Physical Properties Test Report

Link Test Report:	250799-03
Test Description:	SAE J661-2021
Purpose of Test:	To Evaluate the Characteristics of Brake Materials
Material Identification:	YN F3-0
Test Date:	10/12/2025 - 10/13/2025

Requested By:

YANCHENG YANITIGER AUTO PARTS CO., LIMITED
Yan Liang

Tested By

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SAE J661-2021

Test Information

Customer Name	YANCHENG YANITIGER AUTO PARTS CO., LIMITED
Requestor	Yan Liang
Program Number	J661noinsp.chp
Test Coordinator	Fiona Song
Test Equipment	Chase Machine
Test Dates	10/12/2025 - 10/13/2025
Datalogger	v1.0.23
Template Version	1.83

Setup Details

Sample Material	YN F3-0
Sample Size	1 inch x 1 inch
Sample Manufacturer	YANCHENG YANITIGER AUTO PARTS CO.,LIMITED
Test Pressure	150.0 psi

Sample Test Summary

Normal Friction Coefficient	0.541	Pass
Normal Friction Class	G	
Hot Friction Coefficient	0.528	Pass
Hot Friction Class	G	
Minimum Bold Coefficient	0.438	Pass
Max Variation Below Average for Bold Readings	0.055	Pass
Max % Variation for Bold Readings	9.37%	Pass

Pass / Fail

Pass

Comments:

N/A

Created by: **Fiona Song** **Signature:** 宋文娟 日期：2025.10.14 10:26:57 +08'00' **Date** **10/14/2025**

Reviewed by: **Duel Tang** **Signature:** 唐磊鸣 2025.10.14 11:03:21 +08'00' **Date** **10/14/2025**

Test Number

Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
250799-03-A	250799-03-B	250799-03-C	250799-03-D	250799-03-E

Manufacturer:
YANCHENG YANITIGER AUTO PARTS CO., LIMITED
Material:
YN F3-0

Initial Baseline

Application	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	0.362	0.386	0.278	0.377	0.446
20	0.456	0.507	0.451	0.558	0.496

Normal **0.541** **G**

First Fade

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
200.0	0.409	0.492	0.404	0.514	0.459
550.0	0.481	0.481	0.459	0.532	0.484

(or Temp @ 10min)

Hot **0.528** **G**

First Recovery

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Average	Norm/Hot
500.0	0.520	0.532	0.491	0.577	0.528	0.530	
400.0	0.541	0.563	0.494	0.594	0.545	0.547	Hot
300.0	0.531	0.540	0.502	0.576	0.514	0.533	Hot
200.0	0.400	0.508	0.445	0.520	0.489	0.472	

Wear

Application	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	0.553	0.556	0.507	0.572	0.543
100	0.509	0.535	0.562	0.603	0.542

Second Fade

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Average	Max Var. < Average	Norm/Hot	% Var
200.0	**0.438**	**0.449**	**0.498**	**0.497**	**0.475**	**0.471**	**0.033**	**Normal**	**7%**
250.0	**0.548**	**0.518**	**0.558**	**0.556**	**0.519**	**0.540**	**0.022**	**Normal**	**4%**
300.0	**0.576**	**0.541**	**0.579**	**0.599**	**0.553**	**0.570**	**0.029**	**Normal**	**5%**
350.0	**0.588**	**0.568**	**0.586**	**0.622**	**0.548**	**0.582**	**0.034**	**-**	**6%**
400.0	**0.580**	**0.572**	**0.600**	**0.633**	**0.528**	**0.583**	**0.055**	**Normal**	**9%**
450.0	**0.561**	**0.556**	**0.604**	**0.609**	**0.519**	**0.570**	**0.051**	**Hot**	**9%**
500.0	**0.540**	**0.536**	**0.573**	**0.588**	**0.515**	**0.550**	**0.035**	**Hot**	**6%**
550.0	**0.510**	**0.525**	**0.551**	**0.567**	**0.496**	**0.530**	**0.034**	**Hot**	**6%**
600.0	0.479	0.496	0.500	0.512	0.471	0.492	0.021	Hot	4%
650.0	0.465	0.456	0.466	0.464	0.451	0.460	0.009	Hot	2%

(or Temp @ 10min)

Second Recovery

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Average	Max Var. < Average	Norm/Hot	% Var
600.0	0.511	0.505	0.531	0.520	0.486	0.511	0.025	-	5%
500.0	0.510	0.528	0.558	0.577	0.524	0.539	0.029	Hot	5%
400.0	0.498	0.526	0.549	0.584	0.509	0.533	0.035	Hot	7%
300.0	**0.487**	**0.526**	**0.530**	**0.558**	**0.503**	**0.521**	**0.034**	**Hot**	**6%**
200.0	**0.453**	**0.479**	**0.503**	**0.526**	**0.502**	**0.493**	**0.040**	**-**	**8%**

