

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: P589890

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589890
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-LD4-1HI-40-UNV-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 2302.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

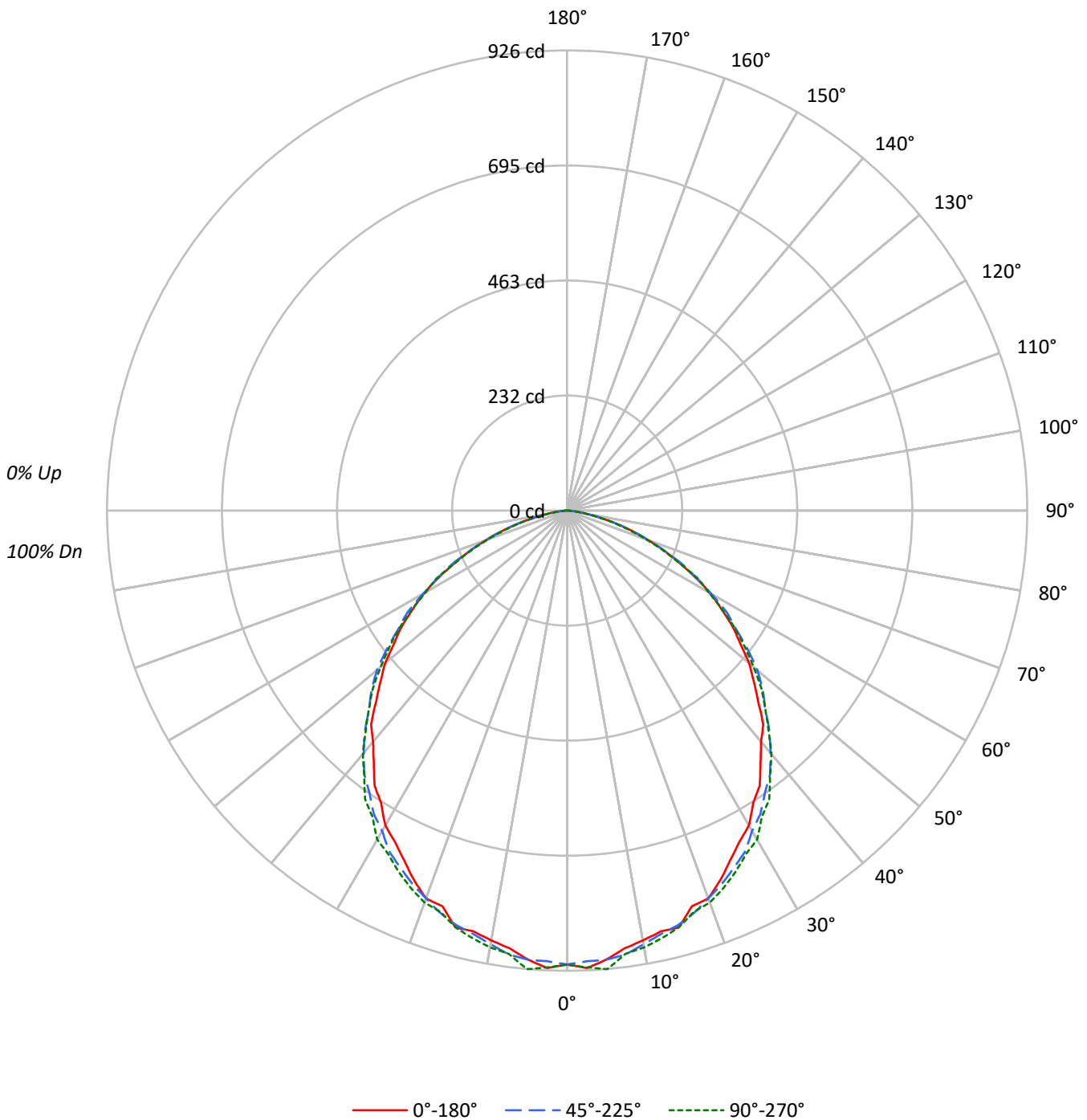
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P589890

