

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: P563872

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563872
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-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9773.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

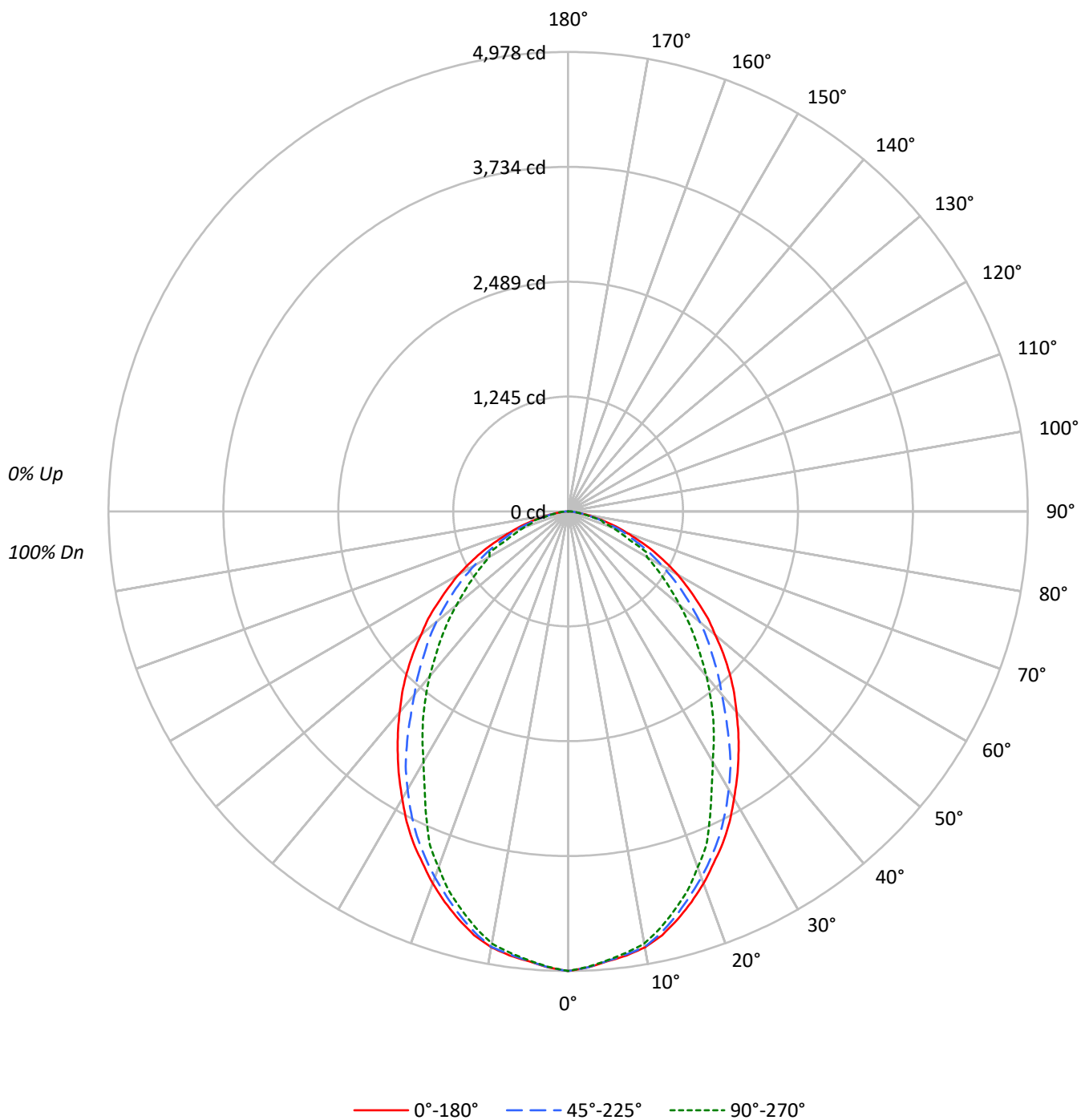
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563872

CATALOG NUMBER: FSR-24-4-LD4-4LO-35-UNV-93-84-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563872

