

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: P563223

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563223
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-50-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12861.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

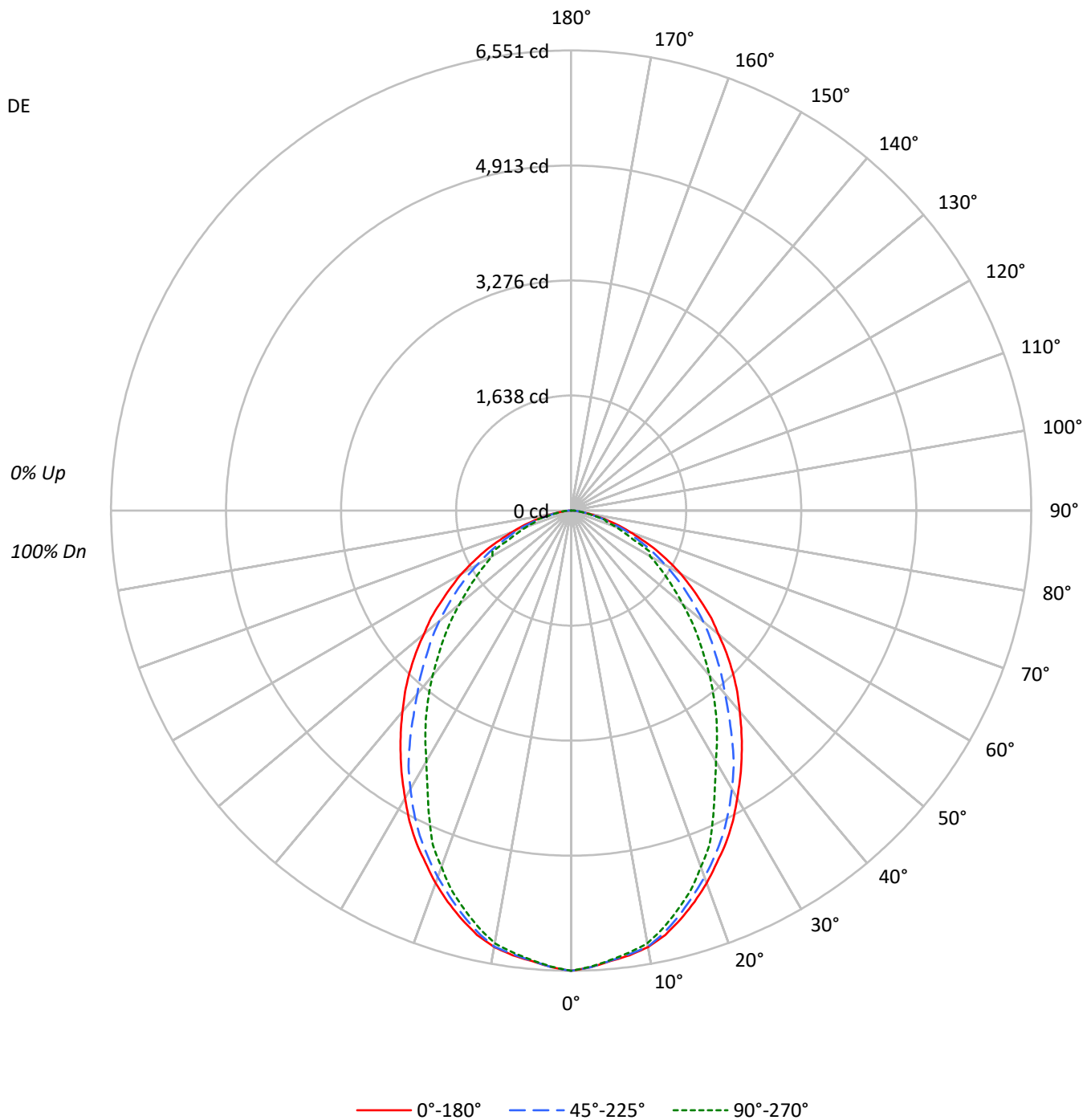
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563223

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-82-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563223

