

# CHROME-Experiment-Result

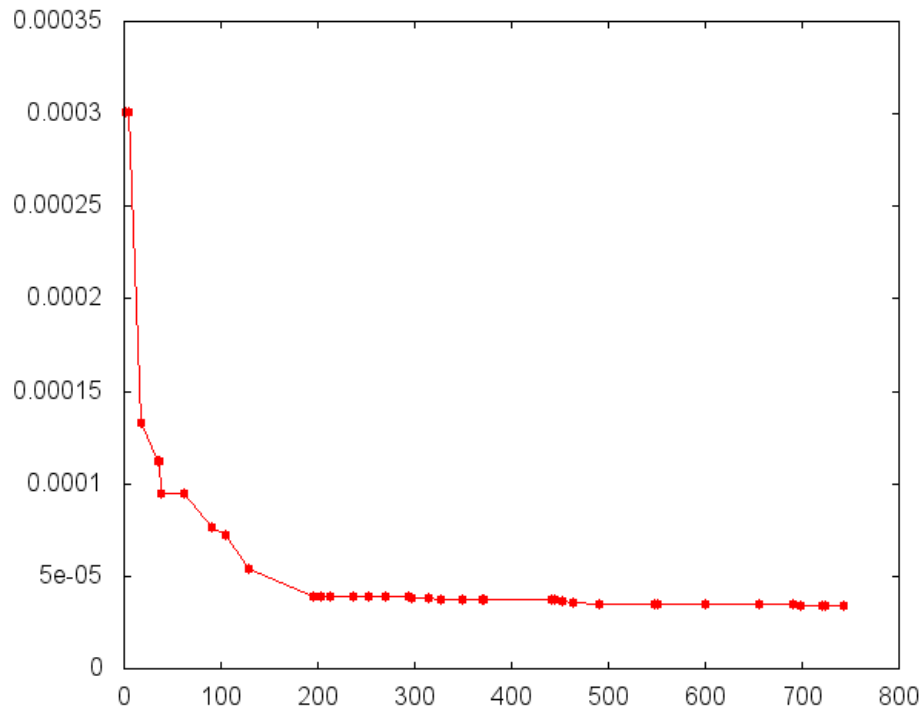
Adam Brady<sup>1</sup> Jason Lawrence<sup>1</sup> Pieter Peers<sup>2</sup> Westley Weimer<sup>1</sup>

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The genetic search was performed on the following 1 materials:

- chrome

Each BRDF is formed by:  $f_r(\omega_i, \omega_o) = \max(f'_r(\omega_i, \omega_o), 0)$ . The form of the BRDF was further constrained to:  $f'_r = \frac{\rho_d}{\pi} + \rho_s s_r(\omega_i, \omega_o)$ , and only  $s_r(\omega_i, \omega_o)$  was optimized.



Pareto Frontier

id	fitness	length	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
059-001025	0.00003439	743	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 5.42397e-15
059-001143	0.00003440	724	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 1.5006787e-14
057-002043	0.00003442	721	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 1.485749e-14
060-001146	0.00003444	698	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 1.798545e-14
061-001355	0.00003451	691	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 2.730953e-14
060-001635	0.00003458	655	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 2.741788e-08
061-001399	0.00003479	600	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 2.742709e-08
054-001138	0.00003486	551	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 4.780873e-14
049-000770	0.00003490	547	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 3.92602e-14
057-001603	0.00003494	491	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 3.99082e-14
036-000612	0.00003561	463	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 4.19405e-05
060-003020	0.00003682	452	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 5.92019e-05
054-002193	0.00003724	444	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 5.23261e-05
057-002645	0.00003729	441	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	0/0 (0/0)	1/1 5.16048e-05
024-003974	0.00003745	371	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 2.498367e-15
024-003492	0.00003752	370	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 1.67660512e-14
028-003457	0.00003754	349	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 2.7226589e-15
023-004000	0.00003763	327	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 3.1409608932e-14
027-002921	0.00003785	314	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 1.00656301e-14
028-002232	0.00003787	297	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 2.3736789e-14
012-003777	0.00003910	294	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 5.105566e-14
019-002464	0.00003914	270	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 0.0
020-002742	0.00003929	252	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 1.2310181e-16
024-002989	0.00003929	237	0/0 (1/1)	0/0 (1/1)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 5.4956369e-14
012-003909	0.00003930	213	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 1.025659e-16

Number of time each BRDF outperforms the competition in terms of " $L_2$  / ssim" error (and number of times better than genBRDF). RMSE on reciprocity listed in blue.

id	fitness	length	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
012-003891	0.00003934	203	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 1.298038e-16
012-003321	0.00003934	195	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 1.671265e-16
009-000894	0.00005416	129	0/0 (1/1)	0/0 (1/1)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 3.966903e-15
008-002602	0.00007217	105	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/1)	0/0 0.0
010-003971	0.00007655	91	0/0 (0/0)	0/0 (0/0)	0/1 (0/1)	0/0 (0/1)	0/0 (0/0)	1/0 1.903254e-14
051-000851	0.00009488	62	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 0.0002040577
006-003581	0.00009492	38	0/0 (0/0)	0/0 (0/0)	0/1 (1/1)	1/0 (1/1)	0/0 (0/0)	0/0 0.0
059-003248	0.00011251	37	0/0 (1/0)	0/0 (1/0)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 0.000323284
048-004046	0.00011255	35	0/0 (1/0)	0/0 (1/0)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 0.0003218365
003-001076	0.00013274	18	0/0 (1/1)	0/0 (1/1)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 0.0
001-000884	0.00030074	5	0/0 (1/1)	0/0 (1/1)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 0.0
001-001994	0.00030084	2	0/0 (1/1)	0/0 (1/1)	0/1 (1/1)	1/0 (1/1)	0/0 (1/1)	0/0 0.0

Number of time each BRDF outperforms the competition in terms of " $L_2$  / ssim" error (and number of times better than genBRDF). RMSE on reciprocity listed in blue.







060-001146

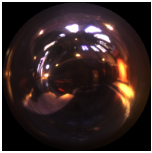
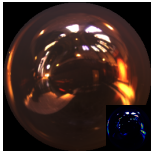
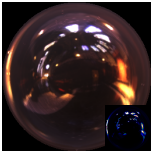
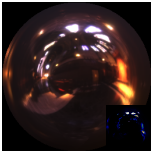
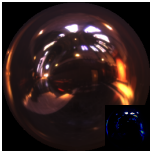
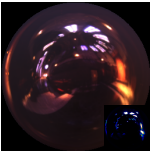
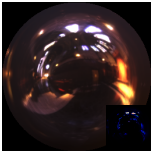
Fitness: 0.000034436633

Length: 698

Reciprocity Error: 1.798545e-14

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( \left( \omega_o \cdot \omega_h \right) * \exp\left(-\left[\text{pow}\left(\tan\left(\cos^{-1}\left(\text{clamp}\left(\omega_{hz}\right)\right)\right) / \left[\left(\frac{1.0}{\pi} * e^{-\left(2.0 * \omega_{hz}\right)}\right)\right] * \min\left(1.0, \min\left(\frac{1.0}{\left(\omega_o \cdot \omega_h\right)}, \frac{\left(p_2 * p_2\right)}{\left(\omega_o \cdot \omega_h\right)}\right)\right)\right) * \left[p_0 + \left(1.0 - p_0\right) * \text{pow}\left(1.0 - \left(\omega_o \cdot \omega_h\right), \left[2.0 * \min\left(\frac{\left(2.0 * \omega_{hz}\right) * \omega_{oz}}{\left(\omega_o \cdot \omega_h\right)}, \frac{\left(2.0 * \omega_{hz}\right) * \omega_{iz}}{\left(\omega_o \cdot \omega_h\right)}\right)\right]\right)\right], \left[p_2 - p_0\right]\right) / 1.0 * \min\left(1.0, \min\left(\left[\left(2.0 * \omega_{hz}\right) * \sqrt{\left|\left(\omega_{iz} * \omega_{oz}\right)\right|} / 1.0\right], \left[\left(1.0 * 1.0\right) * \left[\frac{\left(p_2 + 2.0\right)}{\left(2.0 * \pi\right)} * \left(\omega_{hz}\right)^{p_2}\right] / \left(\omega_o \cdot \omega_h\right)\right]\right) * \left(p_0 + \left[\left(2.0 * \omega_{hz}\right)^{\omega_{hz}} * 1.0\right] / \left[\omega_{iz} * \omega_{oz}\right]\right) \right]$$

MERL	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	1/1

chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.013614 ss: 0.976522

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.38576010e-01	7.68270969e-01	9.64516103e-01	5.44686476e-03	5.40607788e+02
	G	2.34358191e-01	8.59311998e-01	9.54872847e-01	4.93195048e-03	6.52732788e+02
	B	2.17997372e-01	8.07460546e-01	9.42503750e-01	5.38129173e-03	6.70778564e+02

