

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: P563118

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563118
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-LD4-3HI-35-UNV-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 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: 11506.0 lumens
Efficiency: N/A
Efficacy: 88.8 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

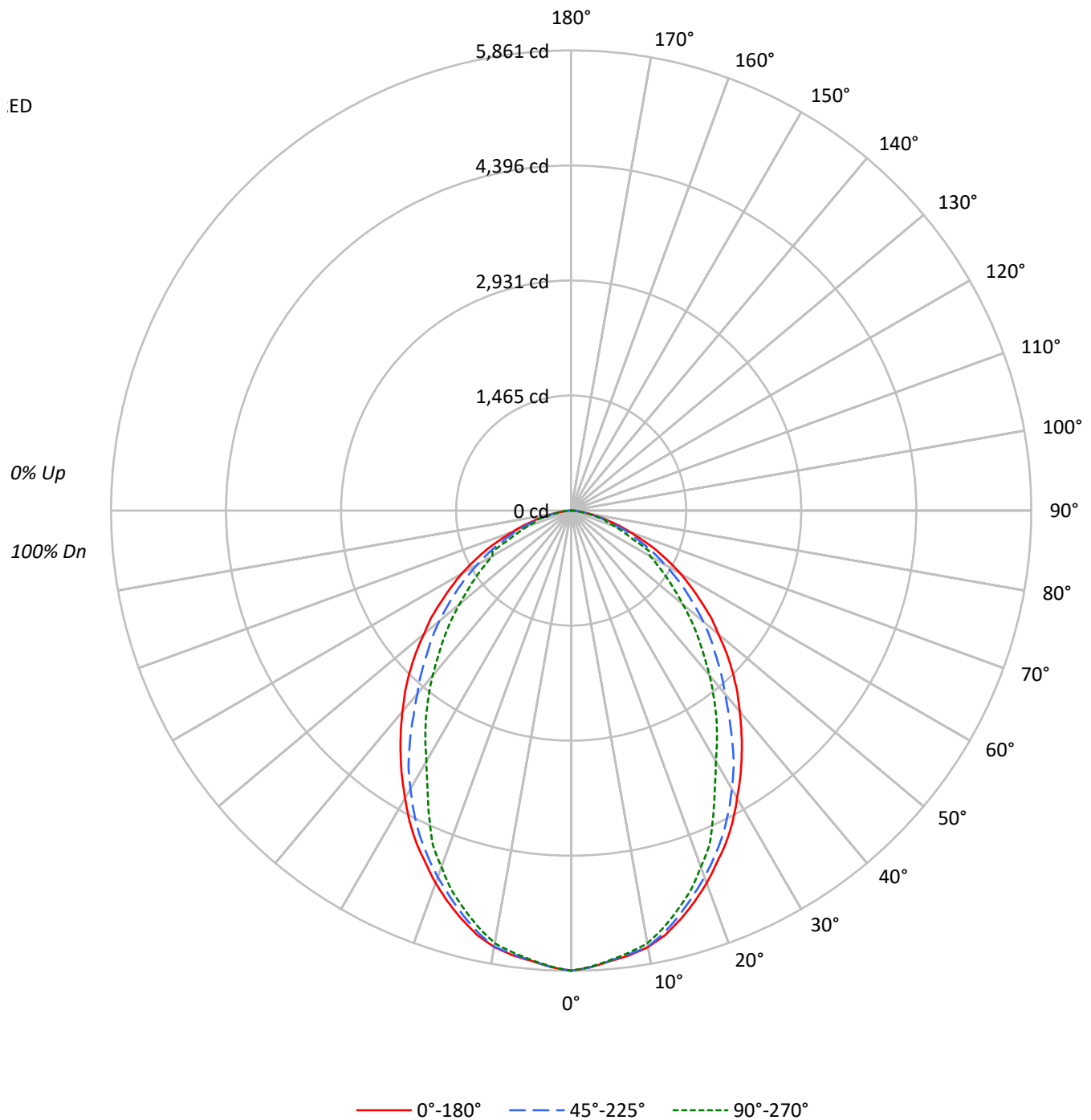
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7886	7886	7886
5°	7779	7770	7760
10°	7711	7702	7646
15°	7503	7428	7324
20°	7228	7111	6917
25°	6931	6780	6357
30°	6569	6358	5727
35°	6221	5876	5298
40°	5867	5355	4820
45°	5531	4951	4358
50°	5120	4595	3886
55°	4737	4164	3481
60°	4339	3719	3118
65°	3818	3257	2761
70°	3145	2852	2346
75°	2501	2184	2289
80°	1680	1575	1470
85°	1047	1255	1465

