

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: P563613

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563613
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-LD4-3STD-50-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11085.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

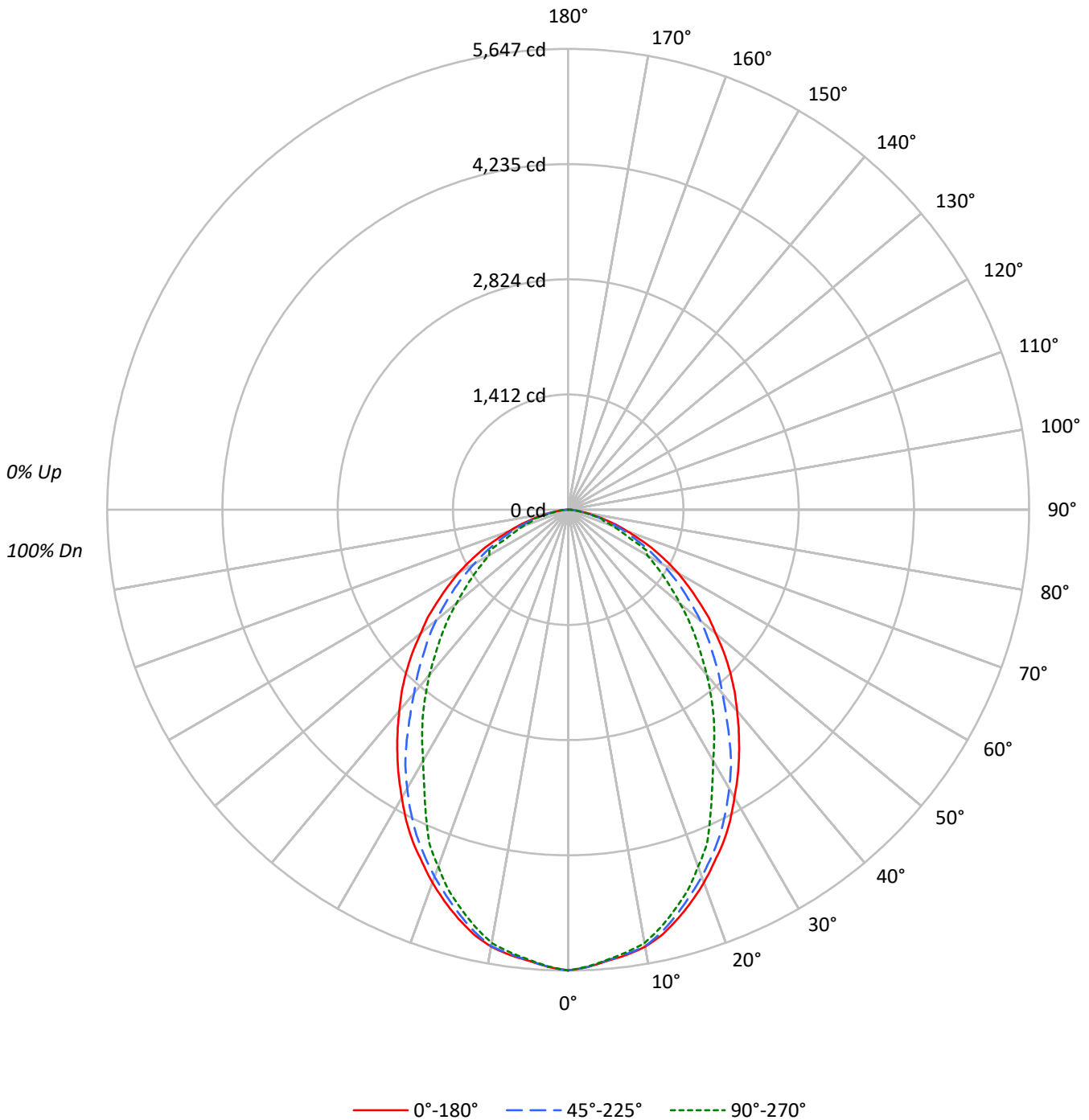
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	7597	7597	7597
5°	7494	7485	7477
10°	7429	7420	7367
15°	7229	7156	7056
20°	6963	6851	6664
25°	6677	6532	6125
30°	6329	6126	5517
35°	5994	5661	5104
40°	5652	5159	4644
45°	5329	4770	4198
50°	4933	4427	3744
55°	4563	4012	3354
60°	4181	3584	3004
65°	3678	3138	2660
70°	3030	2748	2260
75°	2410	2104	2206
80°	1619	1517	1416
85°	1008	1209	1411