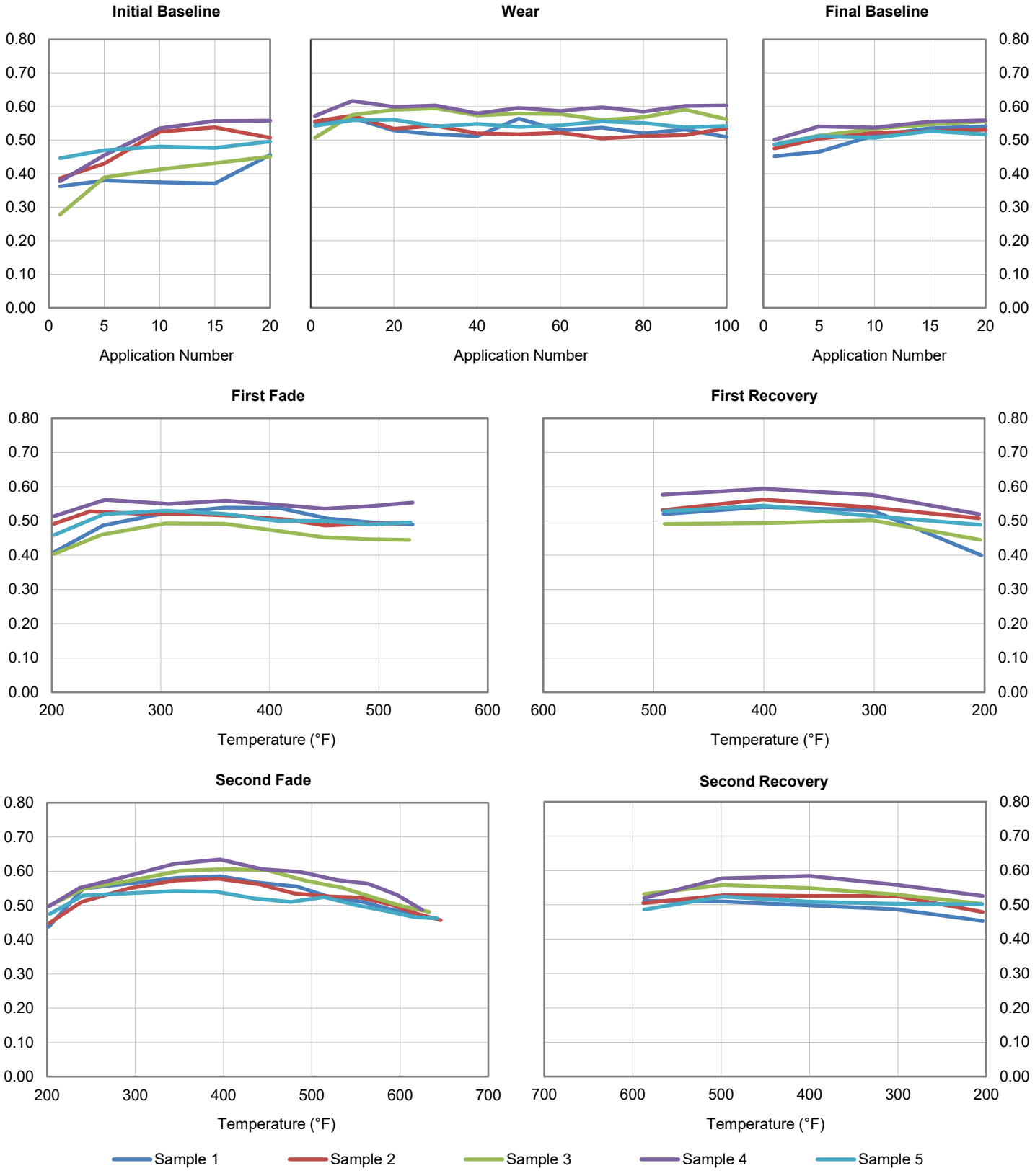
Final Baseline

Application	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	0.452	0.475	0.487	0.501	0.487
20	0.541	0.531	0.556	0.559	0.517

Manufacturer: YANCHENG YANITIGER AUTO PARTS CO., LIMITED Test Dates: 10/12/2025 - 10/13/2025
Material: YN F3-0
Test Pressure: 150.0 psi

Summary of 5 Samples

Coefficient of Friction



Normal	**0.536**	**G**
Hot	**0.512**	**G**

10/12/2025
250799-03-A
Sample 1 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	7.25	6.71	0.54	7.45
Thickness (inch)	0.240	0.228	0.013	5.21

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	53.6	0.362	68.6	0.452
5	57.8	0.380	70.6	0.465
10	56.9	0.374	78.0	0.514
15	55.9	0.371	80.4	0.535
20	67.1	0.456	81.6	0.541

Wear

Event	Force (lb)	μ
1	82.5	0.553
10	84.4	0.566
20	79.7	0.529
30	79.5	0.517
40	76.1	0.512
50	85.4	0.564
60	79.3	0.529
70	80.2	0.537
80	79.0	0.520
90	80.5	0.532
100	76.5	0.509

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	62.5	0.409	202.0
30.0	73.6	0.487	247.0
60.0	78.7	0.523	304.0
90.0	80.1	0.539	359.0
120.0	80.2	0.538	409.0
150.0	78.9	0.507	454.0
180.0	77.4	0.496	494.0
210.0	77.0	0.490	531.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	66.3	0.438	202.0
30.0	82.6	0.549	241.0
60.0	85.3	0.565	296.0
90.0	87.5	0.580	347.0
120.0	87.7	0.585	396.0
150.0	84.7	0.566	441.0
180.0	82.2	0.555	483.0
210.0	78.9	0.522	523.0
240.0	74.0	0.511	557.0
270.0	71.1	0.487	591.0
300.0	69.1	0.472	621.0

First Recovery

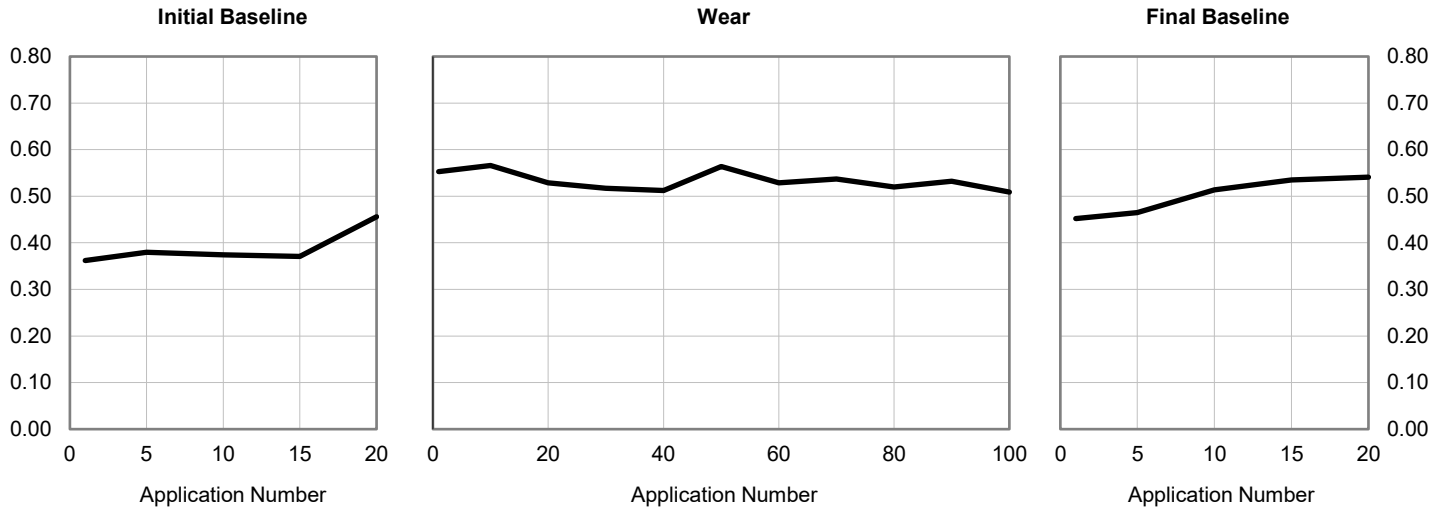
Event	Force (lb)	μ	Temp (°F)
1	77.1	0.520	491.0
2	81.3	0.541	400.0
3	80.9	0.531	302.0
4	59.9	0.400	203.0

