

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: P563798

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563798
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-LD4-4HI-50-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14919.0 lumens
Efficiency: N/A
Efficacy: 86.3 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

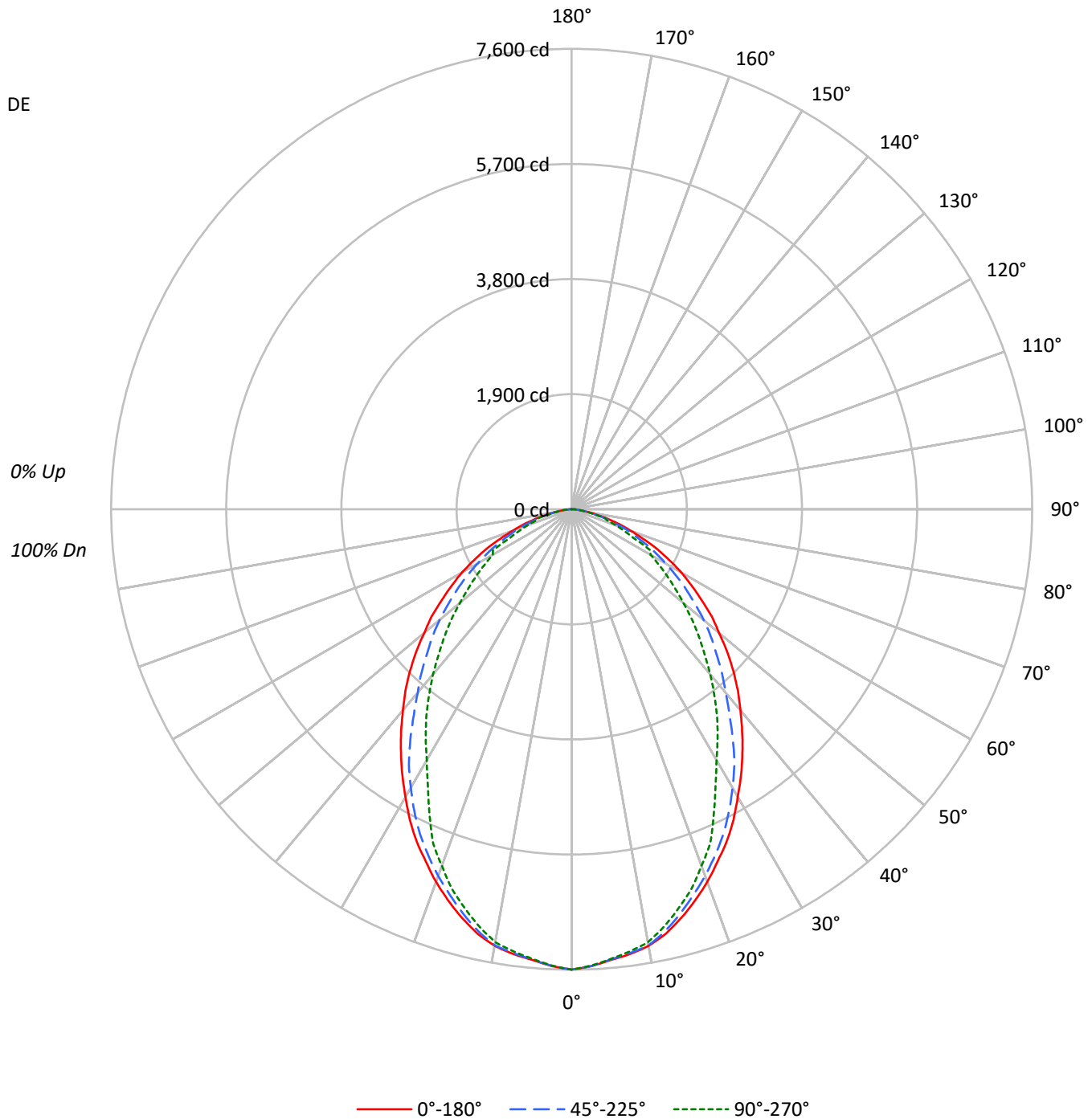
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10225	10225	10225
5°	10086	10074	10062
10°	9999	9987	9915
15°	9729	9631	9497
20°	9372	9221	8969
25°	8987	8791	8243
30°	8517	8244	7425
35°	8067	7619	6869
40°	7608	6944	6250
45°	7172	6420	5650
50°	6639	5958	5039
55°	6142	5400	4513
60°	5627	4823	4043
65°	4951	4223	3580
70°	4078	3698	3041
75°	3243	2832	2969
80°	2178	2042	1906
85°	1357	1627	1899

