

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: P559341

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559341
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-12-1-LD4-2LO-40-UNV-93-96-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

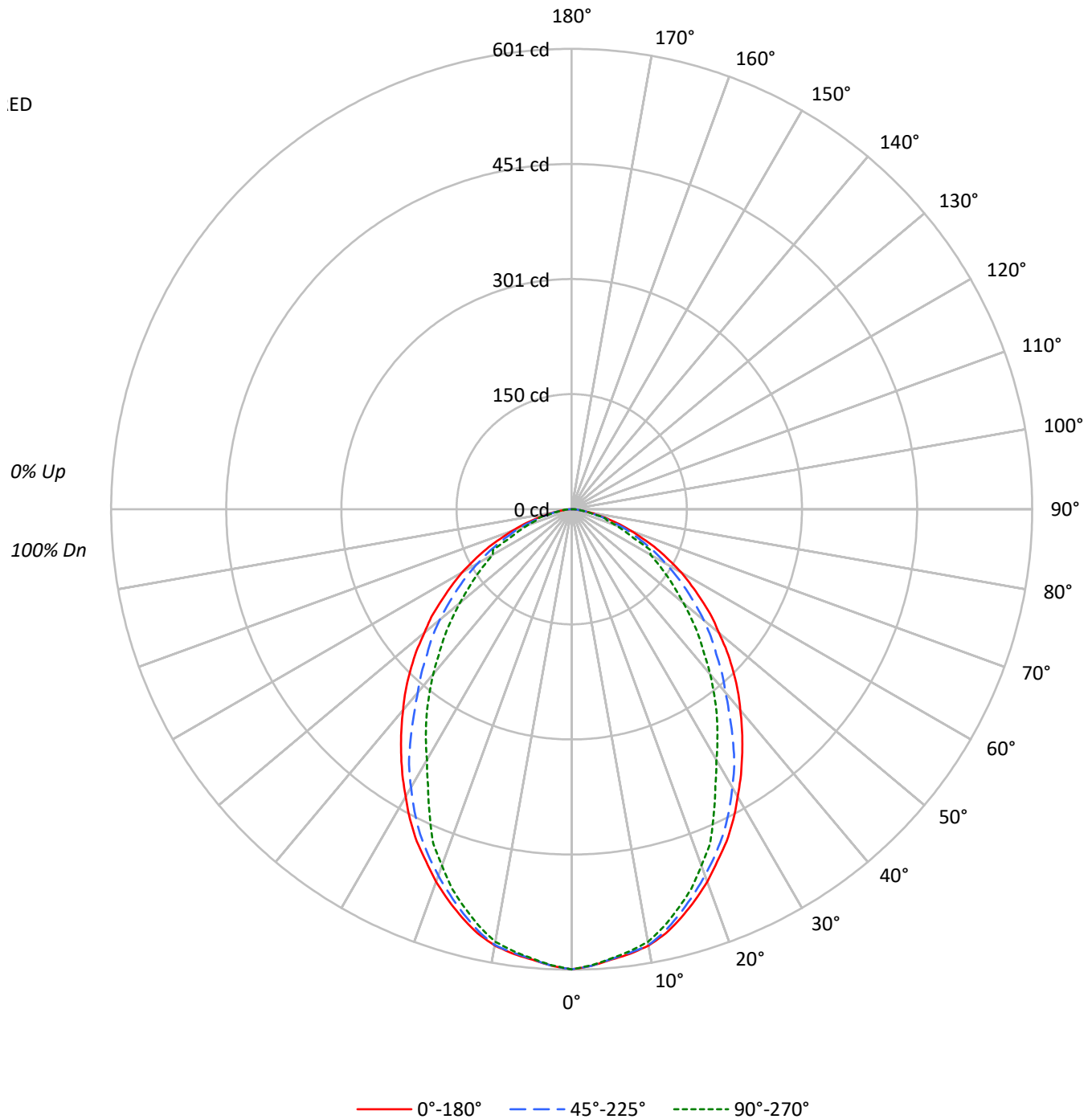
Lumens per Lamp: N/A
Luminaire Lumens: 1179.0 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	6465	6465	6465
5°	6377	6370	6362
10°	6321	6314	6268
15°	6151	6089	6004
20°	5926	5829	5670
25°	5682	5558	5211
30°	5384	5213	4694
35°	5100	4817	4343
40°	4810	4390	3951
45°	4535	4058	3573
50°	4196	3768	3185
55°	3883	3414	2854
60°	3556	3048	2555
65°	3130	2669	2264
70°	2578	2338	1923
75°	2050	1788	1876
80°	1376	1289	1203
85°	852	1025	1198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4535 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.9	4.7
10°-20°	153.4	13.0
20°-30°	212.4	18.0
30°-40°	226.5	19.2
40°-50°	206.6	17.5
50°-60°	161.9	13.7
60°-70°	105.5	8.9
70°-80°	46.7	4.0
80°-90°	10.0	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°	421.7	35.8
0°-40°	648.2	55.0
0°-60°	1016.7	86.2
0°-90°	1179.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	601	601	601	601	601	
5°	590	590	590	589	589	56
15°	552	552	546	541	539	155
25°	478	476	468	451	439	220
35°	388	385	367	339	330	243
45°	298	292	267	244	235	229
55°	207	201	182	160	152	186
65°	123	116	105	107	89	121
75°	49	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	600.6	600.6	600.6	600.6	600.6
2.5°	596.4	596.4	596.4	595.7	595.7
5°	590.2	589.5	589.5	588.8	588.8
7.5°	585.3	584.6	583.9	583.2	581.8
10°	578.3	578.3	577.7	574.2	573.5
12.5°	567.2	566.5	563.8	558.9	557.5
15°	552.0	552.0	546.4	540.9	538.8
17.5°	535.3	534.6	527.7	522.1	519.3
20°	517.3	515.9	508.9	499.9	495.0
22.5°	497.1	497.1	488.8	477.0	472.1
25°	478.4	475.6	468.0	451.3	438.8
27.5°	456.8	452.7	444.4	420.7	406.2
30°	433.2	431.2	419.4	388.8	377.7
32.5°	411.0	407.6	395.1	363.1	354.1
35°	388.1	385.3	366.6	338.8	330.5
37.5°	365.2	361.7	338.1	315.9	305.5
40°	342.3	338.1	312.4	292.3	281.2
42.5°	320.8	315.2	290.2	268.7	256.2
45°	297.9	291.6	266.6	244.4	234.7
47.5°	274.9	269.4	246.5	223.6	212.5
50°	250.6	245.8	225.0	202.0	190.2
52.5°	230.5	222.9	202.7	179.8	170.1
55°	206.9	200.7	181.9	160.4	152.1
57.5°	185.4	179.1	161.8	141.6	134.7
60°	165.2	156.2	141.6	124.3	118.7
62.5°	143.0	136.1	123.6	109.0	115.9
65°	122.9	115.9	104.8	106.9	88.9
67.5°	100.7	97.2	87.5	77.8	75.0
70°	81.9	77.8	74.3	63.9	61.1
72.5°	65.3	61.1	56.2	50.7	48.6
75°	49.3	45.8	43.0	41.0	45.1
77.5°	34.0	32.6	30.5	28.5	27.8
80°	22.2	21.5	20.8	20.1	19.4
82.5°	13.2	13.2	13.2	13.2	13.2
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.2	4.2	4.9	5.6	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)