

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: P590723

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590723
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4HI-35-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9015.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

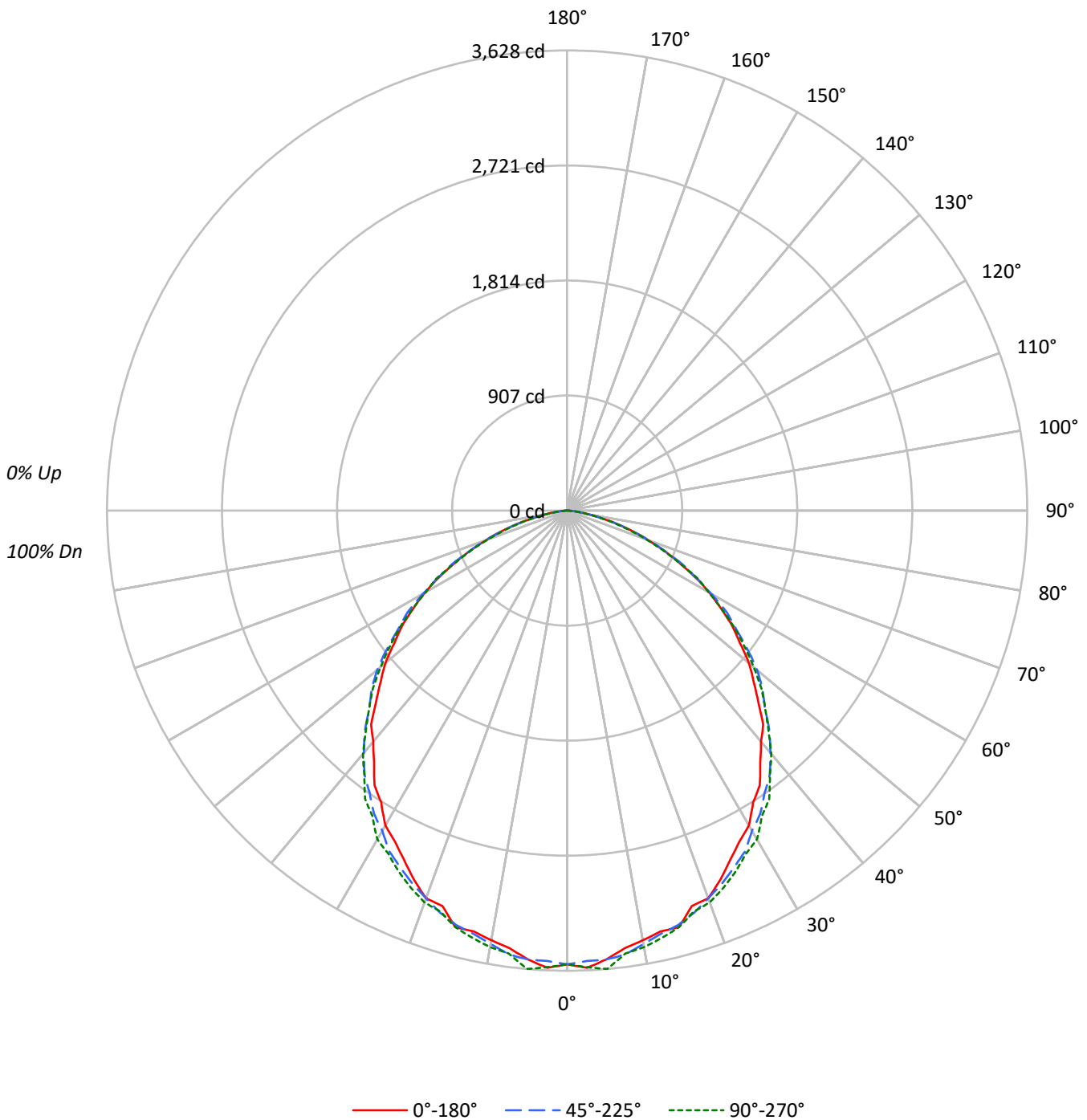
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590723

CATALOG NUMBER: FSR-24-2-LD4-4HI-35-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590723