RGB Parameters for genBRDF 060-001146

**061-001355**

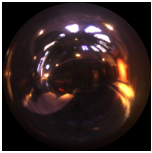
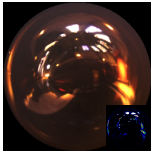
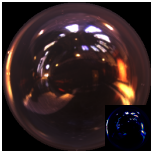
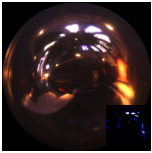
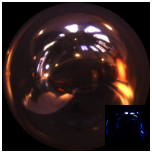
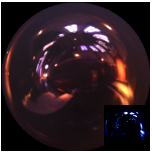
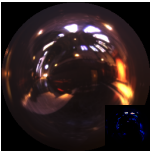
Fitness: 0.000034509741

Length: 691

Reciprocity Error: 2.730953e-14

$$f'_s(\omega_i, \omega_o) = [(((\omega_o \cdot \omega_h) * \exp(-[\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})) / [(\frac{1.0 * e^{-1.0}}{(p_0 * p_1) * e^{-(\omega_{hz})})} * \min(1.0, \min(\frac{1.0}{(\omega_o \cdot \omega_h)}, (\frac{p_2 * p_2}{(\omega_o \cdot \omega_h)})))] * [p_0 + ([1.0 - p_0] * \text{pow}([1.0 - (\omega_o \cdot \omega_h)], [2.0 * \min(\frac{(2.0 * \omega_{hz}) * \omega_{oz}}{(\omega_o \cdot \omega_h)}, \frac{(2.0 * \omega_{hz}) * \omega_{iz}}{(\omega_o \cdot \omega_h)}))])])]) / 1.0) * \min(1.0, \min([\frac{2.0 * \omega_{hz}}{(\omega_o \cdot \omega_h)} * \sqrt{|\omega_{iz} * \omega_{oz}|} / 1.0], [(1.0 * 1.0) * [\frac{(p_2 + 2.0)}{(2.0 * \pi)} * (\omega_{hz})^2] / (\omega_o \cdot \omega_h)])) * (p_0 + [((2.0 * \omega_{hz})^2 * ((1.0 - 1.0))^{5.0})] / [\omega_{iz} * \omega_{oz}])]$$

MERL	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	1/1

chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.013655 ss: 0.976761

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.37661421e-01	5.49752563e+02	9.64506328e-01	5.56616718e-03	5.06684570e+03
	G	2.33566627e-01	6.26346497e+02	9.54617500e-01	4.96450393e-03	6.20383838e+03
	B	2.17219174e-01	6.32798401e+02	9.42259848e-01	5.38491877e-03	6.80446680e+03

RGB Parameters for genBRDF 061-001355



060-001635

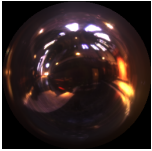
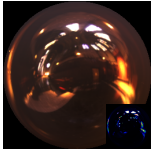
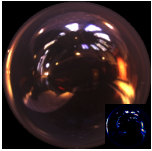
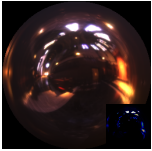
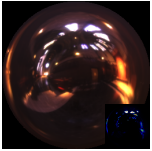
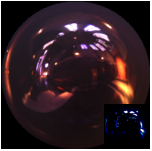
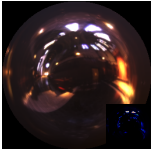
Fitness: 0.000034584488

Length: 655

Reciprocity Error: 2.741788e-08

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( (\omega_o \cdot \omega_h) * \exp(-\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})))) / \left( \frac{1.0}{((p_0 * p_1) * 1.0)} * \min(1.0, \min(\frac{1.0}{(\omega_o \cdot \omega_h)}, \frac{(p_2 * p_2)}{(\omega_o \cdot \omega_h)})) \right) * [p_0 + [(1.0 - p_0) * \text{pow}([1.0 - (\omega_o \cdot \omega_h)], [2.0 * \min(\frac{(2.0 * \omega_{hz}) * \omega_{oz}}{(\omega_o \cdot \omega_h)}, \frac{(2.0 * 1.0) * \omega_{iz}}{(\omega_o \cdot \omega_h)}))])]] \right) / (p_2 - p_0) \right) / 1.0 * \min(1.0, \min([2.0 * \omega_{hz}] * \sqrt{|(\omega_{iz} * \omega_{oz})|} / 1.0], [(1.0 * 1.0) * [\frac{(p_2 + 2.0)}{(2.0 * \pi)} * (\omega_{hz})^2]] / (\omega_o \cdot \omega_h)) \right) * (p_0 + [(2.0 * 1.0)^{p_2} * ((1.0 - 1.0)^{5.0})]) / [\omega_{iz} * \omega_{oz}] \right]$$

MERL	CT(Ngan) 0(0)/0(0)	CT(E <sub>2</sub> fit) 0(0)/0(0)	Löw SS 0(0)/0(0)	Löw MF 0(0)/0(0)	Bagher 0(0)/0(0)	genBRDF 1/1
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chrome							
	Training BRDF	L <sub>2</sub> : 0.038555 ss: 0.902465	L <sub>2</sub> : 0.041371 ss: 0.879025	L <sub>2</sub> : 0.021593 ss: 0.972071	L <sub>2</sub> : 0.021446 ss: 0.950898	L <sub>2</sub> : 0.042031 ss: 0.925449	L <sub>2</sub> : 0.013646 ss: 0.976927

Material		p0	p1	p2	ρ <sub>d</sub>	ρ <sub>s</sub>
chrome	R	2.37829983e-01	5.50008972e+02	9.64521229e-01	5.43043064e-03	5.06035986e+03
	G	2.33838513e-01	6.27002686e+02	9.54716206e-01	4.95526148e-03	6.20513428e+03
	B	2.17425361e-01	6.33586731e+02	9.42301571e-01	5.39263012e-03	6.81231689e+03

RGB Parameters for genBRDF 060-001635

**061-001399**

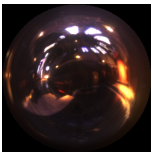
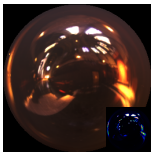
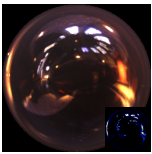
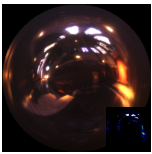
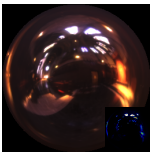
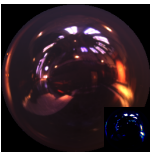
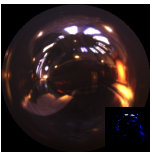
Fitness: 0.000034794797

Length: 600

Reciprocity Error: 2.742709e-08

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( (\omega_o \cdot \omega_h) * \exp(-\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})))) / \left( \frac{1.0}{((p_0 * p_1) * 1.0)} * \min(1.0, \min(\frac{1.0}{(\omega_o \cdot \omega_h)}, \frac{(p_2 * p_2)}{(\omega_o \cdot \omega_h)})) \right) * [p_0 + (1.0 - p_0) * \text{pow}(1.0 - (\omega_o \cdot \omega_h)], [2.0 * \min(\frac{(2.0 * \omega_{hz}) * \omega_{oz}}{(\omega_o \cdot \omega_h)}, \frac{(2.0 * 1.0) * \omega_{iz}}{(\omega_o \cdot \omega_h)})]]) \right) / (p_2 - p_0) \right) / 1.0 * \min(1.0, \min((2.0 * \omega_{hz}) * \sqrt{|\omega_{iz} * \omega_{oz}|}) / 1.0, [(1.0 * 1.0) * \left( \frac{(p_2 + 2.0)}{(2.0 * \pi)} * (\omega_{hz})^{p_2} \right) / (\omega_o \cdot \omega_h)]]) * [p_0 + 1.0] / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	1/1

chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.013642 ss: 0.976893

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.37844199e-01	5.49918762e+02	9.64514971e-01	5.44157391e-03	9.71351440e+02
	G	2.33839020e-01	6.27091797e+02	9.54683661e-01	4.94730286e-03	1.17586621e+03
	B	2.17405453e-01	6.33431519e+02	9.42355514e-01	5.39829023e-03	1.21648010e+03

RGB Parameters for genBRDF 061-001399

054-001138

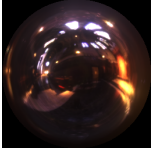
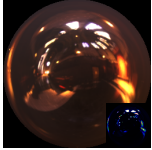
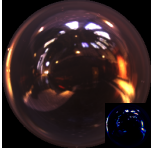
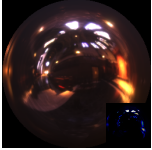
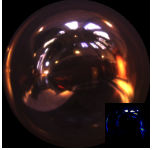
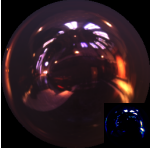
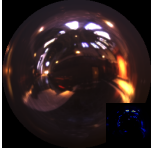
Fitness: 0.000034863634

