

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: P563422

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563422
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-24-4-LD4-3LO-50-UNV-82-97-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7092.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

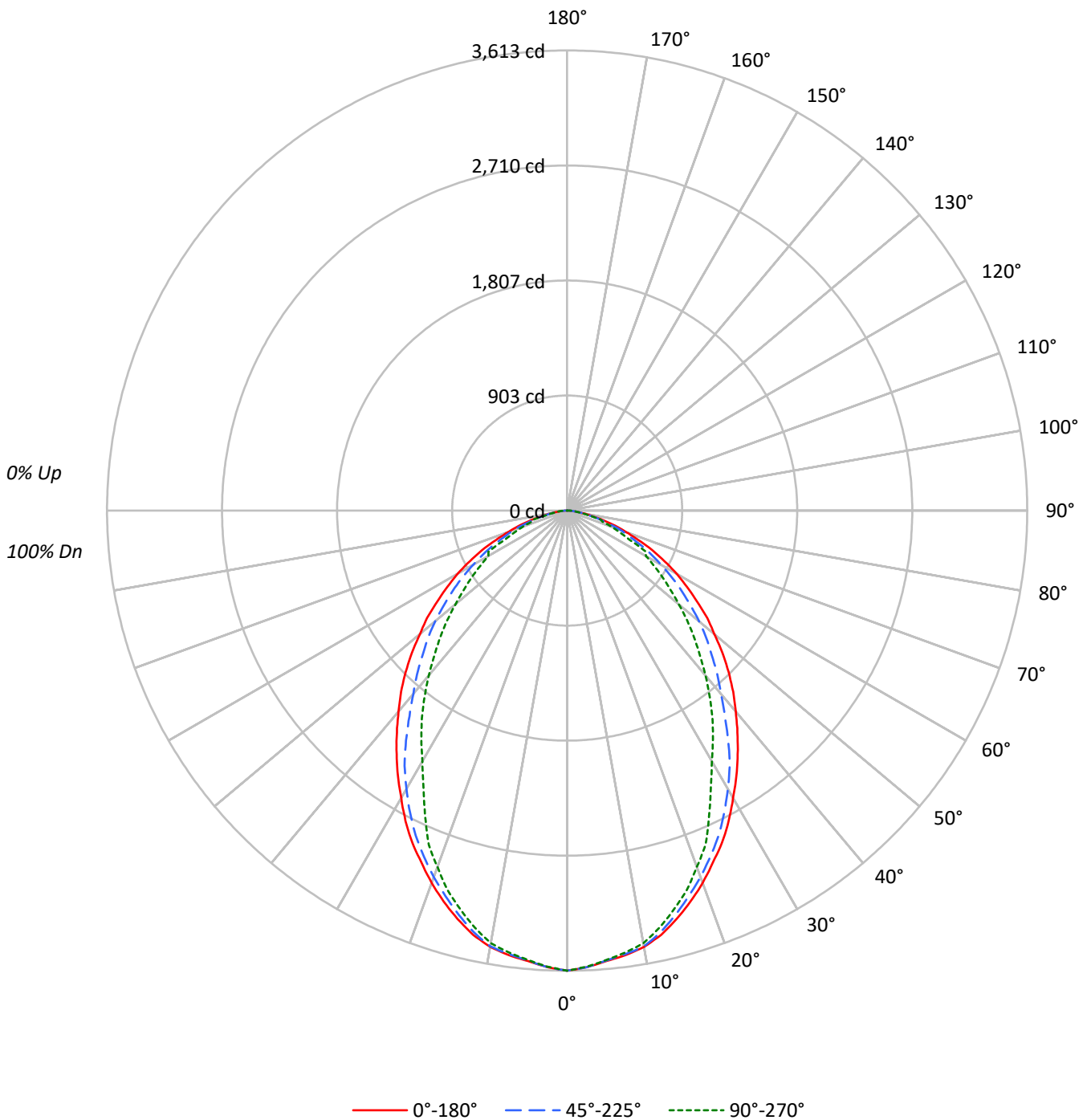
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4861	4861	4861
5°	4795	4789	4783
10°	4753	4747	4713
15°	4625	4578	4514
20°	4455	4383	4264
25°	4272	4179	3919
30°	4049	3919	3530
35°	3835	3622	3265
40°	3616	3301	2971
45°	3409	3052	2686
50°	3156	2832	2395
55°	2920	2567	2145
60°	2675	2293	1922
65°	2353	2008	1702
70°	1939	1758	1446
75°	1541	1346	1411
80°	1035	971	906
85°	645	773	903

