

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: P563638

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563638
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-LD4-4HI-35-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15022.0 lumens
Efficiency: N/A
Efficacy: 86.9 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

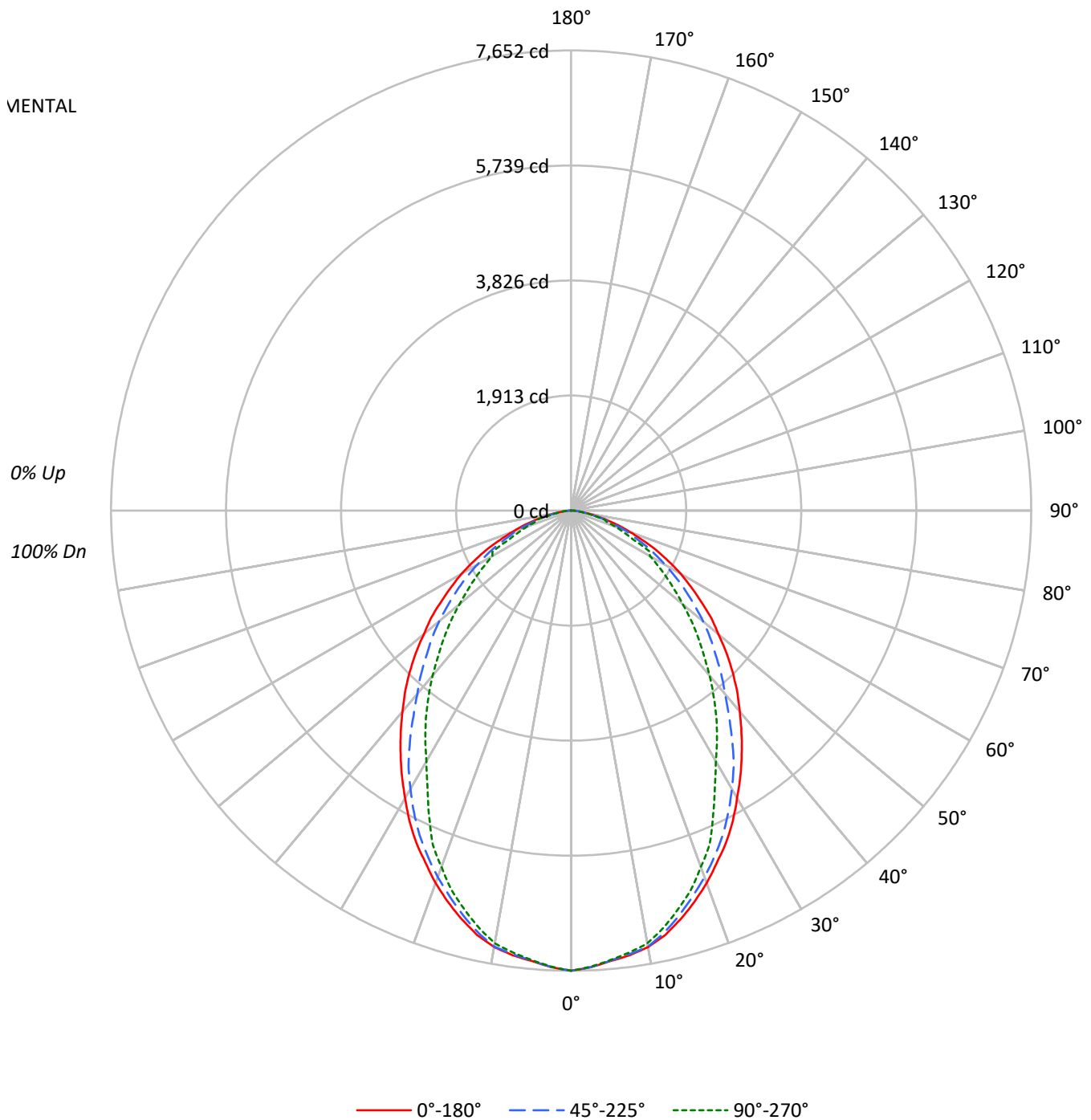
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10296	10296	10296
5°	10156	10144	10132
10°	10068	10056	9983
15°	9796	9698	9562
20°	9437	9284	9031
25°	9049	8852	8300
30°	8576	8301	7477
35°	8123	7672	6916
40°	7660	6992	6293
45°	7221	6464	5689
50°	6685	6000	5074
55°	6184	5437	4544
60°	5666	4856	4071
65°	4985	4253	3605
70°	4107	3723	3063
75°	3265	2851	2989
80°	2194	2056	1919
85°	1366	1639	1911

