

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: P563326

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563326
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-40-UNV-80-97-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7090.0 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

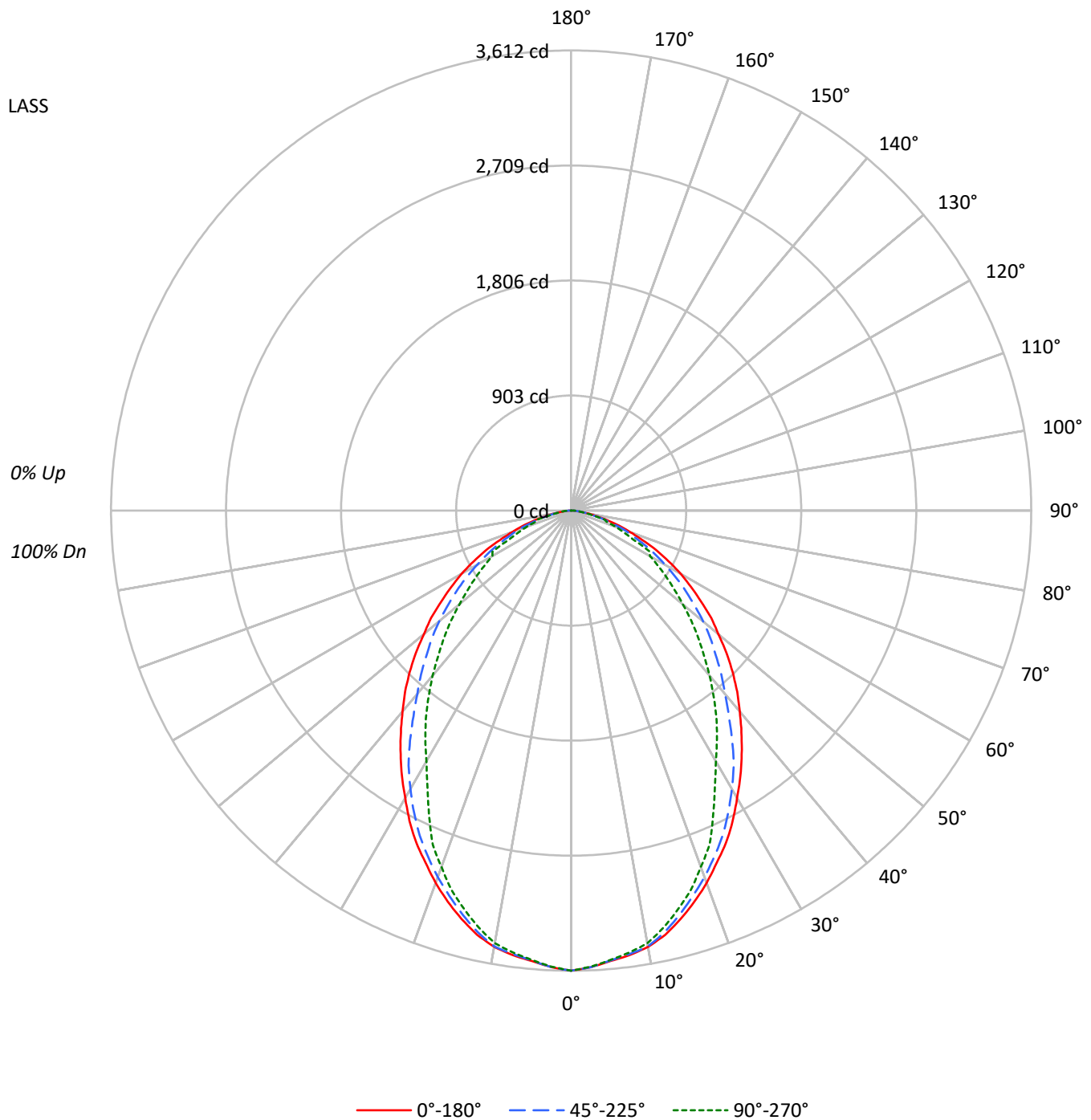
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4859	4859	4859
5°	4793	4788	4782
10°	4752	4746	4712
15°	4624	4577	4513
20°	4454	4382	4262
25°	4271	4178	3917
30°	4048	3918	3529
35°	3834	3621	3264
40°	3615	3300	2970
45°	3408	3051	2685
50°	3155	2832	2395
55°	2919	2566	2145
60°	2674	2292	1921
65°	2353	2007	1701
70°	1938	1757	1445
75°	1541	1346	1411
80°	1035	971	906
85°	645	773	903