Length: 551

Reciprocity Error: 4.780873e-14

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( (\omega_o \cdot \omega_h) * \exp(-[\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})))] / \left[ \left( \frac{1.0}{p_1} * 1.0 \right) * \min(1.0, \min(\frac{1.0}{(\omega_o \cdot \omega_h)}, \frac{p_2 * p_2}{(\omega_o \cdot \omega_h)})) \right) * (p_0 + [1.0 * ((1.0 - (\omega_o \cdot \omega_h))^{5.0})]) \right], [p_2 - p_0]) \right] / 1.0 * \min(1.0, \min([\left[ 2.0 * \omega_{hz} \right] * \sqrt{|\omega_{iz} * \omega_{oz}|}) / 1.0], \left[ (1.0 * 1.0) * \left[ \frac{1.0 + 2.0}{(2.0 * \pi)} \right] * (\omega_{hz})^{p_2} \right] / (\omega_o \cdot \omega_h) \right]) * (p_0 + [(1.0)^{p_2} * ((1.0 - \frac{1.0}{\pi})^{5.0})]) / [\omega_{iz} * \omega_{oz}] \right]$$

MERL	CT(Ngan) 0(0)/0(0)	CT(E <sub>2</sub> fit) 0(0)/0(0)	Löw SS 0(0)/0(0)	Löw MF 0(0)/0(0)	Bagher 0(0)/0(0)	genBRDF 1/1
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chrome							
	Training BRDF	L <sub>2</sub> : 0.038555 ss: 0.902465	L <sub>2</sub> : 0.041371 ss: 0.879025	L <sub>2</sub> : 0.021593 ss: 0.972071	L <sub>2</sub> : 0.021446 ss: 0.950898	L <sub>2</sub> : 0.042031 ss: 0.925449	L <sub>2</sub> : 0.012024 ss: 0.976559

Material		p0	p1	p2	ρ <sub>d</sub>	ρ <sub>s</sub>
chrome	R	2.06484377e-01	3.25390663e+01	9.48761642e-01	5.47743402e-03	3.01362671e+03
	G	2.03560576e-01	3.64802933e+01	9.39966202e-01	4.94623883e-03	3.63756567e+03
	B	1.89297378e-01	3.64854584e+01	9.11575496e-01	5.39233955e-03	4.19095508e+03

RGB Parameters for genBRDF 054-001138

049-000770

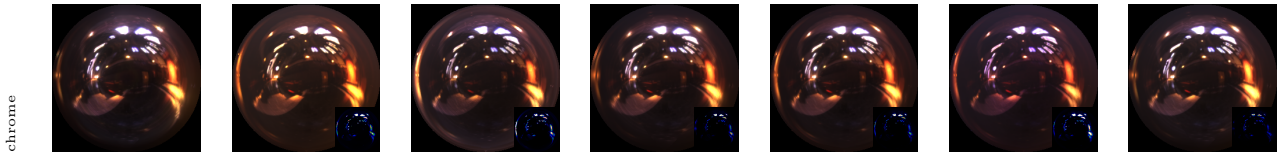
Fitness: 0.000034900931

Length: 547

Reciprocity Error: 3.92602e-14

$$f'_s(\omega_i, \omega_o) = \left( \left[ \left( \left( (\omega_o \cdot \omega_h) * \exp(-[\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{h_z})))] / \left[ \left( \frac{\omega_{h_z} * e^{1.0}}{\pi * p_1} * 1.0 \right) * \min(1.0, \min(4.0, \frac{p_2 * (p_2 * p_2)}{(\omega_o \cdot \omega_h)}) \right)]) * (p_0 + [1.0 * ((1.0 - (\omega_o \cdot \omega_h))^{5.0})])], [p_2 - p_0]) \right] / [1.0 * (1.0)^{4.0}] * \min(1.0, \min([2.0 * \omega_{h_z}] * \sqrt{|\omega_{i_z} * \omega_{o_z}|}) / 1.0, [(1.0 * 1.0) * \left( \frac{p_2 + 2.0}{2.0 * \pi} \right) * (\omega_{h_z})^{p_2}] / (\omega_o \cdot \omega_h)) * (1.0 + [1.0 * (4.0 * \pi) * p_0]) \right] / [\omega_{i_z} * \omega_{o_z}] \right)$$

MERL	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	1/1



Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.012346 ss: 0.976466
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Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.08927915e-01	9.19974518e+00	9.63995337e-01	5.51588181e-03	2.81047058e+02
	G	2.06016421e-01	9.66299915e+00	9.59119201e-01	5.03174542e-03	3.34117249e+02
	B	1.93719402e-01	9.58008003e+00	9.37927127e-01	5.44492202e-03	3.79663483e+02

RGB Parameters for genBRDF 049-000770

**057-001603**

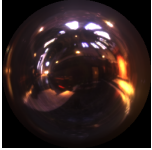
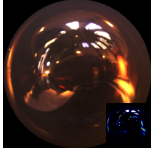
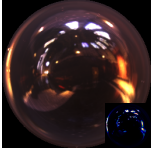
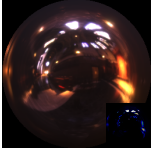
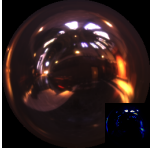
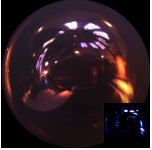
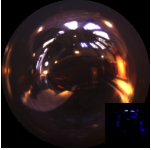
Fitness: 0.000034939249

Length: 491

Reciprocity Error: 3.99082e-14

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( \left( \omega_o \cdot \omega_h \right) * \exp \left( - \left[ \text{pow} \left( \tan \left( \cos^{-1} \left( \text{clamp} \left( \omega_{hz} \right) \right) \right) / \left[ \left( \frac{1.0}{p_1} * 1.0 \right) * \min \left( 1.0, \min \left( \frac{1.0}{\left( \omega_o \cdot \omega_h \right)}, \frac{p_2 * p_2}{\left( \omega_o \cdot \omega_h \right)} \right) \right) \right) * \left( p_0 + \left[ 1.0 * \left( \left( 1.0 - \left( \omega_o \cdot \omega_h \right) \right)^{5.0} \right] \right) \right) \right) \right) / 1.0 * \min \left( 1.0, \min \left( \left[ 2.0 * \omega_{hz} \right] * \sqrt{\left| \left( \omega_{iz} * \omega_{oz} \right) \right|} / 1.0 \right), \left[ \left( 1.0 * 1.0 \right) * \left[ \frac{1.0 + 2.0}{\left( 2.0 * \pi \right)} * \left( \omega_{hz} \right)^{p_2} \right] / \left( \omega_o \cdot \omega_h \right) \right] \right) * 1.0 \right) / \left[ \omega_{iz} * \omega_{oz} \right] \right]$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/0(0)	Löw MF 0(0)/0(0)	Bagher 0(0)/0(0)	genBRDF <b>1/1</b>
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : <b>0.012031</b> ss: <b>0.976544</b>

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.06365258e-01	3.25024719e+01	9.48785365e-01	5.48888324e-03	1.06485095e+03
	G	2.03502595e-01	3.64679947e+01	9.39931870e-01	4.99699870e-03	1.27629089e+03
	B	1.89372435e-01	3.65209351e+01	9.11533296e-01	5.38383285e-03	1.41174878e+03

RGB Parameters for genBRDF 057-001603

036-000612

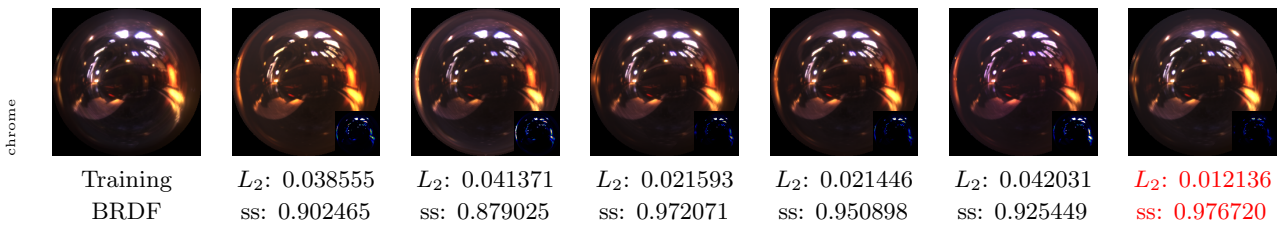
Fitness: 0.000035610485

Length: 463

Reciprocity Error: 4.19405e-05

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( \left( \omega_o \cdot \omega_h \right) * \exp\left(-\left[\text{pow}\left(\tan\left(\cos^{-1}\left(\text{clamp}\left(\omega_{hz}\right)\right)\right) / \left[\left(\frac{1.0}{\pi} * \omega_{hz}\right) * \min(1.0, \min(4.0, \frac{p_2 * 1.0}{\omega_o \cdot \omega_h}\right)\right)\right]\right) * \left[p_0 + \left(1.0 - p_0\right) * \left(1.0 - \left(\omega_o \cdot \omega_h\right)\right)^{5.0}\right]\right), \left[p_2 - p_0\right]\right) / 1.0 * \min(1.0, \min\left(\frac{\left(2.0 * \omega_{hz}\right) * \omega_{oz}}{1.0}\right), \left[\left(1.0 * 1.0\right) * \left[\frac{\left(p_2 + 2.0\right)}{\left(2.0 * \pi\right)} * \left(\omega_{hz}\right)^{p_2}\right] / \left(\omega_o \cdot \omega_h\right)\right] * 1.0 / \left[\omega_{iz} * \omega_{oz}\right] \right]$$

