

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: P589969

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589969
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-LD4-1LO-35-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

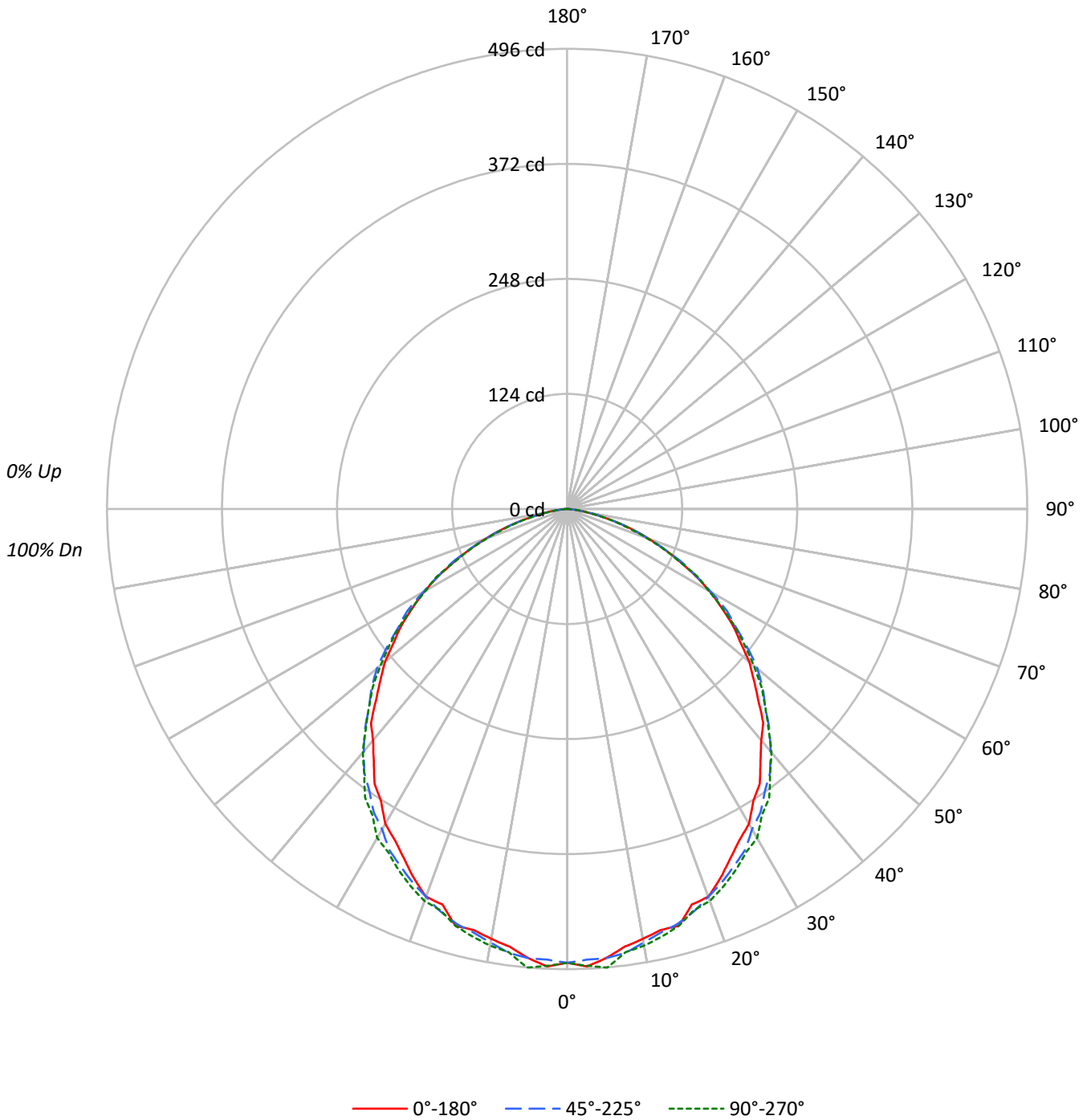
Lumens per Lamp: N/A
Luminaire Lumens: 1233.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P589969
CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-93-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589969

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-93-88-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°	1316	1316	1316
5°	1312	1313	1340
10°	1286	1297	1306
15°	1296	1289	1296
20°	1274	1274	1288
25°	1235	1262	1276
30°	1218	1239	1272
35°	1189	1220	1248
40°	1143	1198	1203
45°	1108	1148	1149
50°	1072	1120	1099
55°	1021	1041	1034
60°	955	964	947
65°	851	873	846
70°	731	733	713
75°	578	577	555
80°	387	377	363
85°	210	210	195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1177 cd/sqm

TEST NUMBER: P589969

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-93-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	3.7
10°-20°	130.4	10.6
20°-30°	195.4	15.8
30°-40°	231.6	18.8
40°-50°	232.0	18.8
50°-60°	196.9	16.0
60°-70°	132.8	10.8
70°-80°	58.3	4.7
80°-90°	9.5	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°	371.8	30.2
0°-40°	603.4	48.9
0°-60°	1032.4	83.7
0°-90°	1233.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1233.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	489	489	489	489	489	
5°	486	485	486	484	496	46
15°	465	460	463	465	465	130
25°	416	418	425	430	430	192
35°	362	363	371	380	380	225
45°	291	297	302	309	302	225
55°	218	216	222	220	220	194
65°	134	132	137	132	133	133
75°	56	54	56	52	53	60
85°	7	7	7	7	6	10
90°	0	0	0	0	0	



TEST NUMBER: P589969

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-93-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	489.2	489.2	489.2	489.2	489.2
2.5°	493.5	489.7	486.3	490.3	492.8
5°	485.7	484.6	485.9	484.5	496.2
7.5°	475.8	480.1	482.7	481.1	481.8
10°	470.5	468.9	474.6	478.5	477.9
12.5°	464.8	467.1	467.4	471.6	472.0
15°	465.1	459.7	462.6	465.0	465.2
17.5°	447.0	452.8	454.8	460.3	453.5
20°	444.8	440.6	444.8	450.4	449.6
22.5°	431.2	426.5	435.6	440.6	440.3
25°	415.8	418.1	424.9	430.5	429.6
27.5°	402.3	405.0	414.7	422.3	417.4
30°	391.9	390.6	398.8	405.6	409.4
32.5°	373.2	378.1	387.7	394.4	390.8
35°	361.9	363.0	371.4	380.0	379.8
37.5°	342.2	347.2	359.0	361.4	359.2
40°	325.3	330.3	341.0	343.6	342.5
42.5°	312.9	313.7	322.9	325.9	321.1
45°	291.2	296.6	301.6	309.3	302.0
47.5°	272.8	275.3	285.9	288.0	284.1
50°	256.0	256.9	267.6	265.0	262.5
52.5°	235.0	238.7	244.7	244.2	241.2
55°	217.7	216.2	221.9	220.4	220.3
57.5°	196.9	199.4	204.1	201.7	197.8
60°	177.4	177.5	179.2	176.5	176.0
62.5°	155.8	156.5	156.9	153.6	159.0
65°	133.7	132.0	137.1	131.9	132.8
67.5°	113.4	114.3	113.8	110.5	111.8
70°	92.9	94.0	93.2	89.4	90.6
72.5°	74.0	72.6	73.5	68.9	71.0
75°	55.6	54.5	55.5	51.6	53.4
77.5°	37.9	38.8	38.2	36.1	37.3
80°	25.0	24.3	24.3	23.1	23.4
82.5°	14.6	13.9	13.7	13.3	13.9
85°	6.8	6.6	6.8	6.6	6.3
87.5°	2.5	2.5	2.5	2.4	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)