

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: P589939

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589939
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-50-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2442.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

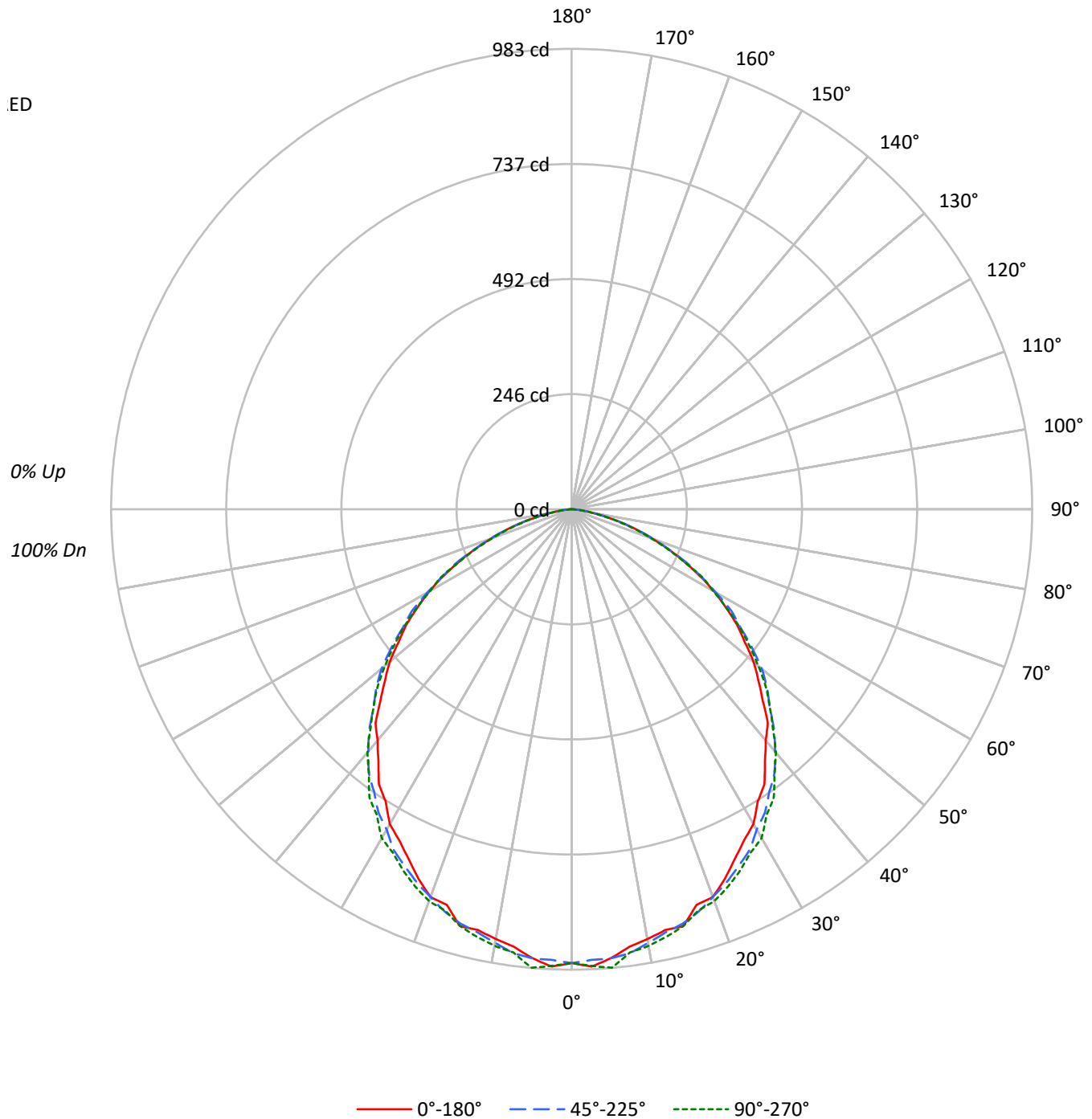
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P589939

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589939

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-93-96-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	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°	2607	2607	2607
5°	2599	2600	2655
10°	2546	2568	2586
15°	2566	2552	2567
20°	2523	2523	2550
25°	2445	2499	2526
30°	2412	2454	2519
35°	2355	2417	2471
40°	2263	2372	2383
45°	2195	2273	2276
50°	2123	2218	2176
55°	2023	2062	2047
60°	1891	1910	1876
65°	1686	1729	1675
70°	1447	1452	1412
75°	1146	1144	1099
80°	767	747	717
85°	417	414	386

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2331 cd/sqm



TEST NUMBER: P589939

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	3.7
10°-20°	258.3	10.6
20°-30°	387.0	15.8
30°-40°	458.7	18.8
40°-50°	459.5	18.8
50°-60°	390.1	16.0
60°-70°	263.0	10.8
70°-80°	115.6	4.7
80°-90°	18.8	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°	736.4	30.2
0°-40°	1195.1	48.9
0°-60°	2044.7	83.7
0°-90°	2442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2442.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	962	960	962	960	983	91
15°	921	910	916	921	921	257
25°	824	828	842	853	851	381
35°	717	719	736	753	752	445
45°	577	588	597	613	598	446
55°	431	428	440	436	436	383
65°	265	261	272	261	263	263
75°	110	108	110	102	106	118
85°	14	13	13	13	12	20
90°	0	0	0	0	0	



TEST NUMBER: P589939

CATALOG NUMBER: FSR-24-2-LD4-1HI-50-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	968.9	968.9	968.9	968.9	968.9
2.5°	977.3	969.9	963.0	971.1	975.9
5°	962.0	959.8	962.4	959.5	982.7
7.5°	942.3	950.9	955.9	952.8	954.2
10°	931.8	928.8	939.9	947.7	946.5
12.5°	920.5	925.0	925.6	934.0	934.8
15°	921.1	910.5	916.1	920.9	921.3
17.5°	885.4	896.9	900.7	911.6	898.1
20°	881.0	872.6	881.0	892.1	890.4
22.5°	854.1	844.7	862.7	872.6	872.0
25°	823.6	828.1	841.6	852.6	850.8
27.5°	796.8	802.0	821.3	836.4	826.7
30°	776.1	773.5	789.8	803.3	810.8
32.5°	739.2	748.7	767.8	781.1	774.0
35°	716.8	719.0	735.6	752.6	752.1
37.5°	677.7	687.6	711.0	715.7	711.3
40°	644.3	654.2	675.3	680.4	678.3
42.5°	619.6	621.4	639.5	645.4	636.0
45°	576.7	587.5	597.2	612.6	598.1
47.5°	540.2	545.2	566.2	570.3	562.7
50°	507.0	508.8	529.9	524.8	519.8
52.5°	465.4	472.8	484.6	483.6	477.8
55°	431.1	428.2	439.5	436.5	436.4
57.5°	389.9	395.0	404.2	399.5	391.8
60°	351.4	351.5	354.9	349.5	348.5
62.5°	308.5	310.0	310.8	304.1	314.9
65°	264.8	261.3	271.6	261.2	263.0
67.5°	224.7	226.4	225.4	218.9	221.4
70°	183.9	186.2	184.5	177.1	179.4
72.5°	146.6	143.9	145.6	136.4	140.6
75°	110.2	108.0	110.0	102.2	105.7
77.5°	75.1	76.8	75.6	71.4	73.8
80°	49.5	48.2	48.2	45.8	46.3
82.5°	28.9	27.5	27.1	26.4	27.5
85°	13.5	13.1	13.4	13.0	12.5
87.5°	4.9	5.0	5.0	4.8	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)