

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: P563875

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563875
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-LD4-4LO-35-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11448.0 lumens
Efficiency: N/A
Efficacy: 122.3 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

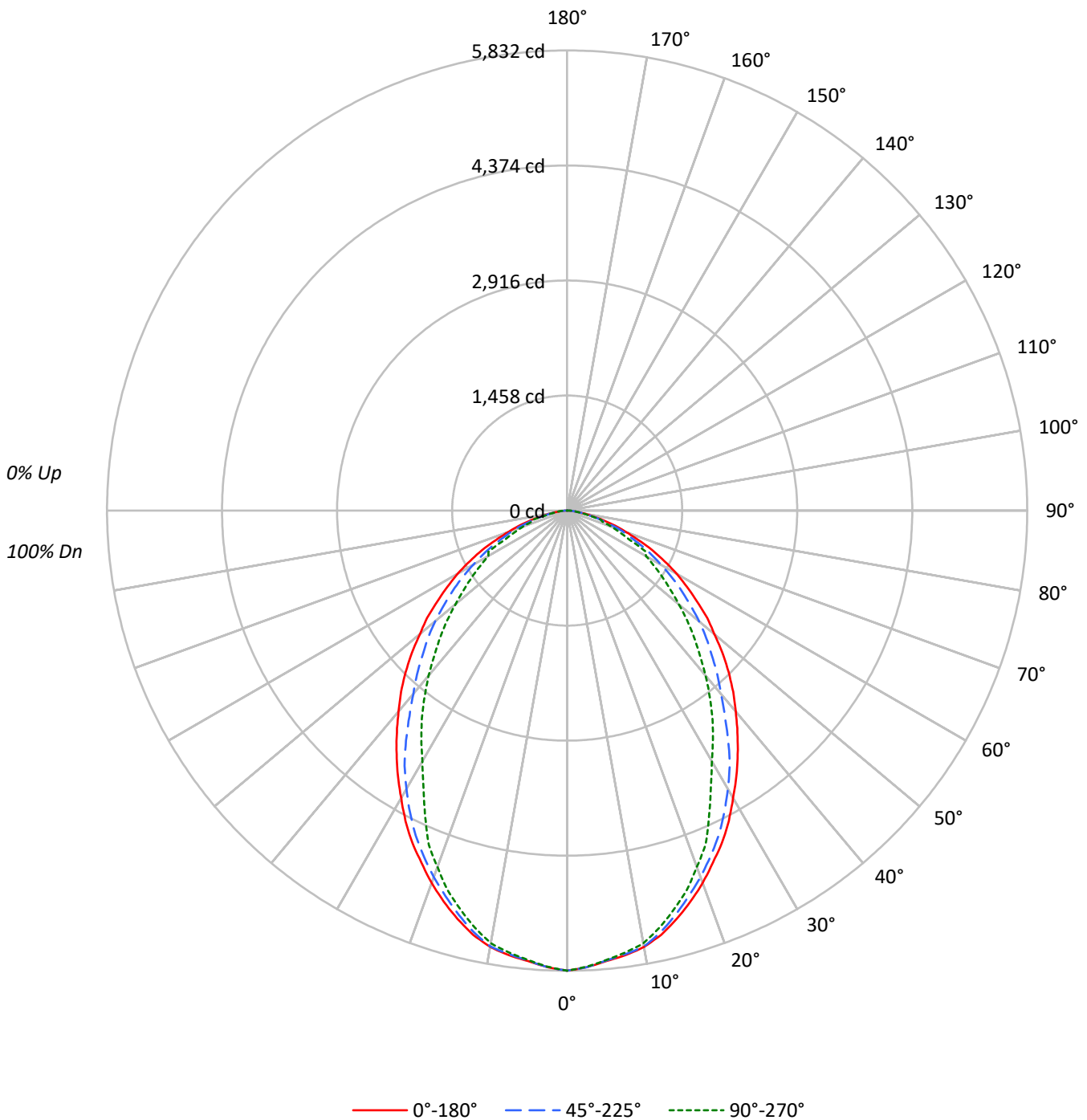
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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												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°	7846	7846	7846
5°	7740	7730	7721
10°	7672	7663	7608
15°	7466	7390	7287
20°	7191	7076	6882
25°	6896	6746	6325
30°	6536	6326	5698
35°	6190	5847	5271
40°	5838	5328	4796
45°	5503	4926	4336
50°	5094	4572	3867
55°	4713	4143	3463
60°	4318	3701	3102
65°	3799	3241	2747
70°	3129	2838	2334
75°	2489	2173	2278
80°	1671	1567	1463
85°	1041	1249	1457