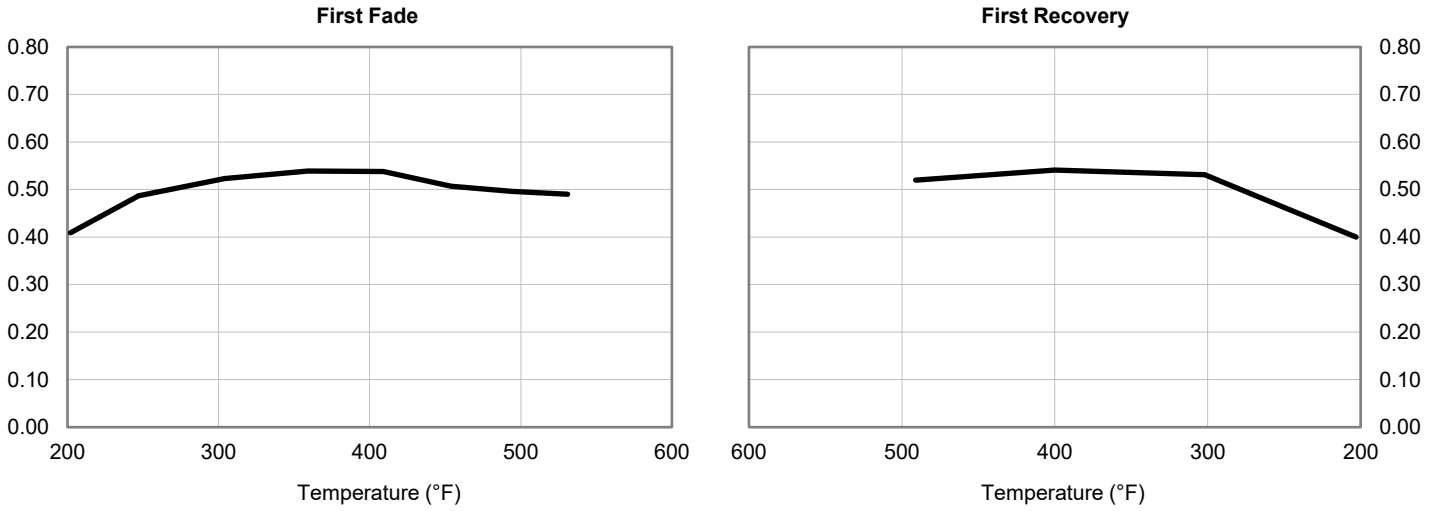
Second Recovery

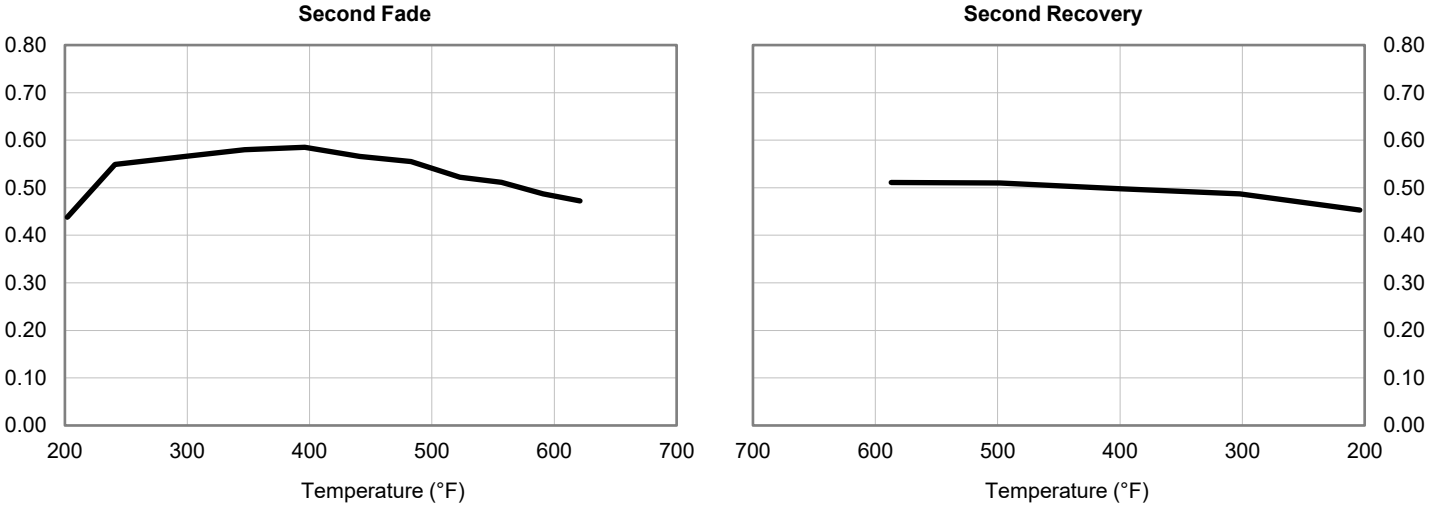
Event	Force (lb)	μ	Temp (°F)
1	77.8	0.511	587.0
2	77.5	0.510	498.0
3	75.3	0.498	400.0
4	71.7	0.487	302.0
5	69.4	0.453	204.0

