

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: P559461

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559461
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1528.0 lumens
Efficiency: N/A
Efficacy: 92.1 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

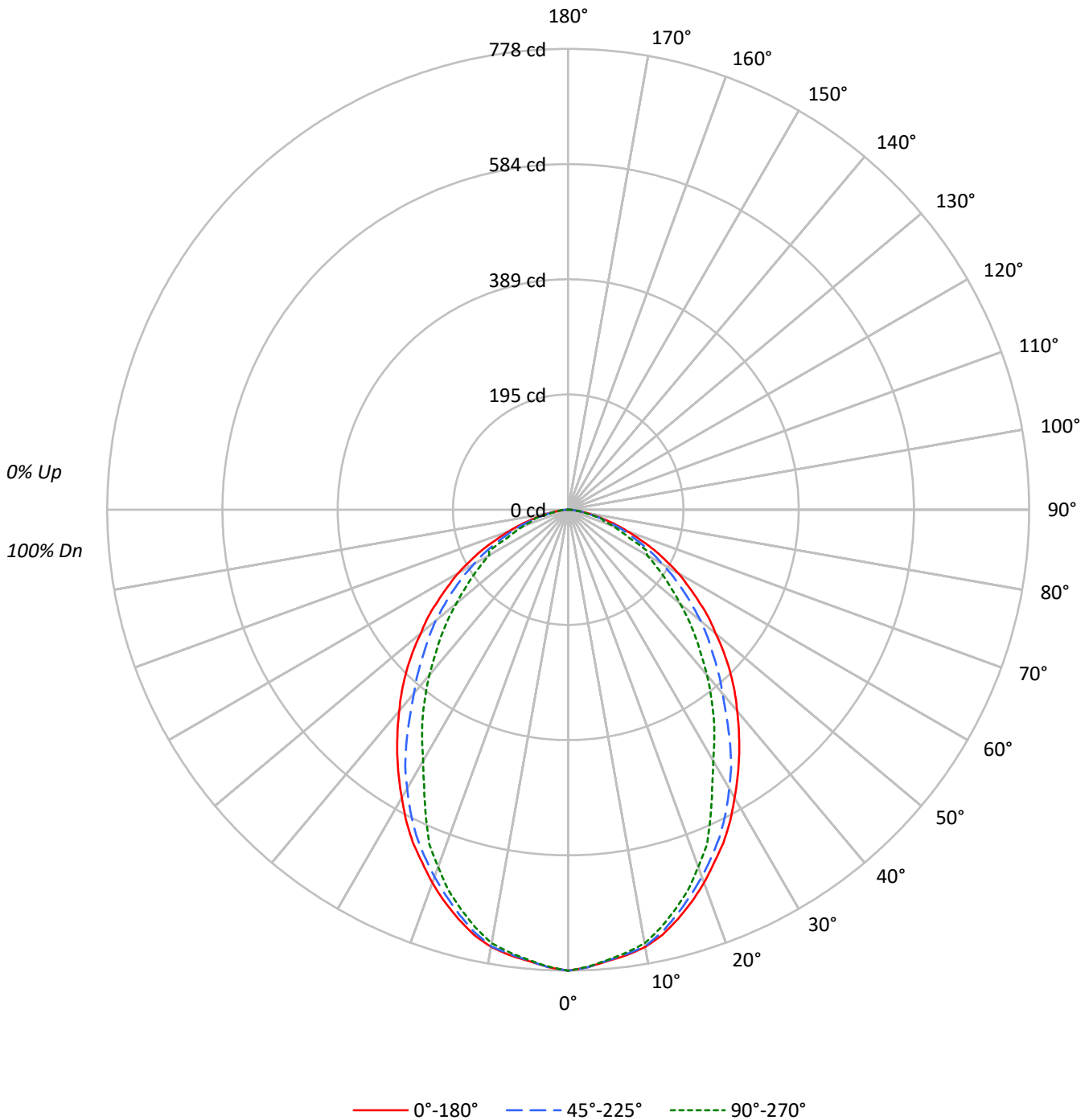
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8378	8378	8378
5°	8264	8254	8244
10°	8192	8182	8123
15°	7972	7892	7782
20°	7679	7556	7349
25°	7364	7203	6754
30°	6979	6755	6084
35°	6610	6243	5628
40°	6233	5689	5120
45°	5876	5259	4629
50°	5439	4881	4129
55°	5031	4425	3699
60°	4611	3953	3313
65°	4057	3461	2934
70°	3342	3031	2493
75°	2658	2321	2433
80°	1785	1674	1562
85°	1112	1334	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5876 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	4.7
10°-20°	198.9	13.0
20°-30°	275.3	18.0
30°-40°	293.5	19.2
40°-50°	267.8	17.5
50°-60°	209.8	13.7
60°-70°	136.8	8.9
70°-80°	60.6	4.0
80°-90°	13.0	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°	546.6	35.8
0°-40°	840.1	55.0
0°-60°	1317.7	86.2
0°-90°	1528.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1528.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	765	764	764	763	763	73
15°	715	715	708	701	698	201
25°	620	616	606	585	569	285
35°	503	499	475	439	428	314
45°	386	378	346	317	304	297
55°	268	260	236	208	197	241
65°	159	150	136	139	115	157
75°	64	59	56	53	58	68
85°	9	10	11	12	13	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	778.3	778.3	778.3	778.3	778.3
2.5°	772.9	772.9	772.9	772.0	772.0
5°	764.8	763.9	763.9	763.0	763.0
7.5°	758.5	757.6	756.7	755.8	754.0
10°	749.5	749.5	748.6	744.1	743.2
12.5°	735.2	734.3	730.7	724.4	722.6
15°	715.4	715.4	708.2	701.0	698.3
17.5°	693.8	692.9	683.9	676.7	673.1
20°	670.4	668.6	659.6	647.9	641.6
22.5°	644.3	644.3	633.5	618.2	611.9
25°	620.0	616.4	606.5	584.9	568.7
27.5°	592.1	586.7	575.9	545.3	526.4
30°	561.5	558.8	543.5	503.9	489.5
32.5°	532.7	528.2	512.0	470.6	458.9
35°	503.0	499.4	475.1	439.1	428.3
37.5°	473.3	468.8	438.2	409.4	395.9
40°	443.6	438.2	404.9	378.8	364.4
42.5°	415.7	408.5	376.1	348.2	332.0
45°	386.0	377.9	345.5	316.7	304.1
47.5°	356.3	349.1	319.4	289.7	275.3
50°	324.8	318.5	291.5	261.8	246.6
52.5°	298.7	288.8	262.7	233.1	220.5
55°	268.1	260.0	235.8	207.9	197.1
57.5°	240.3	232.2	209.7	183.6	174.6
60°	214.2	202.5	183.6	161.1	153.9
62.5°	185.4	176.4	160.2	141.3	150.3
65°	159.3	150.3	135.9	138.6	115.2
67.5°	130.5	126.0	113.4	100.8	97.2
70°	106.2	100.8	96.3	82.8	79.2
72.5°	84.6	79.2	72.9	65.7	63.0
75°	63.9	59.4	55.8	53.1	58.5
77.5°	44.1	42.3	39.6	36.9	36.0
80°	28.8	27.9	27.0	26.1	25.2
82.5°	17.1	17.1	17.1	17.1	17.1
85°	9.0	9.9	10.8	11.7	12.6
87.5°	5.4	5.4	6.3	7.2	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)