

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: P562888

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562888
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-LD4-2STD-35-UNV-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5239.0 lumens
Efficiency: N/A
Efficacy: 78.7 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

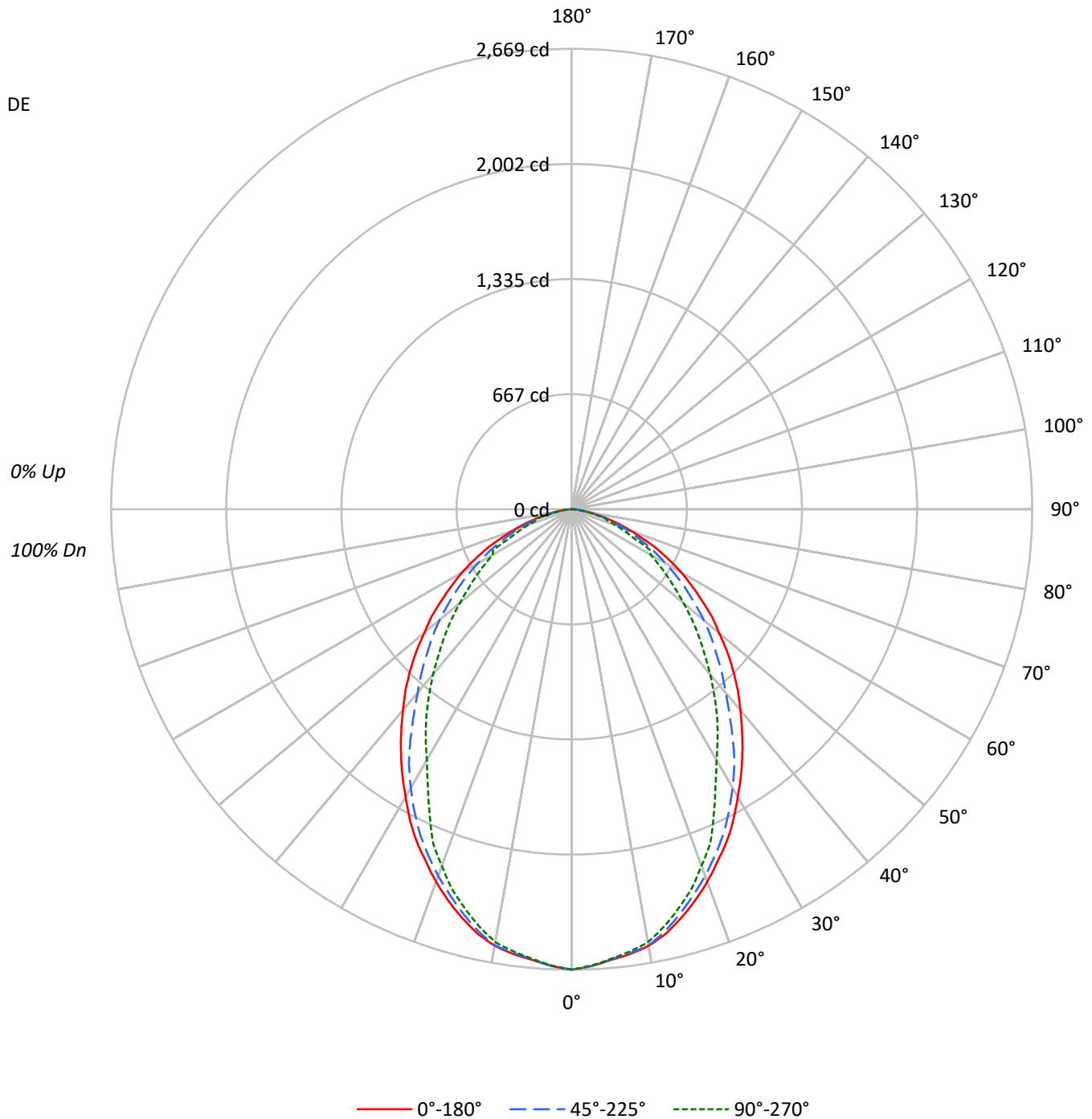
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562888

CATALOG NUMBER: FSR-24-4-LD4-2STD-35-UNV-81-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P562888

