

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: P560944

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560944
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-12-4-LD4-1LO-35-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2075.0 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

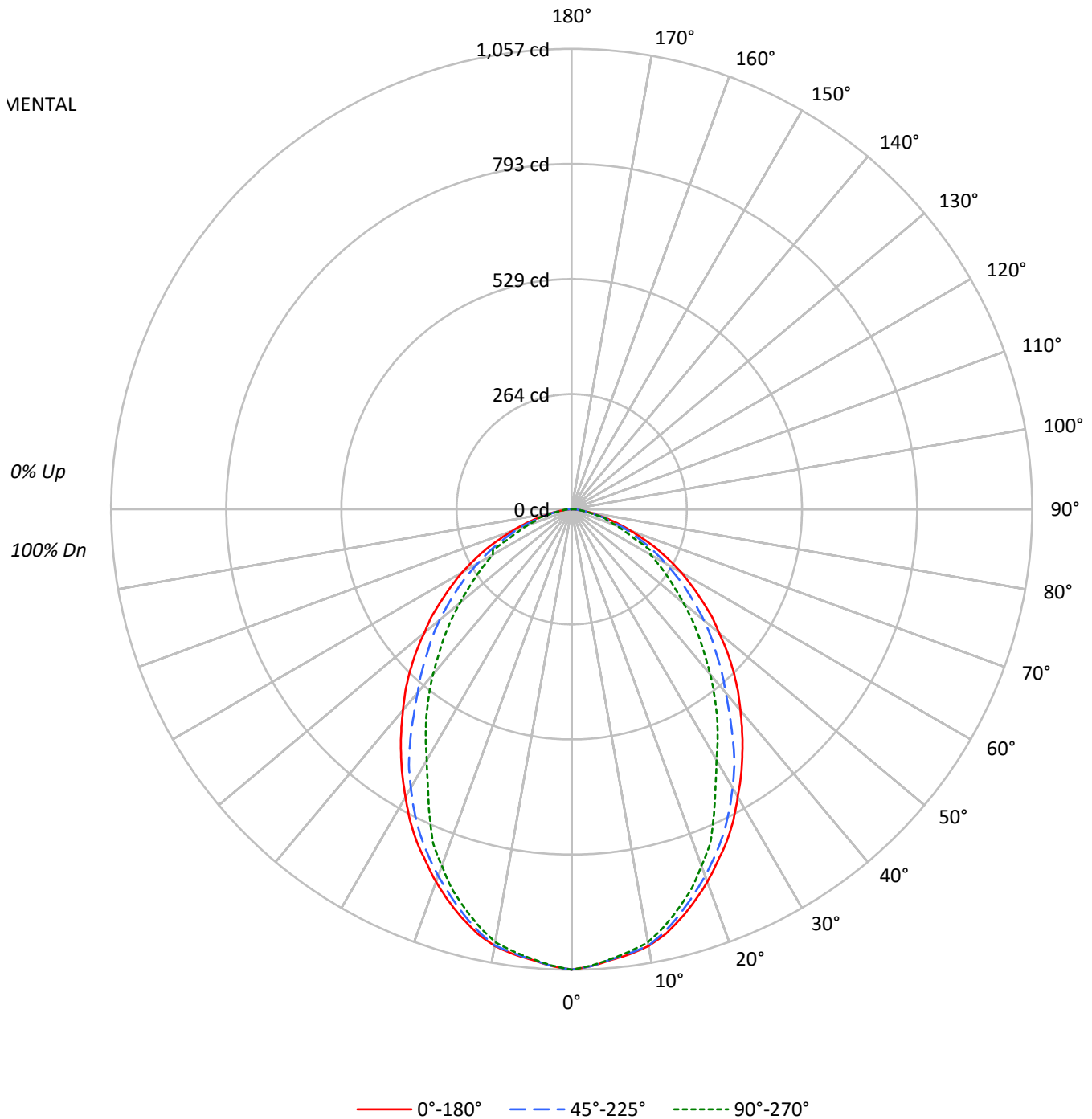
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2844	2844	2844
5°	2806	2802	2799
10°	2781	2778	2758
15°	2706	2679	2642
20°	2607	2565	2495
25°	2500	2445	2293
30°	2369	2293	2065
35°	2244	2120	1911
40°	2116	1932	1738
45°	1995	1786	1572
50°	1847	1657	1402
55°	1708	1502	1255
60°	1565	1342	1125
65°	1377	1175	996
70°	1135	1028	846
75°	902	788	826
80°	606	569	530
85°	377	454	528

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1995 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.4	4.7
10°-20°	270.0	13.0
20°-30°	373.8	18.0
30°-40°	398.6	19.2
40°-50°	363.7	17.5
50°-60°	284.9	13.7
60°-70°	185.7	8.9
70°-80°	82.3	4.0
80°-90°	17.7	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°	742.2	35.8
0°-40°	1140.9	55.0
0°-60°	1789.4	86.2
0°-90°	2075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2075.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1039	1037	1037	1036	1036	99
15°	971	971	962	952	948	273
25°	842	837	824	794	772	387
35°	683	678	645	596	582	427
45°	524	513	469	430	413	404
55°	364	353	320	282	268	327
65°	216	204	184	188	156	213
75°	87	81	76	72	79	93
85°	12	13	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1057.0	1057.0	1057.0	1057.0	1057.0
2.5°	1049.6	1049.6	1049.6	1048.4	1048.4
5°	1038.6	1037.4	1037.4	1036.2	1036.2
7.5°	1030.1	1028.9	1027.7	1026.4	1024.0
10°	1017.9	1017.9	1016.7	1010.5	1009.3
12.5°	998.3	997.1	992.2	983.7	981.2
15°	971.4	971.4	961.7	951.9	948.2
17.5°	942.1	940.9	928.7	918.9	914.0
20°	910.3	907.9	895.7	879.8	871.2
22.5°	874.9	874.9	860.2	839.5	830.9
25°	841.9	837.0	823.6	794.3	772.3
27.5°	804.0	796.7	782.0	740.5	714.8
30°	762.5	758.8	738.1	684.3	664.7
32.5°	723.4	717.3	695.3	639.1	623.2
35°	683.1	678.2	645.2	596.3	581.6
37.5°	642.7	636.6	595.1	556.0	537.7
40°	602.4	595.1	549.9	514.4	494.9
42.5°	564.5	554.8	510.8	472.9	450.9
45°	524.2	513.2	469.2	430.1	413.0
47.5°	483.9	474.1	433.8	393.5	373.9
50°	441.1	432.6	395.9	355.6	334.8
52.5°	405.7	392.2	356.8	316.5	299.4
55°	364.1	353.1	320.1	282.3	267.6
57.5°	326.3	315.3	284.7	249.3	237.1
60°	290.8	274.9	249.3	218.7	209.0
62.5°	251.7	239.5	217.5	191.8	204.1
65°	216.3	204.1	184.5	188.2	156.4
67.5°	177.2	171.1	154.0	136.9	132.0
70°	144.2	136.9	130.7	112.4	107.5
72.5°	114.9	107.5	99.0	89.2	85.5
75°	86.8	80.6	75.8	72.1	79.4
77.5°	59.9	57.4	53.8	50.1	48.9
80°	39.1	37.9	36.7	35.4	34.2
82.5°	23.2	23.2	23.2	23.2	23.2
85°	12.2	13.4	14.7	15.9	17.1
87.5°	7.3	7.3	8.6	9.8	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)