Physical Properties Test Report

Link Test Report:	250799-02
Test Description:	SAE J661-2021
Purpose of Test:	To Evaluate the Characteristics of Brake Materials
Material Identification:	YNFN RM22
Test Date:	10/11/2025 - 10/12/2025

Requested By:

YANCHENG YANITIGER AUTO PARTS CO.,LIMITED
Yan Liang

Tested By

Testing Coordination and Facility
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Declaration

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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	10/11/2025 - 10/12/2025
Datalogger	v1.0.23
Template Version	1.83

Setup Details

Sample Material	YNFN RM22
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	0.404	Pass
Normal Friction Class	F	
Hot Friction Coefficient	0.356	Pass
Hot Friction Class	F	
Minimum Bold Coefficient	0.354	Pass
Max Variation Below Average for Bold Readings	0.019	Pass
Max % Variation for Bold Readings	4.57%	Pass

Pass / Fail

Pass

Comments:

N/A

Created by: **Fiona Song** **Signature:** 宋文娟 日期：2025.10.13 10:06:17 +08'00' **Date** **10/13/2025**

Reviewed by: **Duel Tang** **Signature:** 唐磊鸣 2025.10.13 10:12:20 +08'00' **Date** **10/13/2025**

Test Number

Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
250799-02-A	250799-02-B	250799-02-C	250799-02-D	250799-02-E

Manufacturer:
YANCHENG YANITIGER AUTO PARTS CO., LIMITED
Material:
YNFN RM22

Initial Baseline

Application	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	0.343	0.295	0.319	0.301	0.311
20	0.400	0.364	0.355	0.327	0.329

Normal **0.404** **F**

First Fade

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
200.0	0.383	0.365	0.359	0.316	0.329
550.0	0.383	0.330	0.344	0.316	0.336
(or Temp @ 10min)					

Hot **0.356** **F**

First Recovery

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Average	Norm/Hot
500.0	0.360	0.327	0.324	0.302	0.315	0.326	
400.0	0.351	0.320	0.315	0.305	0.311	0.320	Hot
300.0	0.340	0.328	0.329	0.306	0.317	0.324	Hot
200.0	0.344	0.342	0.342	0.313	0.299	0.328	

Wear

Application	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	0.352	0.350	0.349	0.326	0.322
100	0.428	0.407	0.406	0.384	0.396

Second Fade

Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Average	Max Var. < Average	Norm/Hot	% Var
200.0	**0.386**	**0.402**	**0.393**	**0.389**	**0.391**	**0.392**	**0.006**	**Normal**	**2%**
250.0	**0.414**	**0.410**	**0.410**	**0.392**	**0.397**	**0.405**	**0.013**	**Normal**	**3%**
300.0	**0.432**	**0.425**	**0.417**	**0.395**	**0.400**	**0.414**	**0.019**	**Normal**	**5%**
350.0	**0.419**	**0.409**	**0.418**	**0.389**	**0.393**	**0.406**	**0.017**	**-**	**4%**
400.0	**0.420**	**0.415**	**0.412**	**0.388**	**0.398**	**0.407**	**0.019**	**Normal**	**5%**
450.0	**0.398**	**0.396**	**0.402**	**0.380**	**0.383**	**0.392**	**0.012**	**Hot**	**3%**
500.0	**0.380**	**0.397**	**0.399**	**0.371**	**0.387**	**0.387**	**0.016**	**Hot**	**4%**
550.0	**0.372**	**0.390**	**0.376**	**0.368**	**0.373**	**0.376**	**0.008**	**Hot**	**2%**
600.0	0.366	0.367	0.365	0.357	0.354	0.362	0.008	Hot	2%
650.0	0.359	0.353	0.348	0.337	0.342	0.348	0.011	Hot	3%
(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	0.343	0.343	0.344	0.334	0.334	0.340	0.006	-	2%
500.0	0.337	0.350	0.347	0.325	0.339	0.340	0.015	Hot	4%
400.0	0.344	0.355	0.367	0.341	0.351	0.352	0.011	Hot	3%
300.0	**0.354**	**0.356**	**0.371**	**0.358**	**0.354**	**0.359**	**0.005**	**Hot**	**1%**
200.0	**0.364**	**0.364**	**0.372**	**0.355**	**0.358**	**0.363**	**0.008**	**-**	**2%**