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-82-87-EDD

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°	8815	8815	8815
5°	8695	8685	8674
10°	8620	8609	8547
15°	8387	8303	8187
20°	8079	7949	7732
25°	7747	7578	7106
30°	7342	7107	6401
35°	6954	6568	5922
40°	6558	5986	5387
45°	6182	5534	4871
50°	5723	5137	4344
55°	5294	4655	3891
60°	4850	4158	3485
65°	4268	3641	3086
70°	3516	3188	2622
75°	2795	2441	2559
80°	1878	1760	1643
85°	1169	1403	1636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6182 cd/sqm



TEST NUMBER: P563223

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	609.8	4.7
10°-20°	1673.6	13.0
20°-30°	2317.0	18.0
30°-40°	2470.6	19.2
40°-50°	2253.9	17.5
50°-60°	1765.8	13.7
60°-70°	1150.8	8.9
70°-80°	509.9	4.0
80°-90°	109.5	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°	4600.5	35.8
0°-40°	7071.1	55.0
0°-60°	11090.8	86.2
0°-90°	12861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12861.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6551	6551	6551	6551	6551	
5°	6438	6430	6430	6422	6422	611
15°	6021	6021	5960	5900	5877	1693
25°	5218	5188	5105	4923	4787	2396
35°	4234	4203	3999	3696	3605	2647
45°	3249	3181	2908	2666	2560	2503
55°	2257	2189	1984	1750	1659	2024
65°	1340	1265	1144	1166	969	1321
75°	538	500	470	447	492	576
85°	76	83	91	98	106	105
90°	0	0	0	0	0	



TEST NUMBER: P563223

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-82-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6551.2	6551.2	6551.2	6551.2	6551.2
2.5°	6505.8	6505.8	6505.8	6498.2	6498.2
5°	6437.6	6430.0	6430.0	6422.5	6422.5
7.5°	6384.6	6377.0	6369.5	6361.9	6346.7
10°	6308.9	6308.9	6301.3	6263.4	6255.8
12.5°	6187.7	6180.1	6149.8	6096.8	6081.7
15°	6021.1	6021.1	5960.5	5899.9	5877.2
17.5°	5839.3	5831.7	5756.0	5695.4	5665.1
20°	5642.4	5627.2	5551.5	5453.0	5400.0
22.5°	5422.7	5422.7	5331.9	5203.1	5150.1
25°	5218.3	5188.0	5104.7	4922.9	4786.6
27.5°	4983.5	4938.0	4847.1	4589.6	4430.6
30°	4726.0	4703.2	4574.5	4241.3	4120.1
32.5°	4483.6	4445.7	4309.4	3961.0	3862.6
35°	4233.7	4203.4	3998.9	3695.9	3605.1
37.5°	3983.7	3945.9	3688.4	3446.0	3332.4
40°	3733.8	3688.4	3408.1	3188.5	3067.3
42.5°	3499.0	3438.4	3165.8	2931.0	2794.7
45°	3249.1	3180.9	2908.3	2665.9	2559.9
47.5°	2999.2	2938.6	2688.7	2438.7	2317.5
50°	2734.1	2681.1	2453.9	2203.9	2075.2
52.5°	2514.5	2431.1	2211.5	1961.6	1855.5
55°	2257.0	2188.8	1984.3	1749.5	1658.6
57.5°	2022.2	1954.0	1764.7	1545.0	1469.3
60°	1802.5	1704.1	1545.0	1355.7	1295.1
62.5°	1560.2	1484.4	1348.1	1189.1	1264.8
65°	1340.5	1264.8	1143.6	1166.3	969.4
67.5°	1098.2	1060.3	954.3	848.3	818.0
70°	893.7	848.3	810.4	696.8	666.5
72.5°	711.9	666.5	613.5	552.9	530.2
75°	537.7	499.9	469.6	446.8	492.3
77.5°	371.1	356.0	333.2	310.5	302.9
80°	242.4	234.8	227.2	219.6	212.1
82.5°	143.9	143.9	143.9	143.9	143.9
85°	75.7	83.3	90.9	98.5	106.0
87.5°	45.4	45.4	53.0	60.6	68.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)