

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: P563247

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563247
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-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 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: 14124.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

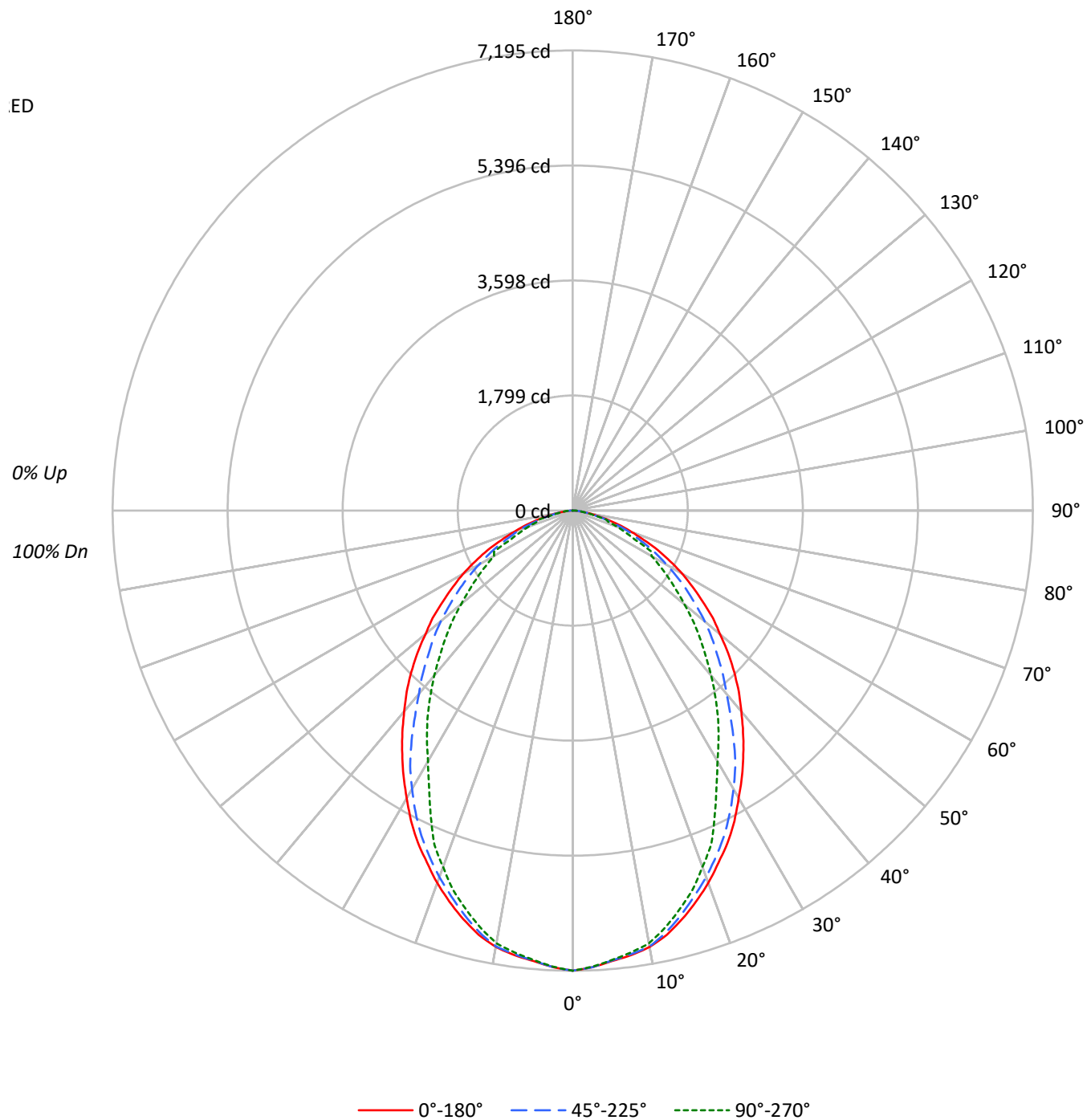
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9680	9680	9680
5°	9549	9537	9526
10°	9466	9455	9386
15°	9211	9118	8991
20°	8872	8729	8491
25°	8508	8322	7804
30°	8064	7805	7030
35°	7637	7213	6503
40°	7202	6574	5917
45°	6790	6077	5349
50°	6285	5641	4770
55°	5814	5112	4273
60°	5327	4566	3827
65°	4687	3998	3389
70°	3861	3501	2879
75°	3070	2681	2810
80°	2063	1933	1805
85°	1284	1541	1797