MERL	CT(Ngan)	CT(E <sub>2</sub> fit)	Löw SS	Löw MF	Bagher	genBRDF
	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	1/1



Material		p0	p1	p2	ρ <sub>d</sub>	ρ <sub>s</sub>
chrome	R	1.71055928e-01	2.73008194e+01	9.10161495e-01	5.47971483e-03	1.09179541e+03
	G	1.69060081e-01	3.29198341e+01	8.85753214e-01	4.94318549e-03	1.41328503e+03
	B	1.54665008e-01	3.12222843e+01	8.69487584e-01	5.32444939e-03	1.46795557e+03

RGB Parameters for genBRDF 036-000612

060-003020

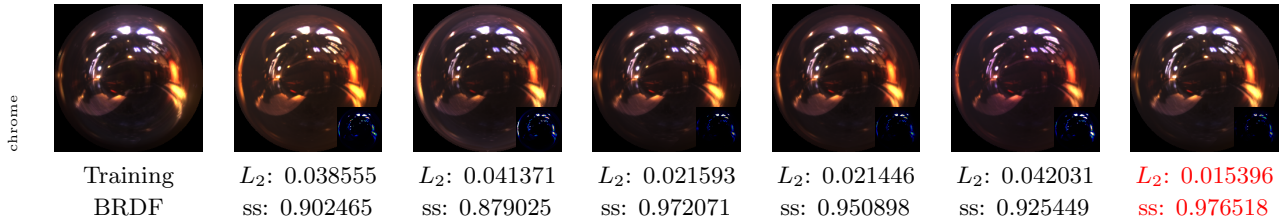
Fitness: 0.000036815780

Length: 452

Reciprocity Error: 5.92019e-05

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left[ \left( \frac{1.0}{2.0 * \omega_{hz}} \right) * \exp(-[\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})))]) / \left( \frac{\left( \frac{1.0}{\pi} * e^{-\left( \left( \frac{\tan(1.0)}{p1} \right)^{\omega_{hz}} \right)} \right)}{1.0} \right) * \min(1.0, \min([4.0 * \pi], \frac{(p2 * p2)}{(\omega_o \cdot \omega_h)})) * (p0 + [1.0 * ((1.0 - (\omega_o \cdot \omega_h))^{5.0})])], [p2 - p0])]] / 1.0 \right) * \min(1.0, \min(\frac{(2.0 * 1.0) * \omega_{oz}}{1.0}, \frac{((1.0 * 1.0) * \omega_{oz})}{(\omega_o \cdot \omega_h)})) * [p0 + 5.0]) / [p1 * \omega_{oz}] \right]$$

MERL	CT(Ngan)	CT( $E_2$ fit)	Löw SS	Löw MF	Bagher	genBRDF
	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	0(0)/0(0)	1/1



Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.75521314e-01	4.55231369e-01	8.95096123e-01	5.57916379e-03	1.55704102e+02
	G	1.73611939e-01	4.38960850e-01	8.85738254e-01	5.06313704e-03	1.84067749e+02
	B	1.60149291e-01	4.46304381e-01	8.73327792e-01	5.52741904e-03	1.97198746e+02

RGB Parameters for genBRDF 060-003020

054-002193

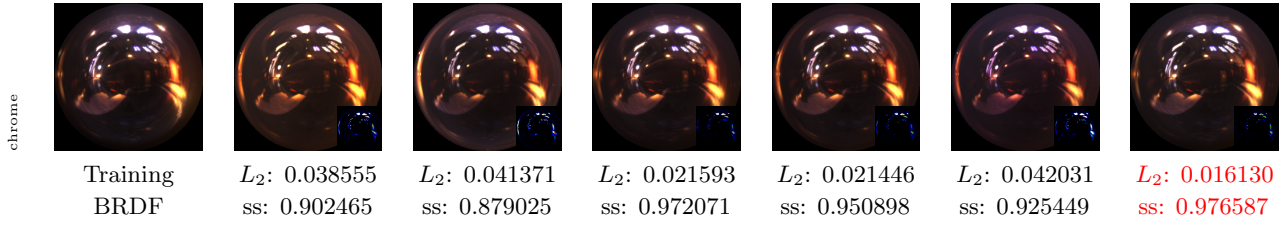
Fitness: 0.000037241368

Length: 444

Reciprocity Error: 5.23261e-05

$$f'_s(\omega_i, \omega_o) = \left( \left[ \left( \frac{1.0}{\pi} * \exp(-[\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})))] / \left[ \left( \frac{1.0}{\pi} * e^{-\left( \left( \frac{\tan(1.0)}{p1} \right)^{2.0}} \right)} \right] * \min(1.0, \min(1.0, \frac{p2 * \omega_{hz}}{(\omega_o \cdot \omega_h)})) * [p0 + ([1.0 - p0] * ((1.0 - (\omega_o \cdot \omega_h)))^{5.0}]])], [p2 - p0]))] / \omega_{hz} * \min(\omega_{hz}, \min(\frac{(2.0 * 1.0) * \omega_{oz}}{1.0}, \frac{(1.0 * 1.0) * \omega_{oz}}{(\omega_o \cdot \omega_h)})) * [p0 + 5.0] / [p1 * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT(E <sub>2</sub> fit) 0(0)/0(0)	Löw SS 0(0)/0(0)	Löw MF 0(0)/0(0)	Bagher 0(0)/0(0)	genBRDF 1/1
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Material		p0	p1	p2	ρ <sub>d</sub>	ρ <sub>s</sub>
chrome	R	1.43270701e-01	8.41497362e-01	8.21891069e-01	5.45172859e-03	5.41151245e+02
	G	1.41257316e-01	8.18810642e-01	8.00334990e-01	4.89470595e-03	6.89153687e+02
	B	1.31317556e-01	8.19579661e-01	7.83957243e-01	5.27706975e-03	7.50216492e+02

RGB Parameters for genBRDF 054-002193



057-002645

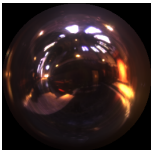
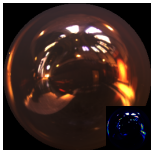
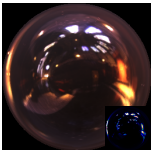
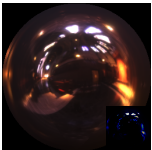
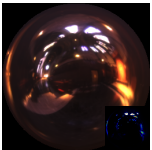
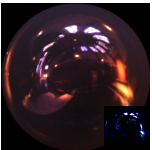
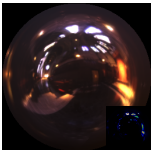
Fitness: 0.000037289479

Length: 441

Reciprocity Error: 5.16048e-05

$$f'_s(\omega_i, \omega_o) = \left( \left[ \left( \frac{1.0}{\pi} * \exp(-[\text{pow}(\tan(\cos^{-1}(\text{clamp}(\omega_{hz})))] / \left[ \left( \frac{1.0}{\pi} * e^{-\left( \left( \frac{1.0}{p_1} \right)^{2.0} \right)} \right] * \min(1.0, \min(\frac{1.0}{p_0}, \frac{p_2 * \omega_{hz}}{(\omega_o \cdot \omega_h)}) \right) * [p_0 + ([1.0 - p_0] * ((1.0 - (\omega_o \cdot \omega_h)))^{5.0})] \right), [p_2 - p_0]) \right] / [1.0 * 1.0] * \min(1.0, \min(\frac{(2.0 * 1.0) * \omega_{oz}}{1.0}, \frac{1.0 * \omega_{oz}}{(\omega_o \cdot \omega_h)}) * [p_1 + 5.0]) / [p_1 * \omega_{oz}] \right) \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT(E <sub>2</sub> fit) 0(0)/0(0)	Löw SS 0(0)/0(0)	Löw MF 0(0)/0(0)	Bagher 0(0)/0(0)	genBRDF 1/1
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chrome							
	Training BRDF	L <sub>2</sub> : 0.038555 ss: 0.902465	L <sub>2</sub> : 0.041371 ss: 0.879025	L <sub>2</sub> : 0.021593 ss: 0.972071	L <sub>2</sub> : 0.021446 ss: 0.950898	L <sub>2</sub> : 0.042031 ss: 0.925449	L <sub>2</sub> : 0.016131 ss: 0.976610

