

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: P559458

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559458
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-35-UNV-93-85-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1293.0 lumens
Efficiency: N/A
Efficacy: 77.9 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

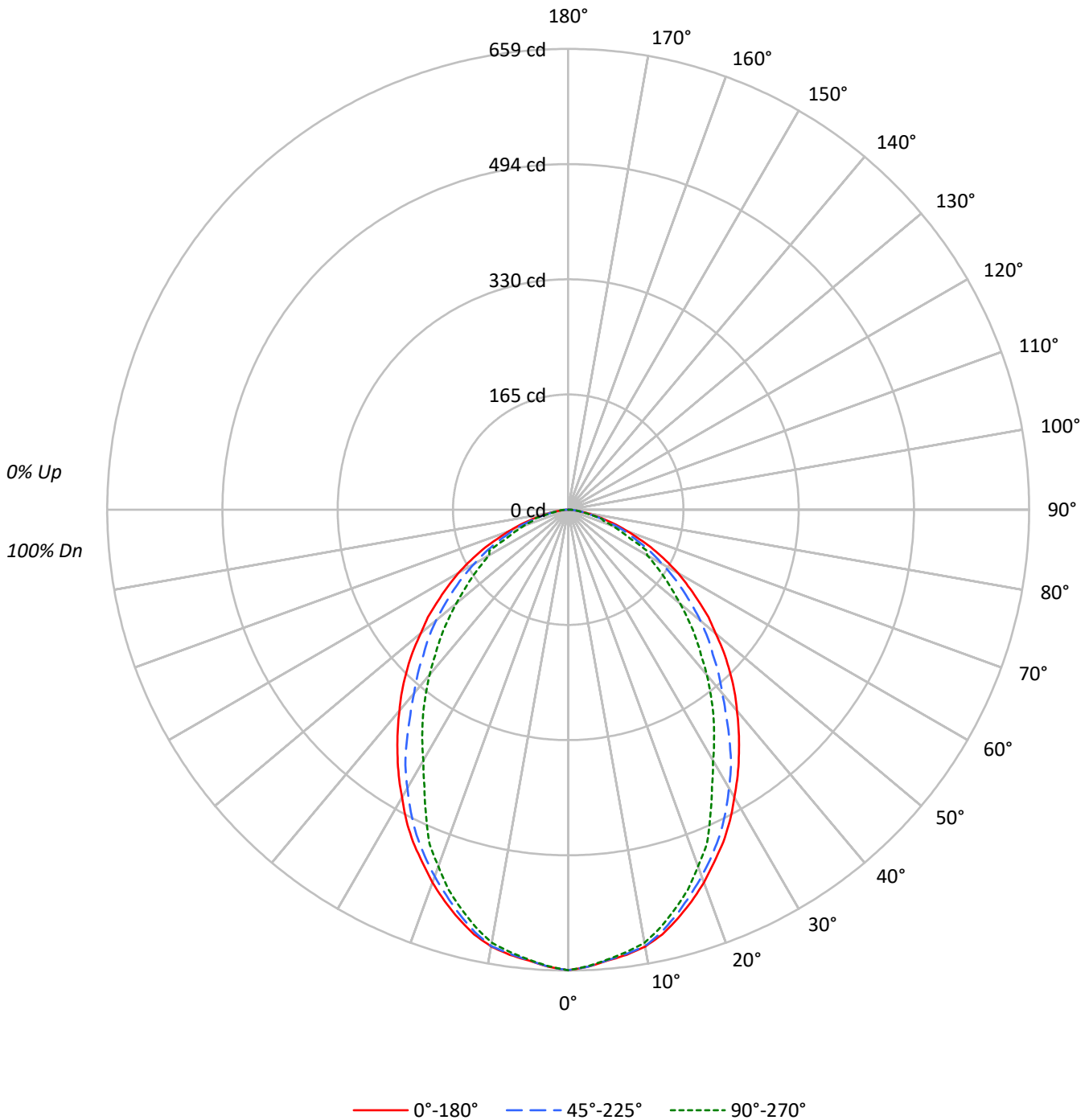
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7089	7089	7089
5°	6993	6985	6977
10°	6933	6924	6874
15°	6745	6677	6585
20°	6498	6393	6219
25°	6230	6095	5715
30°	5905	5716	5148
35°	5593	5282	4762
40°	5275	4814	4333
45°	4973	4451	3918
50°	4603	4131	3493
55°	4258	3744	3130
60°	3901	3343	2803
65°	3433	2929	2483
70°	2826	2565	2109
75°	2250	1963	2059
80°	1512	1413	1320
85°	939	1124	1321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4973 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.3	4.7
10°-20°	168.3	13.0
20°-30°	232.9	18.0
30°-40°	248.4	19.2
40°-50°	226.6	17.5
50°-60°	177.5	13.7
60°-70°	115.7	8.9
70°-80°	51.3	4.0
80°-90°	11.0	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°	462.5	35.8
0°-40°	710.9	55.0
0°-60°	1115.0	86.2
0°-90°	1293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1293.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	647	646	646	646	646	61
15°	605	605	599	593	591	170
25°	525	522	513	495	481	241
35°	426	423	402	372	362	266
45°	327	320	292	268	257	252
55°	227	220	200	176	167	204
65°	135	127	115	117	98	133
75°	54	50	47	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	658.6	658.6	658.6	658.6	658.6
2.5°	654.1	654.1	654.1	653.3	653.3
5°	647.2	646.5	646.5	645.7	645.7
7.5°	641.9	641.1	640.4	639.6	638.1
10°	634.3	634.3	633.5	629.7	628.9
12.5°	622.1	621.3	618.3	613.0	611.4
15°	605.3	605.3	599.2	593.2	590.9
17.5°	587.1	586.3	578.7	572.6	569.5
20°	567.3	565.7	558.1	548.2	542.9
22.5°	545.2	545.2	536.0	523.1	517.8
25°	524.6	521.6	513.2	494.9	481.2
27.5°	501.0	496.5	487.3	461.4	445.4
30°	475.1	472.8	459.9	426.4	414.2
32.5°	450.8	447.0	433.3	398.2	388.3
35°	425.6	422.6	402.0	371.6	362.4
37.5°	400.5	396.7	370.8	346.5	335.0
40°	375.4	370.8	342.6	320.6	308.4
42.5°	351.8	345.7	318.3	294.7	281.0
45°	326.7	319.8	292.4	268.0	257.4
47.5°	301.5	295.4	270.3	245.2	233.0
50°	274.9	269.5	246.7	221.6	208.6
52.5°	252.8	244.4	222.3	197.2	186.6
55°	226.9	220.1	199.5	175.9	166.8
57.5°	203.3	196.4	177.4	155.3	147.7
60°	181.2	171.3	155.3	136.3	130.2
62.5°	156.9	149.2	135.5	119.5	127.2
65°	134.8	127.2	115.0	117.3	97.5
67.5°	110.4	106.6	95.9	85.3	82.2
70°	89.8	85.3	81.5	70.1	67.0
72.5°	71.6	67.0	61.7	55.6	53.3
75°	54.1	50.3	47.2	44.9	49.5
77.5°	37.3	35.8	33.5	31.2	30.5
80°	24.4	23.6	22.8	22.1	21.3
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.1	9.9	10.7
87.5°	4.6	4.6	5.3	6.1	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)