

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: P563217

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563217
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-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13717.0 lumens
Efficiency: N/A
Efficacy: 105.8 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

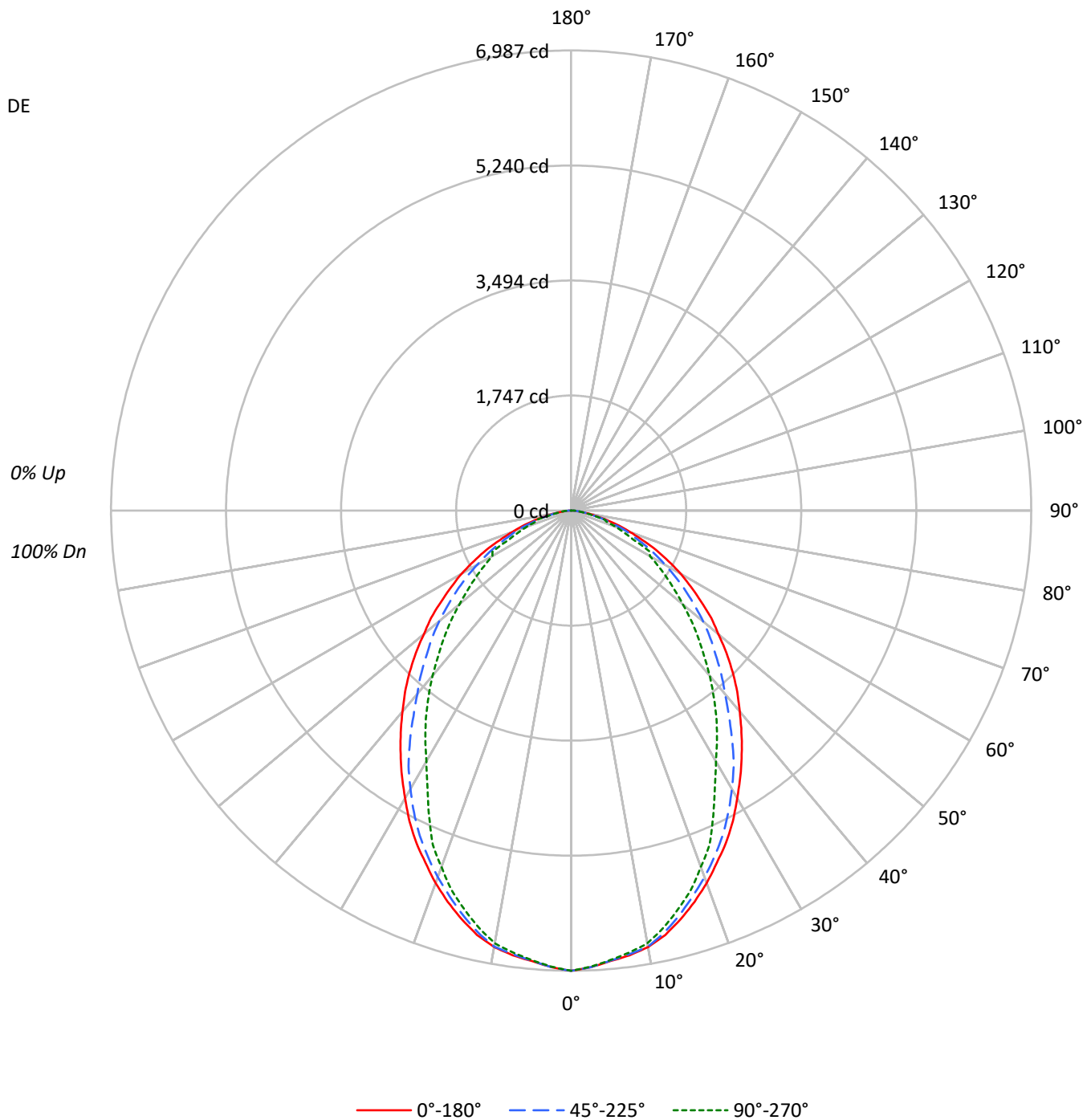
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9401	9401	9401
5°	9274	9263	9252
10°	9193	9182	9116
15°	8945	8855	8731
20°	8617	8478	8247
25°	8263	8083	7579
30°	7831	7580	6827
35°	7417	7006	6316
40°	6995	6385	5746
45°	6594	5902	5195
50°	6104	5478	4633
55°	5647	4965	4150
60°	5173	4434	3717
65°	4552	3883	3292
70°	3750	3400	2796
75°	2981	2603	2730
80°	2003	1877	1753
85°	1247	1496	1746