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5531 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	545.6	4.7
10°-20°	1497.3	13.0
20°-30°	2072.9	18.0
30°-40°	2210.3	19.2
40°-50°	2016.5	17.5
50°-60°	1579.7	13.7
60°-70°	1029.6	8.9
70°-80°	456.2	4.0
80°-90°	97.9	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°	4115.8	35.8
0°-40°	6326.1	55.0
0°-60°	9922.3	86.2
0°-90°	11506.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11506.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5861	5861	5861	5861	5861	
5°	5759	5753	5753	5746	5746	547
15°	5387	5387	5332	5278	5258	1514
25°	4668	4641	4567	4404	4282	2143
35°	3788	3760	3578	3307	3225	2368
45°	2907	2846	2602	2385	2290	2239
55°	2019	1958	1775	1565	1484	1811
65°	1199	1132	1023	1044	867	1182
75°	481	447	420	400	440	516
85°	68	74	81	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5861.0	5861.0	5861.0	5861.0	5861.0
2.5°	5820.3	5820.3	5820.3	5813.6	5813.6
5°	5759.4	5752.6	5752.6	5745.8	5745.8
7.5°	5711.9	5705.2	5698.4	5691.6	5678.1
10°	5644.2	5644.2	5637.4	5603.5	5596.7
12.5°	5535.8	5529.0	5501.9	5454.5	5440.9
15°	5386.7	5386.7	5332.5	5278.3	5258.0
17.5°	5224.1	5217.3	5149.6	5095.3	5068.2
20°	5047.9	5034.4	4966.6	4878.5	4831.1
22.5°	4851.4	4851.4	4770.1	4654.9	4607.5
25°	4668.5	4641.4	4566.8	4404.2	4282.3
27.5°	4458.4	4417.8	4336.5	4106.1	3963.8
30°	4228.1	4207.7	4092.5	3794.4	3686.0
32.5°	4011.2	3977.4	3855.4	3543.7	3455.6
35°	3787.6	3760.5	3577.6	3306.6	3225.2
37.5°	3564.0	3530.2	3299.8	3083.0	2981.3
40°	3340.4	3299.8	3049.1	2852.6	2744.2
42.5°	3130.4	3076.2	2832.3	2622.2	2500.2
45°	2906.8	2845.8	2601.9	2385.1	2290.2
47.5°	2683.2	2629.0	2405.4	2181.8	2073.4
50°	2446.0	2398.6	2195.3	1971.7	1856.5
52.5°	2249.5	2175.0	1978.5	1754.9	1660.1
55°	2019.2	1958.2	1775.2	1565.2	1483.9
57.5°	1809.1	1748.1	1578.7	1382.2	1314.5
60°	1612.6	1524.5	1382.2	1212.9	1158.6
62.5°	1395.8	1328.0	1206.1	1063.8	1131.5
65°	1199.3	1131.5	1023.1	1043.5	867.3
67.5°	982.5	948.6	853.7	758.9	731.8
70°	799.5	758.9	725.0	623.4	596.3
72.5°	636.9	596.3	548.8	494.6	474.3
75°	481.1	447.2	420.1	399.8	440.4
77.5°	332.0	318.5	298.1	277.8	271.0
80°	216.8	210.0	203.3	196.5	189.7
82.5°	128.7	128.7	128.7	128.7	128.7
85°	67.8	74.5	81.3	88.1	94.9
87.5°	40.7	40.7	47.4	54.2	61.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)