

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: P563986

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563986
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-LD4-4LO-50-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9495.0 lumens
Efficiency: N/A
Efficacy: 101.4 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

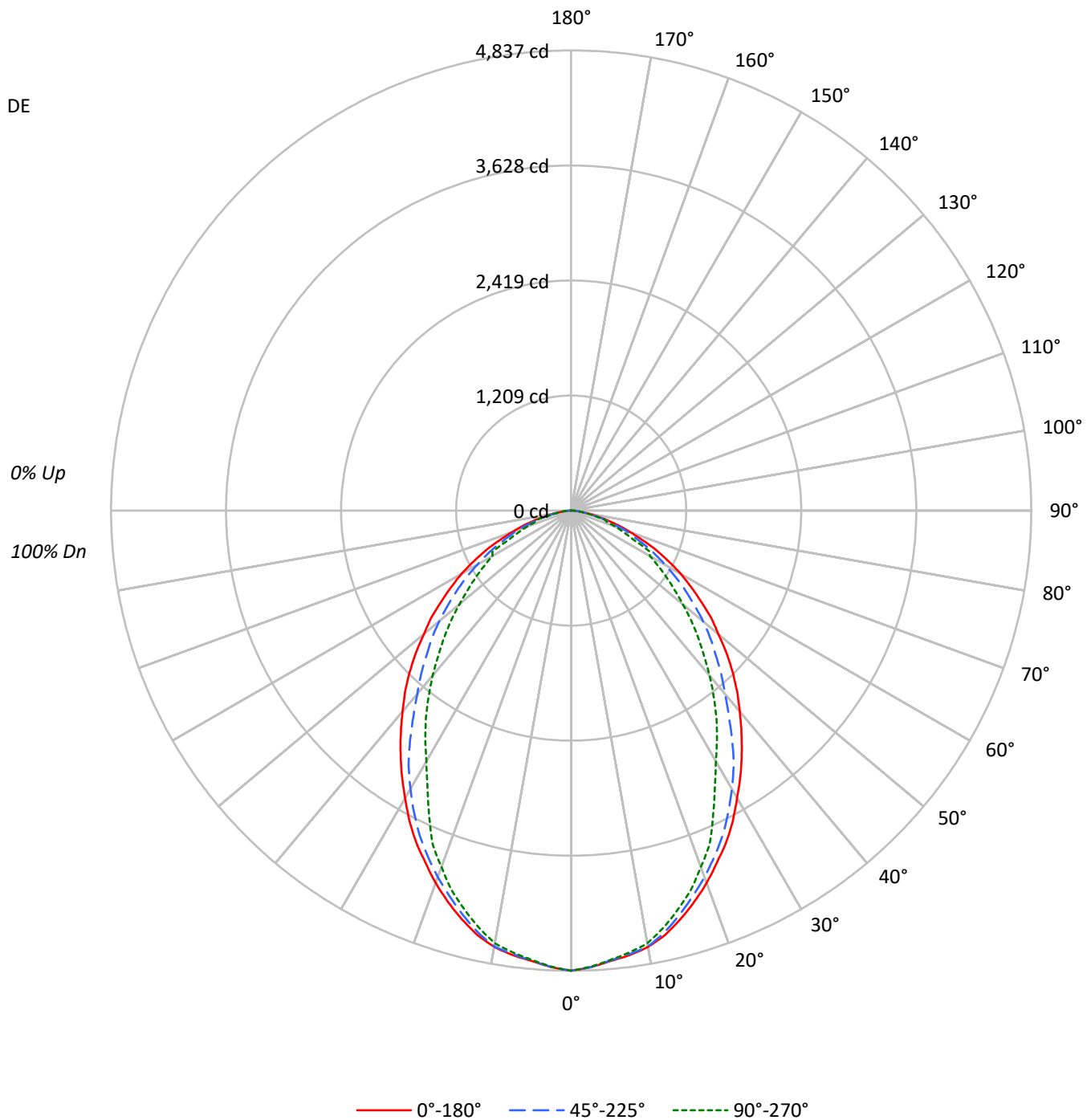
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6508	6508	6508
5°	6419	6412	6404
10°	6364	6356	6310
15°	6192	6130	6044
20°	5964	5869	5708
25°	5719	5595	5246
30°	5421	5247	4726
35°	5134	4849	4372
40°	4842	4419	3977
45°	4564	4086	3596
50°	4225	3792	3207
55°	3909	3437	2872
60°	3581	3070	2573
65°	3151	2688	2279
70°	2596	2354	1936
75°	2064	1802	1889
80°	1386	1299	1213
85°	863	1036	1209

