

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: P559151

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559151
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-40-UNV-93-97-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1867.0 lumens
Efficiency: N/A
Efficacy: 86.4 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

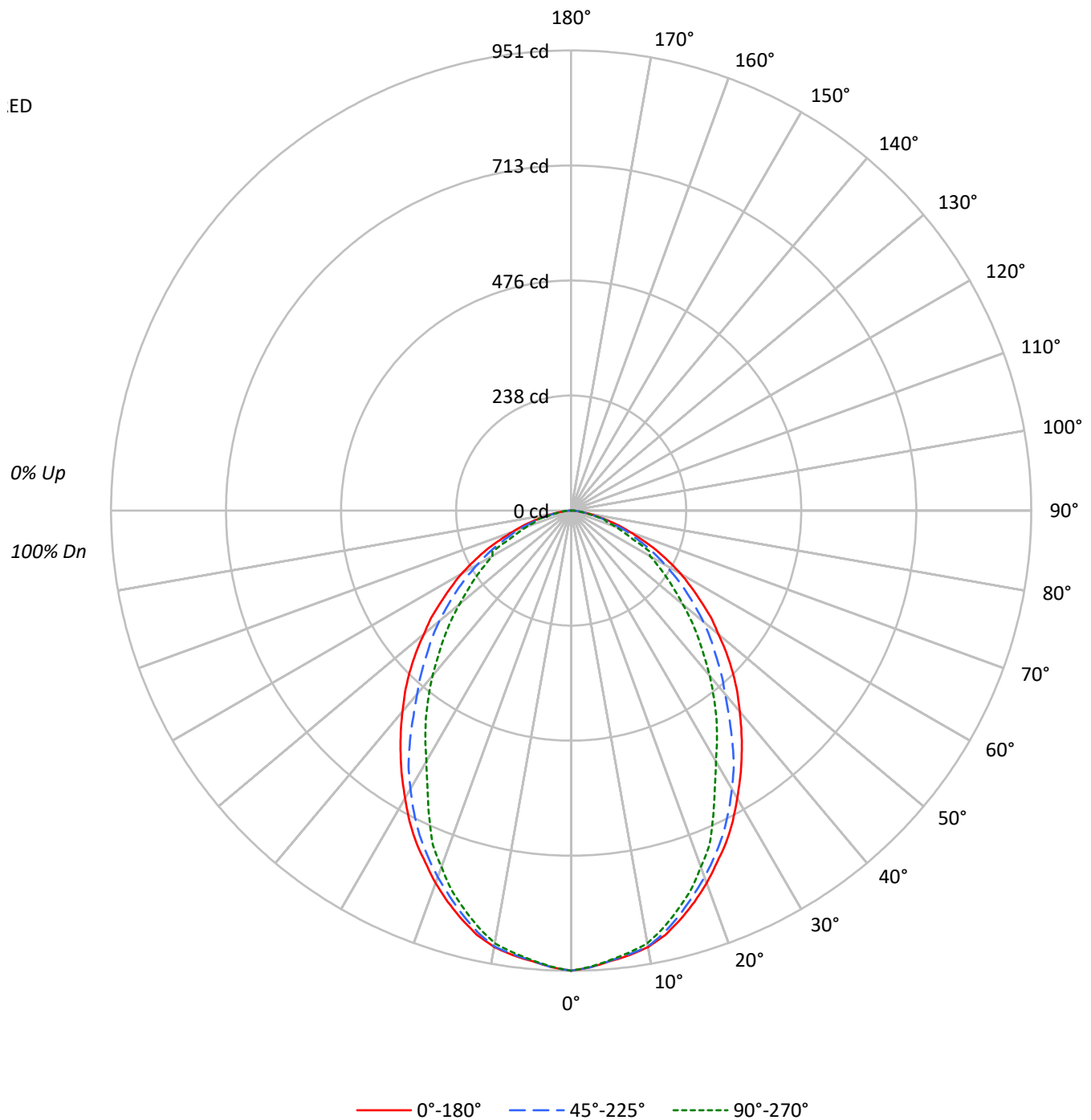
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10236	10236	10236
5°	10097	10085	10074
10°	10010	9998	9926
15°	9741	9643	9508
20°	9383	9231	8979
25°	8997	8801	8253
30°	8528	8254	7434
35°	8076	7628	6876
40°	7616	6953	6257
45°	7180	6427	5657
50°	6646	5965	5044
55°	6148	5407	4519
60°	5634	4829	4047
65°	4956	4228	3584
70°	4082	3701	3046
75°	3248	2836	2974
80°	2182	2046	1909
85°	1359	1630	1902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7180 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.5	4.7
10°-20°	243.0	13.0
20°-30°	336.4	18.0
30°-40°	358.7	19.2
40°-50°	327.2	17.5
50°-60°	256.3	13.7
60°-70°	167.1	8.9
70°-80°	74.0	4.0
80°-90°	15.9	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°	667.8	35.8
0°-40°	1026.5	55.0
0°-60°	1610.0	86.2
0°-90°	1867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1867.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	934	933	933	932	932	89
15°	874	874	865	856	853	246
25°	758	753	741	715	695	348
35°	615	610	580	536	523	384
45°	472	462	422	387	372	363
55°	328	318	288	254	241	294
65°	195	184	166	169	141	192
75°	78	73	68	65	72	84
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	951.0	951.0	951.0	951.0	951.0
2.5°	944.4	944.4	944.4	943.3	943.3
5°	934.5	933.4	933.4	932.3	932.3
7.5°	926.8	925.7	924.6	923.5	921.3
10°	915.8	915.8	914.7	909.2	908.1
12.5°	898.3	897.2	892.8	885.1	882.9
15°	874.1	874.1	865.3	856.5	853.2
17.5°	847.7	846.6	835.6	826.8	822.4
20°	819.1	816.9	805.9	791.6	783.9
22.5°	787.2	787.2	774.0	755.3	747.6
25°	757.5	753.1	741.0	714.6	694.9
27.5°	723.4	716.8	703.6	666.3	643.2
30°	686.1	682.8	664.1	615.7	598.1
32.5°	650.9	645.4	625.6	575.0	560.7
35°	614.6	610.2	580.5	536.5	523.3
37.5°	578.3	572.8	535.4	500.3	483.8
40°	542.0	535.4	494.8	462.9	445.3
42.5°	507.9	499.2	459.6	425.5	405.7
45°	471.7	461.8	422.2	387.0	371.6
47.5°	435.4	426.6	390.3	354.0	336.4
50°	396.9	389.2	356.2	319.9	301.2
52.5°	365.0	352.9	321.0	284.8	269.4
55°	327.6	317.7	288.1	254.0	240.8
57.5°	293.6	283.7	256.2	224.3	213.3
60°	261.7	247.4	224.3	196.8	188.0
62.5°	226.5	215.5	195.7	172.6	183.6
65°	194.6	183.6	166.0	169.3	140.7
67.5°	159.4	153.9	138.5	123.1	118.7
70°	129.7	123.1	117.6	101.1	96.8
72.5°	103.3	96.8	89.1	80.3	77.0
75°	78.1	72.6	68.2	64.9	71.5
77.5°	53.9	51.7	48.4	45.1	44.0
80°	35.2	34.1	33.0	31.9	30.8
82.5°	20.9	20.9	20.9	20.9	20.9
85°	11.0	12.1	13.2	14.3	15.4
87.5°	6.6	6.6	7.7	8.8	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)