.3	926.9	856.7	835.6
37.5°	923.4	914.6	854.9	798.7	772.4
40°	865.4	854.9	790.0	739.1	711.0
42.5°	811.0	797.0	733.8	679.4	647.8
45°	753.1	737.3	674.1	617.9	593.3
47.5°	695.2	681.1	623.2	565.3	537.2
50°	633.7	621.4	568.8	510.8	481.0
52.5°	582.8	563.5	512.6	454.7	430.1
55°	523.1	507.3	459.9	405.5	384.4
57.5°	468.7	452.9	409.0	358.1	340.6
60°	417.8	395.0	358.1	314.2	300.2
62.5°	361.6	344.1	312.5	275.6	293.2
65°	310.7	293.2	265.1	270.3	224.7
67.5°	254.5	245.8	221.2	196.6	189.6
70°	207.1	196.6	187.8	161.5	154.5
72.5°	165.0	154.5	142.2	128.1	122.9
75°	124.6	115.9	108.8	103.6	114.1
77.5°	86.0	82.5	77.2	72.0	70.2
80°	56.2	54.4	52.7	50.9	49.2
82.5°	33.4	33.4	33.4	33.4	33.4
85°	17.6	19.3	21.1	22.8	24.6
87.5°	10.5	10.5	12.3	14.0	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)