

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: P589970

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589970
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-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

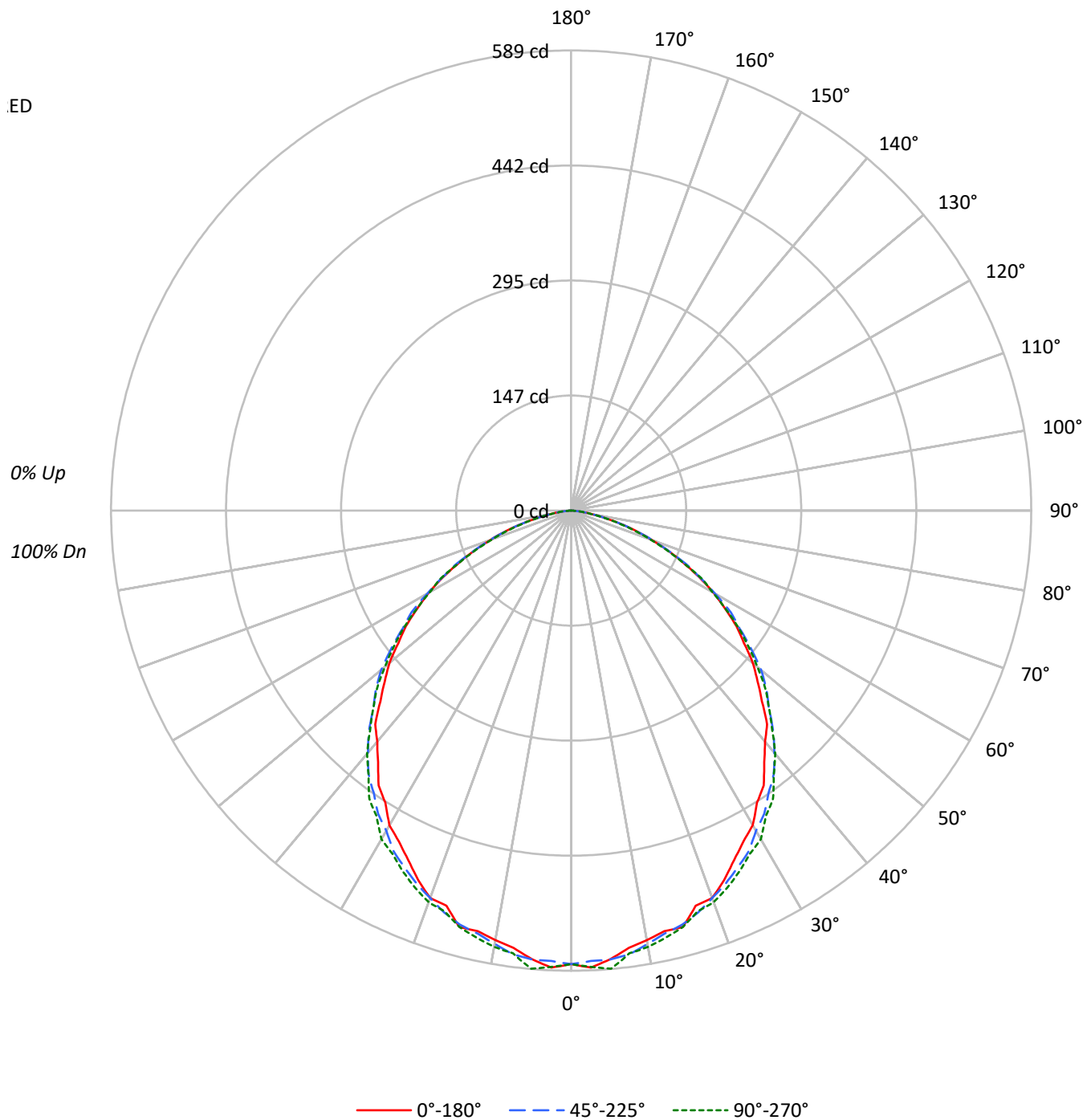
Lumens per Lamp: N/A
Luminaire Lumens: 1463.0 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1562	1562	1562
5°	1557	1558	1590
10°	1525	1539	1550
15°	1538	1529	1538
20°	1511	1511	1527
25°	1465	1497	1513
30°	1445	1470	1509
35°	1411	1448	1480
40°	1356	1421	1428
45°	1315	1362	1364
50°	1272	1329	1304
55°	1212	1235	1226
60°	1133	1144	1124
65°	1011	1036	1003
70°	867	870	846
75°	686	685	658
80°	460	448	429
85°	250	247	232

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1397 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	3.7
10°-20°	154.8	10.6
20°-30°	231.9	15.8
30°-40°	274.8	18.8
40°-50°	275.3	18.8
50°-60°	233.7	16.0
60°-70°	157.6	10.8
70°-80°	69.2	4.7
80°-90°	11.3	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°	441.2	30.2
0°-40°	716.0	48.9
0°-60°	1225.0	83.7
0°-90°	1463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1463.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	576	575	577	575	589	54
15°	552	546	549	552	552	154
25°	493	496	504	511	510	228
35°	430	431	441	451	451	267
45°	346	352	358	367	358	267
55°	258	257	263	262	261	230
65°	159	157	163	156	158	158
75°	66	65	66	61	63	71
85°	8	8	8	8	8	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	580.5	580.5	580.5	580.5	580.5
2.5°	585.5	581.1	577.0	581.8	584.7
5°	576.4	575.0	576.6	574.9	588.7
7.5°	564.5	569.7	572.7	570.8	571.6
10°	558.2	556.4	563.1	567.7	567.1
12.5°	551.5	554.2	554.5	559.6	560.0
15°	551.9	545.5	548.9	551.7	551.9
17.5°	530.4	537.3	539.6	546.2	538.1
20°	527.8	522.8	527.8	534.5	533.4
22.5°	511.7	506.1	516.8	522.8	522.4
25°	493.4	496.1	504.2	510.8	509.7
27.5°	477.4	480.5	492.0	501.1	495.3
30°	465.0	463.4	473.2	481.2	485.7
32.5°	442.9	448.6	460.0	468.0	463.7
35°	429.5	430.7	440.7	450.9	450.6
37.5°	406.0	411.9	425.9	428.8	426.2
40°	386.0	391.9	404.6	407.6	406.4
42.5°	371.2	372.3	383.1	386.7	381.0
45°	345.5	352.0	357.8	367.0	358.3
47.5°	323.6	326.6	339.2	341.7	337.1
50°	303.8	304.8	317.5	314.4	311.4
52.5°	278.8	283.2	290.4	289.8	286.2
55°	258.3	256.6	263.3	261.5	261.4
57.5°	233.6	236.6	242.2	239.3	234.7
60°	210.5	210.6	212.6	209.4	208.8
62.5°	184.8	185.7	186.2	182.2	188.6
65°	158.7	156.6	162.7	156.5	157.5
67.5°	134.6	135.7	135.1	131.2	132.7
70°	110.2	111.5	110.6	106.1	107.5
72.5°	87.8	86.2	87.2	81.7	84.2
75°	66.0	64.7	65.9	61.2	63.3
77.5°	45.0	46.0	45.3	42.8	44.2
80°	29.7	28.9	28.9	27.4	27.7
82.5°	17.3	16.5	16.3	15.8	16.5
85°	8.1	7.9	8.0	7.8	7.5
87.5°	2.9	3.0	3.0	2.8	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)