

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: P590002

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590002
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-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

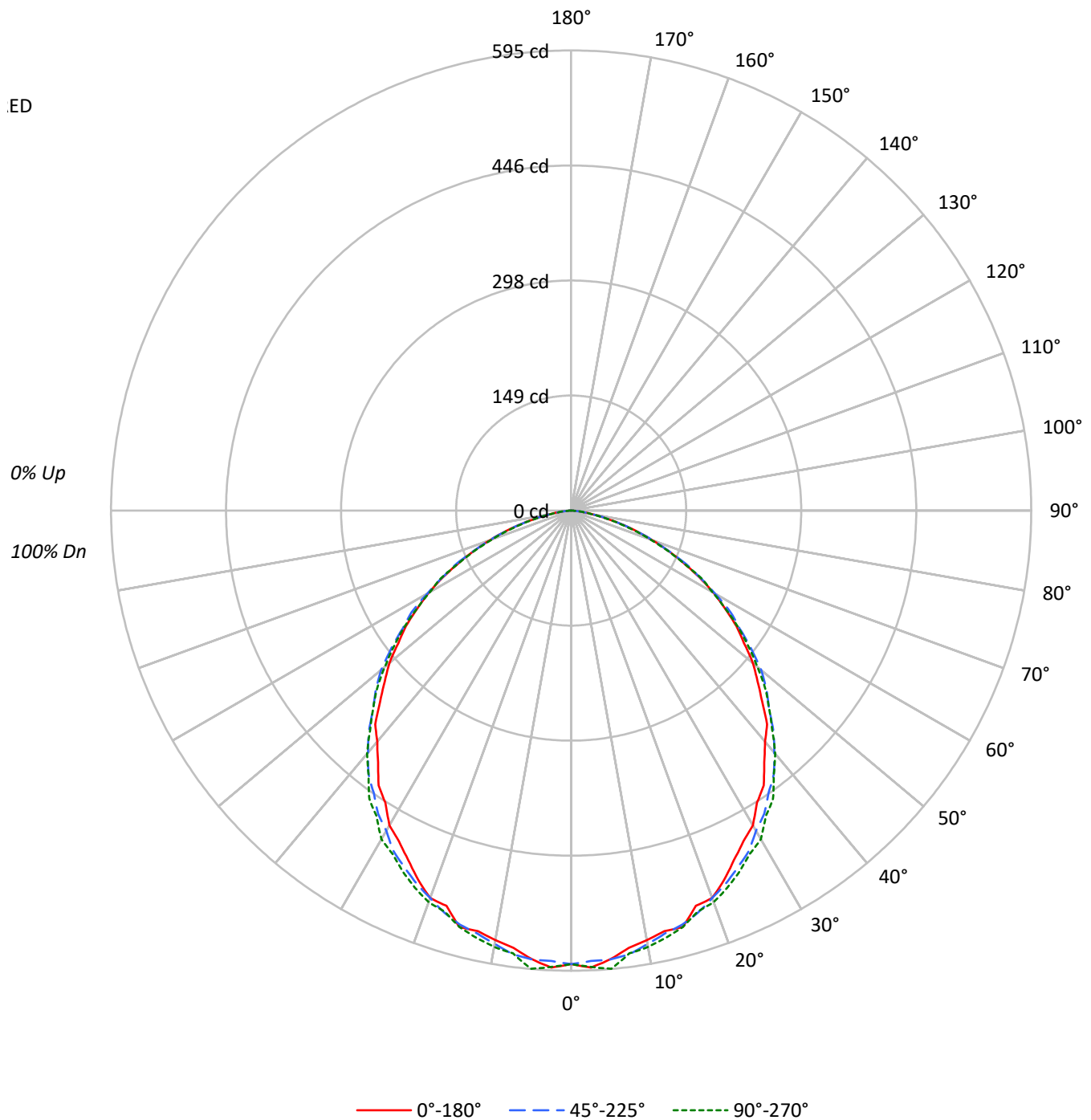
Lumens per Lamp: N/A
Luminaire Lumens: 1478.0 lumens
Efficiency: N/A
Efficacy: 126.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1578	1578	1578
5°	1573	1573	1607
10°	1541	1555	1565
15°	1553	1545	1553
20°	1527	1527	1543
25°	1480	1512	1529
30°	1460	1485	1525
35°	1425	1463	1495
40°	1370	1436	1442
45°	1329	1376	1378
50°	1285	1343	1317
55°	1224	1248	1239
60°	1145	1156	1135
65°	1021	1047	1014
70°	876	879	854
75°	693	692	665
80°	465	453	434
85°	253	250	235

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1411 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.2	3.7
10°-20°	156.3	10.6
20°-30°	234.2	15.8
30°-40°	277.6	18.8
40°-50°	278.1	18.8
50°-60°	236.1	16.0
60°-70°	159.2	10.8
70°-80°	69.9	4.7
80°-90°	11.4	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°	445.7	30.2
0°-40°	723.3	48.9
0°-60°	1237.5	83.7
0°-90°	1478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1478.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	582	581	582	581	595	55
15°	558	551	554	557	558	155
25°	498	501	509	516	515	230
35°	434	435	445	456	455	269
45°	349	356	362	371	362	270
55°	261	259	266	264	264	232
65°	160	158	164	158	159	159
75°	67	65	67	62	64	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°	586.4	586.4	586.4	586.4	586.4
2.5°	591.5	587.0	582.9	587.7	590.7
5°	582.3	580.9	582.5	580.8	594.8
7.5°	570.3	575.5	578.6	576.7	577.5
10°	563.9	562.1	568.9	573.6	572.9
12.5°	557.1	559.9	560.2	565.3	565.8
15°	557.5	551.1	554.5	557.4	557.6
17.5°	535.9	542.8	545.2	551.8	543.6
20°	533.2	528.1	533.2	539.9	538.9
22.5°	516.9	511.2	522.1	528.1	527.8
25°	498.4	501.2	509.4	516.0	515.0
27.5°	482.2	485.4	497.1	506.2	500.3
30°	469.8	468.2	478.0	486.2	490.7
32.5°	447.4	453.2	464.7	472.8	468.5
35°	433.9	435.1	445.2	455.5	455.2
37.5°	410.2	416.1	430.3	433.2	430.5
40°	389.9	395.9	408.7	411.8	410.5
42.5°	375.0	376.1	387.1	390.6	384.9
45°	349.1	355.6	361.5	370.8	362.0
47.5°	326.9	330.0	342.7	345.2	340.6
50°	306.9	307.9	320.7	317.6	314.6
52.5°	281.7	286.1	293.3	292.7	289.2
55°	260.9	259.2	266.0	264.2	264.1
57.5°	236.0	239.0	244.6	241.8	237.1
60°	212.7	212.8	214.8	211.6	210.9
62.5°	186.7	187.6	188.1	184.1	190.6
65°	160.3	158.2	164.4	158.1	159.2
67.5°	136.0	137.0	136.4	132.5	134.0
70°	111.3	112.7	111.7	107.2	108.6
72.5°	88.7	87.1	88.1	82.5	85.1
75°	66.7	65.3	66.6	61.9	64.0
77.5°	45.4	46.5	45.7	43.2	44.7
80°	30.0	29.2	29.2	27.7	28.0
82.5°	17.5	16.7	16.4	16.0	16.7
85°	8.2	8.0	8.1	7.9	7.6
87.5°	3.0	3.0	3.0	2.9	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)