

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: P563611

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563611
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-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 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: 11209.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

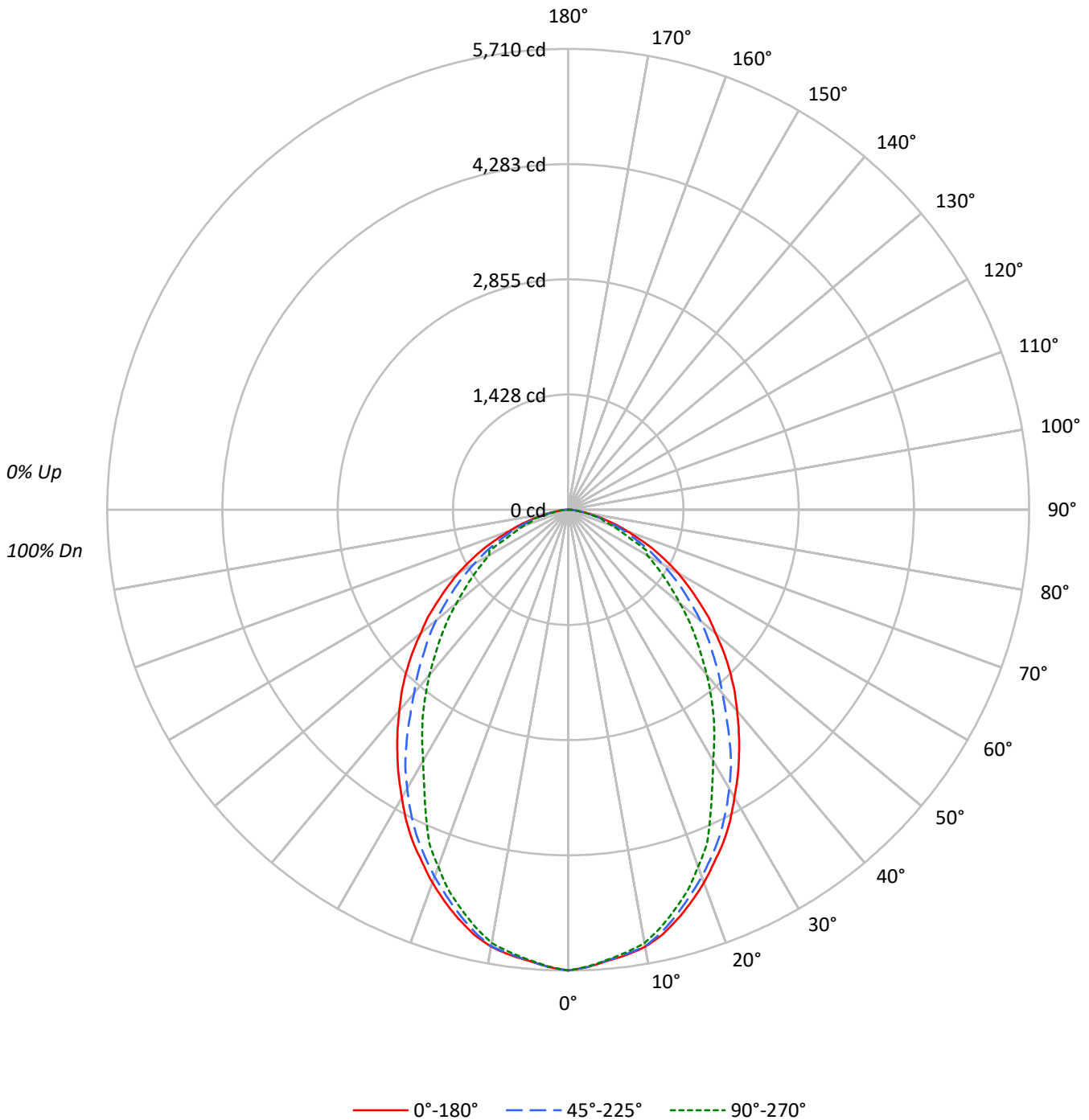
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7682	7682	7682
5°	7578	7569	7560
10°	7512	7503	7449
15°	7310	7236	7135
20°	7041	6928	6739
25°	6752	6605	6193
30°	6399	6194	5579
35°	6061	5725	5161
40°	5716	5217	4695
45°	5388	4823	4245
50°	4988	4477	3786
55°	4614	4057	3391
60°	4228	3624	3037
65°	3720	3173	2690
70°	3064	2779	2285
75°	2437	2128	2231
80°	1636	1534	1432
85°	1019	1223	1426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.5	4.7
10°-20°	1458.7	13.0
20°-30°	2019.4	18.0
30°-40°	2153.3	19.2
40°-50°	1964.4	17.5
50°-60°	1539.0	13.7
60°-70°	1003.0	8.9
70°-80°	444.4	4.0
80°-90°	95.4	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°	4009.6	35.8
0°-40°	6162.8	55.0
0°-60°	9666.2	86.2
0°-90°	11209.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11209.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5710	5710	5710	5710	5710	
5°	5611	5604	5604	5598	5598	533
15°	5248	5248	5195	5142	5122	1475
25°	4548	4522	4449	4290	4172	2088
35°	3690	3664	3485	3221	3142	2307
45°	2832	2772	2535	2324	2231	2181
55°	1967	1908	1729	1525	1446	1764
65°	1168	1102	997	1016	845	1151
75°	469	436	409	389	429	502