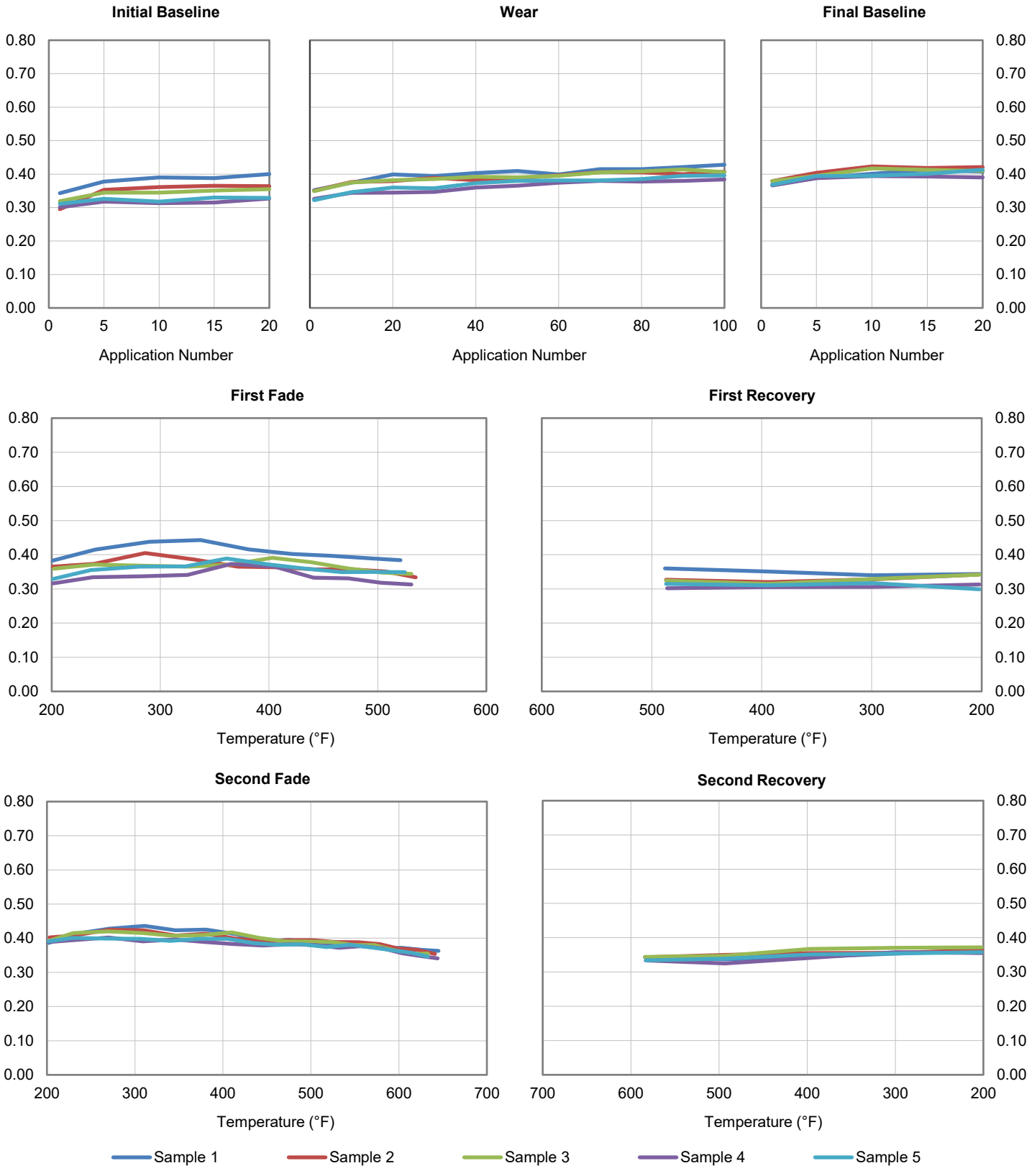
Final Baseline

Application	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	0.369	0.379	0.379	0.366	0.368
20	0.407	0.421	0.409	0.390	0.413

Manufacturer: YANCHENG YANITIGER AUTO PARTS CO., LIMITED Test Dates: 10/11/2025 - 10/12/2025
Material: YNFN RM22
Test Pressure: 150.0 psi

Summary of 5 Samples

Coefficient of Friction



Normal	**0.413**	**F**
Hot	**0.360**	**F**

10/11/2025
250799-02-A
Sample 1 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	9.38	9.25	0.13	1.39
Thickness (inch)	0.237	0.234	0.003	1.27

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	51.9	0.343	54.9	0.369
5	56.3	0.378	59.2	0.388
10	58.8	0.390	60.7	0.401
15	59.2	0.388	61.5	0.413
20	60.5	0.400	60.9	0.407

Wear

Event	Force (lb)	μ
1	53.5	0.352
10	56.5	0.374
20	60.3	0.399
30	59.5	0.394
40	60.9	0.403
50	62.4	0.409
60	60.2	0.399
70	62.0	0.415
80	62.5	0.415
90	64.0	0.421
100	64.6	0.428

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	57.6	0.383	201.0
30.0	62.2	0.415	240.0
60.0	66.7	0.438	290.0
90.0	66.3	0.443	337.0
120.0	62.3	0.416	381.0
150.0	60.3	0.402	421.0
180.0	59.4	0.397	457.0
210.0	58.1	0.390	490.0
240.0	59.1	0.384	521.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	59.1	0.386	202.0
30.0	62.4	0.412	229.0
60.0	64.4	0.428	271.0
90.0	65.3	0.436	311.0
120.0	63.4	0.423	346.0
150.0	63.3	0.425	381.0
180.0	61.3	0.412	415.0
210.0	57.6	0.390	446.0
240.0	58.7	0.395	476.0
270.0	55.5	0.382	504.0
300.0	55.7	0.380	530.0
330.0	56.1	0.385	557.0
360.0	58.4	0.369	581.0
390.0	57.3	0.372	603.0
420.0	53.9	0.366	626.0
450.0	53.2	0.363	645.0

First Recovery

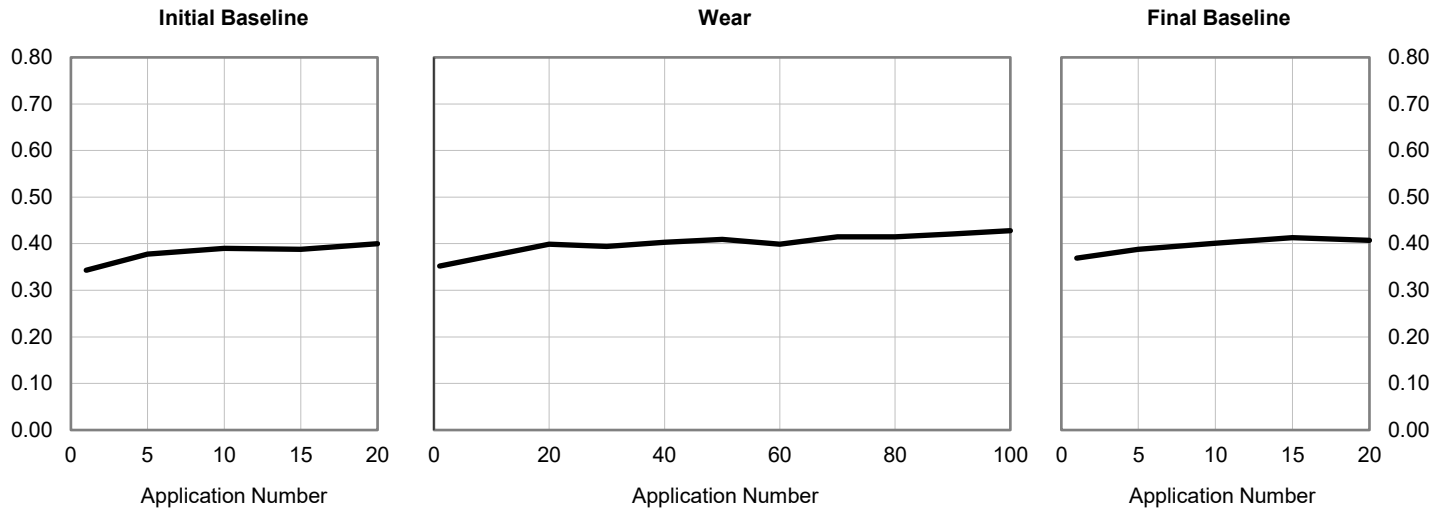
Event	Force (lb)	μ	Temp (°F)
1	54.4	0.360	488.0
2	52.6	0.351	396.0
3	51.5	0.340	299.0
4	52.0	0.344	202.0

