

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: P563842

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563842
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-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9082.0 lumens
Efficiency: N/A
Efficacy: 97.0 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

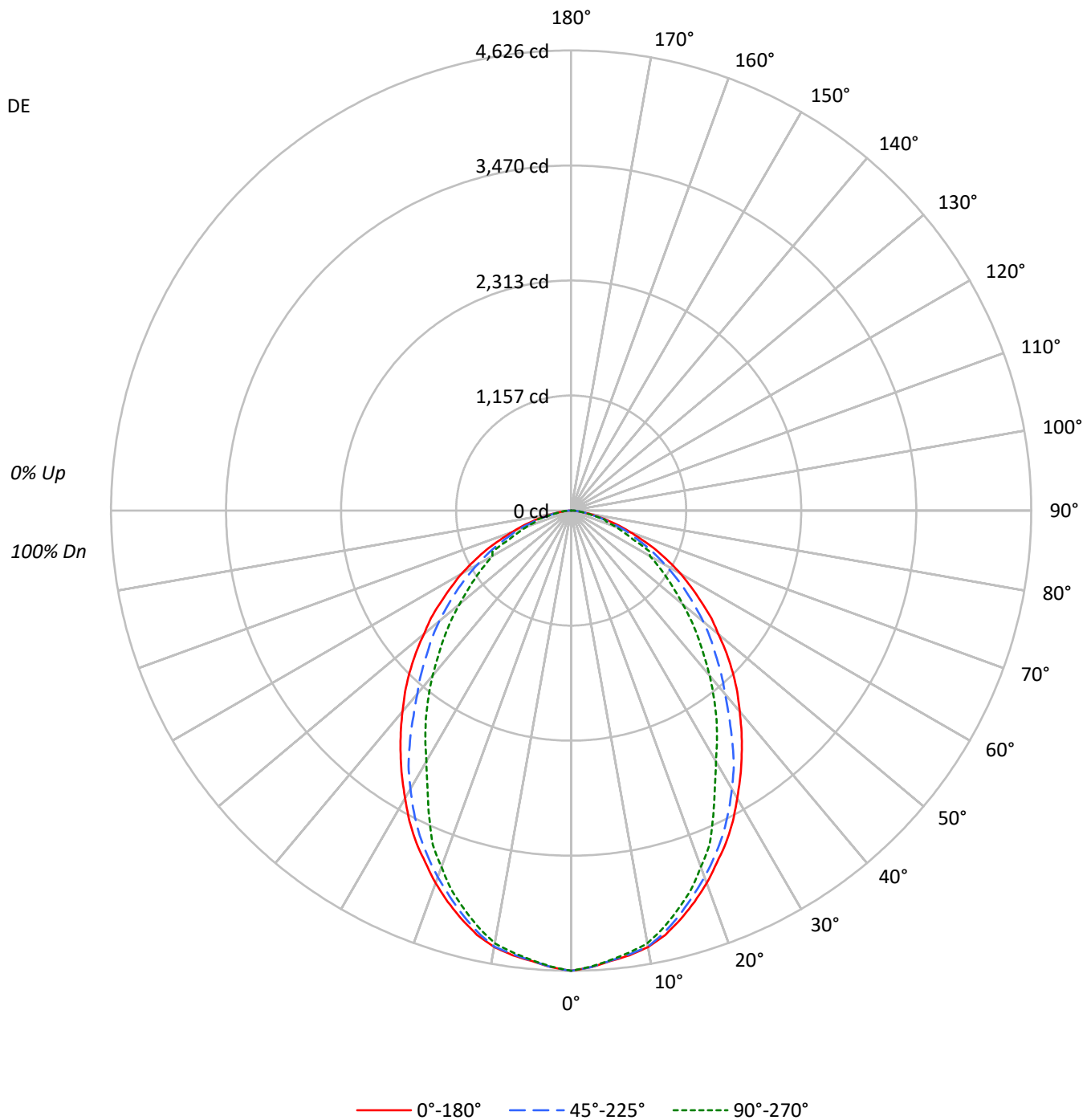
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6225	6225	6225
5°	6140	6133	6126
10°	6087	6080	6036
15°	5923	5863	5781
20°	5705	5613	5460
25°	5471	5351	5018
30°	5185	5019	4520
35°	4911	4638	4182
40°	4631	4227	3804
45°	4366	3908	3440
50°	4041	3627	3067
55°	3739	3287	2748
60°	3425	2936	2461
65°	3014	2571	2180
70°	2483	2251	1851
75°	1974	1724	1807
80°	1326	1243	1161
85°	826	991	1156

