

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: P559260

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559260
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-35-UNV-82-96-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 906.0 lumens
Efficiency: N/A
Efficacy: 77.4 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

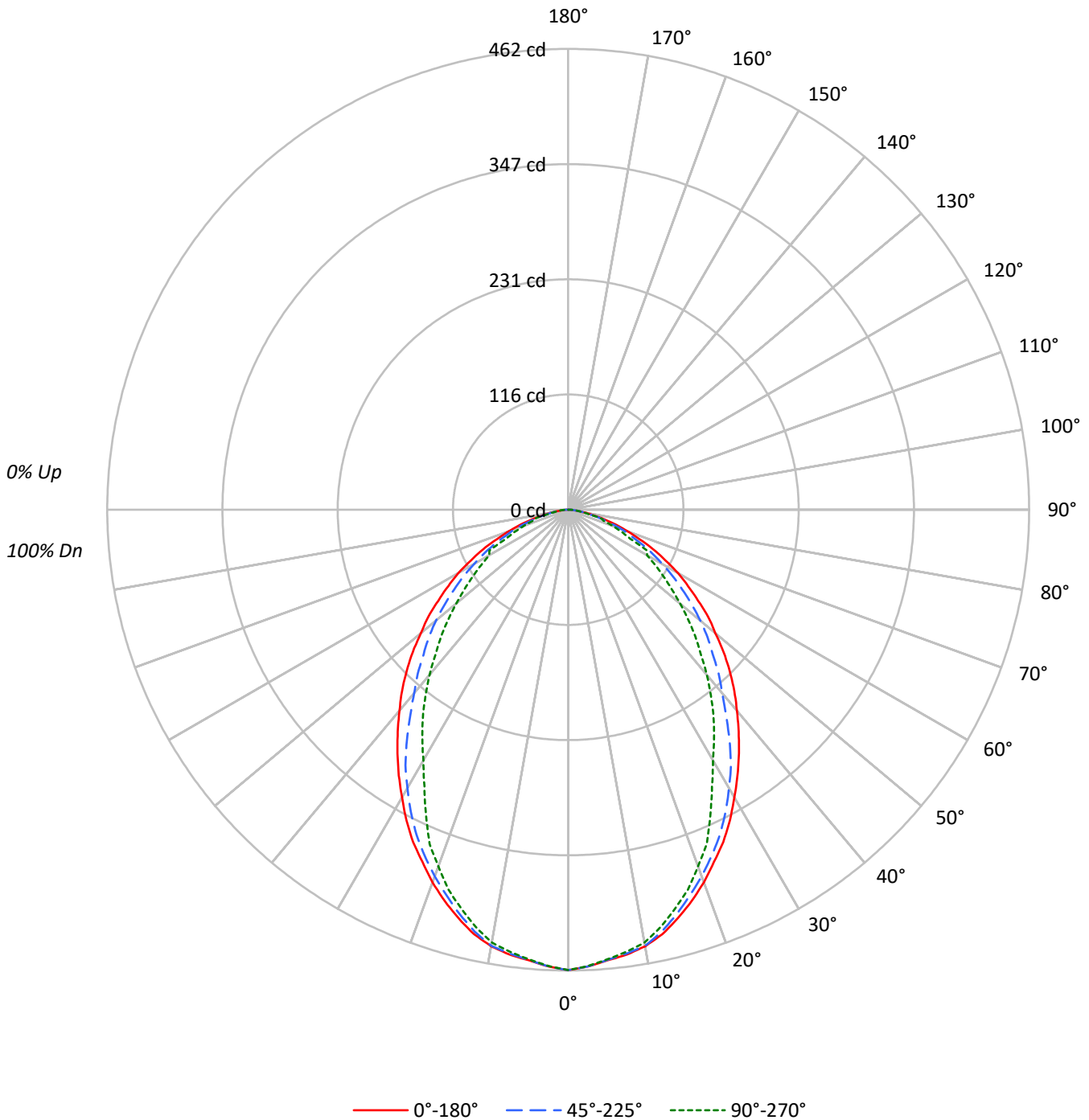
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4968	4968	4968
5°	4900	4895	4888
10°	4857	4852	4817
15°	4727	4679	4613
20°	4553	4480	4357
25°	4366	4271	4005
30°	4138	4006	3607
35°	3918	3702	3338
40°	3695	3374	3036
45°	3484	3119	2745
50°	3225	2895	2448
55°	2984	2624	2192
60°	2734	2342	1963
65°	2404	2053	1740
70°	1983	1797	1479
75°	1576	1377	1443
80°	1060	992	924
85°	655	790	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3484 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	4.7
10°-20°	117.9	13.0
20°-30°	163.2	18.0
30°-40°	174.0	19.2
40°-50°	158.8	17.5
50°-60°	124.4	13.7
60°-70°	81.1	8.9
70°-80°	35.9	4.0
80°-90°	7.7	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°	324.1	35.8
0°-40°	498.1	55.0
0°-60°	781.3	86.2
0°-90°	906.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	454	453	453	452	452	43
15°	424	424	420	416	414	119
25°	368	366	360	347	337	169
35°	298	296	282	260	254	186
45°	229	224	205	188	180	176
55°	159	154	140	123	117	143
65°	94	89	81	82	68	93
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	461.5	461.5	461.5	461.5	461.5
2.5°	458.3	458.3	458.3	457.8	457.8
5°	453.5	453.0	453.0	452.4	452.4
7.5°	449.8	449.2	448.7	448.2	447.1
10°	444.4	444.4	443.9	441.2	440.7
12.5°	435.9	435.4	433.2	429.5	428.4
15°	424.2	424.2	419.9	415.6	414.0
17.5°	411.4	410.8	405.5	401.2	399.1
20°	397.5	396.4	391.1	384.1	380.4
22.5°	382.0	382.0	375.6	366.5	362.8
25°	367.6	365.5	359.6	346.8	337.2
27.5°	351.1	347.9	341.5	323.3	312.1
30°	332.9	331.3	322.3	298.8	290.2
32.5°	315.9	313.2	303.6	279.0	272.1
35°	298.2	296.1	281.7	260.4	254.0
37.5°	280.6	278.0	259.8	242.8	234.8
40°	263.0	259.8	240.1	224.6	216.1
42.5°	246.5	242.2	223.0	206.5	196.9
45°	228.9	224.1	204.9	187.8	180.3
47.5°	211.3	207.0	189.4	171.8	163.3
50°	192.6	188.9	172.9	155.3	146.2
52.5°	177.1	171.3	155.8	138.2	130.7
55°	159.0	154.2	139.8	123.2	116.8
57.5°	142.5	137.7	124.3	108.8	103.5
60°	127.0	120.0	108.8	95.5	91.2
62.5°	109.9	104.6	95.0	83.8	89.1
65°	94.4	89.1	80.6	82.2	68.3
67.5°	77.4	74.7	67.2	59.8	57.6
70°	63.0	59.8	57.1	49.1	47.0
72.5°	50.2	47.0	43.2	38.9	37.3
75°	37.9	35.2	33.1	31.5	34.7
77.5°	26.1	25.1	23.5	21.9	21.3
80°	17.1	16.5	16.0	15.5	14.9
82.5°	10.1	10.1	10.1	10.1	10.1
85°	5.3	5.9	6.4	6.9	7.5
87.5°	3.2	3.2	3.7	4.3	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)