

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: P563129

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563129
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-LD4-3HI-40-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12246.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

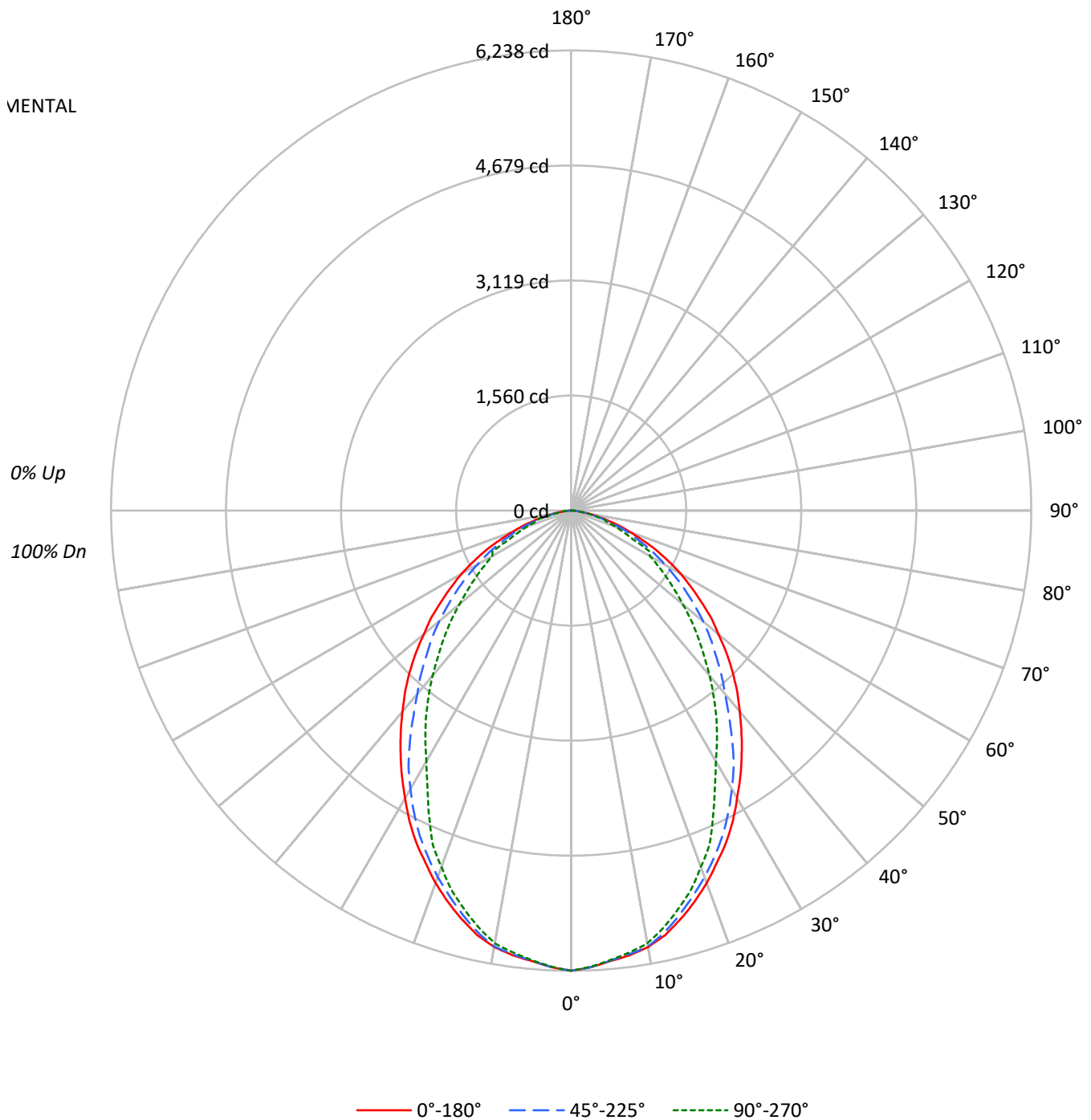
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8393	8393	8393
5°	8279	8269	8260
10°	8207	8197	8138
15°	7986	7906	7795
20°	7693	7569	7362
25°	7376	7216	6766
30°	6991	6767	6095
35°	6621	6254	5638
40°	6245	5700	5130
45°	5887	5269	4638
50°	5449	4891	4136
55°	5041	4432	3705
60°	4619	3959	3319
65°	4064	3467	2939
70°	3348	3035	2496
75°	2662	2324	2437
80°	1788	1676	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°	1593.6	13.0
20°-30°	2206.2	18.0
30°-40°	2352.5	19.2
40°-50°	2146.1	17.5
50°-60°	1681.3	13.7
60°-70°	1095.8	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°	4380.5	35.8
0°-40°	6733.0	55.0
0°-60°	10560.5	86.2
0°-90°	12246.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12246.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6238	6238	6238	6238	6238	
5°	6130	6123	6123	6115	6115	582
15°	5733	5733	5676	5618	5596	1612
25°	4969	4940	4861	4688	4558	2281
35°	4031	4002	3808	3519	3433	2520
45°	3094	3029	2769	2538	2438	2383
55°	2149	2084	1889	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°	6237.9	6237.9	6237.9	6237.9	6237.9
2.5°	6194.7	6194.7	6194.7	6187.5	6187.5
5°	6129.8	6122.6	6122.6	6115.4	6115.4
7.5°	6079.3	6072.1	6064.9	6057.7	6043.2
10°	6007.2	6007.2	6000.0	5963.9	5956.7
12.5°	5891.8	5884.6	5855.7	5805.3	5790.8
15°	5733.1	5733.1	5675.5	5617.8	5596.1
17.5°	5560.1	5552.9	5480.7	5423.0	5394.2
20°	5372.6	5358.1	5286.0	5192.3	5141.8
22.5°	5163.4	5163.4	5076.9	4954.3	4903.8
25°	4968.7	4939.9	4860.6	4687.5	4557.7
27.5°	4745.2	4701.9	4615.4	4370.2	4218.7
30°	4500.0	4478.3	4355.7	4038.4	3923.1
32.5°	4269.2	4233.2	4103.3	3771.6	3677.9
35°	4031.2	4002.4	3807.7	3519.2	3432.7
37.5°	3793.2	3757.2	3512.0	3281.2	3173.1
40°	3555.3	3512.0	3245.2	3036.0	2920.7
42.5°	3331.7	3274.0	3014.4	2790.9	2661.0
45°	3093.7	3028.8	2769.2	2538.4	2437.5
47.5°	2855.8	2798.1	2560.1	2322.1	2206.7
50°	2603.4	2552.9	2336.5	2098.5	1976.0
52.5°	2394.2	2314.9	2105.8	1867.8	1766.8
55°	2149.0	2084.1	1889.4	1665.9	1579.3
57.5°	1925.5	1860.6	1680.3	1471.1	1399.0
60°	1716.3	1622.6	1471.1	1290.9	1233.2
62.5°	1485.6	1413.5	1283.6	1132.2	1204.3
65°	1276.4	1204.3	1088.9	1110.6	923.1
67.5°	1045.7	1009.6	908.6	807.7	778.8
70°	851.0	807.7	771.6	663.5	634.6
72.5°	677.9	634.6	584.1	526.4	504.8
75°	512.0	476.0	447.1	425.5	468.7
77.5°	353.4	338.9	317.3	295.7	288.5
80°	230.8	223.6	216.3	209.1	201.9
82.5°	137.0	137.0	137.0	137.0	137.0
85°	72.1	79.3	86.5	93.7	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)