CATALOG NUMBER: FSR-24-4-LD4-4LO-35-UNV-93-84-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
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°	6698	6698	6698
5°	6607	6599	6592
10°	6550	6542	6495
15°	6373	6309	6221
20°	6139	6040	5875
25°	5887	5759	5400
30°	5579	5401	4864
35°	5284	4991	4500
40°	4983	4549	4094
45°	4698	4205	3702
50°	4349	3903	3301
55°	4023	3537	2957
60°	3686	3159	2648
65°	3243	2767	2345
70°	2672	2423	1993
75°	2124	1855	1945
80°	1427	1338	1248
85°	889	1067	1244

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4698 cd/sqm

TEST NUMBER: P563872

CATALOG NUMBER: FSR-24-4-LD4-4LO-35-UNV-93-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	463.4	4.7
10°-20°	1271.8	13.0
20°-30°	1760.7	18.0
30°-40°	1877.4	19.2
40°-50°	1712.8	17.5
50°-60°	1341.8	13.7
60°-70°	874.5	8.9
70°-80°	387.5	4.0
80°-90°	83.2	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°	3495.9	35.8
0°-40°	5373.3	55.0
0°-60°	8427.8	86.2
0°-90°	9773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9773.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4978	4978	4978	4978	4978	
5°	4892	4886	4886	4880	4880	464
15°	4575	4575	4529	4483	4466	1286
25°	3965	3942	3879	3741	3637	1820
35°	3217	3194	3039	2808	2740	2011
45°	2469	2417	2210	2026	1945	1902
55°	1715	1663	1508	1329	1260	1538
65°	1019	961	869	886	737	1004
75°	409	380	357	340	374	438
85°	58	63	69	75	81	80
90°	0	0	0	0	0	

TEST NUMBER: P563872

CATALOG NUMBER: FSR-24-4-LD4-4LO-35-UNV-93-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4978.2	4978.2	4978.2	4978.2	4978.2
2.5°	4943.7	4943.7	4943.7	4937.9	4937.9
5°	4891.9	4886.2	4886.2	4880.4	4880.4
7.5°	4851.6	4845.9	4840.1	4834.4	4822.8
10°	4794.1	4794.1	4788.3	4759.5	4753.8
12.5°	4702.0	4696.2	4673.2	4632.9	4621.4
15°	4575.4	4575.4	4529.3	4483.3	4466.0
17.5°	4437.2	4431.5	4373.9	4327.9	4304.9
20°	4287.6	4276.1	4218.6	4143.7	4103.4
22.5°	4120.7	4120.7	4051.7	3953.8	3913.5
25°	3965.3	3942.3	3879.0	3740.9	3637.3
27.5°	3786.9	3752.4	3683.3	3487.6	3366.8
30°	3591.2	3574.0	3476.1	3222.9	3130.8
32.5°	3407.1	3378.3	3274.7	3010.0	2935.1
35°	3217.1	3194.1	3038.7	2808.5	2739.5
37.5°	3027.2	2998.5	2802.8	2618.6	2532.3
40°	2837.3	2802.8	2589.8	2422.9	2330.9
42.5°	2658.9	2612.9	2405.7	2227.3	2123.7
45°	2469.0	2417.2	2210.0	2025.8	1945.3
47.5°	2279.1	2233.0	2043.1	1853.2	1761.1
50°	2077.6	2037.3	1864.7	1674.8	1576.9
52.5°	1910.7	1847.4	1680.5	1490.6	1410.0
55°	1715.0	1663.2	1507.9	1329.4	1260.4
57.5°	1536.6	1484.8	1341.0	1174.1	1116.5
60°	1369.7	1294.9	1174.1	1030.2	984.1
62.5°	1185.6	1128.0	1024.4	903.6	961.1
65°	1018.7	961.1	869.0	886.3	736.7
67.5°	834.5	805.7	725.2	644.6	621.6
70°	679.1	644.6	615.8	529.5	506.5
72.5°	541.0	506.5	466.2	420.1	402.9
75°	408.6	379.8	356.8	339.6	374.1
77.5°	282.0	270.5	253.2	236.0	230.2
80°	184.2	178.4	172.7	166.9	161.1
82.5°	109.3	109.3	109.3	109.3	109.3
85°	57.6	63.3	69.1	74.8	80.6
87.5°	34.5	34.5	40.3	46.0	51.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)