

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: P559711

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559711
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-LD4-1HI-40-UNV-82-97-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1716.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

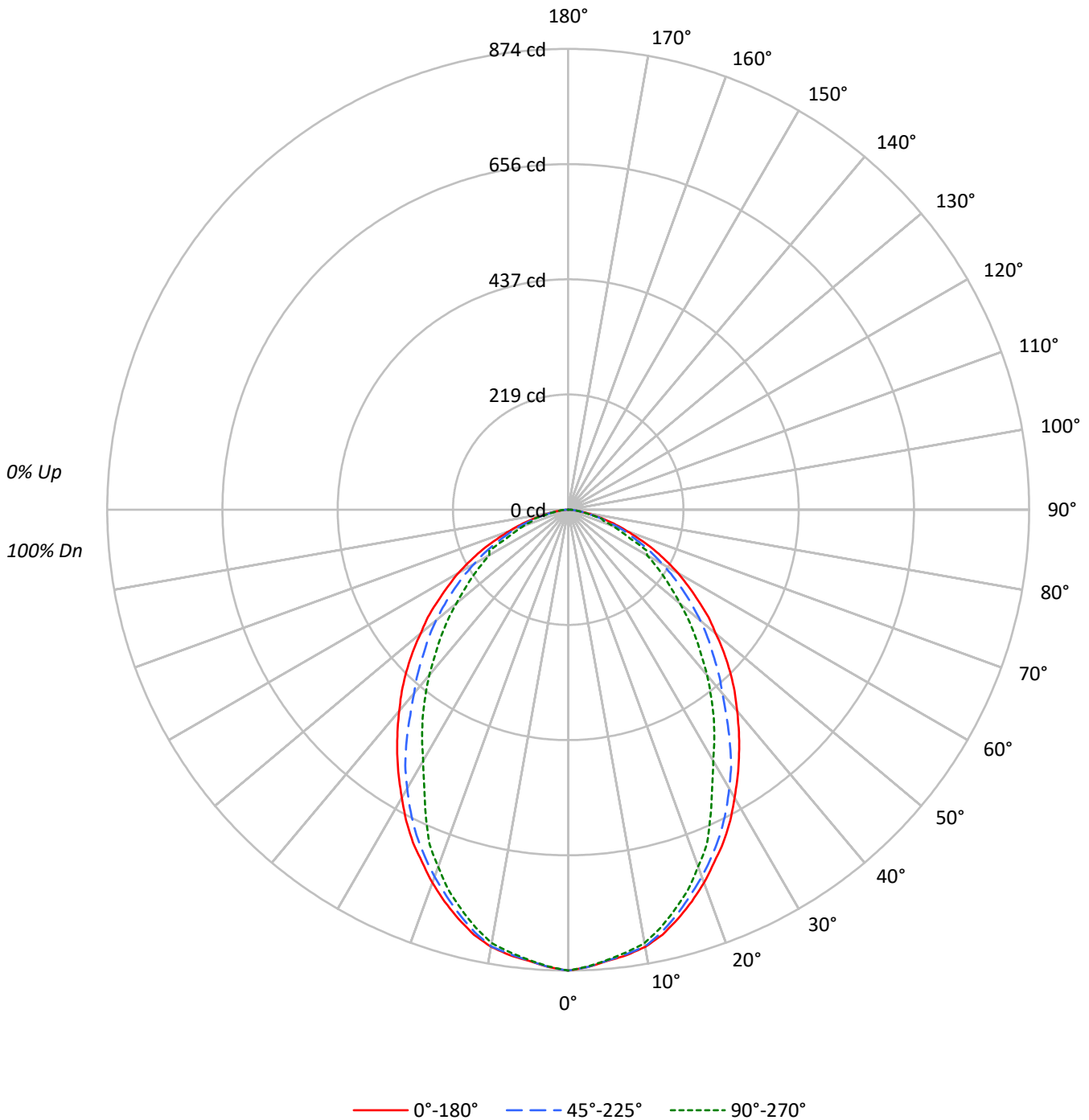
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4704	4704	4704
5°	4640	4635	4629
10°	4600	4595	4562
15°	4476	4431	4369
20°	4312	4242	4127
25°	4135	4045	3793
30°	3919	3793	3416
35°	3711	3506	3160
40°	3500	3195	2876
45°	3299	2953	2600
50°	3054	2741	2318
55°	2825	2485	2076
60°	2589	2218	1860
65°	2278	1943	1647
70°	1876	1701	1399
75°	1491	1304	1366
80°	1001	939	877
85°	624	747	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3299 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	4.7
10°-20°	223.3	13.0
20°-30°	309.2	18.0
30°-40°	329.6	19.2
40°-50°	300.7	17.5
50°-60°	235.6	13.7
60°-70°	153.6	8.9
70°-80°	68.0	4.0
80°-90°	14.6	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°	613.8	35.8
0°-40°	943.5	55.0
0°-60°	1479.8	86.2
0°-90°	1716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1716.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	874	874	874	874	874	
5°	859	858	858	857	857	82
15°	803	803	795	787	784	226
25°	696	692	681	657	639	320
35°	565	561	534	493	481	353
45°	434	424	388	356	342	334
55°	301	292	265	233	221	270
65°	179	169	153	156	129	176
75°	72	67	63	60	66	77
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	874.1	874.1	874.1	874.1	874.1
2.5°	868.0	868.0	868.0	867.0	867.0
5°	858.9	857.9	857.9	856.9	856.9
7.5°	851.9	850.9	849.9	848.8	846.8
10°	841.8	841.8	840.8	835.7	834.7
12.5°	825.6	824.6	820.5	813.5	811.5
15°	803.4	803.4	795.3	787.2	784.2
17.5°	779.1	778.1	768.0	759.9	755.9
20°	752.8	750.8	740.7	727.6	720.5
22.5°	723.5	723.5	711.4	694.2	687.2
25°	696.3	692.2	681.1	656.8	638.7
27.5°	664.9	658.9	646.7	612.4	591.2
30°	630.6	627.5	610.4	565.9	549.7
32.5°	598.2	593.2	575.0	528.5	515.4
35°	564.9	560.8	533.6	493.1	481.0
37.5°	531.5	526.5	492.1	459.8	444.6
40°	498.2	492.1	454.7	425.4	409.3
42.5°	466.9	458.8	422.4	391.1	372.9
45°	433.5	424.4	388.0	355.7	341.6
47.5°	400.2	392.1	358.7	325.4	309.2
50°	364.8	357.7	327.4	294.1	276.9
52.5°	335.5	324.4	295.1	261.7	247.6
55°	301.1	292.0	264.8	233.4	221.3
57.5°	269.8	260.7	235.5	206.1	196.0
60°	240.5	227.4	206.1	180.9	172.8
62.5°	208.2	198.1	179.9	158.7	168.8
65°	178.9	168.8	152.6	155.6	129.3
67.5°	146.5	141.5	127.3	113.2	109.1
70°	119.2	113.2	108.1	93.0	88.9
72.5°	95.0	88.9	81.9	73.8	70.7
75°	71.7	66.7	62.7	59.6	65.7
77.5°	49.5	47.5	44.5	41.4	40.4
80°	32.3	31.3	30.3	29.3	28.3
82.5°	19.2	19.2	19.2	19.2	19.2
85°	10.1	11.1	12.1	13.1	14.1
87.5°	6.1	6.1	7.1	8.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)