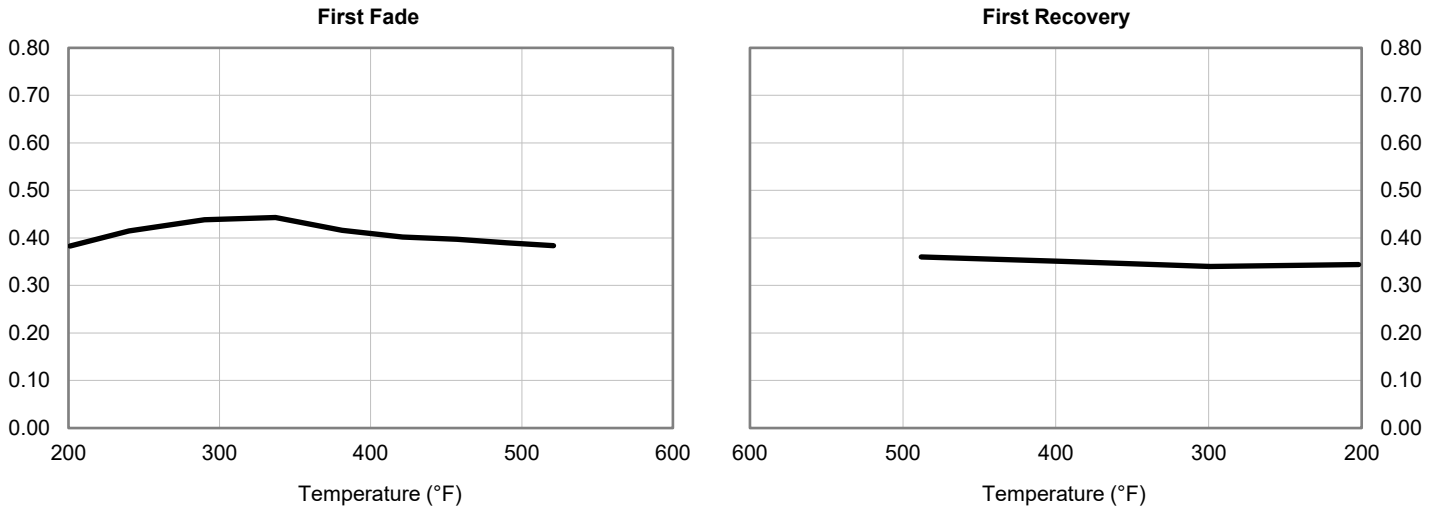
Second Recovery

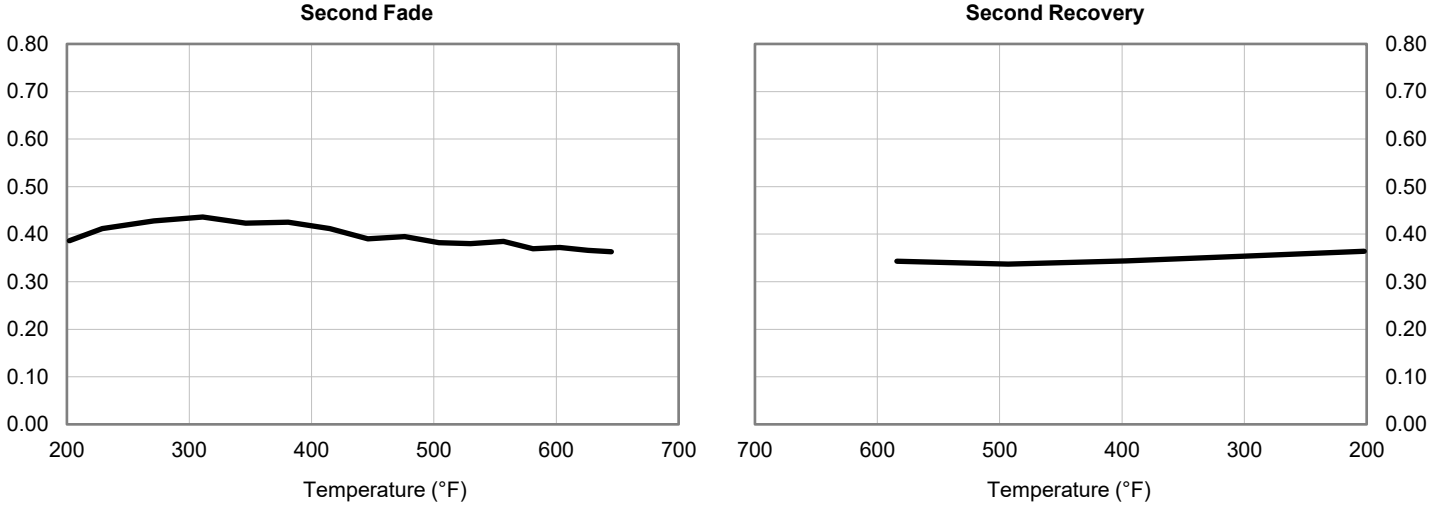
Event	Force (lb)	μ	Temp (°F)
1	51.8	0.343	584.0
2	51.2	0.337	493.0
3	51.8	0.344	397.0
4	53.1	0.354	299.0
5	53.8	0.364	202.0

10/11/2025
250799-02-A
Sample 1 of 5

Coefficient of Friction







Normal	**0.413**	**F**
Hot	**0.361**	**F**

10/11/2025
250799-02-B
Sample 2 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	9.55	9.42	0.13	1.36
Thickness (inch)	0.237	0.232	0.005	2.11

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	44.5	0.295	57.4	0.379
5	53.0	0.353	60.0	0.404
10	54.7	0.361	63.7	0.423
15	55.1	0.365	62.9	0.418
20	54.1	0.364	63.3	0.421