Material		p0	p1	p2	ρ <sub>d</sub>	ρ <sub>s</sub>
chrome	R	1.43235698e-01	5.40343940e-01	8.21826398e-01	5.44129871e-03	3.22480896e+02
	G	1.41221881e-01	5.25794685e-01	8.00335884e-01	4.90983017e-03	4.11451233e+02
	B	1.31273732e-01	5.26293099e-01	7.83973575e-01	5.30209346e-03	4.47168854e+02

RGB Parameters for genBRDF 057-002645

024-003974

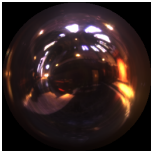
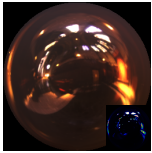
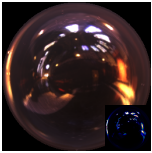
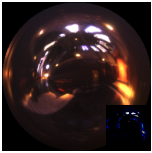
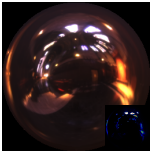
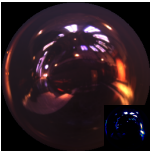
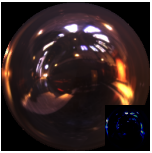
Fitness: 0.000037448988

Length: 371

Reciprocity Error: 2.498367e-15

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( \left( 1.0 * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1}, \left( \left( 4.0 * [p_0 + (1.0 - p_0) * \text{pow}([\omega_{hz} - (\omega_o \cdot \omega_h)], [1.0 + (1.0 - (\omega_o \cdot \omega_h]) * p_0])]) \right) * p_2 \right) * p_2 \right) \right) / [\omega_{hz} * 1.0]) * \cos(\cos^{-1}(\text{clamp}(\omega_{hz}))]) * [p_0 + (1.0 - p_0) * \text{pow}([\omega_{hz} - (\omega_o \cdot \omega_h)], [1.0 + (1.0 - (\omega_o \cdot \omega_h]) * p_0])]) \right) / [\omega_{iz} * \omega_{oz}] \right]$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(0)	genBRDF 0/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.023072 ss: 0.938748

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.68652296e+00	2.73016235e-03	3.56574118e-01	9.95973591e-03	2.11402634e+02
	G	1.55090964e+00	1.68906164e-03	3.48332673e-01	8.77919048e-03	3.82828461e+02
	B	1.66867125e+00	1.70394068e-03	3.39060634e-01	9.50129423e-03	3.62903656e+02

RGB Parameters for genBRDF 024-003974





**023-004000**

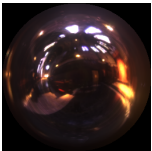
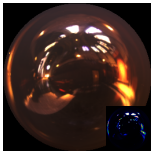
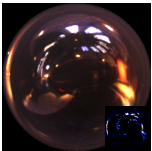
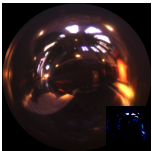
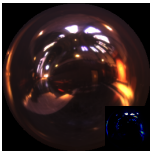
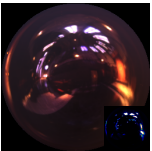
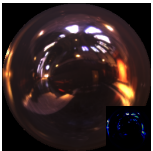
Fitness: 0.000037633754

Length: 327

Reciprocity Error: 3.1409608932e-14

$$f'_s(\omega_i, \omega_o) = \left( \left[ \left( \left[ \left( \left[ \cos(\cos^{-1}(\text{clamp}(\omega_{hz})) \right) \right] * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1})] \right) \right] \left[ \left( 1.0 * (p_0 + [(1.0 - [1.0 - (\omega_o \cdot \omega_h)]) * (p_0)^{(1.0 - (\omega_o \cdot \omega_h))}]]) * p_1 \right) * p_2 \right] \right] / 1.0 \right) * 1.0 * (p_0 + [(1.0 - [1.0 - (\omega_o \cdot \omega_h)]) * (p_0)^{(1.0 - (\omega_o \cdot \omega_h))}]]) / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(0)	genBRDF 0/0
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chrome							
	Training	$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.021842
	BRDF	ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.939293

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.83069372e+00	2.84793740e-03	1.07483841e+02	5.66953374e-03	1.19998749e+02
	G	2.11977434e+00	1.65761856e-03	1.42583191e+02	4.88419365e-03	1.90529282e+02
	B	1.80297053e+00	1.87949440e-03	1.49957321e+02	5.38890809e-03	1.96410660e+02

RGB Parameters for genBRDF 023-004000

**027-002921**

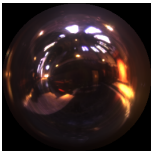
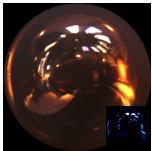
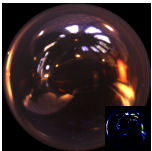
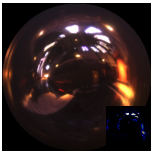
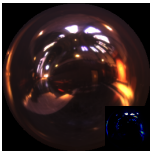
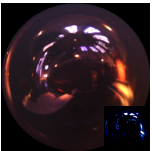
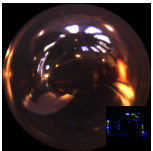
Fitness: 0.000037850095

Length: 314

Reciprocity Error: 1.00656301e-14

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( 1.0 * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1}) \right) \right) \left( \left( [p_0 + (1.0 - p_0) * ((1.0 - (\omega_o \cdot \omega_h))^{5.0})] * [p_0 + (1.0 - p_0) * [1.0 - (\omega_o \cdot \omega_h)]) \right] \right) \right) * [p_1 + 1.0] * p_2 \right) \right] / (1.0 * \min(1.0, 1.0)) * [p_0 + (1.0 - p_0) * [1.0 - (\omega_o \cdot \omega_h)]] / [\omega_{iz} * \omega_{oz}]$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(0)	genBRDF 0/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.024221
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.930814

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.27894080e+00	2.78296811e-03	5.24800003e-01	5.67584950e-03	2.68444122e+02
	G	1.23275054e+00	1.64914574e-03	4.87951815e-01	4.85320762e-03	4.83428497e+02
	B	1.28185499e+00	1.79910823e-03	4.73511875e-01	5.38101234e-03	4.41394104e+02

RGB Parameters for genBRDF 027-002921

028-002232

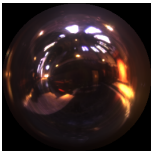
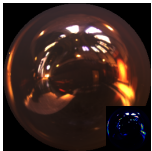
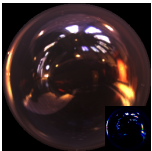
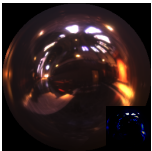
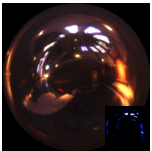
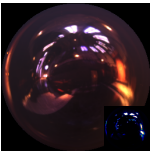
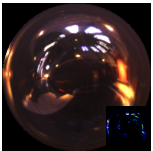
Fitness: 0.000037865796

Length: 297

Reciprocity Error: 2.3736789e-14

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( 1.0 * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1}) \right) \right) \left( (p_0 * [p_0 + ((1.0 - p_0) * [1.0 - (\omega_o \cdot \omega_h)])]) * [p_0 + ((1.0 - p_0) * ((1.0 - (\omega_o \cdot \omega_h)))^{5.0}]) * p_2 \right) \right) \right] / [\omega_{hz} * p_0] * 1.0 * [p_0 + ((1.0 - p_0) * [1.0 - (\omega_o \cdot \omega_h)])] / [\omega_{iz} * \omega_{oz}] \right]$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(0)	genBRDF 0/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.024222
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.930839

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.27895713e+00	2.78506009e-03	4.11592066e-01	5.65613480e-03	3.43090607e+02
	G	1.23268819e+00	1.64945482e-03	3.96568447e-01	4.85783583e-03	5.95913635e+02
	B	1.28194416e+00	1.80142955e-03	3.70169699e-01	5.36039378e-03	5.65180603e+02

RGB Parameters for genBRDF 028-002232

012-003777

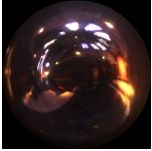
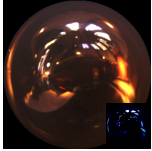
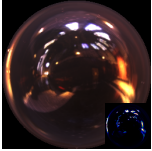
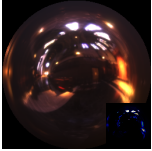
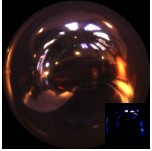
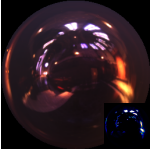
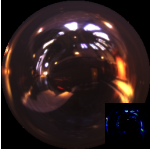
Fitness: 0.000039098834

