

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: P590322

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590322
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-LD4-2LO-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

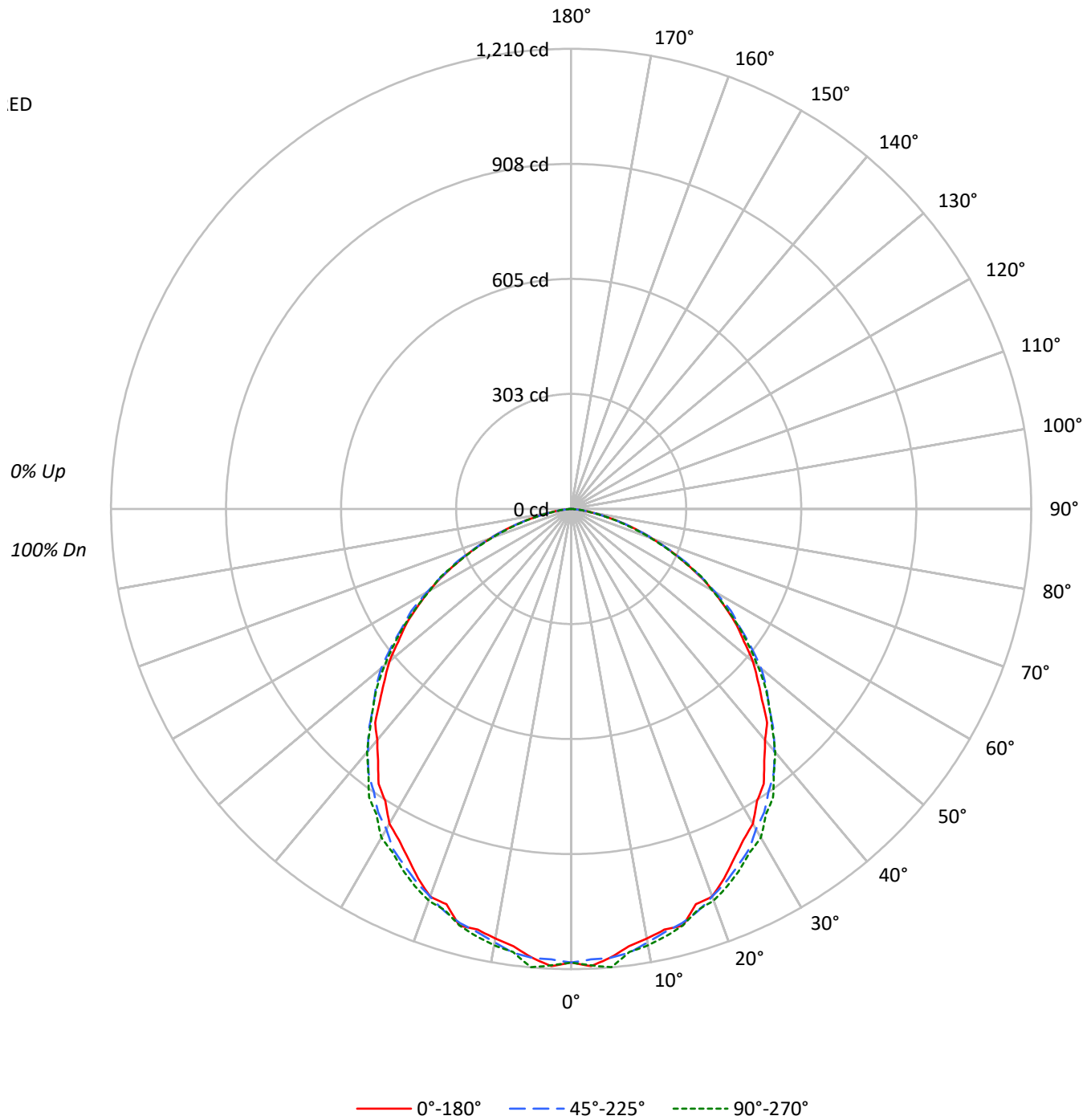
Lumens per Lamp: N/A
Luminaire Lumens: 3006.0 lumens
Efficiency: N/A
Efficacy: 128.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P590322
CATALOG NUMBER: FSR-24-2-LD4-2LO-50-UNV-93-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590322

