

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: P560414

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560414
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-82-97-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1731.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

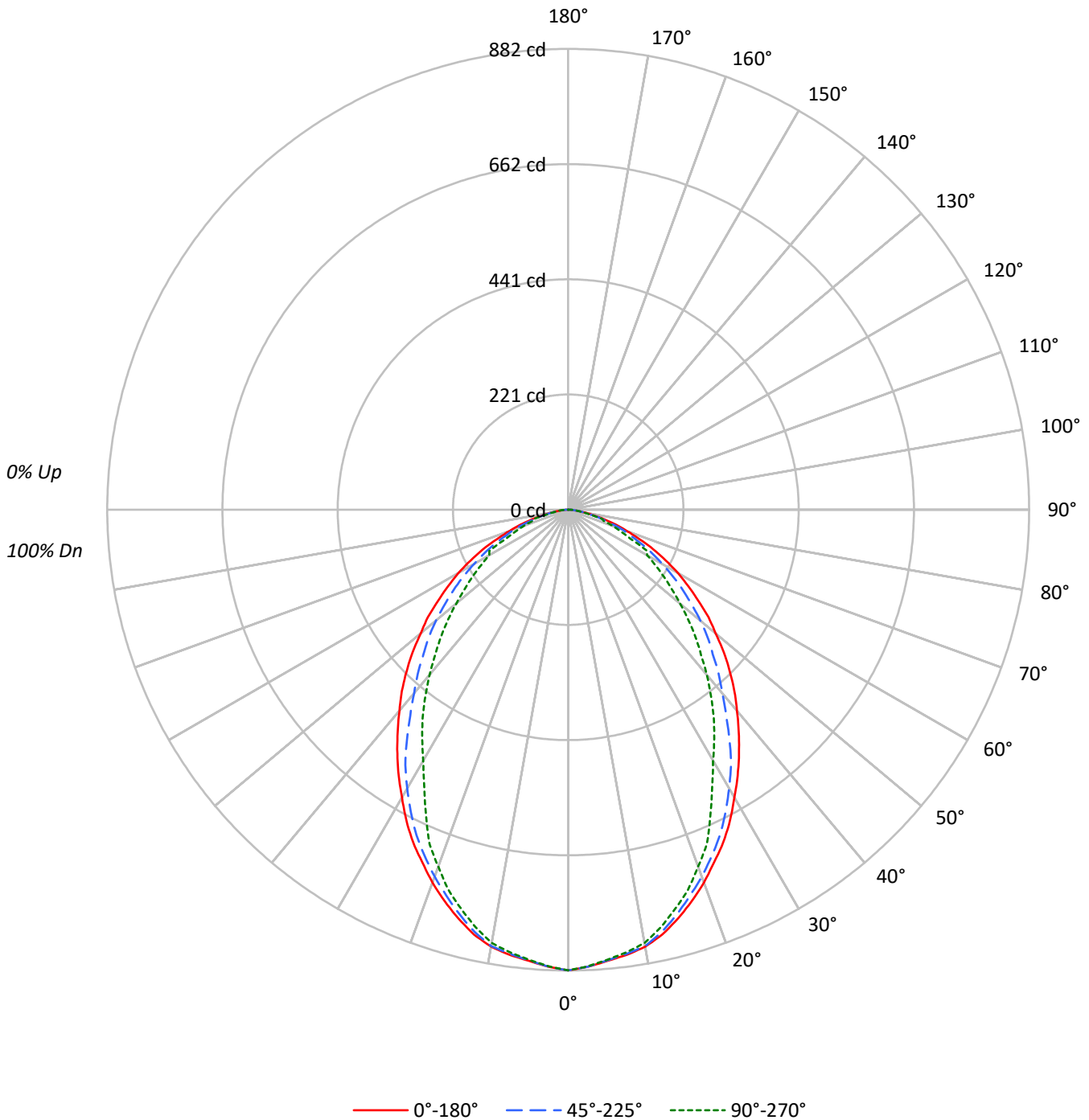
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4745	4745	4745
5°	4681	4675	4670
10°	4640	4635	4602
15°	4515	4470	4407
20°	4349	4279	4163
25°	4170	4080	3825
30°	3953	3826	3446
35°	3744	3536	3188
40°	3530	3223	2900
45°	3328	2979	2622
50°	3081	2766	2339
55°	2851	2506	2094
60°	2611	2238	1876
65°	2297	1960	1662
70°	1893	1717	1412
75°	1506	1314	1379
80°	1010	948	883
85°	630	753	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3328 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.1	4.7
10°-20°	225.3	13.0
20°-30°	311.9	18.0
30°-40°	332.5	19.2
40°-50°	303.4	17.5
50°-60°	237.7	13.7
60°-70°	154.9	8.9
70°-80°	68.6	4.0
80°-90°	14.7	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°	619.2	35.8
0°-40°	951.7	55.0
0°-60°	1492.7	86.2
0°-90°	1731.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1731.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	882	882	882	882	882	
5°	866	865	865	864	864	82
15°	810	810	802	794	791	228
25°	702	698	687	663	644	322
35°	570	566	538	497	485	356
45°	437	428	391	359	344	337
55°	304	295	267	236	223	272
65°	180	170	154	157	130	178
75°	72	67	63	60	66	78
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	881.7	881.7	881.7	881.7	881.7
2.5°	875.6	875.6	875.6	874.6	874.6
5°	866.5	865.4	865.4	864.4	864.4
7.5°	859.3	858.3	857.3	856.3	854.2
10°	849.1	849.1	848.1	843.0	842.0
12.5°	832.8	831.8	827.7	820.6	818.5
15°	810.4	810.4	802.2	794.1	791.0
17.5°	785.9	784.9	774.7	766.6	762.5
20°	759.4	757.4	747.2	733.9	726.8
22.5°	729.9	729.9	717.6	700.3	693.2
25°	702.3	698.3	687.1	662.6	644.2
27.5°	670.7	664.6	652.4	617.7	596.3
30°	636.1	633.0	615.7	570.8	554.5
32.5°	603.5	598.4	580.0	533.1	519.9
35°	569.8	565.7	538.2	497.4	485.2
37.5°	536.2	531.1	496.4	463.8	448.5
40°	502.5	496.4	458.7	429.2	412.8
42.5°	470.9	462.8	426.1	394.5	376.1
45°	437.3	428.1	391.4	358.8	344.5
47.5°	403.7	395.5	361.9	328.2	311.9
50°	368.0	360.9	330.3	296.6	279.3
52.5°	338.4	327.2	297.7	264.0	249.7
55°	303.8	294.6	267.1	235.5	223.2
57.5°	272.2	263.0	237.5	207.9	197.8
60°	242.6	229.4	207.9	182.5	174.3
62.5°	210.0	199.8	181.4	160.0	170.2
65°	180.4	170.2	153.9	157.0	130.5
67.5°	147.8	142.7	128.4	114.2	110.1
70°	120.3	114.2	109.1	93.8	89.7
72.5°	95.8	89.7	82.6	74.4	71.4
75°	72.4	67.3	63.2	60.1	66.3
77.5°	49.9	47.9	44.9	41.8	40.8
80°	32.6	31.6	30.6	29.6	28.5
82.5°	19.4	19.4	19.4	19.4	19.4
85°	10.2	11.2	12.2	13.3	14.3
87.5°	6.1	6.1	7.1	8.2	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)