

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: P563245

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563245
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-50-UNV-93-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14649.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

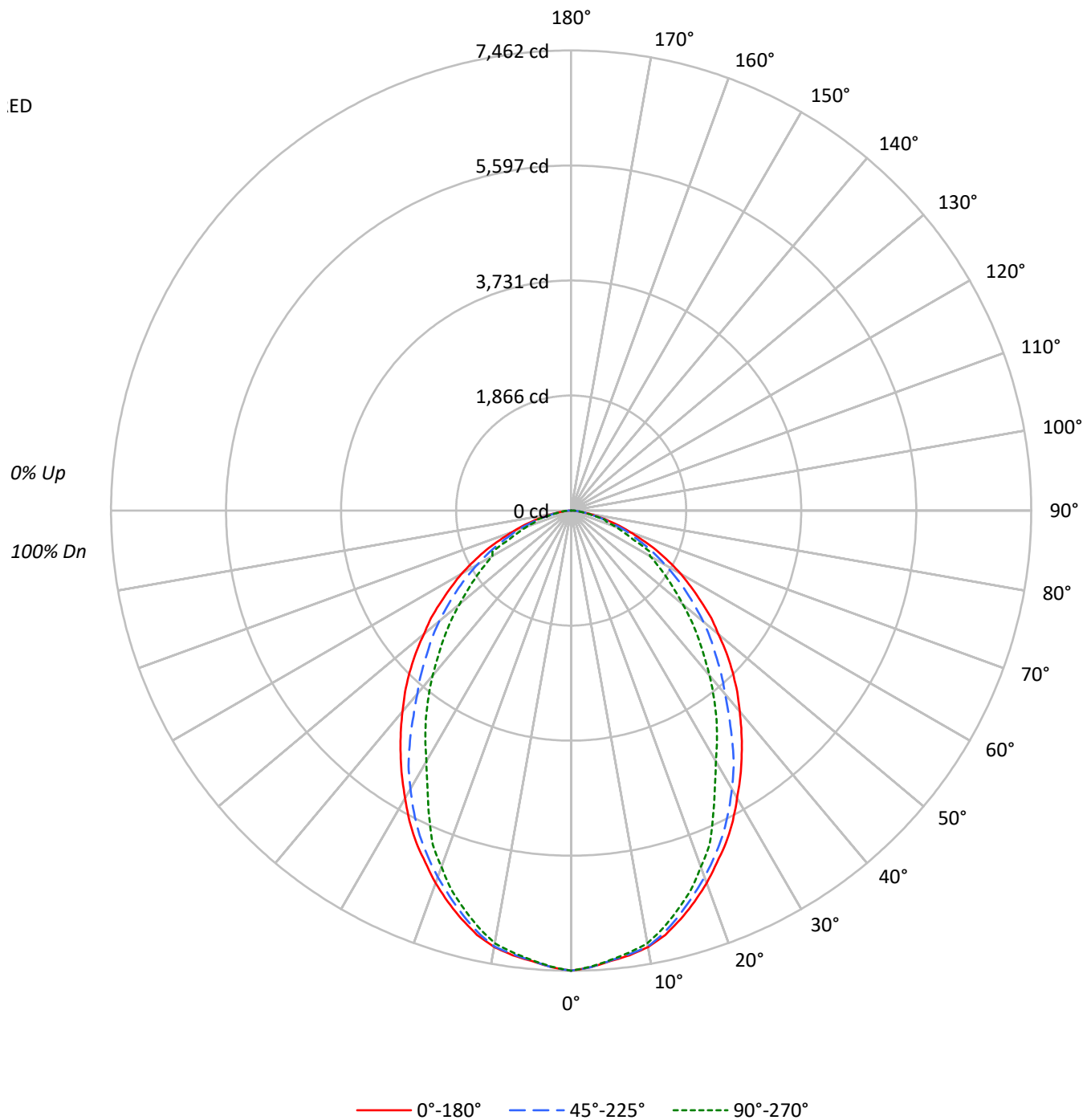
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10040	10040	10040
5°	9904	9892	9880
10°	9818	9806	9735
15°	9553	9457	9325
20°	9202	9054	8807
25°	8824	8632	8094
30°	8363	8095	7291
35°	7921	7481	6745
40°	7470	6818	6137
45°	7042	6303	5548
50°	6519	5851	4948
55°	6030	5302	4432
60°	5525	4736	3969
65°	4861	4147	3515
70°	4004	3631	2986
75°	3184	2780	2915
80°	2139	2005	1871
85°	1332	1598	1865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7042 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	694.6	4.7
10°-20°	1906.3	13.0
20°-30°	2639.1	18.0
30°-40°	2814.1	19.2
40°-50°	2567.3	17.5
50°-60°	2011.3	13.7
60°-70°	1310.8	8.9
70°-80°	580.8	4.0
80°-90°	124.7	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°	5240.1	35.8
0°-40°	8054.2	55.0
0°-60°	12632.7	86.2
0°-90°	14649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14649.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7462	7462	7462	7462	7462	
5°	7333	7324	7324	7315	7315	696
15°	6858	6858	6789	6720	6694	1928
25°	5944	5909	5814	5607	5452	2729
35°	4822	4788	4555	4210	4106	3015
45°	3701	3623	3313	3037	2916	2851
55°	2571	2493	2260	1993	1889	2306
65°	1527	1441	1303	1328	1104	1505
75°	612	569	535	509	561	656