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7221 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	712.3	4.7
10°-20°	1954.8	13.0
20°-30°	2706.4	18.0
30°-40°	2885.8	19.2
40°-50°	2632.7	17.5
50°-60°	2062.5	13.7
60°-70°	1344.2	8.9
70°-80°	595.5	4.0
80°-90°	127.9	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°	5373.5	35.8
0°-40°	8259.2	55.0
0°-60°	12954.4	86.2
0°-90°	15022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7652	7652	7652	7652	7652	
5°	7519	7510	7510	7502	7502	714
15°	7033	7033	6962	6891	6865	1977
25°	6095	6060	5962	5750	5591	2798
35°	4945	4910	4671	4317	4211	3092
45°	3795	3715	3397	3114	2990	2923
55°	2636	2557	2318	2044	1937	2364
65°	1566	1477	1336	1362	1132	1543
75°	628	584	548	522	575	673
85°	88	97	106	115	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7652.0	7652.0	7652.0	7652.0	7652.0
2.5°	7598.9	7598.9	7598.9	7590.1	7590.1
5°	7519.3	7510.5	7510.5	7501.6	7501.6
7.5°	7457.4	7448.5	7439.7	7430.8	7413.2
10°	7368.9	7368.9	7360.1	7315.8	7307.0
12.5°	7227.4	7218.5	7183.2	7121.2	7103.5
15°	7032.8	7032.8	6962.0	6891.2	6864.7
17.5°	6820.5	6811.6	6723.1	6652.4	6617.0
20°	6590.5	6572.8	6484.3	6369.3	6307.4
22.5°	6333.9	6333.9	6227.8	6077.4	6015.4
25°	6095.1	6059.7	5962.4	5750.1	5590.8
27.5°	5820.8	5767.8	5661.6	5360.8	5175.1
30°	5520.1	5493.5	5343.1	4953.9	4812.4
32.5°	5237.0	5192.7	5033.5	4626.6	4511.6
35°	4945.1	4909.7	4670.8	4317.0	4210.8
37.5°	4653.1	4608.9	4308.1	4025.0	3892.3
40°	4361.2	4308.1	3980.8	3724.3	3582.7
42.5°	4087.0	4016.2	3697.7	3423.5	3264.3
45°	3795.0	3715.4	3397.0	3113.9	2990.0
47.5°	3503.1	3432.3	3140.4	2848.5	2707.0
50°	3193.5	3131.6	2866.2	2574.3	2423.9
52.5°	2937.0	2839.6	2583.1	2291.2	2167.3
55°	2636.2	2556.6	2317.7	2043.5	1937.3
57.5°	2361.9	2282.3	2061.2	1804.6	1716.2
60°	2105.4	1990.4	1804.6	1583.5	1512.7
62.5°	1822.3	1733.9	1574.6	1388.9	1477.3
65°	1565.8	1477.3	1335.8	1362.3	1132.3
67.5°	1282.7	1238.5	1114.6	990.8	955.4
70°	1043.9	990.8	946.5	813.9	778.5
72.5°	831.5	778.5	716.5	645.8	619.2
75°	628.1	583.9	548.5	521.9	575.0
77.5°	433.5	415.8	389.2	362.7	353.8
80°	283.1	274.2	265.4	256.5	247.7
82.5°	168.1	168.1	168.1	168.1	168.1
85°	88.5	97.3	106.2	115.0	123.8
87.5°	53.1	53.1	61.9	70.8	79.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)