Wear

Event	Force (lb)	μ
1	52.1	0.350
10	56.3	0.376
20	57.7	0.379
30	57.8	0.389
40	57.7	0.382
50	58.6	0.388
60	58.6	0.396
70	62.0	0.406
80	61.6	0.405
90	61.1	0.400
100	61.5	0.407

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	55.5	0.365	201.0
30.0	56.6	0.373	239.0
60.0	60.7	0.405	286.0
90.0	57.6	0.386	331.0
120.0	54.8	0.365	371.0
150.0	53.8	0.363	409.0
180.0	53.4	0.357	443.0
210.0	56.5	0.357	476.0
240.0	54.7	0.351	507.0
270.0	48.6	0.334	535.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	61.2	0.402	203.0
30.0	61.8	0.408	230.0
60.0	63.9	0.425	271.0
90.0	62.3	0.423	310.0
120.0	60.1	0.408	346.0
150.0	64.2	0.413	381.0
180.0	62.4	0.399	414.0
210.0	61.8	0.391	445.0
240.0	60.7	0.394	475.0
270.0	60.7	0.394	502.0
300.0	59.7	0.389	528.0
330.0	55.8	0.388	554.0
360.0	56.2	0.383	578.0
390.0	58.2	0.370	599.0
420.0	56.6	0.366	621.0
450.0	55.0	0.354	641.0

First Recovery

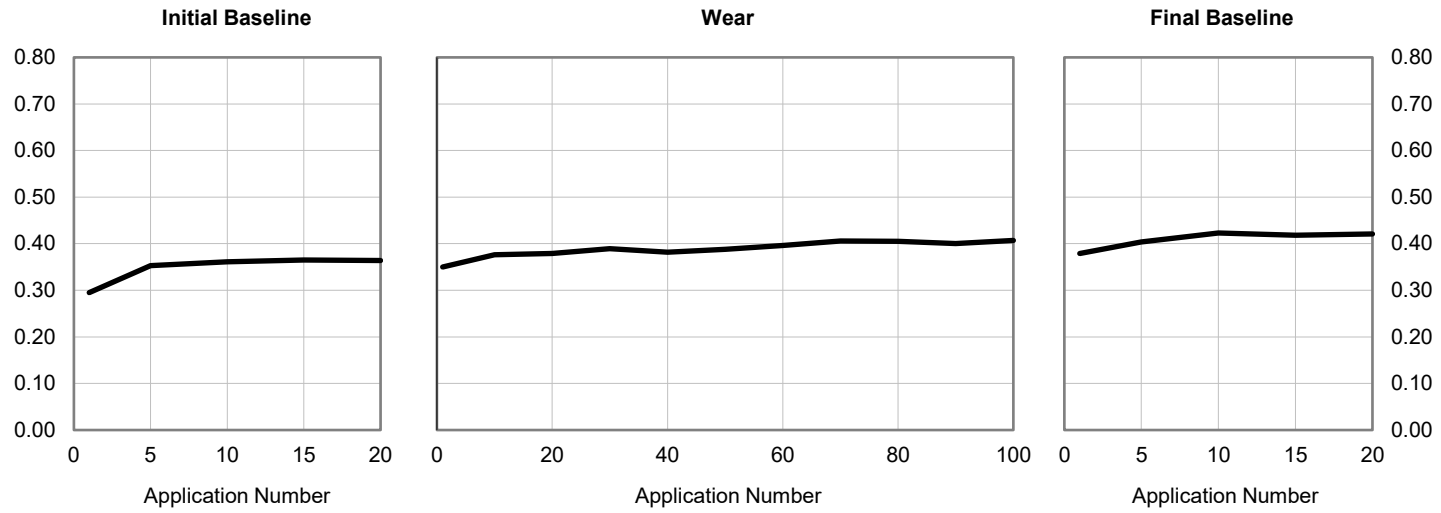
Event	Force (lb)	μ	Temp (°F)
1	49.5	0.327	487.0
2	48.3	0.320	394.0
3	48.9	0.328	299.0
4	51.0	0.342	203.0