Length: 294

Reciprocity Error: 5.105566e-14

$$f'_s(\omega_i, \omega_o) = \left( \left[ \left( \left( \frac{1.0}{\pi} * \exp(-\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1}))}{p_1} \right) \right) \right] / [p_2 * p_2] * ([p_1 * p_1] * \pi) * [p_0 + ((1.0 - p_0) * (((2.0 * \omega_{hz}) - (\omega_o \cdot \omega_h)))^{1.0}))] \right] / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: <b>0.972071</b>	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : <b>0.018355</b> ss: 0.948547

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.47587323e+00	2.89213634e-03	4.85459641e-02	5.80977509e-03	1.045073336e+05
	G	1.35096383e+00	1.64597097e-03	4.45097834e-02	4.95379698e-03	4.68585625e+05
	B	1.44921386e+00	1.75091263e-03	4.35584635e-02	5.45141147e-03	4.03290938e+05

RGB Parameters for genBRDF 012-003777



**019-002464**

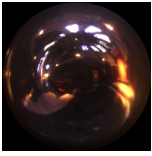
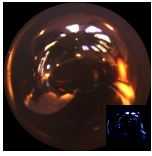
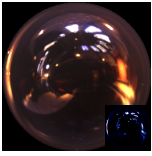
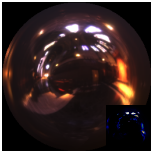
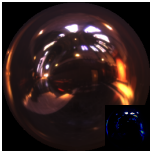
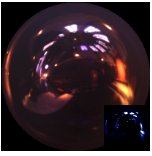
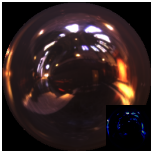
Fitness: 0.000039143102

Length: 270

Reciprocity Error: 0.0

$$f'_s(\omega_i, \omega_o) = \left( \left( \left( \left( \frac{1.0}{\pi} * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1}) \right) \right) \right) \right) \left( \left( \left( 4.0 * [p_0 + ((1.0 - p_0) * \sqrt{|\omega_{iz} * \omega_{oz}|})] \right) * [p_1 + 2.0] * p_2 \right) \right) / 1.0 * \min(1.0, 1.0) * [p_0 + ((1.0 - p_0) * \sqrt{|\omega_{iz} * \omega_{oz}|})] / |\omega_{iz} * \omega_{oz}| \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: <b>0.972071</b>	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : <b>0.018867</b> ss: 0.943749

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	7.00982928e-01	2.89515662e-03	1.11199252e-01	5.75493416e-03	1.07081702e+03
	G	7.48729765e-01	1.67692290e-03	9.45271552e-02	4.89659933e-03	1.89022607e+03
	B	6.95427358e-01	1.89103349e-03	1.01106733e-01	5.47785731e-03	1.76512195e+03

RGB Parameters for genBRDF 019-002464

020-002742

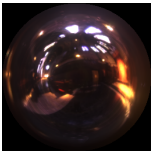
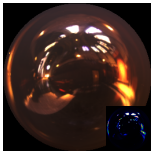
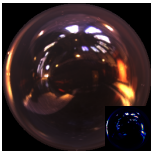
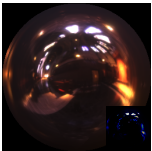
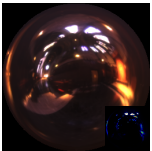
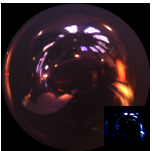
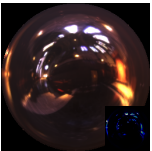
Fitness: 0.000039292064

Length: 252

Reciprocity Error: 1.2310181e-16

$$f'_s(\omega_i, \omega_o) = \left( \left( \left( \left( \frac{\cos(\cos^{-1}(\text{clamp}(1.0)))}{p_2} \right) * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1}] \right) \right) \right) \left( (4.0 * [p_0 + (\omega_o \cdot \omega_h)] * p_2) \right) \right) / [\omega_{hz} * (\text{min}(1.0, 1.0))^{4.0}] * 1.0 * [p_0 + (\omega_o \cdot \omega_h)] / [\omega_{iz} * \omega_{oz}]$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.018787
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.944355

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.32890463e+00	2.89139571e-03	2.58600861e-01	5.74823935e-03	2.64823322e+01
	G	2.98209047e+00	1.66740583e-03	2.17752859e-01	4.93322033e-03	3.30188103e+01
	B	2.26281738e+00	1.88930111e-03	2.49053374e-01	5.44051034e-03	4.28333740e+01

RGB Parameters for genBRDF 020-002742

024-002989

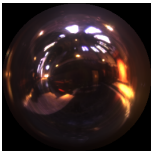
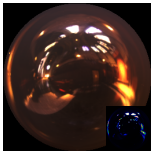
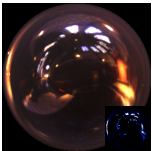
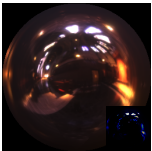
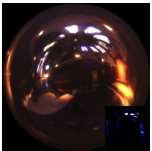
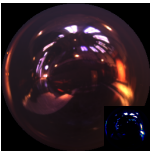
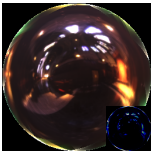
Fitness: 0.000039294705

Length: 237

Reciprocity Error: 5.4956369e-14

$$f'_s(\omega_i, \omega_o) = \left[ \left( \left( \left( 1.0 * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{p_1}) \right) \right) \left( [p_0 + ((\omega_{hz} - p_0) * [1.0 - (\omega_o \cdot \omega_h)])] * [p_1 + 2.0] * p_2 \right) \right) \right) / p_1 * 1.0 * [p_0 + ((\omega_{hz} - p_0) * [1.0 - (\omega_o \cdot \omega_h)])] \right) / [\omega_{iz} * \omega_{oz}] \right]$$

MERL	CT(Ngan) 0(1)/0(1)	CT( $E_2$ fit) 0(1)/0(1)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.076551
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.874145

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.42745662e+00	2.89175566e-03	5.58028400e-01	5.74783096e-03	6.90155745e-01
	G	1.33445227e+00	1.66935322e-03	5.31836569e-01	4.91498830e-03	7.55105913e-01
	B	1.44031560e+00	1.89102080e-03	5.29941618e-01	5.44184912e-03	7.36897290e-01

RGB Parameters for genBRDF 024-002989

012-003909

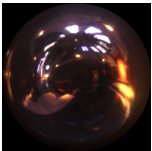
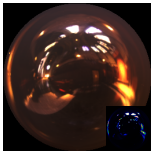
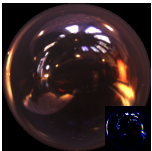
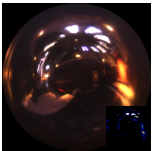
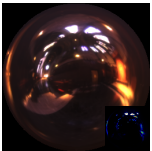
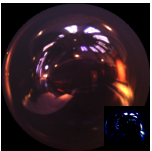
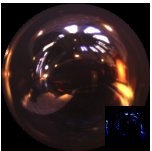
Fitness: 0.000039295387

Length: 213

Reciprocity Error: 1.025659e-16

$$f'_s(\omega_i, \omega_o) = \left( \left( \left( \left( \frac{1.0}{\pi} * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})})}{(4.0 * [p_0 + (\omega_o \cdot \omega_h)] * p_2] * p_2)} \right) / [\omega_{hz} * 4.0] * \min(1.0, 1.0) \right) * [p_0 + (\omega_o \cdot \omega_h)] \right) / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.018787
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.944433

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.32887101e+00	2.89317616e-03	2.58623749e-01	5.72110247e-03	1.28542651e+03
	G	2.98122501e+00	1.66638684e-03	2.17760757e-01	4.90124337e-03	1.90773474e+03
	B	2.26413465e+00	1.88871566e-03	2.48985589e-01	5.46244439e-03	2.16101294e+03

RGB Parameters for genBRDF 012-003909

**012-003891**

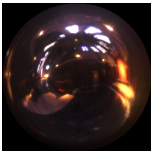
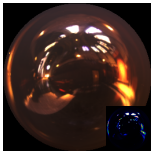
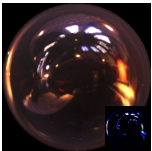
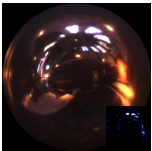
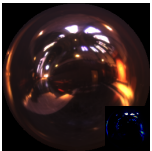
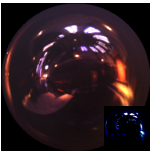
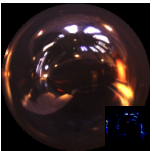
Fitness: 0.000039339910

Length: 203

Reciprocity Error: 1.298038e-16

$$f'_s(\omega_i, \omega_o) = \left( \left[ \left( \left( \frac{1.0}{\pi} * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1}))}{p_1}), ((\pi * [p_0 + (\omega_o \cdot \omega_h)]) * p_2] * p_2)) \right) / [\omega_{hz} * 4.0] * \cos(1.0) \right] * [p_0 + (\omega_o \cdot \omega_h)] \right) / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.018787
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.944325

