

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: P564022

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564022
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-35-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12247.0 lumens
Efficiency: N/A
Efficacy: 91.9 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

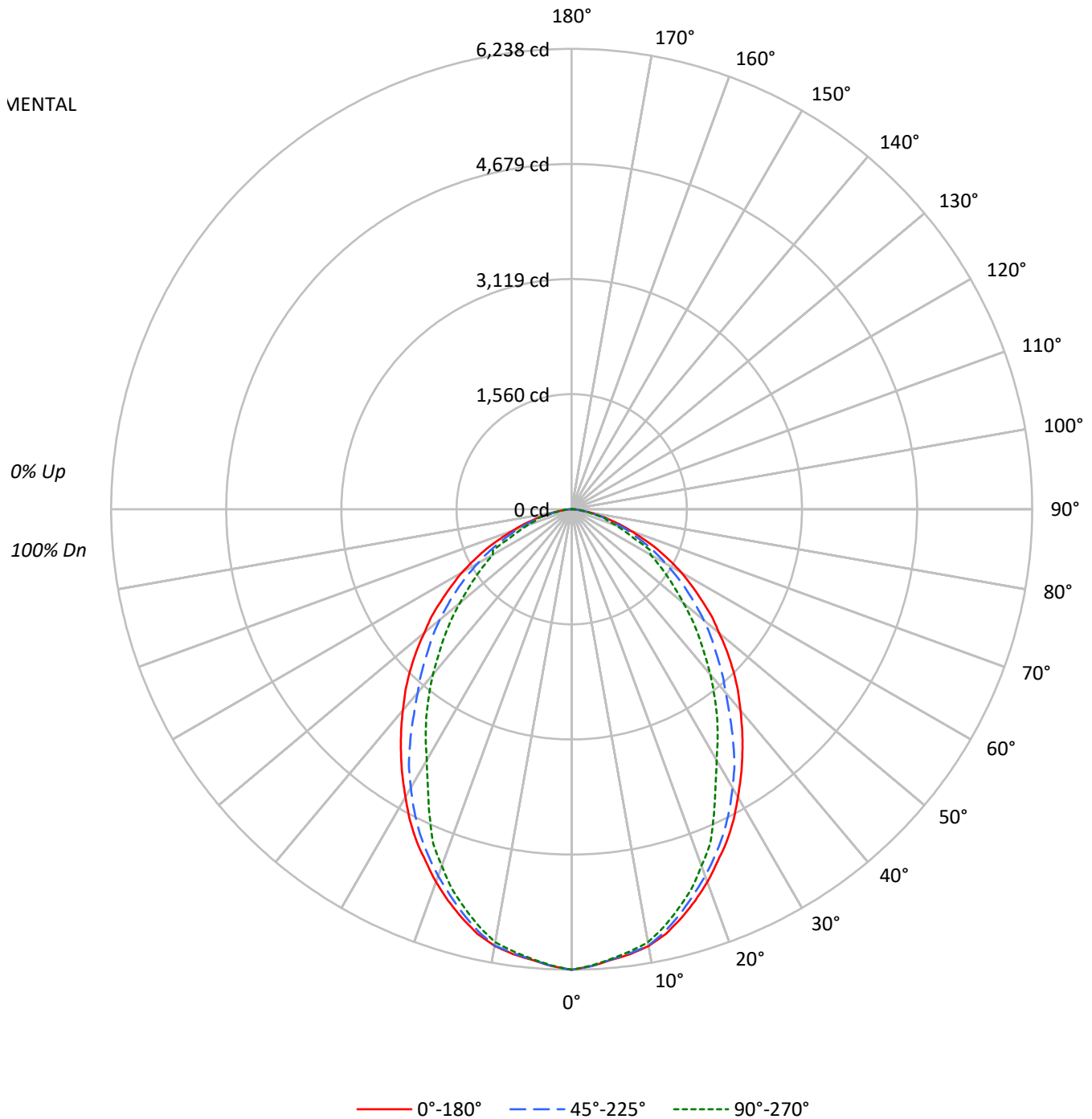
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8394	8394	8394
5°	8280	8270	8260
10°	8208	8198	8139
15°	7987	7906	7796
20°	7693	7569	7363
25°	7377	7216	6767
30°	6992	6768	6096
35°	6622	6255	5639
40°	6245	5700	5130
45°	5887	5270	4638
50°	5450	4891	4136
55°	5042	4433	3705
60°	4619	3959	3319
65°	4064	3467	2939
70°	3348	3036	2497
75°	2662	2324	2437
80°	1788	1677	1564
85°	1113	1335	1559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5887 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	580.7	4.7
10°-20°	1593.7	13.0
20°-30°	2206.4	18.0
30°-40°	2352.7	19.2
40°-50°	2146.3	17.5
50°-60°	1681.5	13.7
60°-70°	1095.9	8.9
70°-80°	485.5	4.0
80°-90°	104.2	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°	4380.9	35.8
0°-40°	6733.5	55.0
0°-60°	10561.3	86.2
0°-90°	12247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12247.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6238	6238	6238	6238	6238	
5°	6130	6123	6123	6116	6116	582
15°	5734	5734	5676	5618	5597	1612
25°	4969	4940	4861	4688	4558	2281
35°	4032	4003	3808	3520	3433	2520
45°	3094	3029	2769	2539	2438	2383
55°	2149	2084	1890	1666	1579	1928
65°	1276	1204	1089	1111	923	1258