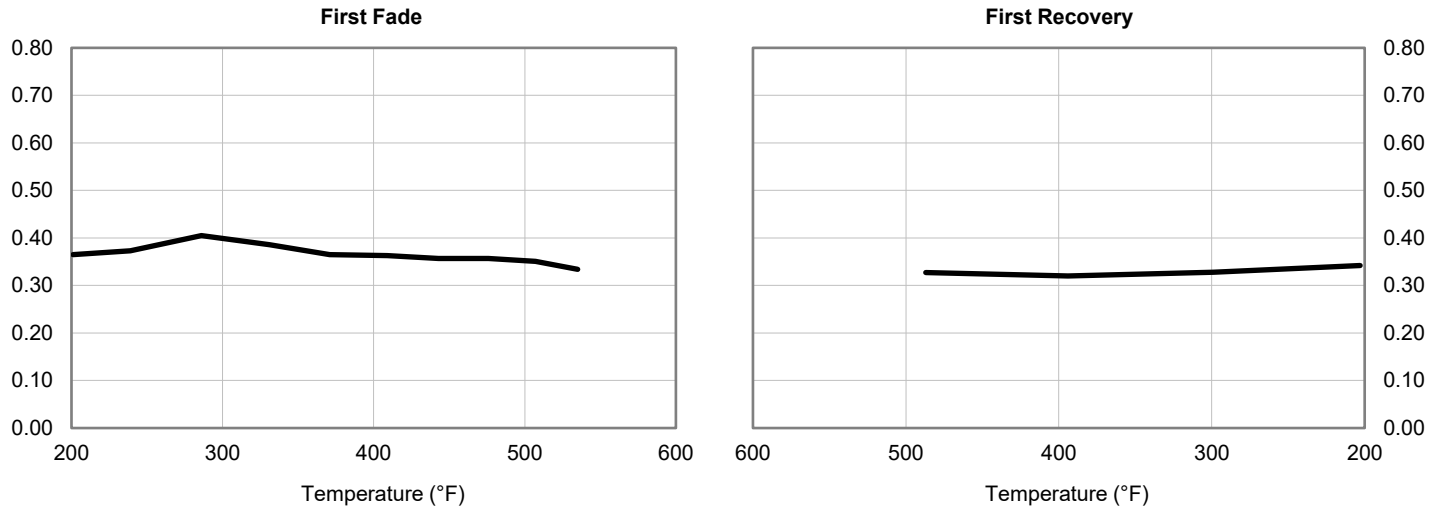
Second Recovery

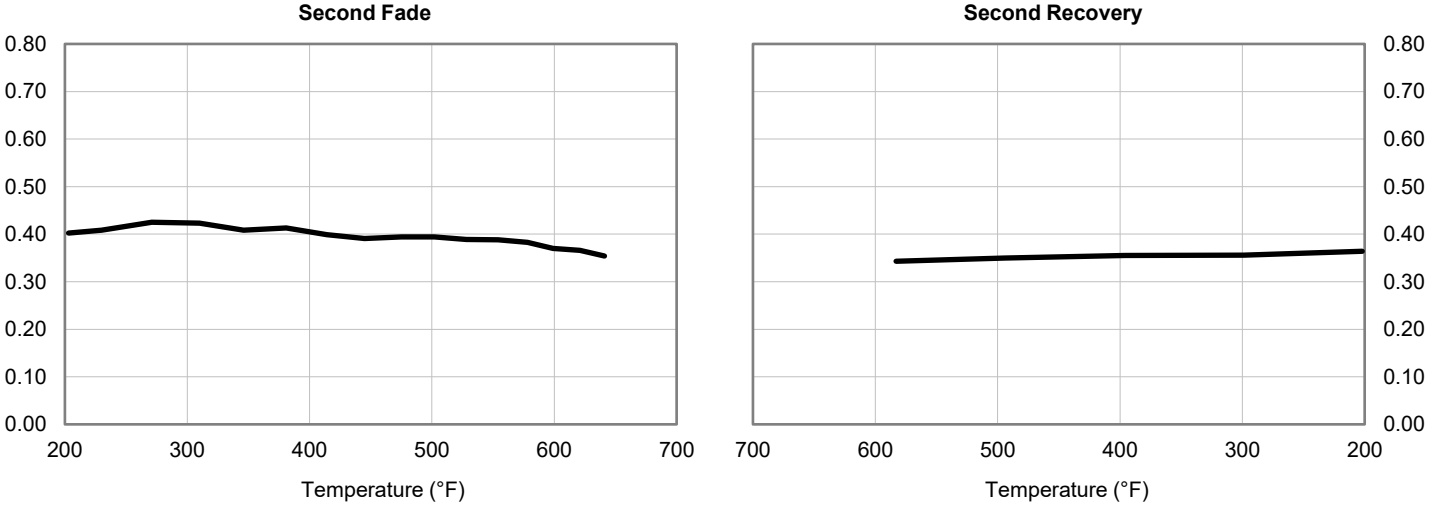
Event	Force (lb)	μ	Temp (°F)
1	52.3	0.343	583.0
2	52.2	0.350	494.0
3	53.6	0.355	396.0
4	53.7	0.356	299.0
5	54.6	0.364	202.0

10/11/2025
250799-02-B
Sample 2 of 5

Coefficient of Friction







Normal	**0.408**	**F**
Hot	**0.362**	**F**

10/11/2025
250799-02-C
Sample 3 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	9.49	9.33	0.16	1.69
Thickness (inch)	0.235	0.234	0.001	0.64

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	48.3	0.319	56.4	0.379
5	50.8	0.345	59.8	0.395
10	52.0	0.345	62.2	0.417
15	53.2	0.351	61.2	0.413
20	53.6	0.355	61.8	0.409

Wear

Event	Force (lb)	μ
1	52.9	0.349
10	56.3	0.375
20	57.7	0.382
30	58.1	0.385
40	58.9	0.392
50	58.5	0.390
60	59.3	0.395
70	60.9	0.405
80	61.9	0.408
90	61.7	0.414
100	61.7	0.406

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	54.7	0.359	202.0
30.0	56.2	0.371	239.0
60.0	55.7	0.368	285.0
90.0	54.9	0.365	327.0
120.0	55.4	0.371	365.0
150.0	58.2	0.391	403.0
180.0	56.4	0.378	439.0
210.0	56.4	0.360	473.0
240.0	53.7	0.348	504.0
270.0	50.1	0.344	531.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	59.7	0.393	203.0
30.0	61.8	0.415	230.0
60.0	63.3	0.420	270.0
90.0	62.6	0.415	309.0
120.0	61.1	0.407	344.0
150.0	61.1	0.409	378.0
180.0	61.8	0.417	410.0
210.0	60.2	0.401	441.0
240.0	62.0	0.391	470.0
270.0	60.7	0.390	498.0
300.0	56.2	0.389	524.0
330.0	55.5	0.380	549.0
360.0	55.0	0.380	572.0
390.0	57.3	0.366	593.0
420.0	57.6	0.354	614.0
450.0	54.2	0.355	633.0

First Recovery

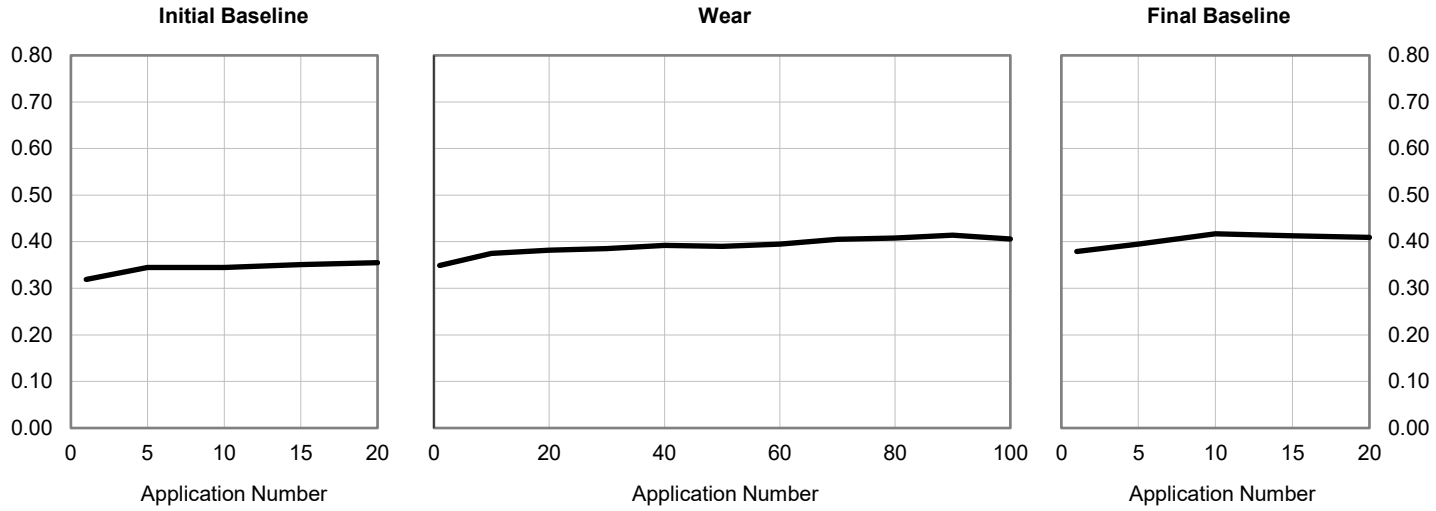
Event	Force (lb)	μ	Temp (°F)
1	48.5	0.324	487.0
2	47.9	0.315	394.0
3	49.6	0.329	300.0
4	50.4	0.342	202.0

