

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: P563737

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563737
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-LD4-4HI-40-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15185.0 lumens
Efficiency: N/A
Efficacy: 87.9 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

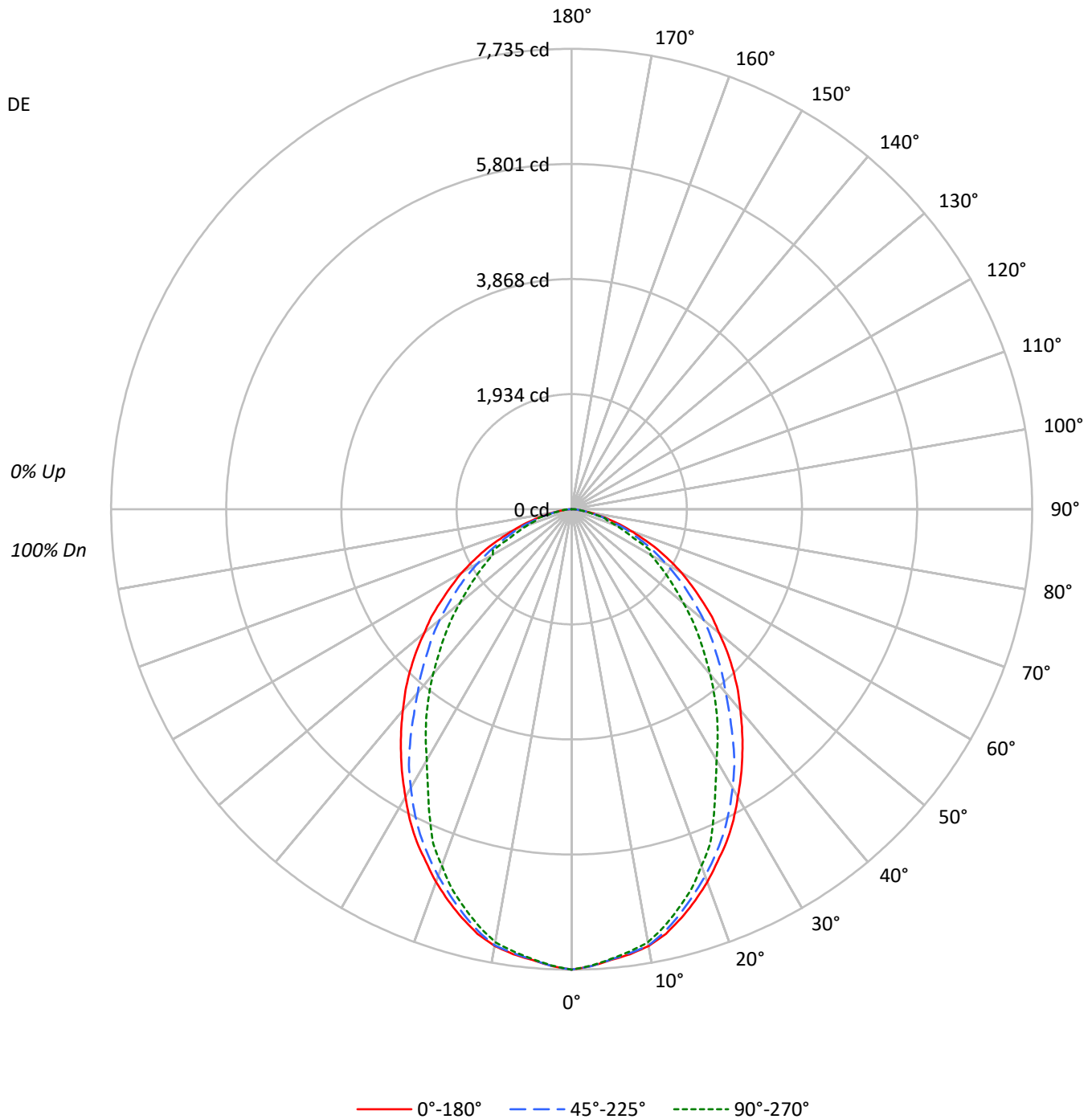
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10407	10407	10407
5°	10266	10254	10242
10°	10177	10165	10092
15°	9903	9803	9666
20°	9539	9385	9129
25°	9147	8948	8390
30°	8669	8391	7558
35°	8211	7755	6991
40°	7743	7068	6361
45°	7300	6534	5751
50°	6757	6065	5129
55°	6251	5496	4594
60°	5727	4909	4115
65°	5039	4299	3644
70°	4151	3764	3096
75°	3301	2882	3021
80°	2218	2079	1940
85°	1380	1656	1933