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6790 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	669.7	4.7
10°-20°	1838.0	13.0
20°-30°	2544.6	18.0
30°-40°	2713.2	19.2
40°-50°	2475.3	17.5
50°-60°	1939.2	13.7
60°-70°	1263.9	8.9
70°-80°	559.9	4.0
80°-90°	120.2	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°	5052.3	35.8
0°-40°	7765.5	55.0
0°-60°	12180.0	86.2
0°-90°	14124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7195	7195	7195	7195	7195	
5°	7070	7062	7062	7053	7053	671
15°	6612	6612	6546	6479	6454	1859
25°	5731	5697	5606	5406	5257	2631
35°	4649	4616	4392	4059	3959	2907
45°	3568	3493	3194	2928	2811	2749
55°	2479	2404	2179	1921	1822	2223
65°	1472	1389	1256	1281	1065	1451
75°	590	549	516	491	541	633
85°	83	92	100	108	116	115
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7194.6	7194.6	7194.6	7194.6	7194.6
2.5°	7144.7	7144.7	7144.7	7136.4	7136.4
5°	7069.8	7061.5	7061.5	7053.2	7053.2
7.5°	7011.6	7003.3	6995.0	6986.6	6970.0
10°	6928.4	6928.4	6920.1	6878.5	6870.2
12.5°	6795.3	6787.0	6753.8	6695.5	6678.9
15°	6612.4	6612.4	6545.8	6479.3	6454.3
17.5°	6412.7	6404.4	6321.2	6254.7	6221.4
20°	6196.5	6179.9	6096.7	5988.5	5930.3
22.5°	5955.3	5955.3	5855.5	5714.1	5655.9
25°	5730.7	5697.4	5605.9	5406.3	5256.6
27.5°	5472.9	5423.0	5323.2	5040.4	4865.7
30°	5190.1	5165.1	5023.7	4657.8	4524.7
32.5°	4923.9	4882.3	4732.6	4350.0	4241.9
35°	4649.4	4616.2	4391.6	4058.9	3959.1
37.5°	4375.0	4333.4	4050.6	3784.4	3659.7
40°	4100.5	4050.6	3742.8	3501.6	3368.6
42.5°	3842.7	3776.1	3476.7	3218.8	3069.1
45°	3568.2	3493.3	3193.9	2927.7	2811.3
47.5°	3293.7	3227.2	2952.7	2678.2	2545.1
50°	3002.6	2944.4	2694.8	2420.4	2279.0
52.5°	2761.4	2669.9	2428.7	2154.2	2037.8
55°	2478.6	2403.7	2179.2	1921.3	1821.5
57.5°	2220.8	2145.9	1938.0	1696.8	1613.6
60°	1979.5	1871.4	1696.8	1488.8	1422.3
62.5°	1713.4	1630.2	1480.5	1305.8	1389.0
65°	1472.2	1389.0	1255.9	1280.9	1064.6
67.5°	1206.0	1164.4	1048.0	931.6	898.3
70°	981.5	931.6	890.0	765.2	731.9
72.5°	781.8	731.9	673.7	607.2	582.2
75°	590.5	549.0	515.7	490.7	540.6
77.5°	407.6	390.9	366.0	341.0	332.7
80°	266.2	257.8	249.5	241.2	232.9
82.5°	158.0	158.0	158.0	158.0	158.0
85°	83.2	91.5	99.8	108.1	116.4
87.5°	49.9	49.9	58.2	66.5	74.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)