

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: P563306

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563306
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-35-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7347.0 lumens
Efficiency: N/A
Efficacy: 104.7 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

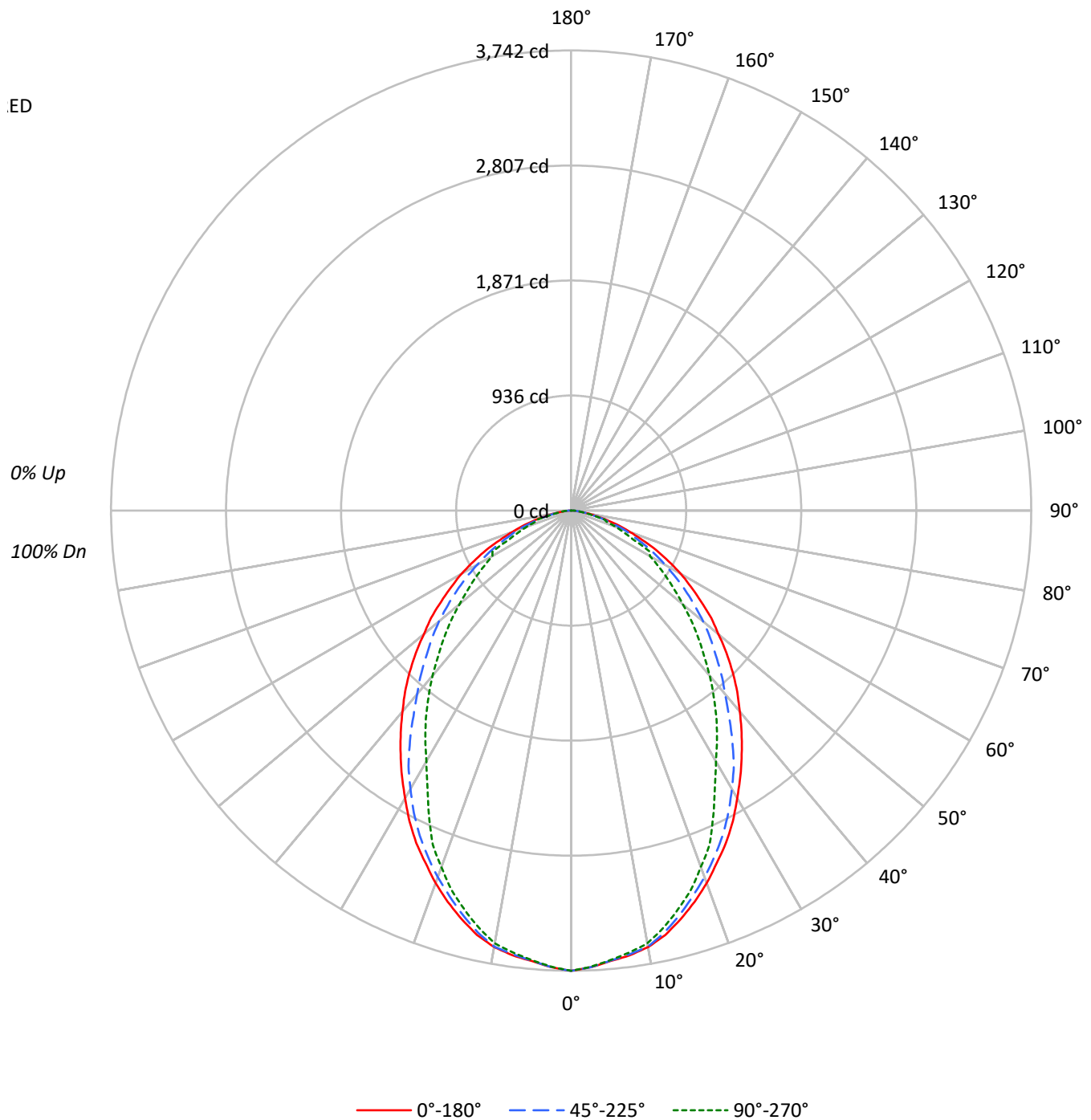
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100											100																	
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87											87																	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75											75																	
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65											65																	
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56											56																	
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50											50																	
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44											44																	
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40											40																	
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36											36																	
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33											33																	
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30											30																	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5035	5035	5035
5°	4967	4961	4955
10°	4924	4918	4883
15°	4791	4743	4677
20°	4615	4541	4417
25°	4426	4329	4059
30°	4195	4060	3657
35°	3972	3752	3383
40°	3746	3420	3078
45°	3532	3161	2783
50°	3269	2934	2482
55°	3024	2659	2223
60°	2771	2375	1991
65°	2438	2080	1763
70°	2008	1821	1498
75°	1597	1394	1462
80°	1072	1006	938
85°	668	801	936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3532 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.4	4.7
10°-20°	956.1	13.0
20°-30°	1323.6	18.0
30°-40°	1411.4	19.2
40°-50°	1287.6	17.5
50°-60°	1008.7	13.7
60°-70°	657.4	8.9