10/12/2025
250799-03-A
Sample 1 of 5

Coefficient of Friction







Normal	**0.520**	**G**
Hot	**0.525**	**G**

10/12/2025
250799-03-B
Sample 2 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	7.29	6.89	0.40	5.49
Thickness (inch)	0.241	0.228	0.013	5.20

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	57.0	0.386	70.3	0.475
5	64.1	0.430	76.2	0.504
10	78.0	0.525	78.5	0.522
15	81.8	0.538	79.4	0.526
20	77.0	0.507	79.5	0.531

Wear

Event	Force (lb)	μ
1	84.3	0.556
10	85.7	0.573
20	80.4	0.534
30	81.3	0.543
40	78.6	0.520
50	77.0	0.517
60	78.4	0.522
70	76.8	0.505
80	76.9	0.512
90	77.9	0.515
100	80.3	0.535

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	74.4	0.492	202.0
30.0	79.7	0.528	235.0
60.0	77.9	0.521	283.0
90.0	77.8	0.520	329.0
120.0	80.8	0.515	372.0
150.0	77.4	0.505	414.0
180.0	75.2	0.487	451.0
210.0	76.6	0.492	487.0
240.0	76.9	0.494	523.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	67.9	0.449	203.0
30.0	77.2	0.510	239.0
60.0	82.8	0.550	293.0
90.0	85.5	0.573	345.0
120.0	86.3	0.578	394.0
150.0	86.5	0.562	440.0
180.0	82.4	0.535	480.0
210.0	77.6	0.526	519.0
240.0	82.2	0.523	555.0
270.0	79.2	0.503	589.0
300.0	75.6	0.476	619.0
330.0	70.2	0.457	646.0

First Recovery

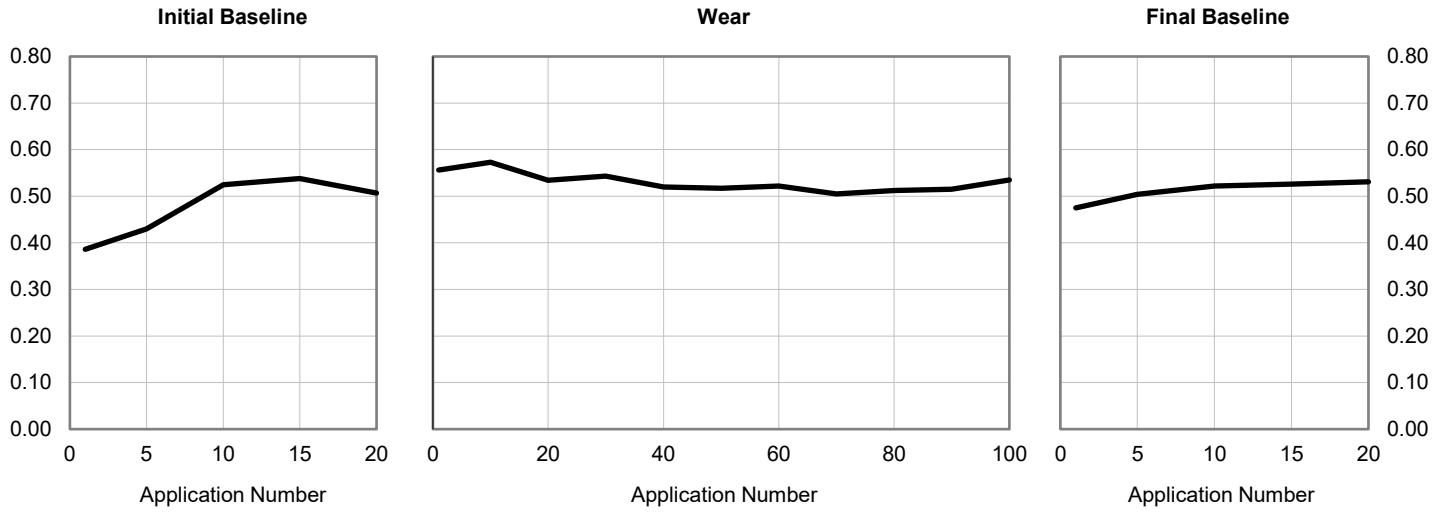
Event	Force (lb)	μ	Temp (°F)
1	80.6	0.532	492.0
2	85.6	0.563	401.0
3	82.3	0.540	303.0
4	76.7	0.508	205.0