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.33053422e+00	2.89084436e-03	2.91703016e-01	5.76572865e-03	2.38017432e+03
	G	2.98116159e+00	1.66602922e-03	2.45707601e-01	4.89018951e-03	3.52994580e+03
	B	2.26505995e+00	1.88655453e-03	2.80855536e-01	5.44267427e-03	4.00373486e+03

RGB Parameters for genBRDF 012-003891

**012-003321**

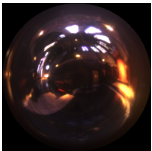
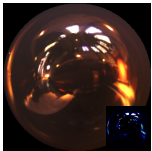
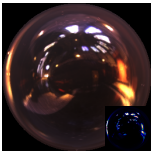
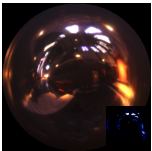
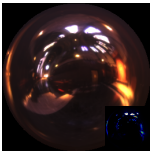
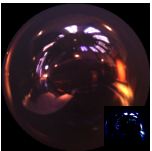
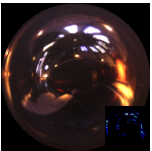
Fitness: 0.000039341200

Length: 195

Reciprocity Error: 1.671265e-16

$$f'_s(\omega_i, \omega_o) = \left( \left( \left( \left( \frac{1.0}{\pi} * \exp(-[\text{pow}(\frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1})}{(4.0 * [p_0 + (\omega_o \cdot \omega_h)]) * p_2] * p_2)})) / [\omega_{hz} * 4.0] * \pi \right) * [p_0 + (\omega_o \cdot \omega_h)] \right) / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: <b>0.972071</b>	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : <b>0.018792</b> ss: 0.944313

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.32765126e+00	2.89215683e-03	2.58664250e-01	5.77302184e-03	4.09606049e+02
	G	2.98176527e+00	1.66632643e-03	2.17737183e-01	4.92400769e-03	6.06682007e+02
	B	2.26192904e+00	1.89010135e-03	2.49113888e-01	5.44489874e-03	6.88074341e+02

RGB Parameters for genBRDF 012-003321

009-000894

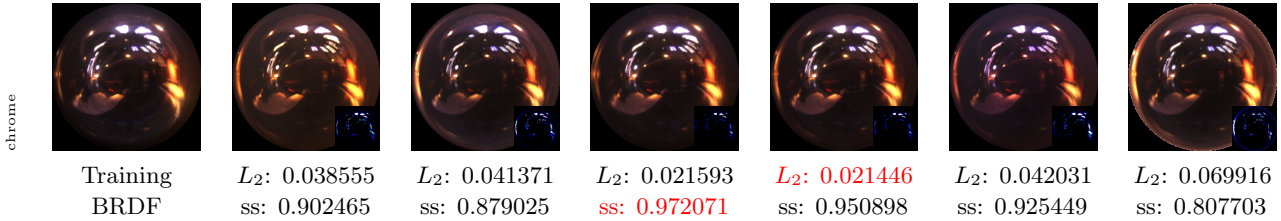
Fitness: 0.000054157985

Length: 129

Reciprocity Error: 3.966903e-15

$$f'_s(\omega_i, \omega_o) = \left[ \left( \frac{1.0 * e^{-\left( \left( \frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1} \right)^{p_0} \right)} \right)}{(\omega_o \cdot \omega_h)} * 1.0 \right) * 1.0 \right] / [\omega_{iz} * \omega_{oz}]$$

MERL	CT(Ngan) 0(1)/0(1)	CT( $E_2$ fit) 0(1)/0(1)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
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Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	6.61248326e-01	1.69449730e-03	6.35320663e+00	4.66806954e-03	2.81515167e+02
	G	5.95414817e-01	1.01999601e-03	7.02088501e+02	4.04408295e-03	4.65784698e+02
	B	5.89962304e-01	1.00453966e-03	1.39670395e+02	4.19592112e-03	4.33811218e+02

RGB Parameters for genBRDF 009-000894

008-002602

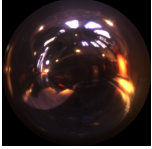
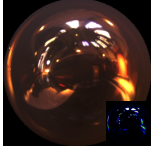
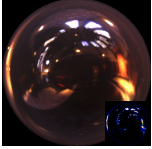
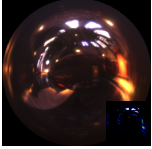
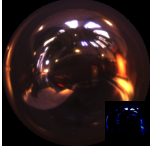
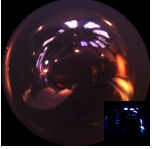
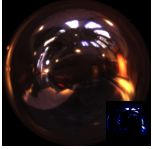
Fitness: 0.000072170376

Length: 105

Reciprocity Error: 0.0

$$f'_s(\omega_i, \omega_o) = \left( [1.0 * (p_0 + [1.0 * \left( \left( 1.0 - \frac{\tan(\cos^{-1}(\text{clamp}(\omega_{hz}))}{p_1}) \right) \right)^{5.0} ])] / [\omega_{iz} * \omega_{oz}] \right)$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(1)	genBRDF 0/0
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chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.031733
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.917357

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.62553897e-03	3.46889757e-02	1.88522217e+02	1.64549206e-07	1.23916237e+02
	G	2.66947667e-03	3.24794278e-02	4.27124102e+04	2.99173257e-06	1.26685692e+02
	B	2.85481452e-03	3.25094424e-02	4.62491486e+02	1.76873675e-06	1.18312759e+02

RGB Parameters for genBRDF 008-002602



**010-003971**

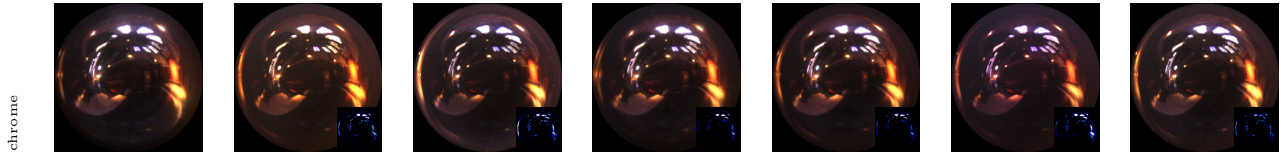
Fitness: 0.000076553237

Length: 91

Reciprocity Error: 1.903254e-14

$$f'_s(\omega_i, \omega_o) = (((\omega_{hz})^{p2} * ((\omega_{hz})^{p2} + [1.0 - (\omega_o \cdot \omega_h)])]) / [\omega_{iz} * \omega_{oz}])$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(0)/1(1)	Löw MF 0(0)/0(1)	Bagher 0(0)/0(0)	genBRDF 1/0
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Training	$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.020185
BRDF	ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.927722

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.94205636e-01	1.95131704e-01	8.93724316e+03	6.88044727e-03	4.36995811e+01
	G	1.84717234e-02	1.45618303e-03	1.09129424e+04	6.13412214e-03	5.01428299e+01
	B	1.88950849e+00	1.90719869e-03	1.10168936e+04	6.37996243e-03	4.87685280e+01

RGB Parameters for genBRDF 010-003971

051-000851

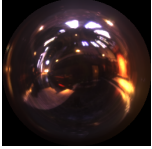
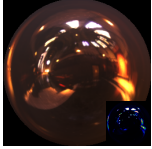
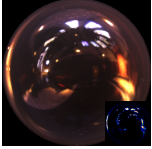
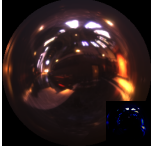
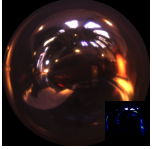
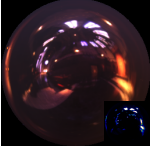
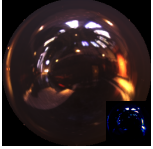
Fitness: 0.000094884588

Length: 62

Reciprocity Error: 0.0002040577

$$f'_s(\omega_i, \omega_o) = \frac{(\omega_{hz})^{p_1}}{(\sqrt{|\omega_{iz} * \omega_{oz}|} * \omega_{oz})}$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(0)	genBRDF 0/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: <b>0.972071</b>	$L_2$ : <b>0.021446</b> ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.035236 ss: 0.932539

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.27334614e+01	1.43208574e+04	1.63959139e-05	6.89723296e-03	4.83192978e+01
	G	3.92613602e+01	1.70811758e+04	4.70677242e-06	6.13024225e-03	5.36396141e+01
	B	4.46138984e-06	1.68382305e+04	1.93018073e-04	6.38307817e-03	4.95871086e+01

RGB Parameters for genBRDF 051-000851

006-003581

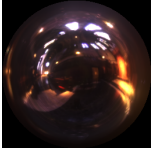
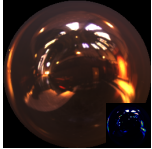
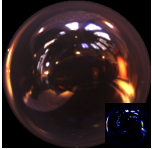
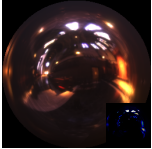
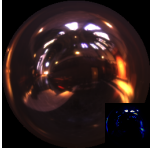
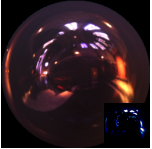
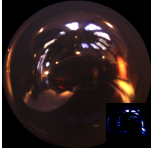
Fitness: 0.000094915527