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5503 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	542.8	4.7
10°-20°	1489.8	13.0
20°-30°	2062.5	18.0
30°-40°	2199.2	19.2
40°-50°	2006.3	17.5
50°-60°	1571.8	13.7
60°-70°	1024.4	8.9
70°-80°	453.9	4.0
80°-90°	97.4	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°	4095.0	35.8
0°-40°	6294.2	55.0
0°-60°	9872.3	86.2
0°-90°	11448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5832	5832	5832	5832	5832	
5°	5730	5724	5724	5717	5717	544
15°	5360	5360	5306	5252	5232	1507
25°	4645	4618	4544	4382	4261	2132
35°	3768	3742	3560	3290	3209	2356
45°	2892	2832	2589	2373	2279	2228
55°	2009	1948	1766	1557	1476	1802
65°	1193	1126	1018	1038	863	1176
75°	479	445	418	398	438	513
85°	67	74	81	88	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5831.5	5831.5	5831.5	5831.5	5831.5
2.5°	5791.0	5791.0	5791.0	5784.3	5784.3
5°	5730.3	5723.6	5723.6	5716.9	5716.9
7.5°	5683.1	5676.4	5669.7	5662.9	5649.4
10°	5615.7	5615.7	5609.0	5575.3	5568.5
12.5°	5507.9	5501.1	5474.2	5427.0	5413.5
15°	5359.5	5359.5	5305.6	5251.7	5231.5
17.5°	5197.8	5191.0	5123.6	5069.7	5042.7
20°	5022.5	5009.0	4941.6	4853.9	4806.7
22.5°	4827.0	4827.0	4746.1	4631.5	4584.3
25°	4644.9	4618.0	4543.8	4382.0	4260.7
27.5°	4436.0	4395.5	4314.6	4085.4	3943.8
30°	4206.7	4186.5	4071.9	3775.3	3667.4
32.5°	3991.0	3957.3	3836.0	3525.8	3438.2
35°	3768.5	3741.6	3559.5	3289.9	3209.0
37.5°	3546.1	3512.4	3283.1	3067.4	2966.3
40°	3323.6	3283.1	3033.7	2838.2	2730.3
42.5°	3114.6	3060.7	2818.0	2609.0	2487.6
45°	2892.1	2831.5	2588.8	2373.0	2278.7
47.5°	2669.7	2615.7	2393.3	2170.8	2062.9
50°	2433.7	2386.5	2184.3	1961.8	1847.2
52.5°	2238.2	2164.0	1968.5	1746.1	1651.7
55°	2009.0	1948.3	1766.3	1557.3	1476.4
57.5°	1800.0	1739.3	1570.8	1375.3	1307.9
60°	1604.5	1516.9	1375.3	1206.7	1152.8
62.5°	1388.8	1321.3	1200.0	1058.4	1125.8
65°	1193.3	1125.8	1018.0	1038.2	862.9
67.5°	977.5	943.8	849.4	755.1	728.1
70°	795.5	755.1	721.3	620.2	593.3
72.5°	633.7	593.3	546.1	492.1	471.9
75°	478.7	444.9	418.0	397.8	438.2
77.5°	330.3	316.9	296.6	276.4	269.7
80°	215.7	209.0	202.2	195.5	188.8
82.5°	128.1	128.1	128.1	128.1	128.1
85°	67.4	74.2	80.9	87.6	94.4
87.5°	40.4	40.4	47.2	53.9	60.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)