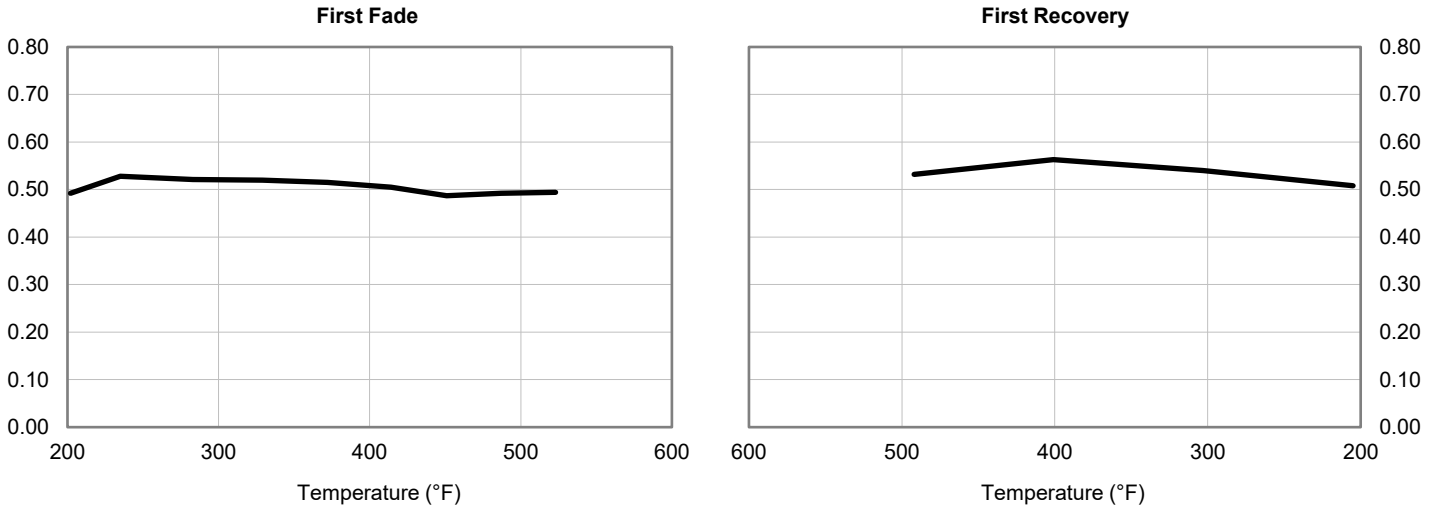
Second Recovery

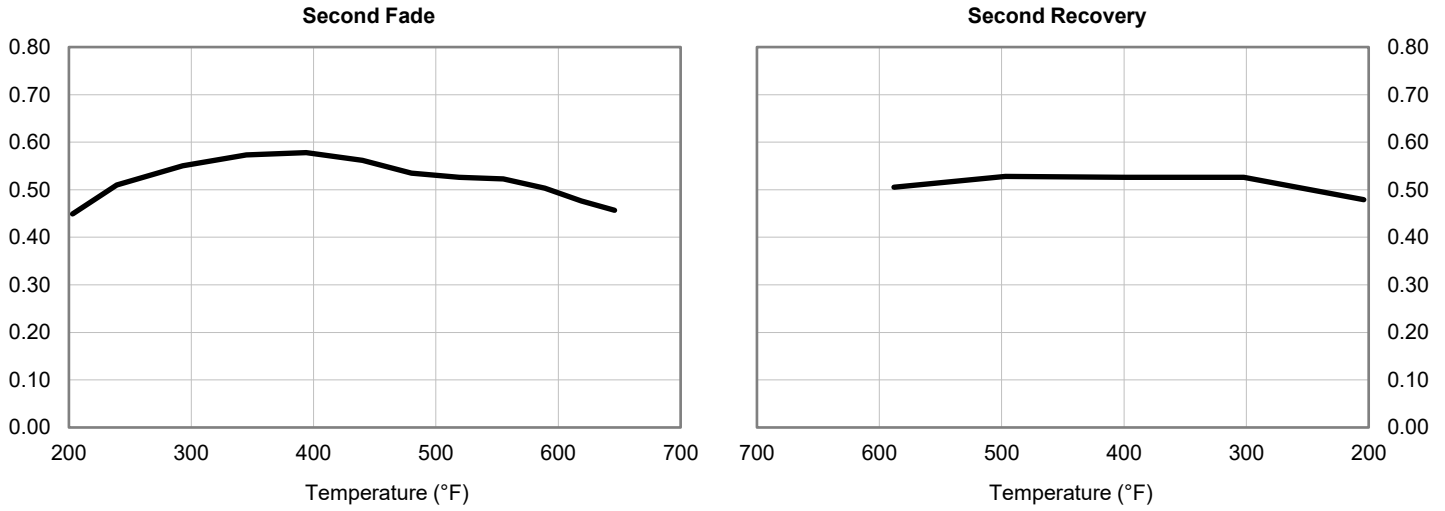
Event	Force (lb)	μ	Temp (°F)
1	77.4	0.505	588.0
2	78.2	0.528	497.0
3	79.7	0.526	399.0
4	78.8	0.526	302.0
5	73.4	0.479	204.0

10/12/2025
250799-03-B
Sample 2 of 5

Coefficient of Friction







Normal	**0.559**	**H**
Hot	**0.533**	**G**

10/13/2025
250799-03-C
Sample 3 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	7.34	6.84	0.50	6.81
Thickness (inch)	0.242	0.227	0.015	6.20

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	42.1	0.278	73.1	0.487
5	58.7	0.389	76.2	0.513
10	61.8	0.413	80.3	0.534
15	65.2	0.431	83.2	0.547
20	68.3	0.451	84.0	0.556

Wear

Event	Force (lb)	μ
1	77.1	0.507
10	86.3	0.575
20	89.2	0.590
30	88.7	0.595
40	86.8	0.574
50	87.6	0.579
60	86.1	0.578
70	84.0	0.560
80	85.5	0.568
90	88.7	0.591
100	85.0	0.562

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	61.3	0.404	202.0
30.0	69.8	0.460	246.0
60.0	74.6	0.493	304.0
90.0	71.7	0.492	358.0
120.0	72.5	0.472	406.0
150.0	69.3	0.452	450.0
180.0	69.6	0.447	490.0
210.0	70.2	0.445	528.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	75.7	0.498	202.0
30.0	83.1	0.549	242.0
60.0	86.5	0.574	298.0
90.0	89.4	0.601	351.0
120.0	90.7	0.606	402.0
150.0	90.2	0.603	449.0
180.0	89.4	0.572	493.0
210.0	86.4	0.552	534.0
240.0	83.3	0.522	571.0
270.0	77.1	0.497	603.0
300.0	75.6	0.481	633.0

