

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: P563833

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563833
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-LD4-4LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9842.0 lumens
Efficiency: N/A
Efficacy: 105.1 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

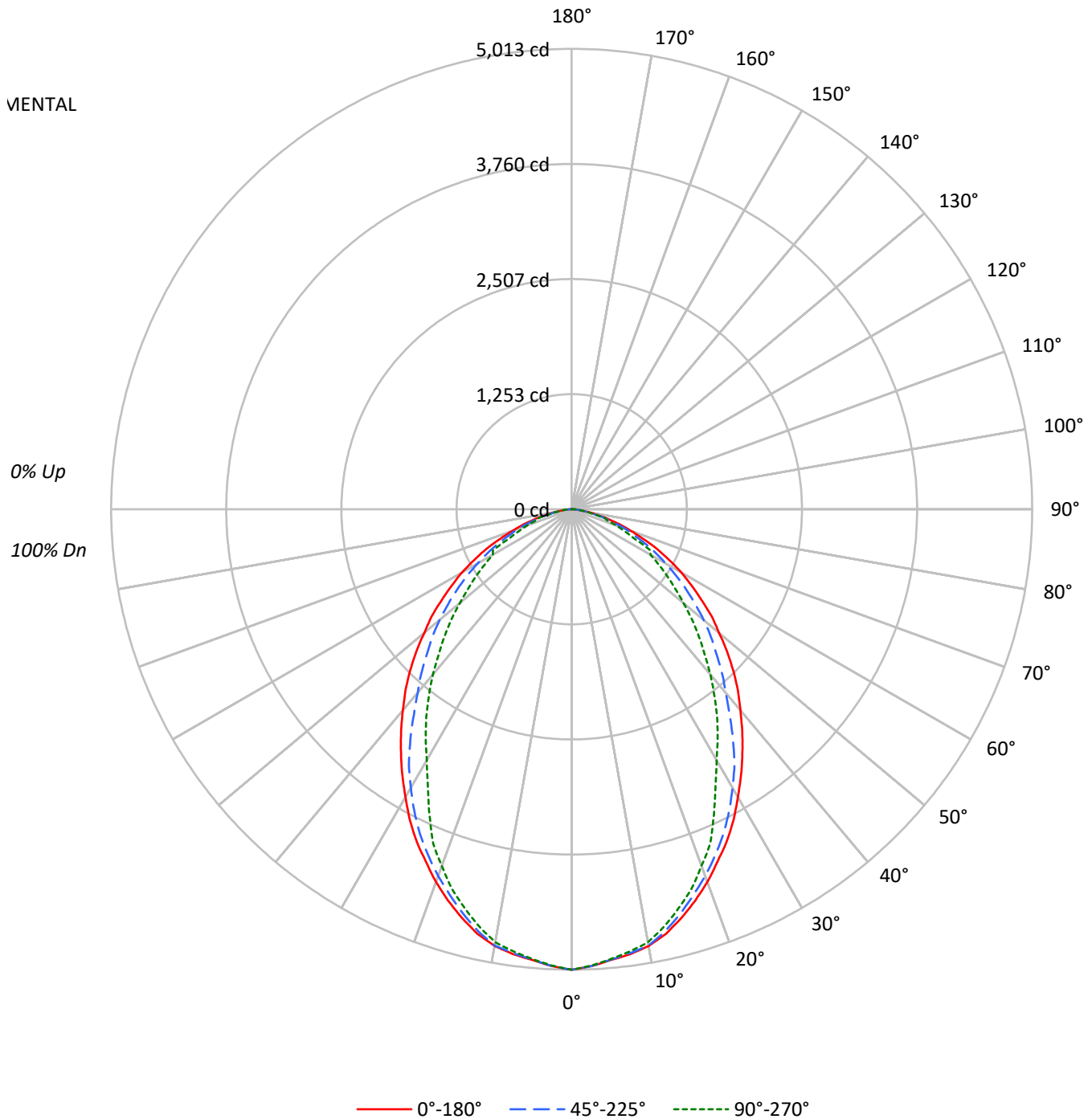
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	6745	6745	6745
5°	6654	6646	6638
10°	6596	6588	6541
15°	6418	6354	6265
20°	6183	6083	5917
25°	5928	5799	5438
30°	5619	5439	4898
35°	5322	5026	4531
40°	5019	4581	4123
45°	4731	4235	3728
50°	4380	3931	3324
55°	4052	3562	2978
60°	3712	3182	2667
65°	3266	2786	2362
70°	2690	2440	2006
75°	2139	1868	1958
80°	1437	1347	1258
85°	895	1073	1252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4731 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	466.7	4.7
10°-20°	1280.8	13.0
20°-30°	1773.1	18.0
30°-40°	1890.7	19.2
40°-50°	1724.8	17.5
50°-60°	1351.3	13.7
60°-70°	880.7	8.9
70°-80°	390.2	4.0
80°-90°	83.8	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°	3520.6	35.8
0°-40°	5411.2	55.0
0°-60°	8487.4	86.2
0°-90°	9842.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9842.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5013	5013	5013	5013	5013	
5°	4926	4921	4921	4915	4915	468
15°	4608	4608	4561	4515	4498	1295
25°	3993	3970	3906	3767	3663	1833
35°	3240	3217	3060	2828	2759	2026
45°	2486	2434	2226	2040	1959	1915
55°	1727	1675	1518	1339	1269	1549
65°	1026	968	875	893	742	1011
