

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: P558694

Luminaire Tested: FSR-12-1-LD4-1LO-35-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558694
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-LD4-1LO-35-UNV-93-87-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 462.0 lumens
Efficiency: N/A
Efficacy: 79.7 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

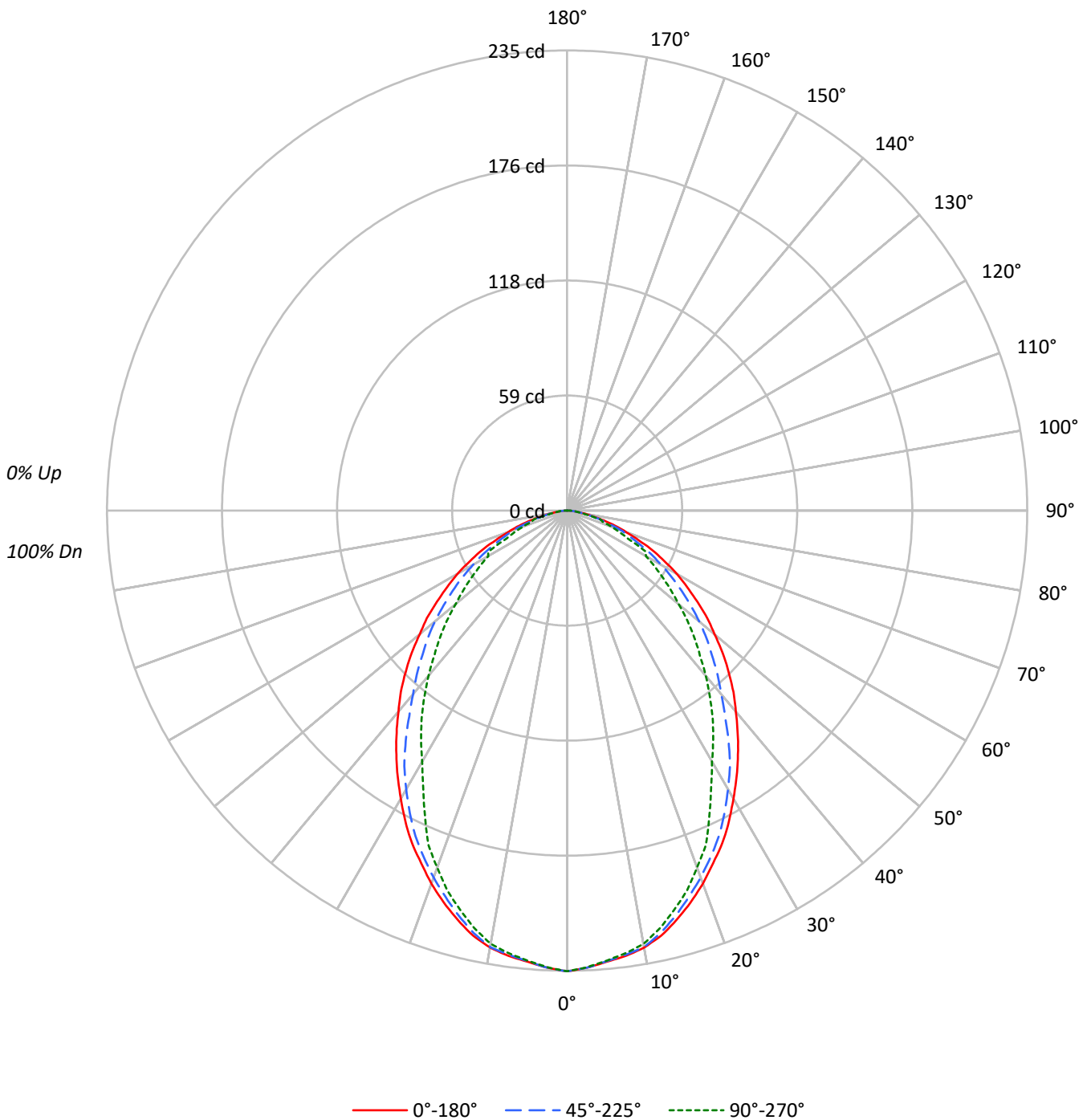
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2533	2533	2533
5°	2499	2496	2493
10°	2477	2475	2456
15°	2410	2386	2352
20°	2322	2284	2222
25°	2227	2178	2042
30°	2110	2042	1840
35°	1999	1888	1702
40°	1884	1720	1548
45°	1776	1591	1400
50°	1644	1475	1248
55°	1522	1338	1118
60°	1395	1195	1001
65°	1228	1047	886
70°	1010	916	752
75°	803	703	736
80°	539	508	471
85°	333	408	469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1776 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.9	4.7
10°-20°	60.1	13.0
20°-30°	83.2	18.0
30°-40°	88.8	19.2
40°-50°	81.0	17.5
50°-60°	63.4	13.7
60°-70°	41.3	8.9
70°-80°	18.3	4.0
80°-90°	3.9	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°	165.3	35.8
0°-40°	254.0	55.0
0°-60°	398.4	86.2
0°-90°	462.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	462.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	235	235	235	235	235	
5°	231	231	231	231	231	22
15°	216	216	214	212	211	61
25°	188	186	183	177	172	86
35°	152	151	144	133	130	95
45°	117	114	104	96	92	90
55°	81	79	71	63	60	73
65°	48	45	41	42	35	47
75°	19	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	235.3	235.3	235.3	235.3	235.3
2.5°	233.7	233.7	233.7	233.4	233.4
5°	231.3	231.0	231.0	230.7	230.7
7.5°	229.4	229.1	228.8	228.5	228.0
10°	226.6	226.6	226.4	225.0	224.7
12.5°	222.3	222.0	220.9	219.0	218.5
15°	216.3	216.3	214.1	211.9	211.1
17.5°	209.8	209.5	206.8	204.6	203.5
20°	202.7	202.1	199.4	195.9	194.0
22.5°	194.8	194.8	191.5	186.9	185.0
25°	187.5	186.4	183.4	176.8	171.9
27.5°	179.0	177.4	174.1	164.9	159.2
30°	169.8	169.0	164.3	152.4	148.0
32.5°	161.1	159.7	154.8	142.3	138.8
35°	152.1	151.0	143.7	132.8	129.5
37.5°	143.1	141.7	132.5	123.8	119.7
40°	134.1	132.5	122.4	114.5	110.2
42.5°	125.7	123.5	113.7	105.3	100.4
45°	116.7	114.3	104.5	95.8	92.0
47.5°	107.7	105.6	96.6	87.6	83.3
50°	98.2	96.3	88.1	79.2	74.5
52.5°	90.3	87.3	79.4	70.5	66.7
55°	81.1	78.6	71.3	62.8	59.6
57.5°	72.6	70.2	63.4	55.5	52.8
60°	64.8	61.2	55.5	48.7	46.5
62.5°	56.0	53.3	48.4	42.7	45.4
65°	48.2	45.4	41.1	41.9	34.8
67.5°	39.4	38.1	34.3	30.5	29.4
70°	32.1	30.5	29.1	25.0	23.9
72.5°	25.6	23.9	22.0	19.9	19.0
75°	19.3	18.0	16.9	16.1	17.7
77.5°	13.3	12.8	12.0	11.2	10.9
80°	8.7	8.4	8.2	7.9	7.6
82.5°	5.2	5.2	5.2	5.2	5.2
85°	2.7	3.0	3.3	3.5	3.8
87.5°	1.6	1.6	1.9	2.2	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)