

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: P559519

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559519
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-12-1-LD4-2STD-40-UNV-82-97-EDD
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1443.0 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

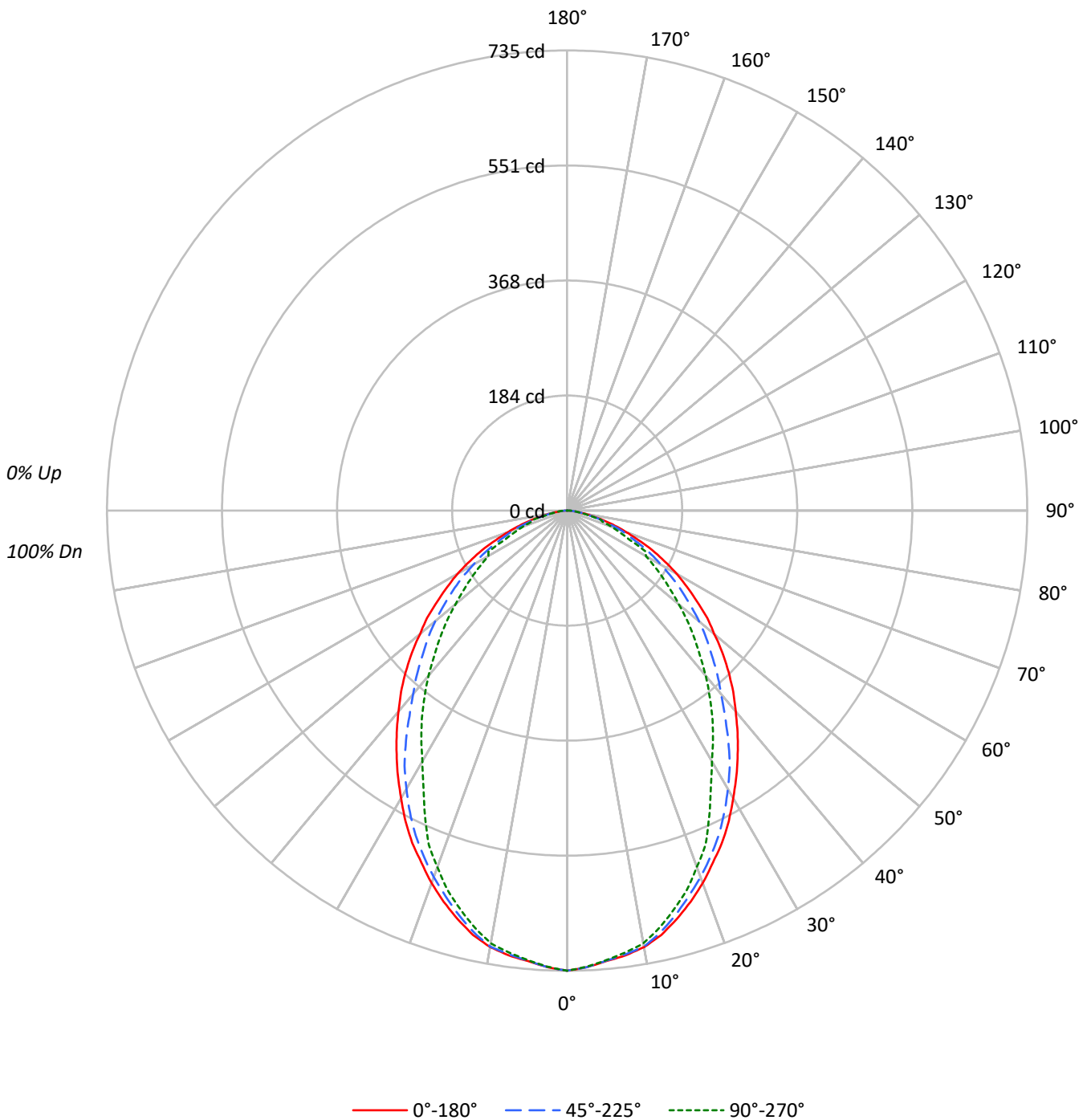
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7911	7911	7911
5°	7804	7795	7786
10°	7737	7727	7672
15°	7529	7453	7348
20°	7252	7135	6940
25°	6954	6802	6379
30°	6591	6380	5746
35°	6242	5896	5315
40°	5886	5373	4836
45°	5549	4967	4372
50°	5138	4610	3898
55°	4752	4177	3492
60°	4353	3733	3128
65°	3831	3268	2771
70°	3157	2861	2354
75°	2508	2192	2296
80°	1686	1581	1475
85°	1050	1260	1470

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5549 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	4.7
10°-20°	187.8	13.0
20°-30°	260.0	18.0
30°-40°	277.2	19.2
40°-50°	252.9	17.5
50°-60°	198.1	13.7
60°-70°	129.1	8.9
70°-80°	57.2	4.0
80°-90°	12.3	0.8
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°	516.2	35.8
0°-40°	793.4	55.0
0°-60°	1244.4	86.2
0°-90°	1443.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1443.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	722	721	721	721	721	69
15°	676	676	669	662	659	190
25°	586	582	573	552	537	269
35°	475	472	449	415	404	297
45°	364	357	326	299	287	281
55°	253	246	223	196	186	227
65°	150	142	128	131	109	148
75°	60	56	53	50	55	65
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	735.0	735.0	735.0	735.0	735.0
2.5°	729.9	729.9	729.9	729.1	729.1
5°	722.3	721.4	721.4	720.6	720.6
7.5°	716.4	715.5	714.7	713.8	712.1
10°	707.9	707.9	707.0	702.8	701.9
12.5°	694.3	693.4	690.0	684.1	682.4
15°	675.6	675.6	668.8	662.0	659.4
17.5°	655.2	654.3	645.8	639.0	635.6
20°	633.1	631.4	622.9	611.8	605.9
22.5°	608.4	608.4	598.2	583.8	577.8
25°	585.5	582.1	572.7	552.3	537.1
27.5°	559.1	554.0	543.8	515.0	497.1
30°	530.3	527.7	513.3	475.9	462.3
32.5°	503.1	498.8	483.5	444.4	433.4
35°	475.0	471.6	448.7	414.7	404.5
37.5°	447.0	442.7	413.8	386.6	373.9
40°	418.9	413.8	382.4	357.8	344.2
42.5°	392.6	385.8	355.2	328.9	313.6
45°	364.5	356.9	326.3	299.1	287.2
47.5°	336.5	329.7	301.7	273.6	260.0
50°	306.8	300.8	275.3	247.3	232.8
52.5°	282.1	272.8	248.1	220.1	208.2
55°	253.2	245.6	222.6	196.3	186.1
57.5°	226.9	219.2	198.0	173.4	164.9
60°	202.2	191.2	173.4	152.1	145.3
62.5°	175.1	166.6	151.3	133.4	141.9
65°	150.4	141.9	128.3	130.9	108.8
67.5°	123.2	119.0	107.1	95.2	91.8
70°	100.3	95.2	90.9	78.2	74.8
72.5°	79.9	74.8	68.8	62.0	59.5
75°	60.3	56.1	52.7	50.1	55.2
77.5°	41.6	39.9	37.4	34.8	34.0
80°	27.2	26.3	25.5	24.6	23.8
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.2	11.0	11.9
87.5°	5.1	5.1	5.9	6.8	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)