

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: P563093

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563093
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-35-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12942.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

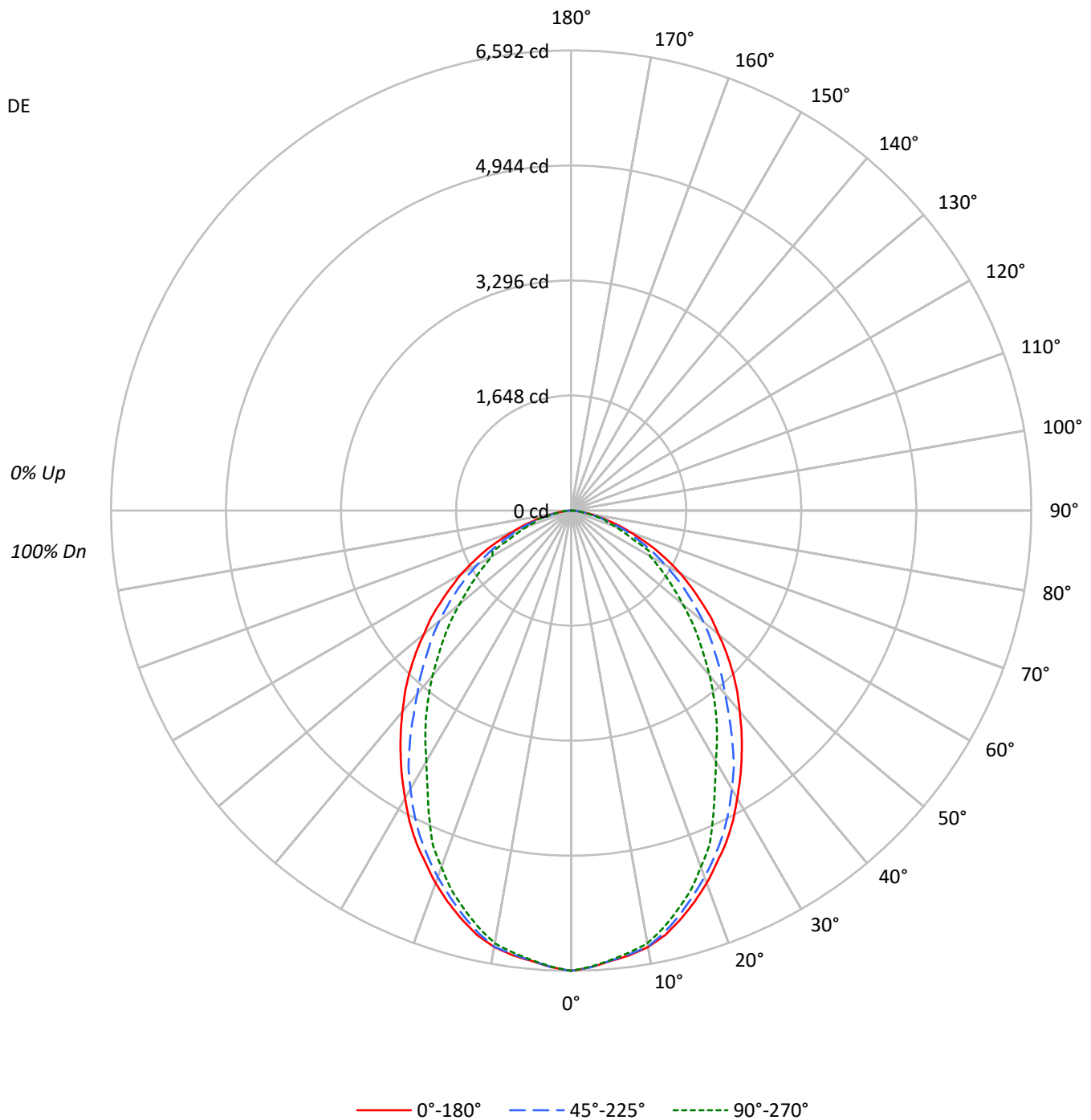
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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									100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87									87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75									75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65									65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56									56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50									50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44									44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40									40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36									36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33									33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30									30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8870	8870	8870
5°	8750	8739	8729
10°	8674	8663	8601
15°	8440	8355	8238
20°	8130	7999	7781
25°	7796	7626	7151
30°	7389	7152	6441
35°	6998	6610	5959
40°	6599	6024	5422
45°	6221	5569	4902
50°	5759	5169	4371
55°	5328	4684	3915
60°	4881	4184	3507
65°	4295	3664	3106
70°	3538	3208	2638
75°	2813	2456	2575
80°	1890	1771	1654
85°	1176	1413	1647

