

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: P590004

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590004
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-40-UNV-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1409.0 lumens
Efficiency: N/A
Efficacy: 120.4 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

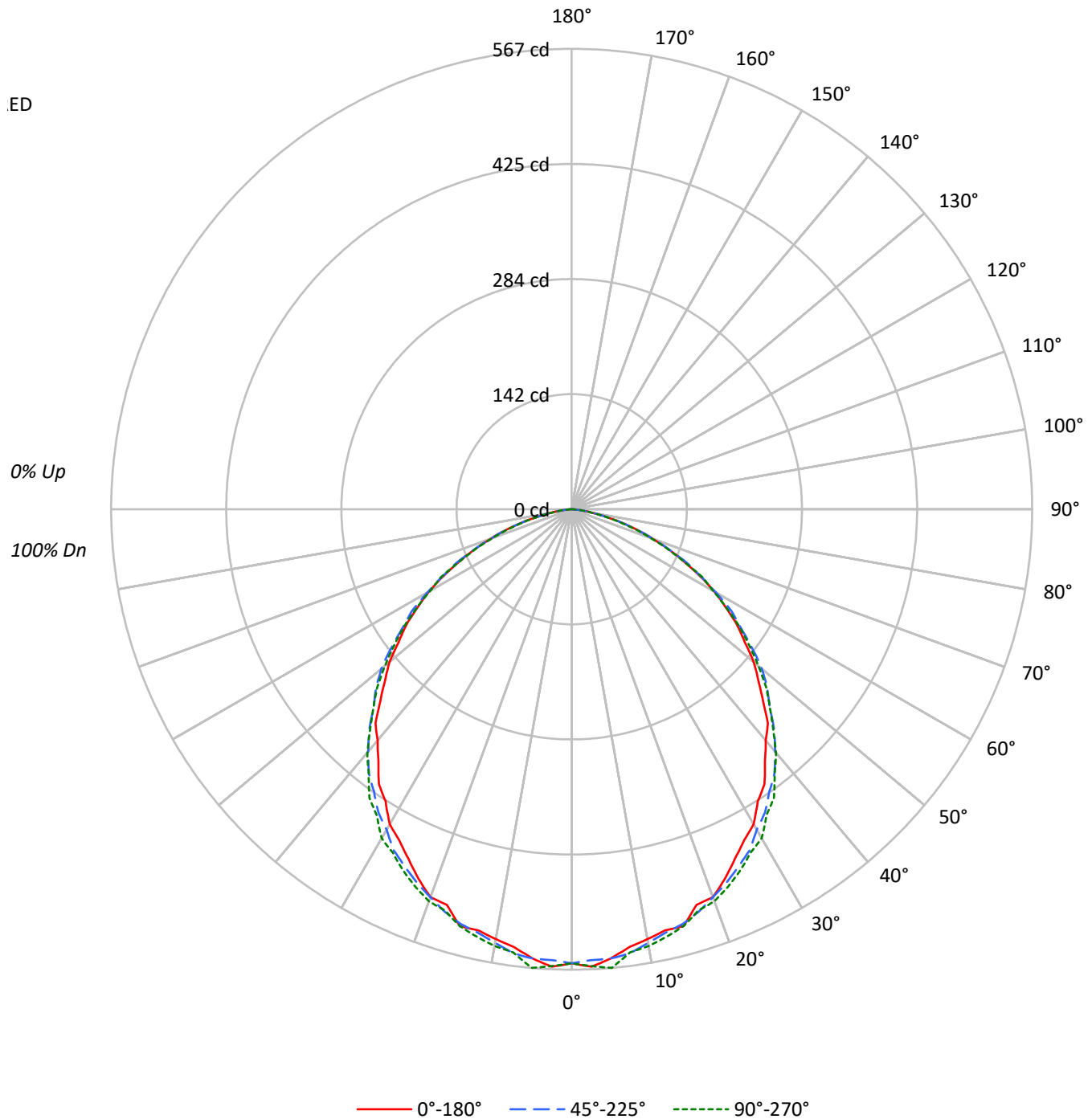
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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°	1505	1505	1505
5°	1499	1500	1532
10°	1469	1482	1492
15°	1481	1473	1481
20°	1456	1456	1471
25°	1411	1442	1458
30°	1391	1416	1454
35°	1359	1394	1426
40°	1306	1369	1375
45°	1267	1311	1313
50°	1225	1280	1256
55°	1167	1190	1181
60°	1091	1102	1082
65°	973	998	966
70°	835	838	814
75°	661	659	634
80°	443	431	414
85°	241	238	222

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1345 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.6	3.7
10°-20°	149.0	10.6
20°-30°	223.3	15.8
30°-40°	264.6	18.8
40°-50°	265.1	18.8
50°-60°	225.1	16.0
60°-70°	151.7	10.8
70°-80°	66.7	4.7
80°-90°	10.8	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°	424.9	30.2
0°-40°	689.6	48.9
0°-60°	1179.8	83.7
0°-90°	1409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	555	554	555	554	567	52
15°	532	525	529	531	532	148
25°	475	478	486	492	491	220
35°	414	415	424	434	434	257
45°	333	339	345	354	345	257
55°	249	247	254	252	252	221
65°	153	151	157	151	152	152
75°	64	62	63	59	61	68
85°	8	8	8	8	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	559.1	559.1	559.1	559.1	559.1
2.5°	563.9	559.6	555.7	560.3	563.1
5°	555.1	553.8	555.3	553.6	567.0
7.5°	543.7	548.7	551.5	549.7	550.5
10°	537.6	535.9	542.3	546.8	546.1
12.5°	531.1	533.7	534.1	538.9	539.3
15°	531.5	525.3	528.6	531.3	531.6
17.5°	510.8	517.5	519.7	526.0	518.2
20°	508.3	503.5	508.3	514.7	513.7
22.5°	492.8	487.4	497.8	503.5	503.1
25°	475.2	477.8	485.6	491.9	490.9
27.5°	459.7	462.8	473.9	482.6	477.0
30°	447.8	446.3	455.7	463.5	467.8
32.5°	426.5	432.0	443.0	450.7	446.6
35°	413.6	414.8	424.4	434.3	434.0
37.5°	391.0	396.7	410.2	413.0	410.4
40°	371.7	377.4	389.6	392.6	391.4
42.5°	357.5	358.5	369.0	372.4	367.0
45°	332.8	339.0	344.6	353.5	345.1
47.5°	311.7	314.6	326.7	329.1	324.7
50°	292.6	293.6	305.8	302.8	299.9
52.5°	268.5	272.8	279.6	279.1	275.7
55°	248.7	247.1	253.6	251.8	251.8
57.5°	225.0	227.9	233.2	230.5	226.1
60°	202.8	202.8	204.8	201.7	201.1
62.5°	178.0	178.9	179.3	175.5	181.7
65°	152.8	150.8	156.7	150.7	151.7
67.5°	129.6	130.7	130.1	126.3	127.8
70°	106.1	107.4	106.5	102.2	103.5
72.5°	84.6	83.0	84.0	78.7	81.1
75°	63.6	62.3	63.4	59.0	61.0
77.5°	43.3	44.3	43.6	41.2	42.6
80°	28.6	27.8	27.8	26.4	26.7
82.5°	16.7	15.9	15.7	15.2	15.9
85°	7.8	7.6	7.7	7.5	7.2
87.5°	2.8	2.9	2.9	2.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)