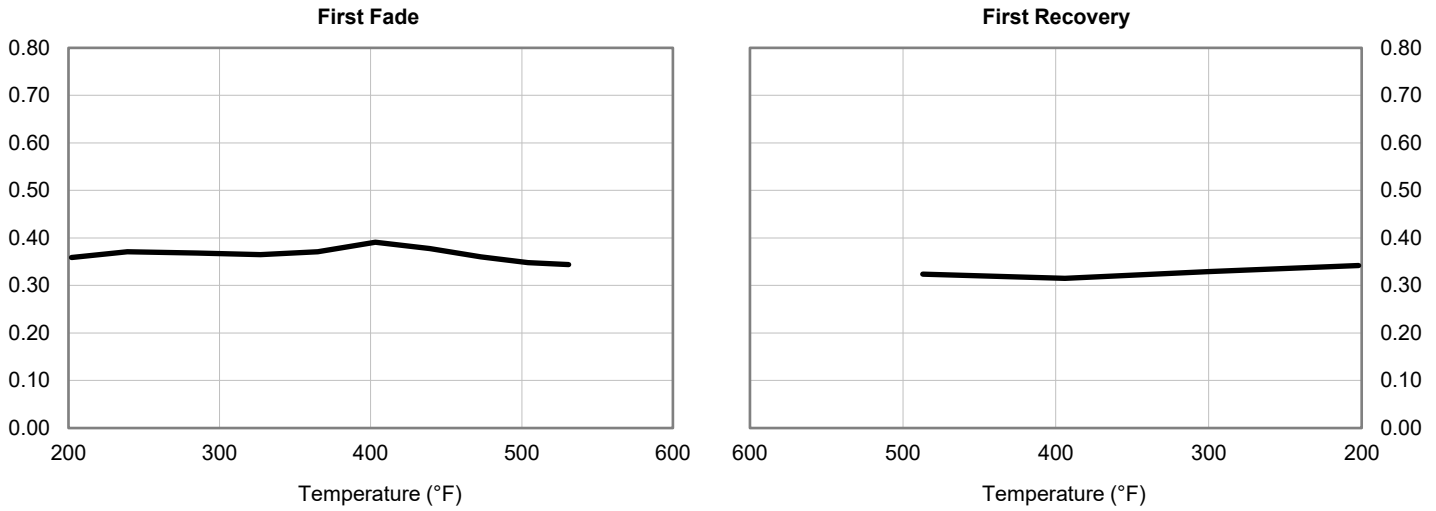
Second Recovery

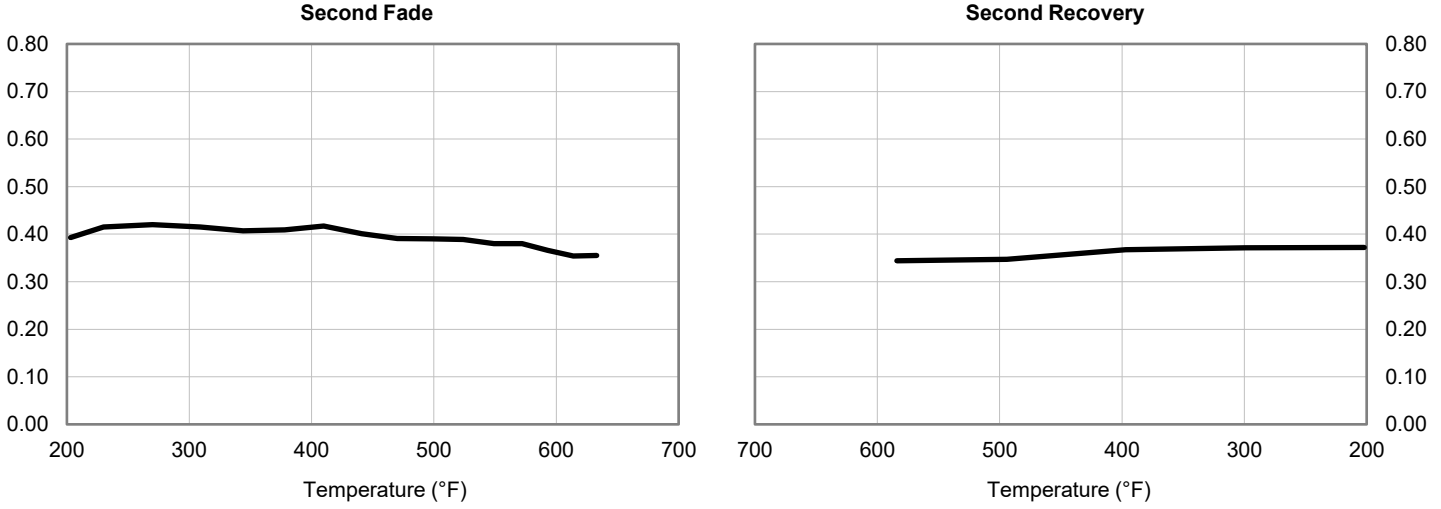
Event	Force (lb)	μ	Temp (°F)
1	52.5	0.344	584.0
2	52.5	0.347	494.0
3	55.2	0.367	397.0
4	55.8	0.371	299.0
5	56.3	0.372	202.0