First Recovery

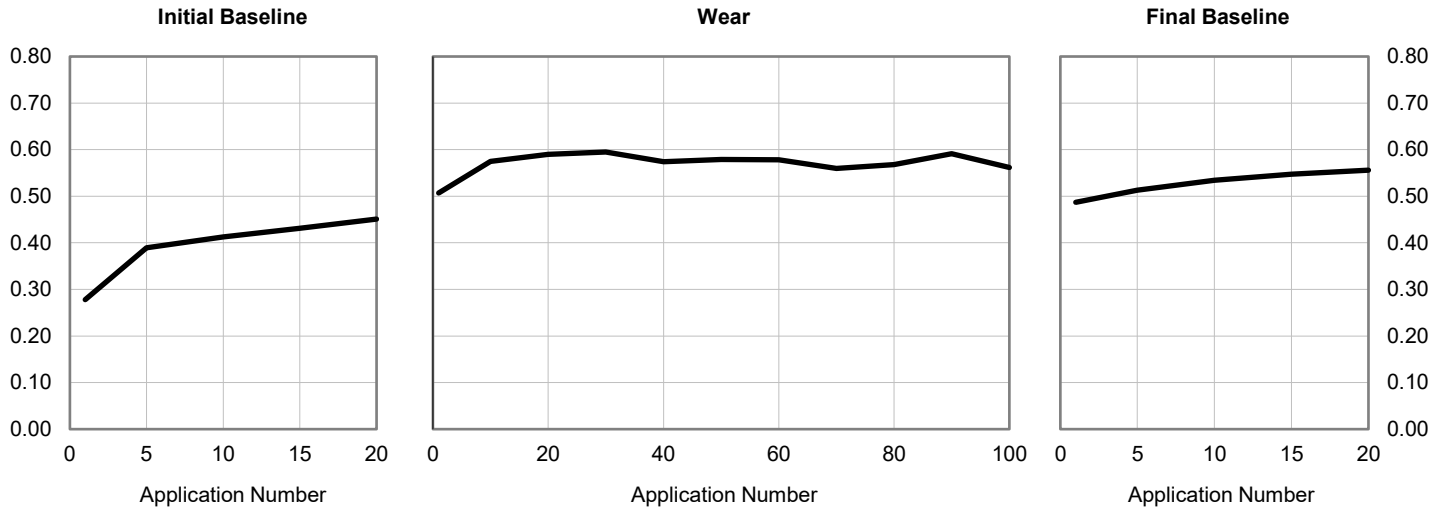
Event	Force (lb)	μ	Temp (°F)
1	74.4	0.491	490.0
2	74.7	0.494	398.0
3	74.8	0.502	302.0
4	67.0	0.445	204.0

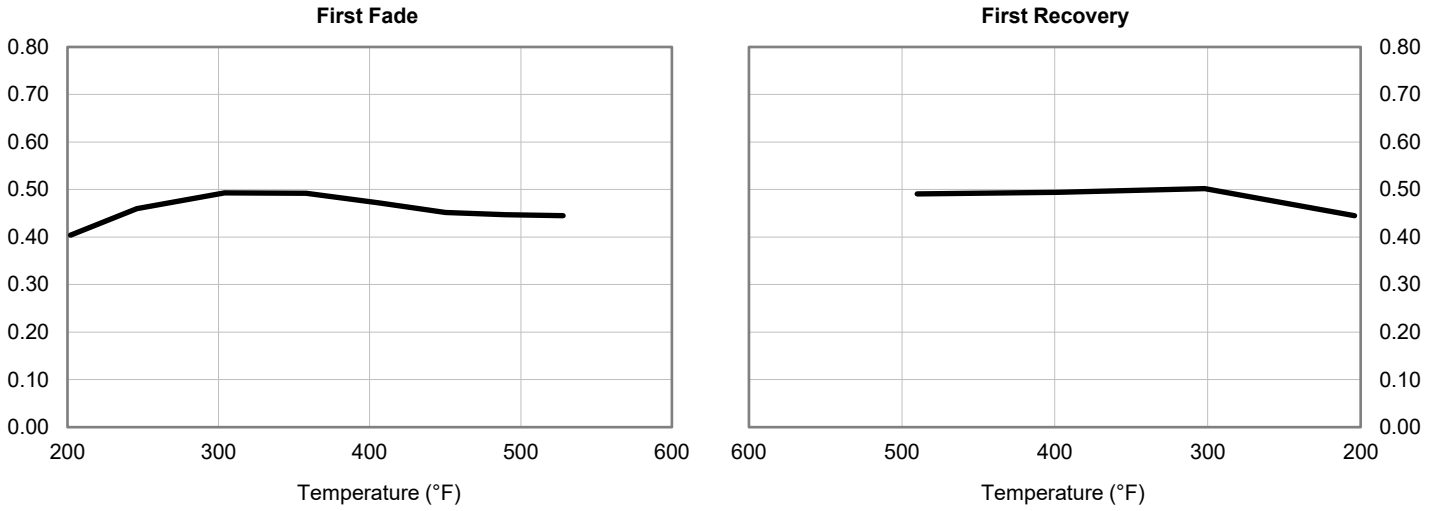
Second Recovery

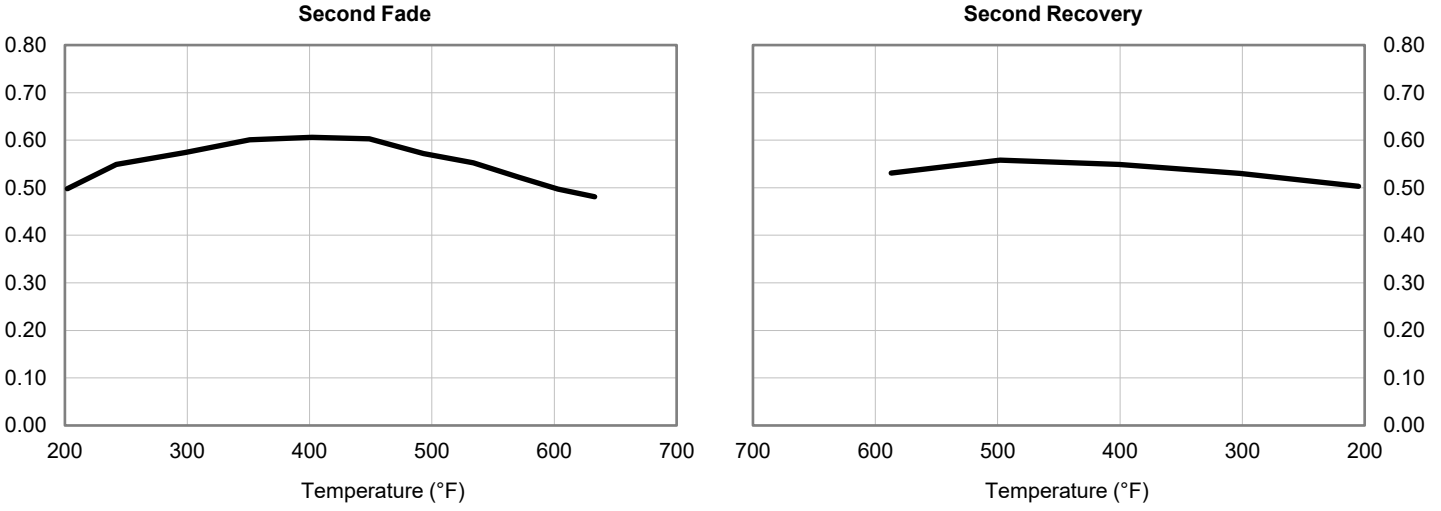
Event	Force (lb)	μ	Temp (°F)
1	80.4	0.531	587.0
2	82.9	0.558	498.0
3	82.9	0.549	401.0
4	79.0	0.530	302.0
5	76.0	0.503	205.0