75°	512	476	447	426	469	549
85°	72	79	86	94	101	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6238.5	6238.5	6238.5	6238.5	6238.5
2.5°	6195.2	6195.2	6195.2	6188.0	6188.0
5°	6130.3	6123.1	6123.1	6115.9	6115.9
7.5°	6079.8	6072.6	6065.4	6058.2	6043.7
10°	6007.7	6007.7	6000.5	5964.4	5957.2
12.5°	5892.3	5885.1	5856.2	5805.7	5791.3
15°	5733.6	5733.6	5675.9	5618.2	5596.6
17.5°	5560.5	5553.3	5481.2	5423.5	5394.6
20°	5373.0	5358.6	5286.5	5192.7	5142.2
22.5°	5163.9	5163.9	5077.3	4954.7	4904.2
25°	4969.1	4940.3	4860.9	4687.9	4558.0
27.5°	4745.6	4702.3	4615.7	4370.5	4219.1
30°	4500.3	4478.7	4356.1	4038.8	3923.4
32.5°	4269.6	4233.5	4103.7	3771.9	3678.2
35°	4031.6	4002.7	3808.0	3519.5	3433.0
37.5°	3793.6	3757.5	3512.3	3281.5	3173.3
40°	3555.6	3512.3	3245.4	3036.3	2920.9
42.5°	3332.0	3274.3	3014.7	2791.1	2661.3
45°	3094.0	3029.1	2769.4	2538.7	2437.7
47.5°	2856.0	2798.3	2560.3	2322.3	2206.9
50°	2603.6	2553.1	2336.7	2098.7	1976.1
52.5°	2394.4	2315.1	2105.9	1867.9	1767.0
55°	2149.2	2084.3	1889.6	1666.0	1579.4
57.5°	1925.6	1860.7	1680.4	1471.3	1399.1
60°	1716.5	1622.7	1471.3	1291.0	1233.3
62.5°	1485.7	1413.6	1283.8	1132.3	1204.4
65°	1276.5	1204.4	1089.0	1110.7	923.1
67.5°	1045.8	1009.7	908.7	807.8	778.9
70°	851.0	807.8	771.7	663.5	634.7
72.5°	677.9	634.7	584.2	526.5	504.8
75°	512.1	476.0	447.1	425.5	468.8
77.5°	353.4	339.0	317.3	295.7	288.5
80°	230.8	223.6	216.4	209.2	201.9
82.5°	137.0	137.0	137.0	137.0	137.0
85°	72.1	79.3	86.5	93.8	101.0
87.5°	43.3	43.3	50.5	57.7	64.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)