

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: P563020

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563020
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-LD4-2STD-50-UNV-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 6568.0 lumens
Efficiency: N/A
Efficacy: 98.6 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

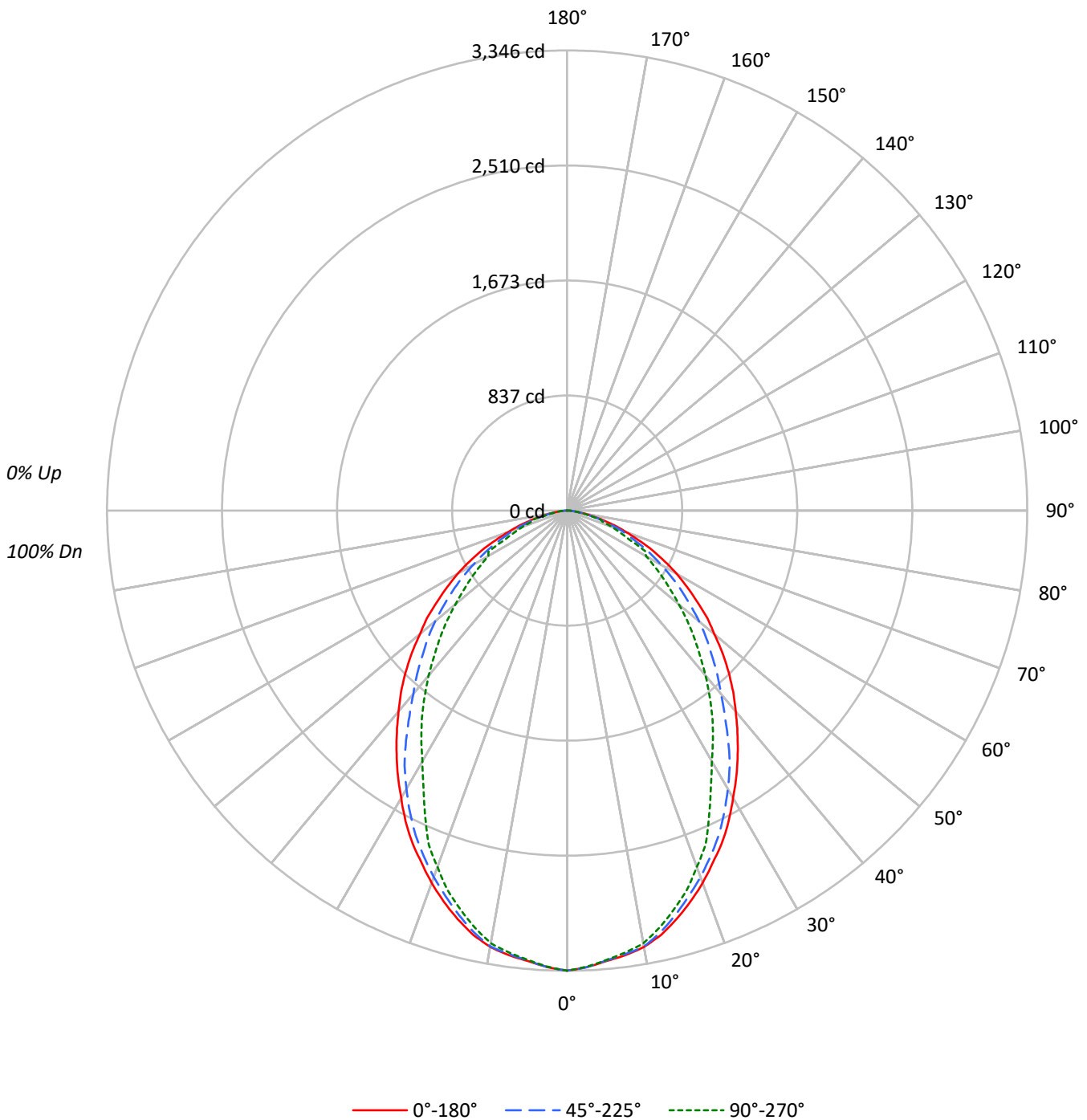
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4502	4502	4502
5°	4440	4435	4430
10°	4402	4397	4365
15°	4283	4240	4181
20°	4126	4059	3949
25°	3956	3870	3629
30°	3750	3630	3269
35°	3551	3354	3024
40°	3349	3057	2751
45°	3157	2826	2488
50°	2923	2623	2218
55°	2704	2377	1987
60°	2477	2123	1780
65°	2180	1859	1576
70°	1795	1628	1339
75°	1428	1247	1307
80°	959	899	839
85°	597	716	835