85°	86	95	104	112	121	120
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7462.0	7462.0	7462.0	7462.0	7462.0
2.5°	7410.2	7410.2	7410.2	7401.6	7401.6
5°	7332.6	7324.0	7324.0	7315.4	7315.4
7.5°	7272.2	7263.6	7255.0	7246.3	7229.1
10°	7186.0	7186.0	7177.3	7134.2	7125.6
12.5°	7047.9	7039.3	7004.8	6944.4	6927.2
15°	6858.1	6858.1	6789.1	6720.1	6694.2
17.5°	6651.1	6642.5	6556.2	6487.2	6452.7
20°	6426.8	6409.6	6323.3	6211.1	6150.8
22.5°	6176.6	6176.6	6073.1	5926.5	5866.1
25°	5943.7	5909.2	5814.3	5607.3	5452.0
27.5°	5676.3	5624.5	5521.0	5227.7	5046.6
30°	5383.0	5357.1	5210.5	4830.9	4692.9
32.5°	5106.9	5063.8	4908.5	4511.7	4399.6
35°	4822.3	4787.8	4554.8	4209.8	4106.3
37.5°	4537.6	4494.5	4201.2	3925.1	3795.7
40°	4252.9	4201.2	3882.0	3631.8	3493.8
42.5°	3985.5	3916.5	3605.9	3338.5	3183.2
45°	3700.8	3623.2	3312.6	3036.6	2915.8
47.5°	3416.1	3347.1	3062.4	2777.8	2639.7
50°	3114.2	3053.8	2795.0	2510.3	2363.7
52.5°	2864.0	2769.1	2519.0	2234.3	2113.5
55°	2570.7	2493.1	2260.2	1992.7	1889.2
57.5°	2303.3	2225.7	2010.0	1759.8	1673.6
60°	2053.1	1941.0	1759.8	1544.2	1475.1
62.5°	1777.1	1690.8	1535.5	1354.4	1440.6
65°	1526.9	1440.6	1302.6	1328.5	1104.2
67.5°	1250.9	1207.7	1087.0	966.2	931.7
70°	1017.9	966.2	923.0	793.6	759.1
72.5°	810.9	759.1	698.8	629.7	603.9
75°	612.5	569.4	534.8	509.0	560.7
77.5°	422.7	405.4	379.6	353.7	345.1
80°	276.1	267.4	258.8	250.2	241.5
82.5°	163.9	163.9	163.9	163.9	163.9
85°	86.3	94.9	103.5	112.1	120.8
87.5°	51.8	51.8	60.4	69.0	77.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)