

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: P559598

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559598
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-50-UNV-93-97-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 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: 1347.0 lumens
Efficiency: N/A
Efficacy: 81.1 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

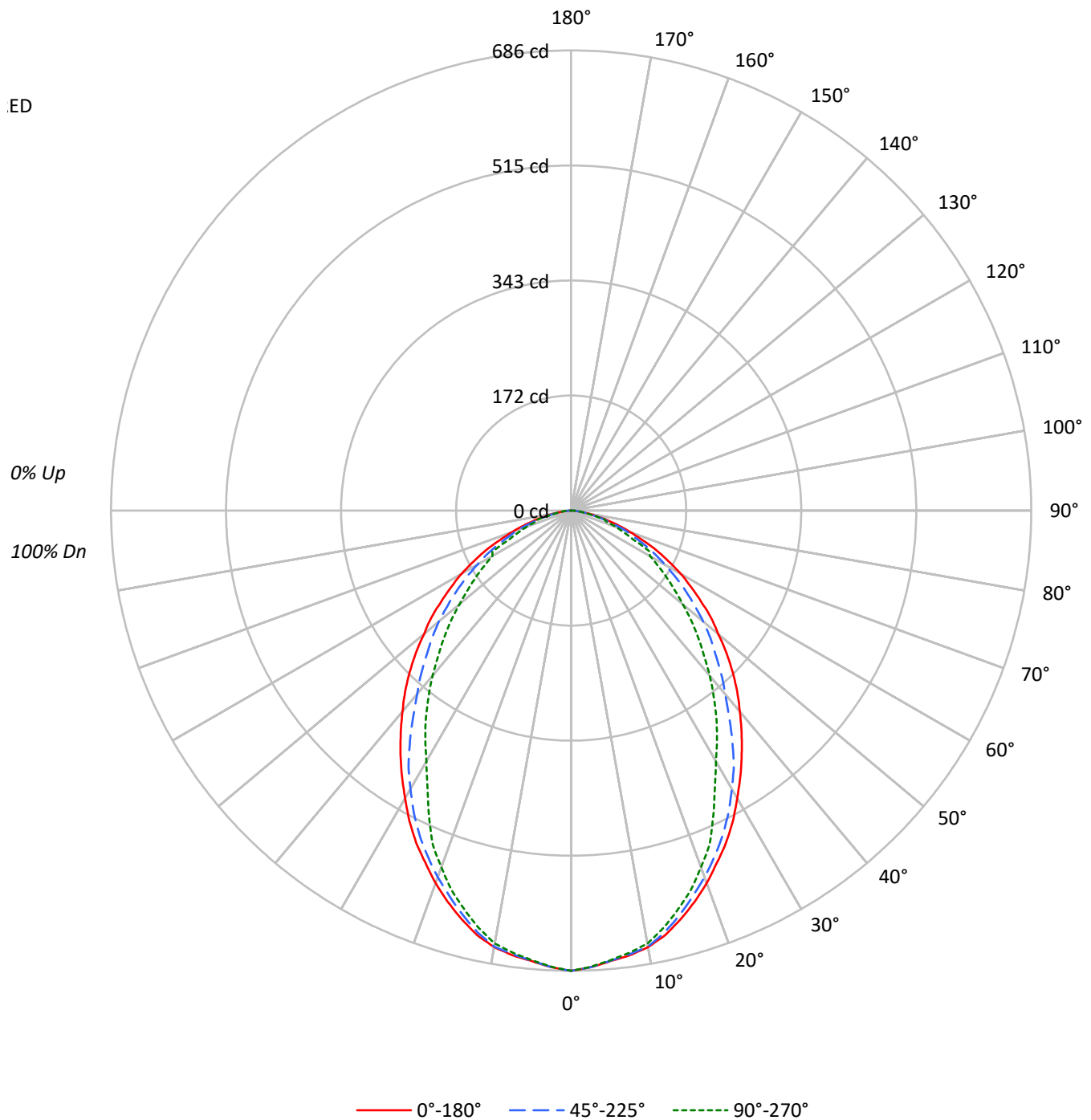
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7385	7385	7385
5°	7285	7277	7269
10°	7223	7214	7161
15°	7027	6957	6859
20°	6770	6660	6479
25°	6491	6349	5954
30°	6152	5955	5363
35°	5826	5503	4962
40°	5495	5016	4515
45°	5180	4637	4081
50°	4796	4304	3639
55°	4436	3900	3260
60°	4064	3483	2919
65°	3576	3051	2585
70°	2946	2672	2197
75°	2341	2046	2146
80°	1574	1475	1376
85°	976	1173	1371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5180 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	4.7
10°-20°	175.3	13.0
20°-30°	242.7	18.0
30°-40°	258.8	19.2
40°-50°	236.1	17.5
50°-60°	184.9	13.7
60°-70°	120.5	8.9
70°-80°	53.4	4.0
80°-90°	11.5	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°	481.8	35.8
0°-40°	740.6	55.0
0°-60°	1161.6	86.2
0°-90°	1347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	674	674	674	673	673	64
15°	631	631	624	618	616	177
25°	546	543	535	516	501	251
35°	443	440	419	387	378	277
45°	340	333	305	279	268	262
55°	236	229	208	183	174	212
65°	140	132	120	122	102	138
75°	56	52	49	47	52	60
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.1	686.1	686.1	686.1	686.1
2.5°	681.4	681.4	681.4	680.6	680.6
5°	674.2	673.5	673.5	672.7	672.7
7.5°	668.7	667.9	667.1	666.3	664.7
10°	660.8	660.8	660.0	656.0	655.2
12.5°	648.1	647.3	644.1	638.6	637.0
15°	630.6	630.6	624.3	617.9	615.5
17.5°	611.6	610.8	602.9	596.5	593.3
20°	591.0	589.4	581.4	571.1	565.6
22.5°	568.0	568.0	558.4	544.9	539.4
25°	546.5	543.4	534.6	515.6	501.3
27.5°	521.9	517.2	507.7	480.7	464.0
30°	495.0	492.6	479.1	444.2	431.5
32.5°	469.6	465.6	451.3	414.9	404.5
35°	443.4	440.2	418.8	387.1	377.6
37.5°	417.2	413.3	386.3	360.9	349.0
40°	391.1	386.3	357.0	333.9	321.3
42.5°	366.5	360.1	331.6	307.0	292.7
45°	340.3	333.2	304.6	279.2	268.1
47.5°	314.1	307.8	281.6	255.4	242.7
50°	286.4	280.8	257.0	230.8	217.3
52.5°	263.4	254.6	231.6	205.4	194.3
55°	236.4	229.2	207.8	183.2	173.7
57.5°	211.8	204.7	184.8	161.8	153.9
60°	188.8	178.5	161.8	142.0	135.6
62.5°	163.4	155.5	141.2	124.5	132.5
65°	140.4	132.5	119.8	122.2	101.5
67.5°	115.0	111.1	99.9	88.8	85.7
70°	93.6	88.8	84.9	73.0	69.8
72.5°	74.6	69.8	64.3	57.9	55.5
75°	56.3	52.4	49.2	46.8	51.6
77.5°	38.9	37.3	34.9	32.5	31.7
80°	25.4	24.6	23.8	23.0	22.2
82.5°	15.1	15.1	15.1	15.1	15.1
85°	7.9	8.7	9.5	10.3	11.1
87.5°	4.8	4.8	5.6	6.3	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)