

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: P564185

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564185
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12590.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

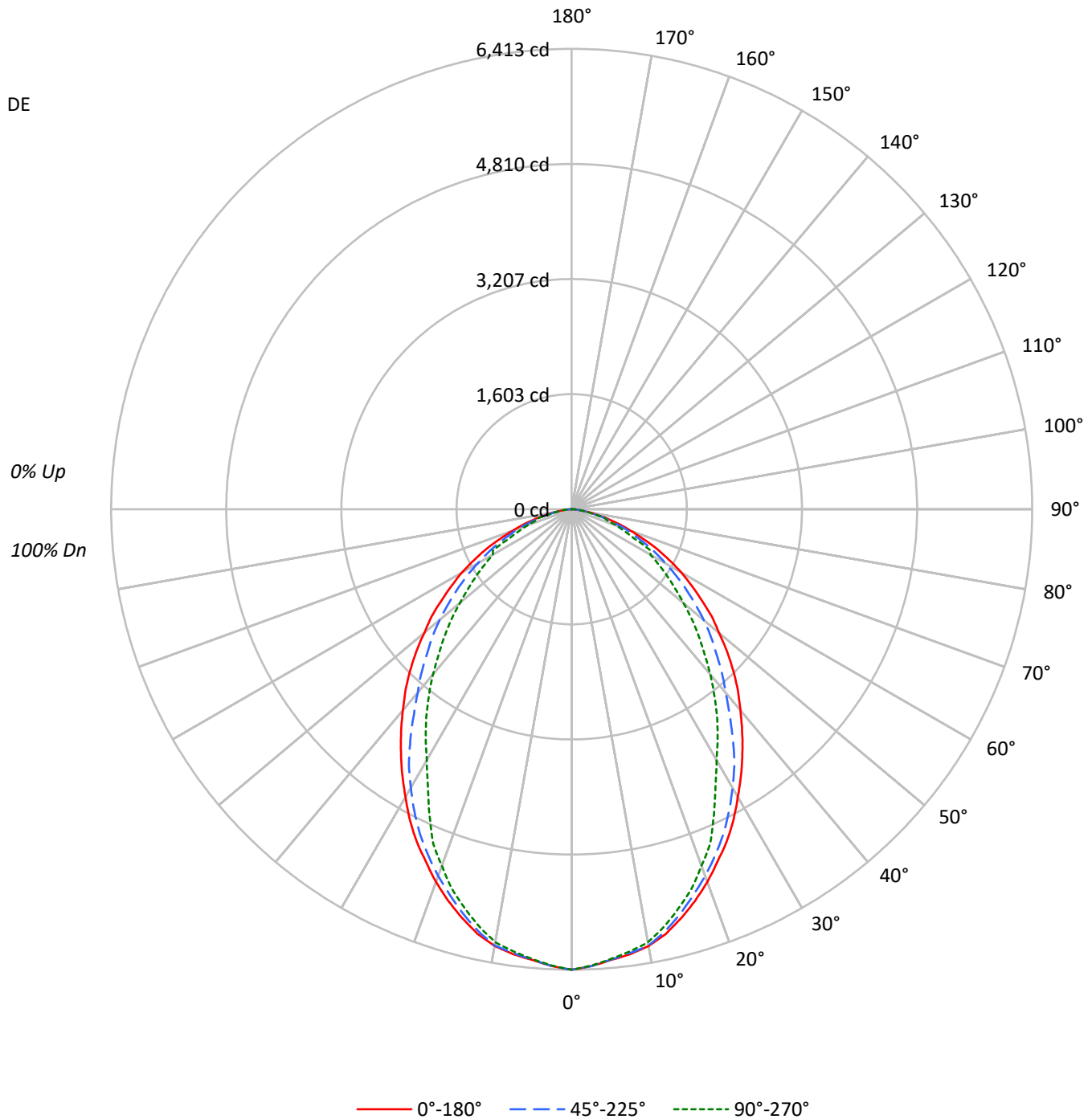
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	8629	8629	8629
5°	8512	8502	8492
10°	8438	8428	8367
15°	8210	8128	8014
20°	7909	7781	7569
25°	7584	7419	6956
30°	7188	6957	6266
35°	6808	6430	5797
40°	6420	5860	5274
45°	6052	5417	4768
50°	5602	5028	4252
55°	5183	4557	3809
60°	4749	4070	3412
65°	4178	3564	3021
70°	3442	3121	2567
75°	2737	2390	2505
80°	1839	1723	1609
85°	1144	1374	1602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6052 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	597.0	4.7
10°-20°	1638.4	13.0
20°-30°	2268.2	18.0
30°-40°	2418.6	19.2
40°-50°	2206.4	17.5
50°-60°	1728.6	13.7
60°-70°	1126.6	8.9
70°-80°	499.1	4.0
80°-90°	107.2	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°	4503.5	35.8
0°-40°	6922.1	55.0
0°-60°	10857.1	86.2
0°-90°	12590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12590.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6413	6413	6413	6413	6413	
5°	6302	6295	6295	6287	6287	598
15°	5894	5894	5835	5776	5753	1657
25°	5108	5079	4997	4819	4686	2345
35°	4144	4115	3915	3618	3529	2591
45°	3181	3114	2847	2610	2506	2450
55°	2209	2143	1942	1713	1624	1982
65°	1312	1238	1120	1142	949	1293
75°	526	489	460	437	482	564
