

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: P590797

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590797
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-50-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9853.0 lumens
Efficiency: N/A
Efficacy: 114.0 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

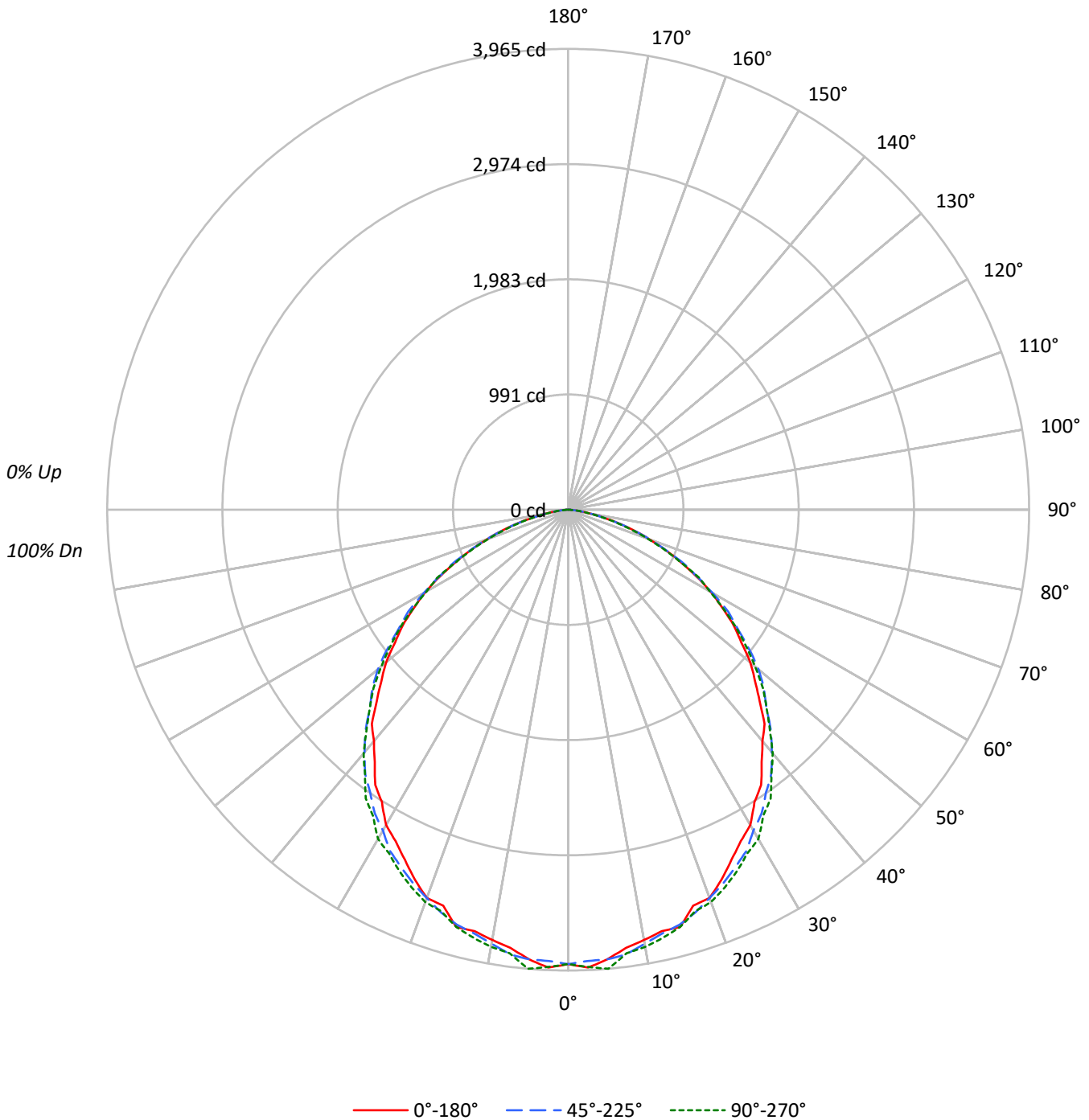
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590797

CATALOG NUMBER: FSR-24-2-LD4-4HI-50-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590797

