

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: P560422

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560422
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-12-2-LD4-2LO-35-UNV-93-87-EDD-90
Description: 1X2 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: 1791.0 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

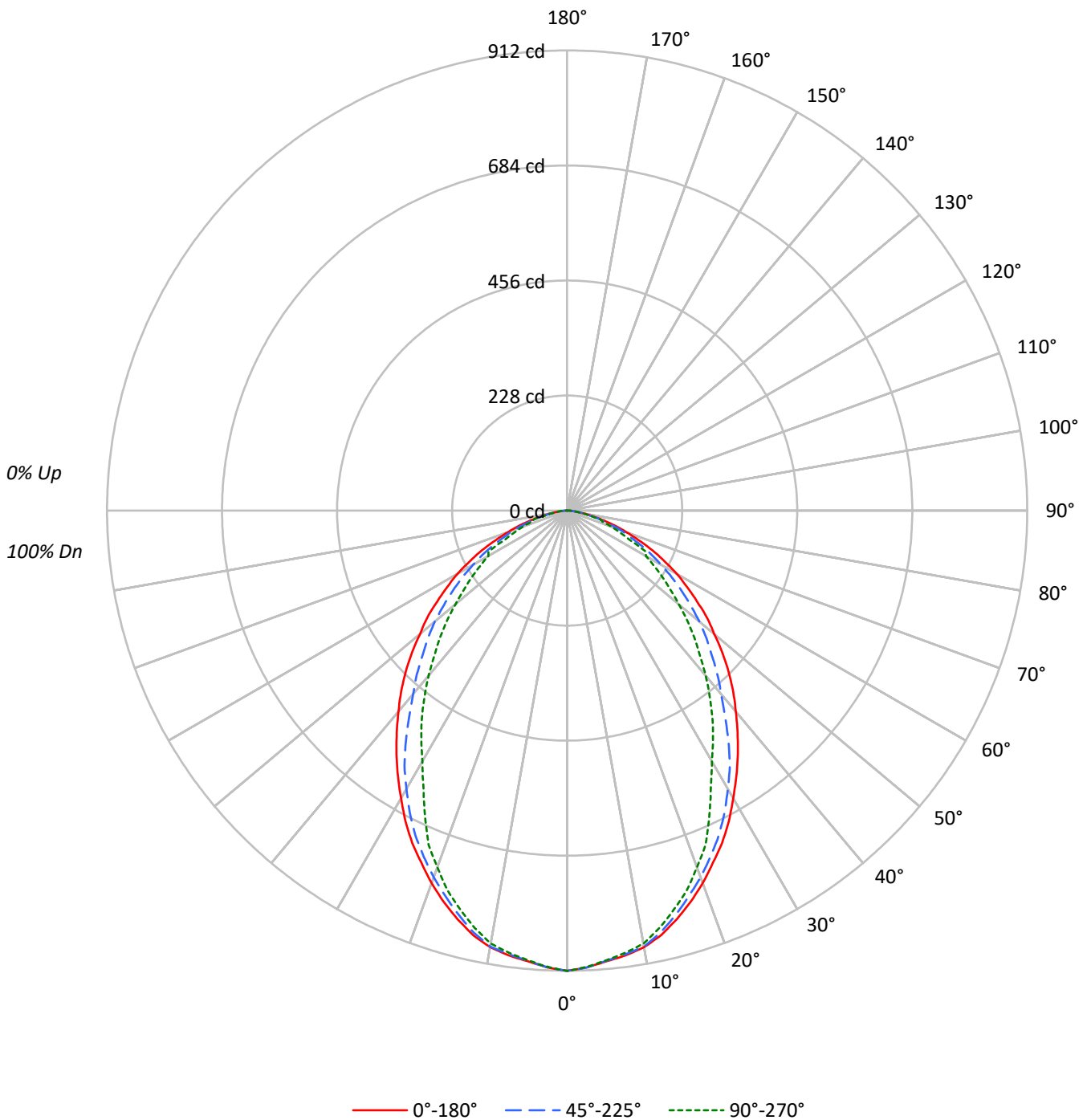
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4910	4910	4910
5°	4843	4837	4832
10°	4802	4796	4761
15°	4672	4625	4560
20°	4500	4428	4307
25°	4315	4222	3958
30°	4090	3959	3566
35°	3874	3659	3298
40°	3653	3334	3001
45°	3444	3083	2713
50°	3188	2861	2420
55°	2949	2593	2168
60°	2702	2316	1942
65°	2378	2029	1719
70°	1959	1777	1460
75°	1557	1360	1426
80°	1048	979	914
85°	648	784	914

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3444 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	4.7
10°-20°	233.1	13.0
20°-30°	322.7	18.0
30°-40°	344.1	19.2
40°-50°	313.9	17.5
50°-60°	245.9	13.7
60°-70°	160.3	8.9
70°-80°	71.0	4.0
80°-90°	15.2	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°	640.7	35.8
0°-40°	984.7	55.0
0°-60°	1544.5	86.2
0°-90°	1791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	896	895	895	894	894	85
15°	838	838	830	822	818	236
25°	727	722	711	686	667	334
35°	590	585	557	515	502	369
45°	452	443	405	371	356	349
55°	314	305	276	244	231	282
65°	187	176	159	162	135	184
75°	75	70	65	62	69	80
85°	10	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.3	912.3	912.3	912.3	912.3
2.5°	906.0	906.0	906.0	904.9	904.9
5°	896.5	895.4	895.4	894.4	894.4
7.5°	889.1	888.1	887.0	885.9	883.8
10°	878.6	878.6	877.5	872.2	871.2
12.5°	861.7	860.6	856.4	849.0	846.9
15°	838.5	838.5	830.0	821.6	818.4
17.5°	813.2	812.1	801.6	793.1	788.9
20°	785.7	783.6	773.1	759.4	752.0
22.5°	755.2	755.2	742.5	724.6	717.2
25°	726.7	722.5	710.9	685.6	666.6
27.5°	694.0	687.7	675.0	639.1	617.0
30°	658.1	655.0	637.0	590.6	573.8
32.5°	624.4	619.1	600.1	551.6	537.9
35°	589.6	585.4	556.9	514.7	502.0
37.5°	554.8	549.5	513.6	479.9	464.1
40°	520.0	513.6	474.6	444.0	427.2
42.5°	487.3	478.8	440.9	408.2	389.2
45°	452.5	443.0	405.0	371.3	356.5
47.5°	417.7	409.2	374.4	339.6	322.7
50°	380.7	373.4	341.7	306.9	289.0
52.5°	350.2	338.6	308.0	273.2	258.4
55°	314.3	304.8	276.3	243.6	231.0
57.5°	281.6	272.1	245.7	215.2	204.6
60°	251.0	237.3	215.2	188.8	180.4
62.5°	217.3	206.7	187.7	165.6	176.1
65°	186.7	176.1	159.3	162.4	135.0
67.5°	152.9	147.7	132.9	118.1	113.9
70°	124.5	118.1	112.9	97.0	92.8
72.5°	99.1	92.8	85.4	77.0	73.8
75°	74.9	69.6	65.4	62.2	68.6
77.5°	51.7	49.6	46.4	43.2	42.2
80°	33.8	32.7	31.6	30.6	29.5
82.5°	20.0	20.0	20.0	20.0	20.0
85°	10.5	11.6	12.7	13.7	14.8
87.5°	6.3	6.3	7.4	8.4	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)