85°	74	82	89	96	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6413.2	6413.2	6413.2	6413.2	6413.2
2.5°	6368.7	6368.7	6368.7	6361.3	6361.3
5°	6302.0	6294.6	6294.6	6287.1	6287.1
7.5°	6250.1	6242.7	6235.2	6227.8	6213.0
10°	6175.9	6175.9	6168.5	6131.4	6124.0
12.5°	6057.3	6049.9	6020.2	5968.3	5953.5
15°	5894.2	5894.2	5834.9	5775.6	5753.3
17.5°	5716.3	5708.8	5634.7	5575.4	5545.7
20°	5523.5	5508.7	5434.5	5338.1	5286.2
22.5°	5308.5	5308.5	5219.5	5093.5	5041.6
25°	5108.3	5078.6	4997.1	4819.2	4685.7
27.5°	4878.5	4834.0	4745.0	4492.9	4337.2
30°	4626.4	4604.1	4478.1	4151.9	4033.3
32.5°	4389.1	4352.1	4218.6	3877.6	3781.2
35°	4144.5	4114.8	3914.6	3618.1	3529.1
37.5°	3899.8	3862.7	3610.7	3373.4	3262.2
40°	3655.1	3610.7	3336.3	3121.3	3002.7
42.5°	3425.3	3366.0	3099.1	2869.2	2735.8
45°	3180.6	3113.9	2847.0	2609.8	2506.0
47.5°	2936.0	2876.7	2632.0	2387.3	2268.7
50°	2676.5	2624.6	2402.2	2157.5	2031.5
52.5°	2461.5	2379.9	2164.9	1920.2	1816.4
55°	2209.4	2142.7	1942.5	1712.7	1623.7
57.5°	1979.6	1912.8	1727.5	1512.5	1438.3
60°	1764.6	1668.2	1512.5	1327.1	1267.8
62.5°	1527.3	1453.2	1319.7	1164.0	1238.2
65°	1312.3	1238.2	1119.5	1141.8	949.0
67.5°	1075.0	1038.0	934.2	830.4	800.7
70°	874.9	830.4	793.3	682.1	652.4
72.5°	696.9	652.4	600.5	541.2	519.0
75°	526.4	489.3	459.7	437.4	481.9
77.5°	363.3	348.5	326.2	304.0	296.6
80°	237.3	229.8	222.4	215.0	207.6
82.5°	140.9	140.9	140.9	140.9	140.9
85°	74.1	81.6	89.0	96.4	103.8
87.5°	44.5	44.5	51.9	59.3	66.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)