

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: P590450

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590450
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-LD4-3HI-35-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7211.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

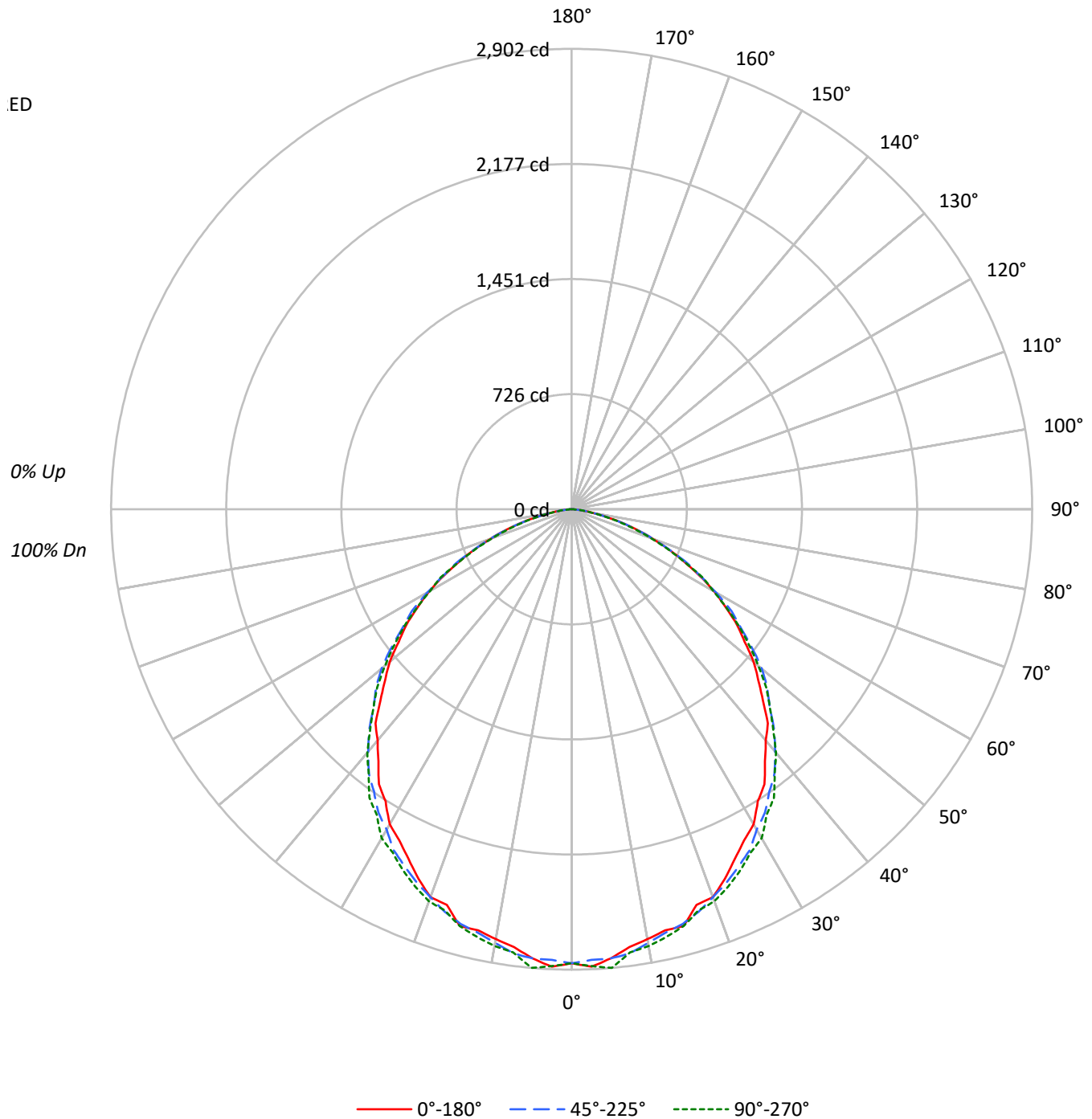
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590450

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-93-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590450