10/11/2025
250799-02-C
Sample 3 of 5

Coefficient of Friction







Normal **0.391** **F**

Hot **0.345** **E**

10/12/2025
250799-02-D
Sample 4 of 5

Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	9.63	9.51	0.12	1.25
Thickness (inch)	0.238	0.235	0.003	1.05

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	45.4	0.301	54.7	0.366
5	46.9	0.318	59.0	0.388
10	46.6	0.313	58.8	0.394
15	46.6	0.315	59.3	0.393
20	48.3	0.327	59.6	0.390

Wear

Event	Force (lb)	μ
1	49.8	0.326
10	51.4	0.344
20	52.0	0.345
30	52.3	0.347
40	53.4	0.360
50	55.3	0.365
60	55.6	0.374
70	56.7	0.380
80	56.6	0.378
90	57.1	0.380
100	57.9	0.384

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	48.0	0.316	201.0
30.0	51.1	0.334	238.0
60.0	50.7	0.337	283.0
90.0	52.5	0.341	325.0
120.0	54.2	0.373	365.0
150.0	52.9	0.365	405.0
180.0	52.6	0.333	441.0
210.0	51.4	0.331	473.0
240.0	49.2	0.318	503.0
270.0	48.7	0.313	531.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	59.0	0.389	202.0
30.0	59.4	0.394	229.0
60.0	60.2	0.402	270.0
90.0	60.5	0.391	309.0
120.0	61.5	0.396	345.0
150.0	61.3	0.389	380.0
180.0	56.9	0.383	413.0
210.0	58.3	0.379	445.0
240.0	55.6	0.382	476.0
270.0	54.3	0.380	505.0
300.0	54.7	0.372	532.0
330.0	54.9	0.377	557.0
360.0	58.6	0.370	582.0
390.0	54.1	0.356	604.0
420.0	50.6	0.348	625.0
450.0	49.4	0.341	644.0

First Recovery

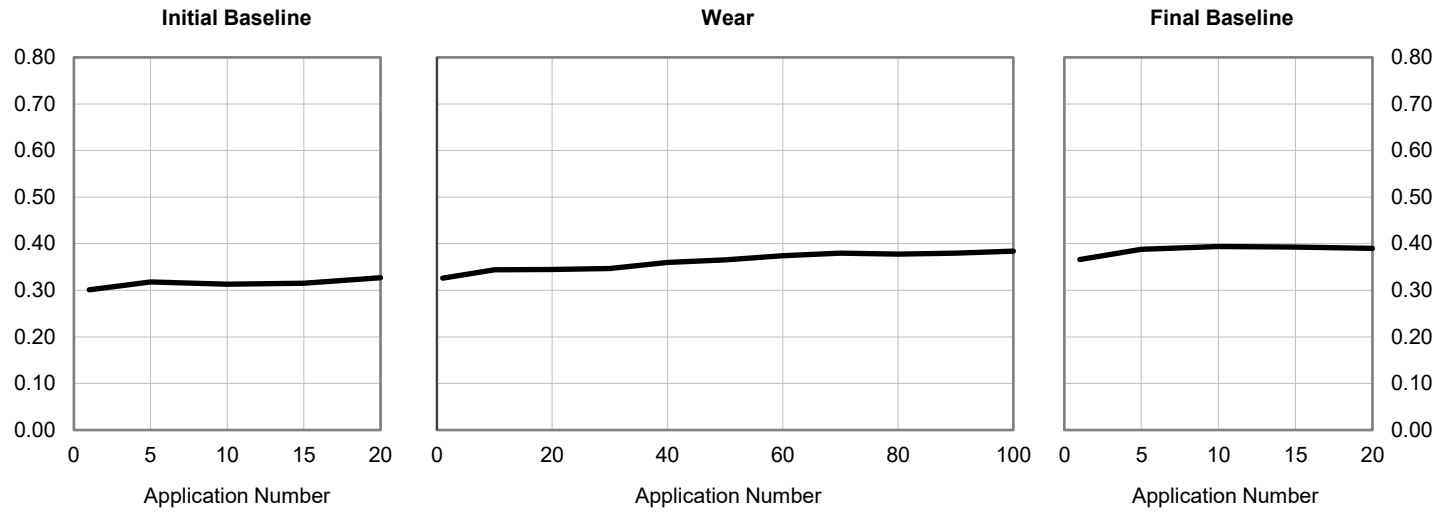
Event	Force (lb)	μ	Temp (°F)
1	44.9	0.302	486.0
2	45.0	0.305	395.0
3	46.5	0.306	299.0
4	47.4	0.313	202.0