85°	66	73	79	86	92	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5709.7	5709.7	5709.7	5709.7	5709.7
2.5°	5670.1	5670.1	5670.1	5663.5	5663.5
5°	5610.7	5604.1	5604.1	5597.5	5597.5
7.5°	5564.5	5557.9	5551.3	5544.7	5531.5
10°	5498.5	5498.5	5491.9	5458.9	5452.3
12.5°	5392.9	5386.3	5359.9	5313.7	5300.5
15°	5247.7	5247.7	5194.9	5142.0	5122.2
17.5°	5089.2	5082.6	5016.6	4963.8	4937.4
20°	4917.6	4904.4	4838.4	4752.6	4706.4
22.5°	4726.2	4726.2	4647.0	4534.8	4488.6
25°	4548.0	4521.6	4449.0	4290.5	4171.7
27.5°	4343.3	4303.7	4224.5	4000.1	3861.5
30°	4118.9	4099.1	3986.9	3696.5	3590.8
32.5°	3907.7	3874.7	3755.9	3452.2	3366.4
35°	3689.9	3663.5	3485.2	3221.2	3142.0
37.5°	3472.0	3439.0	3214.6	3003.4	2904.4
40°	3254.2	3214.6	2970.4	2778.9	2673.3
42.5°	3049.6	2996.8	2759.1	2554.5	2435.7
45°	2831.8	2772.3	2534.7	2323.5	2231.1
47.5°	2613.9	2561.1	2343.3	2125.5	2019.9
50°	2382.9	2336.7	2138.7	1920.8	1808.6
52.5°	2191.5	2118.9	1927.4	1709.6	1617.2
55°	1967.0	1907.6	1729.4	1524.8	1445.6
57.5°	1762.4	1703.0	1538.0	1346.6	1280.6
60°	1571.0	1485.2	1346.6	1181.5	1128.7
62.5°	1359.8	1293.8	1174.9	1036.3	1102.3
65°	1168.3	1102.3	996.7	1016.5	844.9
67.5°	957.1	924.1	831.7	739.3	712.9
70°	778.9	739.3	706.3	607.3	580.9
72.5°	620.5	580.9	534.7	481.9	462.1
75°	468.7	435.7	409.3	389.4	429.1
77.5°	323.4	310.2	290.4	270.6	264.0
80°	211.2	204.6	198.0	191.4	184.8
82.5°	125.4	125.4	125.4	125.4	125.4
85°	66.0	72.6	79.2	85.8	92.4
87.5°	39.6	39.6	46.2	52.8	59.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)