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589890

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-94-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°	2458	2458	2458
5°	2450	2451	2502
10°	2400	2421	2438
15°	2419	2406	2419
20°	2378	2378	2403
25°	2305	2355	2381
30°	2273	2313	2375
35°	2220	2278	2329
40°	2133	2236	2246
45°	2069	2143	2146
50°	2001	2092	2051
55°	1907	1944	1930
60°	1783	1801	1769
65°	1590	1630	1578
70°	1364	1368	1330
75°	1080	1078	1037
80°	724	704	676
85°	392	389	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2198 cd/sqm



TEST NUMBER: P589890

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	3.7
10°-20°	243.5	10.6
20°-30°	364.8	15.8
30°-40°	432.4	18.8
40°-50°	433.2	18.8
50°-60°	367.7	16.0
60°-70°	247.9	10.8
70°-80°	108.9	4.7
80°-90°	17.7	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°	694.2	30.2
0°-40°	1126.6	48.9
0°-60°	1927.5	83.7
0°-90°	2302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2302.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	913	913	913	913	913	
5°	907	905	907	904	926	85
15°	868	858	864	868	868	242
25°	776	781	793	804	802	359
35°	676	678	693	710	709	420
45°	544	554	563	578	564	421
55°	406	404	414	412	411	362
65°	250	246	256	246	248	248
75°	104	102	104	96	100	111
85°	13	12	13	12	12	18
90°	0	0	0	0	0	



TEST NUMBER: P589890

CATALOG NUMBER: FSR-24-2-LD4-1HI-40-UNV-81-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	913.4	913.4	913.4	913.4	913.4
2.5°	921.3	914.3	907.8	915.4	920.0
5°	906.9	904.8	907.2	904.5	926.3
7.5°	888.3	896.4	901.1	898.2	899.5
10°	878.3	875.5	886.0	893.3	892.3
12.5°	867.7	872.0	872.6	880.5	881.2
15°	868.3	858.3	863.6	868.1	868.4
17.5°	834.6	845.4	849.1	859.4	846.6
20°	830.5	822.6	830.5	841.0	839.3
22.5°	805.1	796.3	813.3	822.6	822.0
25°	776.3	780.6	793.3	803.7	802.0
27.5°	751.1	756.1	774.2	788.5	779.3
30°	731.6	729.2	744.5	757.2	764.3
32.5°	696.9	705.8	723.7	736.4	729.6
35°	675.7	677.7	693.4	709.5	709.0
37.5°	638.8	648.1	670.2	674.7	670.6
40°	607.3	616.7	636.6	641.4	639.4
42.5°	584.1	585.8	602.9	608.4	599.6
45°	543.7	553.8	563.0	577.5	563.8
47.5°	509.2	513.9	533.8	537.6	530.5
50°	478.0	479.6	499.6	494.7	490.0
52.5°	438.7	445.7	456.9	455.9	450.4
55°	406.4	403.7	414.3	411.5	411.3
57.5°	367.6	372.3	381.0	376.6	369.4
60°	331.3	331.4	334.6	329.5	328.6
62.5°	290.8	292.2	292.9	286.7	296.8
65°	249.7	246.4	256.0	246.2	247.9
67.5°	211.8	213.5	212.5	206.4	208.7
70°	173.4	175.5	173.9	167.0	169.1
72.5°	138.2	135.6	137.3	128.5	132.6
75°	103.9	101.8	103.7	96.3	99.7
77.5°	70.8	72.4	71.2	67.3	69.6
80°	46.7	45.4	45.4	43.2	43.6
82.5°	27.2	25.9	25.6	24.9	25.9
85°	12.7	12.4	12.6	12.3	11.8
87.5°	4.6	4.7	4.7	4.5	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)