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.4	4.7
10°-20°	854.7	13.0
20°-30°	1183.3	18.0
30°-40°	1261.7	19.2
40°-50°	1151.1	17.5
50°-60°	901.8	13.7
60°-70°	587.7	8.9
70°-80°	260.4	4.0
80°-90°	55.9	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°	2349.4	35.8
0°-40°	3611.2	55.0
0°-60°	5664.0	86.2
0°-90°	6568.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6568.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3346	3346	3346	3346	3346	
5°	3288	3284	3284	3280	3280	312
15°	3075	3075	3044	3013	3001	864
25°	2665	2649	2607	2514	2444	1223
35°	2162	2147	2042	1888	1841	1352
45°	1659	1624	1485	1362	1307	1278
55°	1153	1118	1013	894	847	1034
65°	685	646	584	596	495	675
75°	275	255	240	228	251	294
85°	39	42	46	50	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3345.7	3345.7	3345.7	3345.7	3345.7
2.5°	3322.4	3322.4	3322.4	3318.6	3318.6
5°	3287.6	3283.8	3283.8	3279.9	3279.9
7.5°	3260.6	3256.7	3252.8	3249.0	3241.2
10°	3221.9	3221.9	3218.0	3198.7	3194.8
12.5°	3160.0	3156.1	3140.7	3113.6	3105.8
15°	3074.9	3074.9	3044.0	3013.0	3001.4
17.5°	2982.1	2978.2	2939.5	2908.6	2893.1
20°	2881.5	2873.8	2835.1	2784.8	2757.7
22.5°	2769.3	2769.3	2722.9	2657.2	2630.1
25°	2664.9	2649.4	2606.9	2514.1	2444.5
27.5°	2545.0	2521.8	2475.4	2343.9	2262.7
30°	2413.5	2401.9	2336.2	2166.0	2104.1
32.5°	2289.7	2270.4	2200.8	2022.9	1972.6
35°	2162.1	2146.6	2042.2	1887.5	1841.1
37.5°	2034.5	2015.1	1883.6	1759.9	1701.8
40°	1906.8	1883.6	1740.5	1628.3	1566.5
42.5°	1786.9	1756.0	1616.7	1496.8	1427.2
45°	1659.3	1624.5	1485.2	1361.5	1307.3
47.5°	1531.7	1500.7	1373.1	1245.4	1183.5
50°	1396.3	1369.2	1253.2	1125.5	1059.8
52.5°	1284.1	1241.6	1129.4	1001.8	947.6
55°	1152.6	1117.8	1013.4	893.5	847.0
57.5°	1032.7	997.9	901.2	789.0	750.4
60°	920.5	870.3	789.0	692.3	661.4
62.5°	796.8	758.1	688.5	607.2	645.9
65°	684.6	645.9	584.0	595.6	495.1
67.5°	560.8	541.5	487.3	433.2	417.7
70°	456.4	433.2	413.9	355.8	340.4
72.5°	363.6	340.4	313.3	282.3	270.7
75°	274.6	255.3	239.8	228.2	251.4
77.5°	189.5	181.8	170.2	158.6	154.7
80°	123.8	119.9	116.0	112.2	108.3
82.5°	73.5	73.5	73.5	73.5	73.5
85°	38.7	42.5	46.4	50.3	54.1
87.5°	23.2	23.2	27.1	30.9	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)