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4366 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	430.6	4.7
10°-20°	1181.9	13.0
20°-30°	1636.2	18.0
30°-40°	1744.7	19.2
40°-50°	1591.6	17.5
50°-60°	1246.9	13.7
60°-70°	812.7	8.9
70°-80°	360.0	4.0
80°-90°	77.3	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°	3248.7	35.8
0°-40°	4993.4	55.0
0°-60°	7831.9	86.2
0°-90°	9082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4626	4626	4626	4626	4626	
5°	4546	4541	4541	4535	4535	432
15°	4252	4252	4209	4166	4150	1195
25°	3685	3664	3605	3476	3380	1692
35°	2990	2968	2824	2610	2546	1869
45°	2294	2246	2054	1883	1808	1767
55°	1594	1546	1401	1235	1171	1430
65°	947	893	808	824	685	933
75°	380	353	332	316	348	407
85°	54	59	64	70	75	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4626.2	4626.2	4626.2	4626.2	4626.2
2.5°	4594.2	4594.2	4594.2	4588.8	4588.8
5°	4546.0	4540.7	4540.7	4535.3	4535.3
7.5°	4508.6	4503.2	4497.9	4492.5	4481.8
10°	4455.1	4455.1	4449.8	4423.0	4417.7
12.5°	4369.5	4364.2	4342.8	4305.4	4294.7
15°	4251.9	4251.9	4209.1	4166.3	4150.3
17.5°	4123.5	4118.2	4064.7	4021.9	4000.5
20°	3984.5	3973.8	3920.3	3850.8	3813.3
22.5°	3829.4	3829.4	3765.2	3674.3	3636.8
25°	3685.0	3663.6	3604.7	3476.4	3380.1
27.5°	3519.2	3487.1	3422.9	3241.0	3128.7
30°	3337.3	3321.3	3230.4	2995.0	2909.5
32.5°	3166.2	3139.4	3043.2	2797.1	2727.6
35°	2989.7	2968.3	2823.9	2610.0	2545.8
37.5°	2813.2	2786.4	2604.6	2433.5	2353.2
40°	2636.7	2604.6	2406.7	2251.6	2166.0
42.5°	2470.9	2428.1	2235.6	2069.8	1973.5
45°	2294.4	2246.3	2053.7	1882.6	1807.7
47.5°	2117.9	2075.1	1898.6	1722.1	1636.6
50°	1930.7	1893.3	1732.8	1556.3	1465.4
52.5°	1775.6	1716.8	1561.7	1385.2	1310.3
55°	1593.8	1545.6	1401.2	1235.4	1171.3
57.5°	1428.0	1379.9	1246.1	1091.0	1037.6
60°	1272.9	1203.4	1091.0	957.3	914.6
62.5°	1101.7	1048.3	952.0	839.7	893.2
65°	946.6	893.2	807.6	823.6	684.6
67.5°	775.5	748.8	673.9	599.0	577.6
70°	631.1	599.0	572.3	492.0	470.6
72.5°	502.7	470.6	433.2	390.4	374.4
75°	379.7	353.0	331.6	315.5	347.6
77.5°	262.1	251.4	235.3	219.3	213.9
80°	171.1	165.8	160.4	155.1	149.8
82.5°	101.6	101.6	101.6	101.6	101.6
85°	53.5	58.8	64.2	69.5	74.9
87.5°	32.1	32.1	37.4	42.8	48.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)