10/13/2025
250799-03-C
Sample 3 of 5

Coefficient of Friction







Normal	**0.571**	**H**
Hot	**0.563**	**H**

10/13/2025
250799-03-D
Sample 4 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	7.25	6.72	0.53	7.31
Thickness (inch)	0.240	0.224	0.016	6.68

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	55.7	0.377	74.3	0.501
5	67.1	0.455	81.4	0.541
10	81.4	0.535	81.4	0.537
15	82.9	0.557	84.1	0.555
20	84.7	0.558	84.9	0.559

Wear

Event	Force (lb)	μ
1	86.9	0.572
10	93.2	0.617
20	90.5	0.599
30	91.7	0.603
40	87.6	0.580
50	90.4	0.596
60	88.3	0.587
70	88.9	0.598
80	87.7	0.585
90	90.9	0.602
100	89.8	0.603

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	78.4	0.514	202.0
30.0	84.8	0.562	249.0
60.0	82.7	0.550	307.0
90.0	84.3	0.559	360.0
120.0	82.0	0.548	406.0
150.0	79.7	0.536	450.0
180.0	84.0	0.543	491.0
210.0	81.3	0.554	531.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	76.3	0.497	202.0
30.0	83.9	0.551	237.0
60.0	88.0	0.585	290.0
90.0	92.9	0.621	344.0
120.0	95.1	0.634	396.0
150.0	90.5	0.606	444.0
180.0	89.5	0.598	487.0
210.0	83.3	0.574	528.0
240.0	80.9	0.563	564.0
270.0	80.5	0.530	597.0
300.0	76.5	0.487	625.0

First Recovery

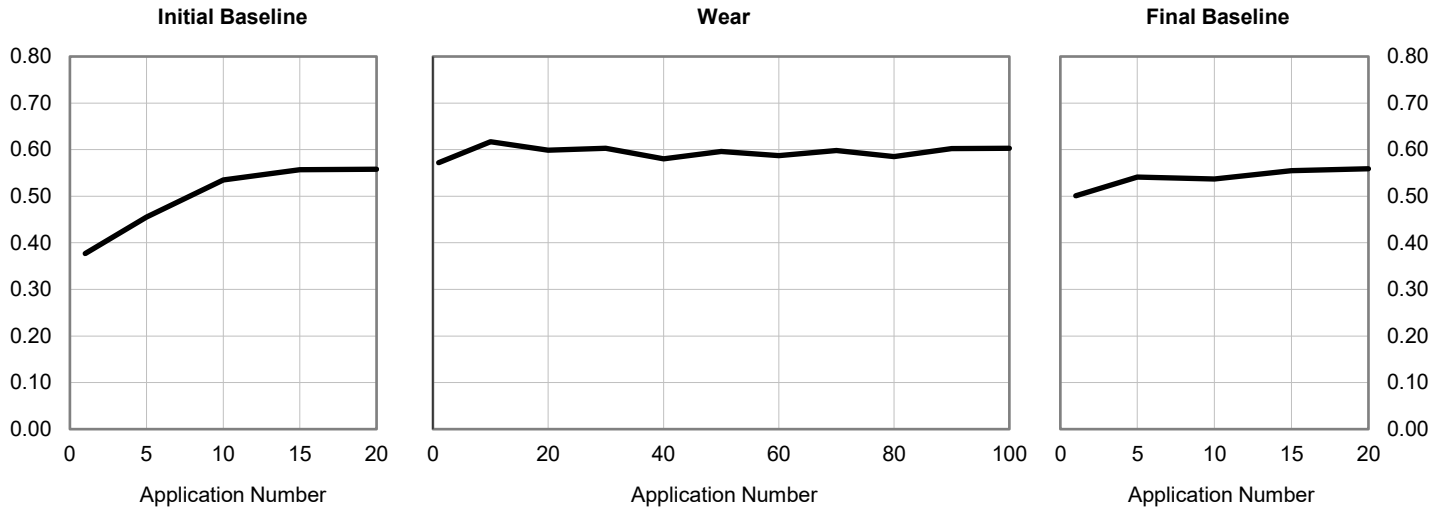
Event	Force (lb)	μ	Temp (°F)
1	85.9	0.577	492.0
2	89.6	0.594	400.0
3	86.5	0.576	302.0
4	78.5	0.520	205.0