Length: 38

Reciprocity Error: 0.0

$$f'_s(\omega_i, \omega_o) = \frac{(\omega_{hz})^{p_2}}{(\omega_{iz} * \omega_{oz})}$$

MERL	CT(Ngan) 0(0)/0(0)	CT( $E_2$ fit) 0(0)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(0)/0(0)	genBRDF 0/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.035210 ss: 0.934269

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.90089480e-07	1.41375184e+00	1.43126650e+04	6.97513204e-03	4.82896767e+01
	G	4.52616250e+04	5.50941005e-02	1.70698418e+04	6.20697672e-03	5.36294632e+01
	B	4.08888702e+02	1.75292930e-03	1.68262715e+04	6.40711095e-03	4.95729942e+01

RGB Parameters for genBRDF 006-003581

059-003248

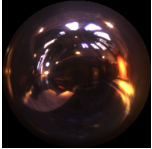
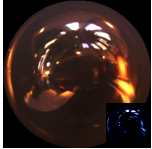
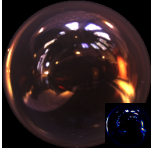
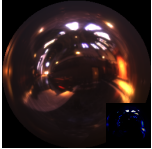
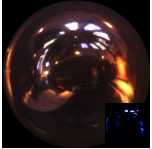
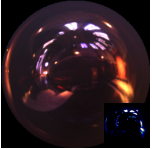
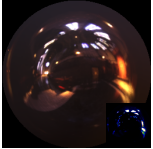
Fitness: 0.000112507953

Length: 37

Reciprocity Error: 0.000323284

$$f'_s(\omega_i, \omega_o) = \frac{(\omega_{hz})^{p1}}{(1.0 * \omega_{o2})}$$

MERL	CT(Ngan) 0(1)/0(0)	CT( $E_2$ fit) 0(1)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.045490 ss: 0.915812

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	4.93370717e-05	1.71802598e+04	1.32696265e-02	7.32373353e-03	8.87003937e+01
	G	2.59465637e+02	2.11627754e+04	1.83234103e-08	6.66862121e-03	1.04965744e+02
	B	9.70775218e-05	2.15489160e+04	2.65815943e-01	6.86854171e-03	1.00955116e+02

RGB Parameters for genBRDF 059-003248

048-004046

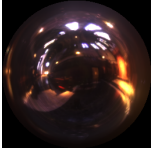
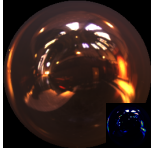
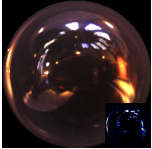
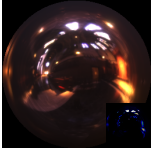
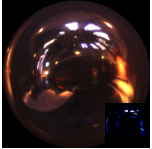
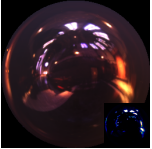
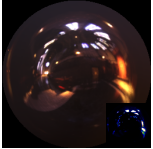
Fitness: 0.000112548032

Length: 35

Reciprocity Error: 0.0003218365

$$f'_s(\omega_i, \omega_o) = \frac{(\omega_{hz})^{p_0}}{(p_1 * \omega_{oz})}$$

MERL	CT(Ngan) 0(1)/0(0)	CT( $E_2$ fit) 0(1)/0(0)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
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chrome							
	Training BRDF	$L_2$ : 0.038555 ss: 0.902465	$L_2$ : 0.041371 ss: 0.879025	$L_2$ : 0.021593 ss: 0.972071	$L_2$ : 0.021446 ss: 0.950898	$L_2$ : 0.042031 ss: 0.925449	$L_2$ : 0.045460 ss: 0.915842

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.71886504e+04	1.31581530e-01	1.46645129e+00	7.34613184e-03	1.16913910e+01
	G	2.11394180e+04	4.36996983e-04	1.57800503e-04	6.61278004e-03	4.58179079e-02
	B	2.15325625e+04	1.57360041e+00	4.29422164e-10	6.88849017e-03	1.58737762e+02

RGB Parameters for genBRDF 048-004046

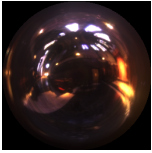
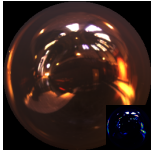
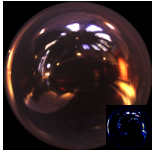
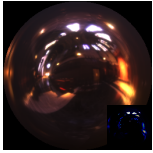
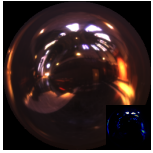
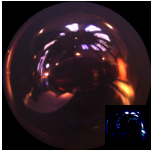
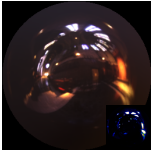
003-001076

Fitness: 0.000132736827

Length: 18

Reciprocity Error: 0.0

$$f'_s(\omega_i, \omega_o) = (\omega_{hz})^{p2}$$

	MERL	CT(Ngan) 0(1)/0(1)	CT( $E_2$ fit) 0(1)/0(1)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.054660
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.871663

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	2.55756662e-03	2.12160079e-03	2.10824219e+04	7.85466097e-03	1.68451599e+02
	G	4.18703766e+01	1.67993258e-10	2.56038848e+04	7.07711047e-03	1.98645355e+02
	B	4.51679140e-01	1.91514064e-05	2.67552676e+04	7.44138239e-03	1.97781570e+02

RGB Parameters for genBRDF 003-001076

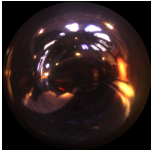
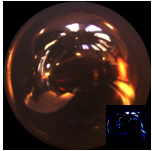
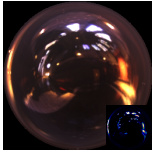
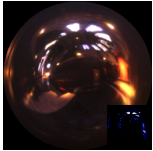
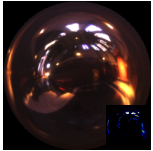
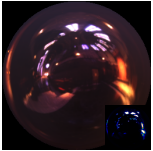
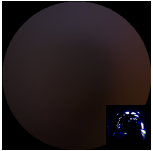
001-000884

Fitness: 0.000300739148

Length: 5

Reciprocity Error: 0.0

$$f'_s(\omega_i, \omega_o) = \omega_{hz}$$

	MERL	CT(Ngan) 0(1)/0(1)	CT( $E_2$ fit) 0(1)/0(1)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.086128
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.674968

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	5.92326469e+01	3.19805660e+01	7.70307000e+05	3.76832219e-07	7.41292583e-03
	G	1.99034531e-03	1.72040313e-02	7.28812378e+02	6.52783285e-07	6.54843217e-03
	B	7.17104492e+03	6.34260687e-06	1.78843140e+02	1.12516022e-06	6.49284758e-03

RGB Parameters for genBRDF 001-000884

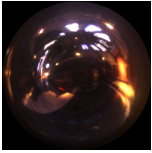
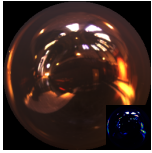
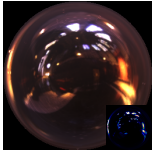
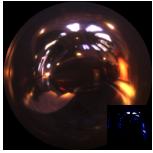
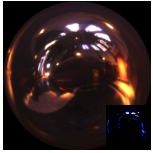
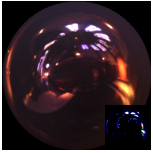

**001-001994**

Fitness: 0.000300836705

Length: 2

Reciprocity Error: 0.0

$$f'_s(\omega_i, \omega_o) = p_1$$

	MERL	CT(Ngan) 0(1)/0(1)	CT( $E_2$ fit) 0(1)/0(1)	Löw SS 0(1)/1(1)	Löw MF 1(1)/0(1)	Bagher 0(1)/0(1)	genBRDF 0/0
chrome							
Training		$L_2$ : 0.038555	$L_2$ : 0.041371	$L_2$ : 0.021593	$L_2$ : 0.021446	$L_2$ : 0.042031	$L_2$ : 0.086787
BRDF		ss: 0.902465	ss: 0.879025	ss: 0.972071	ss: 0.950898	ss: 0.925449	ss: 0.663117

Material		p0	p1	p2	$\rho_d$	$\rho_s$
chrome	R	1.07802534e+01	5.04876435e-01	3.22789955e+01	1.23950969e-02	2.68673431e-03
	G	4.65928125e+00	1.62930787e-02	3.41097565e+01	6.54659932e-03	1.57514945e-01
	B	6.49770451e+00	1.28478538e-02	4.75684738e+01	7.91221205e-03	1.65646821e-01

RGB Parameters for genBRDF 001-001994