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6594 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	650.4	4.7
10°-20°	1785.0	13.0
20°-30°	2471.2	18.0
30°-40°	2635.1	19.2
40°-50°	2404.0	17.5
50°-60°	1883.3	13.7
60°-70°	1227.4	8.9
70°-80°	543.8	4.0
80°-90°	116.8	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°	4906.7	35.8
0°-40°	7541.8	55.0
0°-60°	11829.0	86.2
0°-90°	13717.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13717.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6987	6987	6987	6987	6987	
5°	6866	6858	6858	6850	6850	652
15°	6422	6422	6357	6293	6268	1805
25°	5566	5533	5444	5250	5105	2555
35°	4516	4483	4265	3942	3845	2823
45°	3465	3393	3102	2843	2730	2669
55°	2407	2334	2116	1866	1769	2159
65°	1430	1349	1220	1244	1034	1409
75°	574	533	501	477	525	615
85°	81	89	97	105	113	112
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6987.3	6987.3	6987.3	6987.3	6987.3
2.5°	6938.8	6938.8	6938.8	6930.7	6930.7
5°	6866.1	6858.0	6858.0	6849.9	6849.9
7.5°	6809.5	6801.5	6793.4	6785.3	6769.2
10°	6728.8	6728.8	6720.7	6680.3	6672.2
12.5°	6599.5	6591.4	6559.1	6502.6	6486.4
15°	6421.8	6421.8	6357.2	6292.6	6268.3
17.5°	6227.9	6219.9	6139.1	6074.5	6042.2
20°	6017.9	6001.8	5921.0	5816.0	5759.4
22.5°	5783.7	5783.7	5686.7	5549.4	5492.9
25°	5565.6	5533.3	5444.4	5250.5	5105.1
27.5°	5315.2	5266.7	5169.8	4895.1	4725.5
30°	5040.5	5016.3	4879.0	4523.5	4394.3
32.5°	4782.0	4741.6	4596.2	4224.7	4119.7
35°	4515.5	4483.2	4265.1	3941.9	3845.0
37.5°	4248.9	4208.5	3933.9	3675.4	3554.2
40°	3982.3	3933.9	3635.0	3400.7	3271.5
42.5°	3731.9	3667.3	3376.5	3126.1	2980.7
45°	3465.4	3392.7	3101.9	2843.4	2730.3
47.5°	3198.8	3134.2	2867.6	2601.0	2471.8
50°	2916.1	2859.5	2617.2	2350.6	2213.3
52.5°	2681.8	2593.0	2358.7	2092.1	1979.0
55°	2407.2	2334.5	2116.4	1866.0	1769.0
57.5°	2156.8	2084.1	1882.1	1647.9	1567.1
60°	1922.5	1817.5	1647.9	1445.9	1381.3
62.5°	1664.0	1583.2	1437.8	1268.2	1349.0
65°	1429.8	1349.0	1219.7	1244.0	1034.0
67.5°	1171.3	1130.9	1017.8	904.7	872.4
70°	953.2	904.7	864.3	743.2	710.8
72.5°	759.3	710.8	654.3	589.7	565.4
75°	573.5	533.1	500.8	476.6	525.1
77.5°	395.8	379.7	355.4	331.2	323.1
80°	258.5	250.4	242.3	234.3	226.2
82.5°	153.5	153.5	153.5	153.5	153.5
85°	80.8	88.9	96.9	105.0	113.1
87.5°	48.5	48.5	56.5	64.6	72.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)