CATALOG NUMBER: FSR-24-2-LD4-2LO-50-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°	3210	3210	3210
5°	3199	3200	3267
10°	3134	3161	3184
15°	3159	3142	3159
20°	3105	3105	3139
25°	3010	3076	3110
30°	2969	3021	3101
35°	2899	2975	3041
40°	2786	2920	2933
45°	2702	2798	2802
50°	2613	2731	2679
55°	2490	2538	2520
60°	2328	2351	2309
65°	2076	2129	2061
70°	1781	1787	1737
75°	1411	1408	1353
80°	945	919	883
85°	513	509	475

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2870 cd/sqm



TEST NUMBER: P590322

CATALOG NUMBER: FSR-24-2-LD4-2LO-50-UNV-93-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.2	3.7
10°-20°	318.0	10.6
20°-30°	476.4	15.8
30°-40°	564.6	18.8
40°-50°	565.7	18.8
50°-60°	480.1	16.0
60°-70°	323.7	10.8
70°-80°	142.3	4.7
80°-90°	23.1	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°	906.5	30.2
0°-40°	1471.1	48.9
0°-60°	2516.9	83.7
0°-90°	3006.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3006.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1193	1193	1193	1193	1193	
5°	1184	1182	1185	1181	1210	112
15°	1134	1121	1128	1134	1134	316
25°	1014	1019	1036	1050	1047	469
35°	882	885	906	926	926	548
45°	710	723	735	754	736	549
55°	531	527	541	537	537	472
65°	326	322	334	322	324	324
75°	136	133	135	126	130	145
85°	17	16	16	16	15	24
90°	0	0	0	0	0	



TEST NUMBER: P590322

CATALOG NUMBER: FSR-24-2-LD4-2LO-50-UNV-93-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1192.7	1192.7	1192.7	1192.7	1192.7
2.5°	1203.0	1193.9	1185.5	1195.3	1201.3
5°	1184.2	1181.5	1184.7	1181.2	1209.6
7.5°	1159.9	1170.5	1176.7	1172.8	1174.5
10°	1147.0	1143.3	1157.0	1166.5	1165.1
12.5°	1133.1	1138.7	1139.4	1149.7	1150.7
15°	1133.9	1120.8	1127.7	1133.6	1134.0
17.5°	1089.8	1104.0	1108.8	1122.2	1105.5
20°	1084.4	1074.1	1084.4	1098.2	1096.0
22.5°	1051.3	1039.8	1062.0	1074.1	1073.4
25°	1013.8	1019.3	1035.9	1049.5	1047.3
27.5°	980.8	987.3	1011.0	1029.6	1017.6
30°	955.4	952.2	972.2	988.8	998.1
32.5°	910.0	921.7	945.1	961.6	952.8
35°	882.4	885.0	905.5	926.4	925.8
37.5°	834.2	846.4	875.2	881.0	875.6
40°	793.1	805.2	831.3	837.6	835.0
42.5°	762.7	764.9	787.2	794.5	782.9
45°	709.9	723.2	735.2	754.1	736.3
47.5°	665.0	671.1	697.0	702.1	692.7
50°	624.1	626.3	652.3	646.0	639.9
52.5°	572.9	582.0	596.6	595.4	588.1
55°	530.7	527.1	541.0	537.3	537.1
57.5°	480.0	486.2	497.6	491.7	482.3
60°	432.6	432.7	436.9	430.3	429.0
62.5°	379.8	381.6	382.5	374.4	387.6
65°	326.0	321.7	334.3	321.5	323.7
67.5°	276.6	278.7	277.5	269.5	272.6
70°	226.4	229.1	227.1	218.1	220.8
72.5°	180.5	177.1	179.3	167.9	173.1
75°	135.7	132.9	135.4	125.8	130.1
77.5°	92.4	94.6	93.0	87.9	90.9
80°	61.0	59.3	59.3	56.4	57.0
82.5°	35.6	33.9	33.4	32.5	33.9
85°	16.6	16.2	16.5	16.0	15.4
87.5°	6.0	6.2	6.2	5.9	5.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)