

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: P559844

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559844
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-35-UNV-93-86-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 925.0 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

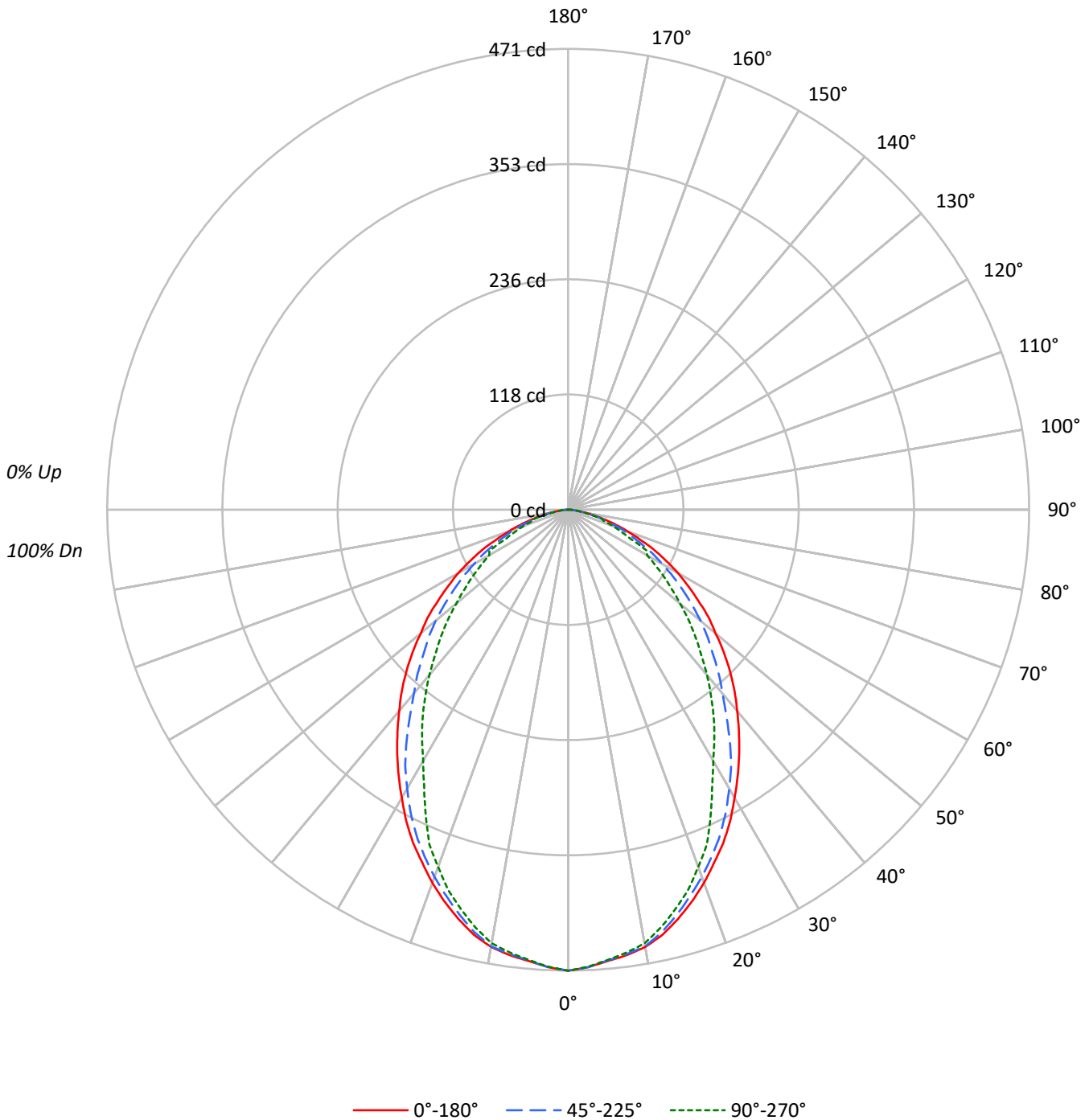
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2536	2536	2536
5°	2501	2499	2495
10°	2480	2477	2459
15°	2413	2389	2355
20°	2324	2287	2225
25°	2229	2180	2045
30°	2112	2045	1841
35°	2001	1890	1704
40°	1886	1722	1550
45°	1779	1592	1401
50°	1646	1478	1250
55°	1523	1339	1119
60°	1395	1196	1002
65°	1228	1048	888
70°	1012	917	754
75°	805	703	736
80°	539	505	474
85°	333	401	469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1779 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.9	4.7
10°-20°	120.4	13.0
20°-30°	166.6	18.0
30°-40°	177.7	19.2
40°-50°	162.1	17.5
50°-60°	127.0	13.7
60°-70°	82.8	8.9
70°-80°	36.7	4.0
80°-90°	7.9	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°	330.9	35.8
0°-40°	508.6	55.0
0°-60°	797.7	86.2
0°-90°	925.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	925.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	471	471	471	471	471	
5°	463	462	462	462	462	44
15°	433	433	429	424	423	122
25°	375	373	367	354	344	172
35°	304	302	288	266	259	190
45°	234	229	209	192	184	180
55°	162	157	143	126	119	146
65°	96	91	82	84	70	95
75°	39	36	34	32	35	41
85°	5	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°	471.2	471.2	471.2	471.2	471.2
2.5°	467.9	467.9	467.9	467.4	467.4
5°	463.0	462.5	462.5	461.9	461.9
7.5°	459.2	458.7	458.1	457.6	456.5
10°	453.8	453.8	453.2	450.5	449.9
12.5°	445.0	444.5	442.3	438.5	437.4
15°	433.1	433.1	428.7	424.3	422.7
17.5°	420.0	419.4	414.0	409.6	407.5
20°	405.8	404.7	399.3	392.2	388.4
22.5°	390.0	390.0	383.5	374.2	370.4
25°	375.3	373.1	367.1	354.1	344.3
27.5°	358.4	355.2	348.6	330.1	318.7
30°	339.9	338.3	329.0	305.0	296.3
32.5°	322.5	319.8	309.9	284.9	277.8
35°	304.5	302.3	287.6	265.8	259.3
37.5°	286.5	283.8	265.3	247.8	239.7
40°	268.5	265.3	245.1	229.3	220.6
42.5°	251.7	247.3	227.7	210.8	201.0
45°	233.7	228.8	209.2	191.7	184.1
47.5°	215.7	211.4	193.4	175.4	166.7
50°	196.6	192.8	176.5	158.5	149.3
52.5°	180.8	174.9	159.1	141.1	133.5
55°	162.3	157.4	142.7	125.8	119.3
57.5°	145.4	140.5	126.9	111.1	105.7
60°	129.6	122.6	111.1	97.5	93.1
62.5°	112.2	106.8	97.0	85.5	91.0
65°	96.4	91.0	82.3	83.9	69.7
67.5°	79.0	76.3	68.6	61.0	58.8
70°	64.3	61.0	58.3	50.1	47.9
72.5°	51.2	47.9	44.1	39.8	38.1
75°	38.7	36.0	33.8	32.1	35.4
77.5°	26.7	25.6	24.0	22.3	21.8
80°	17.4	16.9	16.3	15.8	15.3
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	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)