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6221 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	613.7	4.7
10°-20°	1684.2	13.0
20°-30°	2331.6	18.0
30°-40°	2486.2	19.2
40°-50°	2268.1	17.5
50°-60°	1776.9	13.7
60°-70°	1158.1	8.9
70°-80°	513.1	4.0
80°-90°	110.2	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°	4629.5	35.8
0°-40°	7115.6	55.0
0°-60°	11160.7	86.2
0°-90°	12942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12942.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6592	6592	6592	6592	6592	
5°	6478	6470	6470	6463	6463	615
15°	6059	6059	5998	5937	5914	1703
25°	5251	5221	5137	4954	4817	2411
35°	4260	4230	4024	3719	3628	2663
45°	3270	3201	2927	2683	2576	2519
55°	2271	2203	1997	1760	1669	2037
65°	1349	1273	1151	1174	976	1329
75°	541	503	472	450	495	580
85°	76	84	92	99	107	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6592.5	6592.5	6592.5	6592.5	6592.5
2.5°	6546.8	6546.8	6546.8	6539.1	6539.1
5°	6478.2	6470.5	6470.5	6462.9	6462.9
7.5°	6424.8	6417.2	6409.6	6401.9	6386.7
10°	6348.6	6348.6	6341.0	6302.9	6295.2
12.5°	6226.7	6219.0	6188.5	6135.2	6120.0
15°	6059.0	6059.0	5998.0	5937.0	5914.2
17.5°	5876.1	5868.5	5792.2	5731.3	5700.8
20°	5677.9	5662.7	5586.5	5487.4	5434.0
22.5°	5456.9	5456.9	5365.4	5235.9	5182.5
25°	5251.1	5220.6	5136.8	4953.9	4816.7
27.5°	5014.9	4969.1	4877.7	4618.5	4458.5
30°	4755.7	4732.9	4603.3	4268.0	4146.0
32.5°	4511.8	4473.7	4336.6	3986.0	3886.9
35°	4260.3	4229.9	4024.1	3719.2	3627.8
37.5°	4008.8	3970.7	3711.6	3467.7	3353.4
40°	3757.3	3711.6	3429.6	3208.6	3086.7
42.5°	3521.1	3460.1	3185.7	2949.5	2812.3
45°	3269.6	3201.0	2926.6	2682.7	2576.0
47.5°	3018.1	2957.1	2705.6	2454.1	2332.1
50°	2751.3	2698.0	2469.3	2217.8	2088.3
52.5°	2530.3	2446.5	2225.4	1973.9	1867.2
55°	2271.2	2202.6	1996.8	1760.5	1669.1
57.5°	2034.9	1966.3	1775.8	1554.8	1478.5
60°	1813.9	1714.8	1554.8	1364.2	1303.3
62.5°	1570.0	1493.8	1356.6	1196.6	1272.8
65°	1349.0	1272.8	1150.8	1173.7	975.5
67.5°	1105.1	1067.0	960.3	853.6	823.1
70°	899.3	853.6	815.5	701.2	670.7
72.5°	716.4	670.7	617.3	556.4	533.5
75°	541.1	503.0	472.5	449.7	495.4
77.5°	373.4	358.2	335.3	312.5	304.9
80°	243.9	236.3	228.6	221.0	213.4
82.5°	144.8	144.8	144.8	144.8	144.8
85°	76.2	83.8	91.5	99.1	106.7
87.5°	45.7	45.7	53.3	61.0	68.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)