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3409 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.3	4.7
10°-20°	922.9	13.0
20°-30°	1277.7	18.0
30°-40°	1362.4	19.2
40°-50°	1242.9	17.5
50°-60°	973.7	13.7
60°-70°	634.6	8.9
70°-80°	281.2	4.0
80°-90°	60.4	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°	2536.9	35.8
0°-40°	3899.3	55.0
0°-60°	6115.9	86.2
0°-90°	7092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7092.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3613	3613	3613	3613	3613	
5°	3550	3546	3546	3542	3542	337
15°	3320	3320	3287	3253	3241	933
25°	2878	2861	2815	2715	2640	1321
35°	2335	2318	2205	2038	1988	1460
45°	1792	1754	1604	1470	1412	1380
55°	1245	1207	1094	965	915	1116
65°	739	698	631	643	535	728
75°	296	276	259	246	272	318
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3612.6	3612.6	3612.6	3612.6	3612.6
2.5°	3587.5	3587.5	3587.5	3583.3	3583.3
5°	3549.9	3545.7	3545.7	3541.6	3541.6
7.5°	3520.7	3516.5	3512.3	3508.2	3499.8
10°	3478.9	3478.9	3474.7	3453.9	3449.7
12.5°	3412.1	3407.9	3391.2	3362.0	3353.6
15°	3320.2	3320.2	3286.8	3253.4	3240.9
17.5°	3220.0	3215.8	3174.0	3140.6	3123.9
20°	3111.4	3103.1	3061.3	3007.0	2977.8
22.5°	2990.3	2990.3	2940.2	2869.2	2839.9
25°	2877.5	2860.8	2814.9	2714.6	2639.5
27.5°	2748.1	2723.0	2672.9	2530.9	2443.2
30°	2606.1	2593.5	2522.5	2338.8	2272.0
32.5°	2472.4	2451.5	2376.4	2184.2	2130.0
35°	2334.6	2317.9	2205.1	2038.1	1988.0
37.5°	2196.8	2175.9	2033.9	1900.3	1837.6
40°	2059.0	2033.9	1879.4	1758.3	1691.4
42.5°	1929.5	1896.1	1745.7	1616.3	1541.1
45°	1791.7	1754.1	1603.7	1470.1	1411.6
47.5°	1653.8	1620.4	1482.6	1344.8	1278.0
50°	1507.7	1478.4	1353.1	1215.3	1144.3
52.5°	1386.6	1340.6	1219.5	1081.7	1023.2
55°	1244.6	1207.0	1094.2	964.7	914.6
57.5°	1115.1	1077.5	973.1	852.0	810.2
60°	994.0	939.7	852.0	747.6	714.2
62.5°	860.3	818.6	743.4	655.7	697.5
65°	739.2	697.5	630.6	643.2	534.6
67.5°	605.6	584.7	526.2	467.8	451.0
70°	492.8	467.8	446.9	384.2	367.5
72.5°	392.6	367.5	338.3	304.9	292.3
75°	296.5	275.6	258.9	246.4	271.5
77.5°	204.6	196.3	183.8	171.2	167.1
80°	133.6	129.5	125.3	121.1	116.9
82.5°	79.4	79.4	79.4	79.4	79.4
85°	41.8	45.9	50.1	54.3	58.5
87.5°	25.1	25.1	29.2	33.4	37.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)