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7300 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	720.0	4.7
10°-20°	1976.1	13.0
20°-30°	2735.7	18.0
30°-40°	2917.1	19.2
40°-50°	2661.2	17.5
50°-60°	2084.9	13.7
60°-70°	1358.8	8.9
70°-80°	602.0	4.0
80°-90°	129.3	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°	5431.8	35.8
0°-40°	8348.9	55.0
0°-60°	13094.9	86.2
0°-90°	15185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15185.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7735	7735	7735	7735	7735	
5°	7601	7592	7592	7583	7583	722
15°	7109	7109	7038	6966	6939	1999
25°	6161	6125	6027	5812	5652	2829
35°	4999	4963	4722	4364	4256	3125
45°	3836	3756	3434	3148	3022	2955
55°	2665	2584	2343	2066	1958	2390
65°	1583	1493	1350	1377	1145	1560
75°	635	590	554	528	581	680
85°	89	98	107	116	125	124
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7735.0	7735.0	7735.0	7735.0	7735.0
2.5°	7681.4	7681.4	7681.4	7672.4	7672.4
5°	7600.9	7592.0	7592.0	7583.0	7583.0
7.5°	7538.3	7529.4	7520.4	7511.5	7493.6
10°	7448.9	7448.9	7439.9	7395.2	7386.3
12.5°	7305.8	7296.9	7261.1	7198.5	7180.6
15°	7109.1	7109.1	7037.5	6966.0	6939.2
17.5°	6894.5	6885.5	6796.1	6724.6	6688.8
20°	6662.0	6644.1	6554.7	6438.4	6375.8
22.5°	6402.6	6402.6	6295.3	6143.3	6080.7
25°	6161.2	6125.4	6027.1	5812.5	5651.5
27.5°	5884.0	5830.3	5723.0	5419.0	5231.2
30°	5580.0	5553.1	5401.1	5007.7	4864.6
32.5°	5293.8	5249.1	5088.1	4676.8	4560.5
35°	4998.7	4962.9	4721.5	4363.8	4256.5
37.5°	4703.6	4658.9	4354.9	4068.7	3934.6
40°	4408.5	4354.9	4024.0	3764.7	3621.6
42.5°	4131.3	4059.8	3737.9	3460.6	3299.7
45°	3836.2	3755.7	3433.8	3147.7	3022.5
47.5°	3541.1	3469.6	3174.5	2879.4	2736.3
50°	3228.1	3165.6	2897.3	2602.2	2450.2
52.5°	2968.8	2870.5	2611.1	2316.0	2190.8
55°	2664.8	2584.3	2342.9	2065.7	1958.4
57.5°	2387.6	2307.1	2083.5	1824.2	1734.8
60°	2128.3	2012.0	1824.2	1600.7	1529.1
62.5°	1842.1	1752.7	1591.7	1403.9	1493.4
65°	1582.8	1493.4	1350.3	1377.1	1144.6
67.5°	1296.6	1251.9	1126.7	1001.5	965.8
70°	1055.2	1001.5	956.8	822.7	786.9
72.5°	840.6	786.9	724.3	652.8	626.0
75°	634.9	590.2	554.4	527.6	581.2
77.5°	438.2	420.3	393.5	366.6	357.7
80°	286.2	277.2	268.3	259.3	250.4
82.5°	169.9	169.9	169.9	169.9	169.9
85°	89.4	98.4	107.3	116.2	125.2
87.5°	53.7	53.7	62.6	71.5	80.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)