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4564 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.2	4.7
10°-20°	1235.6	13.0
20°-30°	1710.6	18.0
30°-40°	1824.0	19.2
40°-50°	1664.0	17.5
50°-60°	1303.6	13.7
60°-70°	849.6	8.9
70°-80°	376.4	4.0
80°-90°	80.8	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°	3396.4	35.8
0°-40°	5220.4	55.0
0°-60°	8188.1	86.2
0°-90°	9495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9495.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4837	4837	4837	4837	4837	
5°	4753	4747	4747	4742	4742	451
15°	4445	4445	4400	4356	4339	1250
25°	3852	3830	3769	3634	3534	1769
35°	3126	3103	2952	2729	2662	1954
45°	2399	2348	2147	1968	1890	1848
55°	1666	1616	1465	1292	1224	1495
65°	990	934	844	861	716	975
75°	397	369	347	330	363	425
85°	56	62	67	73	78	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4836.6	4836.6	4836.6	4836.6	4836.6
2.5°	4803.1	4803.1	4803.1	4797.5	4797.5
5°	4752.8	4747.2	4747.2	4741.6	4741.6
7.5°	4713.6	4708.0	4702.4	4696.8	4685.7
10°	4657.7	4657.7	4652.1	4624.2	4618.6
12.5°	4568.2	4562.6	4540.3	4501.1	4490.0
15°	4445.2	4445.2	4400.5	4355.8	4339.0
17.5°	4311.0	4305.4	4249.5	4204.8	4182.4
20°	4165.6	4154.5	4098.6	4025.9	3986.7
22.5°	4003.5	4003.5	3936.4	3841.3	3802.2
25°	3852.5	3830.2	3768.7	3634.5	3533.8
27.5°	3679.2	3645.6	3578.5	3388.4	3271.0
30°	3489.1	3472.3	3377.3	3131.2	3041.8
32.5°	3310.2	3282.2	3181.5	2924.3	2851.7
35°	3125.6	3103.3	2952.3	2728.6	2661.5
37.5°	2941.1	2913.2	2723.0	2544.1	2460.2
40°	2756.6	2723.0	2516.2	2354.0	2264.5
42.5°	2583.3	2538.5	2337.2	2163.9	2063.3
45°	2398.7	2348.4	2147.1	1968.2	1889.9
47.5°	2214.2	2169.5	1985.0	1800.5	1711.0
50°	2018.5	1979.4	1811.6	1627.1	1532.1
52.5°	1856.4	1794.9	1632.7	1448.2	1369.9
55°	1666.3	1615.9	1465.0	1291.6	1224.5
57.5°	1492.9	1442.6	1302.8	1140.7	1084.7
60°	1330.8	1258.1	1140.7	1000.9	956.1
62.5°	1151.8	1095.9	995.3	877.9	933.8
65°	989.7	933.8	844.3	861.1	715.7
67.5°	810.8	782.8	704.5	626.2	603.9
70°	659.8	626.2	598.3	514.4	492.0
72.5°	525.6	492.0	452.9	408.2	391.4
75°	397.0	369.0	346.7	329.9	363.4
77.5°	274.0	262.8	246.0	229.3	223.7
80°	178.9	173.3	167.7	162.2	156.6
82.5°	106.2	106.2	106.2	106.2	106.2
85°	55.9	61.5	67.1	72.7	78.3
87.5°	33.5	33.5	39.1	44.7	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)