CATALOG NUMBER: FSR-24-2-LD4-4HI-35-UNV-81-96-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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9625	9625	9625
5°	9594	9597	9799
10°	9399	9481	9548
15°	9473	9422	9475
20°	9314	9314	9413
25°	9027	9225	9326
30°	8903	9060	9301
35°	8693	8921	9121
40°	8355	8757	8796
45°	8103	8391	8403
50°	7836	8190	8033
55°	7467	7612	7558
60°	6982	7051	6925
65°	6225	6384	6181
70°	5342	5360	5211
75°	4231	4221	4058
80°	2834	2755	2648
85°	1541	1525	1426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8607 cd/sqm



TEST NUMBER: P590723

CATALOG NUMBER: FSR-24-2-LD4-4HI-35-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.5	3.7
10°-20°	953.6	10.6
20°-30°	1428.7	15.8
30°-40°	1693.3	18.8
40°-50°	1696.4	18.8
50°-60°	1439.9	16.0
60°-70°	970.8	10.8
70°-80°	426.6	4.7
80°-90°	69.3	0.8
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°	2718.7	30.2
0°-40°	4412.0	48.9
0°-60°	7548.3	83.7
0°-90°	9015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9015.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3577	3577	3577	3577	3577	
5°	3552	3543	3553	3542	3628	335
15°	3400	3361	3382	3400	3401	947
25°	3040	3057	3107	3147	3141	1406
35°	2646	2654	2716	2778	2777	1643
45°	2129	2169	2205	2262	2208	1647
55°	1592	1581	1622	1611	1611	1416
65°	978	965	1003	964	971	972
75°	407	399	406	377	390	436
85°	50	48	49	48	46	72
90°	0	0	0	0	0	



TEST NUMBER: P590723

CATALOG NUMBER: FSR-24-2-LD4-4HI-35-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3576.9	3576.9	3576.9	3576.9	3576.9
2.5°	3607.9	3580.6	3555.2	3584.8	3602.8
5°	3551.5	3543.2	3552.9	3542.3	3627.7
7.5°	3478.6	3510.4	3528.9	3517.3	3522.4
10°	3439.8	3428.7	3469.8	3498.4	3494.3
12.5°	3398.2	3414.8	3417.1	3448.1	3450.8
15°	3400.5	3361.2	3382.0	3399.6	3401.0
17.5°	3268.4	3310.9	3325.2	3365.4	3315.5
20°	3252.3	3221.3	3252.3	3293.4	3286.9
22.5°	3153.0	3118.3	3184.8	3221.3	3219.0
25°	3040.3	3056.9	3106.8	3147.4	3141.0
27.5°	2941.4	2960.8	3032.0	3087.8	3051.8
30°	2865.2	2855.5	2915.6	2965.5	2993.2
32.5°	2729.0	2764.1	2834.3	2883.7	2857.4
35°	2646.3	2654.2	2715.6	2778.4	2776.6
37.5°	2501.8	2538.3	2624.6	2642.2	2626.0
40°	2378.5	2414.9	2493.0	2511.9	2504.1
42.5°	2287.5	2293.9	2360.9	2382.6	2348.0
45°	2129.1	2168.8	2204.8	2261.6	2208.0
47.5°	1994.2	2012.7	2090.3	2105.5	2077.3
50°	1871.8	1878.3	1956.3	1937.4	1918.9
52.5°	1718.0	1745.3	1789.2	1785.5	1763.8
55°	1591.5	1580.9	1622.4	1611.3	1610.9
57.5°	1439.5	1458.0	1492.2	1474.6	1446.5
60°	1297.3	1297.8	1310.2	1290.4	1286.7
62.5°	1138.9	1144.4	1147.2	1122.7	1162.4
65°	977.7	964.8	1002.6	964.3	970.8
67.5°	829.5	835.9	832.2	808.2	817.5
70°	678.9	687.2	681.2	654.0	662.3
72.5°	541.3	531.1	537.6	503.4	519.1
75°	406.9	398.6	406.0	377.3	390.3
77.5°	277.1	283.6	278.9	263.7	272.5
80°	182.9	177.8	177.8	169.0	170.9
82.5°	106.7	101.6	100.2	97.4	101.6
85°	49.9	48.5	49.4	48.0	46.2
87.5°	18.0	18.5	18.5	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)