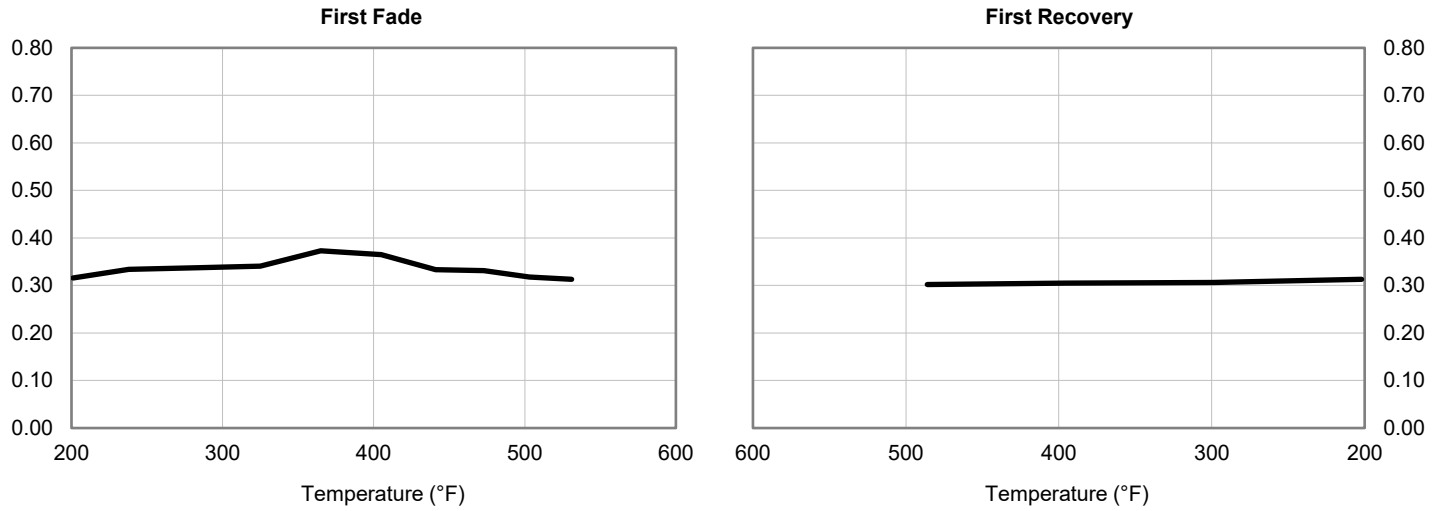
Second Recovery

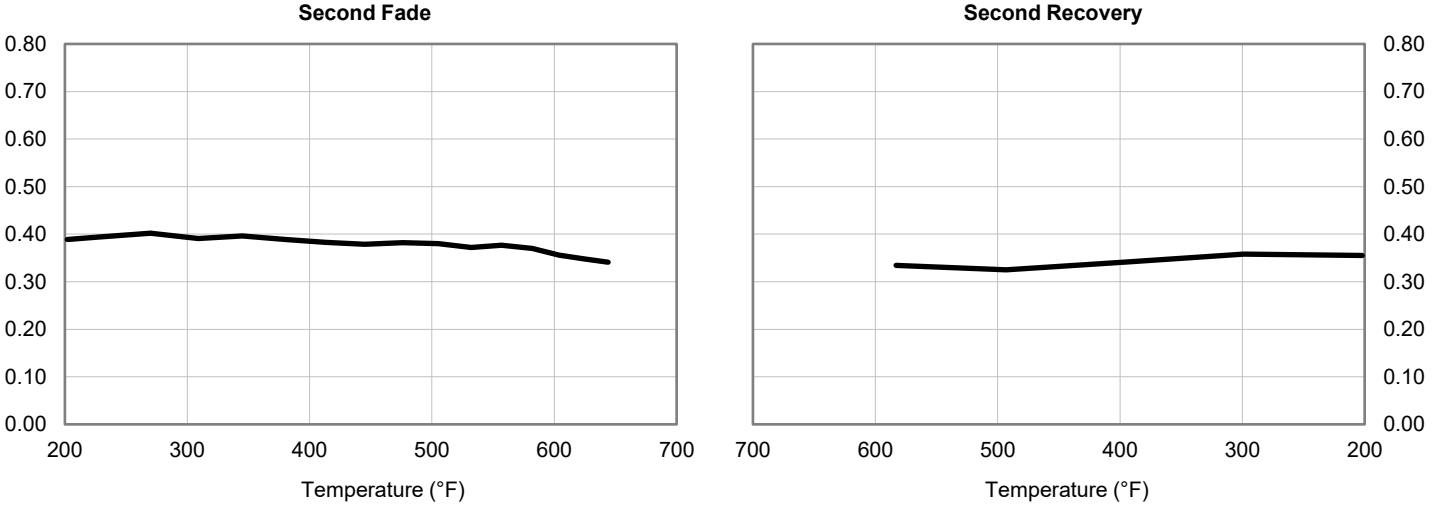
Event	Force (lb)	μ	Temp (°F)
1	50.5	0.334	583.0
2	48.5	0.325	493.0
3	51.9	0.341	397.0
4	54.0	0.358	299.0
5	53.0	0.355	202.0

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Coefficient of Friction







Normal	**0.397**	**F**
Hot	**0.351**	**F**

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Wear

	Initial	Final	Loss	Loss / %
Weight (gr)	9.31	9.20	0.11	1.18
Thickness (inch)	0.237	0.235	0.003	1.05

Baseline

	Initial		Final	
Event	Force (lb)	μ	Force (lb)	μ
1	47.1	0.311	55.8	0.368
5	48.8	0.326	59.5	0.394
10	48.0	0.318	60.2	0.395
15	50.0	0.330	61.1	0.401
20	50.1	0.329	60.8	0.413

Wear

Event	Force (lb)	μ
1	48.9	0.322
10	51.9	0.346
20	54.2	0.360
30	53.9	0.358
40	56.9	0.373
50	56.9	0.380
60	57.5	0.381
70	57.4	0.381
80	59.2	0.385
90	59.8	0.395
100	60.2	0.396

First Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	49.6	0.329	201.0
30.0	53.4	0.355	236.0
60.0	55.2	0.365	281.0
90.0	55.2	0.366	323.0
120.0	58.2	0.389	361.0
150.0	55.6	0.372	399.0
180.0	53.9	0.359	434.0
210.0	52.3	0.349	467.0
240.0	52.2	0.350	496.0
270.0	50.4	0.349	525.0

Second Fade

Time (sec)	Force (lb)	μ	Temp (°F)
0.0	59.5	0.391	202.0
30.0	60.7	0.401	230.0
60.0	60.2	0.399	269.0
90.0	59.5	0.398	306.0
120.0	58.9	0.392	340.0
150.0	59.2	0.398	374.0
180.0	58.0	0.398	405.0
210.0	57.3	0.386	434.0
240.0	56.7	0.381	463.0
270.0	58.9	0.382	491.0
300.0	54.1	0.374	518.0
330.0	55.5	0.381	544.0
360.0	54.4	0.373	568.0
390.0	53.0	0.365	591.0
420.0	52.6	0.357	615.0
450.0	53.3	0.346	633.0

First Recovery

Event	Force (lb)	μ	Temp (°F)
1	46.7	0.315	487.0
2	47.3	0.311	395.0
3	46.8	0.317	299.0
4	45.5	0.299	202.0

Second Recovery

Event	Force (lb)	μ	Temp (°F)
1	50.8	0.334	583.0
2	50.3	0.339	493.0
3	52.2	0.351	396.0
4	54.1	0.354	300.0
5	54.5	0.358	202.0

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Coefficient of Friction