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3408 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.2	4.7
10°-20°	922.6	13.0
20°-30°	1277.3	18.0
30°-40°	1362.0	19.2
40°-50°	1242.5	17.5
50°-60°	973.4	13.7
60°-70°	634.4	8.9
70°-80°	281.1	4.0
80°-90°	60.3	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°	2536.1	35.8
0°-40°	3898.1	55.0
0°-60°	6114.1	86.2
0°-90°	7090.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7090.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3612	3612	3612	3612	3612	
5°	3549	3545	3545	3541	3541	337
15°	3319	3319	3286	3252	3240	933
25°	2877	2860	2814	2714	2639	1321
35°	2334	2317	2204	2038	1987	1459
45°	1791	1754	1603	1470	1411	1380
55°	1244	1207	1094	964	914	1116
65°	739	697	630	643	534	728
75°	296	276	259	246	271	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°	3611.6	3611.6	3611.6	3611.6	3611.6
2.5°	3586.5	3586.5	3586.5	3582.3	3582.3
5°	3548.9	3544.7	3544.7	3540.6	3540.6
7.5°	3519.7	3515.5	3511.3	3507.2	3498.8
10°	3477.9	3477.9	3473.8	3452.9	3448.7
12.5°	3411.1	3407.0	3390.3	3361.0	3352.7
15°	3319.3	3319.3	3285.9	3252.5	3240.0
17.5°	3219.1	3214.9	3173.2	3139.8	3123.1
20°	3110.5	3102.2	3060.4	3006.1	2976.9
22.5°	2989.4	2989.4	2939.3	2868.4	2839.1
25°	2876.7	2860.0	2814.1	2713.9	2638.7
27.5°	2747.3	2722.2	2672.1	2530.2	2442.5
30°	2605.3	2592.8	2521.8	2338.1	2271.3
32.5°	2471.7	2450.8	2375.7	2183.6	2129.4
35°	2333.9	2317.2	2204.5	2037.5	1987.4
37.5°	2196.2	2175.3	2033.3	1899.7	1837.1
40°	2058.4	2033.3	1878.8	1757.8	1691.0
42.5°	1928.9	1895.5	1745.2	1615.8	1540.7
45°	1791.2	1753.6	1603.3	1469.7	1411.2
47.5°	1653.4	1620.0	1482.2	1344.4	1277.6
50°	1507.2	1478.0	1352.8	1215.0	1144.0
52.5°	1386.2	1340.2	1219.2	1081.4	1022.9
55°	1244.2	1206.6	1093.9	964.5	914.4
57.5°	1114.8	1077.2	972.8	851.7	810.0
60°	993.7	939.4	851.7	747.4	714.0
62.5°	860.1	818.3	743.2	655.5	697.3
65°	739.0	697.3	630.5	643.0	534.4
67.5°	605.4	584.5	526.1	467.6	450.9
70°	492.7	467.6	446.7	384.1	367.4
72.5°	392.5	367.4	338.2	304.8	292.3
75°	296.4	275.6	258.9	246.3	271.4
77.5°	204.6	196.2	183.7	171.2	167.0
80°	133.6	129.4	125.3	121.1	116.9
82.5°	79.3	79.3	79.3	79.3	79.3
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)