

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: P558946

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558946
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-LD4-1STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 656.0 lumens
Efficiency: N/A
Efficacy: 79.0 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

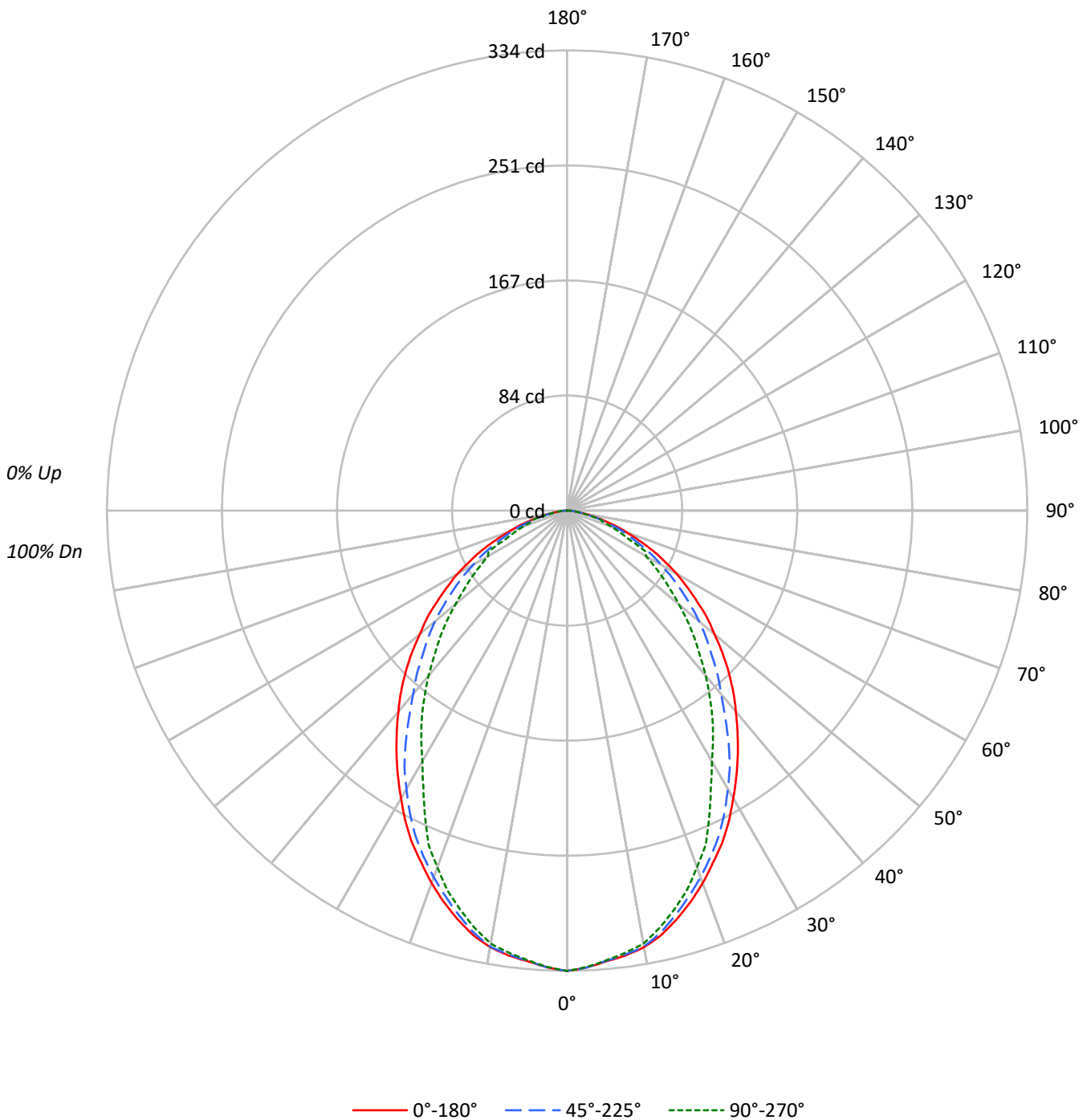
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3597	3597	3597
5°	3548	3544	3540
10°	3517	3513	3488
15°	3422	3388	3341
20°	3297	3244	3155
25°	3162	3093	2899
30°	2997	2900	2613
35°	2837	2681	2417
40°	2677	2442	2199
45°	2522	2257	1988
50°	2336	2097	1772
55°	2160	1899	1588
60°	1978	1696	1423
65°	1742	1485	1258
70°	1435	1300	1070
75°	1140	998	1044
80°	769	719	669
85°	482	568	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2522 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.1	4.7
10°-20°	85.4	13.0
20°-30°	118.2	18.0
30°-40°	126.0	19.2
40°-50°	115.0	17.5
50°-60°	90.1	13.7
60°-70°	58.7	8.9
70°-80°	26.0	4.0
80°-90°	5.6	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°	234.7	35.8
0°-40°	360.7	55.0
0°-60°	565.7	86.2
0°-90°	656.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	656.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	334	334	334	334	334	
5°	328	328	328	328	328	31
15°	307	307	304	301	300	86
25°	266	265	260	251	244	122
35°	216	214	204	188	184	135
45°	166	162	148	136	131	128
55°	115	112	101	89	85	103
65°	68	64	58	60	49	67
75°	27	26	24	23	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	334.2	334.2	334.2	334.2	334.2
2.5°	331.8	331.8	331.8	331.5	331.5
5°	328.4	328.0	328.0	327.6	327.6
7.5°	325.7	325.3	324.9	324.5	323.7
10°	321.8	321.8	321.4	319.5	319.1
12.5°	315.6	315.2	313.7	311.0	310.2
15°	307.1	307.1	304.0	300.9	299.8
17.5°	297.8	297.5	293.6	290.5	289.0
20°	287.8	287.0	283.2	278.1	275.4
22.5°	276.6	276.6	272.0	265.4	262.7
25°	266.2	264.6	260.4	251.1	244.1
27.5°	254.2	251.9	247.2	234.1	226.0
30°	241.1	239.9	233.3	216.3	210.2
32.5°	228.7	226.8	219.8	202.0	197.0
35°	215.9	214.4	204.0	188.5	183.9
37.5°	203.2	201.3	188.1	175.8	170.0
40°	190.5	188.1	173.8	162.6	156.5
42.5°	178.5	175.4	161.5	149.5	142.5
45°	165.7	162.2	148.3	136.0	130.6
47.5°	153.0	149.9	137.1	124.4	118.2
50°	139.5	136.8	125.2	112.4	105.8
52.5°	128.3	124.0	112.8	100.1	94.6
55°	115.1	111.6	101.2	89.2	84.6
57.5°	103.1	99.7	90.0	78.8	74.9
60°	91.9	86.9	78.8	69.1	66.1
62.5°	79.6	75.7	68.8	60.7	64.5
65°	68.4	64.5	58.3	59.5	49.4
67.5°	56.0	54.1	48.7	43.3	41.7
70°	45.6	43.3	41.3	35.5	34.0
72.5°	36.3	34.0	31.3	28.2	27.0
75°	27.4	25.5	24.0	22.8	25.1
77.5°	18.9	18.2	17.0	15.8	15.5
80°	12.4	12.0	11.6	11.2	10.8
82.5°	7.3	7.3	7.3	7.3	7.3
85°	3.9	4.2	4.6	5.0	5.4
87.5°	2.3	2.3	2.7	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)