75°	412	382	359	342	377	441
85°	58	64	70	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5013.4	5013.4	5013.4	5013.4	5013.4
2.5°	4978.6	4978.6	4978.6	4972.8	4972.8
5°	4926.4	4920.7	4920.7	4914.9	4914.9
7.5°	4885.9	4880.1	4874.3	4868.5	4856.9
10°	4827.9	4827.9	4822.1	4793.1	4787.3
12.5°	4735.2	4729.4	4706.2	4665.6	4654.0
15°	4607.7	4607.7	4561.3	4514.9	4497.6
17.5°	4468.6	4462.8	4404.8	4358.5	4335.3
20°	4317.9	4306.3	4248.3	4173.0	4132.4
22.5°	4149.8	4149.8	4080.3	3981.7	3941.2
25°	3993.3	3970.1	3906.4	3767.3	3663.0
27.5°	3813.6	3778.9	3709.3	3512.3	3390.6
30°	3616.6	3599.2	3500.7	3245.7	3152.9
32.5°	3431.1	3402.1	3297.8	3031.2	2955.9
35°	3239.9	3216.7	3060.2	2828.4	2758.8
37.5°	3048.6	3019.6	2822.6	2637.1	2550.2
40°	2857.3	2822.6	2608.1	2440.0	2347.3
42.5°	2677.7	2631.3	2422.7	2243.0	2138.7
45°	2486.4	2434.2	2225.6	2040.1	1959.0
47.5°	2295.1	2248.8	2057.5	1866.3	1773.5
50°	2092.3	2051.7	1877.8	1686.6	1588.1
52.5°	1924.2	1860.5	1692.4	1501.1	1420.0
55°	1727.2	1675.0	1518.5	1338.8	1269.3
57.5°	1547.5	1495.3	1350.4	1182.3	1124.4
60°	1379.4	1304.1	1182.3	1037.5	991.1
62.5°	1193.9	1136.0	1031.7	909.9	967.9
65°	1025.9	967.9	875.2	892.6	741.9
67.5°	840.4	811.4	730.3	649.1	625.9
70°	683.9	649.1	620.2	533.2	510.0
72.5°	544.8	510.0	469.5	423.1	405.7
75°	411.5	382.5	359.3	342.0	376.7
77.5°	284.0	272.4	255.0	237.6	231.8
80°	185.5	179.7	173.9	168.1	162.3
82.5°	110.1	110.1	110.1	110.1	110.1
85°	58.0	63.8	69.5	75.3	81.1
87.5°	34.8	34.8	40.6	46.4	52.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)