

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: P563042

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563042
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-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6850.0 lumens
Efficiency: N/A
Efficacy: 102.9 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

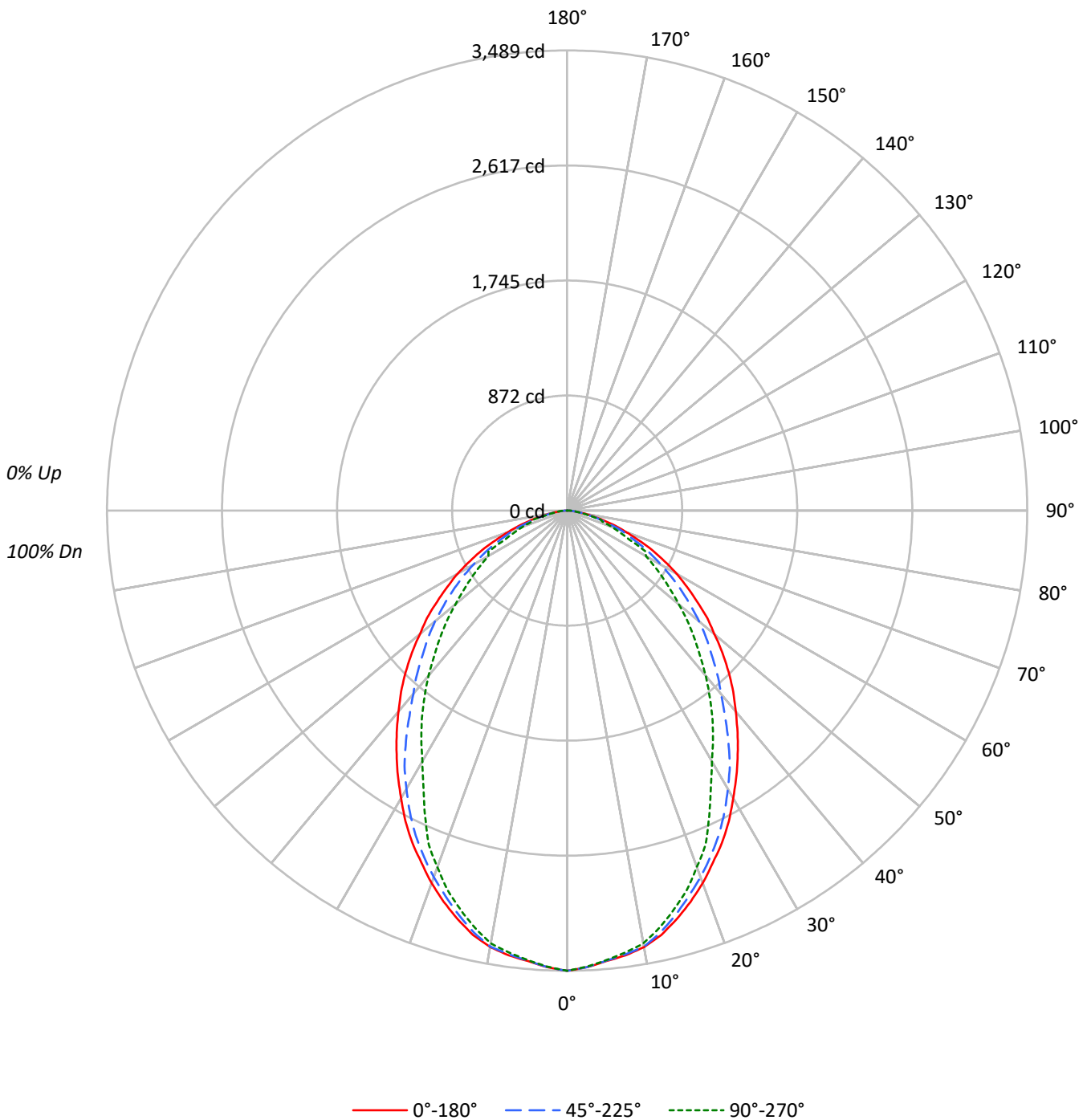
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	4695	4695	4695
5°	4631	4626	4620
10°	4591	4585	4552
15°	4467	4422	4360
20°	4303	4234	4118
25°	4126	4036	3785
30°	3911	3785	3409
35°	3704	3498	3154
40°	3493	3188	2869
45°	3293	2947	2594
50°	3048	2736	2314
55°	2820	2479	2072
60°	2584	2214	1856
65°	2273	1939	1644
70°	1873	1698	1397
75°	1489	1300	1363
80°	1000	938	875
85°	622	747	872