70°-80°	291.3	4.0
80°-90°	62.5	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°	2628.1	35.8
0°-40°	4039.5	55.0
0°-60°	6335.8	86.2
0°-90°	7347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3742	3742	3742	3742	3742	
5°	3678	3673	3673	3669	3669	349
15°	3440	3440	3405	3370	3357	967
25°	2981	2964	2916	2812	2734	1369
35°	2418	2401	2284	2111	2059	1512
45°	1856	1817	1661	1523	1462	1430
55°	1289	1250	1134	999	948	1156
65°	766	722	653	666	554	755
75°	307	286	268	255	281	329
85°	43	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3742.5	3742.5	3742.5	3742.5	3742.5
2.5°	3716.5	3716.5	3716.5	3712.2	3712.2
5°	3677.6	3673.2	3673.2	3668.9	3668.9
7.5°	3647.3	3643.0	3638.6	3634.3	3625.6
10°	3604.0	3604.0	3599.7	3578.1	3573.7
12.5°	3534.8	3530.5	3513.2	3482.9	3474.2
15°	3439.6	3439.6	3405.0	3370.4	3357.4
17.5°	3335.8	3331.4	3288.2	3253.6	3236.3
20°	3223.3	3214.6	3171.4	3115.1	3084.8
22.5°	3097.8	3097.8	3045.9	2972.3	2942.1
25°	2981.0	2963.7	2916.1	2812.3	2734.4
27.5°	2846.9	2820.9	2769.0	2621.9	2531.0
30°	2699.8	2686.8	2613.2	2422.9	2353.6
32.5°	2561.3	2539.7	2461.8	2262.8	2206.5
35°	2418.5	2401.2	2284.4	2111.4	2059.4
37.5°	2275.8	2254.1	2107.0	1968.6	1903.7
40°	2133.0	2107.0	1946.9	1821.5	1752.3
42.5°	1998.9	1964.3	1808.5	1674.4	1596.5
45°	1856.1	1817.1	1661.4	1522.9	1462.4
47.5°	1713.3	1678.7	1535.9	1393.1	1323.9
50°	1561.9	1531.6	1401.8	1259.0	1185.5
52.5°	1436.4	1388.8	1263.4	1120.6	1060.0
55°	1289.3	1250.4	1133.6	999.4	947.5
57.5°	1155.2	1116.2	1008.1	882.6	839.4
60°	1029.7	973.5	882.6	774.5	739.8
62.5°	891.3	848.0	770.1	679.3	722.5
65°	765.8	722.5	653.3	666.3	553.8
67.5°	627.3	605.7	545.1	484.6	467.3
70°	510.5	484.6	462.9	398.0	380.7
72.5°	406.7	380.7	350.5	315.8	302.9
75°	307.2	285.6	268.2	255.3	281.2
77.5°	212.0	203.3	190.4	177.4	173.1
80°	138.4	134.1	129.8	125.5	121.1
82.5°	82.2	82.2	82.2	82.2	82.2
85°	43.3	47.6	51.9	56.2	60.6
87.5°	26.0	26.0	30.3	34.6	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)