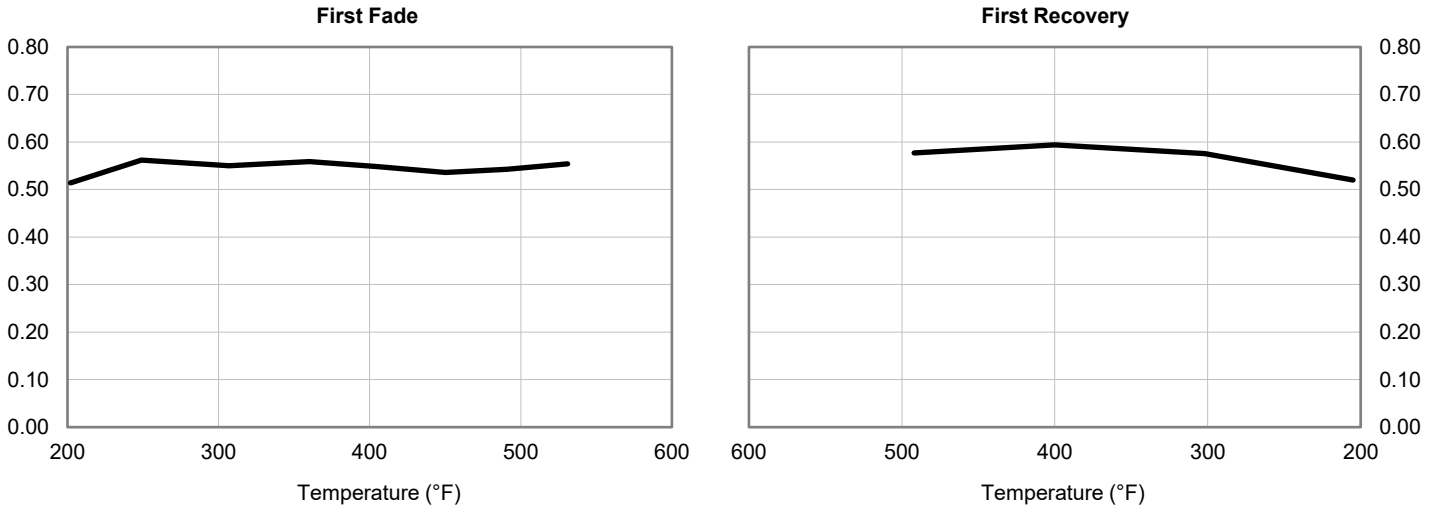
Second Recovery

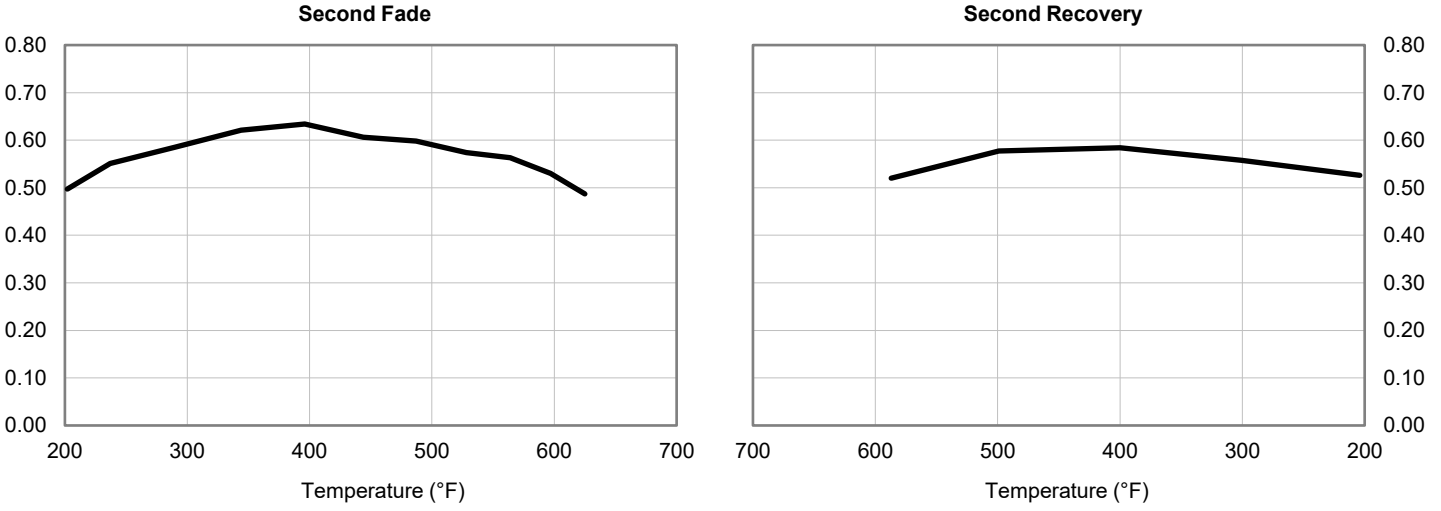
Event	Force (lb)	μ	Temp (°F)
1	78.5	0.520	587.0
2	86.3	0.577	499.0
3	88.0	0.584	400.0
4	82.8	0.558	301.0
5	79.2	0.526	204.0

10/13/2025
250799-03-D
Sample 4 of 5

Coefficient of Friction







Normal	**0.519**	**G**
Hot	**0.505**	**G**

10/13/2025
250799-03-E
Sample 5 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	7.25	6.76	0.49	6.76
Thickness (inch)	0.239	0.227	0.013	5.23

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	66.0	0.446	72.8	0.487
5	70.8	0.470	77.1	0.512
10	70.5	0.481	76.3	0.507
15	72.2	0.477	78.1	0.527
20	74.5	0.496	76.9	0.517

Wear

Event	Force (lb)	μ
1	81.6	0.543
10	84.8	0.559
20	83.8	0.561
30	81.1	0.541
40	82.7	0.548
50	80.5	0.539
60	83.3	0.544
70	84.0	0.556
80	83.5	0.551
90	80.9	0.538
100	81.5	0.542

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	69.4	0.459	202.0
30.0	77.9	0.520	248.0
60.0	79.6	0.530	305.0
90.0	78.2	0.521	358.0
120.0	75.3	0.501	406.0
150.0	74.7	0.500	451.0
180.0	73.6	0.490	491.0
210.0	74.4	0.496	529.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	72.2	0.475	203.0
30.0	79.9	0.529	241.0
60.0	81.0	0.536	295.0
90.0	81.4	0.542	345.0
120.0	80.9	0.540	392.0
150.0	78.6	0.520	435.0
180.0	76.5	0.510	476.0
210.0	77.5	0.524	514.0
240.0	74.6	0.501	550.0
270.0	74.6	0.484	584.0
300.0	68.0	0.466	615.0
330.0	70.7	0.462	642.0

First Recovery

Event	Force (lb)	μ	Temp (°F)
1	79.0	0.528	491.0
2	82.4	0.545	400.0
3	78.3	0.514	302.0
4	72.2	0.489	204.0

Second Recovery

Event	Force (lb)	μ	Temp (°F)
1	73.1	0.486	587.0
2	78.0	0.524	498.0
3	76.7	0.509	400.0
4	76.3	0.503	302.0
5	75.6	0.502	205.0

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Sample 5 of 5

Coefficient of Friction