CATALOG NUMBER: FSR-24-4-LD4-2STD-35-UNV-81-88-EDD-90

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	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°	3591	3591	3591
5°	3542	3538	3534
10°	3511	3507	3482
15°	3416	3382	3335
20°	3291	3238	3150
25°	3156	3087	2895
30°	2991	2895	2607
35°	2833	2676	2412
40°	2672	2438	2195
45°	2518	2254	1984
50°	2331	2092	1769
55°	2157	1896	1585
60°	1976	1694	1420
65°	1739	1483	1257
70°	1432	1299	1068
75°	1138	994	1042
80°	765	717	669
85°	477	571	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2518 cd/sqm



TEST NUMBER: P562888

CATALOG NUMBER: FSR-24-4-LD4-2STD-35-UNV-81-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.4	4.7
10°-20°	681.8	13.0
20°-30°	943.8	18.0
30°-40°	1006.4	19.2
40°-50°	918.2	17.5
50°-60°	719.3	13.7
60°-70°	468.8	8.9
70°-80°	207.7	4.0
80°-90°	44.6	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°	1874.0	35.8
0°-40°	2880.5	55.0
0°-60°	4517.9	86.2
0°-90°	5239.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5239.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2669	2669	2669	2669	2669	
5°	2622	2619	2619	2616	2616	249
15°	2453	2453	2428	2403	2394	690
25°	2126	2113	2079	2005	1950	976
35°	1725	1712	1629	1506	1468	1078
45°	1324	1296	1185	1086	1043	1020
55°	919	892	808	713	676	825
65°	546	515	466	475	395	538
75°	219	204	191	182	200	235
85°	31	34	37	40	43	43
90°	0	0	0	0	0	



TEST NUMBER: P562888

CATALOG NUMBER: FSR-24-4-LD4-2STD-35-UNV-81-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2668.7	2668.7	2668.7	2668.7	2668.7
2.5°	2650.2	2650.2	2650.2	2647.1	2647.1
5°	2622.4	2619.3	2619.3	2616.2	2616.2
7.5°	2600.8	2597.7	2594.6	2591.5	2585.4
10°	2570.0	2570.0	2566.9	2551.4	2548.4
12.5°	2520.6	2517.5	2505.2	2483.6	2477.4
15°	2452.7	2452.7	2428.0	2403.4	2394.1
17.5°	2378.7	2375.6	2344.7	2320.1	2307.7
20°	2298.5	2292.3	2261.4	2221.3	2199.7
22.5°	2209.0	2209.0	2172.0	2119.5	2097.9
25°	2125.7	2113.3	2079.4	2005.4	1949.8
27.5°	2030.0	2011.5	1974.5	1869.6	1804.8
30°	1925.1	1915.9	1863.4	1727.7	1678.3
32.5°	1826.4	1811.0	1755.5	1613.5	1573.4
35°	1724.6	1712.3	1629.0	1505.6	1468.5
37.5°	1622.8	1607.4	1502.5	1403.8	1357.5
40°	1521.0	1502.5	1388.3	1298.9	1249.5
42.5°	1425.4	1400.7	1289.6	1194.0	1138.4
45°	1323.5	1295.8	1184.7	1086.0	1042.8
47.5°	1221.7	1197.0	1095.2	993.4	944.1
50°	1113.7	1092.2	999.6	897.8	845.3
52.5°	1024.3	990.3	900.9	799.1	755.9
55°	919.4	891.6	808.3	712.7	675.7
57.5°	823.7	796.0	718.8	629.4	598.5
60°	734.3	694.2	629.4	552.2	527.6
62.5°	635.5	604.7	549.2	484.4	515.2
65°	546.1	515.2	465.9	475.1	394.9
67.5°	447.4	431.9	388.7	345.5	333.2
70°	364.1	345.5	330.1	283.8	271.5
72.5°	290.0	271.5	249.9	225.2	216.0
75°	219.0	203.6	191.3	182.0	200.5
77.5°	151.2	145.0	135.7	126.5	123.4
80°	98.7	95.6	92.6	89.5	86.4
82.5°	58.6	58.6	58.6	58.6	58.6
85°	30.9	33.9	37.0	40.1	43.2
87.5°	18.5	18.5	21.6	24.7	27.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)