

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: P559918

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559918
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-1LO-40-UNV-93-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 926.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

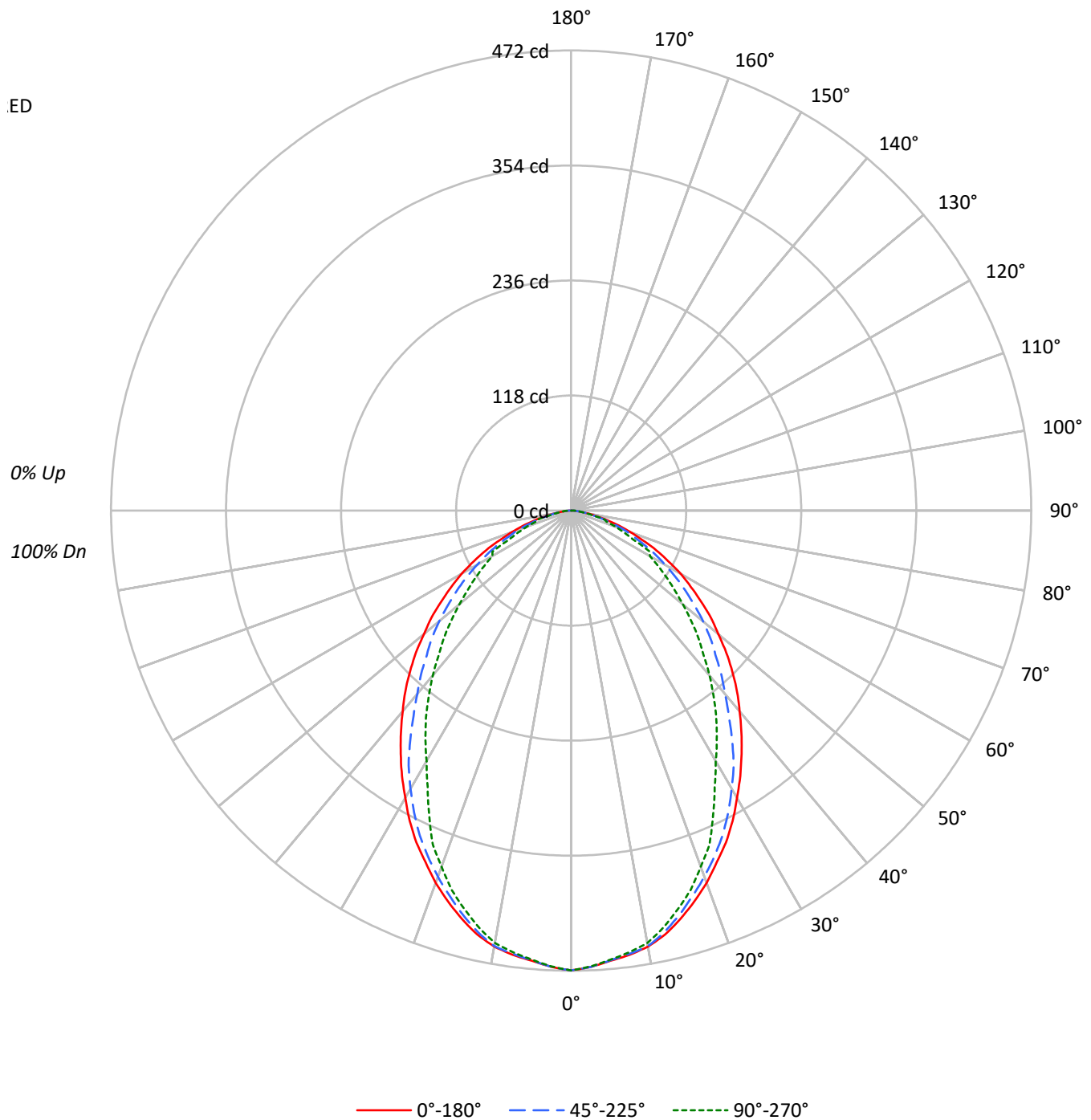
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2539	2539	2539
5°	2504	2501	2498
10°	2482	2479	2461
15°	2415	2391	2358
20°	2327	2289	2227
25°	2231	2182	2046
30°	2115	2047	1843
35°	2003	1892	1706
40°	1888	1724	1552
45°	1780	1594	1403
50°	1649	1479	1251
55°	1525	1341	1120
60°	1397	1197	1003
65°	1229	1048	889
70°	1012	917	755
75°	805	703	736
80°	539	508	474
85°	340	401	469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1780 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.9	4.7
10°-20°	120.5	13.0
20°-30°	166.8	18.0
30°-40°	177.9	19.2
40°-50°	162.3	17.5
50°-60°	127.1	13.7
60°-70°	82.9	8.9
70°-80°	36.7	4.0
80°-90°	7.9	0.9
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°	331.2	35.8
0°-40°	509.1	55.0
0°-60°	798.5	86.2
0°-90°	926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	926.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	464	463	463	462	462	44
15°	434	434	429	425	423	122
25°	376	374	368	354	345	172
35°	305	303	288	266	260	191
45°	234	229	209	192	184	180
55°	162	158	143	126	119	146
65°	96	91	82	84	70	95
75°	39	36	34	32	35	41
85°	6	6	6	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	471.7	471.7	471.7	471.7	471.7
2.5°	468.4	468.4	468.4	467.9	467.9
5°	463.5	463.0	463.0	462.4	462.4
7.5°	459.7	459.1	458.6	458.1	457.0
10°	454.2	454.2	453.7	451.0	450.4
12.5°	445.5	445.0	442.8	439.0	437.9
15°	433.5	433.5	429.2	424.8	423.2
17.5°	420.4	419.9	414.4	410.1	407.9
20°	406.3	405.2	399.7	392.6	388.8
22.5°	390.4	390.4	383.9	374.6	370.8
25°	375.7	373.5	367.5	354.5	344.6
27.5°	358.8	355.5	349.0	330.5	319.0
30°	340.3	338.6	329.4	305.4	296.6
32.5°	322.8	320.1	310.3	285.2	278.1
35°	304.8	302.6	287.9	266.1	259.6
37.5°	286.8	284.1	265.6	248.1	239.9
40°	268.8	265.6	245.4	229.6	220.9
42.5°	251.9	247.6	227.9	211.0	201.2
45°	233.9	229.0	209.4	191.9	184.3
47.5°	215.9	211.6	193.6	175.6	166.9
50°	196.9	193.0	176.7	158.7	149.4
52.5°	181.0	175.0	159.2	141.2	133.6
55°	162.5	157.6	142.9	126.0	119.4
57.5°	145.6	140.7	127.1	111.2	105.8
60°	129.8	122.7	111.2	97.6	93.2
62.5°	112.3	106.9	97.1	85.6	91.1
65°	96.5	91.1	82.3	84.0	69.8
67.5°	79.1	76.3	68.7	61.1	58.9
70°	64.3	61.1	58.3	50.2	48.0
72.5°	51.3	48.0	44.2	39.8	38.2
75°	38.7	36.0	33.8	32.2	35.4
77.5°	26.7	25.6	24.0	22.4	21.8
80°	17.4	16.9	16.4	15.8	15.3
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.5	7.1	7.6
87.5°	3.3	3.3	3.8	4.4	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)