

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: P590755

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590755
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9105.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

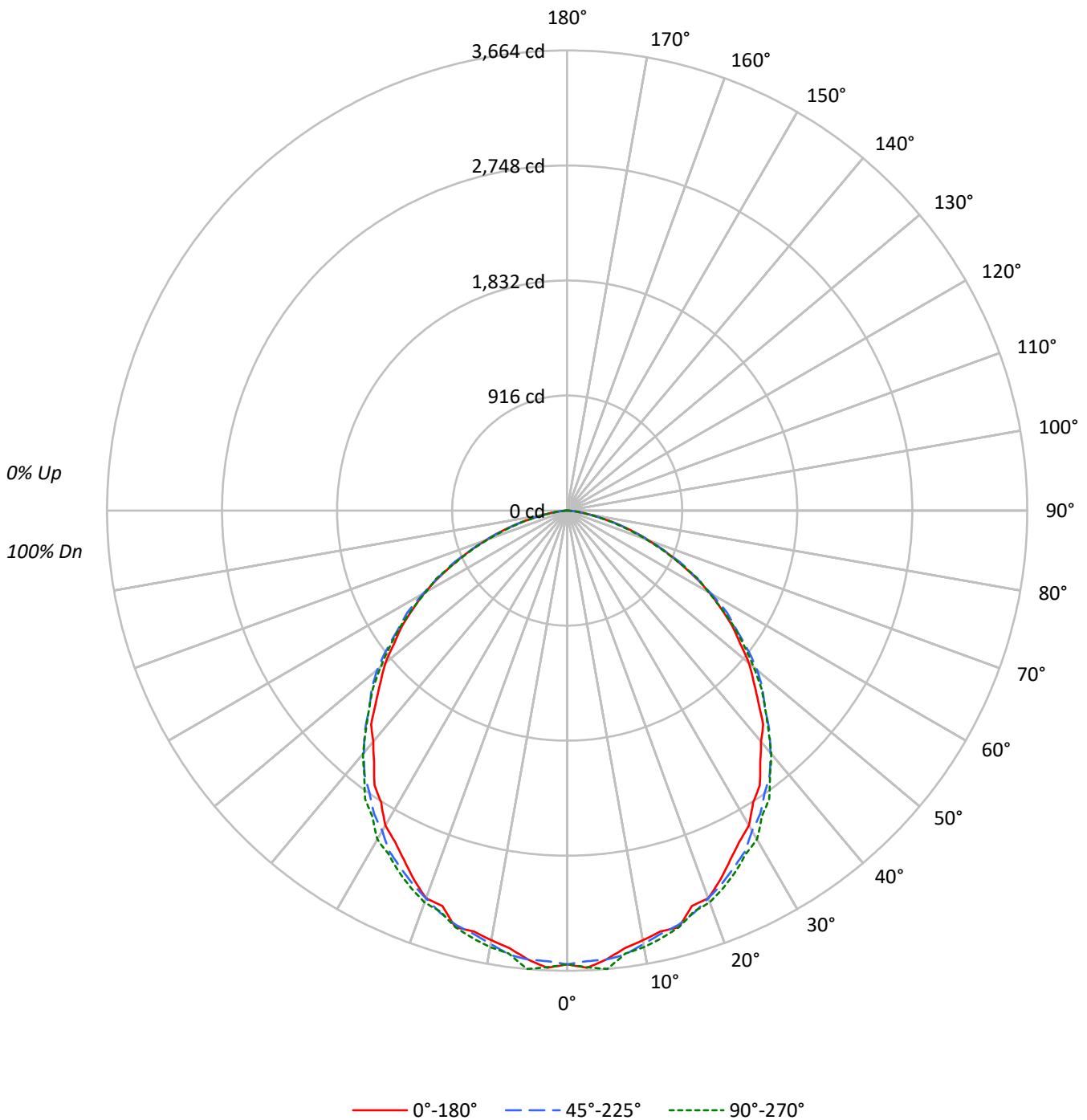
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590755

