

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: P559083

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559083
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-LD4-2HI-35-UNV-93-94-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1939.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

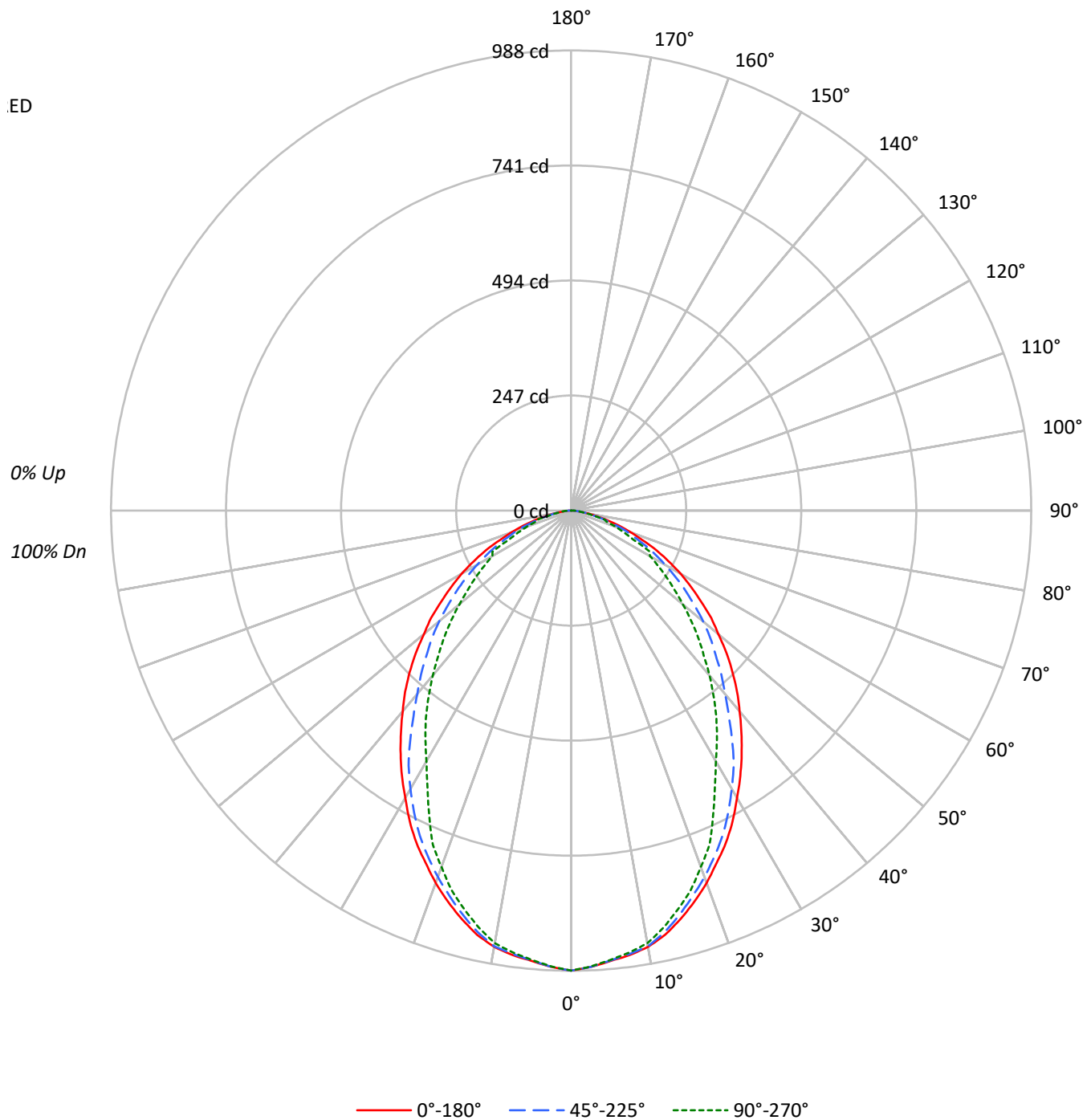
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10632	10632	10632
5°	10487	10474	10463
10°	10397	10383	10309
15°	10116	10014	9874
20°	9745	9588	9325
25°	9343	9140	8570
30°	8856	8572	7721
35°	8387	7922	7142
40°	7909	7220	6497
45°	7457	6675	5874
50°	6903	6196	5240
55°	6386	5615	4693
60°	5851	5014	4204
65°	5147	4391	3724
70°	4239	3846	3163
75°	3373	2944	3086
80°	2263	2126	1984
85°	1408	1692	1976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7457 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	4.7
10°-20°	252.3	13.0
20°-30°	349.3	18.0
30°-40°	372.5	19.2
40°-50°	339.8	17.5
50°-60°	266.2	13.7
60°-70°	173.5	8.9
70°-80°	76.9	4.0
80°-90°	16.5	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°	693.6	35.8
0°-40°	1066.1	55.0
0°-60°	1672.1	86.2
0°-90°	1939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	988	988	988	988	988	
5°	971	969	969	968	968	92
15°	908	908	899	890	886	255
25°	787	782	770	742	722	361
35°	638	634	603	557	544	399
45°	490	480	438	402	386	377
55°	340	330	299	264	250	305
65°	202	191	172	176	146	199
75°	81	75	71	67	74	87
85°	11	13	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	987.7	987.7	987.7	987.7	987.7
2.5°	980.8	980.8	980.8	979.7	979.7
5°	970.6	969.4	969.4	968.3	968.3
7.5°	962.6	961.4	960.3	959.2	956.9
10°	951.2	951.2	950.0	944.3	943.2
12.5°	932.9	931.8	927.2	919.2	916.9
15°	907.8	907.8	898.6	889.5	886.1
17.5°	880.4	879.2	867.8	858.7	854.1
20°	850.7	848.4	837.0	822.1	814.1
22.5°	817.6	817.6	803.9	784.5	776.5
25°	786.7	782.2	769.6	742.2	721.6
27.5°	751.3	744.5	730.8	692.0	668.0
30°	712.5	709.1	689.7	639.4	621.2
32.5°	676.0	670.3	649.7	597.2	582.3
35°	638.3	633.7	602.9	557.2	543.5
37.5°	600.6	594.9	556.1	519.5	502.4
40°	562.9	556.1	513.8	480.7	462.4
42.5°	527.5	518.4	477.3	441.9	421.3
45°	489.9	479.6	438.5	401.9	385.9
47.5°	452.2	443.0	405.4	367.7	349.4
50°	412.2	404.2	370.0	332.3	312.9
52.5°	379.1	366.5	333.4	295.7	279.8
55°	340.3	330.0	299.2	263.8	250.1
57.5°	304.9	294.6	266.1	232.9	221.5
60°	271.8	256.9	232.9	204.4	195.3
62.5°	235.2	223.8	203.2	179.3	190.7
65°	202.1	190.7	172.4	175.8	146.2
67.5°	165.6	159.9	143.9	127.9	123.3
70°	134.7	127.9	122.2	105.1	100.5
72.5°	107.3	100.5	92.5	83.4	79.9
75°	81.1	75.4	70.8	67.4	74.2
77.5°	56.0	53.7	50.2	46.8	45.7
80°	36.5	35.4	34.3	33.1	32.0
82.5°	21.7	21.7	21.7	21.7	21.7
85°	11.4	12.6	13.7	14.8	16.0
87.5°	6.9	6.9	8.0	9.1	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)