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10520	10520	10520
5°	10485	10490	10710
10°	10273	10362	10436
15°	10354	10298	10355
20°	10179	10179	10287
25°	9866	10082	10193
30°	9731	9902	10165
35°	9501	9750	9969
40°	9132	9571	9614
45°	8856	9171	9184
50°	8565	8951	8780
55°	8161	8319	8260
60°	7631	7707	7569
65°	6804	6977	6756
70°	5838	5858	5695
75°	4624	4613	4434
80°	3098	3011	2895
85°	1683	1667	1559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9407 cd/sqm



TEST NUMBER: P590797

CATALOG NUMBER: FSR-24-2-LD4-4HI-50-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.7	3.7
10°-20°	1042.2	10.6
20°-30°	1561.5	15.8
30°-40°	1850.7	18.8
40°-50°	1854.1	18.8
50°-60°	1573.8	16.0
60°-70°	1061.1	10.8
70°-80°	466.2	4.7
80°-90°	75.8	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°	2971.4	30.2
0°-40°	4822.1	48.9
0°-60°	8249.9	83.7
0°-90°	9853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9853.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3909	3909	3909	3909	3909	
5°	3882	3873	3883	3872	3965	366
15°	3717	3674	3696	3716	3717	1035
25°	3323	3341	3396	3440	3433	1536
35°	2892	2901	2968	3037	3035	1796
45°	2327	2370	2410	2472	2413	1800
55°	1739	1728	1773	1761	1761	1547
65°	1069	1054	1096	1054	1061	1063
75°	445	436	444	412	426	477
85°	54	53	54	52	50	79
90°	0	0	0	0	0	



TEST NUMBER: P590797

CATALOG NUMBER: FSR-24-2-LD4-4HI-50-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3909.4	3909.4	3909.4	3909.4	3909.4
2.5°	3943.2	3913.5	3885.7	3918.0	3937.7
5°	3881.7	3872.6	3883.2	3871.6	3964.9
7.5°	3801.9	3836.7	3856.9	3844.3	3849.9
10°	3759.5	3747.4	3792.3	3823.6	3819.1
12.5°	3714.1	3732.2	3734.8	3768.6	3771.6
15°	3716.6	3673.7	3696.4	3715.6	3717.1
17.5°	3572.2	3618.7	3634.3	3678.2	3623.7
20°	3554.6	3520.8	3554.6	3599.5	3592.4
22.5°	3446.0	3408.2	3480.9	3520.8	3518.2
25°	3322.9	3341.1	3395.6	3440.0	3432.9
27.5°	3214.9	3236.1	3313.8	3374.9	3335.5
30°	3131.6	3121.0	3186.6	3241.1	3271.4
32.5°	2982.7	3021.0	3097.8	3151.8	3123.0
35°	2892.3	2900.9	2968.0	3036.7	3034.7
37.5°	2734.3	2774.2	2868.6	2887.8	2870.1
40°	2599.6	2639.4	2724.7	2745.4	2736.8
42.5°	2500.1	2507.2	2580.4	2604.1	2566.2
45°	2327.0	2370.4	2409.8	2471.8	2413.3
47.5°	2179.6	2199.8	2284.6	2301.2	2270.4
50°	2045.8	2052.9	2138.2	2117.5	2097.3
52.5°	1877.7	1907.5	1955.5	1951.4	1927.7
55°	1739.4	1727.8	1773.2	1761.1	1760.6
57.5°	1573.4	1593.5	1630.9	1611.7	1580.9
60°	1417.9	1418.4	1432.0	1410.3	1406.3
62.5°	1244.8	1250.8	1253.8	1227.1	1270.5
65°	1068.6	1054.5	1095.8	1054.0	1061.0
67.5°	906.6	913.6	909.6	883.3	893.4
70°	742.0	751.1	744.5	714.8	723.8
72.5°	591.6	580.5	587.5	550.2	567.4
75°	444.7	435.6	443.7	412.4	426.5
77.5°	302.9	309.9	304.9	288.2	297.8
80°	199.9	194.3	194.3	184.7	186.8
82.5°	116.6	111.0	109.5	106.5	111.0
85°	54.5	53.0	54.0	52.5	50.5
87.5°	19.7	20.2	20.2	19.2	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)