

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: P559909

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559909
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-93-86-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1117.0 lumens
Efficiency: N/A
Efficacy: 95.5 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

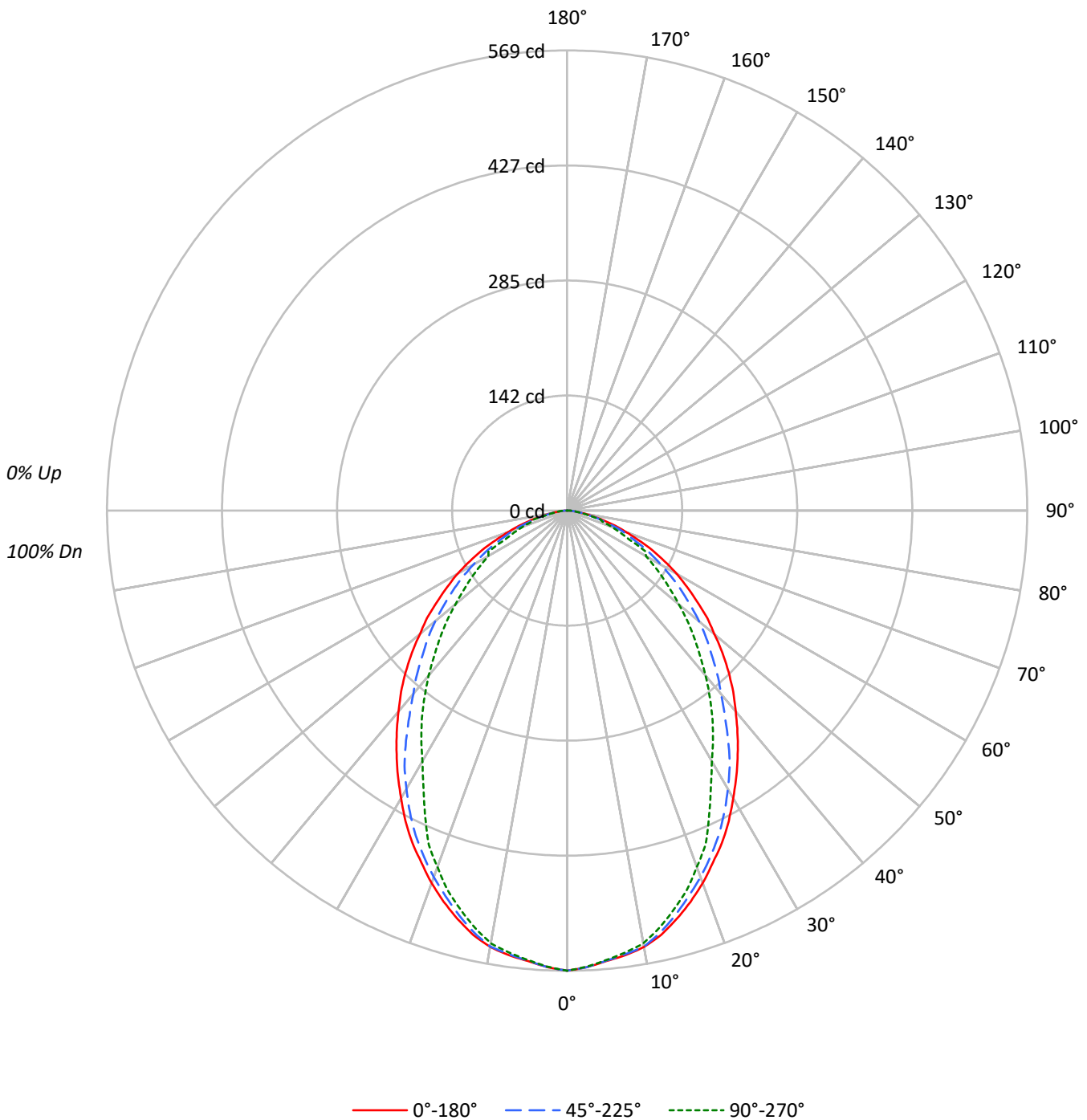
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3062	3062	3062
5°	3021	3017	3014
10°	2994	2991	2969
15°	2914	2885	2844
20°	2807	2762	2686
25°	2691	2632	2469
30°	2551	2469	2224
35°	2416	2282	2057
40°	2278	2080	1872
45°	2148	1923	1692
50°	1989	1784	1509
55°	1839	1617	1352
60°	1686	1445	1211
65°	1482	1265	1072
70°	1221	1108	911
75°	971	848	890
80°	651	611	570
85°	408	488	568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2148 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.0	4.7
10°-20°	145.4	13.0
20°-30°	201.2	18.0
30°-40°	214.6	19.2
40°-50°	195.8	17.5
50°-60°	153.4	13.7
60°-70°	100.0	8.9
70°-80°	44.3	4.0
80°-90°	9.5	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°	399.6	35.8
0°-40°	614.1	55.0
0°-60°	963.3	86.2
0°-90°	1117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	569	569	569	569	569	
5°	559	558	558	558	558	53
15°	523	523	518	512	510	147
25°	453	451	443	428	416	208
35°	368	365	347	321	313	230
45°	282	276	253	232	222	217
55°	196	190	172	152	144	176
65°	116	110	99	101	84	115
75°	47	43	41	39	43	50
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	569.0	569.0	569.0	569.0	569.0
2.5°	565.0	565.0	565.0	564.4	564.4
5°	559.1	558.5	558.5	557.8	557.8
7.5°	554.5	553.9	553.2	552.5	551.2
10°	547.9	547.9	547.3	544.0	543.3
12.5°	537.4	536.8	534.1	529.5	528.2
15°	522.9	522.9	517.7	512.4	510.4
17.5°	507.2	506.5	499.9	494.7	492.0
20°	490.1	488.7	482.2	473.6	469.0
22.5°	471.0	471.0	463.1	451.9	447.3
25°	453.2	450.6	443.3	427.6	415.7
27.5°	432.8	428.9	421.0	398.6	384.8
30°	410.5	408.5	397.3	368.4	357.8
32.5°	389.4	386.1	374.3	344.0	335.5
35°	367.7	365.1	347.3	321.0	313.1
37.5°	346.0	342.7	320.3	299.3	289.4
40°	324.3	320.3	296.0	276.9	266.4
42.5°	303.9	298.6	275.0	254.6	242.7
45°	282.2	276.3	252.6	231.5	222.3
47.5°	260.5	255.2	233.5	211.8	201.3
50°	237.5	232.9	213.1	191.4	180.2
52.5°	218.4	211.1	192.1	170.4	161.2
55°	196.0	190.1	172.3	151.9	144.1
57.5°	175.6	169.7	153.3	134.2	127.6
60°	156.6	148.0	134.2	117.7	112.5
62.5°	135.5	128.9	117.1	103.3	109.9
65°	116.4	109.9	99.3	101.3	84.2
67.5°	95.4	92.1	82.9	73.7	71.0
70°	77.6	73.7	70.4	60.5	57.9
72.5°	61.8	57.9	53.3	48.0	46.0
75°	46.7	43.4	40.8	38.8	42.8
77.5°	32.2	30.9	28.9	27.0	26.3
80°	21.0	20.4	19.7	19.1	18.4
82.5°	12.5	12.5	12.5	12.5	12.5
85°	6.6	7.2	7.9	8.6	9.2
87.5°	3.9	3.9	4.6	5.3	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)