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3293 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.8	4.7
10°-20°	891.4	13.0
20°-30°	1234.1	18.0
30°-40°	1315.9	19.2
40°-50°	1200.5	17.5
50°-60°	940.5	13.7
60°-70°	613.0	8.9
70°-80°	271.6	4.0
80°-90°	58.3	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°	2450.3	35.8
0°-40°	3766.2	55.0
0°-60°	5907.2	86.2
0°-90°	6850.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3489	3489	3489	3489	3489	
5°	3429	3425	3425	3421	3421	325
15°	3207	3207	3175	3142	3130	902
25°	2779	2763	2719	2622	2549	1276
35°	2255	2239	2130	1968	1920	1410
45°	1730	1694	1549	1420	1363	1333
55°	1202	1166	1057	932	883	1078
65°	714	674	609	621	516	704
75°	286	266	250	238	262	307
85°	40	44	48	52	56	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3489.3	3489.3	3489.3	3489.3	3489.3
2.5°	3465.1	3465.1	3465.1	3461.1	3461.1
5°	3428.8	3424.8	3424.8	3420.7	3420.7
7.5°	3400.6	3396.5	3392.5	3388.5	3380.4
10°	3360.2	3360.2	3356.2	3336.0	3332.0
12.5°	3295.7	3291.6	3275.5	3247.3	3239.2
15°	3206.9	3206.9	3174.7	3142.4	3130.3
17.5°	3110.1	3106.1	3065.7	3033.5	3017.3
20°	3005.2	2997.2	2956.8	2904.4	2876.2
22.5°	2888.3	2888.3	2839.8	2771.3	2743.0
25°	2779.3	2763.2	2718.8	2622.0	2549.4
27.5°	2654.3	2630.1	2581.7	2444.5	2359.8
30°	2517.1	2505.0	2436.5	2259.0	2194.4
32.5°	2388.1	2367.9	2295.3	2109.7	2057.3
35°	2254.9	2238.8	2129.9	1968.5	1920.1
37.5°	2121.8	2101.6	1964.5	1835.4	1774.9
40°	1988.7	1964.5	1815.2	1698.3	1633.7
42.5°	1863.6	1831.4	1686.2	1561.1	1488.5
45°	1730.5	1694.2	1549.0	1419.9	1363.4
47.5°	1597.4	1565.1	1432.0	1298.9	1234.4
50°	1456.2	1428.0	1307.0	1173.9	1105.3
52.5°	1339.2	1294.9	1177.9	1044.8	988.3
55°	1202.1	1165.8	1056.9	931.8	883.4
57.5°	1077.0	1040.7	939.9	822.9	782.6
60°	960.1	907.6	822.9	722.1	689.8
62.5°	831.0	790.6	718.0	633.3	673.7
65°	714.0	673.7	609.1	621.2	516.3
67.5°	584.9	564.7	508.3	451.8	435.7
70°	476.0	451.8	431.6	371.1	355.0
72.5°	379.2	355.0	326.7	294.5	282.4
75°	286.4	266.2	250.1	238.0	262.2
77.5°	197.7	189.6	177.5	165.4	161.4
80°	129.1	125.1	121.0	117.0	112.9
82.5°	76.6	76.6	76.6	76.6	76.6
85°	40.3	44.4	48.4	52.4	56.5
87.5°	24.2	24.2	28.2	32.3	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)