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-93-94-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7699	7699	7699
5°	7674	7677	7839
10°	7518	7584	7637
15°	7578	7536	7579
20°	7450	7450	7529
25°	7221	7379	7460
30°	7122	7246	7439
35°	6954	7136	7296
40°	6683	7005	7036
45°	6481	6712	6721
50°	6268	6551	6426
55°	5972	6089	6045
60°	5585	5640	5539
65°	4980	5107	4944
70°	4272	4287	4168
75°	3384	3376	3246
80°	2267	2204	2118
85°	1232	1220	1139

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6884 cd/sqm



TEST NUMBER: P590450

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-93-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.1	3.7
10°-20°	762.8	10.6
20°-30°	1142.8	15.8
30°-40°	1354.4	18.8
40°-50°	1356.9	18.8
50°-60°	1151.8	16.0
60°-70°	776.5	10.8
70°-80°	341.2	4.7
80°-90°	55.4	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°	2174.7	30.2
0°-40°	3529.1	48.9
0°-60°	6037.8	83.7
0°-90°	7211.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7211.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2861	2861	2861	2861	2861	
5°	2841	2834	2842	2833	2902	268
15°	2720	2689	2705	2719	2720	758
25°	2432	2445	2485	2518	2512	1124
35°	2117	2123	2172	2222	2221	1314
45°	1703	1735	1764	1809	1766	1317
55°	1273	1264	1298	1289	1288	1132
65°	782	772	802	771	776	778
75°	326	319	325	302	312	349
85°	40	39	40	38	37	58
90°	0	0	0	0	0	



TEST NUMBER: P590450

CATALOG NUMBER: FSR-24-2-LD4-3HI-35-UNV-93-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2861.1	2861.1	2861.1	2861.1	2861.1
2.5°	2885.9	2864.1	2843.8	2867.4	2881.8
5°	2840.8	2834.2	2841.9	2833.4	2901.8
7.5°	2782.5	2807.9	2822.7	2813.5	2817.6
10°	2751.4	2742.6	2775.4	2798.3	2795.0
12.5°	2718.2	2731.5	2733.3	2758.1	2760.3
15°	2720.0	2688.6	2705.2	2719.3	2720.4
17.5°	2614.4	2648.4	2659.8	2691.9	2652.1
20°	2601.4	2576.7	2601.4	2634.3	2629.1
22.5°	2522.0	2494.3	2547.5	2576.7	2574.8
25°	2431.9	2445.2	2485.1	2517.6	2512.4
27.5°	2352.8	2368.3	2425.2	2469.9	2441.1
30°	2291.9	2284.1	2332.1	2372.0	2394.2
32.5°	2182.9	2211.0	2267.1	2306.6	2285.6
35°	2116.8	2123.0	2172.2	2222.4	2220.9
37.5°	2001.1	2030.3	2099.4	2113.4	2100.5
40°	1902.5	1931.7	1994.1	2009.3	2003.0
42.5°	1829.7	1834.9	1888.5	1905.8	1878.1
45°	1703.0	1734.8	1763.6	1809.0	1766.2
47.5°	1595.1	1609.9	1672.0	1684.2	1661.6
50°	1497.3	1502.4	1564.9	1549.7	1534.9
52.5°	1374.2	1396.0	1431.1	1428.2	1410.8
55°	1273.0	1264.5	1297.8	1288.9	1288.5
57.5°	1151.5	1166.3	1193.6	1179.6	1157.0
60°	1037.7	1038.1	1048.0	1032.2	1029.2
62.5°	911.0	915.4	917.6	898.1	929.8
65°	782.1	771.7	802.0	771.3	776.5
67.5°	663.5	668.6	665.7	646.5	653.9
70°	543.0	549.7	544.9	523.1	529.7
72.5°	433.0	424.8	430.0	402.7	415.2
75°	325.5	318.8	324.7	301.8	312.2
77.5°	221.7	226.8	223.1	210.9	218.0
80°	146.3	142.2	142.2	135.2	136.7
82.5°	85.3	81.3	80.2	77.9	81.3
85°	39.9	38.8	39.5	38.4	36.9
87.5°	14.4	14.8	14.8	14.0	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)