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5329 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	525.6	4.7
10°-20°	1442.5	13.0
20°-30°	1997.1	18.0
30°-40°	2129.4	19.2
40°-50°	1942.7	17.5
50°-60°	1521.9	13.7
60°-70°	991.9	8.9
70°-80°	439.5	4.0
80°-90°	94.4	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°	3965.2	35.8
0°-40°	6094.6	55.0
0°-60°	9559.3	86.2
0°-90°	11085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5647	5647	5647	5647	5647	
5°	5549	5542	5542	5536	5536	527
15°	5190	5190	5137	5085	5066	1459
25°	4498	4472	4400	4243	4126	2065
35°	3649	3623	3447	3186	3107	2281
45°	2800	2742	2507	2298	2206	2157
55°	1945	1886	1710	1508	1430	1745
65°	1155	1090	986	1005	836	1139
75°	464	431	405	385	424	497
85°	65	72	78	85	91	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5646.6	5646.6	5646.6	5646.6	5646.6
2.5°	5607.4	5607.4	5607.4	5600.9	5600.9
5°	5548.6	5542.1	5542.1	5535.6	5535.6
7.5°	5502.9	5496.4	5489.9	5483.4	5470.3
10°	5437.7	5437.7	5431.1	5398.5	5392.0
12.5°	5333.2	5326.7	5300.6	5254.9	5241.8
15°	5189.6	5189.6	5137.4	5085.2	5065.6
17.5°	5032.9	5026.4	4961.1	4908.9	4882.8
20°	4863.2	4850.2	4784.9	4700.0	4654.3
22.5°	4673.9	4673.9	4595.6	4484.6	4438.9
25°	4497.7	4471.5	4399.7	4243.1	4125.6
27.5°	4295.3	4256.1	4177.8	3955.8	3818.8
30°	4073.4	4053.8	3942.8	3655.6	3551.1
32.5°	3864.5	3831.8	3714.3	3414.0	3329.2
35°	3649.0	3622.9	3446.7	3185.6	3107.2
37.5°	3433.6	3401.0	3179.0	2970.2	2872.2
40°	3218.2	3179.0	2937.5	2748.2	2643.8
42.5°	3015.8	2963.6	2728.6	2526.3	2408.8
45°	2800.4	2741.7	2506.7	2297.8	2206.4
47.5°	2585.0	2532.8	2317.4	2102.0	1997.5
50°	2356.5	2310.8	2115.0	1899.6	1788.6
52.5°	2167.2	2095.4	1906.1	1690.7	1599.3
55°	1945.3	1886.5	1710.3	1507.9	1429.6
57.5°	1742.9	1684.2	1521.0	1331.7	1266.4
60°	1553.6	1468.8	1331.7	1168.5	1116.3
62.5°	1344.7	1279.4	1161.9	1024.9	1090.1
65°	1155.4	1090.1	985.7	1005.3	835.6
67.5°	946.5	913.9	822.5	731.1	705.0
70°	770.3	731.1	698.5	600.6	574.4
72.5°	613.6	574.4	528.8	476.5	456.9
75°	463.5	430.8	404.7	385.1	424.3
77.5°	319.9	306.8	287.2	267.6	261.1
80°	208.9	202.4	195.8	189.3	182.8
82.5°	124.0	124.0	124.0	124.0	124.0
85°	65.3	71.8	78.3	84.9	91.4
87.5°	39.2	39.2	45.7	52.2	58.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)