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590755

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-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°	9721	9721	9721
5°	9689	9693	9897
10°	9493	9576	9643
15°	9568	9516	9569
20°	9406	9406	9507
25°	9117	9317	9419
30°	8992	9150	9393
35°	8780	9010	9212
40°	8439	8845	8884
45°	8183	8474	8487
50°	7914	8272	8114
55°	7541	7688	7633
60°	7052	7122	6994
65°	6288	6448	6243
70°	5395	5413	5263
75°	4272	4263	4098
80°	2862	2783	2675
85°	1556	1541	1439

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8693 cd/sqm



TEST NUMBER: P590755

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.8	3.7
10°-20°	963.1	10.6
20°-30°	1442.9	15.8
30°-40°	1710.2	18.8
40°-50°	1713.3	18.8
50°-60°	1454.3	16.0
60°-70°	980.5	10.8
70°-80°	430.8	4.7
80°-90°	70.0	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°	2745.8	30.2
0°-40°	4456.0	48.9
0°-60°	7623.6	83.7
0°-90°	9105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3613	3613	3613	3613	3613	
5°	3587	3579	3588	3578	3664	338
15°	3434	3395	3416	3434	3435	957
25°	3071	3087	3138	3179	3172	1420
35°	2673	2681	2743	2806	2804	1659
45°	2150	2190	2227	2284	2230	1663
55°	1607	1597	1639	1627	1627	1430
65°	988	974	1013	974	980	982
75°	411	402	410	381	394	440
85°	50	49	50	48	47	73
90°	0	0	0	0	0	



TEST NUMBER: P590755

CATALOG NUMBER: FSR-24-2-LD4-4HI-40-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3612.6	3612.6	3612.6	3612.6	3612.6
2.5°	3643.9	3616.4	3590.7	3620.6	3638.8
5°	3587.0	3578.6	3588.4	3577.7	3663.9
7.5°	3513.3	3545.5	3564.1	3552.5	3557.6
10°	3474.1	3462.9	3504.4	3533.3	3529.1
12.5°	3432.1	3448.9	3451.2	3482.5	3485.3
15°	3434.5	3394.8	3415.8	3433.5	3434.9
17.5°	3301.0	3344.0	3358.4	3399.0	3348.6
20°	3284.7	3253.5	3284.7	3326.2	3319.7
22.5°	3184.4	3149.5	3216.6	3253.5	3251.1
25°	3070.6	3087.4	3137.8	3178.8	3172.3
27.5°	2970.8	2990.4	3062.2	3118.7	3082.3
30°	2893.8	2884.0	2944.7	2995.1	3023.0
32.5°	2756.2	2791.7	2862.6	2912.5	2885.9
35°	2672.7	2680.7	2742.7	2806.1	2804.3
37.5°	2526.7	2563.6	2650.8	2668.5	2652.2
40°	2402.2	2439.1	2517.9	2537.0	2529.1
42.5°	2310.3	2316.8	2384.5	2406.4	2371.4
45°	2150.3	2190.4	2226.8	2284.2	2230.1
47.5°	2014.1	2032.8	2111.1	2126.5	2098.1
50°	1890.5	1897.0	1975.9	1956.7	1938.1
52.5°	1735.2	1762.7	1807.0	1803.3	1781.4
55°	1607.4	1596.6	1638.6	1627.4	1627.0
57.5°	1453.9	1472.6	1507.1	1489.4	1460.9
60°	1310.3	1310.7	1323.3	1303.3	1299.5
62.5°	1150.3	1155.9	1158.7	1133.9	1174.0
65°	987.5	974.4	1012.7	973.9	980.5
67.5°	837.7	844.3	840.5	816.3	825.6
70°	685.7	694.1	688.0	660.5	668.9
72.5°	546.7	536.4	542.9	508.4	524.3
75°	410.9	402.5	410.0	381.1	394.1
77.5°	279.9	286.4	281.7	266.3	275.2
80°	184.7	179.6	179.6	170.7	172.6
82.5°	107.7	102.6	101.2	98.4	102.6
85°	50.4	49.0	49.9	48.5	46.6
87.5°	18.2	18.7	18.7	17.7	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)