

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: P559451

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559451
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-82-94-EDD
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1467.0 lumens
Efficiency: N/A
Efficacy: 88.4 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

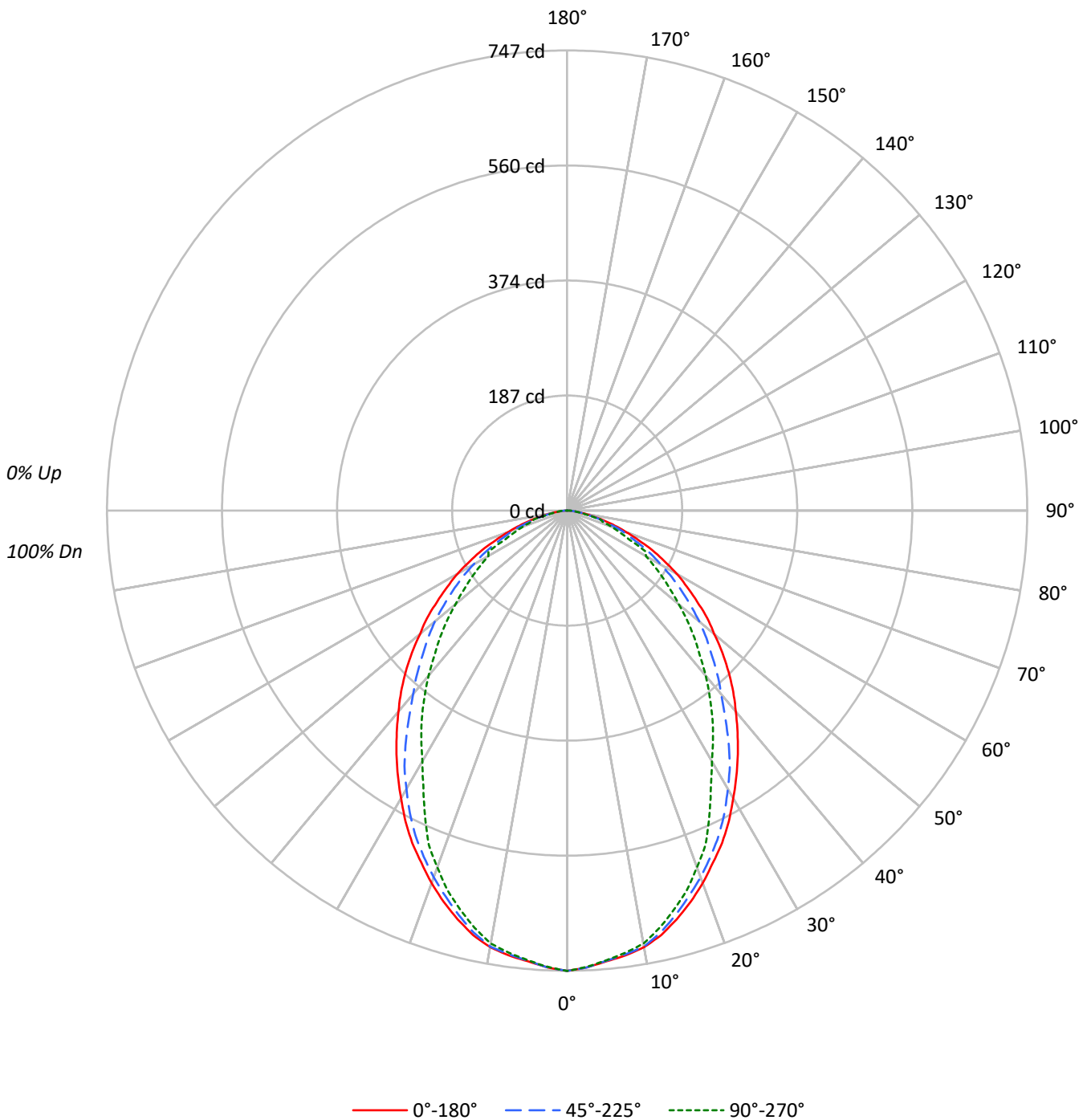
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8044	8044	8044
5°	7934	7924	7916
10°	7865	7856	7800
15°	7653	7577	7471
20°	7372	7253	7056
25°	7069	6916	6485
30°	6701	6486	5842
35°	6345	5993	5403
40°	5984	5463	4917
45°	5641	5049	4445
50°	5223	4687	3964
55°	4830	4247	3551
60°	4426	3793	3180
65°	3894	3321	2817
70°	3207	2908	2392
75°	2549	2229	2337
80°	1711	1605	1500
85°	1062	1284	1494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	4.7
10°-20°	190.9	13.0
20°-30°	264.3	18.0
30°-40°	281.8	19.2
40°-50°	257.1	17.5
50°-60°	201.4	13.7
60°-70°	131.3	8.9
70°-80°	58.2	4.0
80°-90°	12.5	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°	524.8	35.8
0°-40°	806.6	55.0
0°-60°	1265.1	86.2
0°-90°	1467.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1467.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	747	747	747	747	747	
5°	734	733	733	733	733	70
15°	687	687	680	673	670	193
25°	595	592	582	562	546	273
35°	483	480	456	422	411	302
45°	371	363	332	304	292	285
55°	257	250	226	200	189	231
65°	153	144	130	133	111	151
75°	61	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	747.3	747.3	747.3	747.3	747.3
2.5°	742.1	742.1	742.1	741.2	741.2
5°	734.3	733.4	733.4	732.6	732.6
7.5°	728.3	727.4	726.5	725.7	723.9
10°	719.6	719.6	718.8	714.4	713.6
12.5°	705.8	704.9	701.5	695.4	693.7
15°	686.8	686.8	679.9	673.0	670.4
17.5°	666.1	665.2	656.6	649.6	646.2
20°	643.6	641.9	633.2	622.0	616.0
22.5°	618.5	618.5	608.2	593.5	587.4
25°	595.2	591.8	582.3	561.5	546.0
27.5°	568.4	563.3	552.9	523.5	505.4
30°	539.1	536.5	521.8	483.8	470.0
32.5°	511.4	507.1	491.6	451.8	440.6
35°	482.9	479.5	456.1	421.6	411.2
37.5°	454.4	450.1	420.7	393.1	380.1
40°	425.9	420.7	388.8	363.7	349.9
42.5°	399.1	392.2	361.1	334.3	318.8
45°	370.6	362.8	331.7	304.1	292.0
47.5°	342.1	335.2	306.7	278.2	264.4
50°	311.9	305.8	279.9	251.4	236.7
52.5°	286.8	277.3	252.3	223.7	211.7
55°	257.4	249.7	226.3	199.6	189.2
57.5°	230.7	222.9	201.3	176.2	167.6
60°	205.6	194.4	176.2	154.6	147.7
62.5°	178.0	169.3	153.8	135.6	144.3
65°	152.9	144.3	130.4	133.0	110.6
67.5°	125.3	120.9	108.9	96.8	93.3
70°	101.9	96.8	92.4	79.5	76.0
72.5°	81.2	76.0	70.0	63.1	60.5
75°	61.3	57.0	53.6	51.0	56.2
77.5°	42.3	40.6	38.0	35.4	34.6
80°	27.6	26.8	25.9	25.1	24.2
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.6	9.5	10.4	11.2	12.1
87.5°	5.2	5.2	6.0	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)