

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: P559589

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559589
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-LD4-2STD-50-UNV-93-86-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1570.0 lumens
Efficiency: N/A
Efficacy: 94.6 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

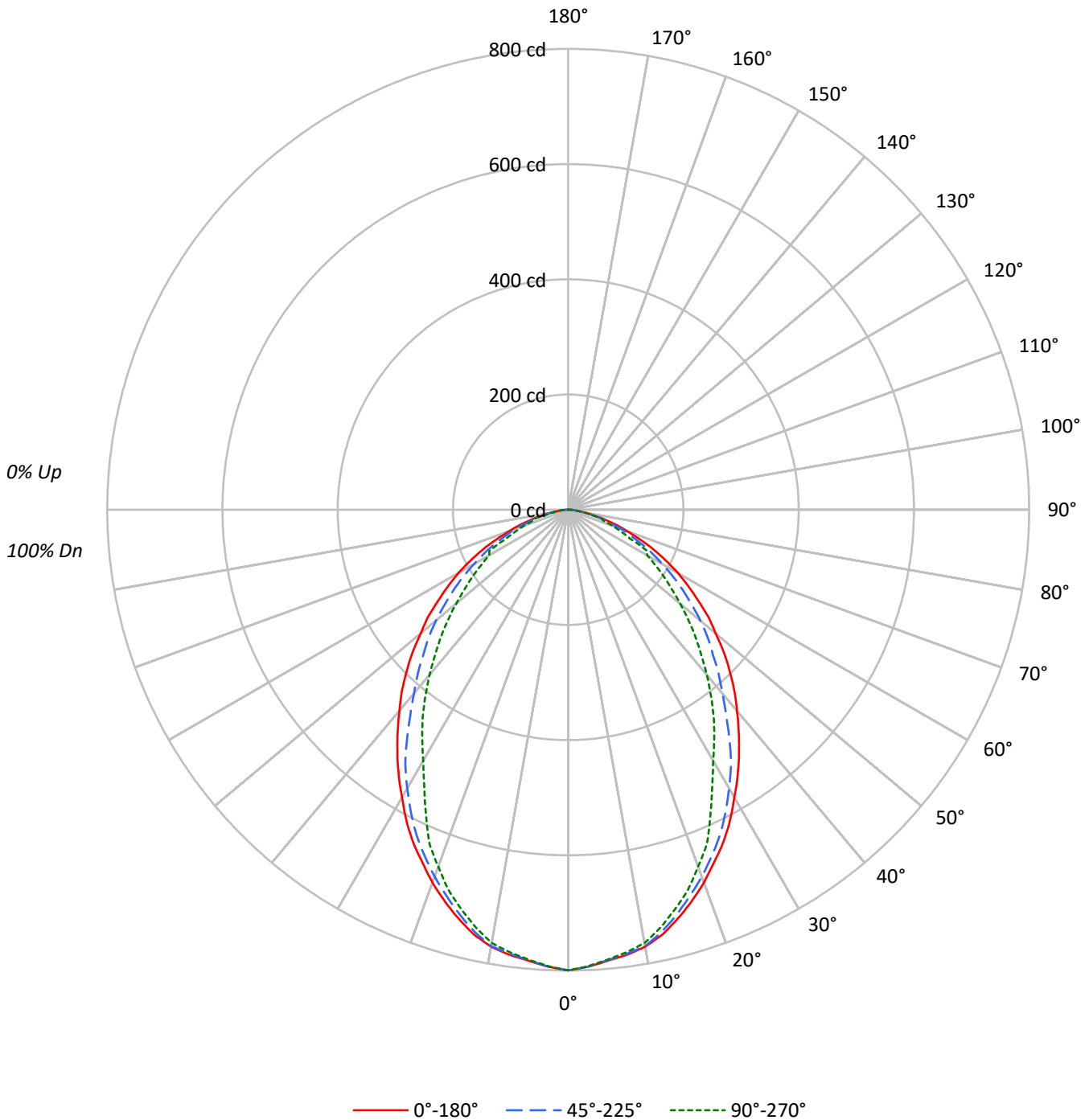
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8608	8608	8608
5°	8492	8481	8471
10°	8418	8407	8347
15°	8191	8108	7996
20°	7890	7763	7551
25°	7565	7400	6940
30°	7170	6940	6252
35°	6791	6415	5783
40°	6405	5845	5261
45°	6037	5404	4757
50°	5590	5017	4242
55°	5170	4545	3800
60°	4736	4060	3404
65°	4167	3556	3013
70°	3434	3113	2562
75°	2728	2383	2499
80°	1835	1717	1605
85°	1136	1371	1593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6037 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	4.7
10°-20°	204.3	13.0
20°-30°	282.9	18.0
30°-40°	301.6	19.2
40°-50°	275.1	17.5
50°-60°	215.6	13.7
60°-70°	140.5	8.9
70°-80°	62.2	4.0
80°-90°	13.4	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°	561.6	35.8
0°-40°	863.2	55.0
0°-60°	1353.9	86.2
0°-90°	1570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	786	785	785	784	784	75
15°	735	735	728	720	718	207
25°	637	633	623	601	584	292
35°	517	513	488	451	440	323
45°	397	388	355	325	312	306
55°	276	267	242	214	202	247
65°	164	154	140	142	118	161
75°	66	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	799.7	799.7	799.7	799.7	799.7
2.5°	794.2	794.2	794.2	793.3	793.3
5°	785.9	784.9	784.9	784.0	784.0
7.5°	779.4	778.5	777.5	776.6	774.8
10°	770.2	770.2	769.2	764.6	763.7
12.5°	755.4	754.4	750.7	744.3	742.4
15°	735.0	735.0	727.6	720.2	717.5
17.5°	712.8	711.9	702.7	695.3	691.6
20°	688.8	686.9	677.7	665.7	659.2
22.5°	662.0	662.0	650.9	635.2	628.7
25°	637.0	633.3	623.1	601.0	584.3
27.5°	608.4	602.8	591.7	560.3	540.9
30°	576.9	574.1	558.4	517.7	503.0
32.5°	547.3	542.7	526.1	483.5	471.5
35°	516.8	513.1	488.2	451.2	440.1
37.5°	486.3	481.7	450.3	420.7	406.8
40°	455.8	450.3	416.0	389.2	374.4
42.5°	427.1	419.7	386.5	357.8	341.2
45°	396.6	388.3	355.0	325.4	312.5
47.5°	366.1	358.7	328.2	297.7	282.9
50°	333.8	327.3	299.6	269.0	253.3
52.5°	307.0	296.8	270.0	239.5	226.5
55°	275.5	267.2	242.2	213.6	202.5
57.5°	246.9	238.5	215.4	188.6	179.4
60°	220.0	208.0	188.6	165.5	158.1
62.5°	190.5	181.2	164.6	145.2	154.4
65°	163.6	154.4	139.6	142.4	118.3
67.5°	134.1	129.4	116.5	103.5	99.9
70°	109.1	103.5	98.9	85.1	81.4
72.5°	86.9	81.4	74.9	67.5	64.7
75°	65.6	61.0	57.3	54.5	60.1
77.5°	45.3	43.5	40.7	37.9	37.0
80°	29.6	28.7	27.7	26.8	25.9
82.5°	17.6	17.6	17.6	17.6	17.6
85°	9.2	10.2	11.1	12.0	12.9
87.5°	5.5	5.5	6.5	7.4	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)