

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: P564041

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564041
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-LD4-4STD-35-UNV-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12521.0 lumens
Efficiency: N/A
Efficacy: 94.0 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

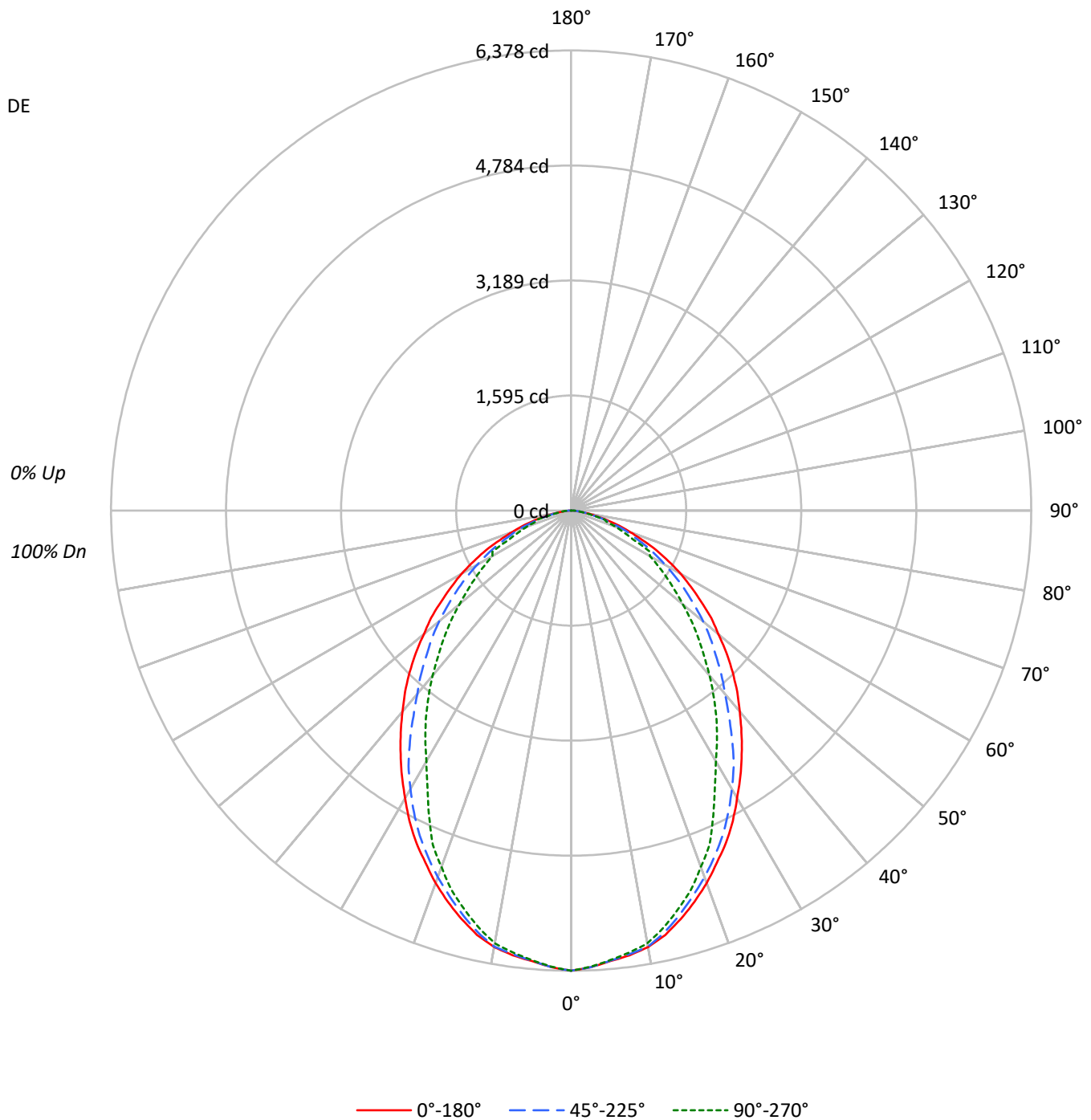
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	8582	8582	8582
5°	8465	8455	8445
10°	8392	8382	8321
15°	8165	8083	7970
20°	7865	7739	7528
25°	7542	7378	6918
30°	7148	6919	6232
35°	6770	6395	5765
40°	6385	5828	5245
45°	6019	5388	4742
50°	5572	5001	4229
55°	5154	4532	3788
60°	4722	4048	3393
65°	4155	3545	3005
70°	3423	3104	2553
75°	2721	2377	2492
80°	1829	1714	1600
85°	1138	1366	1593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6019 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	593.7	4.7
10°-20°	1629.4	13.0
20°-30°	2255.8	18.0
30°-40°	2405.3	19.2
40°-50°	2194.3	17.5
50°-60°	1719.1	13.7
60°-70°	1120.4	8.9
70°-80°	496.4	4.0
80°-90°	106.6	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°	4478.9	35.8
0°-40°	6884.2	55.0
0°-60°	10797.6	86.2
0°-90°	12521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6378	6378	6378	6378	6378	
5°	6267	6260	6260	6253	6253	595
15°	5862	5862	5803	5744	5722	1648
25°	5080	5051	4970	4793	4660	2332
35°	4122	4092	3893	3598	3510	2577
45°	3163	3097	2831	2596	2492	2437
55°	2197	2131	1932	1703	1615	1971
65°	1305	1231	1113	1136	944	1286
75°	524	487	457	435	479	561