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7172 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	707.4	4.7
10°-20°	1941.4	13.0
20°-30°	2687.8	18.0
30°-40°	2866.0	19.2
40°-50°	2614.6	17.5
50°-60°	2048.3	13.7
60°-70°	1335.0	8.9
70°-80°	591.5	4.0
80°-90°	127.0	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°	5336.6	35.8
0°-40°	8202.6	55.0
0°-60°	12865.6	86.2
0°-90°	14919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7600	7600	7600	7600	7600	
5°	7468	7459	7459	7450	7450	709
15°	6984	6984	6914	6844	6818	1964
25°	6053	6018	5922	5711	5552	2779
35°	4911	4876	4639	4287	4182	3070
45°	3769	3690	3374	3092	2970	2903
55°	2618	2539	2302	2030	1924	2348
65°	1555	1467	1327	1353	1125	1533
75°	624	580	545	518	571	669
85°	88	97	105	114	123	122
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7599.5	7599.5	7599.5	7599.5	7599.5
2.5°	7546.8	7546.8	7546.8	7538.0	7538.0
5°	7467.8	7459.0	7459.0	7450.2	7450.2
7.5°	7406.3	7397.5	7388.7	7379.9	7362.3
10°	7318.4	7318.4	7309.6	7265.7	7256.9
12.5°	7177.8	7169.0	7133.9	7072.4	7054.8
15°	6984.5	6984.5	6914.3	6844.0	6817.6
17.5°	6773.7	6764.9	6677.1	6606.8	6571.6
20°	6545.3	6527.7	6439.8	6325.6	6264.1
22.5°	6290.5	6290.5	6185.1	6035.7	5974.2
25°	6053.3	6018.1	5921.5	5710.6	5552.5
27.5°	5780.9	5728.2	5622.8	5324.1	5139.6
30°	5482.2	5455.9	5306.5	4919.9	4779.4
32.5°	5201.1	5157.1	4999.0	4594.9	4480.7
35°	4911.1	4876.0	4638.8	4287.4	4181.9
37.5°	4621.2	4577.3	4278.6	3997.4	3865.7
40°	4331.3	4278.6	3953.5	3698.7	3558.2
42.5°	4058.9	3988.7	3672.4	3400.0	3241.9
45°	3769.0	3689.9	3373.7	3092.5	2969.5
47.5°	3479.1	3408.8	3118.9	2829.0	2688.4
50°	3171.6	3110.1	2846.5	2556.6	2407.3
52.5°	2916.8	2820.2	2565.4	2275.5	2152.5
55°	2618.1	2539.0	2301.8	2029.5	1924.0
57.5°	2345.8	2266.7	2047.0	1792.3	1704.4
60°	2091.0	1976.8	1792.3	1572.6	1502.3
62.5°	1809.8	1722.0	1563.8	1379.3	1467.2
65°	1555.1	1467.2	1326.6	1353.0	1124.6
67.5°	1273.9	1230.0	1107.0	984.0	948.8
70°	1036.7	984.0	940.1	808.3	773.1
72.5°	825.8	773.1	711.6	641.3	615.0
75°	623.8	579.8	544.7	518.4	571.1
77.5°	430.5	412.9	386.6	360.2	351.4
80°	281.1	272.4	263.6	254.8	246.0
82.5°	166.9	166.9	166.9	166.9	166.9
85°	87.9	96.6	105.4	114.2	123.0
87.5°	52.7	52.7	61.5	70.3	79.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)