85°	74	81	88	96	103	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6378.0	6378.0	6378.0	6378.0	6378.0
2.5°	6333.8	6333.8	6333.8	6326.4	6326.4
5°	6267.4	6260.1	6260.1	6252.7	6252.7
7.5°	6215.8	6208.4	6201.1	6193.7	6178.9
10°	6142.1	6142.1	6134.7	6097.8	6090.5
12.5°	6024.1	6016.7	5987.2	5935.6	5920.9
15°	5861.9	5861.9	5802.9	5743.9	5721.8
17.5°	5684.9	5677.6	5603.8	5544.8	5515.3
20°	5493.2	5478.5	5404.7	5308.9	5257.3
22.5°	5279.4	5279.4	5190.9	5065.6	5013.9
25°	5080.3	5050.8	4969.7	4792.7	4660.0
27.5°	4851.7	4807.5	4719.0	4468.3	4313.5
30°	4601.0	4578.9	4453.6	4129.1	4011.2
32.5°	4365.1	4328.2	4195.5	3856.3	3760.5
35°	4121.8	4092.3	3893.2	3598.2	3509.8
37.5°	3878.4	3841.6	3590.9	3354.9	3244.3
40°	3635.1	3590.9	3318.1	3104.2	2986.2
42.5°	3406.5	3347.5	3082.1	2853.5	2720.8
45°	3163.2	3096.8	2831.4	2595.5	2492.2
47.5°	2919.9	2860.9	2617.6	2374.2	2256.3
50°	2661.8	2610.2	2389.0	2145.7	2020.3
52.5°	2448.0	2366.9	2153.0	1909.7	1806.5
55°	2197.3	2130.9	1931.8	1703.3	1614.8
57.5°	1968.7	1902.3	1718.0	1504.2	1430.4
60°	1754.9	1659.0	1504.2	1319.8	1260.9
62.5°	1518.9	1445.2	1312.5	1157.6	1231.4
65°	1305.1	1231.4	1113.4	1135.5	943.8
67.5°	1069.1	1032.3	929.1	825.8	796.3
70°	870.1	825.8	789.0	678.4	648.9
72.5°	693.1	648.9	597.2	538.3	516.1
75°	523.5	486.6	457.2	435.0	479.3
77.5°	361.3	346.6	324.4	302.3	294.9
80°	236.0	228.6	221.2	213.8	206.5
82.5°	140.1	140.1	140.1	140.1	140.1
85°	73.7	81.1	88.5	95.9	103.2
87.5°	44.2	44.2	51.6	59.0	66.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)